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Technical Note

Land at Woodgate Centre, Woodgate

20-061-013 Rev A

Response to WSCC Highways & Arun D C Comments

October 2021

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
-	Draft	GPW/MN	SW	SW	GAC	22/10/2021
A	Final	GC	SW	GC	GAC	3/11/2021

1 Introduction

1.1.1 Charles & Associates Consulting Engineers Ltd. (C&A) have been commissioned by PYE Homes in relation to proposed development of up to 180 dwellings on Land at Woodgate Road, Westergate, West Sussex.

1.1.2 This note has been prepared following receipt of the West Sussex County Council Highways (WSCC) consultation response letter dated 17th September 2021 and Arun District Councils inquiry letter of the same date in relation to planning application reference AL/1072/21/PL.

1.1.3 The note responds to the WSCC summary list of 10 items listed within the conclusion, although matters raised within the main body of the text have been checked and responded to. The WSCC letter is provided within **Appendix A** for reference.

1.1.4 A further six comments raised by Arun District Council (ADC) in their response letter are also addressed, which is attached at **Appendix B** for reference.

2 WSCC Items Raised

2.1 Item 1 – Access and Off-Site Highway Works

2.1.1 The provision of the 2.5m wide footway cycleway would be provided within the existing footway/verge along Woodgate Road, this will require a minor alteration to the junction with Lidsey Road which now also incorporates a new right turn lane. This will then extend along the A29 corridor, north terminating just before the junction with Hook Lane as a 3m shared cycle/footway, before directing cyclists onto the main carriageway.

2.1.2 It is noted that WSCC require further information on how current cycle path guidance is being achieved and LTN 1/20 is quoted. It is generally accepted that LTN 1/20 is an important document to utilise in the production of cycle infrastructure. There are however two further guidance documents that are relevant to this location. That being Sustran guidance 'section 7 geometric design' (**Appendix C**) which allows an absolute minimum width of 2.5m and the current local WSCC guidance, Cycling Design Guide Aug 2019 (**Appendix D**). This guidance is considered the most relevant of all three guidance documents as it also deals with the actual need for a cycleway.

2.1.3 This is dealt with in table 2a for a 20 to 30mph (below 2,500 AADT, development generated **is 1,883**) residential street. Which confirms that a cycle/footway is not actually required, with the use of the main carriageway as being acceptable. That said it is recognised that Woodgate Rd has on street parking that may conflict with cyclists. As such the use of a 2.5m shared cycle/footway is thought to be appropriate, which is the absolute minimum allowed and available.

2.1.4 Topographical survey has been undertaken of the Woodgate Road section that when overlaid with the adopted highway boundary be confirms, a shared 2.5m wide shared cycle/footway can be achieved. This is further addressed in item 5 below.

2.1.5 The quoted 2.5m would be a minimum width, we have updated the drawing with topographic survey to highlight this can be achieved. Drawing **21-061-014 Rev H** is provided within **Appendix F** and included within the updated Travel Plan (within **Appendix E**).

2.1.6 With regards to the comment on the ditch/culverts associated with the Wings Nursery site to the western side of the A29. It is accepted that if any alterations are required, they will be undertaken via the Section 278 highways agreement required to create the revised junction arrangement.

2.2 Item 2 – Foot and Cycle Bridge to Eastern Side of the Development Site

2.2.1 The delivery of the pedestrian and cycle bridge across the river will be secured through a S106 agreement with funding being provided by the two developers at each end of the bridge. The works will be undertaken once both developers have gained a suitable planning permission and both developments proceed. Although the S106 is still in draft the following summary is proposed:

1. The planning application will set out the safeguarding land which is sufficient to deliver the bridge and any ancillary works that may be required in accordance with an E-W Link Specification Document which includes plans, drawings and costings relating to the E-W Link Works;
2. The Owners covenant with Arun District Council and West Sussex County Council that land to which the East-West Link is to be delivered will be safeguarded for the specific purpose of the bridge and any ancillary works that may be required;
3. The owners shall pay a proportional contribution towards the construction costs of the bridge;
4. The Owner shall permit the County Council, District Council and/or any person nominated by the County Council or the District Council to enter onto the Safeguarded Land for the purposes of carrying out the E-W Link Works.

2.2.2 It is however important to note that the bridge does not form part of this planning application.

2.3 Item 3 – Plan Showing Non-Motorised Connectivity to Other BEW Sites

2.3.1 As requested, please find attached at **Appendix G** a plan showing how this site connects, for pedestrians and cyclists, to the wider BEW masterplan. This is also provided on the LANDARB Solutions drawing LAS103-05 within Appendix H. That identifies on onsite foot/cycleways to the site boundary.

2.4 Item 4 – Public Transport Improvements & Infrastructure Enhancements Funding

2.4.1 The developer is offering to upgrade the existing bus stops nearest the site. Again, this will be secured by the section 106 or 278 agreement. If these stops are upgraded by others due to their obligations coming forward first. It would be unreasonable to redirect such funds elsewhere as sustainable transport has already been allowed for under the remaining BEW contributions which are still under discussion between the planning authority and Stagecoach. And the Travel Plan provided.

2.5 Item 5 – Off-Site Cycle Works

2.5.1 Drawing **16-021-014 Rev H** within **Appendix F** provides enhanced details of the off-site cycle works.

2.5.2 Refer section 2.12 above for further explanation.

2.6 Item 6 – On-Site Cycle and Pedestrian Infrastructure Enhancements

2.6.1 A request has been made to further consider LTN 1/20 within the internal layout of the developments.

2.6.2 Alterations have been made to the main east/west spine road to attempt to reduce traffic speeds. Via the inclusion of raised tables at each junction that also facilitate the smooth flow of pedestrians and cyclists. In addition, footways have been extended into the shared surfaces. For continuity.

2.6.3 The above, has provided on the revised ECE Architecture Drawing 6781-PL-02 and Land Arb Solutions Drawing LAS103/05 Rev E provided within **Appendix H.**

2.6.4 These cycle/footways related to the highway infrastructure adhere to LTN 1/20 by, but not limited to, meeting these requirements:

- Coherent, connecting the current A29 to the wider BEW development;
- Direct, connects the site access to the cycle link to the east broadly along the desire line, with the cycle route appearing to have priority over the roads;
- Safe, off-road cycle route for those not confident to cycle along the main site road (even though this would be suitable for most people);
- Comfortable, the route is envisaged to be fairly flat and with few road crossings;
- Attractive. The route passes near the liner park within the site as well as connecting onto the Rife Valley Park.

2.6.5 Cycle/Footways, that pass through the open space from west to east and then north to south will include a 3m shared leisure cycleway footway together with footways to form a leisure network to the boundaries. This will be constructed of sustainable breed and gravel with timber edging. Thus, enabling future connections to any potential offsite leisure routes.

2.7 Item 7 – Further response to Road Safety Audit

2.7.1 Drawing **16-021-014 Rev H** within **Appendix F,** provided for point 5 above incorporates the designers responses that was provided within the RSA appended to the TA, this includes noting that the cycleway is a minimum of 2.5m rather than a fixed width. Likewise, set back from the junction of Hook Lane, dropped kerbs have been provided to allow cycles to join the carriageway as well as providing an advisory on carriageway cycle lane to highlight the joining of cyclists to the carriageway.

2.8 Item 8 – Modelling of Traffic (various scenarios)

2.8.1 A separate response is provided in Chapter 3 below.

2.9 Item 9 – Parking

2.9.1 **ECE Architecture Drawing 6781-PL-02**, within **Appendix H** provided for point 6 above indicates the location of additional unallocated visitor cycle parking (12 Sheffield stands).

2.9.2 With regards to EV parking, it is confirmed that passive EV charging provision will be provided throughout in accordance with ADC parking standards in order to future-proof the development.

2.10 Item 10 – Travel Plan

2.10.1 The monitoring fee of £3,500 is agreed and is anticipated to be secured via the S106 agreement.

2.10.2 The Travel Plan has been updated to reflect the comments received from WSCC. The below provides signposts to the changes in the Travel Plan together with the paragraph reference (in brackets):

- Inclusion of a target 10% reduction in single occupancy car trips (4.2.4);
- Monitoring surveys (following TRICS SAM) are to be done and secured in the S106 (6.1.6 and 6.2.4);
- A £500 audit fee for WSCC per survey will be secured through the s106 (6.1.6);

- A TP coordinator should be appointed and WSCC advised of their contact details (5.3.3);
- A welcome pack is to be provided which will include travel vouchers with a minimum value of £150 per dwelling and information on where these can be redeemed (5.3.7);
- The Travel Plan Coordinator is to contact the local bus companies to negotiate potential incentives to travel by bus (5.2.8);
- Various contact details for organisations provided to aid in the development of the travel plan and the welcome pack (5.3.11);
- Details of what should be included in the travel information provided to residents (5.3.9);
- Infrastructure for EV charger points (3.4.3) in line with current LPA policy;
- The TP coordinator should promote national awareness events, as listed (5.3.4)
- Enforcement and potential additional measures to be provided (6.3.1)
- Infrastructure works as part of the BEW site to be secured as part of the S106 (7.1.3)

2.10.3 Although requested no allowance has been made for a car share club. This is considered to be unviable for a development of this size and location.

3 Present Day/Interim Year Traffic Assessments

3.1 Present Day Network Assessment

3.1.1 WSCC have requested that a present-day assessment of network operating conditions is provided. For the purposes of this assessment the junctions assessed for capacity within the submitted TA have been adopted as an appropriate study area. The exception to this is the A29/CALA Homes Site Access Junction which is a proposed scheme and as such is not currently present on the network. The junctions assessed for present day operation are as follows:

1. A29/Woodgate Road
2. A29/Hook Lane
3. A29/Nyton Road triangular junction
4. A29/B2233 War Memorial Roundabout with Barnham Road
5. Woodgate Road Level Crossing

3.1.2 The methodology used to derive 2021 traffic flows was agreed with WSCC in the absence of observed traffic data on the network. This approach utilises the 2017 Base SATURN transport model with appropriate growth factors applied to provide proxy 2021 Present Day traffic flows on the network.

3.1.3 TEMPro is an industry standard approach to derive traffic growth rates based on the effects of demographic changes and land use. This software includes assumptions on development forecasts which form part of the 'Planning data' within the software, which is generally provided by the local planning authority based on known site allocations and expected growth projections. The TEMPro software uses this information to localise growth forecast for particular road types, based on national forecasts from the National Transport Model (NTM).

3.1.4 Growth factors have been derived from TEMPro/NTM for Arun district and all road types for 2017-2021 for both weekday peak periods, to inform the present-day assessments.

3.1.5 A summary of the growth factors applied to the 2017 base model traffic is provided in **Table 3.1** below.

Table 3.1: 2021 Present Day - TEMPro Growth Factors

Road Category		2017-2021	
		AM Peak	PM Peak
Urban	All Road Types	1.059	1.057

3.1.6 The above junctions have been assessed for capacity following the same approach adopted within the TA using industry standard software PICADY and ARCADY as appropriate. The assessment results are summarised below, and the full assessment output reports are provided at **Appendix I**.

A29/Woodgate Road Junction

3.1.7 The existing layout is a simple priority T-junction with Woodgate Road as the minor arm.

Table 3.2: A29/Woodgate Road – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Woodgate Road	0.16	0.2	13.11	0.08	0.1	11.97
A29 Lidsey Road	0.01	0.0	7.02	0.03	0.0	7.71

3.1.8 The assessment outputs indicate that the junction currently operates comfortably within capacity during peak highway conditions.

A29/Hook Lane Junction

3.1.9 This is a simple priority T-junction to the north of the Woodgate level crossing. Hook Lane to the east forms the minor arm of the junction and the A29 heading north to south forms the major road.

Table 3.3: A29/Hook Lane – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Hook Lane	0.23	0.3	13.17	0.26	0.4	12.18
A29 Lidsey Road North	0.09	0.2	5.28	0.07	0.1	4.37

3.1.10 The assessment outputs indicate that the junction currently operates comfortably within capacity during peak highway conditions.

A29/B2233 Nyton Road Junction

3.1.11 This junction is made up of three linked priority junctions between the A29 Nyton Road, A29 Westergate Road and B2233 Nyton Road in the centre of Westergate village. For ease of reference, these three linked junctions are referred as eastern, southern, and western junctions.

Table 3.4: A29/Nyton Road (East) – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.7	10.50	-	1.0	10.24
A29 Nyton Road East	-	11.7	40.94	-	1.1	3.86

Table 3.5: A29/Nyton Road (South) – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	12.43	-	0.8	13.73
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00

Table 3.6: B2233/Nyton Road (West) – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.5	8.93	-	0.4	7.55
B2233 Nyton Road West	-	0.5	3.81	-	1.4	8.39

3.1.12 The assessment outputs above indicate that the junctions currently operate within capacity during peak highway conditions. Only the A29 Nyton Road East arm of the Eastern junction observes more than minimal queueing with a queue of approximately 11 vehicles during the AM peak.

A29 War Memorial Roundabout

3.1.13 This junction is a three-arm roundabout between Nyton Road to the west, Barnham Road to the east and Fontwell Avenue to the northeast. There are two entry lanes on the approach from Nyton Road arm and the remaining two arms (Barnham Road and Fontwell Avenue) are one lane entries.

Table 3.7: A29 War Memorial Roundabout – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Barnham Road	0.52	1.1	5.70	0.43	0.8	4.84
Nyton Road	0.54	1.2	4.24	0.46	0.9	3.60
Fontwell Avenue	0.89	6.8	50.07	1.50	194.4	1113.55

3.1.14 The assessment outputs above indicate that the junction currently operates over capacity on the Fontwell Avenue arm during the PM peak period. This results in significant queueing and delay on this arm.

Woodgate Level Crossing Assessment

3.1.15 The Woodgate level crossing is located approximately 130m north of the junction between the A29 and Woodgate Road. It has been assessed using LinSig software, as agreed with WSCC as part of pre-app scoping, which is considered an appropriate tool for modelling conflicting movements by signal control.

3.1.16 The typical level crossing open and closure durations and frequencies are based on traffic survey observations that were provided as part of the approved adjacent Wings Nursery site's TA (ADC reference: AL/32/19/OUT).

3.1.17 In the AM peak, the crossing closed 8 times, resulting in a typical cycle of 307 seconds with the barriers open to traffic and 123 seconds with the barriers closed to allow trains to pass. This has been modelled in LINSIG as a 450 second signal cycle, including 10 second intergreen periods at the start and end of the barrier closure.

3.1.18 Similarly in the PM peak, the crossing closed 9 times, resulting in a typical cycle of 222 seconds with the barriers open to traffic and 158 seconds with the barriers closed. This has been modelled in LINSIG as a 400 second signal cycle, with the same 10 seconds intergreen periods.

Table 3.8: Woodgate Level Crossing – Present Day Assessment

Arm/Movement	AM Peak			PM Peak		
	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)
2021 – Present Day (proxy)						
A29 Lidsey Road (N)	35.5%	24.7	31.7	61.2%	49.9	63.7
A29 Lidsey Road (S)	45.4%	37.8	34.8	41.7%	31.8	53.7

3.1.19 The assessment outputs indicate that the level crossing observes some significant queuing of between 25 and 50 vehicles during peak highway periods.

3.2 2024 Interim Year Assessment

3.2.1 An interim year assessment has been requested and following discussions a combined Year of Opening/Interim year of 2024 was agreed. The methodology was agreed in advance with WSCC and was based upon the use of available SATURN transport model scenarios for the forecast year 2023.

3.2.2 The approach to the 2024 interim year assessment as agreed is summarised as follows:

- Interim year traffic models developed representing 2024 Do Minimum scenario (without the proposed development) and 2024 Do Something scenario (with the proposed development);
- The 2024 models will be developed based on the 2023 model which includes Phase 1 of the new committed A29 link. This link is anticipated to be open by 2024;

- The 2024 With Development scenario will assume full build out of the application site development;
- Background traffic growth to be applied for the period 2023-2024;
- The model will incorporate traffic associated with the revised list of committed developments; and
- Traffic data from the model will be used to inform detailed junction assessments at agreed locations and also where there is an increase in traffic due to the development of over 30 vehicles.

3.2.3 The committed developments that are expected to be complete by 2025 and therefore accounted for in the 2024 Interim Year Model are summarised in Table 3.9 below.

Table 3.9: 2024 Interim Year - Committed Development

Address*	Complete by 2025	Accounted for in 2023 model
Land west of Hook Lane Aldingbourne	10	300
Land at Bridge Cottage and The Old Cottage Lidsey Rd	27	0
Land north of Lees Yard, Lidsey Road	38	0
Nyton Nursery Nyton Road, Westergate	68	0
Wings Nursery, Lidsey Road	55	0
Land at Nyton Rd, Northfields Ln and Fontwell Ave	167	268
Land to south of Barnside, Hook Lane	14	0
Land North of Barnham Road (East of Collins Close) (Former Eastergate Fruit Farm)	38	60
Pollards Nursery, Lake Lane (aka Eric Wall Nursery)	107	73
1 Northfields Cottages, Fontwell Avenue	42	0

**Extracted from ODBrun Report*

3.2.4 It should be noted that for some locations the 2023 model accounted for more completions than are currently anticipated by 2025. The trip rates used to determine the number of trips generated are as reported in the TA and shown in Table 3.10.

Table 3.10: 2024 Interim Year - Trip Rates

	AM Peak		PM Peak	
	Depart	Arrive	Depart	Arrive
Trip Rates	0.324	0.124	0.161	0.312

3.2.5 Background growth between 2023 and 2024 was applied derived from TEMPro and the growth factors used are shown in Table 3.11 below.

Table 3.11: 2024 Interim Year - TEMPro Growth Factors

	AM Peak		PM Peak	
	Origin	Destination	Origin	Destination
2023-2024 Factors	1.0077	1.0075	1.0076	1.0077

3.2.6 Traffic turning movements were extracted from the 2024 Do Minimum and 2024 Do Something (with development) models to inform localised junction capacity assessments for the locations assessed within the TA.

3.2.7 The results of the junction assessments for the 2024 Interim year with and without development are summarised in the following tables alongside the results from the 2021 Present Day assessment, where applicable. The full assessment output reports are provided at **Appendix J**.

A29/Woodgate Road Junction

Table 3.12: A29/Woodgate Road – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Woodgate Road	0.16	0.2	13.11	0.08	0.1	11.97
A29 Lidsey Road	0.01	0.0	7.02	0.03	0.0	7.71
2024 Do Minimum – Existing Layout						
Woodgate Road	0.24	0.3	0.24	0.11	0.1	12.82
A29 Lidsey Road	0.18	0.6	4.80	0.06	0.1	4.58
2024 Do Something (with BEW Development) – proposed layout						
Woodgate Road	0.51	1.0	28.10	0.24	0.3	17.37
A29 Lidsey Road	0.04	0.0	7.73	0.05	0.1	8.03

3.2.8 The above assessment outputs indicate that the junction is forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29/Hook Lane Junction

Table 3.13: A29/Hook Lane – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Hook Lane	0.23	0.3	13.17	0.26	0.4	12.18

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
A29 Lidsey Road North	0.09	0.2	5.28	0.07	0.1	4.37
2024 Do Minimum						
Hook Lane	0.42	0.8	20.28	0.47	0.9	18.43
A29 Lidsey Road North	0.12	0.3	4.90	0.06	0.1	4.58
2024 Do Something (with BEW Development) – proposed layout						
Hook Lane	0.47	0.9	22.37	0.62	1.6	27.12
A29 Lidsey Road North	0.12	0.3	4.97	0.06	0.1	4.59

3.2.9 The above assessment outputs indicate that the junction is forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29/CALA Homes Site Access

Table 3.14: A20/CALA Homes Site Access – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2024 Do Minimum						
CALA Homes Access	0.05	0.1	13.49	0.02	0.0	11.41
A29 North	0.09	0.1	8.25	0.12	0.2	7.43
Meadow Way	0.32	0.5	15.62	0.19	0.2	9.99
A20 South	0.01	0.0	7.24	0.02	0.0	7.71
2024 Do Something (with BEW Development) – proposed layout						
CALA Homes Access	0.05	0.1	13.50	0.02	0.0	11.44
A29 North	0.08	0.1	8.21	0.12	0.2	7.43
Meadow Way	0.32	0.5	15.64	0.19	0.2	9.99
A20 South	0.01	0.0	7.24	0.02	0.0	7.72

3.2.10 The above assessment outputs indicate that the proposed junction arrangement is forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29/B2233 Nyton Road Junctions

Table 3.15: A29/Nyton Road (East) – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.7	10.50	-	1.0	10.24
A29 Nyton Road East	-	11.7	40.94	-	1.1	3.86
2024 Do Minimum						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.8	10.42	-	0.9	10.30
A29 Nyton Road East	-	15.8	51.15	-	1.2	3.94
2024 Do Something (with BEW Development)						
A29 Nyton Road South	-	0.0	0.00	-	0.0	0.00
B2233 Nyton Road West	-	0.7	10.73		1.1	10.16
A29 Nyton Road East	-	13.4	50.56		1.1	3.75

Table 3.16: A29/Nyton Road (South) – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	12.43	-	0.8	13.73
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00
2024 Do Minimum						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	13.72	-	0.7	13.38
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00
2024 Do Something (with BEW Development)						
A29 Westergate Road (S)	-	0.0	0.00	-	0.0	0.00
B2233 North	-	0.3	13.57	-	0.7	14.16
A29 Nyton Road North	-	0.0	0.00	-	0.0	0.00

Table 3.17: B2233/Nyton Road (West) – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.5	8.93	-	0.4	7.55
B2233 Nyton Road West	-	0.5	3.81	-	1.4	8.39
2024 Do Minimum						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.5	8.74	-	0.5	8.10
B2233 Nyton Road West	-	0.4	4.15	-	1.3	8.63
2024 Do Something (with BEW Development)						
B2233 Nyton Road East	-	0.0	0.00	-	0.0	0.00
B2233 South	-	0.4	8.90	-	0.3	7.81
B2233 Nyton Road West	-	0.5	4.30	-	1.3	8.67

3.2.11 The above assessment outputs indicate that the existing junctions are forecast to operate comfortably within capacity during peak highway conditions in 2024 both with and without the development.

A29 War Memorial Roundabout

Table 3.18: A29 War Memorial Roundabout – 2024 Interim Year Assessments

Arm/Movement	AM Peak			PM Peak		
	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
2021 – Present Day (proxy)						
Barnham Road	0.52	1.1	5.70	0.43	0.8	0.43
Nyton Road	0.54	1.2	4.24	0.46	0.9	0 .46
Fontwell Avenue	0.89	6.8	50.07	1.50	194.4	1.50
2024 Do Minimum						
Barnham Road	0.51	1.1	5.91	0.39	0.6	4.8
Nyton Road	0.52	1.1	3.96	0.46	0.9	3.47
Fontwell Avenue	0.85	5.0	37.01	1.09	37.3	199.48
2024 Do Something (with BEW development)						
Barnham Road	0.51	1.1	5.91	0.38	0.6	4.69
Nyton Road	0.52	1.1	3.98	0.46	0.9	3.47
Fontwell Avenue	0.85	5.2	37.01	1.15	50.0	265.75

3.2.12 The above assessment outputs indicate that the junction is forecast to continue to operate over capacity on the Fontwell Avenue arm during the PM peak in 2024 both with and without the development. The operation of the junction is improved when compared with the 2021 Present Day assessment.

3.2.13 The relative impact of the development proposals is considered to be minor. With negligible increases in RFC and queues with the exception of the already over capacity Fontwell Avenue arm, which is forecast to observe an increase in RFC of 0.06 in the PM peak. With the AM peak being within capacity.

Woodgate Level Crossing Assessment

Table 3.19: Woodgate Level Crossing Assessment

Arm/Movement	AM Peak			PM Peak		
	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)	DoS	Mean Max Queue (PCU)	Av. Delay Per PCU (s/PCU)
2021 – Present Day (proxy)						
A29 Lidsey Road (N)	35.5%	24.7	31.7	61.2%	49.9	63.7
A29 Lidsey Road (S)	45.4%	37.8	34.8	41.7%	31.8	53.7
2024 Do Minimum						
A29 Lidsey Road (N)	49.5	39.4	36.6	63.6	53.1	65.2
A29 Lidsey Road (S)	46.2	38.9	35.1	50.0	40.6	57.3
2024 Do Something (with BEW development)						
A29 Lidsey Road (N)	50.1	40.3	36.8	67.3	58.1	67.8
A29 Lidsey Road (S)	49.4	43.0	36.3	51.9	42.9	58.3

3.2.14 The above assessment outputs indicate that the level crossing will continue to operate with similar levels of queuing during highway peak periods in 2024 both with and without the development. The relative impact of the development proposals is minor, however, with increases in queues of between 1 and 5 vehicles across both peaks.

3.3 Summary

3.3.1 A 2021 Present Day and comparative 2024 Interim Year (with and without development) scenario assessments have been undertaken following the methodologies agreed in advance with WSCC.

3.3.2 The 2021 Present Day assessment indicates that prior to the implementation of the proposed development that all junctions but the A29 War Memorial roundabout currently operate within theoretical capacity. The Fontwell Avenue arm only of the above junction is shown to operate over capacity during the weekday PM peak. Furthermore, the Woodgate Rd level crossing is shown to operate with queues during both peak periods.

3.3.3 The assessments of an interim year of 2024 both with and without the proposed development show consistently that the relative traffic impacts of the application site are negligible or minor at worst.

3.3.4 It is considered that the absolute impacts in 2024 with the development in place are not sufficiently significant or severe in the context of the NPPF as to require interim mitigation in advance of the delivery of the proposed new link road beyond Phase 1 which has is assumed to be place by the year of assessment.

3.3.5 As demonstrated within Chapter 6 of the TA, the forecast situation of the study area network in 2038 with the development in place is generally improved through the delivery of the new A29 link road, which the proposed development will contribute towards. As such it is concluded that the relative impacts of the development within both the 2024 interim year and 2038 horizon year are minor and non-severe in the context of the NPPF.

4 Arun District Council Comments

4.1.1 Many of the actions raised by Arun District Council are being covered by other disciplines, those which are relevant to highways and drainage are provided.

4.1.2 Action 2 has been raised with our street lighting designer and will be subject to a separate reply.

4.1.3 Action 4 (Travel Plan), attached to Appendix C of the Travel Plan is a plan showing the location of the notice boards which will provide travel information.

4.1.4 Action 5 (Travel Plan), paragraph 5.2.6 confirms that the nearest bus stop will ultimately have bus shelters and real time bus information screens.

4.1.5 Action 6 (Travel Plan), we have removed the reference to Kent County Council

4.1.6 Action 7 has been raised with our street lighting designer and will be subject to a separate reply.

4.1.7 Actions 11, 12 and 13, has been raised and are dealt with below (sections 3.2, 3.3 and 3.4).

4.1.8 Action 17 (Transport Assessment) is the subject of section 2 above, other than the comments relating to the transport modelling will be subject to a separate technical note.

4.2 Action 11: Please confirm how drainage in relation to the E-W link will be undertaken?

4.2.1 The E-W link is a pedestrian/cycle bridge across the Lidsey Rife and does not form part of the current planning application. The link was included in the application documents for information only to illustrate how this link could be achieved could be delivered in the future, and how the development proposals would not prejudice its delivery.

4.2.2 The bridge will consist of a 4.8m wide structure which will be constructed on piers across the river as illustrated on drawing 20-061-027 Rev A in **Appendix N** of the submitted FRA and attached to this note as **Appendix K.**

4.2.3 Detailed design of the bridge has not yet been undertaken; however, it will be designed in accordance with relevant highway design standards, and it is anticipated that drainage will be discharged either directly to the Lidsey Rife (subject to attenuation as necessary) or to the drainage systems on either side of the bridge. The final drainage proposals will be dependent on proposed levels and gradient of the bridge. As stated above, the bridge and its drainage infrastructure do not form part of this application. The bridge will require planning permission, as such any planning application will need to demonstrate how surface water drainage will not be increased elsewhere as a result of the bridge crossing.

4.3 Action 12: Please confirm whose land/responsibility and management this drainage will fall within?

4.3.1 Subject to detailed design and outfall location as noted above the drainage will either be within land controlled by the applicant of this site, or the site to the east of the Lidsey Rife. The development proposals which form part of this planning application would not prevent an appropriate surface water drainage strategy for the bridge proposals from coming forward.

4.3.2 The bridge will ultimately be offered for adoption to the Highway Authority and the drainage would be included within the adopted highway.

4.4 Action 13: Please confirm what are the suitable mitigation measures referred to in paragraph 14.2.2

4.4.1 **Drawing no 20-061-027 Rev A**, included in Appendix N of the submitted FRA, and appended to this note within **Appendix K** shows an area of land to be reprofiled on the western (Development) side of the Lidsey Rife, to compensate for the loss of flood plain as a result of construction the bridge piers. The maximum estimated volume of flood plain compensation is 6.17$m^{3.}$

4.4.2 Detailed compensation volumes required as a result of the bridge will be confirmed at detailed design stage of the bridge and demonstrated within any planning application. The information provided within the FRA confirms that the ultimate scheme will not prejudice the bridge coming forward at a future date.

5 Conclusion

5.1.1 Having received the letters dated 17th September from both West Sussex County Highways Department and Arun District Council and systematically replied to the points raised.

Appendix A WSCC letter (dated 17th September 2021)

WEST SUSSEX COUNTY COUNCIL CONSULTATION

TO:	Arun District Council FAO: James Cross
FROM:	WSCC - Highway Authority
DATE:	17 September 2021
LOCATION:	Woodgate Centre Oak Tree Lane Chichester PO20 3GU
SUBJECT:	AL/107/21/PL Demolition of the Woodgate Centre buildings (including 3 No. residential dwellings) and the construction of 180 No. residential dwellings with the creation of new vehicular access with footways and cycleways, ancillary road infrastructure, emergency access arrangements, associated parking, public open space, including children's play space, landscape planting, surface water attenuation and drainage and other associated infrastructure. This site in in Cil Zone H SP2, BEW Strategic Site and is not CIL Liable.
DATE OF SITE VISIT:	10th September 2021
RECOMMENDATION:	More Information Required
S106 CONTRIBUTION TOTAL:	£ See below for breakdown

This is the first WSCC Highways (CHA) response to the above planning application for demolition of the Woodgate Centre buildings (including 3 No. residential dwellings) and the construction of 180 No. residential dwellings with the creation of new vehicular access with footways and cycleways, ancillary road infrastructure, emergency access arrangements, associated parking, public open space, including children's play space, landscape planting, surface water attenuation and drainage and other associated infrastructure.

Site location and access.
The site is located to the east of the A29 Lidsey Road and to the south of the existing railway line running east - west through Woodgate village. It is accessed via the eastern-most part of Woodgate Road. The site's location is illustrated in red in Figure 1.1 within the applicant's Transport Assessment.

Access is shown as a continuation of Woodgate Road in the form of a central spine road with a number of roads leading off it north and south. At the point it joins the A29 Lidsey Road, the junction is shown provided with a right hand turning 'pocket' in the centre of the A29. Added to this are widened footways to provide shared-use walking and cycling facilities with an uncontrolled crossing point over the A29.

Policy considerations.
Given the site's location, the TA refers to a number of the policies relevant to the current development plan for Arun District Council (ADC). They are as follows:

- ADC Adopted Local Plan 2011-2031
- Aldingbourne Neighbourhood Development Plan (2014-2034)
- ADC Parking Standards Supplementary Planning Document January 2020
- ADCBEW Framework Masterplan

The site forms part of the wider strategic allocation referred to as Barnham, Eastergate and Westergate (BEW) under Policy H SP2c (SDS) within the adopted ADC Local Plan 2011-2031.

Proposed highways works.
The scheme proposes a modification to the junction of Woodgate Road with the existing A29 Lidsey Road in the form of a right-hand turning lane.

Additional to this are shared foot and cycle paths – one section along the northern-side of Woodgate Road and then continuing northwards along the A29 – firstly along the eastern-side of the road and then along the western side, terminating just before the junction with Hook Lane found north of the railway crossing (shown on submitted drawing 20-061-014 Revision 'E').

With regard to the changes shown, the applicant should provide further information to demonstrate how such works comply with the relevant sections of DMRB (for the road works) and for the cycle works, LTN 1/20. Specifically with regard to the widened footway (to provide shared use – foot and cycle) along the northern-side of Woodgate Road, the applicant should explain how this is achieved (i.e. does it require any narrowing of the existing carriageway of Woodgate Road or is it wholly accommodated within the existing footway and verge running along that side of the road)?

The applicant should note that the realignment of the footway on the western side of the A29 to cater for the increased width for the right turn lane in to Woodgate Road might have an impact upon the existing ditch and new culverts that are part of the Wings Nursery design. If approved, the applicant (of the Woodgate Centre) would need to meet the costs of all the necessary changes.

Please also see comments made about the route under 'Road Safety Audit' found below.

Internal layout.
From scrutiny of the plans provided for the internal layout, it is apparent that at some junctions on the main 'spine road' running E-W through the development that raised table features might be offered. Given the relative straightness of the alignment of the roads, this form of traffic management should be provided at each junction along the spine road.

In addition to the above, where traditional roads with footways become shared-surface roads, the tie-ins for the footways should be further into the shared surface roads.

For the shared foot/cycleway running through the site using the alignment of the spine road – initially on the northern-side but then transferring to the southern-side, the current arrangement would require cyclists to give-way to drivers at the junctions.

Where appropriate to do so, LTN 1/20 does encourages designers to design for cyclists and pedestrians having priority at junctions. Looking at the current plans, this would require amendments to the internal layout to enable this. While it might be difficult to achieve such an arrangement for those crossing N-S across the spine road as they enter or leave the site, the designer might be able to consider the side road junctions as such if an appropriate set-back can be achieved in-line with the LTN.

With regard to the internal paths shown running-around the boundary of the development (internal to the site) and that shown running north to Oak Tree Lane and land to the north, the applicant should show how these would be suitable for foot and cycle access.

For all cycle infrastructure, the applicant should provide a commentary demonstrating how it meets the requirements of LTN 1/20.

A plan showing all the above to be provided. For any changes to the junction priorities for pedestrians and cyclists, the applicant should run these past the Road Safety Audit team for comments.

Road Safety Audit.
A Stage 1 Road Safety Audit forms part of the submission. This has considered all the proposed highways works.

Two Problems were identified in the report. They are:

1. **Problem 2.1** – Lidsey Road.
   Summary: Sections of shared-use cycle facility are shown to be sub-standard and may lead to accidents.

   The audit team noted that the proposed shared-use cycle facilities are shown t be 2.5m-wide instead of the recommended 3.0m as-per current national standards. They consider that the sub-standard width could lead to cycle/pedestrian collisions.

2. **Problem 2.2** – Lidsey Road.
   Summary: The lack of safe facilities for cycles to re-join the carriageway may lead to accidents.

   The audit team noted that the proposed cycle facility ends at the Lidsey Road/Hook Lane junction and there is no indication of how cycles would re-join the carriageway. Northbound cyclists would have very poor visibility at the Hook Lane junction due to no footway on the south-side and leaving the shared-use facility to the carriageway may lead to vehicle/cycle collisions.

Designer's Response.

Audit Team Problem No.	Audit Team Problem	Audit Team Recommendation	Design Organisation's Response	Overseeing Organisation's Response	Agreed Action
2.1	*Location:* Lidsey Road. *Summary:* Sections of the shared-use cycle	Recommendation: It is recommended that all sections of the shared-use	Agree/ Disagree. Partly agree: That the current	Agree with Design Organisation.	That the route be provide d to

	facility are shown to be sub-standard and may lead to accidents. The Audit Team noted that the proposed cycle facility, a shared-use cycle/pedestrian facility between Woodgate Road and Hook Lane and the whole of Woodgate Road are shown to be 2.5m in width although the current national standard for a shared-use cycle/pedestrian facility is 3.0m. The sub-standard width may lead to cycle/pedestrian collisions.	facility are upgraded to be 3.0m in width.	national standard for a shared-use facility is 3.0m. However, WSCC cycleway design guide also states that 2.5m is the absolute minimum acceptable width for such a facility. Therefore, adhering to the above, where highway land is available, 3.0m wide shared facility is proposed, whereas 2.5m wide facility is proposed where 3.0m is not possible.		2.5m wide but where possible, 3.0m is to be provided.
2.2	*Location:* Lidsey Road. *Summary:* The lack of safe facilities for cycles to re-join the carriageway may lead to accidents. The Audit Team noted that the proposed cycle facility ends at the Lidsey Road/Hook Lane junction and there is no indication of how cycles should re-join the carriageway. Northbound cyclists would	Recommendation: It is recommended that the shared-use facility is terminated south of the level crossing with suitable signage and dropped kerbs.	Agree/ Disagree. Partly agree: However, the shared-use facility has not been terminated south of the level crossing. Instead, the latest drawing has been updated to show how the cyclist safely re-joins the carriageway with appropriate dropped-kerbs, signage and tactile paving before	Agree with Audit Team. Introducing cyclists to the carriageway adjacent to Hook Lane will be at a location where visibility is limited around the corner into Hook Lane. Furthermore, the junction can be busy and adding another 'movement' could potentially lead to conflicts between	Terminate shared-use facility as-per the Audit Team's recommendation with appropriate markings and signage.

	have very poor visibility at the Hook Lane junction due to no footway on the south-side and leaving the shared-use facility to the carriageway may lead to vehicle/cycle collisions.		reaching Hook Lane junction. This is to ensure cyclist's facility is available as far as possible.	users. And the section crossing the railway crossing is also narrow and sub-2.5m wide which could also introduce conflicts between users.	

The Design Organisation should reply to the above. And, a plan should be submitted showing the revisions documented above.

Road safety history.
At the pre-application stage, the CHA requested that a review of Personal Injury Accidents (PIA) that have occurred in the local highway network during the latest 10-year period should be included in the TA supporting the application. As such, the applicant has obtained such data from Sussex Police for the latest available 10-year period covering 01/12/2010 to 30/07/2020. The extent of study area includes the A29 corridor between and including the War Memorial roundabout to the north and the A29/A259 roundabout to the south.

Sustainable access.
The applicant acknowledges that planning policy places strong emphasis on the integration of land use, transport and planning decisions. To ensure developments are sustainable, they should be accessible to local amenities, schools and public transport services by a choice of sustainable transport modes such as walking, cycling and public transport.

Manual for Streets (MfS) considers 800m to be comfortably accessible distance on foot and states that walking has the potential to replace short car trips of up to 2km. Whereas, CIHT's 'Planning for Walking' document reports that approximately 80% of journeys shorter than 1 mile (1.6 km) are made wholly on foot. Based on these, walking distance of up to 2km and cycling distance of up to 5km to such local amenities are generally considered to be acceptable.

The applicant considers that the site is located within easy access on foot and cycle to the amenities and services of Woodgate, Aldingbourne and Westergate to the north of the site. However at the present time, provision for cyclists is limited and only slightly improved with the offer from this development. Most will still be reliant on using the existing A29 for journeys north and south of the development until such time as the rest of BEW is constructed and links provided to and from that site. In addition, public footpaths are available to the north of the level crossing as illustrated in Figure 3.4 found in the TA although require users to leave the site to get to them. These provide connections between the site and schools and amenities in Eastergate. However, the potential to link to them through the site and adjacent sites within BEW will not arise until sometime into the future. What is not shown, however, is how such links will be made – particularly to the north and east of the site. The applicant should provide more information about this and a plan showing how the site would fit-in with the Masterplan for the rest of the BEW allocation.

A list of local amenities available within walking and cycling distances from the site are tabulated in Table 3.1 found in the TA. The location of these amenities relative to the site along with 800m and 2km isochrones are illustrated in Figure 3.5 of the TA. It should also be noted that the BEW allocation site to the east will provide two new primary schools, two local centres which – when provided - will include shops and library facility, and these will be within reach from the site.

Public transport is currently limited in the locality although is expected to improve in-line with developments in the BEW allocation as they come forward. As such, this site will be expected to contribute towards a public transport strategy for both new and improved bus services and associated infrastructure. It is acknowledged that the applicant is offering the same stops, shelters, real-time passenger information as that secured form the nearby Wings Nursery site. However, if that site is built-out first, then the offer from the Woodgate Centre for that same infrastructure might fall away. The applicant should, therefore, provide more detail of discussions with local bus providers and what strategy is proposed for the BEW development site as a whole and what its contribution to that will be.

For information purposes, it should be noted that planning application No. AL/55/21/PL - Proposed demolition of existing post office and to replace with new food store is, at the time of writing, a 'live' planning application for a proposed new food store to be re-built in accordance with previously approved scheme to alter the existing building application No. AL/53/20/PL on the former Aldingbourne Stores site found north of the railway crossing.

Connection into Church Commissioner's land (to east of site).
Reference is made in the TA to a future connection for walking and cycling purposes into the land adjacent (east) currently in the ownership or control of the Church Commissioners. An indicative alignment is also shown on one of the submitted drawings. However, what isn't clear is who will provide it. The CHA recommends that this be provided by the applicants and secured by S106 Agreement.

Traffic impact.
Section 6 in the TA considers various development scenarios, namely:

- 2038 – Do minimum with new A29 fully open (***without*** development at Woodgate Centre)
- 2038 – Do minimum with new A29 fully open (***with*** development at Woodgate Centre)

With regard to junctions reviewed for possible modelling, the following were examined:

1. A29/Woodgate Road
2. A29/'CALA Homes' junction
3. A29 /Nyton Road junction
4. A29/B2233 War Memorial Junction with Barnham Road
5. A29/New A29 Northern Section junction
6. A29/Eastergate Lane Junction
7. A29/Wandleys Lane Junction
8. A29/A27Junction
9. A29/A259 (Rowan Way)
10. A29/A259 (Felpham Relief Road)
11. A29 - Proposed new Shripney Road connection

In-line with recognised guidance, only those junctions where an increase of 30 or more trips is identified have been modelled. They are as follows:

1. A29/Woodgate Road
2. A29/Hook Lane
3. A29/'CALA Homes' access
4. A29/Nyton Road triangular junction
5. A29/B2233 War Memorial Roundabout with Barnham Road

For the scenarios tested at each junction, the 'with development' scenarios all show increases in both traffic and associated delays. However, the increases are relatively small and not considered severe in the opinion of the CHA. This is likely attributable to the new A29 being in-place which effectively by-passes the existing A29, thereby reducing traffic flows on the 'old' road (A29) and road junctions along it.

Woodgate railway crossing.
The traffic assessment also includes reference to the future impact at the nearby Woodgate railway crossing. Again, in the two scenarios modelled, the impacts only appear to modestly increase with development added and like the junction modelling referred to above, impacts cannot be considered severe.

Opening year and interim scenarios.
As far as can be seen from scrutiny of the TA, no scenarios have been presented for either an opening year for the development nor any interim period when the new A29 – either in-part or full – has not been constructed. As such, this information is required using existing traffic flow information to enable the CHA to be able to see what any opening year and interim periods might look like traffic-wise until such time as the new A29 road has been built. This work should, in particular, include assessment of the impact at the junction of Woodgate Road with the existing A29 (alongside parked vehicles on Woodgate Road), the impact of the development at the junction when the railway crossing gates are down and the impact on the on the queues on the A29 when the gates are down. It should also include development traffic from the recently approved Wings Nursery development found nearby.

Finally, the applicant does not appear to have included any existing traffic impact associated with the site in its current guise. This should be provided including information about whether such uses are currently active. Comparison tables of new and existing development traffic impacts should be provided.

Parking.
Car parking – The requirements for parking and electric vehicle (EV) charging provision applicable to the site are set out in ADC's Parking Standards Supplementary Planning Document (SPD) January 2020 and WSCC's Guidance on Parking September 2020. Table 4.2 in the TA sets out the comparison between the two council's parking guidance.

Added to the designated parking is visitor parking. visitor parking will be required to be provided at a ratio of 20% of the total number of residential units and accessible bays are required to a minimum of 5% of overall provision. A garage should be at least 6m x 3m internally to be regarded as an allocated parking space and each single garage will be counted as 0.5 allocated parking space.

The proposed on-site allocated and unallocated parking and EV charging provision are summarised below and the applicant has said that these are provided to meet the ADC and WSCC parking standards. Where there is shortfall in the allocated parking spaces, additional unallocated parking spaces are provided to supplement this as discussed below, and therefore, in overall, the proposed parking provision meets the requirement of both

guidance documents. The applicants have said that they consider it appropriate to provide a mixture of allocated and unallocated spaces as unallocated spaces tend to provide more flexible solution where spaces are then available to both visitors and residents:

- 1 allocated no. space per 1-bedroom and 2-bedroom flats;
- 2 allocated no. spaces per 2-bedroom FOG*, 2 FOGs have 1 no. space;
- 2 allocated no. spaces per house;
- 20 single garages and 10 double garages are provided in addition to the above spaces;
- 37 unallocated parking spaces are provided;
- 36 visitor spaces (20%)

*(*FOG – 'flat over garage'/coach house etc.)*

And for electric vehicle (EV) provision:

- All units with 2 No allocated parking spaces will have one space equipped with an EV charging socket;
- 4 additional unallocated spaces with EV charging socket, one each on four blocks of flats.

With regard to passive EV provision, the applicant should confirm that the appropriate infrastructure will be provided throughout the scheme in accordance with ADC requirements in order to future-proof the development.

Cycle parking – This is documented in paragraph 4.6.10 of the TA. It is recommended that wherever possible, 'Sheffield' style stands be used – particularly in the communal areas as these are generally easy to use. In addition to the allocated provision, some visitor parking should also be provided throughout the development layout. This should be shown on a plan.

Travel Plan.
A Residential Travel Plan (TP) has also been prepared for the proposed development. The TP presents measures would be implemented that the applicant considers would encourage future residents to adopt non-car modes of transport.

In its consideration of the measures included in the TP, the CHA is of the view that further measures are required, including penalty measures should targets for trip-rate reduction are not met. See comments below.

In addition to and in-accordance with WSCC Travel Plan policy, a standard Travel Plan monitoring fee of £3,500 will be required.

Both the TP and the monitoring fee must be secured by S106 Agreement.

Targets.
The headline target for the Travel Plan should be to achieve a 12-hour weekday vehicle trip rate that is 10% lower than that predicted for the site in the Transport Assessment assuming a Travel Plan were not implemented. This trip rate should be achieved within 5 years and sustained for the 5-year monitoring period. The Travel Plan should clearly state the number of trips expected between 7am and 7pm on a typical weekday (as should appear in the TA) and also the target number of trips (i.e. TA – 10%).

Monitoring and Auditing.
The Travel Plan should be monitored in accordance with the TRICS UK Standard Assessment Methodology (aka TRICS SAM). This involves 3 multi-modal surveys over a 5-year period whereupon the 10% trip rate reduction target should be achieved, or further TP measures implemented.

The developer/Travel Plan Coordinator should commission these directly with the TRICS organisation and should be secured through a Section 106 agreement.

Consideration will need to be given as to when the first of the TRICS SAM surveys should be conducted. The final survey should be conducted following final occupation. Therefore 50% occupation may prove to be a reasonable trigger point for the initial survey.

We require the developer to pay an auditing fee of £500 per survey. If the results show the TP is on track then a meeting to discuss remedial actions will not be required, and hence we will be able to offer a 25% discount on the fee.

Travel Plan Co-ordinator.
A Travel Plan Coordinator (TPC) should be appointed to deliver the Travel Plan.

The TPC should ensure that regular surveys are conducted in order to monitor progress towards targets.

The TPC should also provide a basic personal journey planning service to residents.

The TPC should be appointed prior to occupation of the first dwelling (ideally before the first unit goes on sale) and should be in place at least until the results of the final surveys are known.

Contact details for the TPC should be provided to this office on appointment. If possible, a planning condition should be applied that prevents occupation of the first dwelling until contact details for the TPC have been provided to the County Council.

Travel Information and Resident's Travel Packs.
Resident's welcome packs should include the following:

- A map of the local area highlighting local schools, shops, any areas of major employment, hospitals, doctor's surgeries, dentists, bus and rail stations, bus stops, and leisure facilities etc.
- Information about how to access the above by bus, including approximate journey times, route numbers etc and a cost comparison with car travel + parking
- Information about how to access the above on foot or by bicycle, including approximate journey times, route information etc, and a cost comparison with car travel + parking
- Information about areas served by any local rail station, including approximate journey times and a cost comparison with car travel + parking
- Details about grocery home delivery services operated by local shops and supermarkets, including the benefits such services offer compared to private car travel, such as reduced CO2 and greater convenience.
- Information about local bike shops offering discounts to residents living on developments where a Travel Plan is operating.

The CHA also requires to see some sort of travel voucher offering to the initial occupants of the residential units. Vouchers should be worth at least £150 per dwelling and could be exchanged for the following:

a. A season ticket for the local bus service
b. A rail season ticket or network card
c. A contribution towards the purchase of a new bicycle and/or equipment
d. Cycle training up to 4 members of the household (further details and course costs are available at www.westsussex.gov.uk/cycletraining)
e. 12 months free membership to any local Car Club (including joining fee)

Developments served by Metrobus: For larger developments Metrobus may be able to supply welcome packs for people moving in, with bespoke travel info and a free trial smartcard. If the developer is able to make a financial contribution then Metrobus may also be able to offer significant discounts for residents over a longer period. For further details contact: nick.hill@metrobus.co.uk

Developments served by Stagecoach South: Stagecoach may be able to supply free 'taster' tickets for each resident and discounted Megarider tickets. Contact russel.byrne@stagecoachbus.com for details.

For sites in Adur & Worthing, Chichester, Crawley, and Mid Sussex (East Grinstead & Haywards Heath): The easitNETWORK is a business-led network which provides sustainable travel solutions to local employers. Member employers can access a number of incentives including 15% on Southern rail services, discounted bus travel, and a car sharing scheme. Information about any local easitNETWORK should be included in welcome packs.

The County Council has commissioned Pindar Creative's Travel Plan Mapping Solution. The service enables developers, employers, and other organisations to purchase site-specific multi-modal travel maps, notice boards, and interactive PDFs. The applicant may wish to consider using this service to produce the local travel information for the resident's welcome packs. Further details can be found on our website: http://www.westsussex.gov.uk/leisure/getting_around_west_sussex/travelwise/supporting_material.aspx

The County Council has produced a leaflet about our car sharing scheme, which is available on our web site and can be downloaded for inclusion in resident welcome packs and on any community web site that might be established. A video which explains how the scheme works is also available. The url is: www.westsussex.gov.uk/carsharing

The West Sussex Cycle Journey planner should be promoted in welcome packs and across the site, as should Traveline South East and National Rail Enquiries etc. The link to our cycle journey planner is http://cyclejourneyplanner.westsussex.gov.uk/
and can also be accessed via the WSCC website:
https://www.westsussex.gov.uk/leisure-recreation-and-community/walking-horse-riding-and-cycling-routes/cycle-journey-planner/

Car club.
The site might benefit from the introduction of a car club. However, if it is found that commercial operators are not be interested in servicing the site, a not-for-profit operator, such as Co-Wheels, might be able to establish a car club at this development although this would be determined through direct discussion between the applicant and Co-Wheels (or similar company). This would require an initial period of funding from the developer until 20-40 regular users per vehicle is established in order to make the club self-sustaining. WSCC would estimate that a budget of around £30k would enable a

company such as Co-Wheels to provide 2 vehicles for 2 years (inc. maintenance) although the company itself would be able to confirm this. An alternative, and perhaps cheaper, option would be for the developer to provide vehicles and fund the installation on the relevant car club hardware. A maintenance charge would also apply in this case.

EV charging points.
It is acknowledged that the site is to be supplied with electric vehicle charging points. Existing charge points in West Sussex are part of the Energise Network and any points installed at this site may well benefit from being part of the same scheme. Further information is available on our web site:
http://www.westsussex.gov.uk/leisure/getting_around_west_sussex/travelwise/electric_vehicle_charging_netw.aspx

It is also acknowledged that the LPA has it's own criteria for EV parking requirements and this should also be included in any consideration of such parking arrangements.

Promotion and Publicity.
National awareness events, such as those listed below, should be promoted by the TPC:

Walk to School Week
National Bike Week
Cycle to Work Day
European Mobility Week / Travelwise Week
Cycle September
National Liftshare Week
International Walk to School Month
Road Safety Week

The County Council has developed a suite of posters, which can be used to promote sustainable and active modes of travel. The artwork may be used free of charge and can be downloaded from our web site:
http://www.westsussex.gov.uk/leisure/getting_around_west_sussex/travelwise/supporting_material.aspx

Enforcement.
The Travel Plan should include provision for enforcement action that would be taken in the event that the 5-year target is not met. One option might be for a second round of travel vouchers to be offered to each dwelling should the 10% trip rate reduction target not be achieved by year 5.

Monitoring Fees.
For residential sites of between 80 and 500 units the applicant is required to pay a Travel Plan monitoring fee of £3,500 at the application stage.

S106.
Given that the site forms part of the Barnham-Eastergate-Westergate (BEW) Strategic Allocation, it will be required to provide suitable infrastructure (funding and physical measures) - both highways and non-highways - to support itself and the overall allocation.

In accordance with approved policy within the Arun Local Plan, the following will inform what contributions are required. All highways-related contributions to be based on Local Plan allocation of 3000 homes for the BEW Strategic Development Area:

Apportionment Study (https://www.arun.gov.uk/transport-planning-policy/) – A contribution proportional to the impact of the development on the overall BEW development site will be required to be secured by S106 Agreement.* Schemes set-out in this appropriate to BEW are as follows:

1. A29 re-alignment
2. A259 corridor improvements (Bognor Regis to Littlehampton)
3. A259 Oyster Catcher improvements
4. A27/Fontwell East RBT improvements
5. A27/Nyton Road improvements
6. Barnham Village Centre improvements

*(*Please note that current figures in Apportionment Study are, at the time of writing, under review and might increase at or before signing of any S106 Agreement should the planning proposal be permitted).*

*Infrastructure Delivery Plan (IDP)*** - The following works are considered applicable for the Woodgate Centre site to contribute to (and in addition to those set-out in the Apportionment Study):

1. Walking and cycle route and bridge over Lidsey Rife – To be delivered by applicant
2. Cycle links BEW to SDNP – estimated cost £500,000 – so £500,000/3000 = £166 per-dwelling x 180 = £29,880
3. Barnham – Tangmere cycle route – estimated cost £1,500,000 – so 1,500,000/3000 = £500 per-dwelling x 180 = £90,000
4. Barnham to Bognor Regis cycle route – estimated cost £1,150,000 – so 1,150,000/3000 = £383 per-dwelling x 180 = £68,940
5. B2233 footway imps – estimated cost £1,150,000 – so £1,150,000/3000 = £383 per-dwelling x 180 = £68,940
6. Additonal cycle parking Barnham Station – estimated cost - £35,000 – so £35,000/3000 = £11.66 x 180 = £2,098.80
7. Bus services – for applicant to put-forward proposals.
8. A29/B2233 War Memorial roundabout interim junction improvement – only necessary if A29 Realignment phase 1 is not implemented.
9. Creation of a dedicated NMU grade-separated railway crossing to provide a safe connection between sections of the proposed Rife Valley Park – proportionate contribution required from all development sites.
10. Creation of a dedicated NMU grade-separated railway crossing to provide a safe crossing of the Barnham-Bognor branch line linking various PRoW - proportionate contribution required from all development sites.
11. Site specific transport improvements identified through Transport Assessments – to be delivered by each applicant to mitigate the impact of each development site.

*(**Like the Apportionment Study, the costs quoted are under review and may change at or close-to the signing of any S106 Agreement should planning permission be granted).*

Travel Plan – The Travel Plan and its monitoring fees to be secured by S106 Agreement.

Non-highways infrastructure – list to be submitted separately.

Other matters.
Given the proximity to and impact on the railway crossing found on Lidsey Road (A29) by the development proposals, the case officer should also consult Network Rail.

Conclusion.
Additional information is required to enable the CHA to be able to consider the proposal further. The detail of this is found in the main body of the text in this report and summarised below:

1. Access and off-site highways works – demonstration how works comply with relevant design standards and guidance.
2. Foot and cycle bridge to eastern-side of development site - Confirmation that this will be delivered by the applicant and when.
3. Plan showing how the site will connect to other sites within the adjacent BEW Strategic Land Allocation with regard to non-motorised provision.
4. Details of public transport provision and associated service improvements and infrastructure contributions.
5. Provide drawing of revised off-site cycle works.
6. Consideration of changes to foot and cycle infrastructure within the development and how that meets the requirements of LTN 1/20.
7. Provision of a further response to the Road Safety Audit 'Log' (Designer's Response).
8. Modelling of existing and interim (pre-A29) scenarios + details of existing uses and comparisons with the proposed development in traffic-terms.
9. Cycle parking – visitor provision to be shown on a plan.
10. Travel Plan – revised version required with additional measures included.

Please re-consult when the above additional information is available, at which time the CHA will consider the proposals further.

Thank you.

Tim Townsend
West Sussex County Council – Planning Services

Appendix B Arun District Council letter

(Dated 17th September 2021)

Arun District Council
Arun Civic Centre
Maltravers Road
Littlehampton
West Sussex BN17 5LF
Planning & Building Control General Enquiries
Tel: (01903) 737756 Fax: (01903) 730442
Dx: 57406 Littlehampton
Minicom: 01903 732765
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website: www.arun.gov.uk/planning

Lindsay Goodyear
Terence O'Rouke Limited
Everdene House
Deansleigh Road
Bournemouth
BH7 7DU

Please ask for: James Cross
Email: james.cross@arun.gov.uk
Telephone: 01903 737784
Our Ref: AL/107/21/PL
Your Ref:
Date: 17 September 2021

Dear Lindsay

SD5 Barnham, Eastergate and Westergate (BEW) Development Site

LPA ref: AL/107/21/PL – Initial Application Feedback
Full planning permission for residential development (Use Class C3); car and cycle parking; landscaping works and amenity space; access from Woodgate Road; and all ancillary works and infrastructure.

Further to your submission made to Arun District Council on 16 August 2021, Officers have now had an opportunity to review the submitted reports and are able to provide the following feedback. The feedback consolidates consultee responses received. Some consultee comments remain outstanding and Arun District Council reserves the right to provide further comment on these matters later. As of this date of this, the Consultees who have provided feedback and remain outstanding include:

Received	Outstanding
Economic Regeneration	*Aldingbourne Parish Council**
Highways England	*Barnham & Eastergate Parish Council*
WSCC Strategic Highways	*West Sussex Adult Social Care*
Environment Agency	*West Sussex Public Health & Sustainability*
Natural England	*NHS Coastal Commissioning Group**
Housing Officer	*Surface Water Drainage **
CPDA Community Safety Branch	*Environmental Health**
Ecology Adviser	*Parks and Landscapes**
	*Council's Arboriculturist**
	*Southern Water – Developer Services**
	*ADC Engineering Services Manager**
	*Archaeology Advisor**
	*Conservation Officer**

I have indicated above with an asterix which consultation responses will prevent the Council being able to make a favourable recommendation to Planning Committee. We will continue to chase these outstanding consultees for a response on the lead up to Committee.

A number of the consultation responses have requested further information to be submitted in respect of each matter.

Sussex Police Comments
Action 1: Please amend plans to show play areas surrounded with railings with self-closing gates to provide a dog free environment

Action 2: Please amend plans in respect of lighting stated. Bollard lighting not appropriate as it does not project sufficient light.

We will be contacting Sussex Police to confirm the level of contributions sought for this development, in line with all other parcels on BEW.

Economic Development Comments
Action 3: Please provide Employment and Skills plan for the development.

We can often condition this as a requirement to be submitted as part of the discharge of condition process. However, there will be sufficient time within this application period to submit this. ADC are happy in either manner but please advise which you will prefer.

Travel Plan
Action 4: Please indicate on Appended plan to TP where notice boards in key locations will be provided.

Action 5: Please indicate what improvements to the existing bus stops will be, as indicated in the TP.

Action 6: Please remove reference to Kent County Council Highways on page 18, paragraph 5.3.4 – fifth bullet point.

Lighting Assessment
Action 7: Please make reference to how the lighting strategy will be tailored around the Ecology Statement and Planning Statement contents, specifically in respect of impacts upon bats.

We require this additional information for continuity, but also to form the basis of the Council's Appropriate Assessment to demonstrate mitigation measures for impacts upon bats from the Singleton & Cocking Tunnels SAC.

Arboricultural Survey and Impact Assessment
We are awaiting comments from our Tree Officer, Mark Warwick, on the contents of this document. Any such comments will form the basis of the Council's position on this matter.

Hard & Soft Landscape Proposals
Action 8: Please amend footpaths to align with footbridge – at present there are too many routes shown which encourage non-path use and erodes the tranquillity of the Linear Park.

Action 9: Please provide 2 sets of plans for this, one showing the layout with the E-W link and one without. There needs to be continuity in both scenarios.

We recall this specific matter about user behaviour was raised verbally within the pre-application discussions on this matter.

Energy Efficiency and Low Carbon Technologies Appraisal
Action 10: Please provide a plan and/or confirm which properties will benefit from solar PV panels.

This can be undertaken by condition, alternatively. However, I see no reason why this can't be amended in the application period to reduce matters required for subsequent discharge.

Flood Risk Assessment Incorporating Surface & Foul Water Management Statement
Action 11: Please confirm how drainage in relation to the E-W link will be undertaken?

Action 12: Please confirm whose land/responsibility and management this drainage will fall within?

Action 13: Please confirm what are the suitable mitigation measures referred to in paragraph 14.2.2?

We assume that the suitable mitigation measures are those detailed as being required to be secured in Appendix L of the FRA; however, your confirmation/clarification is welcomed?

Planning Statement

Action 14: Please provide market evidence referred to in paragraph 6.20 confirming there would not be demand from self and custom builders to own a plot on a housing development site?

Action 15: Please provide a more robust justification as to why gypsy and traveller pitches cannot be provided?

We would suggest referring to the identified need and whether sites are likely to be found elsewhere in the District. Consideration should be given to whether the delivery of this site would prejudice delivery on other more appropriate sites.

Action 16: Please provide greater detail on why/how the absence of any such provision would have on the speed and pace of delivery of this site, so Officers are able to assess this matter fully, on balance.

Transport Assessment

We are awaiting comments from WSCC Highways on the date of this response. However, Highways England have raised a number of issues within their consultation response (provided under separate cover).

Action 17: Please provide an updated TA responding to the comments received by Highways England and comments from WSCC?

In particular, and as noted in the Highways England Response, we note that the scenarios used within the TA rely upon the 2038 scenarios. ADC understands that the 2038 scenarios rely upon the re-aligned A29 project having been delivered.

The delivery of the re-aligned A29 project is that it alleviates traffic pressures off the Woodgate Level Crossing. However, there is an interim period between which the grant of any permission will be in place and the delivery of the A29 taking place.

We therefore consider that the interim impacts on the traffic flows from the development, between the grant of consent and delivery of the A29, need to be fully assessed, in order to take into account traffic impacts upon the Woodgate Level Crossing.

Please also see separate correspondence provided by West Sussex County Council which requires further actions.

Future Feedback

Please note that this feedback solely focusses on the submitted documents and consultation responses received to date (as indicated at the top of this letter). We will send on further consultation responses as and when we receive them and are happy for you to take both this, and the further consultation responses, fully into account, in one comprehensive response.

This feedback does not relate to matters of design, layout etc and solely focusses upon the technical reports and studies submitted in support of the application. It is our intention to feedback (under separate cover) matters relating to design, and any relevant tweaks that may/may not be required.

I trust that the above detailed information provides sufficient clarity regarding the Council's requirements in relation to this planning application.

If you require any further information, please do not hesitate to contact me on the below details at your convenience.

Kindest regards,



James Cross Bsc (Hons) MSc Lcgi TP. MRTPI
Strategic Development Sites Project Officer
Arun District Council, Maltravers Road, Littlehampton, BN17 5LF
Email: james.cross@arun.gov.uk | DD: 01903 737784

Appendix C Sustrans Geometric Design Guidance

sustrans

PUBLISHED: 13TH NOVEMBER 2019

7. Geometric design

Geometric design is part of the Sustrans traffic-free routes and greeways design guide. It covers managing speed and providing enough width for all users by presenting minimum design criteria for horizontal and vertical alignments, as well as suitable visibility.



Key principles

- A well-designed traffic-free route will manage speed and provide enough width for all users.
- Minimum design criteria for horizontal and vertical alignments.
- Suitable visibility should be provided to ensure the safety of all users, especially on the approach to roads.

7.1 Design speed

7.1.1

The geometric design of a route will be influenced by the likely speeds at which users will move along it. Visibility along the route, route function and accessibility will also influence geometric design.

7.1.2

Where traffic-free routes are intended to be used as a shared-use facility, interactions between different user groups will be greater, and so speeds are reduced.

On this basis, the concept of design speed becomes less important. Instead, geometric design will be guided by the space required for users to manoeuvre in a way that does not cause inconvenience or delay.

7.1.3

People on bikes are likely to be the highest speed users of traffic-free routes. There are two scenarios where inappropriate speeds are likely to cause an issue:

- Higher-speed users intimidate and jeopardise the safety of lower-speed users, resulting in a reduction in use of the route.
- Speed is inappropriate at interfaces between the route and highway, such as roads and junctions.

7.1.4

The alignment of a well-designed route should encourage appropriate speeds. Providing enough width along a shared-use path can reduce the impact of inappropriate speeds. As there is more space for users to interact and higher speed differentials between users can be accommodated. Where sufficient width cannot be provided, the following measures may help to encourage appropriate speeds:

- Promotion of responsible use of the path, such as a One Path Initiative (Section 3.5).
- The use of signing and surface markings.
- Artwork and other features to create a greater sense of place.

The provision of physical measures to control user speeds, such as speed humps and rumble strips, must be avoided. These features can serve to reduce the convenience and attractiveness of a route and can make a route inaccessible to some users.

7.1.5

Where it is necessary to encourage slower speeds on approach to a hazard, the preference is to introduce a change in horizontal alignment that will require users to slow down. For example, introducing a 90-degree turn on the approach to a highway interface.

Designers must take care when introducing more severe changes in alignment. It is important that these do not result in people riding bikes or horses having to dismount.



Change in path alignment on approach to highway, Dewsbury, Yorkshire.

7.2 Widths

7.2.1

The width of a traffic-free route is fundamental to its success. Routes should be designed to enable users to move side-by-side, comfortably overtake, and pass other users travelling in the opposing direction.

Widths should also encourage use of the route as a sociable facility, where people can interact as they walk, wheel and ride side-by-side. Widths should be proportionate to the anticipated level, and type, of use.

7.2.2

The effective width of a traffic-free route is considered the ‘useable’ width of the route. Providing a path width that satisfies the requirements of the table below does not mean a suitable effective width will have been achieved.

The table below builds upon the principles of user space requirements and summarises the absolute and desirable minimum effective widths:

Recommended effective widths of shared use routes

	Shared use	Separated use
Absolute minimum	**2.5m**	**4.5m**
Desirable minimum	**3.0m**	**5.0m**

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7.2.3

Features located at the side of a traffic-free route can have the effect of reducing effective width. For example, users of a 3m shared use path with fencing either side may ‘shy’ away from the fences. In practice, the ‘shy distance’ can have the effect of offsetting path users towards the centre of the path.

Subsequently, a 3m wide shared-use path with fencing either side may only have an effective width of 2m. Put more simply, only 2m of the path is considered functional by path users, even though there is a 3m wide surface.

Designers should note that shy distances are more applicable to people on bikes and horse riders than other path users. This is mainly due to the risk of handlebars, pedals and stirrups striking vertical features situated alongside the path edge. Thus the effect of shy distances on the effective width of a path needs to be considered against the composition of users of the traffic-free route.

The table below summarises the extra width that can be added to a path to achieve or maintain effective widths. These are applicable where vertical features are present alongside the path.

Additional widths to maintain effective widths

Edge constraint	Additional width
Kerb up to 150mm high	**add 0.20m**
Vertical feature 105 - 600mm high	**add 0.25m**
Vertical feature > 600mm high	**add 0.50m**

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7.2.4.

The widths provided above are intended as a guide. In some cases, there may be benefits in exceeding these widths, particularly where routes may be used as a safe route to a school. Providing a greater width will also increase level of service and provide passive capacity for future growth in use.

Whilst increasing the widths of routes can provide many benefits for users, it can also be costly to projects. As such, the proposed width of route should be assessed through a Scheme Assessment during the planning stage. This will assist in clarifying what width of route is required to meet the objectives of the scheme and ensure the route is inclusive.

7.2.5

Where a traffic-free route is located next to a road, within the highway verge, it must be separated from the edge of road. The table below summarises the level of separation required.

Horizontal separation between traffic-free route and road

Speed limit (mph)	Desirable minimum horizontal separation (m)	Absolute minimum horizontal separation (m)
30	0.5	N/A
40	1	0.5
50	2.0 *	1.5 *
60	2.5 *	2.0 *
70	3.5 *	3.0 *

* Separation width may include the paved hard strip where there is one. Source: Highways England

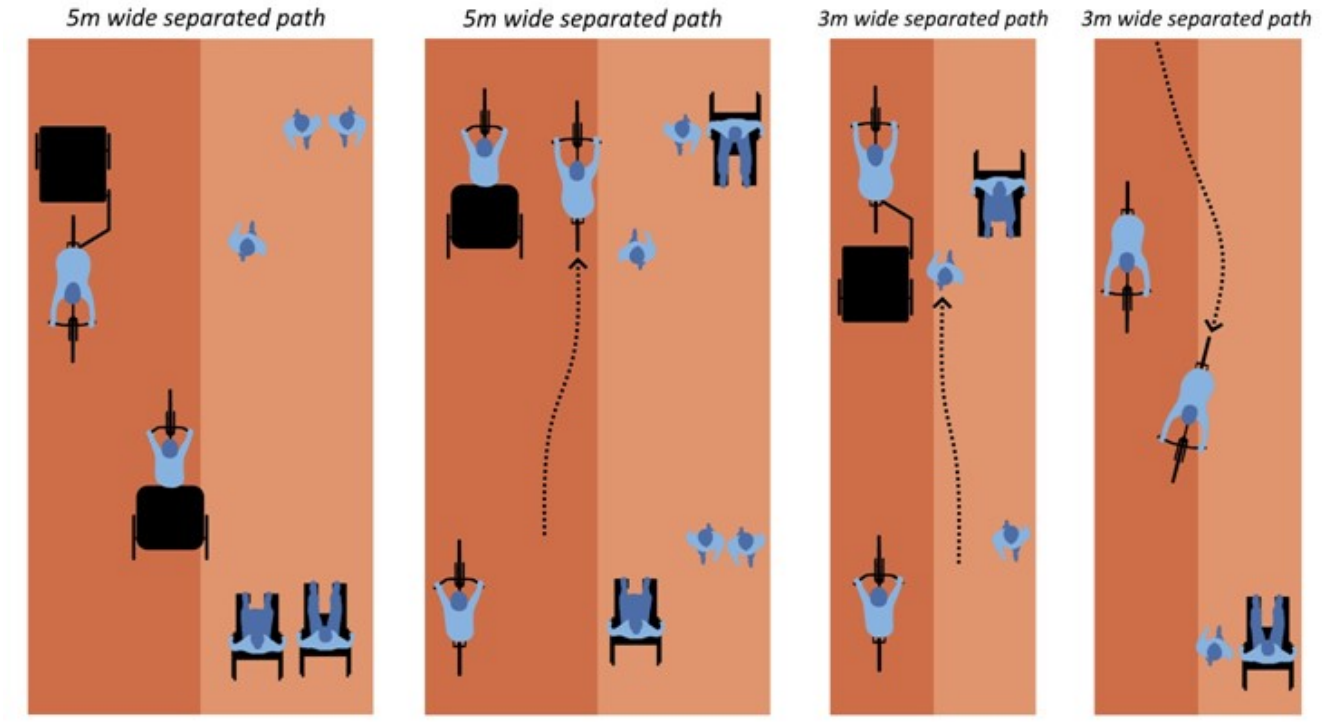
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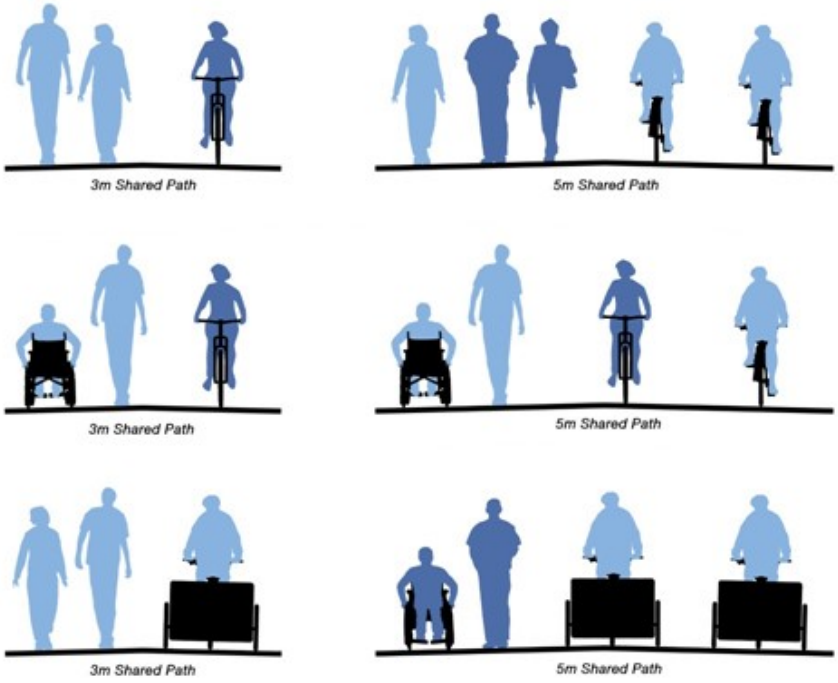


Traffic-free route alongside highway, Millwall Path, London

7.3 Typical cross-sections

The following figures illustrate a number of typical cross-sections for traffic-free routes:





7.4 Horizontal alignment

7.4.1

The horizontal alignment of a traffic-free route is fundamental to creating an environment that is inclusive, safe, attractive and memorable. Horizontal alignment will largely be predetermined by the topography of the site, particularly where the route follows a railway corridor or canal towpath.

7.4.2

Depending on the function and user composition of a route, curvature will vary. A route that has a high proportion of commuters using bikes should consider the use of larger radii to ensure that higher speeds can be maintained. In general, routes with a high commuter composition should avoid the use of radii lower than 25m.

Where routes have more of a recreational function, smaller radii may be used to encourage lower speeds. In recreational environments, designers should avoid the use of radii smaller than 15m. Except in specific circumstances.

7.4.3

Where the horizontal alignment is being used to control speeds, such as on the approach to a hazard, a minimum (inside) radius of 4m is appropriate. This will still be negotiable by someone riding a bike but will require a reduction in speed to negotiate the curvature.



Horizontal alignment serves to reduce cycling speeds.

7.4.4

Junctions between paths should have either a 2m radius or a 45° chamfer. This will assist users in negotiating a sharp change in direction. It will also help to reduce conflict and discourage people on bikes from creating informal routes across the verge.



Radius used at junction in route on Nene Way, Northamptonshire.

7.5 Vertical alignment

7.5.1

Local topography can have an impact on the vertical alignment of a route. It is important that designers overcome the impacts of local topography through design.

The design of vertical alignments should ensure that routes remain inclusive, accessible and attractive. The vertical alignment of a traffic-free route should follow the gradients listed in the table below.

Gradients on traffic-free routes

Criteria	Gradient %	Gradient ratio
Desirable maximum	3%	1 in 33
Normal maximum up to 100m	5%	1 in 20
Limiting gradient up to 30m when there is no practical alternative	7%	1 in 14*
Desirable minimum gradient to ensure good surface water shedding	8%	1 in 12*

* Any gradients greater than 5% are considered a ramp (Inclusive Mobility, DfT 2002). Where these gradients are used, level-resting platforms must be introduced at regular intervals through the ramp.

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7.5.2

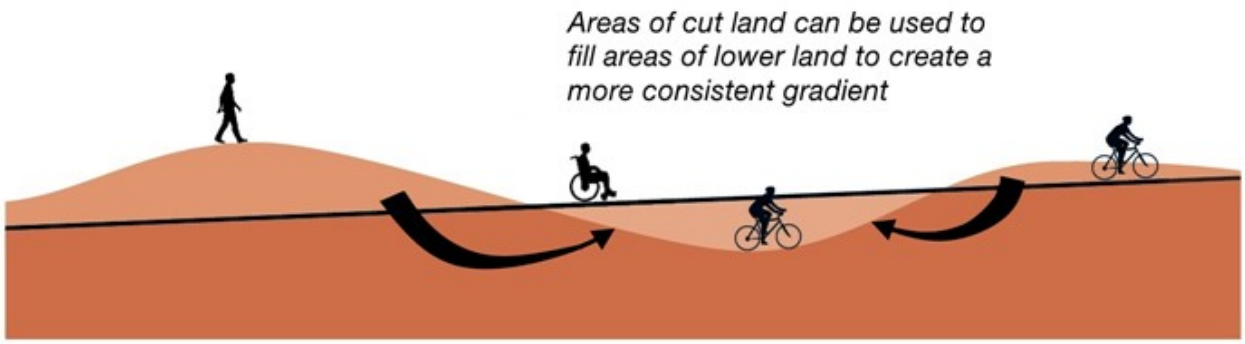
Where existing ground profiles are not excessive, it may be possible to meander or ‘zig-zag’ the route. Whilst this may increase the length of a route, it may reduce the need for earthworks (Section 7.5.3) or retaining structures (Section 10.5). Where this approach to route alignment is adopted, it is common to introduce a set of steps. These provide those walking with a more convenient and direct route up the steeper parts of the existing ground profile.



Path along gradient without retaining structures.

7.5.3

'Cut and fill’ earthworks can be used to overcome irregular or excessive ground profiles. This process involves moving earth from one section of route to another to create a more regular gradient. The figure below provides an overview of how cut and fill can be used to create a more consistent and attractive gradient to users.



Cut and Fill used on a traffic-free route.

In this example, the black line represents the ideal vertical path profile. This profile overcomes the undulating nature of the existing ground profile. The two highest points of the existing ground profile can be ‘cut’ to ‘fill’ the lowest point in the existing ground profile. In this case, the amount of cut material exceeds the volume of fill material required.

7.5.4

Designers should be aware of the potential for greater speed differentials between users on gradients. This occurrence can affect comfort and safety along routes. Therefore, designers should consider whether more localised width or separation is needed as mitigation. Additional width may also be required on steep uphill gradients. As the effective width of those riding bikes uphill will increase.

7.5.5

Care should be taken to avoid designing a route that has lower sections than the surrounding ground profile. This may result in surface water draining onto the route.

In this scenario, standing water can cause a hazard to users, particularly where the water freezes. Designers should ensure that water sheds from the surface of a path where possible.

This will reduce the likelihood of costly drainage interventions being required post-implementation. Designers should also note that steep paths could introduce maintenance issues. Where surface water can gather velocity down gradients, it can serve to erode the path surface and verges.

7.6 Ramps and connections

7.6.1

How a traffic-free route connects with a wider transportation network needs careful consideration. Traffic-free routes, particularly those that utilise old railway corridors, canals or rivers, will invariably be required to connect into the highway network.

This requirement presents challenges where, historically, canal towpaths and rail corridors have used structures to ‘grade separate’ the different transport corridors.

Therefore, where routes are planned and designed to use canal towpaths or disused rail corridors, a significant level difference may need to be overcome to provide an ‘at-grade’ interface with the highway network.



Ramp providing access to traffic-free route in Worsley, Greater Manchester.

7.6.2

The vertical alignment of ramps, including the requirement for landings, rest places and handrails should be designed in accordance with the requirements of Inclusive Mobility, DfT 2002. By achieving the requirements of Inclusive Mobility, designers can ensure that traffic-free routes are accessible to everyone.

7.6.3

There may be cases where the location of the ramp and the nature of the route would make the more challenging requirements of Inclusive Mobility disproportionate. For example, where a ramp connects to a canal towpath that incorporates cobbled side arm bridges. In this scenario, wheelers would not be able to use the route even if it could be accessed by a ramp.

Any decision to depart from the requirements of Inclusive Mobility should be documented. Documentation should include an Accessibility Audit / Equality Impact Assessment and Designer Risk Assessment. Under these circumstances, designers must consider how their decisions will affect inclusivity.

7.6.4

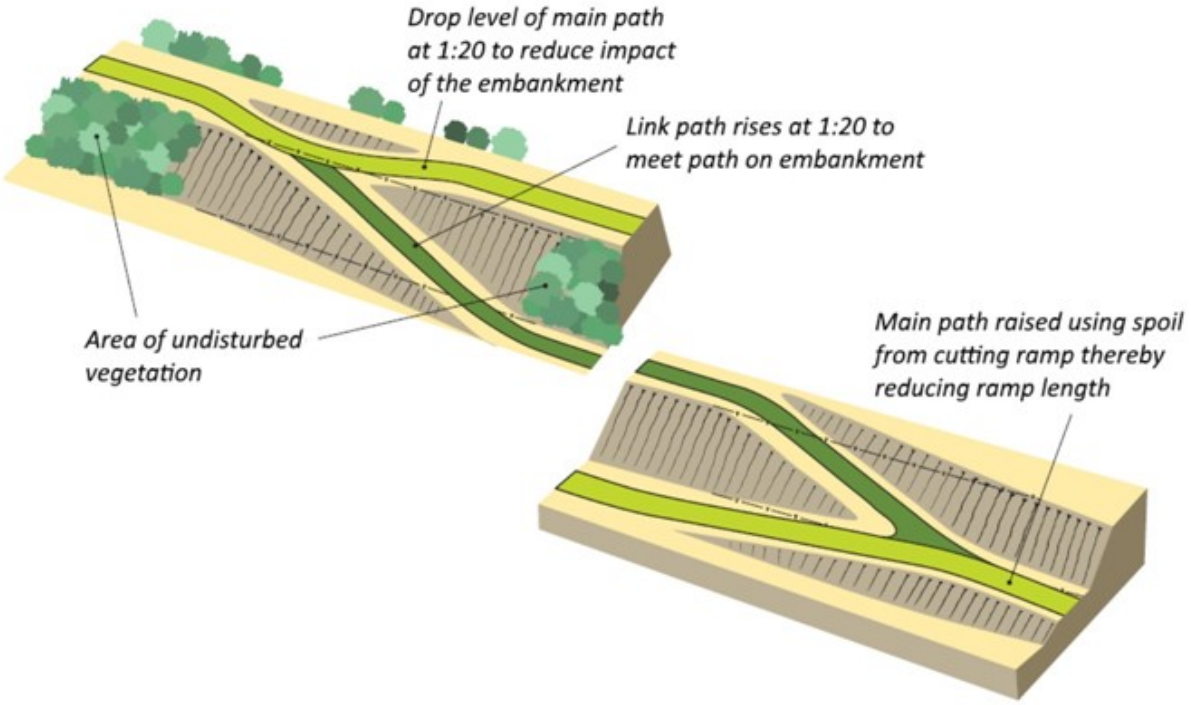
The construction of a ramp may need retaining measures. These can increase the cost of a scheme and need additional land to be acquired. The cost of introducing retaining measures needs to be considered against the extra cost of providing a longer route that follows natural ground gradients and does not require retaining measures.



Crib wall Construction on Padiham Greenway, Burnley, Lancashire.

7.6.5

To reduce the likelihood of non-compliant ramp gradients, it may be possible to locally adjust the level of the traffic-free route to decrease the level difference, as shown in the figure below:



7.6.6

Where providing ramped access is not possible, consideration should be given to relocating the access point. Access points could be moved to a position where there is less level difference, or there is space to construct a ramp. The benefit of accessibility to all users is likely to outweigh reductions in directness.

7.7 Visibility

7.7.1

When designing a traffic-free route it is important to provide enough forward visibility. This will ensure that all users are aware of changing situations ahead. Providing enough forward visibility is relevant to those users travelling at greater speeds. This is termed stopping sight distance (SSD) and is the distance travelled in the time taken to react and stop.

Sight distance in motion (SDM) is the distance that someone needs to be able to see ahead when moving to feel safe and comfortable. Typically, this is the distance covered in 8 to 10 seconds whilst moving towards an object.

7.7.2

Traffic-free routes should be designed to achieve the SSD and SDM values set out in the table below. These distances should be provided within the envelope of forward visibility shown in the figure below. The SSD values in the table apply to a level route with a sealed surface, at the design speeds shown. SSD will increase at greater speeds, for downhill gradients and poor surface conditions. Poor surface conditions will include wet and icy surfaces as well surfaces where leaves are present. SSD on unsealed surfaces should be increased by 50%.

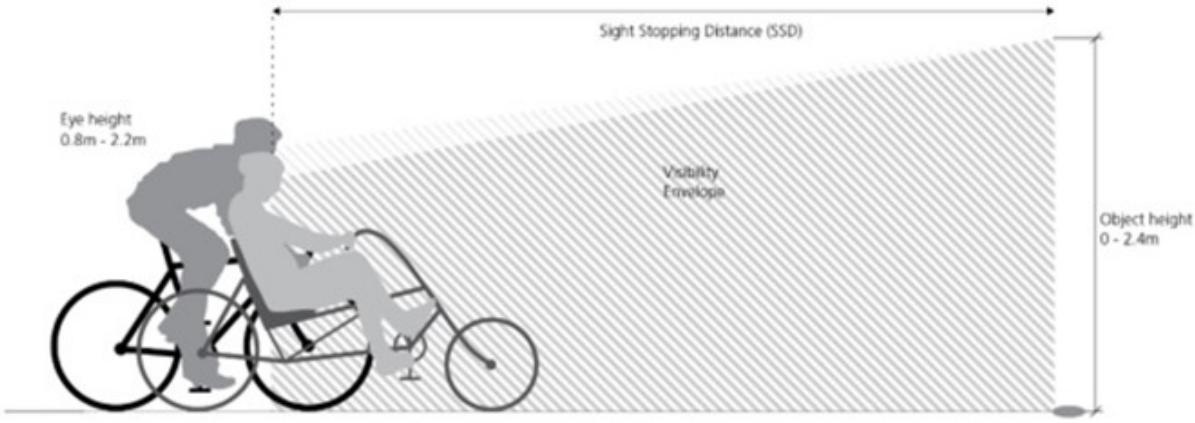
Forward visibility requirements on traffic-free routes

Type of route	Indicative design speed	Minimum stopping sight distance (SSD)	Sight distance in motion (SDM)
Shared use	15mph	15m	50m
Separated provision	20mph*	25m	80m

*** It should be noted that if a traffic-free route is being designed for people on bikes at 20mph then separation between people on bikes and those walking must be provided.**

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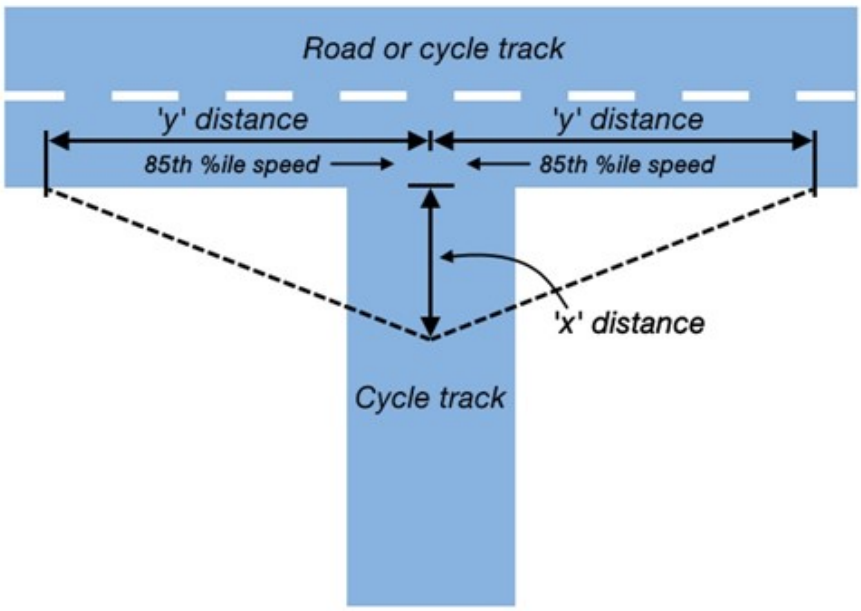
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7.7.3

Where a traffic-free route joins a road or another route, adequate visibility between users on each route must be provided. Designs should ensure that visibility within the envelope shown in the figure below is not obscured.

This visibility envelope is determined by the speed of traffic (motor or people on bikes) on the major arm of the junction. It assumes that the traffic-free route adjoins a highway network. Although the principles would be applicable to a junction with another traffic-free route.



7.7.4

An ‘X’ distance, measured from the give-way line or edge of the major arm, of 4.5m should be used where possible. This will ensure that route users have adequate time to determine whether they need to stop at the junction.

This distance may be reduced to 2.4m and to 1.0m as an absolute minimum where cycle approach speeds are low and the approach geometry encourages a reduction in speed on the traffic-free route. ‘Y’’ distances will be determined by the type and speed of the road environment.

Typical ‘Y’ distances are shown in the table below:

Visibility at junctions

Speed on major arm Kph	20	25	30	32	40	45	48	50	60
Speed on major arm Mph	12	16	19	20	25	28	30	31	37
Y distance along major arm (m)	12	16	20	22	31	36	40	43	56

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7.7.5

In circumstances where traffic-free routes adjoin the strategic highway network, achieving the visibility requirements of the Design Manual for Roads and Bridges (DMRB) will be required.

Appendix D West Sussex Cycling Design Guide

WEST SUSSEX CYCLING DESIGN GUIDE

A guide for Developers, Planners and Engineers

August 2019

west sussex county council

FOREWORD

West Sussex County Council aims to make walking and cycling a central part of transport, planning, health and clean air strategies. We are doing this through the West Sussex Transport Plan 2011 – 2026, the West Sussex Walking and Cycling Strategy 2016 – 2026 and by working together with West Sussex's Local Planning Authorities to ensure walking and cycling considerations are designed into masterplans and development designs from the outset.

The Council recognises that good highway design, which prioritises and creates dedicated space for cycling and walking, will significantly contribute to:

- improving people's health and wellbeing,
- improving safety for pedestrians and cyclists,
- reducing congestion,
- improving air quality,
- boosting the local economy, and
- creating attractive environments where people wish to live

This document conveys our vision for better cycling infrastructure in West Sussex. It is intended to support decision makers and set out more clearly what is expected of developers.

Research commissioned by British Cycling (2014)[1], found that if the UK became a cycling nation like the Netherlands or Denmark it could:

- save the NHS £17 billion within 20 years
- reduce road deaths by 30%
- increase mobility of the nation's poorest families by 25%
- increase retail sales by a quarter
- shifting just 10% of journeys from car to bike would reduce air pollution and save 400 productive life years
- adopting Dutch safety standards could reduce cycling casualties by 2/3rds
- Cycling saves a third of road space compared to driving, to help cut congestion and bike parking takes up 8 times less space than cars

[1]Benefits of Investing in cycling, by Dr Rachel Aldred for British Cycling (2014)

This document provides technical solutions appropriate to specific scenarios that support all cycle users when planning for new development. Our aim is that these design standards become commonplace in all new schemes throughout the county and, as opportunities arise to renew and upgrade existing infrastructure through the normal maintenance routine, or as funding becomes available, they become the standard that is applied to the entire network if site-specific constraints allow.

The conversation around creating healthy environments that support greater levels of cycling is not just unique to West Sussex; it is receiving more attention and investment at a national level, in particular with the government's publication of the Cycling and Walking Investment Strategy (CWIS).

The Council would like to acknowledge the work done by Oxfordshire County Council, upon which these cycling design standards are based.



Roger Elkins
Cabinet Member for Highways & Infrastructure

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Introduction

A better environment for cycling

We would like to see a West Sussex where more people choose to cycle for more journeys. We believe this can be achieved through good highway design to create an attractive and safer environment for cycling. The better we can make the environment for cycling, the more people will choose to cycle. We believe there is a huge unmet demand for more people choosing to cycle, which we will unlock if we get it right.

A more attractive choice

What does this mean? For many journeys people have a choice of how they choose to travel. A large number of factors influence this decision including journey time, cost, convenience and safety. We need to make sure that we address these factors through good highway design so that cycling becomes the preferred choice more often. We need to ensure that people can cycle directly without unnecessary delays, that there is somewhere convenient to leave their cycle at their destination and that they can be and feel safer while cycling.

A choice for everyone

National census data indicates that in some areas of the county, such as along the coastal plain, the proportion of people cycling to work is higher than the national average. This is encouraging but more often than not those that choose to cycle are from specific demographics. We need to ensure we create the right conditions for everyone to choose to cycle, whether they are young or old, male or female, or disabled. We want to make cycling a preferred choice for everyone.

Benefits for everyone

The more people choose to cycle, the greater the benefits for everyone, regardless of whether or not they choose to cycle. An increase in cycle journeys contributes to reduced traffic congestion, better public health, a better environment, a stronger economy and a more pleasant place to live. These are things that everyone wants to see. We hope that the guidance in this document helps to bring these benefits to the people of West Sussex.

Part 1 - Our aims

1.1 Making cycling the natural choice for more journeys

1.1.1 The County Council adopted the West Sussex Walking & Cycling Strategy 2016-2026 as an integral part of the West Sussex Transport Plan 2011-2026. This guidance has been prepared to help deliver the aims and aspirations of the strategy.

1.1.2 The guidance aims to draw attention to key issues and to outline the application of contemporary cycle design thinking from across the country in the West Sussex context. Several similar documents from other parts of the country have been used to inform this guidance.

1.1.3 This document is intended to be a live document and updated when required. It is not intended to be exhaustive or to replicate detailed national or local guidance or regulations that already apply (examples include Design Manual for Roads and Bridges (DMRB) and Traffic Signs Regulations and General Directions 2016 (TSRGD)). Instead, it aims to 'signpost' to these documents.

1.1.4 Several guidance documents should be read in conjunction with this guidance. These documents include:

- Design Guidance Active Travel (Wales) Act 2013 (2014)
- London Cycling Design Standards (2014)
- Greater Manchester Cycling Design Guidance (2014)
- Making Space for Cycling (Cyclenation)
- Handbook for Cycle-friendly Design (Sustrans)
- Interim Advice Note 195/16 Cycle Traffic and the Strategic Road Network (2016)
- Roads in the South Downs (2015) (for developments located within the South Downs National Park)

The guidance contained within these documents is more comprehensive than that contained here and should be referred to for aspects not covered in detail in this guidance where relevant. Case studies that illustrate examples of good practice when developing new cycling infrastructure can be found on the gov.uk website and further related publications are listed in the References section of this document. **Note: as and when new best practice guidance is issued, particularly by the Department for Transport, this may replace guidance in these existing documents.**

1.1.5 In addition, Chapter 9 of the National Planning Policy Framework (Ministry of Housing, Communities and Local Government, Feb 2019) sets out the approach to promoting sustainable transport through new development. In particular, paragraph 110 states that applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and

e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

1.1.6 It is hoped that, by following the guidance contained here, the best value is obtained from future investment in transport facilities through ensuring these are well designed for existing and potential new cycle users from the outset. Well-designed facilities, with cycle users in mind, are essential to make cycling the mode of choice for as many journeys as possible and meet the aims and aspirations of both the West Sussex Walking & Cycling Strategy 2016-2026, Local Cycling and Walking Infrastructure Plans (LCWIPs), and the government's Cycling and Walking Investment Strategy (CWIS).

Part 2 - Cycling in new developments

New developments can offer both a blank canvas and the opportunity to create the ideal conditions that make cycling the first choice for many journeys. Manual for Streets and Streets for All provides the overall guidance for planning new developments. This section draws attention to some of the sections relevant for cycling design and expands upon them.

Note: developers are encouraged to seek pre application advice from the County Council and the Local Planning Authority so that issues can be discussed at an early stage. Information about the Highways pre application advice service can be found on the West Sussex County Council website.

2.1 Connectivity and permeability

"Street networks should, in general, be connected. Connected, or 'permeable', networks encourage walking and cycling, and make places easier to navigate through. They also lead to a more even spread of motor traffic throughout the area..." - **Manual for Streets paragraph 4.2.3**



Diagram 1: Well-connected street layout (left). Poorly connected street layout (right). Credit: Manual for Streets

2.1.1 A well connected street network provides cycle users with the opportunity to make direct journeys with distance minimised whilst spreading motor traffic throughout a wider area, which reduces the level of traffic in any particular area. Both aspects help to make conditions for cycle users more attractive.

2.1.2 Any path connecting one street to another must be planned so that it can be used by both pedestrians and cycle users. Pedestrian only paths (footpaths) should not normally be provided (see 2.1.4). This maximises convenience for cycle users and prevents unsatisfactory situations where paths have been designed for pedestrians only but also become used by cycle users. Building placement needs to ensure acceptable forward visibility at resulting road/path junctions in order to meet this requirement.

Footways or footpaths?

Pedestrians are usually accommodated adjacent to the road carriageway on paths normally raised and edged with kerbs, often known as pavement. These are footways. Away from roads, pedestrians are accommodated on footpaths.

2.1.3 Footways (as opposed to footpaths) must be designed to be used by pedestrians only - cycle users must be accommodated on the road or a dedicated cycle facility.

2.1.4 There are a small number of circumstances where a footpath for pedestrians only might be appropriate, such as:

• Paths that lead off-site to footpaths which are Public Rights of Way (PRoW) and not suitable or without potential for cycling. The County Council's PRoW service should be consulted for advice
• Paths through enclosed or equipped play areas (alternative paths for cycle users should be provided if these are on desire lines)
• Paths that are short connections between parts of a property and in general not used by the public (for example, a path which only leads to a front door of a single property)

2.2 Provision of cycle infrastructure

"Pedestrians and cycle users should generally be accommodated on streets rather than routes segregated from motor traffic. Being seen by drivers, residents and other users affords a greater sense of security. However, short pedestrian and cycle-only links are generally acceptable if designed well…" - **Manual for Streets paragraph 4.2.4**

2.2.1 Creating a permeable street network as described in 2.1.1 will help to spread traffic evenly throughout a development. This should ensure motor traffic on most streets is minimised and, when combined with a low road design speed, will create conditions where no specific infrastructure for cycle users is needed. However, careful consideration of the needs of cycle users is still required and design aspects that can affect cycle users are detailed in section 3.1.

2.2.2 Short pedestrian and cycle links are essential to maximise permeability. General design considerations are to follow the principles contained in Manual for Streets chapter 4. Detailed design considerations are specified in section 3.4 of this document.

Green corridors

2.2.3 Although emphasis is on keeping pedestrian and cycle-only links short, there will be occasions where a longer form of traffic free path (or 'Green Corridor') may be desired through a development as either a design feature or incorporation of an existing public right of way. In these cases, it is essential that routes are wide (2.5m+ within a wider corridor), open, overlooked, not enclosed and barrier-free. Where a green corridor is proposed that uses an existing Public Right of Way it needs to follow the legal line and full width, while also ensuring provision for cycle users does not unnecessarily impact on other users, including walkers and equestrians as appropriate, as well as respecting habitats and protected species. Also, the provision of any form of green corridor is to be in addition to, not instead of, appropriate provision of cycle facilities elsewhere on the site, including on spine roads.

Spine and distributor roads

2.2.4 Accommodating cycle users on the carriageway applies equally for busier roads in new developments where the speed of the road is 30mph or less. While a well-connected street network helps to prevent roads becoming busy with motor traffic, only a small number of streets in a new development are usually connected to the existing highway network, resulting in greater levels of traffic on these roads.

2.2.5 While no specific cycle infrastructure is required along the majority of residential streets, busier streets do require specific infrastructure to create an acceptable environment for cycle users. Good design - including adequate space and priority for cycle users - is needed to ensure cycle users feel safe and cycle journeys are direct and convenient.

2.2.6 Along such roads, sometimes referred to as spine roads, the minimum provisions for cycle users are stepped cycle tracks (sometimes called hybrid cycle lanes, terraced or similar) on each side of the road. This also applies to smaller sites where these will ultimately form a larger overall development meeting these criteria. Table 2a sets out the minimum level of cycle infrastructure provision.

2.2.7 Design aspects for stepped cycle tracks can be found in section 3.2.

2.2.8 Other solutions for cycle user provision on busier roads can be considered but the principle of provision being an integral part of the carriageway rather than footway must remain. Shared-use footways alongside spine roads must not be provided, only pedestrian footways. Priority for cycle users at side road junctions is critical. Stepped cycle tracks as described in 3.2 or completely segregated cycle lanes are to be provided, not cycle lanes consisting only of painted lines as, in order to achieve adequate cycle lane width, simple painted lines create an unacceptably wide carriageway, making control of motor vehicle speed less self-enforcing.

Road type	Description of road type	Cycle provision
Primary distributor road	Sometimes required for larger developments. Normally connects to existing roads at either end. Development spine roads connect to this road. Development properties do not normally access this road directly.	Depends on the speed of road. Where greater than 30mph, off carriageway provision must be provided (cycle tracks), preferably segregated. Where 30mph or below, either the provision described above or that described for spine roads.
Spine Road	Road that connects to the existing highway network or primary distributor road. Residential streets connect to this road, and some development properties directly connect to this road. Local centres are likely to be served by this road.	Where spine road serves a development of greater than 500 dwellings and connects to existing highway or primary distributor road at both ends, stepped cycle tracks are to be provided throughout on both sides of the carriageway.
Residential Street	Streets serving dwellings which connect to a spine road and to each other.	Streets should be designed to minimise traffic speed. No specific cycle infrastructure required, but to be designed with cycle users in mind.

Table 1: Cycle provision and road type

Public Rights of Way

2.2.9 The West Sussex Rights of Way Management Plan 2018-2028 details how the public rights of way network will be managed and developed.

2.2.10 Sites will sometimes have existing Public Rights of Way (PROW) that cross them. Internally, within a site, and unless a public path order to divert or extinguish the path is confirmed, it is essential to recognise and incorporate existing public rights of way into the well-connected network of streets and paths. It may be possible to make footpaths available to cycle users where this will not impact detrimentally on other users of the path; if unsuitable, alternative parallel facilities for cycle users are to be provided. Discussion with the County Council's PRoW service will determine the approach to incorporating these paths into a new site.

2.2.11 Footpaths are the most common type of Public Rights of Way and use by cyclists is not as of public right. However, cycle users have rights to use higher status routes alongside other users: bridleways, restricted byways and byways, but these are often unsurfaced and may not be suitable for some types of cycle. Where a Public Right of Way crosses a development site, it should be assessed for the potential to incorporate it into the local transport network and suitable provision made for cycle users. This is likely to take one of two forms:

- Provision of a parallel cycle path, offering shared use or segregated from the public right of way as necessary
- Enabling cycle users to use the route through the site by the landowner dedicating the route as bridleway or restricted byway

2.2.12 It should be noted that these provisions apply to Public Rights of Way through a new development area only. Off site, a new development usually impacts on PRoW in some way. Improvement of local off-road access may enhance the offer of the new development for future occupants whilst also being visible mitigation for the local disruption and any loss felt due to the development itself. Developers are, therefore, expected to play a positive role in improving the local PRoW network outside of the 'red line boundary' and the County Council's PRoW service welcomes early discussion with developers on this issue.

Contact the Public Rights of Way Team if you need more information:

prow@westsussex.gov.uk

01243 777620

2.3 Connectivity of sites to existing network

"Internal permeability is important, but the area also needs to be properly connected with adjacent street networks. A development with poor links to the surrounding area creates an enclave which encourages movement to and from it by car rather than other modes" **- Manual for Streets paragraph 4.2.5**

2.3.1 Connections for motor vehicles to the existing highway network from a new development are usually restricted to a small number of points. All opportunities therefore need to be explored to supplement these points with pedestrian and cycle user only links, particularly at points furthest from the site access road junction(s) and corners of the site. The aim is to ensure that the distance required to make a journey by bicycle is minimised. Indeed, cycling and walking should be the natural choice for shorter journeys (such as journeys to school) or as part of a longer journey.
2.3.2 The design and layout of the development must recognise that the site will form part of the wider network for cycle users and that cycle users will use the site roads and paths to make journeys passing through the site. Development layout needs to ensure cycle users passing through a site should not be subject to unnecessary diversions or delays and be able to maintain a direct route, so far as is possible. West Sussex County Council will assist with the identification of the wider network, particularly where it does not yet exist.

2.4 Cycle Parking

"Providing enough convenient and secure cycle parking at people's homes and other locations for both residents and visitors is critical to increasing the use of cycles. In residential developments, designers should aim to make access to cycle storage at least as convenient as access to car parking" **- Manual for Streets paragraph 8.2.1**

2.4.1 All cycle parking facilities should be secure, easy to use, and located in convenient, sheltered positions. Residential visitor cycle parking should be provided as communal parking at convenient and appropriate locations through the development ('Sheffield' stands preferred). Garages should be designed to allow space for car plus storage of cycles in line with 'Principle G' of the County Council's 'Guidance on Parking in New Developments 2019'.

2.4.2 There are several aspects to consider when planning cycle parking to ensure it is attractive to use and contributes positively to a journey by bike. Section 8.2 of Manual for Streets details many of the considerations.

2.4.3 Particular attention is drawn to the provision of enclosed cycle storage often provided for flats. Inside enclosed cycle storage areas, simple Sheffield type stands are often the most straightforward solution. However, they must be positioned with adequate spacing between them and to any walls. Entry doors or gates need to have clear access; for example, they must not open onto a parking space.



2.4.4 The standards contained in this section are very much minimum standards – new developments need to consider rising levels of cycle ownership (including accessories such as trailers and larger cycles such as cargo bikes and e-bikes) and ensure that provision is appropriate and sustainable. Provision of bolt-down cycle repair stations (stands featuring basic tools) and track pumps should be considered for workplaces and for communal cycle parking areas in residential developments. At workplaces consideration should be given to appropriate shower and changing facilities and secure locker storage.

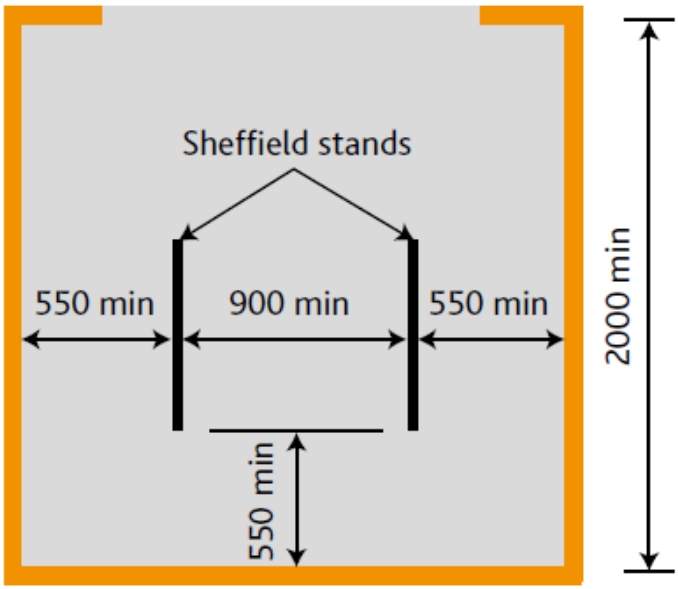


Diagram 2: Minimum dimensions of an enclosed cycle storage area. Credit: Manual for Streets

2.5 Checklist for developers

Cycle provision should be assessed using the LCWIP Route Selection Tool and score well against the assessment criteria:

Directness
Comfort
Gradient
Connectivity
Safety

The minimum standards for cycle parking must also be met.

2.6 Inclusive design

Infrastructure causes the most difficulty for disabled cyclists. Although most disabled cyclists (41%) use standard two-wheel bicycles around 1 in 3 have been unable to park and store a non-standard cycle. 'A Guide to Inclusive Cycling' (Wheels for Wellbeing, Nov 2017) contains advice about how inclusive cycling can be achieved through the provision of appropriate infrastructure and facilities.

Part 3 - Cycle facility specifications

This section gives guidance on the specification of infrastructure elements for cycle users. In addition to new developments, the guidance can apply to new schemes on the existing highway network. In retrofit locations it will not always be possible to achieve the minimum widths set out below and it may be necessary to compromise. Where existing constraints restrict the desired widths, or prevent types of infrastructure from being installed to the standards set in this chapter, designs will be considered on an individual basis.

Speed Limit	Annual Average Daily Traffic (AADT)	Anticipated peak hour number of non-motorised users per hour (either 1-way or 2-way depending on the Cycle Route Type)	Cycle Route Type	Desirable Minimum Effective Width	Absolute Minimum Effective Width
20 or 30 mph	Below 2,500	Any	Cycle-friendly street design		
20 or 30 mph	2,500 - 5,000	<150	Cycle Lanes (Mandatory or Advisory)* **	2.0m	1.5m
20 or 30 mph	5,000+	<150	1-way cycle track (including stepped cycle track)* **	2.5m	1.5m
		150-750		3.0m	2.5m
		>750		4.0m	3.5m
30 mph	5,000+	<150	2-way cycle track or shared path **	3.0m	2.5m
		>150	2-way cycle track (segregated from pedestrians) **	4.0m	3.5m
40 mph and above	Any	<150	2-way cycle track or shared path ***	3.0m	2.5m
		>150	2-way cycle track (segregated from pedestrians) ***	4.0m	3.5m

* Where the minimum width cannot be attained over the majority of its length, cycle lanes should not normally be provided. In such circumstances, and where demarcation of a route is deemed appropriate, the use of signing and cycle symbol logo patches located 1.5m from the kerb may be an alternative option.
** Light forms of cycle lane segregation, such as wands or armadillos, can also be considered.
*** Tracks on high speed roads should be separated from the carriageway by verge space or hedge. See 3.2.7.

Table 2a: Summary of minimum provision of cycle infrastructure on highways

Where vertical features are present, additional clearance will be required to maintain effective widths as set out in Table 2b.

Type of edge constraint	Additional width required to maintain effective width of cycle track
Flush or near-flush surface	No additional width needed
Kerb up to 150 mm high	Add 200 mm
Vertical feature from 150 to 600 mm high	Add 250 mm
Vertical feature above 600 mm high	Add 500 mm

Table 2b: Additional clearances to maintain effective widths for cycle users

3.1 Quiet streets

3.1.1 No specific cycle infrastructure is required or necessarily desired on streets where traffic is light and speed is low. For the purposes of this document this is defined as where the 5-day average annual daily motor traffic flow is less than 2,500 and speed limit of either 20mph or 30mph. Most residential streets fall into this category.

3.1.2 Although no specific infrastructure is required, the needs of cycle users must still always be considered. This is particularly true when using features to help ensure slow moving motor vehicles - the impact of features designed to slow or calm motor traffic on cycle users must be considered.

3.1.3 The following table outlines features sometimes used and their potential impact on cycle users. It is not intended to be exhaustive.

Feature	Possible impact on cycle users
Surface changes/rumble strips/cobbles	Can cause cycle users to become unsteady. Where used, alternative smoother surface sections for cycle users should be provided. For example, if rough cobbles are to be used, smooth sections for cycle users should be provided, and these need to be in appropriate locations and not a narrow strip at the very edge of the road. Often a wider section one metre from the road edge will be more appropriate.
Build-outs	Can be an inconvenience and potential danger for cycle users and may be too narrow for cleaning vehicles to access leading to detritus build-up. If used, build-outs must have a method for cycle users to bypass them, although care should be taken to ensure this is in an appropriate location, particularly if parked cars are likely to be present on either side, in which case street furniture should prevent parking too close to the build-out. The bypass facility should have a smooth surface.

Table 3: Road features that negatively impact cyclists and should be avoided if site-specific constraints allow

3.2 Busier roads

3.2.1 Where the average annual daily motor traffic flow (AADT) exceeds 2,500, or where the road speed is higher than 40mph, provision for cyclists must be made.

3.2.2 Cycle users should be provided with space to cycle. This helps to improve safety for cycle users and allows cycle users not to be obstructed when vehicle congestion causes slow or stationary traffic. In addition, the provision of space dedicated for cycle users helps to improve perceived safety of cycling and creates a more pleasant cycling experience as a result.

3.2.3 Several types of cycle facility can provide dedicated space for cycle users including mandatory cycle lanes, stepped cycle tracks and parallel cycle tracks completely segregated from traffic.

3.2.4 The minimum infrastructure provision is stated in Table 2a.

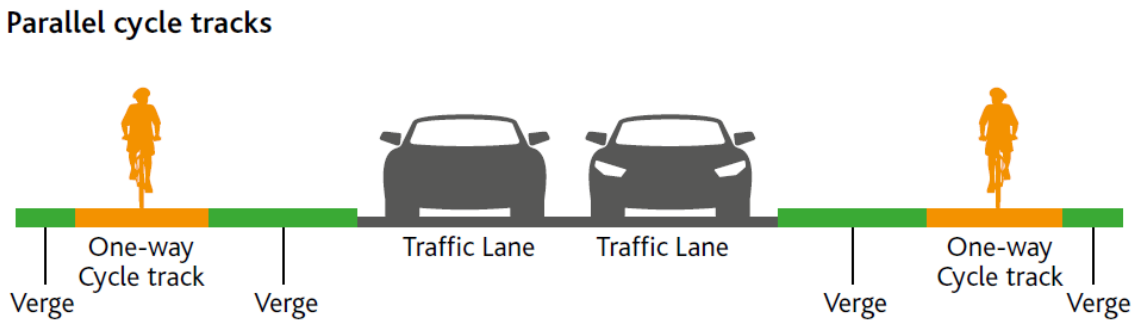


Diagram 3: Parallel cycle track

3.2.5 Along inter-urban higher speed roads, priority for cycle provision is to focus on fully segregating cycle users from traffic. This can be achieved with the provision of completely segregated cycle tracks or shared use paths alongside the road. In these circumstances some of the negative aspects of roadside shared use paths that occur where provided in urban areas can be less of an issue: pedestrian usage tends to be significantly lower reducing potential for conflict; and the number of side-roads is likely to be lower. Care must be taken to ensure good integration with the carriageway at appropriate points.

3.2.6 Such paths must generally cater for cyclists travelling in both directions. There should be an aim, where it is possible, for them to be provided on both sides of the carriageway to prevent the need for cycle users to have to cross the carriageway and back again. Paths should be set back away from the roadside as far as possible to reduce the possibility of cycle users being dazzled by car headlights at night.

3.2.7 Design aspects for shared use paths alongside roads are the same as for any off-carriageway path and detailed in section 3.4. Paths should be separated from the carriageway by verge space or hedge – the greater the buffer between the path and the carriageway the more pleasant the path environment can be. This separation is especially important for paths also used by equestrians.

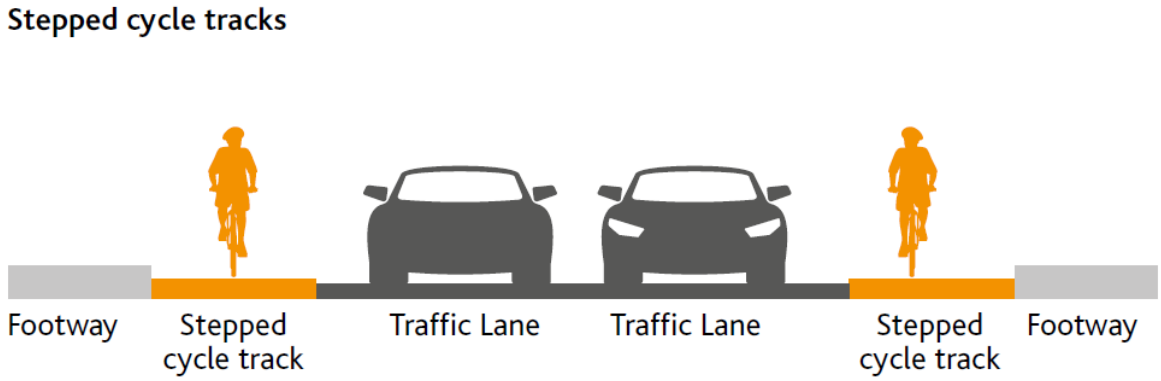


Diagram 4: Stepped cycle track

3.2.8 Stepped cycle tracks provide cycle users with some protection from traffic, dedicated space on the carriageway and priority across side-road junctions. Sometimes referred to as 'hybrid' or 'terraced' cycle lanes, the cycle lane is raised slightly above the rest of the carriageway and clearly separated from it with kerbing, with a further kerb between the cycle lane and the footway. This design addresses several of the negative aspects of roadside shared use paths while retaining the

benefits. They can usually be constructed without needing substantially more overall highway space than shared use paths require.

3.2.9 There are several different design styles of cycle lanes that provide some form of partial segregation from traffic.

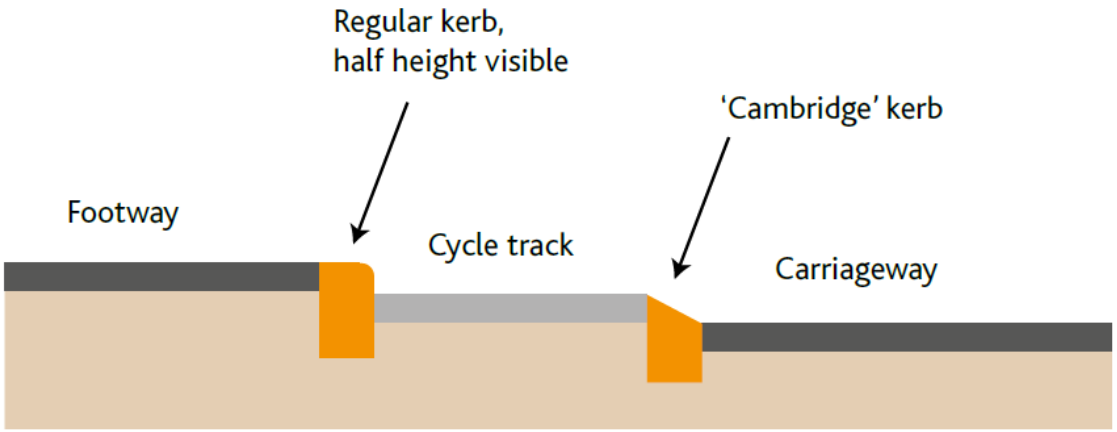


Diagram 5: Stepped cycle track cross-section

3.2.10 The preferred design of stepped cycle track is shown in Diagram 5. This has a kerb of mid height between the cycle lane and the rest of the carriageway, and another similar height kerb to the footway or verge. The kerbs provide barriers helping to prevent incursion from motor vehicles while allowing street cleaning vehicles to access the cycle lane when required, helping to ensure the facility doesn't become a 'gutter' for litter and foliage. At side roads, the cycle lane can remain raised across the junction mouth. At more complicated junctions it may be necessary for raised cycle lanes to drop down to carriageway height, becoming regular painted cycle lanes.

3.2.11 Stepped cycle tracks should be of a width between 1.5 metres (absolute minimum running width - excludes kerb/paint width) and 2 metres, with a recommended width of 1.8 metres. Where cycle traffic volumes demand a width of greater than 2 metres, or space is available, full segregation should be considered first.

3.2.12 Kerbs separating the stepped cycle track from the rest of the carriageway should be 'Cambridge' kerbs, which were developed specifically for raised cycle lanes to ensure cycle users can safely negotiate an obstruction in the cycle track by re-joining the carriageway.

3.2.13 Kerbs separating a stepped cycle track from the footway should be half-height bullnose kerbs to ensure appropriate physical footway edging relied upon by partially sighted people and to discourage cycle users from riding on the footway.

3.2.14 Parking in stepped cycle tracks must not be permitted. Where parking is to be accommodated, a stepped cycle track could pass either side of the parking bays, although passing on the nearside is preferable. An adequate buffer should be provided to prevent car doors being opened into the cycle track.

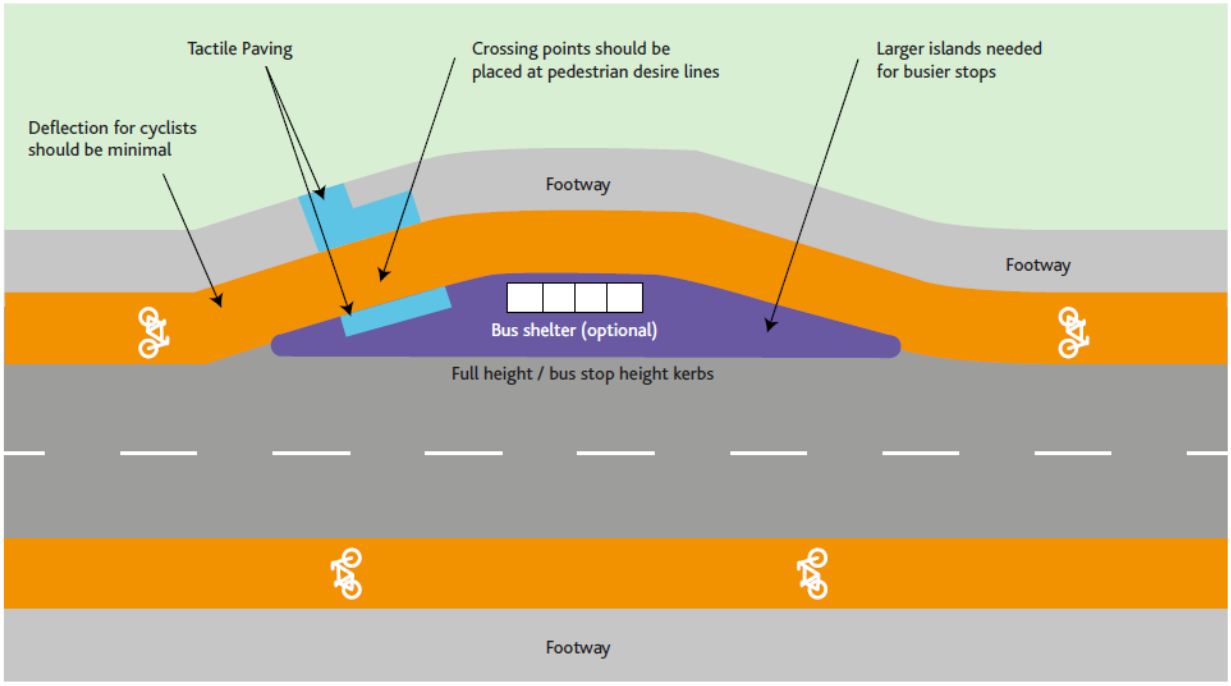


Diagram 6: Bus Stop by-pass (indicative layout – not to scale)

3.2.15 Bus stop bypasses may be appropriate for stepped cycle tracks; however, care needs to be taken to ensure their design is not unnecessarily inconvenient for cycle users or pedestrians. The angle of deflection for the cycle track to pass behind a bus stop should be minimised while ensuring appropriate width and space for bus passengers.

3.2.16 Locations of crossing points for pedestrians should be based on desire lines and be raised across the cycle track. Where a bus lane is present, designs should take into account that some cycle users may wish to use the bus lane rather than the bypass when a bus is not present. As a general principle, bus passengers should not be able to step off a bus directly into any form of cycle infrastructure.

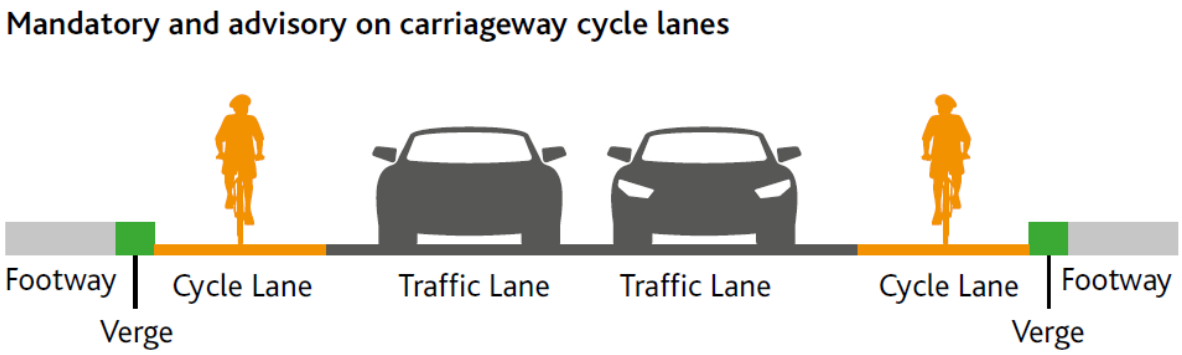


Diagram 7: On-carriageway cycle lanes

3.2.17 The widths of both mandatory and advisory cycle lanes are the same as for stepped cycle tracks: 1.5m to 2m with 1.8m being the recommended width.

3.2.18 Where the minimum width cannot be attained over the majority of its length, cycle lanes should not normally be provided. Research by Parkin J & Meyers C, 2009 suggests cycle lanes can cause motorists to leave a smaller and, in the case of narrow lanes, inadequate space when

overtaking a cycle user. In such circumstances, and where demarcation of a route is deemed appropriate, the use of signing and cycle symbol logo patches located 1.5m from the kerb may be an alternative option. There may be limited occasions where short sections of substandard width cycle lane do have clear benefit, such as to allow access to an advance stop line at traffic lights or to maintain continuity.

3.2.19 Both mandatory and advisory lanes should in general not make use of specially coloured surfaces. This is primarily to reduce maintenance costs. Short sections of coloured surface may be used in some circumstances, such as across side road mouths. When roads are resurfaced, this must include the full width of the carriageway including cycle lanes.

3.2.20 The use of LED road studs to delineate cycle lanes is encouraged, particularly along busier roads.

3.2.21 Light forms of cycle lane segregation, such as wands, orcas, or armadillos, can be considered.

3.2.22 If site-specific constraints allow, ironworks - such as drains and drain covers – should not be sited within 1.2m of the kerb. Drain/manhole covers should not be sited where cyclists could lose front wheel grip (e.g. on corners). Skid resistant covers should be used at locations where this cannot be practically achieved.

3.3 Junctions

3.3.1 The needs of cycle users should be incorporated into the designs of all junctions. The needs of cycle users should be considered for all possible movements.

3.3.2 Junctions present many complex issues for good cycle facility design and a great deal of recent work has been done elsewhere to try to address this. This guidance document does not aim to cover detailed design aspects of junctions. For this reason, it is essential to refer to the more detailed guidance on junctions contained within the following reference documents (see also References section at the end of this guide):

- Design Guidance - Active Travel (Wales) Act 2013 (2014)
- London Cycling Design Guidance (2014)
- Greater Manchester Cycling Design Guidance (2014)
- Handbook for Cycle-friendly Design (Sustrans, 2014)
- Interim Advice Note 195/16 – Cycle Traffic and the Strategic Road Network (2016) (sections 2.4, 2.6 and 2.7)

3.3.3 The toolkit for junction designers has recently been enhanced with low level signals for cycle users, early release for cycle users, and two stage turns now available. These are covered in some of the documents listed above and should be incorporated into designs where appropriate.

3.3.4 At traffic light-controlled junctions on classified roads or where cycle lanes or stepped cycle tracks are present, advance stop lines should be provided on all arms of the junction together with appropriate means to access them. Advance stop lines should be a minimum of 4m deep.

3.3.5 Roundabouts can be particularly daunting for some cycle users, especially large multi-lane roundabouts. Approaches, exits and the geometry of roundabouts should aim to cause traffic to slow down to use the roundabout and therefore reduce the risk to cycle users. For low speed roads

with low traffic volumes roundabout entry should be radial, not tangential. For higher speed roads with higher traffic volumes where tangential roundabouts are to be provided, the design should give consideration to cycle users and the type of cycle routes the roundabout is connecting to (see Table 2a). These aspects are covered in some of the documents listed in 3.3.2. Dialogue with the County Council is encouraged – especially in relation to complex scenarios or where capacity is material consideration.

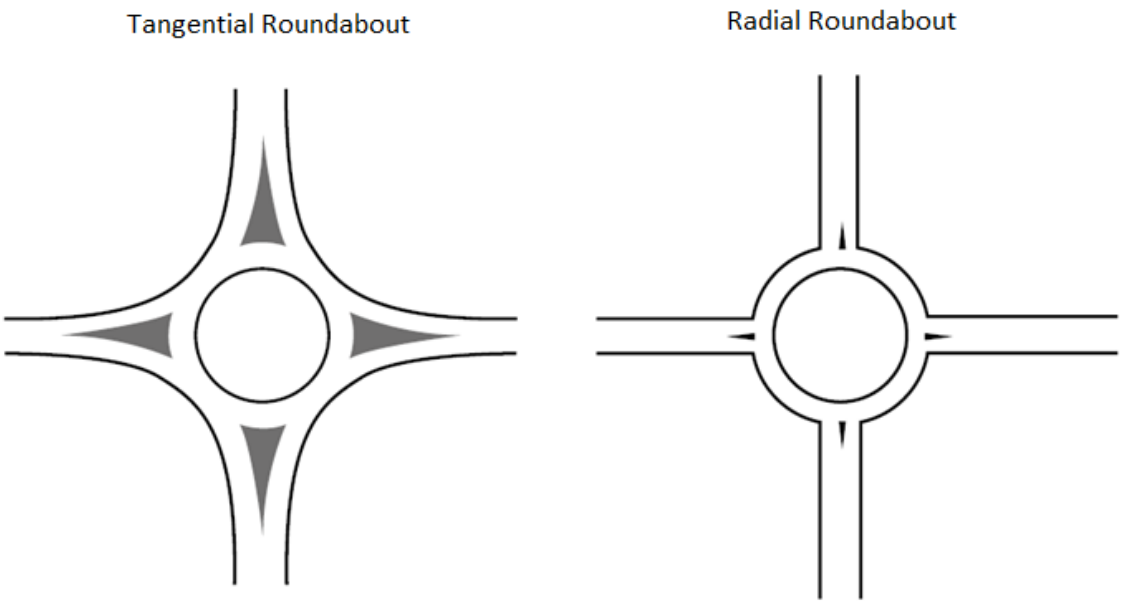


Diagram 8: Roundabouts on low speed roads with low traffic flows should be designed with radial entry

3.3.6 Adverse cambers at junctions are potential hazard for cyclists and should be mitigated.

3.4 Off-carriageway cycle facilities

3.4.1 Good facilities for cycle users on carriageways are complemented by good off-carriageway facilities.

3.4.2 It is imperative that on and off carriageway facilities are integrated to form a single network for cycle users and not considered as two separate networks. This includes where off-carriageway facilities meet a road that itself has no specific infrastructure for cycle users.

3.4.3 Path surfaces should be appropriate to the environment and users; for example, in urban areas paths should usually be sealed with 'black top' unless Conservation Area status precludes this. Town centre Public Realm schemes may require a higher standard of finish. In rural areas other surfaces may be more appropriate, such as compacted stone, or grit rolled into a stone surface, especially if the routes are shared with equestrian users (obtain advice from local riders and British Horse Society), or if the route is located in a sensitive location such in the South Downs National Park, an Area of Outstanding Natural Beauty, or open countryside. In certain rural locations the use of 'black top' may be acceptable if the surface is suitable for all path users (e.g. equestrians). The County Council's PRoW service can advise on this matter.

3.4.4 Paths should be lit wherever appropriate – and particularly where they connect one lit area to another. In rural areas, solar studs can provide an appropriate form of light. Consideration must be given to the South Downs National Park's International Dark Sky Reserve status.

3.4.5 Paths should be direct, open (not enclosed with high sided fences) and, if site-specific constraints allow, overlooked to aid personal security.

3.4.6 Off-carriageway facilities that are well used by cycle users and other users should be fully segregated by kerbing, verge or hedge, and not by painted lines. This benefits all users by reducing the potential for conflict, increasing perceived safety and helping to ensure all users can make their journey in an efficient and enjoyable manner.

3.4.7 On the highway network a section of a segregated path for cycle users should be 3 metres or wider, with 2.5m as a minimum acceptable for short sections (no greater than 100m). For walkers a minimum of 1.5m (2m+ recommended) is to be provided and for equestrians a minimum of 3m.

3.4.8 On the Public Rights of Way network footpaths should be a minimum of 3 metres wide and bridleways should be a minimum of 4m wide (see 2.2.9 to 2.2.12 above).

Shared paths

3.4.9 It is not always appropriate, possible or necessary to provide fully segregated off-carriageway paths. For lightly used paths a shared path will suffice (see Table 2a above). Extra care will be required to integrate shared paths with the carriageway for cycle users while suitably catering for the needs of pedestrians and other users, including equestrians where appropriate.

3.4.10 Usage should dictate the width of such paths, with 3 metres the recommended width - 2.5 metres may be acceptable but should be discussed with the County Council. Paths wider than 3 metres should normally be segregated rather than shared.

3.4.11 In general, shared paths should not be divided with painted lines. Where these have been provided in the past, they are often ignored by both pedestrians and cycle users and provide little benefit. In locations where usage is high segregation with painted lines may begin to become self-enforcing and have benefit.

3.5 Interface between on and off-carriageway facilities

3.5.1 Where a cycle facility transitions from off- to on-carriageway, or where an off-carriageway facility ends and cycle users continue their journey on carriageway, flush kerbs must be used rather than drop kerbs.



✓ flush kerb



✗ drop kerb

3.5.2 Barriers must not be provided at the beginning or end of off-carriageway facilities, except in circumstances where there is a demonstrable need. Where incursion by motor vehicles is an issue, a single centrally placed bollard should be sufficient. Bollard placement must ensure adequate space either side and include reflectors to ensure it can be seen at night. It may be necessary to apply for formal consent to site a bollard or barrier within an existing public right of way; the County Council's PRoW service can provide advice on request. A 1.5m gap either side of the bollard is required on bridleways.

3.5.3 The use of 'protected exits' is encouraged where an off-carriageway facility joins the carriageway. With this facility the off-carriageway (or roadside) cycle path continues directly onto the carriageway into a cycle lane. This interface allows cycle users to continue their journey seamlessly onto the carriageway without a need to stop and give way to traffic. Where no cycle lane on the carriageway is provided, a short section of advisory lane should be provided to allow the cycle user to merge into the traffic flow, again without needing to give way.

3.5.4 Protected exits should not be used in all scenarios, for example where a cycle facility continues on the opposite side of the carriageway. In these scenarios a give way marking may be the most suitable option. Careful consideration is needed to ensure all possible movements of cycle users are adequately catered for.

Crossings

3.5.5 When designing crossing facilities for cycle users, designs should take into consideration that a crossing point is an interface between the off-carriageway cycle facility and the carriageway - not all cycle users will be crossing; some will be leaving the highway at that point to continue along the off-carriageway facility and vice-versa. It may be helpful to think of a crossing as a road junction with one or more arms available for cycle users only.

3.5.6 Crossing designs should not expect or require cycle users to dismount to cross the road.

3.5.7 As with junctions, this guidance does not currently cover detailed design aspects of crossings. Instead designers are to refer to the documents as listed in 3.3.2 and in the reference section together with the Design Manual for Roads and Bridges and Manual for Streets.

3.5.8 A new type of crossing for cycle users is now available. A parallel crossing provides a crossing for cycle users alongside a traditional zebra crossing and is sometimes referred to as a Tiger crossing.

3.6 Signing

3.6.1 Signing has three main functions: regulatory (traffic management signing that is enforceable); warning and information (traffic management signing that provides hazard warnings and guides vehicle positioning); and wayfinding (location and direction signing).

3.6.2 All cycle signs and road markings located within the public highway must be in accordance with the Traffic Signs Regulations & General Directions 2016 (TSRGD) and any subsequent amendments to this Statutory Instrument. Supplementary advice on correct signing application is found within the Traffic Signs Manual.

3.6.3 Off-highway signing shall indicate where cycling is permitted and support cycle wayfinding. This signing must conform to WSCC guidance and standards, although recognisable elements from on-highway signing should be incorporated to support continuity and legibility.

3.6.4 Cycle signing must be minimised to that actually required or with a clear benefit to users (refer to Traffic Advisory Leaflet 01/13 Reducing Sign Clutter). Consideration should be given to mounting repeater signs at smaller sizes on bollards, where practicable, rather than posts. Signing should be sensitive to the location.

3.6.5 The CYCLISTS DISMOUNT sign to TSRGD Schedule 11 Part 2 Item 46 should not be used; a CYCLISTS REJOIN CARRIAGEWAY sign to the same diagram may be more appropriate in some circumstances. The appropriateness of cycle infrastructure should be reconsidered at locations where a designer has to consider using a CYCLISTS DISMOUNT sign.

3.6.6 Use of the END OF CYCLE ROUTE signs to TSRGD Schedule 11 Part 2 Item 45 and the associated END road marking to TSRGD Schedule 11 Part 4 Item 30 should be avoided or minimised as they indicate provision for cyclists has ended. Signed provision must be made where an off-road track ends; in most cases this will be on the adjacent carriageway, for which a CYCLISTS REJOIN CARRIAGEWAY sign should be used. This must be made clear to cyclists to prevent inadvertent riding on footways.

3.6.7 Signs shall be mounted at a minimum height of 2.4 metres where cyclists can cycle beneath them. Wall or bollard mounting heights between 0.8 and 1.5 metres are preferred.

3.6.8 Signs should not be located more than 1.0 metre from the relevant surface to prevent possible user confusion. A minimum 500mm lateral clearance is required between edge of cycle facility and traffic sign installation (post or signplate depending on the latter's mounting height).

3.6.9 The use of directional signing is encouraged where it helps wayfinding, even for shorter sections of path. Directional signing should be provided at all junctions with other cycle routes and where a cycle route meets a carriageway. Distances will usually be indicated except where the journey time to a stated destination is less than 15 minutes for a cycle user travelling at 12mph, in which case the journey time should be displayed instead in mins.

3.6.10 Directional signs for cyclists should use 25mm x-height text (the smallest permitted size – x-height is the height of the lowercase letter ‘x’) to minimise signplate sizes. It will seldom be necessary to use larger text heights except where the viewing distance is greater than 30 metres, in which case 30mm x-height should suffice.

References

- Manual for Streets 1 (Department for Transport, 2007)
- Manual for Streets 2 (Department for Transport, 2010)
- Cycle & Pedestrian Routes within Car Parks (Sustrans Technical Information Note No. 16, 2011)
- The National Planning Policy Framework (Ministry of Housing, Communities & Local Government, Feb 2019)
- Local Transport Note 1/12 – Shared Use Routes for Pedestrians and Cyclists (Department for Transport, 2012)
- Door to Door: A strategy for improving sustainable transport integration (Department for Transport, 2013)
- Better Streets Delivered (Transport for London, 2013)
- Better Streets Delivered 2 (Transport for London, 2017)
- Design Guidance Active Travel (Wales) Act 2013 (Welsh Government, 2014)
- London Cycling Design Standards (Transport for London, 2014)
- Greater Manchester Cycling Design Guidance (Transport for Greater Manchester, 2014)
- Handbook for Cycle-friendly Design (Sustrans, 2014)
- Making Space for Cycling (Cyclenation, 2014)
- Street Design for All (Civic Voice, 2014)
- Benefits of Investing in Cycling (British Cycling/ Dr Rachel Aldred, 2014)
- Station Public Realm Design Guidance (Transport for London 2015)
- Waltham Forest Mini Holland Design Guide (Waltham Forest Council, 2015)
- Roads in the South Downs (South Downs National Park Authority, 2015)
- Interim Advice Note 195/16 Cycle Traffic and the Strategic Road Network (2016)
- Design Manual for Roads and Bridges (Highways England, 2019)
- Working Together to Promote Active Travel (Public Health England, 2016)
- Start Active, Stay Active (Department of Health, 2016)
- Traffic Signs Regulations and General Directions (Department for Transport, 2016)
- Case studies: developing new cycling infrastructure (Department for Transport, 2016)
- A Guide to Inclusive Cycling (Wheels for Wellbeing, 2017)
- Oxfordshire Cycling Design Standards (Oxfordshire County Council, 2017)
- North Tyneside Cycling Design Guide (North Tyneside Council, 2018)
- Parking in New Developments (West Sussex County Council, 2019)

Developers, planners and engineers are guided to read the Cycling Design Guide in conjunction with the relevant Local Planning Authority Local Plan as well as the following West Sussex County Council published documents:

- The West Sussex Transport Plan 2011-2026
- The West Sussex Walking & Cycling Strategy 2016-2026
- The West Sussex Rights of Way Management Plan 2018-2028

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Appendix E Updated Travel Plan



Travel Plan

Land at Woodgate Centre, Woodgate

20-061-008 Rev C

August 2021

Charles & Associates

Document Control Sheet

Project Name:	Land at Woodgate Centre, Woodgate
Project Number:	20-061
Report Title:	Travel Plan
Report Number:	008

Rev	Issue Purpose	Author	Checked	Reviewed	Approved	Date
-	Draft	PL	CG	PL	GAC	14/04/21
A	2nd Draft	PL	CG	PL	GAC	08/07/21
B	Final	PL	CG	PL	GAC	03/08/21
C	WSCC comments	GW	MN	SW	GAC	22/10/21

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1 Introduction

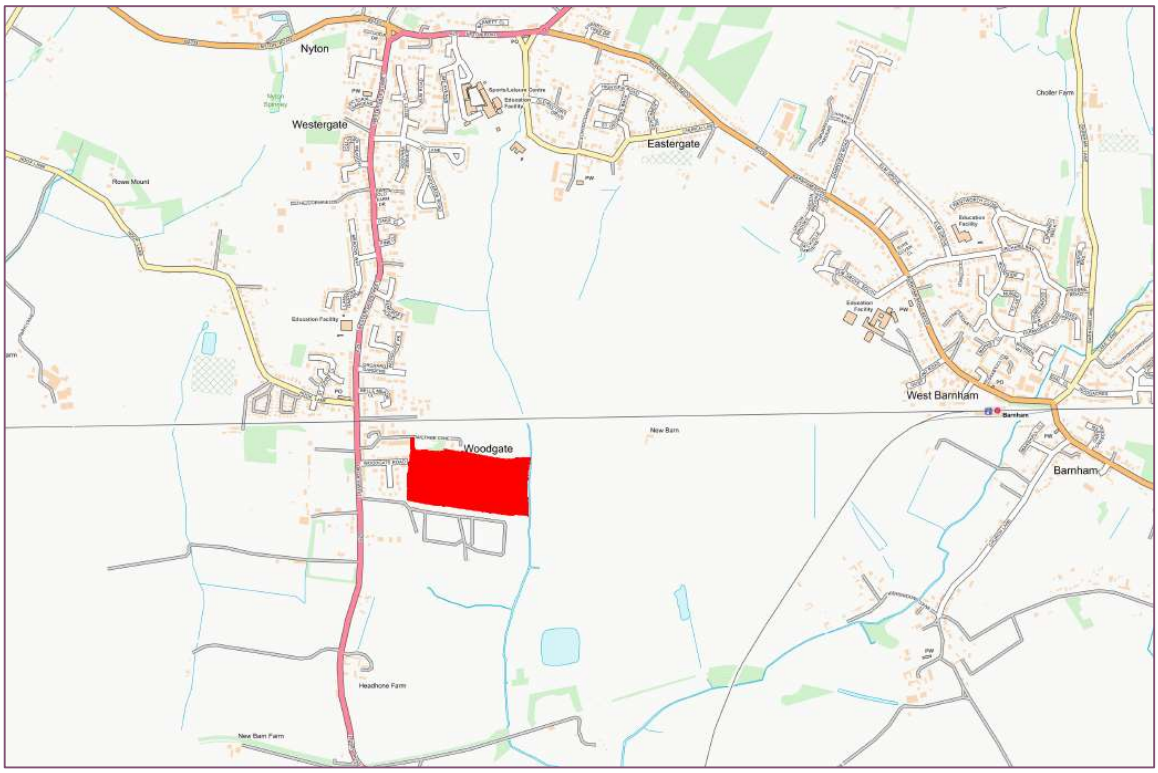
1.1 Introduction

1.1.1 Charles & Associates Consulting Engineers Ltd. (C&A) have been commissioned by PYE Homes in relation to Land at Woodgate Road, Aldingbourne, West Sussex, hereafter referred as the "the site".

1.1.2 C&A have prepared a Transport Assessment (TA) and a Residential Travel Plan (TP) in support of a detailed planning application for up to 180 dwellings on the site.

1.1.3 The site is located to the east of the A29 Lidsey Road and to the south of the existing railway line running through the Woodgate village and is access via Woodgate Road. The location of the site is illustrated in red in **Figure 1.1** below.

Figure 1.1: Site Location



1.1.4 The site forms part of the wider strategic allocation referred to as Barnham, Eastergate and Westergate (BEW) under Policy H SP2c (SD5) within the adopted Arun District Council (ADC) Local Plan 2011-2031.

1.1.5 Pre-application discussions were held with West Sussex Council County (WSCC) which is the local highway authority for the area. During the discussions, it was determined that a TP would be required and therefore, the proposed development will implement a robust and effective TP with the objective of encouraging and supporting sustainable travel and reducing single occupancy car use.

1.1.6 This TP sets out site specific initiatives aimed at improving the availability and choice of travel modes to and from the development for all residents and visitors of the site. Together with the TA submitted with this application, this TP will aim to be the mechanism by which the overall travel demand will be managed ad monitored. Therefore, this TP should be read in conjunction with the associated TA (C&A ref: 20-061-004) supporting the application.

1.2 Travel Plan Requirements

1.2.1 The National Planning Policy Framework (NPPF) updated in July 2021 requires that developments that will generate significant amounts of movement should be required to provide a TP and be supported by a transport statement or transport assessment so that likely impacts can be assessed.

1.2.2 TPs are long term management strategies for integrating proposals for sustainable travel onto the planning process. The primary purpose of a TP is to identify opportunities for the effective promotion and delivery of sustainable transport initiatives.

1.2.3 The Ministry of Housing, Communities and Local Government (MHCLG) Guidance on TPs, Transport Assessments and Statements (2014) provides advice on what should be considered. In summary, TPs should:

- identify explicit outcomes, targets and measures;
- set out future monitoring and management arrangements, all of which should be proportionate;
- address all journeys resulting from a proposed development and seek to fit in with wider strategies for transport in the area;
- set out clearly what data is to be collected, and when; establishing the baseline conditions in relation to any targets.

1.2.4 It is recognised that it is prudent to retain some flexibility in the TP until the occupation and operational characteristics of the development are established.

1.3 Travel Plan Objectives

1.3.1 The key objectives identified for this TP are to:

- Reduce the use of single occupancy vehicles;
- Increase the number of people walking, cycling and public transport; and
- Raise awareness amongst residents and visitors of the existence of the Plan.

1.3.2 TP objectives will be met by the implementation of appropriate measures, ongoing management and monitoring of the plan's performance.

1.4 Report Structure

1.4.1 The structure of the remainder of this report is as follows:

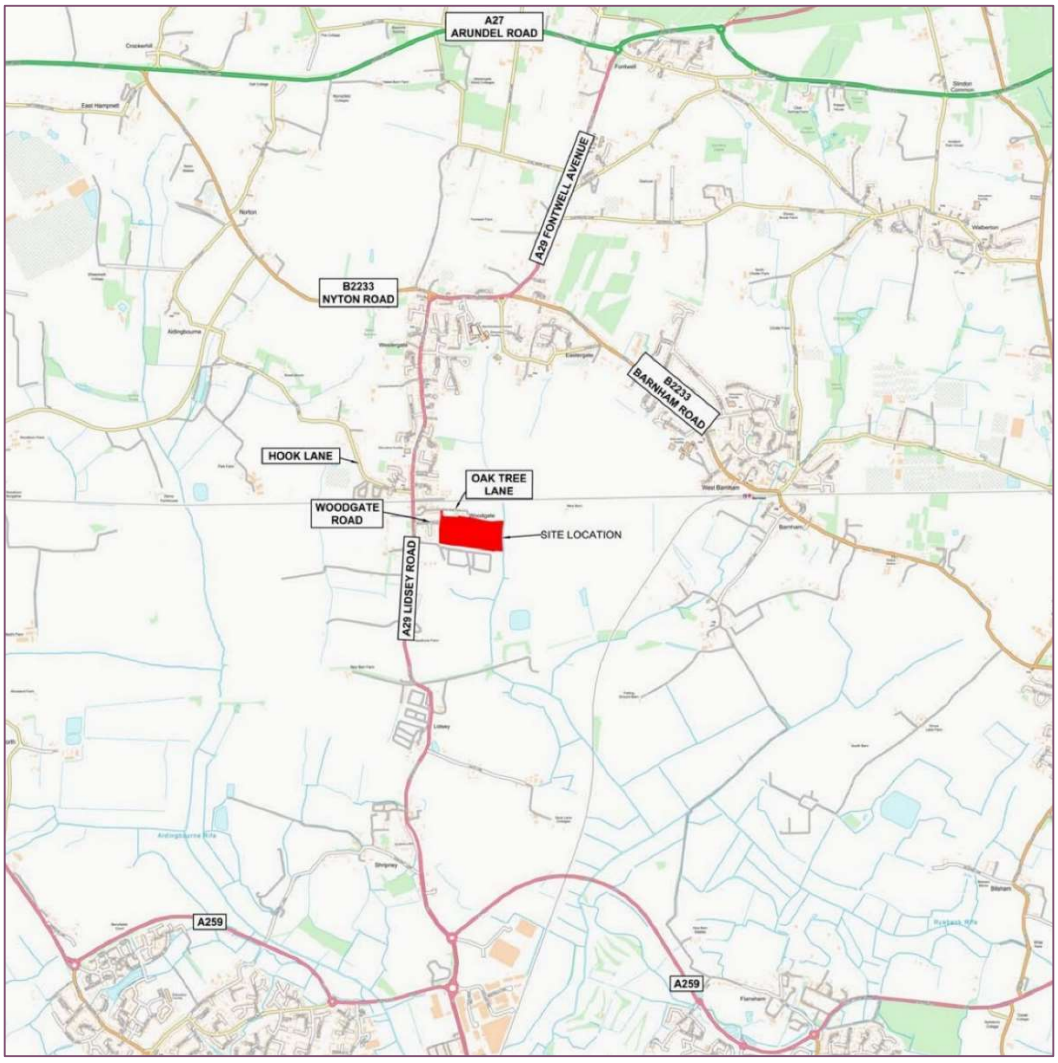
- **Section 2** provides a site audit which sets out the local context in terms of the highway network, along with a detailed review of the local accessibility and access to non-car modes of travel;
- **Section 3** details the proposed development and the site access strategy;
- **Section 4** sets out the aims, objectives and likely targets which will be confirmed once initial site surveys have been completed;
- **Section 5** considers the measures that will be implemented, alongside the consultation and partnerships likely as part of the TP;
- **Section 6** provides information on when and how monitoring, implementation and review of the TP will be undertaken;
- **Section 7** outlines the indicative cost for the proposed measures; and
- **Section 8** summarises and concludes the report.

2 Site Accessibility

2.1 Site Description and Local Highway Network

2.1.1 The development site is located to the east of the A29 Lidsey Road and to the south of Westergate village as illustrated in **Figure 2.1**. It is bound by single storey bungalows to the west, by Willows Caravan Park to the south and by farmlands to the north and east. The site is currently accessed through Woodgate Road.

Figure 2.1: Site Location and Local Highway Network



2.1.2 The site comprises a mixed-use premise collectively called the Woodgate Centre which accommodates several small businesses.

2.1.3 **Figure 2.1** also illustrates the local highway network surrounding the site, which is comprised of Woodgate Road, Oak Tree Lane, Hook Lane, the A29, B2233 and further afield the A27. These roads as they pass through the villages of Woodgate and Westergate are residential in nature, subject to 30mph speed limit and provide access to residential properties, local facilities and minor residential estate roads.

2.2 Walking and Cycling

2.2.1 Planning guidance emphasises the integration of land use, transport and planning decisions. To ensure developments are sustainable, they should be accessible to local amenities, schools and public transport services on foot and cycle.

2.2.2 **Table 2.1** below provides comprehensive list of local amenities within reasonable walking (2km) and cycling (5km) distance from the site. These include primary schools, health facilities, local shops, bus stops along the A29 and Barnham Rail Station. The location of these facilities relative to the site are shown in **Figure 2.2**.

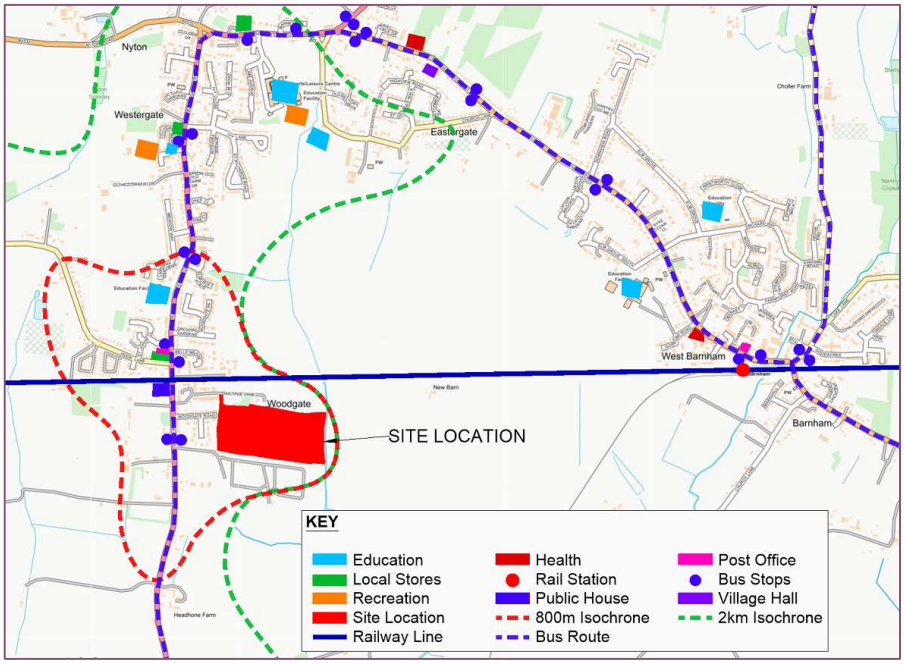
2.2.3 Currently, there are footway provision along Woodgate Road and the A29 from the site which provides access to these amenities. However, it is proposed, as part of the development, that these existing footways will be upgraded to shared footway/cycleway enhancing connectivity by non-car modes. Additionally, new pedestrian/cyclist provisions are to come forward as part of BEW development. Details of these are provided in the following chapter of this TP.

Table 2.1: Local Amenities

	Facilities	Approx. Distance	Walking Time	Cycling Time
Education	Aldingbourne Primary School	600 m	8 min	3 min
	Hop Scotch Pre School	1.2 km	15 min	5 min
	Eastergate CE Primary School	1.7 km	21 min	9 min
	Ormiston Six Villages Academy	1.8 km	23 min	8 min
	St Philip Howard Catholic School	3.0 km	37 min	12 min
	Barnham Primary School	3.3 km	42 min	12 min
Health	The Croft Surgery	2.2 km	28 min	8 min
	Five Villages Pharmacy	3.3 km	42 min	11 min
Public Transport	Willows Caravan Park Bus Stops	250 m	3 min	1 min
	Barnham Rail Station	3.5 km	44 min	11 min
Retail	Aldingbourne Village Stores	350 m	5 min	2 min

	Facilities	Approx. Distance	Walking Time	Cycling Time
	Hirange Supermarket	1.2 km	15 min	5 min
	Hursts Convenience Store	1.7 km	21 min	6 min
Others	Public House	250 m	3 min	2 min
	Post Office	350 m	5 min	2 min
	Aldingbourne Community Sports Centre	1.4 km	17 min	5 min
	Six Villages Sports Centre	1.8 km	23 min	8 min
	Eastergate Parish Hall	2.3 km	29 min	9 min

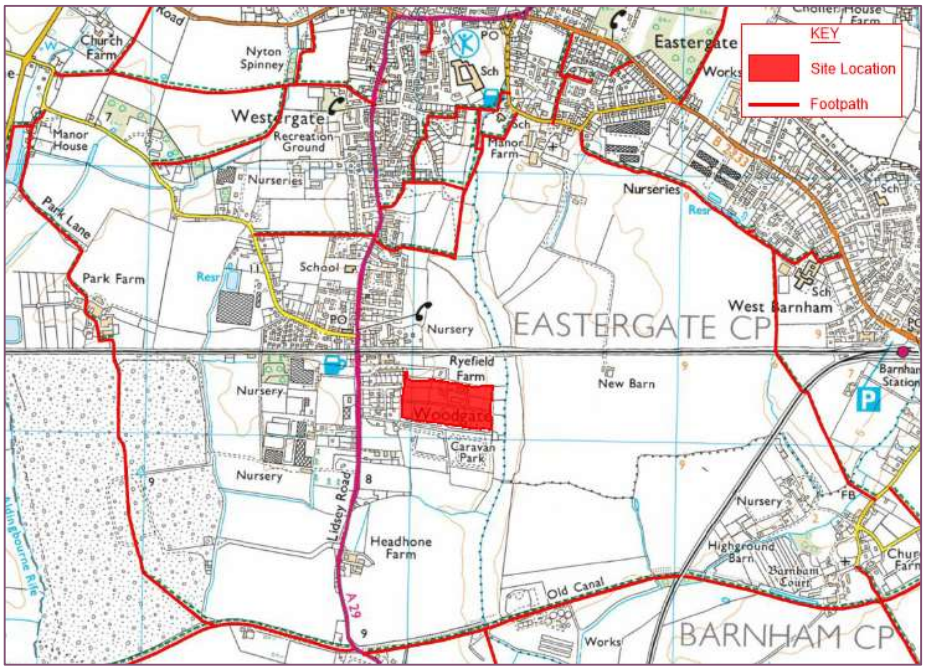
Figure 2.2: Local Amenities Plan



2.2.4 It should also be noted that the framework masterplan for the remainder of BEW allocation site to the east includes two new primary schools, two local centres which will include shops and library facility. Therefore, when the whole allocated site is built, there will be additional amenities within easy reach from the site.

2.2.5 There are several Public Rights of Ways in the form of footpaths in the vicinity of the site as illustrated in **Figure 2.3**. These can be used for leisure walking or as alternatives to the footways to access the amenities to the north and east.

Figure 2.3: Public Footpaths



2.3 Public Transport

Bus Service

2.3.1 The closest bus stops from the site (northbound and southbound) are located on either side of the A29 Lidsey Road as illustrated in **Figure 2.2**. These are flagpole bus stops and are within easily walking distance of 250m from the site.

2.3.2 Bus routes 66A and 66C operated by Compass Travel are accessible from these bus stops. Both these routes start at Bognor Regis and serve Barnham, Yapton and Walberton in a circular loop before returning back to Bognor Regis. However, 66A travels in anti-clockwise direction via Yapton and Walberton, whereas, 66C travel in clockwise direction via Walberton and Yapton.

2.3.3 Typically, there are six services running every two hours Mondays to Saturdays. The southbound and northbound bus timetable at these stops is tabulated in **Table 2.2** and the full timetable and the bus route are provided within **Appendix A**.

Table 2.2: Bus Timetables

Direction	Times					
Southbound	07:55	09:07	11:07	13:25	15:33	17:22
Northbound	08:30	10:30	12:49	14:48	16:47	17:52

Rail Service

2.3.4 Barnham Station is the closest railway station from the site which is located within cycling distance of 4.1km (approximately 13 minutes' cycle) from the site using the A29 and Barnham Road. The station can also be accessed on foot using footways along this route or at a shorter distance of around 3.5km (approximately 44 minutes' walk) using the public footpaths to the northeast of level crossing and along the south of Eastergate nursery and the Springfield site.

2.3.5 The proposed development will safeguard land for a new pedestrian/cyclist bridge to the east to provide connectivity with the remainder of the BEW allocation. Therefore, when the remainder of the BEW comes forward, the residents will have a shorter and more direct walking/cycling route to the station through the BEW site to the east.

2.3.6 The rail station is also accessible using bus route 66 described above from the bus stops located along the A29. The typical bus journey time between the site and the station is 10 minutes.

2.3.7 The station is managed by Southern Railway and provides services to destinations including London Victoria via Horsham, Bognor Regis, Portsmouth & Southsea, Southampton Central and Brighton via Worthing. Typical weekday frequencies and journey duration of these services are summarised in **Table 2.3** below.

Table 2.3: Train Services

Destinations	Typical Frequency	Typical Journey Duration
London Victoria via Horsham	4 per hour	1 hr 27 min
Bognor Regis	4 per hour	7 min
Portsmouth & Southsea	5 per hour	38 min
Southampton Central	2 per hour	1 hr
Brighton via Worthing	2 per hour	44 min

2.3.8 The station has 62 cycle storage spaces and 130 (pay and display) car parking spaces, as well as a taxi rank.

3 Proposed Development

3.1 Proposed Development

3.1.1 The development proposals include demolition of the Woodgate Centre buildings including residential properties and the construction of 180 residential dwellings, with the creation of new vehicular access with footways and cycleways and ancillary road infrastructure and emergency access arrangements, associated parking, public open space, including children's play space, landscape planting, surface water attenuation and drainage and other associated infrastructure.

3.1.2 A site layout plan prepared by ECE Architecture is provided in **Appendix B.**

3.1.3 The proposed development will comprise a mixture of 1-bedroom, 2-bedroom, 3-bedroom and 4-bedroom dwellings. 70% of the total number of dwellings will be private and the remaining 30% will be affordable.

3.1.4 As forementioned, the site forms part of the wider strategic allocation for housing referred to as BEW under Policy H SP2c (SD5) within the adopted ADC Local Plan 2011-2031. The policy also sets out the key design and infrastructure requirements that the development proposals within the allocation must demonstrate compliance with.

3.1.5 The Framework Masterplan which provides an indication of the broad layout of the entire Strategic Allocation is provided in **Appendix C**. The proposed development has given due regards to the masterplanning principles set out in the BEW Framework Masterplan and will seek to ensure the delivery of the envisioned new high-quality neighbourhood.

3.2 Vehicular Access Arrangements

3.2.1 As illustrated in the Framework Masterplan, the proposed development will be accessed through the extension of Woodgate Road to the west of the site. A further access for emergency vehicles only will be provided through Oak Tree Lane from the northern site boundary. This emergency access will also serve as a pedestrian and cyclist access.

3.2.2 The vehicular site access proposals are illustrated in **Drawing No. 20-061-014** and the emergency access is illustrated in **Drawing No. 20-061-032**. These are discussed in detail within the accompanying TA.

3.3 Pedestrian and Cyclist Access Arrangements

3.3.1 The proposals also include a shared footway/cycleway along Woodgate Road and the A29 Lidsey Road heading north across the level crossing leading to Hook Lane.

3.3.2 The provision has been provided to comply with the WSCC Cycling Design Guide which state that the desirable minimum effective width of shared footway/cycleway is 3m whereas the absolute minimum effective width is 2.5m.

3.3.3 As illustrated in **Drawing No. 20-061-014** and considering the WSCC Cycling Design Guide, a shared footway/cycleway with 2.5m width is proposed on the northern edge of Woodgate Road due to the limited highway land availability along Woodgate Road and 3m width is proposed on the eastern edge of the A29 Lidsey Road which crosses on the other side just before the level crossing. The shared provision along the A29 is separated by approximately 1m wide grass verge from the carriageway to ensure pedestrian and cyclist separation from vehicles.

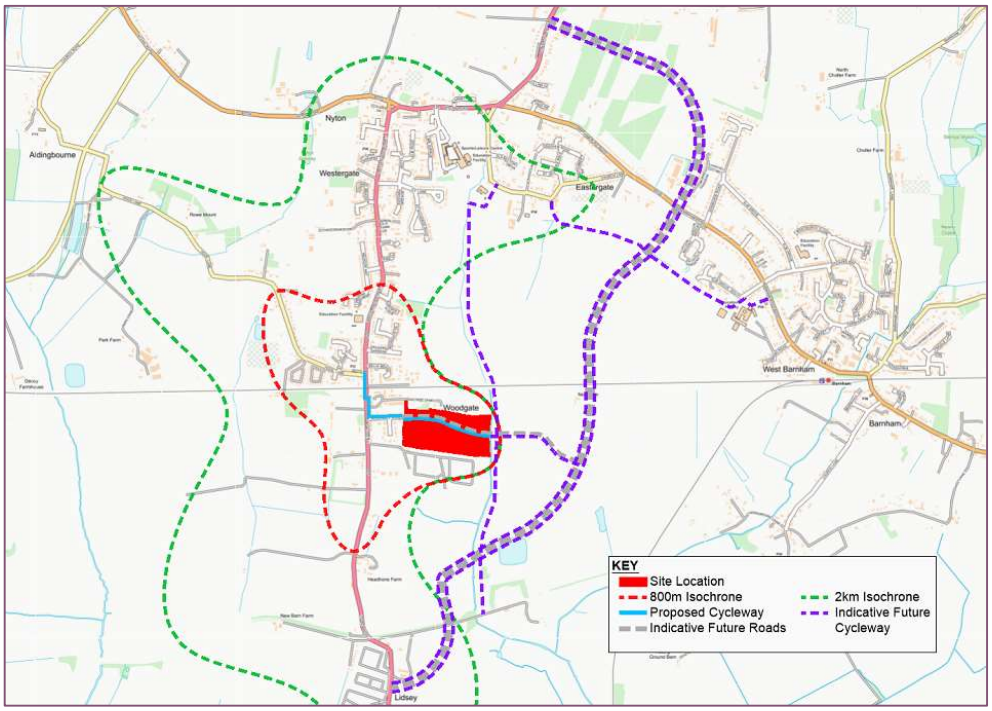
3.3.4 The crossing points will be provided with appropriate dropped kerbs and tactile paving. With this, it is intended that the proposals along with the footways proposed by Wings Nursery site will provide high quality facilities for pedestrians and cyclists in the area.

3.3.5 The shared provision on Woodgate Road will continue through the site on the southern edge of the spine road as a 3m shared facility. The shared footway/cycleway will encourage and facilitate the future residents of the site and the existing residents in the area to use sustainable methods of travel to the local facilities identified in the previous section.

3.3.6 As part of the application, land will be safeguarded for the provision of a new foot/cycle bridge which will link with the BEW allocation to the east of the development when it comes forward. It is envisioned that the shared facility on spine road through this bridge will ensure permeability between the BEW sites and provides access to local facilities proposed by the BEW allocation and also provides a shorter route to the Barham Railway station to the east.

3.3.7 **Figure 3.1** below shows how the shared footway/cycleway proposed by this development will sit alongside the pedestrian and cyclist provisions that are to be brought forward as part of the BEW development to the east. As shown the BEW proposals include new shared provision running on both sides of the realigned A29 for its entire length and upgrading of the existing north/south leisure foot/cycleway through the existing railway culvert alongside the Rife.

Figure 3.1: Proposed and Indicative Future Shared Footway/Cycleway



3.4 On-site Parking and EV Charging Provision

3.4.1 The development proposals include a mixture of allocated and unallocated parking spaces (including visitors) in compliance with the relevant ADC and WSCC parking standards and meets the demand of the development whilst avoiding overprovision of parking spaces. The exact details on the proposed parking provision are discussed within the accompanying TA.

3.4.2 The proposals also include appropriate electric vehicle (EV) charging provision. All of the houses will be provided with at least two allocated parking spaces of which one will be equipped with EV charging socket. Whereas all four blocks of flats will be provided with a shared unallocated parking space equipped with EV charging socket in addition to one allocated parking space for each flat.

3.4.3 It acknowledged that there are significant EV charging points in West Sussex which use the Energise Network, as such as part of the development of this site consideration will be given to joining this network to maximise the ability for people in the local area to have maximum access to charging points.

3.4.4 Cycle parking will be provided at the rates of 1 space per 1 bedroom flat and 2 spaces per 2- ,3- and 4-bedroom dwellings. The cycle storages will be provided within garages, rear garden sheds or communal cycle stores.

3.5 Bus Improvements

3.5.1 The proposals also include improvements to the nearest Willows Caravan Park northbound and southbound bus stops on the A29 Lidsey Road.

3.5.2 It is identified that the planning application of the adjacent Wings Nursery site, to the west, has proposed to relocate and provide the northbound and southbound bus stops with new bus shelters. This is shown in their Drawing 2019-6115-011 within the relevant TA supporting the application. It is proposed that appropriate financial contribution will be provided as part of this development to undertake these improvement works and further enhance by including provision of Real Time Information (RTI) displays.

4 Aims, Objectives and Targets

4.1 Aims and Objectives

4.1.1 This section outlines the aims and objectives of the TP. These have been developed with consideration given to current policy including the NPPF.

4.1.2 The aim of this TP is to promote sustainable travel to future residents of the site from the day of occupation, setting sustainable travel patterns to and from the site from the outset and by achieving the following objectives:

- Reduce the actual need to travel through the provision of local services and facilities;
- Improvement of local infrastructure to allow greater choice of travel modes;
- In offering greater choice, increase the usage of the alternatives to the car (pedestrian, cycle, bus and rail); and
- Improved management of residual traffic e.g. vehicle speeds.

4.1.3 This TP and the associated measures go beyond simply seeking to achieve sustainable travel for new residents. It also sets out measures that can be facilitated by the proposed development that seek to promote a significant shift away from car-based travel. These aims are both consistent and supportive of the overall policy objective.

4.1.4 The primary benefits of the TP will be a reduction in vehicle use resulting in less congestion, reduced noise and air pollution and potentially in accidents. A range of broader benefits will include improved health of residents, reduced stress, improved travel options and cost savings.

4.2 Targets

4.2.1 The TP measures proposed are designed to promote a change in travel habits. Specific targets are not required for a TP, but they do provide a means by which the success of the proposed measures can be assessed. The TP is a live document which will evolve over time, as will the targets.

4.2.2 Targets may relate to non-quantifiable actions, such as a broader commitment to deliver a package of measures; or more specific quantifiable outcomes such as:

- A reduction in the number of single occupancy car journeys;
- An increase in the proportion of trips made by walking, cycling or by public transport; and
- An increased awareness of the benefits of sustainable travel.

4.2.3 Targets need to be based on up to date and ideally site-specific data. It is therefore considered appropriate to set detailed targets following the initial baseline travel survey which will be completed once 50% of the dwellings are occupied.

4.2.4 The preliminary targets aimed for by Year 5 are:

- 10% reduction in single occupancy car trips;
- 3% increase in walking journeys;
- 3% increase in cycling journeys;
- 2% increase in bus journeys;
- 2% increase in rail journeys; and
- 80% awareness of the TP.

5 Travel Plan Measures / Strategy

5.1 Introduction

5.1.1 In order to meet the targets, set out above, a package of measures will be employed to encourage sustainable travel. These measures are designed to work toward the established targets of reducing the number of car trips and increasing the proportion of journeys by foot or bicycle.

5.1.2 The measures employed include a combination of hard measures, incorporated in the design of the development, and soft measures, designed to promote a change in travel habits from the outset.

5.2 Travel Plan Measures

Measures to Reduce Car Travel

5.2.2 The key target of the TP is a reduction in car travel. The measures designed to work to this end include the following:

- Promotion of the West Sussex car sharing database promoted by WSCC. Car sharing provides benefits for the users from reductions in travel costs, wear and tear on vehicles and from stress. Broader benefits include a reduction in vehicles on the road and consequent congestion and pollution.
- Car parking provision across the development in accordance with ADC and WSCC parking standards as detailed above and in the accompanying TA, designed to avoid overprovision which could encourage car use.
- Resident Travel Information Packs to provide comprehensive travel information for travelling without a car. The site is well positioned within close proximity of many local facilities and access to public transport. Information on travel options will be provided to promote and raise awareness of sustainable modes of transport from the outset.
- Well positioned travel notice boards at key locations will provide up to date information on alternatives to travel by car, with information on walking and cycling routes and public transport. The notice boards will also hold information about the TP and contact details for the Travel Plan Coordinator (TPC). The TPC will undertake regular checks of the information available on the notice boards to ensure the content is up to date.
- A Travel Plan website will be constructed and maintained to provide all travel related information and provide a forum for the exchange of information by residents.

Measures to Promote Cycling

5.2.3 The measures to be adopted to promote cycling include:

- The development proposals include a shared footway/cycleway to the west of the site along Woodgate Road and the A29 Lidsey Road. Additionally, the BEW Strategic Allocation to the east is to bring additional pedestrian and cyclist routes and links. These will facilitate safe cycle connectivity from the site with the wider network and local facilities.
- Cycle parking/storage is incorporated within the design of the development to the relevant standards.
- The resident Travel Information Packs, Travel Plan website and the travel notice boards will publicise the local cycle routes, details of local cycling groups, WSCC's cycle training course, map illustrating key facilities easily accessible by cycling and promote the benefits of cycling for the individual and the environment.
- The TPC will seek opportunities to negotiate discounts with local cycle retailers in exchange for promotion in TP literature.

Measures to Promote Walking

5.2.4 As discussed in the previous section, the development site is well located within walking distance of local facilities. The promotion of walking as an alternative to car travel will be supported by a number of measures.

- Positive design features are included within the development to encourage residents to choose to walk instead of using the car. These include wide footways and shared surface areas which will reduce vehicle speeds and improve the environment for pedestrians.
- Resident Travel Information Packs will provide details of the local pedestrian network, links to local walking groups and highlight the health benefits of walking. This information will also be highlighted on notice boards and the Travel Plan website.

Measures to Promote Public Transport

5.2.5 The Willows Caravan Park bus stops along the A29 Lidsey Road are within easy walking distance from the site. Additionally, Barnham Railway station is also located with cycling distance from the site. The station can also be accessed using bus services.

5.2.6 These public transport modes will be supported by a number of measures including:

- Resident Travel Information Packs will provide details of the rail services, local bus services and routes. The travel notice boards and Travel Plan website will be maintained to provide updated current public transport information and timetables.
- The nearest bus stops on the A29 Lidsey Road, both northbound and southbound, will be upgraded with bus shelters and RTI displays.
- The TPC will be in contact with local bus operators from the outset to discuss initiatives that could be beneficial for residents.

5.2.7 **Table 5.1** summarises the key measures designed to support the TP.

Table 5.1: Travel Plan Measures

Hard Measures
Car parking provision including EV charging points in accordance with appropriate planning guidance.
Travel noticeboards at key locations across the development to provide up to date information on sustainable travel.
Shared surface areas to improve the environment for pedestrians/cyclists by constraining vehicle speeds.
Secure cycle storage in accordance with adopted standards.
Improvements to existing bus stops.
Proposed new offsite shared footway/cycleway leading to local facilities.
Potential walking and cycling links between the sites in the allocation is maintained.
Soft Measures
Appointment of a TPC to implement and monitor the TP.
Promotion of WSCC Car Sharing Scheme.
Sustainable travel information within sales literature to inform potential residents about accessibility to local facilities and sustainable travel modes available to them.
Resident Travel Information Packs to provide information about the TP and TPC. This document will provide details of pedestrian networks, cycle networks and public transport as well as important links and contact details.
Construction of a travel plan website to provide all travel related information and provide a forum for residents to exchange travel information.
TPC to establish a close liaison with local bus operators and cycle shops to discuss initiatives which would benefit residents e.g. discounts and promotions.

Measures to Promote Sustainable Travel

5.2.8 Further optional measures, to promote a positive attitude to sustainable travel, will be made available to new residents of the proposed development, to maximise the value of travel vouchers available to each household (for more details see paragraph 5.3.7).

- The TPC will negotiate with local public transport providers for potential incentives to travel by bus and train, for example a one-month bus pass or train pass per dwelling to encourage new residents to use bus / train travel from the outset.
- The TPC will negotiate with local cycle shops to provide a cycle discount/voucher per dwelling in return for promotion in the travel plan documentation, travel packs etc.
- Investigate the viability of providing car club vehicle(s) for this site and/or as part of the wider BEW masterplan, as although WSCC suggest 2 cars for this site, it is also acknowledged that there would need to be at least 40 regular users to sustain 2 vehicles and as the site has 180 dwellings that would be a very high usage rate if primarily relying on only this site.

5.3 Travel Plan Management

TP Coordinator (TPC)

5.3.2 The TP will require the support of the developer in order to be successful and the applicant is fully aware of its importance and significance. The applicant will allocate adequate resources and funding of measures and monitoring in order to ensure that the TP is fully implemented to achieve the maximum impact.

5.3.3 The TP Co-ordinator will be appointed by the applicant three months in advance of the first occupation of the site to take responsibility for ensuring the delivery of measures. It is expected that the TPC will be retained on a part-time basis from an external company specialising in TP implementation and development. Contact details for the TPC will be provided to the County Council.

5.3.4 The TPC will be responsible for overseeing the management, development, implementation, monitoring and review of the TP. The key roles and responsibilities will be:

- The implementation of measures set out in the approved plan;
- Reporting to and liaising with stakeholders and WSCC TP Officers regarding the implementation and progress of the TP;
- Managing the development of new measures;
- Monitoring agreed targets;
- Reporting the results of travel surveys to stakeholders and WSCC Officers; and
- Acting as a point of contact for all residents regarding travel and the success of the plan.
- Promoting national and international events such as world car free day, walk to school week and nation bike week amongst others.

Marketing Strategy

5.3.5 Residents will be made aware of the TP, the objectives, measures and need for the development to meet specified targets through the sales promotion and the Travel Information Pack.

5.3.6 Travel Information Packs (TIP) will be provided for each residential unit on first occupation. The packs are intended to influence residents' travel habits from the outset. The TIP will include a summarised version of the TP along with information on public transport, local walking and cycling network and contact details of local taxi operators etc.

5.3.7 These packs will include details of how to obtain a travel voucher with a minimum value of £150 for each household (although there maybe limits on how much can be spent on any one option depending on discussions with providers), these vouchers will be able to used for or towards various low carbon travel options which could include:

- Bus season tickets
- Rail season tickets
- Rail discount cards (i.e. those available from https://www.railcard.co.uk/)
- Bicycle(s) and or accessories
- Cycle training provided by West Sussex (on current prices a family of 4 could have 1.5 hours of training at it cost £14 plus their voucher) details are available from https://www.westsussex.gov.uk/roads-and-travel/road-safety/one-to-one-cycle-training/
- Membership for car clubs

5.3.8 A dedicated Travel Plan website will also be set up which will have more up to date travel information.

5.3.9 The final content of the TIP and the website will depend upon up-to date information available at the time of issue, but it is anticipated that they will include the following:

- Contact details for the TPC;
- Pedestrian and cycle network maps and information;
- Information on the health benefits of walking and cycling;
- Information regarding local businesses selling bicycles and protective clothing and providing cycle maintenance services;
- Internet links to local authority road safety information relating to walking and cycling;
- Public transport guide for routes serving the proposed development including timetables for bus and train services operating in the area;
- Details of local businesses providing home delivery services and locations where deliveries can be collected;
- Information on initiatives and proposals detailed in this plan; and
- Information on sources of travel information, both local and national (telephone numbers and internet links). Including, but not limited to, cycle training, rail discount cards.

5.3.10 The TIP and the Travel Plan website will be produced by the developers in such a way that information can be easily updated. Third party leaflets will be required and permission to use the information will be sought. A summary of the TP will be provided as an 'introductory' flyer to the homeowner's pack.

5.3.11 The action plan in **Table 5.2** below summarises the measures proposed that are directed at influencing resident travel habits and their timescale.

Table 5.2: Action Plan

Measure	Target	Trigger Point / Timescale
Cycle parking provision in accordance with adopted standards.	To encourage increased cycle use.	Design feature - prior to occupation.
Car parking provision in accordance with adopted standards.	To avoid over provision of parking that would encourage car use.	Design feature - prior to occupation.
Wide footways and shared surface areas	To improve the environment for pedestrians by constraining vehicle speeds.	Design feature - prior to occupation.
Crossing facilities with tactile paving and dropped kerbs.	To improve cycle and pedestrian access.	Design feature – prior to occupation.
EV Charging Points	To encourage and facilitate electric vehicles.	Design feature – prior to occupation.

Measure	Target	Trigger Point / Timescale
TP Coordinator.	To implement the TP and monitor Progress.	3 months prior to first occupation.
Travel Information Packs.	To promote sustainable travel, providing information on walking and cycling networks, car sharing and local taxi services etc.	2 months prior to planned initial occupation
Travel notice board.	To promote sustainable travel. Information to be regularly updated.	Design feature - prior to occupation.
Travel Plan website	To promote sustainable travel, providing information on walking and cycling networks, car sharing and local taxi services etc.	2 months prior to planned initial occupation
Sales literature.	To promote sustainable travel and included on Developer's website	Prior to occupation
Promotion of West Sussex car sharing	To encourage car sharing. Details to be displayed on travel notice boards and Developer's website	Prior to occupation
Monitoring	To ensure progress is made toward targets. Monitoring report on Baseline survey and subsequent surveys	Following Baseline survey and any subsequent surveys

6 Monitoring, Implementation & Review

6.1 Monitoring

6.1.1 Monitoring of the TP is a fundamental process as it facilitates both an appraisal of the performance as well as providing a mechanism to inform the modification and development of the TP throughout its life.

6.1.2 The TPC will monitor and review the TP on an on-going basis, making sure that it is effective and ensuring that the information included is up to date.

6.1.3 As part of this process, the TPC will monitor the TP annually for a period of 5 years.

6.1.4 The first part of the monitoring will be in the form of a travel questionnaire (example in **Appendix D**) sent to each occupied household. The travel questionnaire will take the form of a travel diary for all residents to complete, recording journeys, trip purpose and mode of travel for a selected mid-week day. A monitoring report will be produced, and a summary of the survey findings distributed to residents if required.

6.1.5 The first survey will take place once 50% of dwellings have been occupied. This will form the observed baseline and the data collection process will then be repeated annually to determine how well the measures within the TP are working. The TP is an evolving process and amendments to the TP targets and measures may be required based on the survey results.

6.1.6 In addition, as requested by WSCC, these will be monitored in accordance with the TRICS UK Standard Assessment Methodology. This will require 3 multi-modal surveys over the same 5 year period (i.e. starting once 50% of the dwellings have been occupied) and will be use to confirm the travel questionnaire data. WSCC will require a £500 payment to audit each survey, these will be confirmed and agreed in the S106 agreement.

6.1.7 The overall success of the TP will be judged on the success in achieving a reduction in car-based travel by all user groups, below what would be expected of a development of this size and location.

6.1.8 Targets will be set to achieve an increase in pedestrian, cycle, and public transport use and a reduction in single occupancy car trips. The monitoring results will be compared to the base monitoring or predicted travel in the T (whichever is higher) and the following increases/ decreases (given the first surveys will be at 50% occupancy of the site it would allow for the number of dwellings occupied at the time of the survey) will be expected at the end of the travel plan period:

Table 6.1: Target Mode Change

Mode	% Change
Single occupancy car trips	-10%
Pedestrian	+3%
Cycle	+3%
Bus	+2%
Train	+2%

6.2 Implementation and Review

6.2.1 The first action will be to appoint a TPC and identify point of contacts for the TPC to liaise with the relevant parties that need to be consulted.

6.2.2 Continual efforts will be made to ensure that the TP continues to be relevant and effective. For example, the travel literature and other information must be kept up to date. Changes must then be communicated to residents through means such as literature, notice boards and online.

6.2.3 This TP represents an ongoing commitment to the residents of the development and that of the local area to support and encourage sustainable modes of travel.

6.2.4 It is envisaged that the success of the Travel Plan in achieving its stated targets will be enforced through a Section 106 Agreement.

6.3 Enforcement

6.3.1 If the above targets are not met there maybe a need to look at providing additional measures to reduce car usage from the baseline. This may include pushing the travel vouchers a second time for those dwellings which haven't already taken advantage of them or extending the employment of the TPC for an additional year.

7 Travel Plan Budget

7.1 Funding

7.1.1 The developer will be responsible for the funding of the TPC post, provision of Travel Plan Packs to each new dwelling, establishing and maintaining the website and monitoring the Travel Plan for an agreed period. The indicative cost to the developer of the core Travel Plan measures identified have been summarised in **Table 7.1**.

Table 7.1: Indicative Travel Plan Budget

Measure	Item	End Cost (£)
Website	Design	£2,000
	Maintenance and hosting	£1,500
Travel Plan Packs	Design	£600
	Printing	£1,200
Travel Plan Coordinator	Funding of position (5 years @ £12,000pa)	£60,000
Monitoring	Printing and postage costs	£1,000
	Reporting	£5,000
	Revision of TP	£2,500
Total		**£73,800**

7.1.2 In addition, a package of optional sustainable travel incentives will be offered. These will include incentives that will be negotiated by the TPC for bus travel and cycle purchase. Indicative costs are summarised below.

Table 7.2: Optional Sustainable Travel Incentives

Optional Measures	Item	Indicative End Cost (£)
Travel Voucher	£150 per unit (assuming 60% take up)	£16,200
Total		**£16,200**

8 Summary and Conclusion

8.1 Summary and Conclusion

8.1.1 This Residential TP has been prepared by Charles & Associates Consulting Engineers Ltd (C&A), on behalf of PYE Homes, to support the proposed residential development on a site known as Land East of Woodgate Road, West Sussex. The proposed development will contain up to 180 dwellings.

8.1.2 This TP sets out site specific initiatives aimed at improving the availability and choice of travel modes to and from the development. Together with the TA, this TP will aim to be the mechanism by which overall travel demand will be managed and monitored.

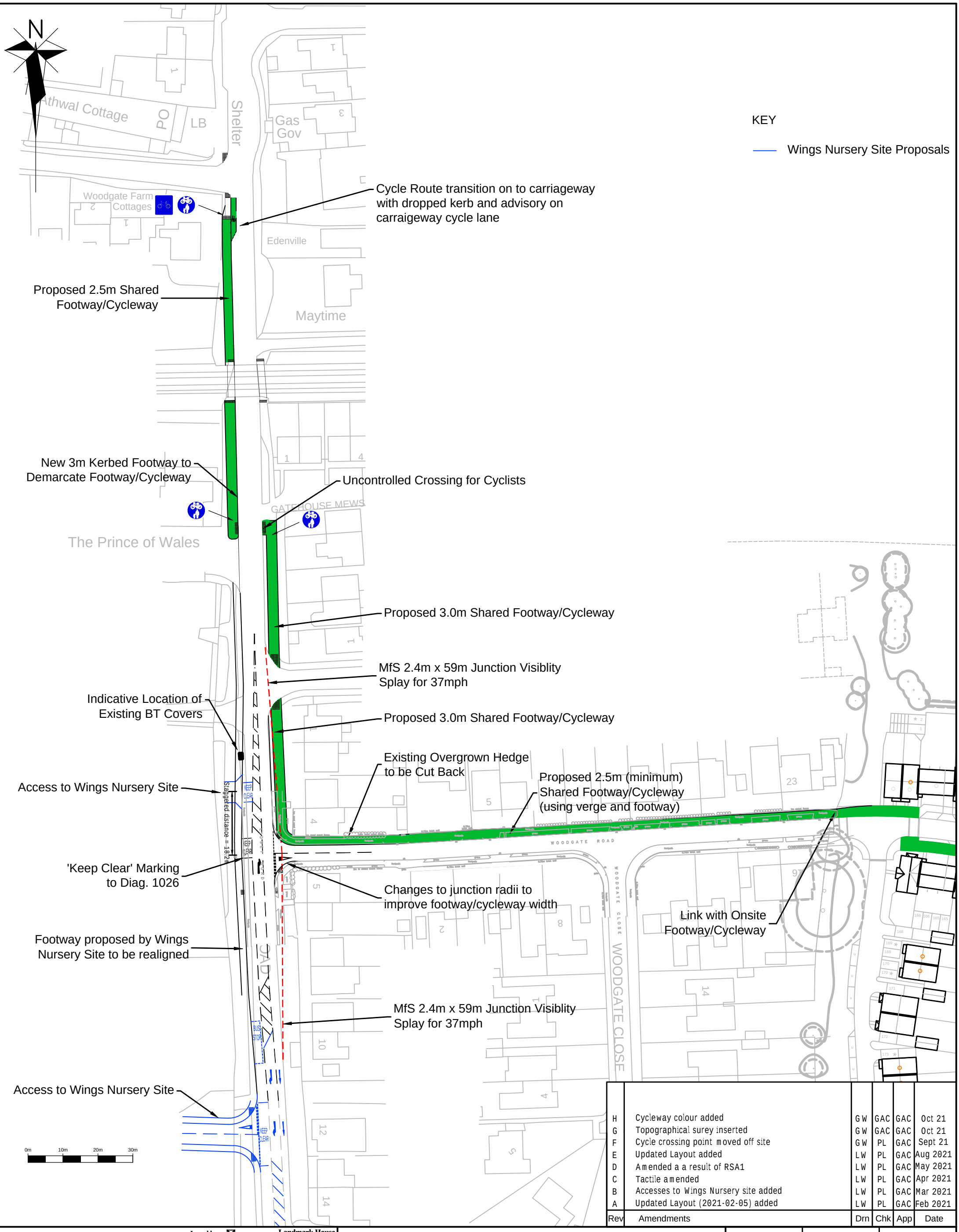
8.1.3 The aims and objectives, policy context and audit of the existing travel conditions around the site are provided within this TP. The audit concludes that the site is located within reasonable travel distance by foot and cycle to local facilities, services and public transport. The development proposals will include good quality footways/cycleways within the site and provide connections to existing pedestrian infrastructure. Provision will also be allowed for a future pedestrian and cycle link to the east as part of the wider BEW Masterplan.

8.1.4 The hard/physical and soft/informative measures that are to be implemented have been discussed, alongside details of the role of the TPC, targets set, monitoring and budget.

8.1.5 The TPC will be responsible for the monitoring and review of the TP annually for a period of 5 years. The first baseline survey will be completed at 50% occupation of the development. The monitoring will be in a form of a travel questionnaire which will be sent to each occupied household.

8.1.6 All of this information will be agreed with WSCC Travel Planning Team, as part of the implementation of the TP and updated through the monitoring process.

Drawings



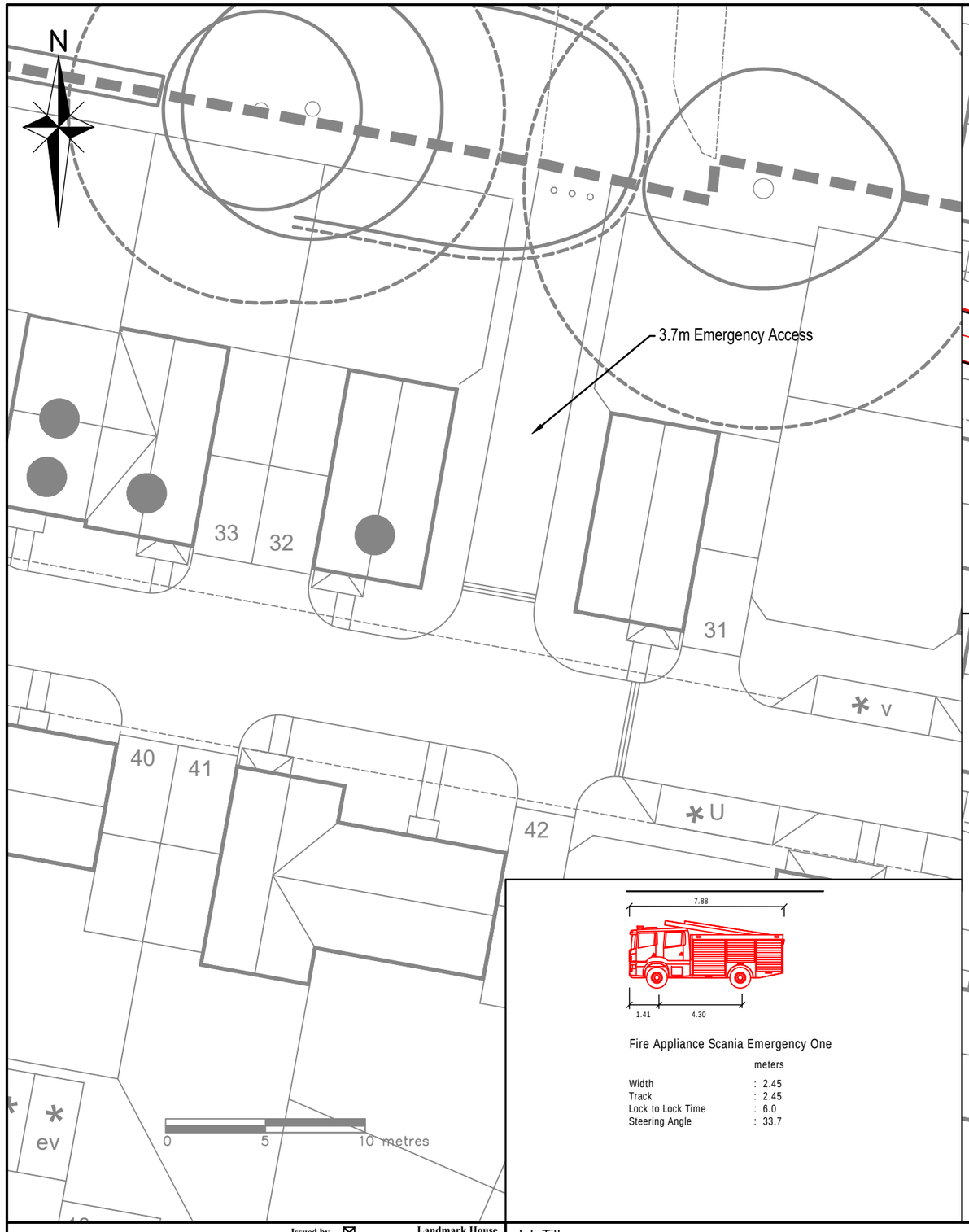
Rev	Amendments	Drn	Chk	App	Date
H	Cycleway colour added	GW	GAC	GAC	Oct 21
G	Topographical surey inserted	GW	GAC	GAC	Oct 21
F	Cycle crossing point moved off site	GW	PL	GAC	Sept 21
E	Updated Layout added	LW	PL	GAC	Aug 2021
D	Amended a a result of RSA1	LW	PL	GAC	May 2021
C	Tactile amended	LW	PL	GAC	Apr 2021
B	Accesses to Wings Nursery site added	LW	PL	GAC	Mar 2021
A	Updated Layout (2021-02-05) added	LW	PL	GAC	Feb 2021

Issued by ☒
Landmark House
Station Road
Hook
Hampshire
RG27 9HA
01256 630420

☐
Park House, Park Farm
East Malling Trust Estate
Bradbourne Lane
Aylesford, Kent ME20 6SN
01732 448120

Charles & Associates

Job Title: Land East of Woodgate Lane	Scale: 1:1000	Date: Jan 21	Designed: LEW
Drawing Title: Proposed Site Access and Cycle Connection	Drawn: LEW	Checked: PL	Approved: GAC
Client: Pye Homes	Job No: 20-061	Drawing No: 20-061-014	Rev: H



Fire Appliance Scania Emergency One

	meters
Width	: 2.45
Track	: 2.45
Lock to Lock Time	: 6.0
Steering Angle	: 33.7



Rev	Amendments	Drn	Chk	App	Date

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Hook
Hampshire
RG27 9HA
01256 630420

Charles & Associates

☐ Park House, Park Farm
East Malling Trust Estate
Bradbourne Lane
Aylesford Kent ME20 6SN
01732 448120

Job Title: Land East of Woodgate Lane

Drawing Title: Emergency Access - Fire Tender Tracks

Client: Pye Homes

Scale	Date	Designed
1:250	Jul 21	-
Drawn	Checked	Approved
LW	PL	GAC
Job No	Drawing No	Rev
20-061	20-061-032	-

Appendix A Bus Routes and Timetables

66A: BOGNOR REGIS - BARNHAM - YAPTON - WALBERTON - BOGNOR REGIS
66C: BOGNOR REGIS - BARNHAM - WALBERTON - YAPTON - BOGNOR REGIS

66A - anti-clockwise via Yapton and Walberton *66C - clockwise via Walberton and Yapton*

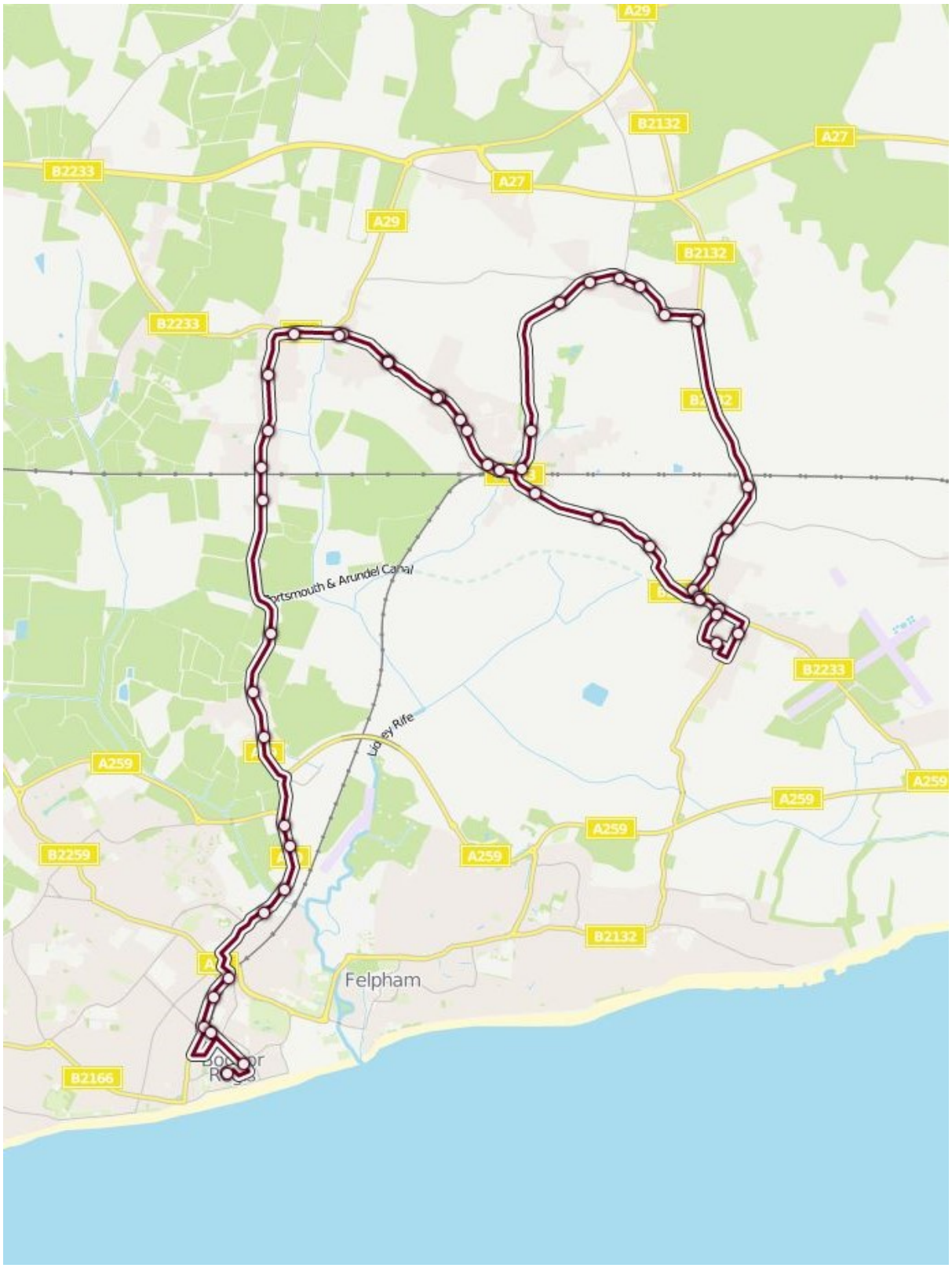
Mondays to Saturdays	**NS**						
(except public holidays)	**66A**	**66C**	**66A**	**66C**	**66A**	**66C**	**66A**
Bognor Regis, High Street		0815	1015	1235	1435#	1635	1740
Bognor Regis Station, Longford Rd		0818	1018	1238	1438#	1638	1743
Tesco, Shripney Road		0822	1022	1242	1442#	1641	1746
Shripney, Robin Hood		0826	1026	1246	1445#	1644	1749
Westergate, Barnett Close	**E**	0834	1034	1253	1457**B**	1651	1756
Barnham, Station	0726	0838	1038	1257	1505	1656	1801
Walberton, Post Office	….	0843	….	1302		1701	….
Yapton, Canal Road	0731	0850	1042	1309	1508	1707	1806
Yapton, Sparks Corner	0735	0853	1045	1312	1512	1709	1808
Walberton, Old Vicarage	0742	….	1051	….	1519	….	1814**W**
Barnham, Station	0749	0859	1059	1317	1526	1714	….
Westergate, Westergate Mews	0753	0904*	1104	1322	1530	1719	….
Shripney, Robin Hood	0759	0912*	1112	1330	1537	1726	….
Tesco, Shripney Road	0805	0916*	1116	1334	1541	1729	….
Bognor Regis Station, Longford Rd	0807	0919*	1119	1337	1544	1732	….
Bognor Regis, High Street	0810**D**	0922*	1122	1340	1547	1735**D**	….

Highlighted journeys are designated for school students only - on schooldays

NS - does not operate on Saturdays
B - on Schooldays operates via Ormiston Six Villages Academy departing 1451
D - returns to High St via Richmond Rd, Lyon St W, Sudley Rd. - not via Canada Grove, Queensway
E - commences from Eastergate Memorial, Barnham Road at 0724
W - continues to Walberton, The Green
- operates 5 minutes later on Saturdays and in School Holidays
*** -** WSCC Concessionary card accepted from these points

67: BOGNOR REGIS - N FELPHAM - GLENWOOD ESTATE - BOGNOR REGIS

Mondays to Saturdays								
Bognor Regis, High Street	….	….	0950	1210	1410	1610	….	….
North Felpham, Wroxham Way	….	….	0956	1216	1416	1616	….	….
Glenwood Estate Shops	….	….	1004	1224	1424	1624	….	….
Bognor Regis, High Street	….	….	1010	1230	1430	1630	….	….


A29
B2132
A27
B2233
A27
A29
B2132
B2233
B2132
Portsmouth & Arundel Canal
B2233
Lavey Rife
A259
A259
A259
A259
B2259
A259
B2132
Felpham
B2166

Appendix B Proposed Site Layout Plan

N

CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Hazard Register.



ACCOMMODATION SCHEDULE

Private Dwellings

No.	Dwelling Type	
15no.	2-Bed 3 Person Flats	
4no.	2-Bed 4 Person Flat Over Garage	Type A
3no.	3-Bed 4 Person Bungalow	Type C
11no.	2-Bed 4 Person House	Type D
19no.	2-Bed 4 Person House	Type E2
7no.	3-Bed 5 Person House	Type F
2no.	3-Bed 5 Person House	Type G
4no.	3-Bed 5 Person House	Type H
12no.	3-Bed 5 Person House	Type J
5no.	3-Bed 5 Person House	Type M
2no.	3-Bed 5 Person Chalet	Type U
19no.	3-Bed 5 Person House	Type S
1no.	4-Bed 6 Person House	Type K
14no.	4-Bed 6 Person House	Type T
3no.	4-Bed 7 Person House	Type L
6no.	4-Bed 8 Person House	Type R

Total 127 Dwellings

Affordable Rent Dwellings

No.	Dwelling Type	
9no.	1-Bedroom Flats	
2no.	2-Bed 4 Person Flat Over Garage	Type A
17no.	2-Bed 4 Person House	Type E1
10no.	3-Bed 5 Person House	Type I
2no.	4-Bed 6 Person House	Type K

Total 40 Dwellings

Intermediate Family Home Dwellings

No.	Dwelling Type	
6no.	1-Bedroom Flats	
1no.	2-Bed 4 Person Flat Over Garage	Type A
2no.	2-Bed 4 Person House	Type E1
3no.	3-Bed 5 Person House	Type I
1no.	4-Bed 6 Person House	Type K

Total 13 Dwellings

Totals

53 Affordable Dwellings (30%)
127 Private Dwellings (70%)

Total 180 Dwellings

M4(2)

* Denotes Part M4 compliant. Out of the total provision, 56 dwellings are Part M4(2) & M4(3) compliant equating to 31%

Car Parking - generally;

1no. spaces per 1 & 2 bedroom apartment
2no. spaces per House (one of which is an EV charging point)

* 36no. visitor parking spaces (20%)
* 37no. unallocated parking spaces
* 4no. unallocated EV charging spaces

Cycle Parking - generally;

1no. space per 1 bedroom Flat
2no. spaces per 2-bedroom Dwelling
2no. spaces per 3-bedroom Dwelling
2no. spaces per 4-bedroom Dwelling
* 20no. unallocated sheffield bike stands for visitors

Cycle storage generally provided within garages, rear garden sheds or communal cycle stores.

Site Area - 7.25ha

Rev	Date	Revision Details	Dr	Ch
P6	04.11.21	Bike stands annotation added	AX	LT
P5	01.11.21	Boundary adjusted	AX	LT
P4	20.10.21	Raised tables amended	AX	LT
P3	19.10.21	Raised tables amended	AX	LT
P2	18.10.21	Raising tables and cycle parking added	AX	LT
P1	06.08.21	Planning Issue	LT	KE

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ECE Architecture
www.ecearchitecture.com

Client's Name
Pye Homes

Job Title
Land east of Woodgate Lane, Woodgate

Drawing Title
Proposed Site Layout

Scale
1:500 @ A0 / 1:1000 @ A2

metres 10 20 30 40 50

Drawn	Checked	Date
KE	LT	01.07.21

Job No	Drawing No	Rev
6781	PL-02	P6

Status
APPROVAL

CAD Plot date: 4/11/2021 - 09:27:17 6781 site dwg

NATIVE TREE PLANTING
Strategic and Public Open Space Areas

Species	Form	Girth cm	Height cm	Root condition	Quantity
Acer campestre	EHS	14-16	425-600	65/85 L	24
Alnus glutinosa	EHS	14-16	425-600	65/85 L	15
Betula pendula	EHS	14-16	425-600	65/85 L	17
Betula pubescens	EHS	14-16	425-600	65/85 L	16
Carpinus betulus	EHS	14-16	425-600	65/85 L	19
Fagus sylvatica	EHS	14-16	425-600	65/85 L	15
Malus domestica	EHS	14-16	425-600	65/85 L	6
Prunus domestica	EHS	14-16	425-600	65/85 L	4
Populus tremula	EHS	14-16	425-600	65/85 L	18
Tilia cordata	EHS	14-16	425-600	65/85 L	10
Quercus robur	EHS	14-16	425-600	65/85 L	15
Sorbus aucuparia	EHS	14-16	425-600	65/85 L	11

ORNAMENTAL TREE PLANTING
Side Roads, On Plot and Car Parking Areas

Species	Form	Girth cm	Height cm	Root condition	Quantity
Carpinus betulus 'Frans Fontaine'	EHS	14-16	425-600	65/85 L	15
Tilia cordata 'Greenspire'	EHS	14-16	425-600	65/85 L	24
Sorbus commixta 'Embley'	EHS	14-16	425-600	65/85 L	20

NATIVE HEDGING

Species	Height/ spread cm	Pot size (Litres)	Habit	Min no. of rows	Min no. / m2
Carpinus betulus	60-80	2L	Feathered	4	5/lin m
Fagus sylvatica	60-80	2L	Feathered	4	5/lin m
Ligustrum vulgare	60-80	2L	Feathered	-	4/lin m

NATIVE STRUCTURE MIX @ 1M CTRS

Species	Root Condition	Age + Times Transpl	Height cm	Quantity Area 5	Quantity Area 6	Total Quantity
Acer campestre (15%)	Bagged	2x	150-175	42	42	84
Crataegus monogyna (20%)	Bagged	1+1	40-60	56	56	112
Corylus avellana (20%)	Bagged	1+1	40-60	56	56	112
Cornus sanguineum (15%)	Bagged	1+1	40-60	42	42	84
Malus sylvestris (10%)	Bagged	1+2	100-125	28	28	56
Prunus spinosa (10%)	Bagged	1+1	40-60	28	28	56
Sambucus nigra (10%)	Bagged	1+1	40-60	28	28	56

NATIVE HEDGE TRANSPLANTS at 7 per linear metre, triple staggered row

Species	Root Condition	Age + Times Transpl	Height cm	Quantity Area 1	Quantity Area 2	Quantity Area 3	Quantity Area 4	Total Quantity
Acer campestre (20%)	Bagged	1+1	40-60	966	242	244	123	1275
Crataegus monogyna 30%)	Bagged	1+1	40-60	999	363	367	184	1913
Corylus avellana (10%)	Bagged	1+1	40-60	333	121	122	61	637
Cornus sapauineum (10%)	Bagged	1+1	40-60	333	121	122	61	637
Euonymus europaeus (10%)	Bagged	1+1	40-60	333	121	122	61	637
Ilex aquifolium (10%)	3L	-	40-60	333	121	122	61	637
Prunus spinosa (10%)	Bagged	1+1	40-60	333	121	122	61	637

SHRUB PLANTING - Including species for the RHS Plants for Pollinators Lists

Species	Height/ spread cm	Pot size (Litres)	Habit	Min no. of rows	Min no. / m2
Berberis 'Amstelveen'	20-30	2L	Bushy	3	3
Bergenia cordifolia 'Purpurea'	15-20	3L	-	-	5
Buxus sempervirens 'Faulkner'	30-40	3L	Bushy	5	5
Berberis thunbergii atropurpurea 'Nana'	20-30	2L	Bushy	3	5
Cistus corbariensis	30-40	3L	Bushy	4	3
Cornus alba 'Elegantissima'	40-60	3L	Branched	3	1.5
Cornus alba 'Kesselringii'	40-60	3L	Branched	4	1.5
Cornus alba 'Elegantissima'	40-60	3L	Branched	3	1.5
Carex oshimensis Evergold	20-30	2L	-	-	5
Cotoneaster 'Skogholm'	30-40	3L	Spreading	3	3
Cistus 'Silver Pink'	30-40	3L	Bushy	4	3
Cornus sanguinea 'Midwinter Fire'	40-60	3L	Branched	3	4
Choisya ternata	30-40	3L	Bushy	7	1.5
Elaeagnus x ebbingei	60-80	3L	Bushy	3	1.5
Euonymus 'Emerald 'n' Gold'	20-30	3L	Bushy	7	5
Euonymus 'Emerald Gaiety'	20-30	3L	Bushy	7	5
Geranium 'Johnsons Blue'	20-30	2L	-	-	5
Hebe albicans 'Red Edge'	20-30	3L	Bushy	5	3
Hebe rakiaiensis	20-30	3L	Bushy	5	3
Hypericum 'Hidcote'	30-40	3L	Bushy	5	2
Hebe 'Mrs Winder'	20-30	3L	Bushy	7	3
Heuchera 'Sugar Frosting'	20-30	2L	-	-	5
Lavandula 'Hidcote'	20-30	3L	Bushy	5	5
Lonicera 'Maygreen'	30-40	2L	Bushy	3	3
Mahonia 'Appollo'	30-40	3L	Bushy	3	2.5
Olearia haastii	30-40	3L	Bushy	2	3
Osmanthus burkwoodii	30-40	3L	Bushy	5	1.5
Potentilla 'Abbotswood'	30-40	3L	Bushy	4	2.5
Potentilla 'Elizabeth'	30-40	4L	Bushy	6	2.5
Potentilla 'Red Ace'	30-40	3L	Bushy	4	2.5
Prunus 'Otto Luyken'	30-40	3L	Bushy	3	2
Photoinia x Fraseri 'Red Robin'	40-60	3L	Branched	6	1.5
Rosa 'Kent'	30-40	3L	Bushy	4	3
Rosa 'Hertfordshire'	30-40	3L	Bushy	3	3
Rubus 'Betty Ashburner'	30-40	3L	Branched	5	3
Spiraea 'Anthony Waterer'	30-40	3L	Branched	5	3
Spiraea 'Goldflame'	20-30	2L	Bushy	5	3
Symphoricarpos 'Hancock'	40-60	3L	Branched	2	2
Sarcococa hookeriana	30-40	3L	Bushy	3	3
Skimmia 'Kew White'	30-40	3L	Bushy	3	3
Skimmia japonica 'Rubella'	30-40	3L	Bushy	3	3
Senecio 'Sunshine'	30-40	3L	Bushy	4	2
Viburnum davidii	30-40	3L	Bushy	3	3
Viburnum tinus 'Eve Price'	30-40	3L	Bushy	7	1.5

POND EDGE (planted randomly – up to 0.5m above settled water level)

Species	Root condition	No. / m2	Area A	Area B	Area C	Area D	Area E	Area F	Area G	Total
Caltha palustris	P9/0.5lt	3	5	6	4	8	8	8	4	43
Carex aculiformis	P9/0.5lt	3	5	6	4	8	8	8	4	43
Filipendula ulmaria	P9/0.5lt	3	5	6	4	8	8	8	4	43
Myosotis scorpioides	P9/0.5lt	3	5	6	4	8	8	8	4	43

AQUATIC MARGINALS (planted randomly - to 0.3m below settled water level)

Species	Root condition	No. / m2	Area A	Area B	Area C	Area D	Area E	Area F	Area G	Total
Alitriche stagnalis	P9/0.5lt	2	4	5	3	7	7	7	3	36
Hydrocharis morsus ranae	P9/0.5lt	2	4	5	3	7	7	7	3	36
Ranunculus aquatilis	P9/0.5lt	2	4	5	3	7	7	7	3	36
Stratiotes aloides	P9/0.5lt	2	4	5	3	7	7	7	3	36

Amenity Grass Areas
Emorsgate EL1 Flowering Lawn Mix sown at 4gms/m2

Wild Flowers

%	Latin name	Common name
4	Galium verum	Lady's Bedstraw
0.5	Leontodon hispidus	Rough Hawkbit
1	Leucanthemum vulgare	Oxeye Daisy
3.7	Lotus corniculatus	Birdsfoot Trefoil
3	Primula veris	Cowslip
4	Prunella vulgaris	Selfheal
3.5	Ranunculus acris	Meadow Buttercup
0.3	Trifolium pratense	Wild Red Clover
20		

Grasses

%	Latin name	Common name
8	Agrostis capillaris	Common Bent
40	Cynosurus cristatus	Crested Dogstail
28	Festuca rubra	Slender-creeping Red-fescue
4	Phleum bertolonii	Smaller Cat's-tail
80		

Grassland Mixture – Adjacent Native Hedgerow Planting Areas
Emorsgate EH1 Hedgerow Mixture sown at 4gms/m2

Wild Flowers

%	Latin name	Common name
0.5	Achillea millefolium	Yarrow
1	Agrimonia eupatoria	Agrimony
1.5	Alliaria petiolata	Garlic Mustard
0.5	Centaurea nigra	Common Knapweed
2	Galium album - (Galium mollugo)	Hedge Bedstraw
2.2	Geum urbanum	Wood Avens
0.3	Hypericum perforatum	Perforate St John's Wort
1.5	Leucanthemum vulgare	Oxeye Daisy
0.5	Plantago lanceolata	Ribwort Plantain
0.5	Primula veris	Cowslip
2	Prunella vulgaris	Selfheal
2	Silene dioica	Red Campion
2	Silene vulgaris	Bladder Campion
0.5	Stachys sylvatica	Hedge Woundwort
1	Torilis japonica	Upright Hedge-parsley
0.5	Tragopogon pratensis	Goat's-beard
1.5	Vicia cracca	Tufted Vetch
20		

Grasses

%	Latin name	Common name
10	Agrostis capillaris	Common Bent
1	Anthoxanthum odoratum	Sweet Vernal-grass (w)
6	Brachypodium sylvaticum	False Brome (w)
35	Cynosurus cristatus	Crested Dogstail
2	Deschampsia cespitosa	Tufted Hair-grass (w)
26	Festuca rubra	Slender-creeping Red-fescue
80		

Grassland Mixture – Adjacent SuDs Basins and Swales
Emorsgate EP1 Pond Edge Mix sown at 1.5gms/m2

%	Latin name	English name
	Wildflower	
0.5	Achillea ptarmica	Sneezewort
1.6	Alisma plantago-aquatica	Water plantain
2.5	Angelica sylvestris	Wild angelica
0.5	Eupatorium cannabinum	Hemp agrimony
3.0	Filipendula ulmaria	Meadowsweet
1.2	Geum rivale	Water avens
0.5	Hypericum tetrapterum	Square-stalked St Johns wort
3.0	Iris pseudacorus	Yellow iris
1.2	Lotus pedunculatus	Greater birdsfoot trefoil
1.2	Lychnis flos-cuculi	Ragged robin
1.0	Lycopus europaeus	Gipsywort
0.5	Lythrum salicaria	Purple loosestrife
0.3	Pulicaria dysenterica	Fleabane
0.5	Scutellaria galericulata	Skullcap
1.0	Thalictrum flavum	Common meadow rue
1.5	Vicia cracca	Tufted vetch

Grassland Mixture – Strategic Open Space Area to East (Floodplain)
Emorsgate EM3 Special General-Purpose Meadow Mixture sown at 4gms/m2

Wild Flowers

%	Latin name	Common name
0.5	Achillea millefolium	Yarrow
0.5	Centaurea nigra	Common Knapweed
1.8	Centaurea scabiosa	Greater Knapweed
0.6	Daucus carota	Wild Carrot
0.5	Filipendula ulmaria	Meadowsweet
1	Galium album - (Galium mollugo)	Hedge Bedstraw
1	Galium verum	Lady's Bedstraw
1	Knautia arvensis	Field Scabious
0.2	Leontodon hispidus	Rough Hawkbit
1	Leucanthemum vulgare	Oxeye Daisy
0.2	Lotus corniculatus	Birdsfoot Trefoil
0.2	Plantago media	Hoary Plantain
1.5	Poterium sanguisorba - (Sanguisorba minor)	Salad Burnet
0.6	Primula veris	Cowslip
1	Prunella vulgaris	Selfheal
2.5	Ranunculus acris	Meadow Buttercup
1	Ranunculus bulbosus	Bulbous Buttercup
1	Rhinanthus minor	Yellow Rattle
0.4	Rumex acetosa	Common Sorrel
1	Silene dioica	Red Campion
1.5	Silene vulgaris	Bladder Campion
1	Vicia cracca	Tufted Vetch
20		

Grasses

%	Latin name	Common name
8	Agrostis capillaris	Common Bent
40	Cynosurus cristatus	Crested Dogstail
28	Festuca rubra	Slender-creeping Red-fescue
4	Phleum bertolonii	Smaller Cat's-tail
80		



N

0 100m

KEY

Soft Landscaping

- Existing Trees/Vegetation Retained
- Proposed Tree Planting
- Proposed Native Structure Mix Planting
- Proposed Mixed Native Hedge Transplants
- Proposed Single Species Native Hedge
- Proposed Shrub Planting - On plot hardy, mixed shrub planting, including species from RHS Plants for Pollinators
- Proposed Amenity and Rear Garden Grass - Hardy flowering lawn mixture for amenity areas and turf for rear gardens
- Proposed Grassland - Native wildflower mixes and grassland mixes, for adjacent Suds features and aligning new buffer planting and open space area to east
- Proposed Grassland - Damp Tolerant Native wildflower mixes and grassland mixes for Suds features
- Proposed Lawn Mixture - Flowering Lawn Mixture
- Proposed Marginal Planting - Aquatic marginals planted 0.5m above and below anticipated water line

Hard Landscaping

- Proposed Highway Access and Paths - Tarmac path with conservation kerb edging
- Proposed Shared Surface, Driveways and Parking - 'Burnt Ochre' Tegula Priora Block Paving' stretcher bond
- Proposed Shared Surface, Driveways and Parking - 'Harvest' Tegula Priora Block Paving' stretcher bond
- Proposed Transitions Paving - 'Pennant Grey' Tegula Priora Block Paving' stretcher bond
- Proposed Paving - Front garden paths, Textured 'Buff' 450x450mm
- Proposed 2m wide Path - Breedon gravel with timber edging
- Proposed 3m wide leisure cycle/footway- Breedon gravel with timber edging
- Proposed Bench
- Proposed Play Area - Grass Safety Surfacing
- Proposed 0.5m High Cleft Natural Style Treated Timber Knee Rail
- BS: 5837: 2012 Root Protection Area
- Existing Water Main with 3m buffer either side
- Existing Foul Sewer with 3m buffer either side

Revision	Description	Date
-	First issue	20/11/20
A	Second issue	14/12/20
B	Third issue	3/3/21
C	Fourth issue	6/7/21
D	Fifth issue	2/8/21
E	Sixth issue	21/10/21

LANDARB SOLUTIONS

Project:
Land at Woodgate Centre, Westergate

Description:
Hard and Soft Landscape Proposals Plan - Sheet 1 of 2

Status:
For Planning

Scale: **1:500 @A0**
Drawn I Checked: **DP MP**
Date: **21/10/2021**
Job Number: **LAS 103**
Drawing Number: **05**
Revision: **E**

N

Emergency access retained from Oak Tree Lane. Restricted bollard access to be implemented to only be used for emergency services.

Blue line indicates the position of the existing water main and a 3m easement either side

Existing shrubs trimmed back

2m wide buffer planting zone to northern boundary

Pedestrian and cycle crossing point within the site from the proposed route along Woodgate Road.

Dashed line indicate approximate extents of Flood Zone 2

Existing foul sewer, dashed section to be diverted

Existing shrubs trimmed back

Brown line indicates the position of the existing foul sewer and a 3m easement either side

Safe guarded route for future pedestrian bridge with 1m easment either side.

Proposed raised table with pedestrian/cycle priority. See highway consultant drawing for further information.

3m cycle route throughout the centre of the site and connecting to the eastern boundary

Blue line indicates the position of the existing water main and a 3m easement either side

High value existing Oak trees retained within the new central open space area

Flood Zone 2 Boundary

Flood Zone 3 Boundary

Flood Zone 2 Boundary

Flood Zone 3 Boundary

Lidsey Rife Water Course

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14no.	4-Bed 6 Person House	Type T
3no.	4-Bed 7 Person House	Type L
6no.	4-Bed 8 Person House	Type R

Total 127 Dwellings

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127 Private Dwellings (70%)

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37no. unallocated parking spaces
4no. unallocated EV charging spaces

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2no. spaces per 3-bedroom Dwelling
2no. spaces per 4-bedroom Dwelling
20no. cycle stands

Cycle storage generally provided within garages, rear garden sheds or communal cycle stores.

Site Area - 7.25ha

CDM 2015 Health & Safety Information

This information relates only to 'Significant Hazards' identified on this drawing and is to be read in conjunction with the Designer's Hazard Register.

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P5	01.11.21	Boundary adjusted	AX	LT
P4	20.10.21	Raised tables amended	AX	LT
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P2	18.10.21	Raising tables and cycle parking added	AX	LT
P1	06.08.21	Planning Issue	LT	KE

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Client's Name
Pye Homes

Job Title
Land east of Woodgate Lane, Woodgate

Drawing Title
Proposed Site Layout

Scale
1:500 @ A0 / 1:1000 @ A2
metres 10 20 30 40 50

Drawn	Checked	Date
KE	LT	01.07.21

Job No	Drawing No	Rev
6781	PL-02	P5

Status
APPROVAL

CAD Plot date: 1/11/2021 - 14:38:55 6781 site dwg

Appendix C BEW Framework Masterplan

The Framework Masterplan



Illustrative Framework Masterplan

Appendix D Example Survey Questionnaire

Residential Travel Plan Snapshot Questionnaire
Date: _____

As part of the monitoring process for the Residential Travel Plan, we are currently conducting a Travel Survey. We would be grateful if all members of your household over the age of 18 could complete this brief survey to help us better understand your travel patterns, needs and how we may be able to assist with your travel requirements.

It will take about 5 minutes to complete and all responses will be treated confidentially.

If you have any queries about the survey, or for guidance on how to complete it, please do not hesitate to contact me at the details provided below:

(TPC to complete details)
Travel Plan Coordinator:
Telephone:
E-mail:

Section A: about you and your home

1. Are you:

   Male
   Female

2. Which age range do you fall into?

   Under 25
   25 – 34
   35 – 44
   45 – 54
   55 – 64
   65 or over

3. What is your home postcode?

4. Do you own a car?

   Yes
   No

Section B: about your travel to and from your home

5. How do you most frequently travel to and from your home for the following activities? (choose the mode of travel that you use most often)

Reason for Travel	Walk	Cycle	Bus	Train	Car Share (driver)	Car Share (passenger)	Motorcycle / Scooter	Car (alone)	Other (please specify)
Work									
Shopping									
Education									

6. How often do you use the following modes of travel for journeys from your home? (Tick all modes that you ever use, for all or part of a journey, choosing the frequency with which you use them)

Travel Mode	Very Often (7 or more in every 10 trips)	Quite Often (between 3 and 6 out of every 10 trips)	Occasionally (once or twice out of every 10 trips)	Never
Walk				
Cycle				
Bus				
Train				
Car Share (driver)				
Car Share (passenger)				
Motorcycle / Scooter				
Car (alone)				
Other (please specify)				

7. Have you changed your most common mode of transport since moving to this development?

Yes
No
If yes, what was the main reason for this change?

Section C: about your future journeys

8. Which of the following changes would most encourage you to cycle for journeys in the local area? (If you already cycle, which would you most like to see?)

Safer, better lit cycle paths
Improve cycle paths on the journey to town centre/ rail station
Improve cycle parking at this development
Improved crossing facilities
Improved cycle parking at local facilities (please state where)
None of the above
Other (please specify)

9. Which of the following changes would most encourage you to use public transport for your journeys in the local area? (If you already travel to by public transport, which would you most like to see).

More direct bus routes
More frequent bus services
More frequent train services
Better lighting at bus shelters and on footpaths
More convenient bus drop-off points
Better bus links to work from station
Public transport information
None of the above
Other (please specify)

10. Which of the following changes would most encourage you to walk for journeys in the local area? (If you already walk, which would you most like to see?)

Cleaner, better maintained workplace footpaths
Better lighting on workplace footpaths
More improved pedestrian crossing points
Higher presence of security around the site
Slower speed limits
Better street lighting in the local area
None
Other (please specify)

11. Which of the following changes would most encourage you to car share? (If you already car share, which would you most like to see?)

More help finding car share partners who have similar work patterns
Free taxi home if let down by car
More information regarding car sharing i.e. benefits and cost savings
None
Other (please specify)

12. Did you know this development operated a Travel Plan?

Yes
No

13. If yes, how did you know about the Travel Plan?

During the sales process
Word of mouth
Development publication/newsletter/noticeboard/website
Travel Plan Co-ordinator
Other (please specify)

14. Did you know about the discounts available to residents and have you signed up for any of them?

Yes, but I don't use them
Yes, I have obtained a discount on the purchase of a bike
Yes, I have obtained a discount on the purchase of a bus season ticket
Yes, I have obtained a discount on the purchase of a rail season ticket
No

15. Please use the following space to provide any comments you wish to make in relation to travel in the local area:

Thank you for your co-operation

Charles & Associates

c-a.uk.com

Charles & Associates Consulting Engineers Ltd
Landmark House, Station Road
Hook, Hampshire RG27 9HA

TEL: 01622 449760 Email enquiries@c-a.uk.com

Appendix F Off-site Highway Works Plan

KEY

Wings Nursery Site Proposals

Cycle Route transition on to carriageway with dropped kerb and advisory on carraigeway cycle lane

Proposed 2.5m Shared Footway/Cycleway

New 3m Kerbed Footway to Demarcate Footway/Cycleway

Uncontrolled Crossing for Cyclists

Proposed 3.0m Shared Footway/Cycleway

MfS 2.4m x 59m Junction Visiblity Splay for 37mph

Indicative Location of Existing BT Covers

Proposed 3.0m Shared Footway/Cycleway

Existing Overgrown Hedge to be Cut Back

Access to Wings Nursery Site

Proposed 2.5m (minimum) Shared Footway/Cycleway (using verge and footway)

'Keep Clear' Marking to Diag. 1026

Changes to junction radii to improve footway/cycleway width

Link with Onsite Footway/Cycleway

Footway proposed by Wings Nursery Site to be realigned

MfS 2.4m x 59m Junction Visiblity Splay for 37mph

Access to Wings Nursery Site

0m 10m 20m 30m

Rev	Amendments	Drn	Chk	App	Date
H	Cycleway colour added	GW	GAC	GAC	Oct 21
G	Topographical surey inserted	GW	GAC	GAC	Oct 21
F	Cycle crossing point moved off site	GW	PL	GAC	Sept 21
E	Updated Layout added	LW	PL	GAC	Aug 2021
D	Amended a a result of RSA1	LW	PL	GAC	May 2021
C	Tactile amended	LW	PL	GAC	Apr 2021
B	Accesses to Wings Nursery site added	LW	PL	GAC	Mar 2021
A	Updated Layout (2021-02-05) added	LW	PL	GAC	Feb 2021

Issued by ☒

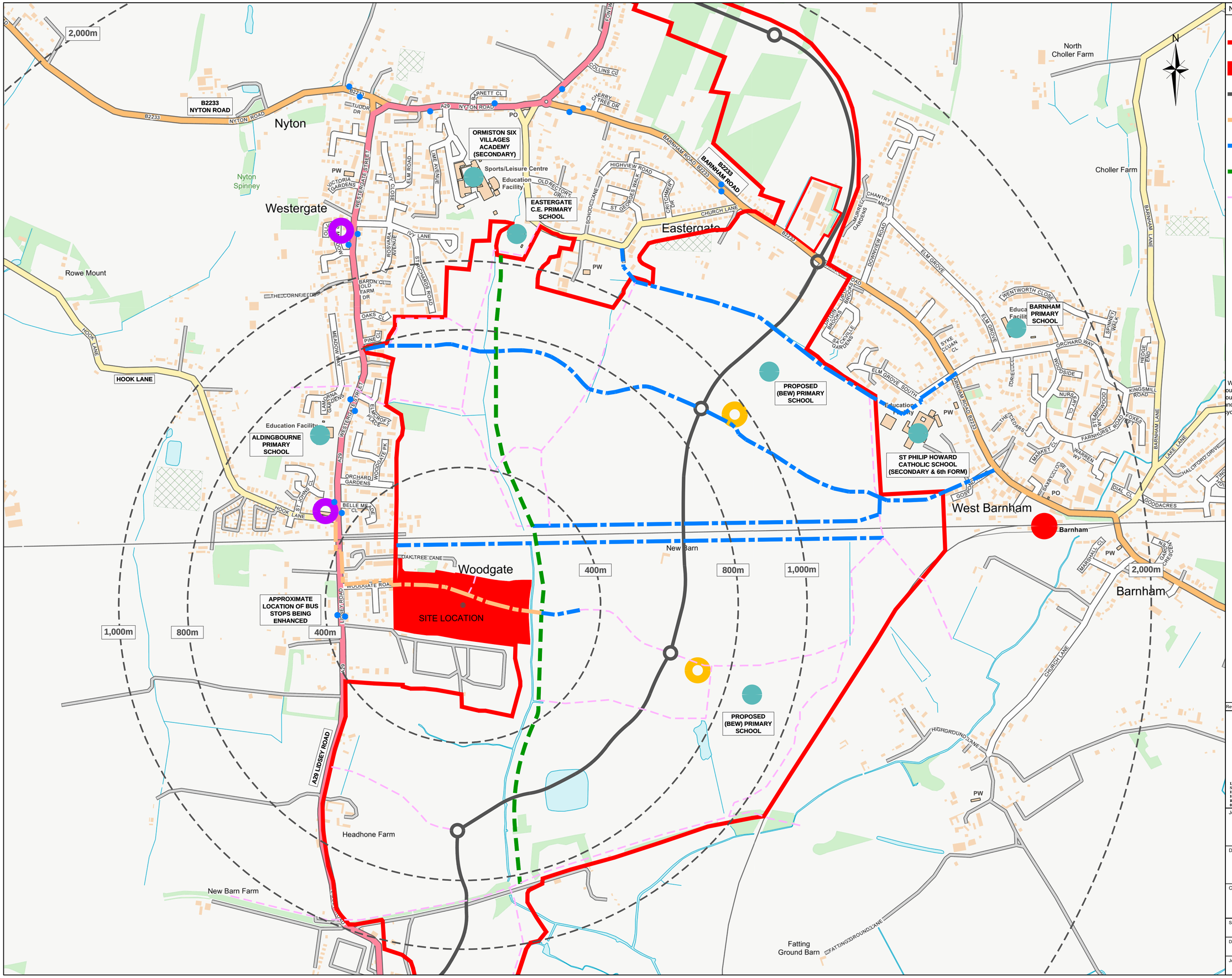
Landmark House
Station Road
Hook
Hampshire
RG27 9HA
01256 630420

☐ Park House, Park Farm
East Malling Trust Estate
Bradbourne Lane
Aylesford, Kent ME20 6SN
01732 448120

Charles & Associates

Job Title: Land East of Woodgate Lane	Scale: 1:1000	Date: Jan 21	Designed: LEW	
Drawing Title: Proposed Site Access and Cycle Connection	Drawn: LEW	Checked: PL	Approved: GAC	
Client: Pye Homes	Job No: 20-061	Drawing No: 20-061-014	Rev: H	

Appendix G Plan Showing Site Connectivity to BEW Masterplan



NOTES

- BEW Masterplan Boundary
- Development Site
- Realigned A29 (Assumed Cycle Route Alongside)
- Woodgate Development Proposed Cycle Routes
- BEW Masterplan Proposed Cycle Routes
- BEW Proposed River Cycle Route
- BEW Masterplan Proposed Pedestrian Routes
- Existing bus stop (approximate location)
- School
- Proposed Local Hub
- Existing Local Shop
- Railway Station

Whilst the masterplan defines these routes as pedestrian routes, there maybe some which are provided as cycle routes. Likewise, for those alongside roads, traffc volumes and speeds maybe low enough that they do not discorage cycling (i.e. sub 20mph and sub 2,000pcu/24 hour)

Rev	Amendments	Drn	Chk	App	Date

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Landmark House
Station Road
Hook
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Park House
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East Malling Trust Estate
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enquiries@c-a-uk.com
www.c-a-uk.com

Job Title
Land East of Woodgate Lane

Drawing Title
Sustainable Interconnectivity to Wider BEW Development

Client
Pye Homes

Scale	Date	Designed
1:5,000	Sept 21	GPW
Drawn	Checked	Approved
GPW	GAC	GAC
Job No	Drawing No	Rev
20-061	20-061-036	-

Appendix H On-Site Pedestrian & Cycle Infrastructure

NATIVE TREE PLANTING
Strategic and Public Open Space Areas

Species	Form	Girth cm	Height cm	Root condition	Quantity
Acer campestre	EHS	14-16	425-600	65/85 L	24
Alnus glutinosa	EHS	14-16	425-600	65/85 L	15
Betula pendula	EHS	14-16	425-600	65/85 L	17
Betula pubescens	EHS	14-16	425-600	65/85 L	16
Carpinus betulus	EHS	14-16	425-600	65/85 L	19
Fagus sylvatica	EHS	14-16	425-600	65/85 L	15
Malus domestica	EHS	14-16	425-600	65/85 L	6
Prunus domestica	EHS	14-16	425-600	65/85 L	4
Populus tremula	EHS	14-16	425-600	65/85 L	18
Tilia cordata	EHS	14-16	425-600	65/85 L	10
Quercus robur	EHS	14-16	425-600	65/85 L	15
Sorbus aucuparia	EHS	14-16	425-600	65/85 L	11

ORNAMENTAL TREE PLANTING
Side Roads, On Plot and Car Parking Areas

Species	Form	Girth cm	Height cm	Root condition	Quantity
Carpinus betulus 'Frans Fontaine'	EHS	14-16	425-600	65/85 L	15
Tilia cordata 'Greenspire'	EHS	14-16	425-600	65/85 L	24
Sorbus commixta 'Embley'	EHS	14-16	425-600	65/85 L	20

NATIVE HEDGING

Species	Height/ spread cm	Pot size (Litres)	Habit	Min no. of rows	Min no. / m2
Carpinus betulus	60-80	2L	Feathered	4	5/lin m
Fagus sylvatica	60-80	2L	Feathered	4	5/lin m
Ligustrum vulgare	60-80	2L	Feathered	-	4/lin m

NATIVE STRUCTURE MIX @ 1M CTRS

Species	Root Condition	Age + Times Transpl	Height cm	Quantity Area 5	Quantity Area 6	Total Quantity
Acer campestre (15%)	Bagged	2x	150-175	42	42	84
Crataegus monogyna (20%)	Bagged	1+1	40-60	56	56	112
Corylus avellana (20%)	Bagged	1+1	40-60	56	56	112
Cornus sanguineum (15%)	Bagged	1+1	40-60	42	42	84
Malus sylvestris (10%)	Bagged	1+2	100-125	28	28	56
Prunus spinosa (10%)	Bagged	1+1	40-60	28	28	56
Sambucus nigra (10%)	Bagged	1+1	40-60	28	28	56

NATIVE HEDGE TRANSPLANTS at 7 per linear metre, triple staggered row

Species	Root Condition	Age + Times Transpl	Height cm	Quantity Area 1	Quantity Area 2	Quantity Area 3	Quantity Area 4	Total Quantity
Acer campestre (20%)	Bagged	1+1	40-60	966	242	244	123	1275
Crataegus monogyna 30%)	Bagged	1+1	40-60	999	363	367	184	1913
Corylus avellana (10%)	Bagged	1+1	40-60	333	121	122	61	637
Cornus sapauineum (10%)	Bagged	1+1	40-60	333	121	122	61	637
Euonymus europaeus (10%)	Bagged	1+1	40-60	333	121	122	61	637
Ilex aquifolium (10%)	3L	-	40-60	333	121	122	61	637
Prunus spinosa (10%)	Bagged	1+1	40-60	333	121	122	61	637

SHRUB PLANTING - Including species for the RHS Plants for Pollinators Lists

Species	Height/ spread cm	Pot size (Litres)	Habit	Min no. of rows	Min no. / m2
Berberis 'Amstelveen'	20-30	2L	Bushy	3	3
Bergenia cordifolia 'Purpurea'	15-20	3L	-	-	5
Buxus sempervirens 'Faulkner'	30-40	3L	Bushy	5	5
Berberis thunbergii atropurpurea 'Nana'	20-30	2L	Bushy	3	5
Cistus corbariensis	30-40	3L	Bushy	4	3
Cornus alba 'Elegantissima'	40-60	3L	Branched	3	1.5
Cornus alba 'Kesselringii'	40-60	3L	Branched	4	1.5
Cornus alba 'Elegantissima'	40-60	3L	Branched	3	1.5
Carex oshimensis Evergold	20-30	2L	-	-	5
Cotoneaster 'Skogholm'	30-40	3L	Spreading	3	3
Cistus 'Silver Pink'	30-40	3L	Bushy	4	3
Cornus sanguinea 'Midwinter Fire'	40-60	3L	Branched	3	4
Choisya ternata	30-40	3L	Bushy	7	1.5
Elaeagnus x ebbingei	60-80	3L	Bushy	3	1.5
Euonymus 'Emerald 'n' Gold'	20-30	3L	Bushy	7	5
Euonymus 'Emerald Gaiety'	20-30	3L	Bushy	7	5
Geranium 'Johnsons Blue'	20-30	2L	-	-	5
Hebe albicans 'Red Edge'	20-30	3L	Bushy	5	3
Hebe rakiaiensis	20-30	3L	Bushy	5	3
Hypericum 'Hidcote'	30-40	3L	Bushy	5	2
Hebe 'Mrs Winder'	20-30	3L	Bushy	7	3
Heuchera 'Sugar Frosting'	20-30	2L	-	-	5
Lavandula 'Hidcote'	20-30	3L	Bushy	5	5
Lonicera 'Maygreen'	30-40	2L	Bushy	3	3
Mahonia 'Appollo'	30-40	3L	Bushy	3	2.5
Olearia haastii	30-40	3L	Bushy	2	3
Osmanthus burkwoodii	30-40	3L	Bushy	5	1.5
Potentilla 'Abbotswood'	30-40	3L	Bushy	4	2.5
Potentilla 'Elizabeth'	30-40	4L	Bushy	6	2.5
Potentilla 'Red Ace'	30-40	3L	Bushy	4	2.5
Prunus 'Otto Luyken'	30-40	3L	Bushy	3	2
Photoinia x Fraseri 'Red Robin'	40-60	3L	Branched	6	1.5
Rosa 'Kent'	30-40	3L	Bushy	4	3
Rosa 'Hertfordshire'	30-40	3L	Bushy	3	3
Rubus 'Betty Ashburner'	30-40	3L	Branched	5	3
Spiraea 'Anthony Waterer'	30-40	3L	Branched	5	3
Spiraea 'Goldflame'	20-30	2L	Bushy	5	3
Symphoricarpos 'Hancock'	40-60	3L	Branched	2	2
Sarcococa hookeriana	30-40	3L	Bushy	3	3
Skimmia 'Kew White'	30-40	3L	Bushy	3	3
Skimmia japonica 'Rubella'	30-40	3L	Bushy	3	3
Senecio 'Sunshine'	30-40	3L	Bushy	4	2
Viburnum davidii	30-40	3L	Bushy	3	3
Viburnum tinus 'Eve Price'	30-40	3L	Bushy	7	1.5

POND EDGE (planted randomly – up to 0.5m above settled water level)

Species	Root condition	No. / m2	Area A	Area B	Area C	Area D	Area E	Area F	Area G	Total
Caltha palustris	P9/0.5lt	3	5	6	4	8	8	8	4	43
Carex aculiformis	P9/0.5lt	3	5	6	4	8	8	8	4	43
Filipendula ulmaria	P9/0.5lt	3	5	6	4	8	8	8	4	43
Myosotis scorpioides	P9/0.5lt	3	5	6	4	8	8	8	4	43

AQUATIC MARGINALS (planted randomly - to 0.3m below settled water level)

Species	Root condition	No. / m2	Area A	Area B	Area C	Area D	Area E	Area F	Area G	Total
Alitriche stagnalis	P9/0.5lt	2	4	5	3	7	7	7	3	36
Hydrocharis morsus ranae	P9/0.5lt	2	4	5	3	7	7	7	3	36
Ranunculus aquatilis	P9/0.5lt	2	4	5	3	7	7	7	3	36
Stratiotes aloides	P9/0.5lt	2	4	5	3	7	7	7	3	36

Amenity Grass Areas
Emorsgate EL1 Flowering Lawn Mix sown at 4gms/m2

Wild Flowers

%	Latin name	Common name
4	Galium verum	Lady's Bedstraw
0.5	Leontodon hispidus	Rough Hawkbit
1	Leucanthemum vulgare	Oxeye Daisy
3.7	Lotus corniculatus	Birdsfoot Trefoil
3	Primula veris	Cowslip
4	Prunella vulgaris	Selfheal
3.5	Ranunculus acris	Meadow Buttercup
0.3	Trifolium pratense	Wild Red Clover
20		

Grasses

%	Latin name	Common name
8	Agrostis capillaris	Common Bent
40	Cynosurus cristatus	Crested Dogstail
28	Festuca rubra	Slender-creeping Red-fescue
4	Phleum bertolonii	Smaller Cat's-tail
80		

Grassland Mixture – Adjacent Native Hedgerow Planting Areas
Emorsgate EH1 Hedgerow Mixture sown at 4gms/m2

Wild Flowers

%	Latin name	Common name
0.5	Achillea millefolium	Yarrow
1	Agrimonia eupatoria	Agrimony
1.5	Alliaria petiolata	Garlic Mustard
0.5	Centaurea nigra	Common Knapweed
2	Galium album - (Galium mollugo)	Hedge Bedstraw
2.2	Geum urbanum	Wood Avens
0.3	Hypericum perforatum	Perforate St John's Wort
1.5	Leucanthemum vulgare	Oxeye Daisy
0.5	Plantago lanceolata	Ribwort Plantain
0.5	Primula veris	Cowslip
2	Prunella vulgaris	Selfheal
2	Silene dioica	Red Campion
2	Silene vulgaris	Bladder Campion
0.5	Stachys sylvatica	Hedge Woundwort
1	Torilis japonica	Upright Hedge-parsley
0.5	Tragopogon pratensis	Goat's-beard
1.5	Vicia cracca	Tufted Vetch
20		

Grasses

%	Latin name	Common name
10	Agrostis capillaris	Common Bent
1	Anthoxanthum odoratum	Sweet Vernal-grass (w)
6	Brachypodium sylvaticum	False Brome (w)
35	Cynosurus cristatus	Crested Dogstail
2	Deschampsia cespitosa	Tufted Hair-grass (w)
26	Festuca rubra	Slender-creeping Red-fescue
80		

Grassland Mixture – Adjacent SuDs Basins and Swales
Emorsgate EP1 Pond Edge Mix sown at 1.5gms/m2

%	Latin name	English name
	Wildflower	
0.5	Achillea ptarmica	Sneezewort
1.6	Alisma plantago-aquatica	Water plantain
2.5	Angelica sylvestris	Wild angelica
0.5	Eupatorium cannabinum	Hemp agrimony
3.0	Filipendula ulmaria	Meadowsweet
1.2	Geum rivale	Water avens
0.5	Hypericum tetrapterum	Square-stalked St Johns wort
3.0	Iris pseudacorus	Yellow iris
1.2	Lotus pedunculatus	Greater birdsfoot trefoil
1.2	Lychnis flos-cuculi	Ragged robin
1.0	Lycopus europaeus	Gipsywort
0.5	Lythrum salicaria	Purple loosestrife
0.3	Pulicaria dysenterica	Fleabane
0.5	Scutellaria galericulata	Skullcap
1.0	Thalictrum flavum	Common meadow rue
1.5	Vicia cracca	Tufted vetch

Grassland Mixture – Strategic Open Space Area to East (Floodplain)
Emorsgate EM3 Special General-Purpose Meadow Mixture sown at 4gms/m2

Wild Flowers

%	Latin name	Common name
0.5	Achillea millefolium	Yarrow
0.5	Centaurea nigra	Common Knapweed
1.8	Centaurea scabiosa	Greater Knapweed
0.6	Daucus carota	Wild Carrot
0.5	Filipendula ulmaria	Meadowsweet
1	Galium album - (Galium mollugo)	Hedge Bedstraw
1	Galium verum	Lady's Bedstraw
1	Knautia arvensis	Field Scabious
0.2	Leontodon hispidus	Rough Hawkbit
1	Leucanthemum vulgare	Oxeye Daisy
0.2	Lotus corniculatus	Birdsfoot Trefoil
0.2	Plantago media	Hoary Plantain
1.5	Poterium sanguisorba - (Sanguisorba minor)	Salad Burnet
0.6	Primula veris	Cowslip
1	Prunella vulgaris	Selfheal
2.5	Ranunculus acris	Meadow Buttercup
1	Ranunculus bulbosus	Bulbous Buttercup
1	Rhinanthus minor	Yellow Rattle
0.4	Rumex acetosa	Common Sorrel
1	Silene dioica	Red Campion
1.5	Silene vulgaris	Bladder Campion
1	Vicia cracca	Tufted Vetch
20		

Grasses

%	Latin name	Common name
8	Agrostis capillaris	Common Bent
40	Cynosurus cristatus	Crested Dogstail
28	Festuca rubra	Slender-creeping Red-fescue
4	Phleum bertolonii	Smaller Cat's-tail
80		



N

0 100m

KEY

Soft Landscaping

- Existing Trees/Vegetation Retained
- Proposed Tree Planting
- Proposed Native Structure Mix Planting
- Proposed Mixed Native Hedge Transplants
- Proposed Single Species Native Hedge
- Proposed Shrub Planting - On plot hardy, mixed shrub planting, including species from RHS Plants for Pollinators
- Proposed Amenity and Rear Garden Grass - Hardy flowering lawn mixture for amenity areas and turf for rear gardens
- Proposed Grassland - Native wildflower mixes and grassland mixes, for adjacent Suds features and aligning new buffer planting and open space area to east
- Proposed Grassland - Damp Tolerant Native wildflower mixes and grassland mixes for Suds features
- Proposed Lawn Mixture - Flowering Lawn Mixture
- Proposed Marginal Planting - Aquatic marginals planted 0.5m above and below anticipated water line

Hard Landscaping

- Proposed Highway Access and Paths - Tarmac path with conservation kerb edging
- Proposed Shared Surface, Driveways and Parking - 'Burnt Ochre' Tegula Priora Block Paving' stretcher bond
- Proposed Shared Surface, Driveways and Parking - 'Harvest' Tegula Priora Block Paving' stretcher bond
- Proposed Transitions Paving - 'Pennant Grey' Tegula Priora Block Paving' stretcher bond
- Proposed Paving - Front garden paths, Textured 'Buff' 450x450mm
- Proposed 2m wide Path - Breedon gravel with timber edging
- Proposed 3m wide leisure cycle/footway- Breedon gravel with timber edging
- Proposed Bench
- Proposed Play Area - Grass Safety Surfacing
- Proposed 0.5m High Cleft Natural Style Treated Timber Knee Rail
- BS: 5837: 2012 Root Protection Area
- Existing Water Main with 3m buffer either side
- Existing Foul Sewer with 3m buffer either side

Revision	Description	Date
-	First issue	20/11/20
A	Second issue	14/12/20
B	Third issue	3/3/21
C	Fourth issue	6/7/21
D	Fifth issue	2/8/21
E	Sixth issue	21/10/21

LANDARB SOLUTIONS

Project:
Land at Woodgate Centre, Westergate

Description:
Hard and Soft Landscape Proposals Plan - Sheet 1 of 2

Status:
For Planning

Scale: **1:500 @A0**
Drawn I Checked: **DP MP**
Date: **21/10/2021**
Job Number: **LAS 103**
Drawing Number: **05**
Revision: **E**

Appendix I Junction Analysis 2021

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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+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: A29 Hook Ln Junction - 2021 test.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 04/10/2021 13:27:09

»2021 (2017 base * Tempro), AM
»2021 (2017 base * Tempro), PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2021 (2017 base * Tempro)							
Stream B-AC	0.3	13.17	0.23	49 %	0.4	12.18	0.26	56 %
Stream C-AB	0.2	5.28	0.09	[Stream B-AC]	0.1	4.37	0.07	[Stream B-AC]

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	A29 Hook Ln Junction
Location	
Site number	
Date	29/03/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2021 (2017 base * Tempro)	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 (2017 base * Tempro)	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2021 (2017 base * Tempro), 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	A29 Hook Ln Junction	T-Junction	Two-way		1.02	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	49	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	A29 S		Major
B	Hook Ln W		Minor
C	A29 N		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 - A29 N	6.87			100.0	✓	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 - Hook Ln W	One lane	3.53	19	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518	0.091	0.229	0.144	0.327
1	B-C	667	0.098	0.249	-	-
1	C-B	632	0.236	0.236	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 (2017 base * Tempro)	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 S		ONE HOUR	✓	721	100.000
B - Hook Ln W		ONE HOUR	✓	76	100.000
C - A29 N		ONE HOUR	✓	478	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	23	698
	B - Hook Ln W	25	0	51
	C - A29 N	452	26	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	6	3
	B - Hook Ln W	10	0	3
	C - A29 N	6	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.23	13.17	0.3	B	70	105
C-AB	0.09	5.28	0.2	A	53	79
C-A					386	579
A-B					21	32
A-C					640	961

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	450	0.127	57	0.0	0.2	9.613	A
C-AB	36	9	749	0.048	36	0.0	0.1	5.264	A
C-A	324	81			324				
A-B	17	4			17				
A-C	525	131			525				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	418	0.164	68	0.2	0.2	10.831	B
C-AB	49	12	777	0.063	49	0.1	0.1	5.165	A
C-A	381	95			381				
A-B	21	5			21				
A-C	627	157			627				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	371	0.225	83	0.2	0.3	13.129	B
C-AB	73	18	820	0.089	73	0.1	0.2	5.050	A
C-A	453	113			453				
A-B	25	6			25				
A-C	769	192			769				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	84	21	371	0.225	84	0.3	0.3	13.166	B
C-AB	73	18	820	0.089	73	0.2	0.2	5.059	A
C-A	453	113			453				
A-B	25	6			25				
A-C	769	192			769				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	417	0.164	69	0.3	0.2	10.869	B
C-AB	49	12	778	0.063	50	0.2	0.1	5.183	A
C-A	380	95			380				
A-B	21	5			21				
A-C	627	157			627				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	57	14	450	0.127	57	0.2	0.2	9.655	A
C-AB	36	9	749	0.048	36	0.1	0.1	5.276	A
C-A	324	81			324				
A-B	17	4			17				
A-C	525	131			525				

2021 (2017 base * Tempro), 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	A29 Hook Ln Junction	T-Junction	Two-way		1.10	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	56	Stream B-AC

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	2021 (2017 base * Tempro)	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 S		ONE HOUR	✓	513	100.000
B - Hook Ln W		ONE HOUR	✓	97	100.000
C - A29 N		ONE HOUR	✓	672	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	33	480
	B - Hook Ln W	33	0	64
	C - A29 N	654	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	5	3
	B - Hook Ln W	3	0	2
	C - A29 N	2	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.26	12.18	0.4	B	89	134
C-AB	0.07	4.37	0.1	A	47	71
C-A					569	854
A-B					30	45
A-C					440	661

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	18	476	0.153	72	0.0	0.2	9.109	A
C-AB	31	8	885	0.034	30	0.0	0.0	4.368	A
C-A	475	119			475				
A-B	25	6			25				
A-C	361	90			361				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	22	449	0.194	87	0.2	0.2	10.178	B
C-AB	43	11	940	0.046	43	0.0	0.1	4.156	A
C-A	561	140			561				
A-B	30	7			30				
A-C	432	108			432				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	409	0.261	106	0.2	0.4	12.143	B
C-AB	68	17	1019	0.066	68	0.1	0.1	3.906	A
C-A	672	168			672				
A-B	36	9			36				
A-C	528	132			528				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	107	27	409	0.261	107	0.4	0.4	12.179	B
C-AB	68	17	1020	0.067	68	0.1	0.1	3.903	A
C-A	672	168			672				
A-B	36	9			36				
A-C	528	132			528				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	87	22	449	0.194	88	0.4	0.3	10.217	B
C-AB	43	11	941	0.046	44	0.1	0.1	4.147	A
C-A	561	140			561				
A-B	30	7			30				
A-C	432	108			432				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	73	18	476	0.153	73	0.3	0.2	9.155	A
C-AB	31	8	885	0.035	31	0.1	0.0	4.362	A
C-A	475	119			475				
A-B	25	6			25				
A-C	361	90			361				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Nyton Rd Junction - Linked - 2021 test.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 04/10/2021 13:22:42

»2021 (2017 base * Tempro), AM
»2021 (2017 base * Tempro), PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	[Lane Simulation] - 2021 (2017 base * Tempro)									
1 - East Junction - A - A29 Nyton Rd S	0.0	0.00		A		0.0	0.00		A	
1 - East Junction - B - Nyton Rd W	0.7	10.50		B		1.0	10.24		B	
1 - East Junction - C - Nyton Rd E	11.7	40.94		E		1.1	3.85		A	
2 - South Junction - A - A29 Westergate Rd S	0.0	0.00		A	%	0.0	0.00		A	%
2 - South Junction - B - B2233 N	0.3	12.43		B		0.8	13.73		B	
2 - South Junction - C - A29 Nyton Rd N	0.0	0.00		A	[ ]	0.0	0.00		A	[ ]
3 - West Junction - A - Nyton Rd E	0.0	0.00		A		0.0	0.00		A	
3 - West Junction - B - B2233 S	0.5	8.92		A		0.4	7.55		A	
3 - West Junction - C - Nyton Rd W	0.5	3.81		A		1.4	8.39		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. Arm and junction delays are averages for all movements, including movements with zero delay. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

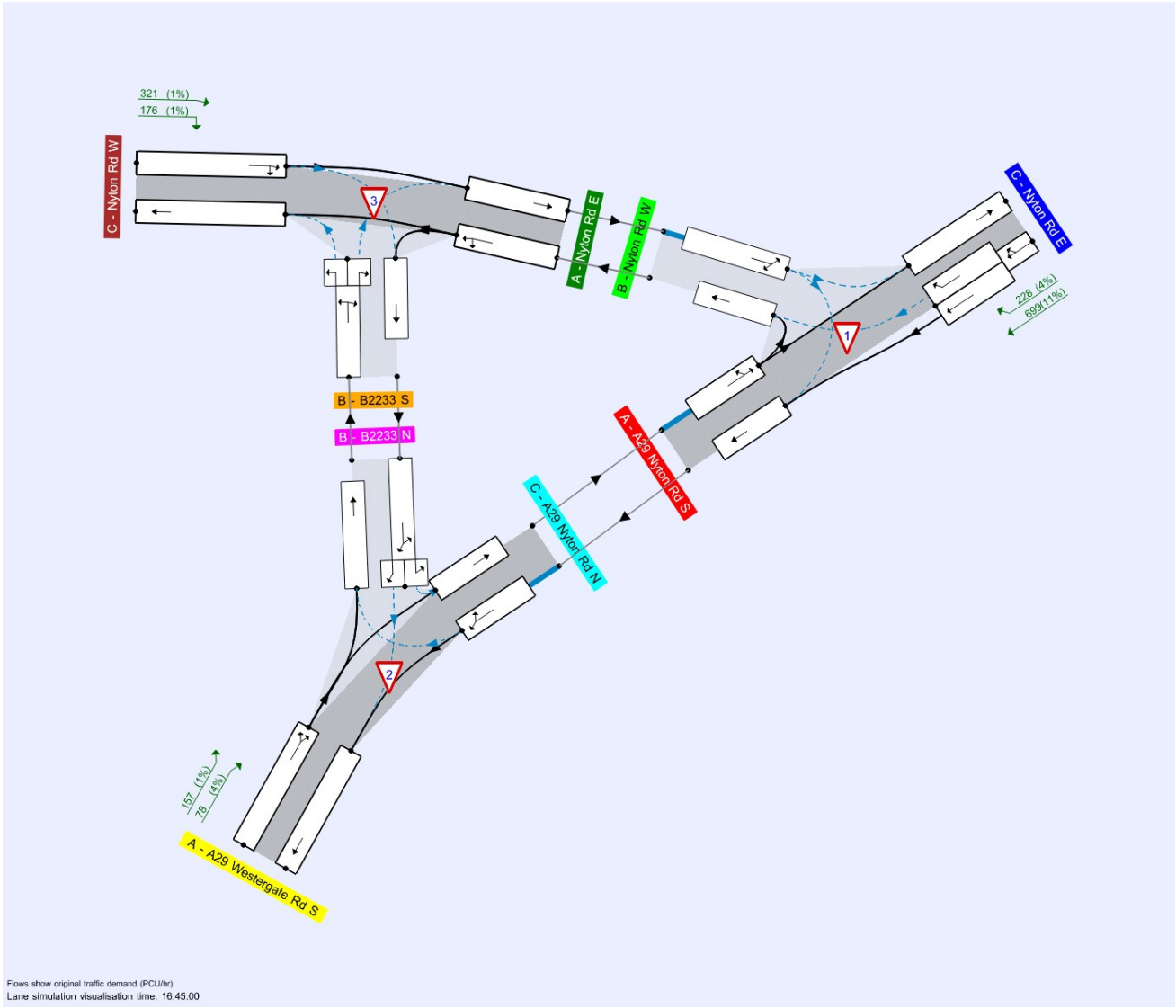
File summary

File Description

Title	
Location	
Site number	
Date	07/04/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CA-PC06\PLimbu
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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			2020791584	153	11.25

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	2021 (2017 base * Tempro)	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 (2017 base * Tempro)	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2021 (2017 base * Tempro), AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way		24.41	C
2	South Junction	T-Junction	Two-way		0.76	A
3	West Junction	T-Junction	Two-way		2.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1 - East Junction	A	A29 Nyton Rd S		Major
	B	Nyton Rd W		Minor
	C	Nyton Rd E		Major
2 - South Junction	A	A29 Westergate Rd S		Major
	B	B2233 N		Minor
	C	A29 Nyton Rd N		Major
3 - West Junction	A	Nyton Rd E		Major
	B	B2233 S		Minor
	C	Nyton Rd W		Major

Major Arm Geometry

Junction	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)
1 - East Junction	C - Nyton Rd E	6.58		✓	2.43	80.0	✓	3.00
2 - South Junction	C - A29 Nyton Rd N	6.69				96.0	✓	0.00
3 - West Junction	C - Nyton Rd W	6.30				50.0	✓	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

Junction	Arm	Minor arm type	Lane width (m)	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)
1 - East Junction	B - Nyton Rd W	One lane	3.72								76	93
2 - South Junction	B - B2233 N	One lane plus flare		10.00	7.09	4.01	3.11	3.04	✓	1.00	27	129
3 - West Junction	B - B2233 S	One lane plus flare		10.00	5.00	3.58	3.28	3.05	✓	1.00	35	13

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	588	0.104	0.264	0.166	0.377
1	B-C	732	0.109	0.276	-	-
1	C-B	636	0.240	0.240	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2	B-A	606	0.107	0.271	0.170	0.387
2	B-C	744	0.111	0.279	-	-
2	C-B	630	0.237	0.237	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
3	B-A	470	0.085	0.214	0.134	0.305
3	B-C	694	0.105	0.265	-	-
3	C-B	603	0.231	0.231	-	-

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.

Lanes

Junction	Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	✓	3.00		0	99999	
		Exit	1	1		✓	3.00				
	B - Nyton Rd W	Entry	1	1	A, C	✓	4.00		0	99999	
		Exit	1	1		✓	3.00				
	C - Nyton Rd E	Entry	1	1	A	✓	3.00		0	99999	
				2	B	✓	3.00		0	99999	
			2	1	(A, B)		Infinity				
		Exit	1	1			Infinity				
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C		Infinity		0	99999	
		Exit	1	1			Infinity				
	B - B2233 N	Entry	1	1	C	✓	1.00		0	99999	
				2	A	✓	1.00		0	99999	
			2	1	(A, C)	✓	4.00				
		Exit	1	1		✓	4.00				
	C - A29 Nyton Rd N	Entry	1	1	A, B	✓	3.00		0	99999	
		Exit	1	1		✓	3.00				
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	✓	4.00		0	99999	
		Exit	1	1		✓	4.00				
	B - B2233 S	Entry	1	1	C	✓	1.00		0	99999	
				2	A	✓	1.00		0	99999	
			2	1	(A, C)	✓	4.00				
		Exit	1	1		✓	3.00				
	C - Nyton Rd W	Entry	1	1	A, B		Infinity		0	99999	
		Exit	1	1			Infinity				

Summary of Entry Lane allowed movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A29 Nyton Rd S	Nyton Rd W	Nyton Rd E
1 - East Junction	A - A29 Nyton Rd S	1	1		✓	✓
	B - Nyton Rd W	1	1	✓		✓
	C - Nyton Rd E	1	1	✓		
			2		✓	
		2	1	✓	✓	

Summary of Entry Lane allowed movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A29 Westergate Rd S	B2233 N	A29 Nyton Rd N
2 - South Junction	A - A29 Westergate Rd S	1	1		✓	✓
	B - B2233 N	1	1			✓
			2	✓		
		2	1	✓		✓
	C - A29 Nyton Rd N	1	1	✓	✓	

Summary of Entry Lane allowed movements

Junction	Arm	Lane Level	Lane	Destination arm		
				Nyton Rd E	B2233 S	Nyton Rd W
3 - West Junction	A - Nyton Rd E	1	1		✓	✓
	B - B2233 S	1	1			✓
			2	✓		
		2	1	✓		✓
	C - Nyton Rd W	1	1	✓	✓	

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	2021 (2017 base * Tempro)	AM	ONE HOUR	07:45	09:15	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - East Junction	A - A29 Nyton Rd S	2	C	Simple (vertical queueing)	Normal	0	100.00	
	B - Nyton Rd W	3	A	Simple (vertical queueing)	Normal	0	100.00	
2 - South Junction	B - B2233 N	3	B	Simple (vertical queueing)	Normal	0	100.00	
	C - A29 Nyton Rd N	1	A	Simple (vertical queueing)	Normal	0	100.00	
3 - West Junction	A - Nyton Rd E	1	B	Simple (vertical queueing)	Normal	0	100.00	
	B - B2233 S	2	B	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - A29 Nyton Rd S	✓				
	B - Nyton Rd W	✓				
	C - Nyton Rd E		ONE HOUR	✓	846	100.000
2 - South Junction	A - A29 Westergate Rd S		ONE HOUR	✓	639	100.000
	B - B2233 N	✓				
	C - A29 Nyton Rd N	✓				
3 - West Junction	A - Nyton Rd E	✓				
	B - B2233 S	✓				
	C - Nyton Rd W		ONE HOUR	✓	291	100.000

Origin-Destination Data

1 - East Junction

Demand (PCU/hr)

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	100
	B - Nyton Rd W	0	0	100
	C - Nyton Rd E	444	402	0

2 - South Junction

Demand (PCU/hr)

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	157	482
	B - B2233 N	100	0	0
	C - A29 Nyton Rd N	100	0	0

3 - West Junction

Demand (PCU/hr)

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	100
	B - B2233 S	0	0	100
	C - Nyton Rd W	217	74	0

Vehicle Mix

1 - East Junction

Heavy Vehicle Percentages

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	0
	B - Nyton Rd W	0	0	0
	C - Nyton Rd E	5	1	0

2 - South Junction

Heavy Vehicle Percentages

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	2	6
	B - B2233 N	0	0	0
	C - A29 Nyton Rd N	0	0	0

3 - West Junction

Heavy Vehicle Percentages

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	0
	B - B2233 S	0	0	0
	C - Nyton Rd W	3	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	A - A29 Nyton Rd S	0.00	0.0	A	415	623
	B - Nyton Rd W	10.50	0.7	B	194	291
	C - Nyton Rd E	40.94	11.7	E	776	1164
2 - South Junction	A - A29 Westergate Rd S	0.00	0.0	A	583	874
	B - B2233 N	12.43	0.3	B	63	95
	C - A29 Nyton Rd N	0.00	0.0	A	385	577
3 - West Junction	A - Nyton Rd E	0.00	0.0	A	364	545
	B - B2233 S	8.92	0.5	A	140	210
	C - Nyton Rd W	3.81	0.5	A	267	401

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	340	85	340	342	337	0.0	0.0	0.000	A
	B - Nyton Rd W	157	39	158	157	304	0.0	0.3	7.654	A
	C - Nyton Rd E	635	159	641	632	498	0.0	1.1	8.208	A
2 - South Junction	A - A29 Westergate Rd S	478	119	478	478	372	0.0	0.0	0.000	A
	B - B2233 N	51	13	51	52	117	0.0	0.1	10.043	B
	C - A29 Nyton Rd N	321	80	321	317	360	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	301	75	301	296	163	0.0	0.0	0.000	A
	B - B2233 S	115	29	115	114	54	0.0	0.2	7.143	A
	C - Nyton Rd W	218	55	218	219	416	0.0	0.3	3.121	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	407	102	407	409	394	0.0	0.0	0.000	A
	B - Nyton Rd W	194	48	194	190	361	0.3	0.6	8.663	A
	C - Nyton Rd E	765	191	755	748	601	1.1	3.2	12.092	B
2 - South Junction	A - A29 Westergate Rd S	575	144	575	574	439	0.0	0.0	0.000	A
	B - B2233 N	63	16	63	60	143	0.1	0.2	10.065	B
	C - A29 Nyton Rd N	377	94	377	378	433	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	357	89	357	349	199	0.0	0.0	0.000	A
	B - B2233 S	139	35	140	138	67	0.2	0.4	7.497	A
	C - Nyton Rd W	265	66	265	260	497	0.3	0.3	3.279	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	490	122	490	494	475	0.0	0.0	0.000	A
	B - Nyton Rd W	231	58	231	232	434	0.6	0.7	10.499	B
	C - Nyton Rd E	924	231	910	901	720	3.2	9.1	27.389	D
2 - South Junction	A - A29 Westergate Rd S	685	171	685	695	528	0.0	0.0	0.000	A
	B - B2233 N	74	19	74	75	168	0.2	0.3	12.158	B
	C - A29 Nyton Rd N	453	113	453	451	517	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	430	108	430	424	239	0.0	0.0	0.000	A
	B - B2233 S	165	41	166	169	79	0.4	0.3	8.720	A
	C - Nyton Rd W	317	79	319	320	597	0.3	0.3	3.732	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	493	123	493	501	480	0.0	0.0	0.000	A
	B - Nyton Rd W	229	57	231	232	441	0.7	0.6	10.049	B
	C - Nyton Rd E	931	233	922	923	724	9.1	11.7	40.937	E
2 - South Junction	A - A29 Westergate Rd S	694	173	694	704	532	0.0	0.0	0.000	A
	B - B2233 N	76	19	77	76	170	0.3	0.2	12.434	B
	C - A29 Nyton Rd N	456	114	456	458	524	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	437	109	437	438	237	0.0	0.0	0.000	A
	B - B2233 S	166	42	165	168	82	0.3	0.5	8.917	A
	C - Nyton Rd W	319	80	318	321	602	0.3	0.5	3.807	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	417	104	417	406	395	0.0	0.0	0.000	A
	B - Nyton Rd W	189	47	189	190	357	0.6	0.5	8.920	A
	C - Nyton Rd E	760	190	752	793	606	11.7	3.0	18.445	C
2 - South Junction	A - A29 Westergate Rd S	586	147	586	572	439	0.0	0.0	0.000	A
	B - B2233 N	62	15	61	63	144	0.2	0.2	10.592	B
	C - A29 Nyton Rd N	378	94	378	397	442	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	353	88	353	373	195	0.0	0.0	0.000	A
	B - B2233 S	142	35	143	140	66	0.5	0.2	8.024	A
	C - Nyton Rd W	260	65	260	260	495	0.5	0.2	3.429	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	344	86	344	340	339	0.0	0.0	0.000	A
	B - Nyton Rd W	162	41	160	160	307	0.5	0.5	7.860	A
	C - Nyton Rd E	643	161	646	641	504	3.0	1.3	8.059	A
2 - South Junction	A - A29 Westergate Rd S	478	119	478	479	377	0.0	0.0	0.000	A
	B - B2233 N	54	13	54	52	113	0.2	0.1	9.550	A
	C - A29 Nyton Rd N	323	81	323	322	365	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	304	76	304	301	167	0.0	0.0	0.000	A
	B - B2233 S	111	28	110	116	57	0.2	0.2	7.079	A
	C - Nyton Rd W	224	56	224	220	414	0.2	0.1	2.901	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	340	340	342	0.0	0.0	0.000	A
		Exit	1	1		337	337	333	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	157	158	157	0.0	0.3	7.654	A
		Exit	1	1		304	304	299	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	337	337	333	0.0	0.0	0.000	A
				2	B	303	304	299	0.0	0.9	12.269	B
			2	1	(A, B)	635	640	636	0.0	0.2	2.241	A
		Exit	1	1		498	498	499	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	478	478	478	0.0	0.0	0.000	A
		Exit	1	1		372	372	369	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	51	51	52	0.0	0.1	8.720	A
			2	1	(A, C)	51	51	52	0.0	0.0	1.319	A
		Exit	1	1		117	117	116	0.0	0.0	0.001	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	321	321	317	0.0	0.0	0.000	A
		Exit	1	1		360	360	362	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	301	301	296	0.0	0.0	0.000	A
		Exit	1	1		163	163	163	0.0	0.0	0.025	A
	B - B2233 S	Entry	1	1	C	115	115	114	0.0	0.1	5.766	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	115	115	114	0.0	0.1	1.366	A
		Exit	1	1		54	54	56	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	218	218	219	0.0	0.3	3.121	A
		Exit	1	1		416	416	410	0.0	0.0	0.000	A

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	407	407	409	0.0	0.0	0.000	A
		Exit	1	1		394	394	396	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	194	194	190	0.3	0.6	8.663	A
		Exit	1	1		361	361	352	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	394	394	396	0.0	0.0	0.000	A
				2	B	361	361	352	0.9	1.5	14.001	B
			2	1	(A, B)	765	756	751	0.2	1.7	5.326	A
		Exit	1	1		601	601	599	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	575	575	574	0.0	0.0	0.000	A
		Exit	1	1		439	439	438	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	63	63	60	0.1	0.2	8.812	A
			2	1	(A, C)	63	63	61	0.0	0.0	1.261	A
		Exit	1	1		143	143	141	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	377	377	378	0.0	0.0	0.000	A
		Exit	1	1		433	433	433	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	357	357	349	0.0	0.0	0.000	A
		Exit	1	1		198	199	196	0.0	0.0	0.116	A
	B - B2233 S	Entry	1	1	C	140	140	138	0.1	0.3	5.919	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	139	140	138	0.1	0.1	1.591	A
		Exit	1	1		67	67	64	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	265	265	260	0.3	0.3	3.279	A
		Exit	1	1		497	497	486	0.0	0.0	0.000	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	490	490	494	0.0	0.0	0.000	A
		Exit	1	1		475	475	473	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	231	231	232	0.6	0.7	10.499	B
		Exit	1	1		434	434	429	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	475	475	473	0.0	0.0	0.000	A
				2	B	433	434	429	1.5	2.0	16.812	C
			2	1	(A, B)	924	909	904	1.7	7.1	19.175	C
		Exit	1	1		720	720	726	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	685	685	695	0.0	0.0	0.000	A
		Exit	1	1		528	528	526	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	74	74	75	0.2	0.2	9.671	A
			2	1	(A, C)	74	74	75	0.0	0.1	2.467	A
		Exit	1	1		168	168	172	0.0	0.0	0.040	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	453	453	451	0.0	0.0	0.000	A
		Exit	1	1		517	517	523	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	430	430	424	0.0	0.0	0.000	A
		Exit	1	1		239	239	241	0.0	0.0	0.388	A
	B - B2233 S	Entry	1	1	C	166	166	169	0.3	0.3	6.171	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	165	166	169	0.1	0.1	2.545	A
		Exit	1	1		79	79	80	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	317	319	320	0.3	0.3	3.732	A
		Exit	1	1		597	597	593	0.0	0.0	0.000	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	493	493	501	0.0	0.0	0.000	A
		Exit	1	1		480	480	481	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	229	231	232	0.7	0.6	10.049	B
		Exit	1	1		441	441	442	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	480	480	481	0.0	0.0	0.000	A
				2	B	442	441	442	2.0	2.3	17.722	C
			2	1	(A, B)	931	923	924	7.1	9.4	32.253	D
		Exit	1	1		724	724	734	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	694	694	704	0.0	0.0	0.000	A
		Exit	1	1		532	532	533	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	76	77	76	0.2	0.2	9.742	A
			2	1	(A, C)	76	76	75	0.1	0.0	2.710	A
		Exit	1	1		170	170	173	0.0	0.0	0.010	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	456	456	458	0.0	0.0	0.000	A
		Exit	1	1		524	524	532	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	437	437	438	0.0	0.0	0.000	A
		Exit	1	1		237	237	240	0.0	0.0	0.361	A
	B - B2233 S	Entry	1	1	C	165	165	168	0.3	0.3	6.312	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	166	165	168	0.1	0.2	2.603	A
		Exit	1	1		82	82	81	0.0	0.0	0.005	A
	C - Nyton Rd W	Entry	1	1	A, B	319	318	321	0.3	0.5	3.807	A
		Exit	1	1		602	602	606	0.0	0.0	0.000	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	417	417	406	0.0	0.0	0.000	A
		Exit	1	1		395	395	417	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	189	189	190	0.6	0.5	8.920	A
		Exit	1	1		357	357	377	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	395	395	417	0.0	0.0	0.000	A
				2	B	358	357	377	2.3	1.5	14.592	B
			2	1	(A, B)	760	752	790	9.4	1.5	11.527	B
		Exit	1	1		606	606	596	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	586	586	572	0.0	0.0	0.000	A
		Exit	1	1		439	439	460	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	61	61	63	0.2	0.1	9.012	A
			2	1	(A, C)	62	61	62	0.0	0.0	1.579	A
		Exit	1	1		144	144	142	0.0	0.0	0.001	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	378	378	397	0.0	0.0	0.000	A
		Exit	1	1		442	442	430	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	353	353	373	0.0	0.0	0.000	A
		Exit	1	1		195	195	194	0.0	0.0	0.108	A
	B - B2233 S	Entry	1	1	C	142	143	140	0.3	0.2	6.132	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	142	142	140	0.2	0.0	1.890	A
		Exit	1	1		66	66	66	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	260	260	260	0.5	0.2	3.429	A
		Exit	1	1		495	495	513	0.0	0.0	0.000	A

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	344	344	340	0.0	0.0	0.000	A
		Exit	1	1		339	339	338	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	162	160	160	0.5	0.5	7.860	A
		Exit	1	1		307	307	303	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	339	339	338	0.0	0.0	0.000	A
				2	B	306	307	303	1.5	1.0	12.193	B
			2	1	(A, B)	643	644	639	1.5	0.4	2.257	A
		Exit	1	1		504	504	500	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	478	478	479	0.0	0.0	0.000	A
		Exit	1	1		377	377	374	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	54	54	52	0.1	0.1	8.375	A
			2	1	(A, C)	54	54	52	0.0	0.0	1.181	A
		Exit	1	1		113	113	118	0.0	0.0	0.002	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	323	323	322	0.0	0.0	0.000	A
		Exit	1	1		365	365	361	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	304	304	301	0.0	0.0	0.000	A
		Exit	1	1		167	167	164	0.0	0.0	0.078	A
	B - B2233 S	Entry	1	1	C	110	110	116	0.2	0.2	5.709	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	111	110	116	0.0	0.0	1.373	A
		Exit	1	1		57	57	55	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	224	224	220	0.2	0.1	2.901	A
		Exit	1	1		414	414	416	0.0	0.0	0.000	A

2021 (2017 base * Tempro), PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way		5.15	A
2	South Junction	T-Junction	Two-way		2.28	A
3	West Junction	T-Junction	Two-way		6.11	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2021 (2017 base * Tempro)	PM	ONE HOUR	16:45	18:15	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - East Junction	A - A29 Nyton Rd S	2	C	Simple (vertical queueing)	Normal	0	100.00	
	B - Nyton Rd W	3	A	Simple (vertical queueing)	Normal	0	100.00	
2 - South Junction	B - B2233 N	3	B	Simple (vertical queueing)	Normal	0	100.00	
	C - A29 Nyton Rd N	1	A	Simple (vertical queueing)	Normal	0	100.00	
3 - West Junction	A - Nyton Rd E	1	B	Simple (vertical queueing)	Normal	0	100.00	
	B - B2233 S	2	B	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - A29 Nyton Rd S	✓				
	B - Nyton Rd W	✓				
	C - Nyton Rd E		ONE HOUR	✓	927	100.000
2 - South Junction	A - A29 Westergate Rd S		ONE HOUR	✓	235	100.000
	B - B2233 N	✓				
	C - A29 Nyton Rd N	✓				
3 - West Junction	A - Nyton Rd E	✓				
	B - B2233 S	✓				
	C - Nyton Rd W		ONE HOUR	✓	497	100.000

Origin-Destination Data

1 - East Junction

Demand (PCU/hr)

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	100
	B - Nyton Rd W	0	0	100
	C - Nyton Rd E	699	228	0

2 - South Junction

Demand (PCU/hr)

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	157	78
	B - B2233 N	100	0	0
	C - A29 Nyton Rd N	100	0	0

3 - West Junction

Demand (PCU/hr)

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	100
	B - B2233 S	0	0	100
	C - Nyton Rd W	321	176	0

Vehicle Mix

1 - East Junction

Heavy Vehicle Percentages

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	0
	B - Nyton Rd W	0	0	0
	C - Nyton Rd E	11	4	0

2 - South Junction

Heavy Vehicle Percentages

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	1	4
	B - B2233 N	0	0	0
	C - A29 Nyton Rd N	0	0	0

Heavy Vehicle Percentages

3 - West Junction

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	0
	B - B2233 S	0	0	0
	C - Nyton Rd W	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	A - A29 Nyton Rd S	0.00	0.0	A	68	103
	B - Nyton Rd W	10.24	1.0	B	290	435
	C - Nyton Rd E	3.85	1.1	A	860	1291
2 - South Junction	A - A29 Westergate Rd S	0.00	0.0	A	216	324
	B - B2233 N	13.73	0.8	B	160	240
	C - A29 Nyton Rd N	0.00	0.0	A	586	879
3 - West Junction	A - Nyton Rd E	0.00	0.0	A	203	304
	B - B2233 S	7.55	0.4	A	144	215
	C - Nyton Rd W	8.39	1.4	A	454	681

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	59	15	59	57	538	0.0	0.0	0.000	A
	B - Nyton Rd W	236	59	237	235	172	0.0	0.5	7.700	A
	C - Nyton Rd E	710	177	710	697	296	0.0	0.4	2.321	A
2 - South Junction	A - A29 Westergate Rd S	180	45	180	180	619	0.0	0.0	0.000	A
	B - B2233 N	135	34	135	131	119	0.0	0.3	9.843	A
	C - A29 Nyton Rd N	484	121	484	476	61	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	166	41	166	165	239	0.0	0.0	0.000	A
	B - B2233 S	118	30	119	119	136	0.0	0.2	6.720	A
	C - Nyton Rd W	374	93	375	372	285	0.0	0.5	4.858	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	64	16	64	67	630	0.0	0.0	0.000	A
	B - Nyton Rd W	288	72	289	284	206	0.5	0.7	8.781	A
	C - Nyton Rd E	840	210	836	833	353	0.4	0.8	2.584	A
2 - South Junction	A - A29 Westergate Rd S	210	53	210	210	725	0.0	0.0	0.000	A
	B - B2233 N	158	39	157	154	145	0.3	0.7	10.869	B
	C - A29 Nyton Rd N	568	142	568	568	66	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	197	49	197	195	291	0.0	0.0	0.000	A
	B - B2233 S	143	36	144	138	159	0.2	0.2	7.100	A
	C - Nyton Rd W	449	112	450	444	341	0.5	0.9	6.505	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	84	21	84	79	771	0.0	0.0	0.000	A
	B - Nyton Rd W	351	88	347	344	256	0.7	1.0	9.916	A
	C - Nyton Rd E	1021	255	1028	1011	430	0.8	1.1	3.850	A
2 - South Junction	A - A29 Westergate Rd S	266	66	266	254	889	0.0	0.0	0.000	A
	B - B2233 N	193	48	195	193	178	0.7	0.6	13.728	B
	C - A29 Nyton Rd N	694	174	694	684	87	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	246	61	246	239	354	0.0	0.0	0.000	A
	B - B2233 S	175	44	174	170	195	0.2	0.4	7.551	A
	C - Nyton Rd W	547	137	550	543	420	0.9	1.0	8.389	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	80	20	80	81	783	0.0	0.0	0.000	A
	B - Nyton Rd W	353	88	351	355	252	1.0	1.0	10.235	B
	C - Nyton Rd E	1035	259	1035	1032	430	1.1	0.8	3.000	A
2 - South Junction	A - A29 Westergate Rd S	249	62	249	256	890	0.0	0.0	0.000	A
	B - B2233 N	185	46	184	188	166	0.6	0.8	13.251	B
	C - A29 Nyton Rd N	706	177	706	701	82	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	243	61	243	243	356	0.0	0.0	0.000	A
	B - B2233 S	166	41	167	170	187	0.4	0.3	7.387	A
	C - Nyton Rd W	546	137	544	550	409	1.0	1.4	7.849	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	67	17	67	66	646	0.0	0.0	0.000	A
	B - Nyton Rd W	278	70	278	290	204	1.0	0.6	8.844	A
	C - Nyton Rd E	850	213	850	835	346	0.8	0.5	2.681	A
2 - South Junction	A - A29 Westergate Rd S	212	53	212	212	747	0.0	0.0	0.000	A
	B - B2233 N	162	41	161	160	142	0.8	0.5	11.299	B
	C - A29 Nyton Rd N	586	146	586	567	70	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	197	49	197	198	281	0.0	0.0	0.000	A
	B - B2233 S	141	35	139	142	164	0.3	0.3	7.332	A
	C - Nyton Rd W	447	112	446	452	335	1.4	0.8	6.756	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	58	14	58	57	532	0.0	0.0	0.000	A
	B - Nyton Rd W	233	58	232	237	178	0.6	0.6	8.042	A
	C - Nyton Rd E	707	177	709	704	290	0.5	0.4	2.438	A
2 - South Junction	A - A29 Westergate Rd S	178	45	178	177	606	0.0	0.0	0.000	A
	B - B2233 N	126	31	127	129	119	0.5	0.4	9.715	A
	C - A29 Nyton Rd N	479	120	479	476	59	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	170	43	170	167	236	0.0	0.0	0.000	A
	B - B2233 S	118	29	117	118	127	0.3	0.2	6.519	A
	C - Nyton Rd W	361	90	363	369	287	0.8	0.6	5.390	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	59	59	57	0.0	0.0	0.000	A
		Exit	1	1		538	538	526	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	236	237	235	0.0	0.5	7.700	A
		Exit	1	1		172	172	171	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	538	538	526	0.0	0.0	0.000	A
				2	B	172	172	171	0.0	0.4	8.036	A
			2	1	(A, B)	710	710	699	0.0	0.0	0.239	A
		Exit	1	1		296	296	292	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	180	180	180	0.0	0.0	0.000	A
		Exit	1	1		619	619	606	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	134	135	131	0.0	0.2	7.309	A
			2	1	(A, C)	135	134	131	0.0	0.1	2.532	A
		Exit	1	1		119	119	120	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	484	484	476	0.0	0.0	0.000	A
		Exit	1	1		61	61	60	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	166	166	165	0.0	0.0	0.000	A
		Exit	1	1		239	239	239	0.0	0.0	0.132	A
	B - B2233 S	Entry	1	1	C	119	119	119	0.0	0.1	5.544	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	118	119	119	0.0	0.0	1.176	A
		Exit	1	1		136	136	133	0.0	0.0	0.004	A
	C - Nyton Rd W	Entry	1	1	A, B	374	375	372	0.0	0.5	4.858	A
		Exit	1	1		285	285	284	0.0	0.0	0.000	A

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	64	64	67	0.0	0.0	0.000	A
		Exit	1	1		630	630	630	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	288	289	284	0.5	0.7	8.781	A
		Exit	1	1		206	206	204	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	630	630	630	0.0	0.0	0.000	A
				2	B	209	206	204	0.4	0.7	8.789	A
			2	1	(A, B)	840	839	835	0.0	0.1	0.325	A
		Exit	1	1		353	353	351	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	210	210	210	0.0	0.0	0.000	A
		Exit	1	1		725	725	721	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	157	157	154	0.2	0.4	7.555	A
			2	1	(A, C)	158	157	154	0.1	0.3	3.330	A
		Exit	1	1		145	145	140	0.0	0.0	0.002	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	568	568	568	0.0	0.0	0.000	A
		Exit	1	1		66	66	70	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	197	197	195	0.0	0.0	0.000	A
		Exit	1	1		291	291	288	0.0	0.0	0.330	A
	B - B2233 S	Entry	1	1	C	143	144	138	0.1	0.2	5.541	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	143	143	139	0.0	0.0	1.555	A
		Exit	1	1		159	159	157	0.0	0.0	0.044	A
	C - Nyton Rd W	Entry	1	1	A, B	449	450	444	0.5	0.9	6.505	A
		Exit	1	1		341	341	334	0.0	0.0	0.000	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	84	84	79	0.0	0.0	0.000	A
		Exit	1	1		771	771	761	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	351	347	344	0.7	1.0	9.916	A
		Exit	1	1		256	256	250	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	771	771	761	0.0	0.0	0.000	A
				2	B	256	256	250	0.7	0.7	9.591	A
			2	1	(A, B)	1021	1027	1011	0.1	0.4	1.355	A
		Exit	1	1		430	430	423	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	266	266	254	0.0	0.0	0.000	A
		Exit	1	1		889	889	877	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	194	195	193	0.4	0.4	8.071	A
			2	1	(A, C)	193	194	193	0.3	0.2	5.643	A
		Exit	1	1		178	178	173	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	694	694	684	0.0	0.0	0.000	A
		Exit	1	1		87	87	82	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	246	246	239	0.0	0.0	0.000	A
		Exit	1	1		355	354	348	0.0	0.0	0.771	A
	B - B2233 S	Entry	1	1	C	175	174	170	0.2	0.3	5.594	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	175	175	170	0.0	0.1	1.962	A
		Exit	1	1		195	195	195	0.0	0.0	0.175	A
	C - Nyton Rd W	Entry	1	1	A, B	547	550	543	0.9	1.0	8.389	A
		Exit	1	1		420	420	409	0.0	0.0	0.000	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	80	80	81	0.0	0.0	0.000	A
		Exit	1	1		783	783	778	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	353	351	355	1.0	1.0	10.235	B
		Exit	1	1		252	252	253	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	783	783	778	0.0	0.0	0.000	A
				2	B	251	252	253	0.7	0.6	9.356	A
			2	1	(A, B)	1035	1034	1031	0.4	0.2	0.596	A
		Exit	1	1		430	430	437	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	249	249	256	0.0	0.0	0.000	A
		Exit	1	1		890	890	890	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	184	184	188	0.4	0.4	8.034	A
			2	1	(A, C)	185	184	188	0.2	0.3	5.216	A
		Exit	1	1		166	166	171	0.0	0.0	0.008	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	706	706	701	0.0	0.0	0.000	A
		Exit	1	1		82	82	85	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	243	243	243	0.0	0.0	0.000	A
		Exit	1	1		356	356	358	0.0	0.1	0.789	A
	B - B2233 S	Entry	1	1	C	166	167	170	0.3	0.2	5.531	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	166	166	170	0.1	0.1	1.856	A
		Exit	1	1		187	187	191	0.0	0.0	0.108	A
	C - Nyton Rd W	Entry	1	1	A, B	546	544	550	1.0	1.4	7.849	A
		Exit	1	1		409	409	414	0.0	0.0	0.000	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	67	67	66	0.0	0.0	0.000	A
		Exit	1	1		646	646	628	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	278	278	290	1.0	0.6	8.844	A
		Exit	1	1		204	204	206	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	646	646	628	0.0	0.0	0.000	A
				2	B	204	204	206	0.6	0.4	8.927	A
			2	1	(A, B)	850	850	834	0.2	0.1	0.379	A
		Exit	1	1		346	346	356	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	212	212	212	0.0	0.0	0.000	A
		Exit	1	1		747	747	727	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	162	161	160	0.4	0.4	7.694	A
			2	1	(A, C)	162	162	160	0.3	0.2	3.616	A
		Exit	1	1		142	142	143	0.0	0.0	0.002	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	586	586	567	0.0	0.0	0.000	A
		Exit	1	1		70	70	69	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	197	197	198	0.0	0.0	0.000	A
		Exit	1	1		282	281	291	0.1	0.0	0.283	A
	B - B2233 S	Entry	1	1	C	140	139	142	0.2	0.3	5.681	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	141	140	142	0.1	0.1	1.654	A
		Exit	1	1		164	164	161	0.0	0.0	0.055	A
	C - Nyton Rd W	Entry	1	1	A, B	447	446	452	1.4	0.8	6.756	A
		Exit	1	1		335	335	340	0.0	0.0	0.000	A

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	58	58	57	0.0	0.0	0.000	A
		Exit	1	1		532	532	530	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	233	232	237	0.6	0.6	8.042	A
		Exit	1	1		178	178	173	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	532	532	530	0.0	0.0	0.000	A
				2	B	177	178	173	0.4	0.4	8.367	A
			2	1	(A, B)	707	709	704	0.1	0.0	0.275	A
		Exit	1	1		290	290	294	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	178	178	177	0.0	0.0	0.000	A
		Exit	1	1		606	606	605	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	127	127	129	0.4	0.3	7.233	A
			2	1	(A, C)	126	127	129	0.2	0.1	2.479	A
		Exit	1	1		119	119	119	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	479	479	476	0.0	0.0	0.000	A
		Exit	1	1		59	59	59	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	170	170	167	0.0	0.0	0.000	A
		Exit	1	1		236	236	240	0.0	0.0	0.125	A
	B - B2233 S	Entry	1	1	C	117	117	118	0.3	0.2	5.457	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	118	117	117	0.1	0.1	1.067	A
		Exit	1	1		127	127	129	0.0	0.0	0.018	A
	C - Nyton Rd W	Entry	1	1	A, B	361	363	369	0.8	0.6	5.390	A
		Exit	1	1		287	287	284	0.0	0.0	0.000	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Woodgate Road Junction - 2021 test.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 04/10/2021 11:38:59

»2021 (2017 base * Tempro), AM
»2021 (2017 base * Tempro), PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2021 (2017 base * Tempro)							
Stream B-AC	0.2	13.11	0.16	57 %	0.1	11.97	0.08	63 %
Stream C-AB	0.0	7.02	0.01	[Stream B-AC]	0.0	7.71	0.03	[Stream B-AC]

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	A29 Woodgate Road Junction
Location	
Site number	
Date	21/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	20-061
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2021 (2017 base * Tempro)	AM	ONE HOUR	07:45	09:15	15	✓
D2	2021 (2017 base * Tempro)	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2021 (2017 base * Tempro), 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	A29 Woodgate Road Junction	T-Junction	Two-way		0.55	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	57	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	A29 N		Major
B	Woodgate Road		Minor
C	A29 S		Major

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)
C - A29 S	6.00		✓	3.00	100.0	✓	5.00

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 - Woodgate Road	One lane	3.04	19	17

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	494	0.090	0.227	0.143	0.325
1	B-C	637	0.098	0.247	-	-
1	C-B	687	0.266	0.266	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2021 (2017 base * Tempro)	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 N		ONE HOUR	✓	498	100.000
B - Woodgate Road		ONE HOUR	✓	47	100.000
C - A29 S		ONE HOUR	✓	675	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	4	494
	B - Woodgate Road	27	0	20
	C - A29 S	668	7	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	13	6
	B - Woodgate Road	1	0	1
	C - A29 S	4	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.16	13.11	0.2	B	43	65
C-AB	0.01	7.02	0.0	A	6	10
C-A					613	919
A-B					4	6
A-C					453	680

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	401	0.088	35	0.0	0.1	9.926	A
C-AB	5	1	587	0.009	5	0.0	0.0	6.434	A
C-A	503	126			503				
A-B	3	0.75			3				
A-C	372	93			372				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	11	371	0.114	42	0.1	0.1	11.039	B
C-AB	6	2	568	0.011	6	0.0	0.0	6.667	A
C-A	601	150			601				
A-B	4	0.90			4				
A-C	444	111			444				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	13	329	0.157	52	0.1	0.2	13.092	B
C-AB	8	2	541	0.014	8	0.0	0.0	7.020	A
C-A	735	184			735				
A-B	4	1			4				
A-C	544	136			544				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	52	13	329	0.157	52	0.2	0.2	13.113	B
C-AB	8	2	541	0.014	8	0.0	0.0	7.020	A
C-A	735	184			735				
A-B	4	1			4				
A-C	544	136			544				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	42	11	371	0.114	42	0.2	0.1	11.066	B
C-AB	6	2	568	0.011	6	0.0	0.0	6.670	A
C-A	601	150			601				
A-B	4	0.90			4				
A-C	444	111			444				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	401	0.088	36	0.1	0.1	9.953	A
C-AB	5	1	587	0.009	5	0.0	0.0	6.436	A
C-A	503	126			503				
A-B	3	0.75			3				
A-C	372	93			372				

2021 (2017 base * Tempro), 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	A29 Woodgate Road Junction	T-Junction	Two-way		0.33	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	63	Stream B-AC

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	2021 (2017 base * Tempro)	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 N		ONE HOUR	✓	699	100.000
B - Woodgate Road		ONE HOUR	✓	25	100.000
C - A29 S		ONE HOUR	✓	528	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	8	691
	B - Woodgate Road	8	0	17
	C - A29 S	514	14	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	2	2
	B - Woodgate Road	19	0	1
	C - A29 S	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.08	11.97	0.1	B	23	34
C-AB	0.03	7.71	0.0	A	13	19
C-A					472	707
A-B					7	11
A-C					634	951

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	425	0.044	19	0.0	0.0	9.390	A
C-AB	11	3	547	0.019	10	0.0	0.0	6.711	A
C-A	387	97			387				
A-B	6	2			6				
A-C	520	130			520				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	6	393	0.057	22	0.0	0.1	10.307	B
C-AB	13	3	520	0.024	13	0.0	0.0	7.098	A
C-A	462	116			462				
A-B	7	2			7				
A-C	621	155			621				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	7	347	0.079	27	0.1	0.1	11.962	B
C-AB	15	4	482	0.032	15	0.0	0.0	7.714	A
C-A	566	141			566				
A-B	9	2			9				
A-C	761	190			761				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	28	7	347	0.079	28	0.1	0.1	11.969	B
C-AB	15	4	482	0.032	15	0.0	0.0	7.714	A
C-A	566	141			566				
A-B	9	2			9				
A-C	761	190			761				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	22	6	393	0.057	23	0.1	0.1	10.315	B
C-AB	13	3	520	0.024	13	0.0	0.0	7.102	A
C-A	462	116			462				
A-B	7	2			7				
A-C	621	155			621				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	19	5	425	0.044	19	0.1	0.0	9.402	A
C-AB	11	3	547	0.019	11	0.0	0.0	6.715	A
C-A	387	97			387				
A-B	6	2			6				
A-C	520	130			520				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: War Memorial Roundabout - 2021test.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Arcady
Report generation date: 04/10/2021 10:52:00

»2038 Do Minimum, AM
»2038 Do Minimum, PM
»2038 With Development, AM
»2038 With Development, PM
»2021 (proxy from 2017), AM
»2021 (proxy from 2017), PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
2038 Do Minimum								
1 - Barnham Rd	0.8	4.41	0.44	95 % [1 - Barnham Rd]	0.2	3.14	0.19	47 % [3 - Fontwell Ave]
2 - Nyton Rd	0.3	2.49	0.22		0.4	2.65	0.30	
3 - Fontwell Ave	0.5	7.98	0.33		1.0	12.51	0.49	
2038 With Development								
1 - Barnham Rd	0.8	4.53	0.46	90 % [1 - Barnham Rd]	0.2	3.12	0.18	45 % [3 - Fontwell Ave]
2 - Nyton Rd	0.3	2.50	0.23		0.4	2.64	0.29	
3 - Fontwell Ave	0.5	7.98	0.33		1.0	12.66	0.49	
2021 (proxy from 2017)								
1 - Barnham Rd	1.1	5.70	0.52	-5 % [3 - Fontwell Ave]	0.8	4.84	0.43	-37 % [3 - Fontwell Ave]
2 - Nyton Rd	1.2	4.24	0.54		0.9	3.60	0.46	
3 - Fontwell Ave	6.8	50.07	0.89		194.4	1113.55	1.50	

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	War Memorial Roundabout
Location	
Site number	
Date	30/03/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	20-061
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2038 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D2	2038 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D3	2038 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D4	2038 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D5	2021 (proxy from 2017)	AM	ONE HOUR	07:45	09:15	15	✓
D6	2021 (proxy from 2017)	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2038 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	4.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	95	1 - Barnham Rd

Arms

Arms

Arm	Name	Description
1	Barnham Rd	
2	Nyton Rd	
3	Fontwell Ave	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1 - Barnham Rd	3.37	5.30	18.7	331.8	25.0	15.0	
2 - Nyton Rd	4.17	6.48	30.0	133.4	25.0	10.0	
3 - Fontwell Ave	3.23	3.75	0.5	6.3	25.0	75.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Barnham Rd	0.673	1604
2 - Nyton Rd	0.764	2028
3 - Fontwell Ave	0.384	747

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	2038 Do Minimum	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	596	100.000
2 - Nyton Rd		ONE HOUR	✓	392	100.000
3 - Fontwell Ave		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	493	103
	2 - Nyton Rd	133	0	259
	3 - Fontwell Ave	43	163	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	1	3
	2 - Nyton Rd	5	0	4
	3 - Fontwell Ave	2	3	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)
1 - Barnham Rd	0.44	4.41	0.8	A	547	820
2 - Nyton Rd	0.22	2.49	0.3	A	360	540
3 - Fontwell Ave	0.33	7.98	0.5	A	189	284

Main Results for each time segment

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
1 - Barnham Rd	449	112	122	1522	0.295	447	132	0.0	0.4	3.394	A
2 - Nyton Rd	295	74	77	1969	0.150	294	492	0.0	0.2	2.242	A
3 - Fontwell Ave	155	39	100	709	0.219	154	272	0.0	0.3	6.658	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
1 - Barnham Rd	536	134	146	1506	0.356	535	158	0.4	0.6	3.757	A
2 - Nyton Rd	352	88	93	1957	0.180	352	589	0.2	0.2	2.340	A
3 - Fontwell Ave	185	46	120	701	0.264	185	325	0.3	0.4	7.163	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
1 - Barnham Rd	656	164	179	1484	0.442	655	194	0.6	0.8	4.398	A
2 - Nyton Rd	432	108	113	1941	0.222	431	721	0.2	0.3	2.487	A
3 - Fontwell Ave	227	57	146	691	0.328	226	398	0.4	0.5	7.958	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
1 - Barnham Rd	656	164	179	1483	0.442	656	194	0.8	0.8	4.410	A
2 - Nyton Rd	432	108	113	1941	0.222	432	722	0.3	0.3	2.488	A
3 - Fontwell Ave	227	57	146	691	0.328	227	399	0.5	0.5	7.975	A

08:45 - 09:00

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
1 - Barnham Rd	536	134	147	1505	0.356	537	158	0.8	0.6	3.772	A
2 - Nyton Rd	352	88	93	1957	0.180	353	591	0.3	0.2	2.343	A
3 - Fontwell Ave	185	46	120	701	0.264	186	326	0.5	0.4	7.186	A

09:00 - 09:15

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
1 - Barnham Rd	449	112	123	1521	0.295	449	133	0.6	0.4	3.406	A
2 - Nyton Rd	295	74	78	1968	0.150	295	495	0.2	0.2	2.245	A
3 - Fontwell Ave	155	39	100	709	0.219	155	273	0.4	0.3	6.696	A

2038 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	5.29	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	47	3 - Fontwell Ave

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	2038 Do Minimum	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	246	100.000
2 - Nyton Rd		ONE HOUR	✓	527	100.000
3 - Fontwell Ave		ONE HOUR	✓	266	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	163	83
	2 - Nyton Rd	341	0	186
	3 - Fontwell Ave	62	204	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	1	0	2
	3 - Fontwell Ave	1	10	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)
1 - Barnham Rd	0.19	3.14	0.2	A	226	339
2 - Nyton Rd	0.30	2.65	0.4	A	484	725
3 - Fontwell Ave	0.49	12.51	1.0	B	244	366

Main Results for each time segment

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
1 - Barnham Rd	185	46	152	1502	0.123	185	302	0.0	0.1	2.813	A
2 - Nyton Rd	397	99	62	1980	0.200	396	274	0.0	0.3	2.302	A
3 - Fontwell Ave	200	50	256	649	0.309	198	202	0.0	0.5	8.580	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
1 - Barnham Rd	221	55	183	1481	0.149	221	362	0.1	0.2	2.942	A
2 - Nyton Rd	474	118	75	1971	0.240	473	329	0.3	0.3	2.437	A
3 - Fontwell Ave	239	60	306	629	0.380	238	242	0.5	0.6	9.905	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
1 - Barnham Rd	271	68	224	1454	0.186	271	443	0.2	0.2	3.134	A
2 - Nyton Rd	580	145	91	1958	0.296	580	403	0.3	0.4	2.648	A
3 - Fontwell Ave	293	73	375	603	0.486	291	296	0.6	1.0	12.400	B

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
1 - Barnham Rd	271	68	225	1453	0.186	271	444	0.2	0.2	3.136	A
2 - Nyton Rd	580	145	91	1958	0.296	580	404	0.4	0.4	2.648	A
3 - Fontwell Ave	293	73	375	603	0.486	293	296	1.0	1.0	12.507	B

17:45 - 18:00

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
1 - Barnham Rd	221	55	184	1480	0.149	221	363	0.2	0.2	2.948	A
2 - Nyton Rd	474	118	75	1971	0.240	474	331	0.4	0.3	2.438	A
3 - Fontwell Ave	239	60	307	629	0.380	240	242	1.0	0.7	10.015	B

18:00 - 18:15

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
1 - Barnham Rd	185	46	154	1500	0.123	185	304	0.2	0.1	2.821	A
2 - Nyton Rd	397	99	63	1980	0.200	397	277	0.3	0.3	2.306	A
3 - Fontwell Ave	200	50	257	648	0.309	201	203	0.7	0.5	8.687	A

2038 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	4.45	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	90	1 - Barnham Rd

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	2038 With Development	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	616	100.000
2 - Nyton Rd		ONE HOUR	✓	398	100.000
3 - Fontwell Ave		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	509	107
	2 - Nyton Rd	134	0	264
	3 - Fontwell Ave	44	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	1	3
	2 - Nyton Rd	5	0	4
	3 - Fontwell Ave	2	3	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)
1 - Barnham Rd	0.46	4.53	0.8	A	565	848
2 - Nyton Rd	0.23	2.50	0.3	A	365	548
3 - Fontwell Ave	0.33	7.98	0.5	A	189	284

Main Results for each time segment

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
1 - Barnham Rd	464	116	121	1523	0.305	462	134	0.0	0.4	3.434	A
2 - Nyton Rd	300	75	80	1966	0.152	299	503	0.0	0.2	2.251	A
3 - Fontwell Ave	155	39	101	708	0.219	154	279	0.0	0.3	6.661	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
1 - Barnham Rd	554	138	145	1506	0.368	553	160	0.4	0.6	3.826	A
2 - Nyton Rd	358	89	96	1954	0.183	358	602	0.2	0.2	2.352	A
3 - Fontwell Ave	185	46	120	701	0.264	185	333	0.3	0.4	7.167	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
1 - Barnham Rd	678	170	178	1484	0.457	677	196	0.6	0.8	4.515	A
2 - Nyton Rd	438	110	118	1938	0.226	438	738	0.2	0.3	2.504	A
3 - Fontwell Ave	227	57	147	690	0.329	226	408	0.4	0.5	7.964	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
1 - Barnham Rd	678	170	178	1484	0.457	678	196	0.8	0.8	4.527	A
2 - Nyton Rd	438	110	118	1938	0.226	438	739	0.3	0.3	2.504	A
3 - Fontwell Ave	227	57	148	690	0.329	227	408	0.5	0.5	7.982	A

08:45 - 09:00

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
1 - Barnham Rd	554	138	146	1506	0.368	555	160	0.8	0.6	3.840	A
2 - Nyton Rd	358	89	96	1954	0.183	358	604	0.3	0.2	2.353	A
3 - Fontwell Ave	185	46	121	701	0.264	186	334	0.5	0.4	7.194	A

09:00 - 09:15

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
1 - Barnham Rd	464	116	122	1522	0.305	464	134	0.6	0.4	3.453	A
2 - Nyton Rd	300	75	81	1966	0.152	300	506	0.2	0.2	2.255	A
3 - Fontwell Ave	155	39	101	708	0.219	155	280	0.4	0.3	6.699	A

2038 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	5.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	45	3 - Fontwell Ave

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	2038 With Development	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	238	100.000
2 - Nyton Rd		ONE HOUR	✓	523	100.000
3 - Fontwell Ave		ONE HOUR	✓	271	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	156	82
	2 - Nyton Rd	337	0	186
	3 - Fontwell Ave	63	208	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	1	0	2
	3 - Fontwell Ave	1	10	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)
1 - Barnham Rd	0.18	3.12	0.2	A	218	328
2 - Nyton Rd	0.29	2.64	0.4	A	480	720
3 - Fontwell Ave	0.49	12.66	1.0	B	249	373

Main Results for each time segment

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
1 - Barnham Rd	179	45	155	1500	0.119	179	300	0.0	0.1	2.805	A
2 - Nyton Rd	394	98	62	1981	0.199	393	272	0.0	0.3	2.297	A
3 - Fontwell Ave	204	51	253	650	0.314	202	201	0.0	0.5	8.629	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
1 - Barnham Rd	214	53	186	1479	0.145	214	359	0.1	0.2	2.931	A
2 - Nyton Rd	470	118	74	1971	0.239	470	327	0.3	0.3	2.430	A
3 - Fontwell Ave	244	61	303	631	0.386	243	241	0.5	0.7	9.984	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
1 - Barnham Rd	262	66	228	1451	0.181	262	440	0.2	0.2	3.118	A
2 - Nyton Rd	576	144	90	1959	0.294	575	400	0.3	0.4	2.638	A
3 - Fontwell Ave	298	75	371	605	0.493	297	295	0.7	1.0	12.548	B

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
1 - Barnham Rd	262	66	229	1450	0.181	262	440	0.2	0.2	3.120	A
2 - Nyton Rd	576	144	90	1959	0.294	576	401	0.4	0.4	2.638	A
3 - Fontwell Ave	298	75	371	605	0.494	298	295	1.0	1.0	12.663	B

17:45 - 18:00

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
1 - Barnham Rd	214	53	188	1477	0.145	214	360	0.2	0.2	2.937	A
2 - Nyton Rd	470	118	74	1971	0.239	471	328	0.4	0.3	2.431	A
3 - Fontwell Ave	244	61	303	631	0.386	245	241	1.0	0.7	10.099	B

18:00 - 18:15

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
1 - Barnham Rd	179	45	157	1498	0.120	179	301	0.2	0.1	2.813	A
2 - Nyton Rd	394	98	62	1980	0.199	394	275	0.3	0.3	2.300	A
3 - Fontwell Ave	204	51	254	650	0.314	205	202	0.7	0.5	8.740	A

2021 (proxy from 2017), AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	15.34	C

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-5	3 - Fontwell Ave

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
D5	2021 (proxy from 2017)	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	644	100.000
2 - Nyton Rd		ONE HOUR	✓	936	100.000
3 - Fontwell Ave		ONE HOUR	✓	478	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	510	134
	2 - Nyton Rd	371	0	565
	3 - Fontwell Ave	145	333	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	6	0	3
	3 - Fontwell Ave	1	3	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)
1 - Barnham Rd	0.52	5.70	1.1	A	591	886
2 - Nyton Rd	0.54	4.24	1.2	A	859	1288
3 - Fontwell Ave	0.89	50.07	6.8	F	439	658

Main Results for each time segment

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
1 - Barnham Rd	485	121	247	1438	0.337	483	386	0.0	0.5	3.874	A
2 - Nyton Rd	705	176	100	1951	0.361	702	629	0.0	0.6	2.999	A
3 - Fontwell Ave	360	90	278	640	0.562	355	524	0.0	1.3	12.704	B

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
1 - Barnham Rd	579	145	297	1404	0.412	578	462	0.5	0.7	4.485	A
2 - Nyton Rd	841	210	120	1936	0.435	841	755	0.6	0.8	3.423	A
3 - Fontwell Ave	430	107	333	619	0.694	426	628	1.3	2.2	18.734	C

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
1 - Barnham Rd	709	177	356	1364	0.520	708	563	0.7	1.1	5.630	A
2 - Nyton Rd	1031	258	147	1915	0.538	1029	916	0.8	1.2	4.224	A
3 - Fontwell Ave	526	132	408	590	0.891	511	768	2.2	6.0	40.332	E

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
1 - Barnham Rd	709	177	364	1359	0.522	709	567	1.1	1.1	5.705	A
2 - Nyton Rd	1031	258	148	1915	0.538	1031	926	1.2	1.2	4.240	A
3 - Fontwell Ave	526	132	408	590	0.892	523	770	6.0	6.8	50.072	F

08:45 - 09:00

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
1 - Barnham Rd	579	145	311	1394	0.415	580	470	1.1	0.7	4.564	A
2 - Nyton Rd	841	210	121	1935	0.435	843	771	1.2	0.8	3.440	A
3 - Fontwell Ave	430	107	334	619	0.695	447	630	6.8	2.5	23.281	C

09:00 - 09:15

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
1 - Barnham Rd	485	121	254	1433	0.338	486	390	0.7	0.5	3.917	A
2 - Nyton Rd	705	176	101	1950	0.361	706	638	0.8	0.6	3.016	A
3 - Fontwell Ave	360	90	280	640	0.563	364	527	2.5	1.4	13.602	B

2021 (proxy from 2017), PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	408.35	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-37	3 - Fontwell Ave

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
D6	2021 (proxy from 2017)	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	522	100.000
2 - Nyton Rd		ONE HOUR	✓	802	100.000
3 - Fontwell Ave		ONE HOUR	✓	759	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	373	149
	2 - Nyton Rd	450	0	352
	3 - Fontwell Ave	209	550	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	2	2
	2 - Nyton Rd	1	0	3
	3 - Fontwell Ave	1	3	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)
1 - Barnham Rd	0.43	4.84	0.8	A	479	718
2 - Nyton Rd	0.46	3.60	0.9	A	736	1104
3 - Fontwell Ave	1.50	1113.55	194.4	F	696	1045

Main Results for each time segment

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
1 - Barnham Rd	393	98	393	1340	0.293	391	487	0.0	0.4	3.864	A
2 - Nyton Rd	604	151	112	1942	0.311	602	672	0.0	0.5	2.732	A
3 - Fontwell Ave	571	143	338	617	0.926	542	376	0.0	7.4	39.896	E

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
1 - Barnham Rd	469	117	423	1320	0.356	469	565	0.4	0.6	4.312	A
2 - Nyton Rd	721	180	134	1925	0.374	720	758	0.5	0.6	3.041	A
3 - Fontwell Ave	682	171	404	592	1.153	583	450	7.4	32.1	141.233	F

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
1 - Barnham Rd	575	144	403	1333	0.431	574	648	0.6	0.8	4.834	A
2 - Nyton Rd	883	221	164	1902	0.464	882	813	0.6	0.9	3.590	A
3 - Fontwell Ave	836	209	495	557	1.500	557	551	32.1	101.9	446.113	F

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
1 - Barnham Rd	575	144	403	1333	0.431	575	649	0.8	0.8	4.844	A
2 - Nyton Rd	883	221	164	1902	0.464	883	814	0.9	0.9	3.597	A
3 - Fontwell Ave	836	209	495	557	1.501	557	552	101.9	171.7	866.734	F

17:45 - 18:00

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
1 - Barnham Rd	469	117	428	1316	0.357	470	568	0.8	0.6	4.347	A
2 - Nyton Rd	721	180	134	1925	0.375	722	764	0.9	0.6	3.052	A
3 - Fontwell Ave	682	171	405	591	1.154	591	451	171.7	194.4	1113.549	F

18:00 - 18:15

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
1 - Barnham Rd	393	98	445	1305	0.301	393	508	0.6	0.4	4.032	A
2 - Nyton Rd	604	151	112	1942	0.311	604	726	0.6	0.5	2.742	A
3 - Fontwell Ave	571	143	339	617	0.926	614	378	194.4	183.9	1109.964	F

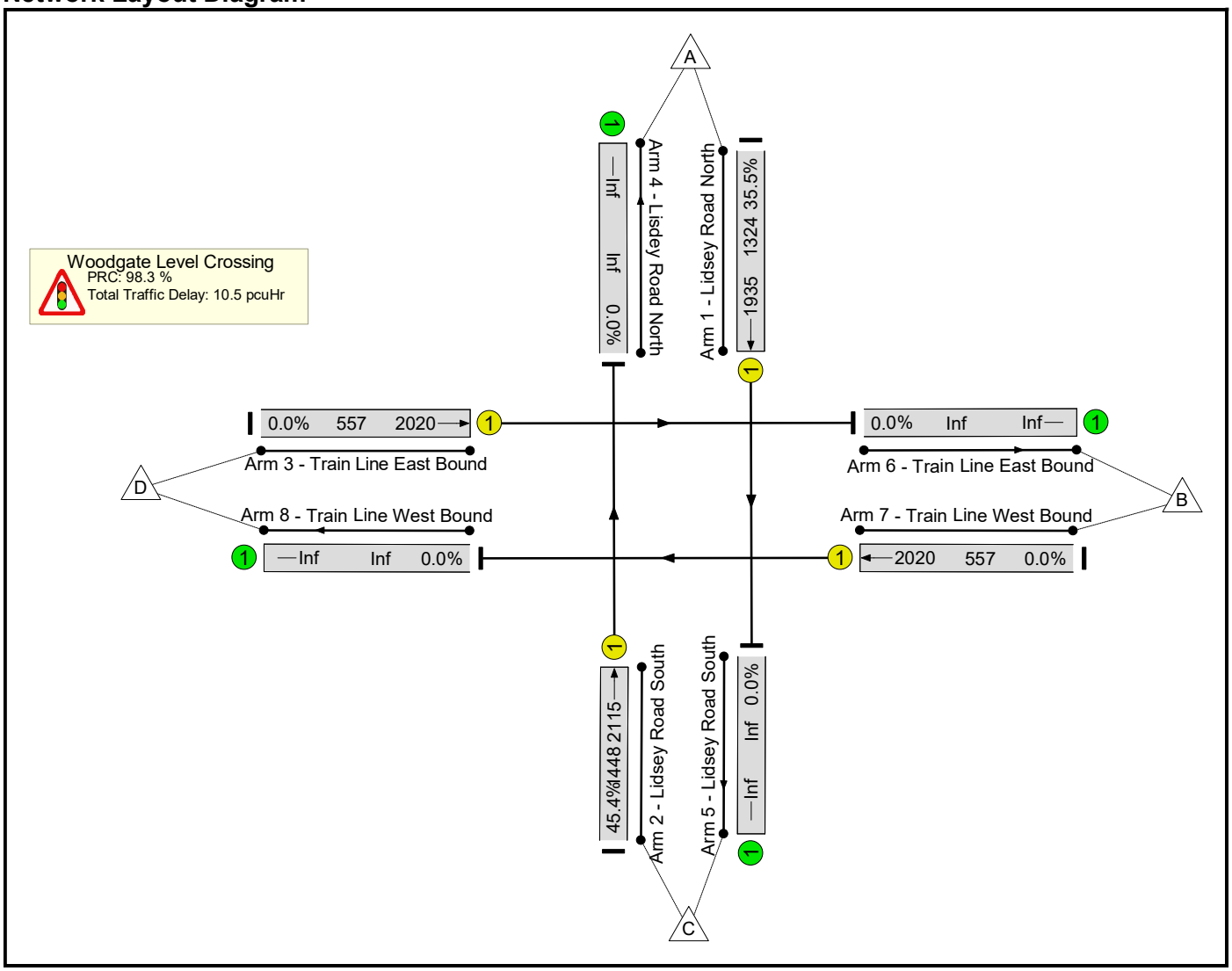
Basic Results Summary

User and Project Details

Project:	**Land East of Woodgate Road**
Title:	**Woodgate Level Crossing**
Location:	
Site Ref(s):	20-061
Additional detail:	
File name:	Woodgate Level Crossing-2021.lsg3x
Author:	
Company:	C&A
Address:	

Scenario 1: '2021 AM' (FG1: '2021 AM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**45.4%**	**0**	**0**	**0**	**10.5**	-	-
Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**45.4%**	**0**	**0**	**0**	**10.5**	-	-
1/1	Lidsey Road North Ahead	U	A		1	307	-	470	1935	1324	35.5%	-	-	-	4.1	31.7	24.7
2/1	Lidsey Road South Ahead	U	B		1	307	-	657	2115	1448	45.4%	-	-	-	6.3	34.8	37.8
3/1	Train Line East Bound Ahead	U	C		1	123	-	0	2020	557	0.0%	-	-	-	0.0	0.0	0.0
7/1	Train Line West Bound Ahead	U	D		1	123	-	0	2020	557	0.0%	-	-	-	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 98.3
PRC Over All Lanes (%): 98.3

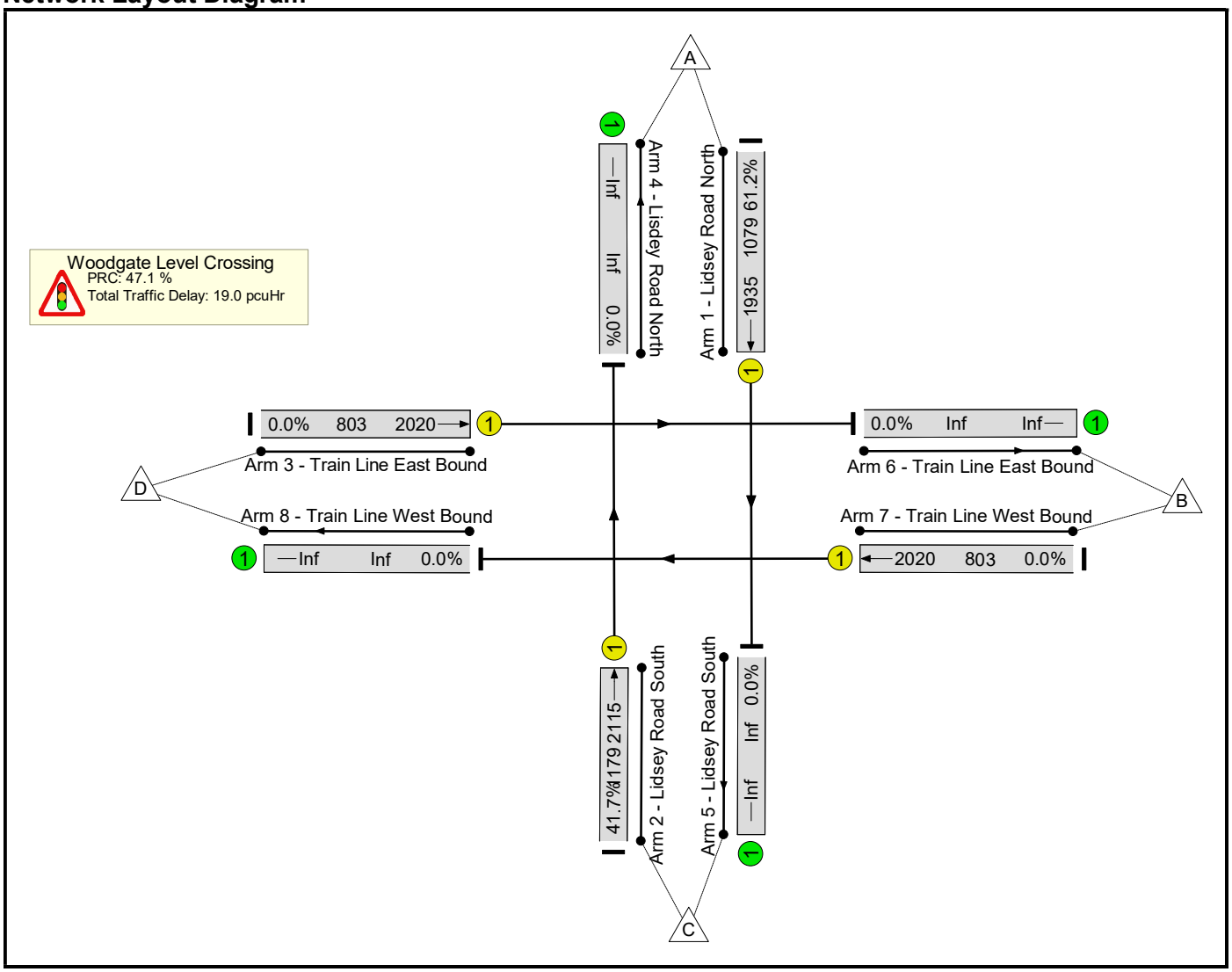
Total Delay for Signalled Lanes (pcuHr): 10.48
Total Delay Over All Lanes(pcuHr): 10.48

Cycle Time (s): 450

Basic Results Summary

Scenario 2: '2021 PM' (FG2: '2021 PM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**61.2%**	**0**	**0**	**0**	**19.0**	-	-
Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**61.2%**	**0**	**0**	**0**	**19.0**	-	-
1/1	Lidsey Road North Ahead	U	A		1	222	-	660	1935	1079	61.2%	-	-	-	11.7	63.7	49.9
2/1	Lidsey Road South Ahead	U	B		1	222	-	492	2115	1179	41.7%	-	-	-	7.3	53.7	31.8
3/1	Train Line East Bound Ahead	U	C		1	158	-	0	2020	803	0.0%	-	-	-	0.0	0.0	0.0
7/1	Train Line West Bound Ahead	U	D		1	158	-	0	2020	803	0.0%	-	-	-	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 47.1
PRC Over All Lanes (%): 47.1

Total Delay for Signalled Lanes (pcuHr): 19.01
Total Delay Over All Lanes(pcuHr): 19.01

Cycle Time (s): 400

Appendix J Junction Analysis 2024

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Cala Homes Access Junction 2024.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 15/10/2021 12:47:25

»2024 Do Minimum, AM
»2024 Do Minimum, PM
»2024 With Development, AM
»2024 With Development, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
2024 Do Minimum										
Stream B-ACD	0.1	13.49	0.05	B	31 % [Stream D-ABC]	0.0	11.41	0.02	B	62 % [Stream B-ACD]
Stream AB-CD	0.1	8.25	0.09	A		0.2	7.43	0.12	A	
Stream D-ABC	0.5	15.62	0.32	C		0.2	9.99	0.19	A	
Stream CD-AB	0.0	7.24	0.01	A		0.0	7.71	0.02	A	
2024 With Development										
Stream B-ACD	0.1	13.50	0.05	B	31 % [Stream D-ABC]	0.0	11.44	0.02	B	62 % [Stream B-ACD]
Stream AB-CD	0.1	8.21	0.08	A		0.2	7.43	0.12	A	
Stream D-ABC	0.5	15.64	0.32	C		0.2	9.99	0.19	A	
Stream CD-AB	0.0	7.24	0.01	A		0.0	7.72	0.02	A	

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	A29 Cala Homes Access Junction
Location	
Site number	
Date	29/03/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2024 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 With Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2024 Do Minimum, 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	A29 Cala Homes Access Junction	Left-Right Stagger	Two-way		0.76	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	31	Stream D-ABC

Arms

Arms

Arm	Name	Description	Arm type
A	A29 N		Major
B	Cala Homes Access E		Minor
C	A29 S		Major
D	Meadow Way W		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 - A29 N	6.40		✓	2.50	61.9	✓	1.00
C - A29 S	6.40		✓	2.50	100.0	✓	1.00

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 - Cala Homes Access E	One lane	3.94	25	25
D - Meadow Way W	One lane	3.37	25	23

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	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
1	AB-D	630	-	-	-	-	-	0.240	0.240	0.240	-	-
1	B-A	545	0.097	0.246	0.246	-	-	0.155	0.352	-	0.155	0.352
1	B-CD	700	0.105	0.266	0.266	-	-	-	-	-	-	-
1	CD-B	653	0.248	0.248	0.248	-	-	-	-	-	-	-
1	D-AB	662	-	-	-	-	-	0.252	0.252	0.100	-	-
1	D-C	515	-	0.147	0.333	0.147	0.333	0.233	0.233	0.092	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 Do Minimum	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 N		ONE HOUR	✓	579	100.000
B - Cala Homes Access E		ONE HOUR	✓	14	100.000
C - A29 S		ONE HOUR	✓	752	100.000
D - Meadow Way W		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	1	544	34
	B - Cala Homes Access E	11	0	3	0
	C - A29 S	720	4	0	28
	D - Meadow Way W	75	0	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	0	5	1
	B - Cala Homes Access E	0	0	0	0
	C - A29 S	4	0	0	2
	D - Meadow Way W	5	0	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.05	13.49	0.1	B	13	19
A-B					0.92	1
A-C					499	749
A-D					31	47
AB-CD	0.09	8.25	0.1	A	34	51
AB-C					499	749
D-ABC	0.32	15.62	0.5	C	95	143
C-D					26	39
C-A					661	991
C-B					4	6
CD-AB	0.01	7.24	0.0	A	4	6
CD-A					729	1094

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	3	377	0.028	10	0.0	0.0	9.822	A
A-B	0.75	0.19			0.75				
A-C	410	102			410				
A-D	26	6			26				
AB-CD	27	7	516	0.052	27	0.0	0.1	7.437	A
AB-C	411	103			411				
D-ABC	78	20	443	0.177	77	0.0	0.2	10.298	B
C-D	21	5			21				
C-A	542	136			542				
C-B	3	0.75			3				
CD-AB	3	0.76	548	0.006	3	0.0	0.0	6.612	A
CD-A	598	149			598				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	3	338	0.037	13	0.0	0.0	11.075	B
A-B	0.90	0.22			0.90				
A-C	489	122			489				
A-D	31	8			31				
AB-CD	33	8	500	0.065	33	0.1	0.1	7.787	A
AB-C	490	122			490				
D-ABC	93	23	407	0.230	93	0.2	0.3	11.991	B
C-D	25	6			25				
C-A	647	162			647				
C-B	4	0.90			4				
CD-AB	4	0.91	528	0.007	4	0.0	0.0	6.865	A
CD-A	714	179			714				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	15	4	282	0.055	15	0.0	0.1	13.479	B
A-B	1	0.28			1				
A-C	599	150			599				
A-D	37	9			37				
AB-CD	42	11	484	0.087	42	0.1	0.1	8.246	A
AB-C	598	149			598				
D-ABC	115	29	356	0.322	114	0.3	0.5	15.529	C
C-D	31	8			31				
C-A	793	198			793				
C-B	4	1			4				
CD-AB	4	1	502	0.009	4	0.0	0.0	7.240	A
CD-A	875	219			875				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	15	4	282	0.055	15	0.1	0.1	13.489	B
A-B	1	0.28			1				
A-C	599	150			599				
A-D	37	9			37				
AB-CD	42	11	485	0.087	42	0.1	0.1	8.250	A
AB-C	598	149			598				
D-ABC	115	29	356	0.322	114	0.5	0.5	15.620	C
C-D	31	8			31				
C-A	793	198			793				
C-B	4	1			4				
CD-AB	4	1	502	0.009	4	0.0	0.0	7.240	A
CD-A	875	219			875				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	3	337	0.037	13	0.1	0.0	11.088	B
A-B	0.90	0.22			0.90				
A-C	489	122			489				
A-D	31	8			31				
AB-CD	33	8	501	0.065	33	0.1	0.1	7.795	A
AB-C	490	122			490				
D-ABC	93	23	407	0.230	94	0.5	0.3	12.074	B
C-D	25	6			25				
C-A	647	162			647				
C-B	4	0.90			4				
CD-AB	4	0.91	528	0.007	4	0.0	0.0	6.865	A
CD-A	715	179			715				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	3	377	0.028	11	0.0	0.0	9.835	A
A-B	0.75	0.19			0.75				
A-C	410	102			410				
A-D	26	6			26				
AB-CD	27	7	516	0.052	27	0.1	0.1	7.445	A
AB-C	411	103			411				
D-ABC	78	20	443	0.177	79	0.3	0.2	10.370	B
C-D	21	5			21				
C-A	542	136			542				
C-B	3	0.75			3				
CD-AB	3	0.76	548	0.006	3	0.0	0.0	6.612	A
CD-A	599	150			599				

2024 Do Minimum, 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	A29 Cala Homes Access Junction	Left-Right Stagger	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	62	Stream B-ACD

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Do Minimum	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 N		ONE HOUR	✓	683	100.000
B - Cala Homes Access E		ONE HOUR	✓	7	100.000
C - A29 S		ONE HOUR	✓	567	100.000
D - Meadow Way W		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	0	631	52
	B - Cala Homes Access E	4	0	3	0
	C - A29 S	521	9	0	37
	D - Meadow Way W	67	0	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	0	2	4
	B - Cala Homes Access E	0	0	0	0
	C - A29 S	23	0	0	1
	D - Meadow Way W	2	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.02	11.41	0.0	B	6	10
A-B					0	0
A-C					579	869
A-D					48	72
AB-CD	0.12	7.43	0.2	A	54	81
AB-C					575	863
D-ABC	0.19	9.99	0.2	A	71	106
C-D					34	51
C-A					478	717
C-B					8	12
CD-AB	0.02	7.71	0.0	A	8	13
CD-A					539	809

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	5	1	415	0.013	5	0.0	0.0	8.778	A
A-B	0	0			0				
A-C	475	119			475				
A-D	39	10			39				
AB-CD	42	11	567	0.074	42	0.0	0.1	7.119	A
AB-C	474	119			474				
D-ABC	58	14	514	0.113	57	0.0	0.1	8.005	A
C-D	28	7			28				
C-A	392	98			392				
C-B	7	2			7				
CD-AB	7	2	530	0.013	7	0.0	0.0	6.886	A
CD-A	442	111			442				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	6	2	377	0.017	6	0.0	0.0	9.705	A
A-B	0	0			0				
A-C	567	142			567				
A-D	47	12			47				
AB-CD	52	13	565	0.092	52	0.1	0.1	7.282	A
AB-C	565	141			565				
D-ABC	69	17	489	0.142	69	0.1	0.2	8.725	A
C-D	33	8			33				
C-A	468	117			468				
C-B	8	2			8				
CD-AB	8	2	508	0.016	8	0.0	0.0	7.215	A
CD-A	528	132			528				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	8	2	323	0.024	8	0.0	0.0	11.412	B
A-B	0	0			0				
A-C	695	174			695				
A-D	57	14			57				
AB-CD	68	17	571	0.119	68	0.1	0.2	7.428	A
AB-C	687	172			687				
D-ABC	85	21	451	0.188	85	0.2	0.2	9.975	A
C-D	41	10			41				
C-A	574	143			574				
C-B	10	2			10				
CD-AB	10	3	479	0.021	10	0.0	0.0	7.708	A
CD-A	647	162			647				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	8	2	323	0.024	8	0.0	0.0	11.413	B
A-B	0	0			0				
A-C	695	174			695				
A-D	57	14			57				
AB-CD	68	17	570	0.119	68	0.2	0.2	7.431	A
AB-C	687	172			687				
D-ABC	85	21	451	0.188	85	0.2	0.2	9.989	A
C-D	41	10			41				
C-A	574	143			574				
C-B	10	2			10				
CD-AB	10	3	479	0.021	10	0.0	0.0	7.708	A
CD-A	647	162			647				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	6	2	377	0.017	6	0.0	0.0	9.710	A
A-B	0	0			0				
A-C	567	142			567				
A-D	47	12			47				
AB-CD	52	13	565	0.092	52	0.2	0.1	7.289	A
AB-C	565	141			565				
D-ABC	69	17	489	0.142	69	0.2	0.2	8.743	A
C-D	33	8			33				
C-A	468	117			468				
C-B	8	2			8				
CD-AB	8	2	509	0.016	8	0.0	0.0	7.215	A
CD-A	529	132			529				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	5	1	415	0.013	5	0.0	0.0	8.782	A
A-B	0	0			0				
A-C	475	119			475				
A-D	39	10			39				
AB-CD	42	11	566	0.074	42	0.1	0.1	7.131	A
AB-C	474	119			474				
D-ABC	58	14	514	0.113	58	0.2	0.1	8.029	A
C-D	28	7			28				
C-A	392	98			392				
C-B	7	2			7				
CD-AB	7	2	531	0.013	7	0.0	0.0	6.889	A
CD-A	443	111			443				

2024 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	A29 Cala Homes Access Junction	Left-Right Stagger	Two-way		0.75	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	31	Stream D-ABC

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	2024 With Development	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 N		ONE HOUR	✓	579	100.000
B - Cala Homes Access E		ONE HOUR	✓	14	100.000
C - A29 S		ONE HOUR	✓	754	100.000
D - Meadow Way W		ONE HOUR	✓	104	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	2	544	33
	B - Cala Homes Access E	11	0	3	0
	C - A29 S	722	4	0	28
	D - Meadow Way W	75	0	29	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	0	5	0
	B - Cala Homes Access E	0	0	0	0
	C - A29 S	4	0	0	2
	D - Meadow Way W	5	0	4	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.05	13.50	0.1	B	13	19
A-B					2	3
A-C					499	749
A-D					30	45
AB-CD	0.08	8.21	0.1	A	33	49
AB-C					499	749
D-ABC	0.32	15.64	0.5	C	95	143
C-D					26	39
C-A					663	994
C-B					4	6
CD-AB	0.01	7.24	0.0	A	4	6
CD-A					731	1097

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	3	377	0.028	10	0.0	0.0	9.824	A
A-B	2	0.38			2				
A-C	410	102			410				
A-D	25	6			25				
AB-CD	26	6	514	0.050	26	0.0	0.1	7.377	A
AB-C	411	103			411				
D-ABC	78	20	442	0.177	77	0.0	0.2	10.305	B
C-D	21	5			21				
C-A	544	136			544				
C-B	3	0.75			3				
CD-AB	3	0.76	548	0.006	3	0.0	0.0	6.612	A
CD-A	599	150			599				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	3	337	0.037	13	0.0	0.0	11.079	B
A-B	2	0.45			2				
A-C	489	122			489				
A-D	30	7			30				
AB-CD	32	8	498	0.064	32	0.1	0.1	7.733	A
AB-C	490	122			490				
D-ABC	93	23	407	0.230	93	0.2	0.3	12.002	B
C-D	25	6			25				
C-A	649	162			649				
C-B	4	0.90			4				
CD-AB	4	0.91	528	0.007	4	0.0	0.0	6.865	A
CD-A	716	179			716				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	15	4	282	0.055	15	0.0	0.1	13.488	B
A-B	2	0.55			2				
A-C	599	150			599				
A-D	36	9			36				
AB-CD	41	10	481	0.084	40	0.1	0.1	8.205	A
AB-C	598	149			598				
D-ABC	115	29	356	0.322	114	0.3	0.5	15.549	C
C-D	31	8			31				
C-A	795	199			795				
C-B	4	1			4				
CD-AB	4	1	502	0.009	4	0.0	0.0	7.239	A
CD-A	877	219			877				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	15	4	282	0.055	15	0.1	0.1	13.497	B
A-B	2	0.55			2				
A-C	599	150			599				
A-D	36	9			36				
AB-CD	41	10	482	0.084	41	0.1	0.1	8.208	A
AB-C	598	149			598				
D-ABC	115	29	355	0.322	114	0.5	0.5	15.642	C
C-D	31	8			31				
C-A	795	199			795				
C-B	4	1			4				
CD-AB	4	1	502	0.009	4	0.0	0.0	7.242	A
CD-A	877	219			877				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	13	3	337	0.037	13	0.1	0.0	11.090	B
A-B	2	0.45			2				
A-C	489	122			489				
A-D	30	7			30				
AB-CD	32	8	499	0.063	32	0.1	0.1	7.740	A
AB-C	490	122			490				
D-ABC	93	23	407	0.230	94	0.5	0.3	12.083	B
C-D	25	6			25				
C-A	649	162			649				
C-B	4	0.90			4				
CD-AB	4	0.91	528	0.007	4	0.0	0.0	6.865	A
CD-A	717	179			717				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	11	3	377	0.028	11	0.0	0.0	9.838	A
A-B	2	0.38			2				
A-C	410	102			410				
A-D	25	6			25				
AB-CD	26	6	515	0.050	26	0.1	0.1	7.388	A
AB-C	411	103			411				
D-ABC	78	20	442	0.177	79	0.3	0.2	10.377	B
C-D	21	5			21				
C-A	544	136			544				
C-B	3	0.75			3				
CD-AB	3	0.76	548	0.006	3	0.0	0.0	6.612	A
CD-A	600	150			600				

2024 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	A29 Cala Homes Access Junction	Left-Right Stagger	Two-way		0.52	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	62	Stream B-ACD

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	2024 With Development	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 N		ONE HOUR	✓	685	100.000
B - Cala Homes Access E		ONE HOUR	✓	7	100.000
C - A29 S		ONE HOUR	✓	567	100.000
D - Meadow Way W		ONE HOUR	✓	77	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	0	633	52
	B - Cala Homes Access E	4	0	3	0
	C - A29 S	521	9	0	37
	D - Meadow Way W	67	0	10	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		A - A29 N	B - Cala Homes Access E	C - A29 S	D - Meadow Way W
From	A - A29 N	0	0	2	4
	B - Cala Homes Access E	0	0	0	0
	C - A29 S	23	0	0	1
	D - Meadow Way W	2	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-ACD	0.02	11.44	0.0	B	6	10
A-B					0	0
A-C					581	871
A-D					48	72
AB-CD	0.12	7.43	0.2	A	54	81
AB-C					577	866
D-ABC	0.19	9.99	0.2	A	71	106
C-D					34	51
C-A					478	717
C-B					8	12
CD-AB	0.02	7.72	0.0	A	8	13
CD-A					539	809

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	5	1	415	0.013	5	0.0	0.0	8.786	A
A-B	0	0			0				
A-C	477	119			477				
A-D	39	10			39				
AB-CD	42	11	567	0.074	42	0.0	0.1	7.117	A
AB-C	476	119			476				
D-ABC	58	14	514	0.113	57	0.0	0.1	8.006	A
C-D	28	7			28				
C-A	392	98			392				
C-B	7	2			7				
CD-AB	7	2	530	0.013	7	0.0	0.0	6.891	A
CD-A	442	111			442				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	6	2	377	0.017	6	0.0	0.0	9.717	A
A-B	0	0			0				
A-C	569	142			569				
A-D	47	12			47				
AB-CD	52	13	565	0.092	52	0.1	0.1	7.279	A
AB-C	566	142			566				
D-ABC	69	17	489	0.142	69	0.1	0.2	8.727	A
C-D	33	8			33				
C-A	468	117			468				
C-B	8	2			8				
CD-AB	8	2	508	0.016	8	0.0	0.0	7.221	A
CD-A	528	132			528				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	8	2	323	0.024	8	0.0	0.0	11.434	B
A-B	0	0			0				
A-C	697	174			697				
A-D	57	14			57				
AB-CD	68	17	571	0.119	68	0.1	0.2	7.424	A
AB-C	689	172			689				
D-ABC	85	21	451	0.188	85	0.2	0.2	9.978	A
C-D	41	10			41				
C-A	574	143			574				
C-B	10	2			10				
CD-AB	10	3	479	0.021	10	0.0	0.0	7.717	A
CD-A	647	162			647				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	8	2	322	0.024	8	0.0	0.0	11.435	B
A-B	0	0			0				
A-C	697	174			697				
A-D	57	14			57				
AB-CD	68	17	571	0.119	68	0.2	0.2	7.430	A
AB-C	689	172			689				
D-ABC	85	21	451	0.188	85	0.2	0.2	9.993	A
C-D	41	10			41				
C-A	574	143			574				
C-B	10	2			10				
CD-AB	10	3	479	0.021	10	0.0	0.0	7.717	A
CD-A	647	162			647				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	6	2	377	0.017	6	0.0	0.0	9.720	A
A-B	0	0			0				
A-C	569	142			569				
A-D	47	12			47				
AB-CD	52	13	565	0.092	52	0.2	0.1	7.286	A
AB-C	566	142			566				
D-ABC	69	17	489	0.142	69	0.2	0.2	8.744	A
C-D	33	8			33				
C-A	468	117			468				
C-B	8	2			8				
CD-AB	8	2	509	0.016	8	0.0	0.0	7.222	A
CD-A	529	132			529				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-ACD	5	1	415	0.013	5	0.0	0.0	8.791	A
A-B	0	0			0				
A-C	477	119			477				
A-D	39	10			39				
AB-CD	42	11	566	0.074	42	0.1	0.1	7.132	A
AB-C	476	119			476				
D-ABC	58	14	514	0.113	58	0.2	0.1	8.030	A
C-D	28	7			28				
C-A	392	98			392				
C-B	7	2			7				
CD-AB	7	2	530	0.013	7	0.0	0.0	6.891	A
CD-A	443	111			443				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Hook Ln Junction 2024.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 13/10/2021 13:19:15

»2024 Do Minimum, AM
»2024 Do Minimum, PM
»2024 With Development, AM
»2024 With Development, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2024 Do Minimum							
Stream B-AC	0.8	20.28	0.42	19 %	0.9	18.43	0.47	23 %
Stream C-AB	0.3	4.90	0.12	[Stream B-AC]	0.1	4.58	0.06	[Stream B-AC]
	2024 With Development							
Stream B-AC	0.9	22.37	0.47	14 %	1.6	27.12	0.62	7 %
Stream C-AB	0.3	4.97	0.12	[Stream B-AC]	0.1	4.59	0.06	[Stream B-AC]

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	A29 Hook Ln Junction
Location	
Site number	
Date	29/03/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2024 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 With Development	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2024 Do Minimum, 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	A29 Hook Ln Junction	T-Junction	Two-way		2.06	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	19	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	A29 S		Major
B	Hook Ln W		Minor
C	A29 N		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 - A29 N	6.87			100.0	✓	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 - Hook Ln W	One lane	3.53	19	15

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	518	0.091	0.229	0.144	0.327
1	B-C	667	0.098	0.249	-	-
1	C-B	632	0.236	0.236	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 Do Minimum	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 S		ONE HOUR	✓	698	100.000
B - Hook Ln W		ONE HOUR	✓	124	100.000
C - A29 N		ONE HOUR	✓	592	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	41	657
	B - Hook Ln W	63	0	61
	C - A29 N	561	31	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	3	3
	B - Hook Ln W	10	0	3
	C - A29 N	5	2	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.42	20.28	0.8	C	114	171
C-AB	0.12	4.90	0.3	A	74	112
C-A					469	703
A-B					38	56
A-C					603	904

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	23	411	0.227	92	0.0	0.3	11.990	B
C-AB	49	12	811	0.060	48	0.0	0.1	4.885	A
C-A	397	99			397				
A-B	31	8			31				
A-C	495	124			495				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	375	0.297	111	0.3	0.4	14.460	B
C-AB	68	17	853	0.080	68	0.1	0.2	4.757	A
C-A	464	116			464				
A-B	37	9			37				
A-C	591	148			591				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	137	34	325	0.420	135	0.4	0.7	20.037	C
C-AB	106	26	914	0.116	105	0.2	0.3	4.630	A
C-A	546	136			546				
A-B	45	11			45				
A-C	723	181			723				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	137	34	325	0.420	136	0.7	0.8	20.283	C
C-AB	106	27	914	0.116	106	0.3	0.3	4.640	A
C-A	546	136			546				
A-B	45	11			45				
A-C	723	181			723				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	111	28	375	0.297	113	0.8	0.5	14.653	B
C-AB	69	17	853	0.081	69	0.3	0.2	4.779	A
C-A	463	116			463				
A-B	37	9			37				
A-C	591	148			591				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	93	23	410	0.227	94	0.5	0.3	12.127	B
C-AB	49	12	811	0.060	49	0.2	0.1	4.899	A
C-A	397	99			397				
A-B	31	8			31				
A-C	495	124			495				

2024 Do Minimum, 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	A29 Hook Ln Junction	T-Junction	Two-way		2.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	23	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 Do Minimum	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 S		ONE HOUR	✓	558	100.000
B - Hook Ln W		ONE HOUR	✓	159	100.000
C - A29 N		ONE HOUR	✓	607	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	75	483
	B - Hook Ln W	79	0	80
	C - A29 N	589	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	3	2
	B - Hook Ln W	2	0	1
	C - A29 N	2	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.47	18.43	0.9	C	146	219
C-AB	0.06	4.58	0.1	A	43	65
C-A					514	771
A-B					69	103
A-C					443	665

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	443	0.270	118	0.0	0.4	11.209	B
C-AB	29	7	845	0.034	28	0.0	0.0	4.578	A
C-A	428	107			428				
A-B	56	14			56				
A-C	364	91			364				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	143	36	414	0.345	142	0.4	0.5	13.417	B
C-AB	40	10	892	0.045	40	0.0	0.1	4.380	A
C-A	506	126			506				
A-B	67	17			67				
A-C	434	109			434				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	44	373	0.469	174	0.5	0.9	18.191	C
C-AB	61	15	960	0.064	61	0.1	0.1	4.140	A
C-A	607	152			607				
A-B	83	21			83				
A-C	532	133			532				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	175	44	373	0.469	175	0.9	0.9	18.426	C
C-AB	61	15	960	0.064	61	0.1	0.1	4.136	A
C-A	607	152			607				
A-B	83	21			83				
A-C	532	133			532				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	143	36	414	0.345	144	0.9	0.5	13.615	B
C-AB	40	10	892	0.045	40	0.1	0.1	4.370	A
C-A	506	126			506				
A-B	67	17			67				
A-C	434	109			434				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	443	0.270	120	0.5	0.4	11.357	B
C-AB	29	7	845	0.034	29	0.1	0.0	4.572	A
C-A	428	107			428				
A-B	56	14			56				
A-C	364	91			364				

2024 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	A29 Hook Ln Junction	T-Junction	Two-way		2.30	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	14	Stream B-AC

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	2024 With Development	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 S		ONE HOUR	✓	744	100.000
B - Hook Ln W		ONE HOUR	✓	133	100.000
C - A29 N		ONE HOUR	✓	592	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	84	660
	B - Hook Ln W	72	0	61
	C - A29 N	561	31	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	2	3
	B - Hook Ln W	4	0	3
	C - A29 N	5	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.47	22.37	0.9	C	122	183
C-AB	0.12	4.97	0.3	A	76	113
C-A					468	702
A-B					77	116
A-C					606	908

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	100	25	400	0.250	99	0.0	0.3	12.302	B
C-AB	49	12	805	0.061	49	0.0	0.1	4.952	A
C-A	397	99			397				
A-B	63	16			63				
A-C	497	124			497				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	364	0.328	119	0.3	0.5	15.151	C
C-AB	69	17	846	0.082	69	0.1	0.2	4.826	A
C-A	463	116			463				
A-B	76	19			76				
A-C	593	148			593				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	146	37	313	0.468	145	0.5	0.9	21.994	C
C-AB	108	27	906	0.119	107	0.2	0.3	4.704	A
C-A	544	136			544				
A-B	92	23			92				
A-C	727	182			727				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	146	37	313	0.468	146	0.9	0.9	22.370	C
C-AB	108	27	907	0.119	108	0.3	0.3	4.713	A
C-A	544	136			544				
A-B	92	23			92				
A-C	727	182			727				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	120	30	364	0.328	121	0.9	0.5	15.421	C
C-AB	70	17	846	0.082	70	0.3	0.2	4.845	A
C-A	463	116			463				
A-B	76	19			76				
A-C	593	148			593				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	100	25	400	0.250	101	0.5	0.4	12.473	B
C-AB	49	12	805	0.061	50	0.2	0.1	4.966	A
C-A	396	99			396				
A-B	63	16			63				
A-C	497	124			497				

2024 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	A29 Hook Ln Junction	T-Junction	Two-way		4.01	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	7	Stream B-AC

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	2024 With Development	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 S		ONE HOUR	✓	581	100.000
B - Hook Ln W		ONE HOUR	✓	197	100.000
C - A29 N		ONE HOUR	✓	609	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	98	483
	B - Hook Ln W	117	0	80
	C - A29 N	591	18	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 S	B - Hook Ln W	C - A29 N
From	A - A29 S	0	2	2
	B - Hook Ln W	1	0	1
	C - A29 N	2	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.62	27.12	1.6	D	181	271
C-AB	0.06	4.59	0.1	A	44	66
C-A					515	773
A-B					90	135
A-C					443	665

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	148	37	422	0.351	146	0.0	0.5	13.070	B
C-AB	29	7	843	0.034	29	0.0	0.0	4.590	A
C-A	430	107			430				
A-B	74	18			74				
A-C	364	91			364				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	177	44	392	0.451	176	0.5	0.8	16.713	C
C-AB	40	10	890	0.045	40	0.0	0.1	4.392	A
C-A	507	127			507				
A-B	88	22			88				
A-C	434	109			434				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	217	54	350	0.619	214	0.8	1.5	26.129	D
C-AB	62	16	958	0.065	62	0.1	0.1	4.153	A
C-A	608	152			608				
A-B	108	27			108				
A-C	532	133			532				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	217	54	350	0.619	217	1.5	1.6	27.120	D
C-AB	62	16	958	0.065	62	0.1	0.1	4.150	A
C-A	608	152			608				
A-B	108	27			108				
A-C	532	133			532				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	177	44	392	0.451	180	1.6	0.9	17.342	C
C-AB	40	10	890	0.045	41	0.1	0.1	4.382	A
C-A	507	127			507				
A-B	88	22			88				
A-C	434	109			434				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	148	37	422	0.351	150	0.9	0.6	13.388	B
C-AB	29	7	843	0.034	29	0.1	0.0	4.586	A
C-A	430	107			430				
A-B	74	18			74				
A-C	364	91			364				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Nyton Rd Junction - Linked - 2024.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 13/10/2021 10:47:58

»2024 BEW DM, AM
»2024 BEW DM, PM
»2024 BEW DS, AM
»2024 BEW DS, PM

Summary of junction performance

	AM					PM				
	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	LOS	Network Residual Capacity
	[Lane Simulation] - 2024 BEW DM									
1 - East Junction - A - A29 Nyton Rd S	0.0	0.00		A		0.0	0.00		A	
1 - East Junction - B - Nyton Rd W	0.8	10.42		B		0.9	10.30		B	
1 - East Junction - C - Nyton Rd E	15.8	51.15		F		1.2	3.94		A	
2 - South Junction - A - A29 Westergate Rd S	0.0	0.00		A	%	0.0	0.00		A	%
2 - South Junction - B - B2233 N	0.3	13.72		B		0.7	13.38		B	
2 - South Junction - C - A29 Nyton Rd N	0.0	0.00		A	[ ]	0.0	0.00		A	[ ]
3 - West Junction - A - Nyton Rd E	0.0	0.00		A		0.0	0.00		A	
3 - West Junction - B - B2233 S	0.5	8.74		A		0.5	8.10		A	
3 - West Junction - C - Nyton Rd W	0.4	4.15		A		1.3	8.63		A	
	[Lane Simulation] - 2024 BEW DS									
1 - East Junction - A - A29 Nyton Rd S	0.0	0.00		A		0.0	0.00		A	
1 - East Junction - B - Nyton Rd W	0.7	10.73		B		1.1	10.16		B	
1 - East Junction - C - Nyton Rd E	13.4	50.56		F		1.1	3.75		A	
2 - South Junction - A - A29 Westergate Rd S	0.0	0.00		A	%	0.0	0.00		A	%
2 - South Junction - B - B2233 N	0.3	13.57		B		0.7	14.16		B	
2 - South Junction - C - A29 Nyton Rd N	0.0	0.00		A	[ ]	0.0	0.00		A	[ ]
3 - West Junction - A - Nyton Rd E	0.0	0.00		A		0.0	0.00		A	
3 - West Junction - B - B2233 S	0.4	8.90		A		0.3	7.81		A	
3 - West Junction - C - Nyton Rd W	0.5	4.30		A		1.3	8.67		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. Arm and junction delays are averages for all movements, including movements with zero delay. Network Residual Capacity indicates the amount by which network flow could be increased before a user-definable threshold (see Analysis Options) is met.

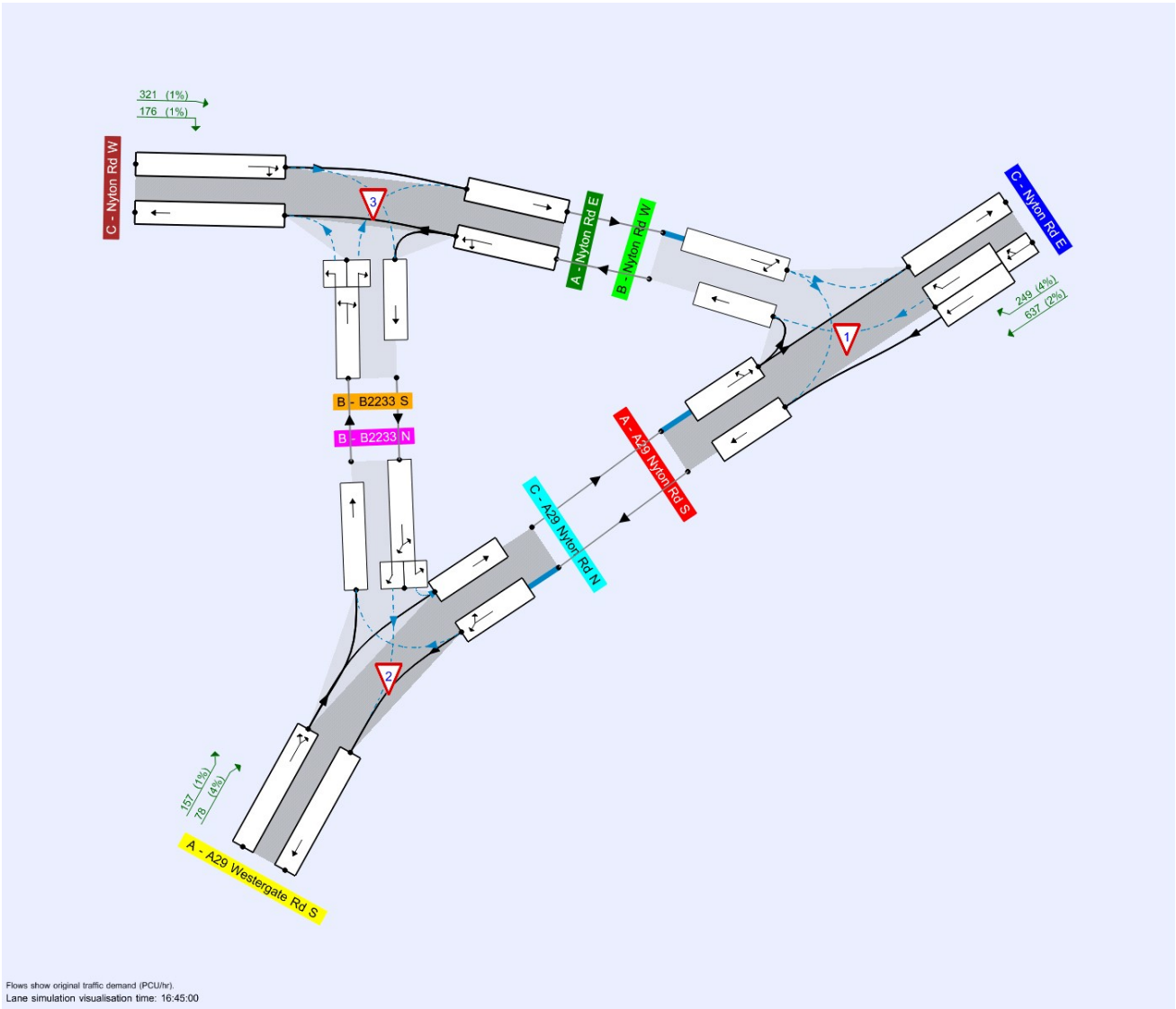
File summary

File Description

Title	
Location	
Site number	
Date	07/04/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	CA-PC06\PLimbu
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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Lane Simulation options

Criteria type	Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Average animation capture interval (s)	Use quick response	Do flow sampling	Suppress automatic lane creation	Last run random seed	Last run number of trials	Last run time taken (s)
Delay	1.00	100000	100000	-1	3	1	60	✓			291904094	185	14.19

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	2024 BEW DM	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 BEW DM	PM	ONE HOUR	16:45	18:15	15	✓
D3	2024 BEW DS	AM	ONE HOUR	07:45	09:15	15	✓
D4	2024 BEW DS	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2024 BEW DM, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way		31.39	D
2	South Junction	T-Junction	Two-way		0.78	A
3	West Junction	T-Junction	Two-way		2.98	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1 - East Junction	A	A29 Nyton Rd S		Major
	B	Nyton Rd W		Minor
	C	Nyton Rd E		Major
2 - South Junction	A	A29 Westergate Rd S		Major
	B	B2233 N		Minor
	C	A29 Nyton Rd N		Major
3 - West Junction	A	Nyton Rd E		Major
	B	B2233 S		Minor
	C	Nyton Rd W		Major

Major Arm Geometry

Junction	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)
1 - East Junction	C - Nyton Rd E	6.58		✓	2.43	80.0	✓	3.00
2 - South Junction	C - A29 Nyton Rd N	6.69				96.0	✓	0.00
3 - West Junction	C - Nyton Rd W	6.30				50.0	✓	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

Junction	Arm	Minor arm type	Lane width (m)	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)
1 - East Junction	B - Nyton Rd W	One lane	3.72								76	93
2 - South Junction	B - B2233 N	One lane plus flare		10.00	7.09	4.01	3.11	3.04	✓	1.00	27	129
3 - West Junction	B - B2233 S	One lane plus flare		10.00	5.00	3.58	3.28	3.05	✓	1.00	35	13

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	588	0.104	0.264	0.166	0.377
1	B-C	732	0.109	0.276	-	-
1	C-B	636	0.240	0.240	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2	B-A	606	0.107	0.271	0.170	0.387
2	B-C	744	0.111	0.279	-	-
2	C-B	630	0.237	0.237	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
3	B-A	470	0.085	0.214	0.134	0.305
3	B-C	694	0.105	0.265	-	-
3	C-B	603	0.231	0.231	-	-

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.

Lanes

Junction	Arm	Side	Lane level	Lane	Destination arms	Has limited storage	Storage (PCU)	Has bottleneck	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)	Signalised
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	✓	3.00		0	99999	
		Exit	1	1		✓	3.00				
	B - Nyton Rd W	Entry	1	1	A, C	✓	4.00		0	99999	
		Exit	1	1		✓	3.00				
	C - Nyton Rd E	Entry	1	1	A	✓	3.00		0	99999	
				2	B	✓	3.00		0	99999	
			2	1	(A, B)		Infinity				
		Exit	1	1			Infinity				
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C		Infinity		0	99999	
		Exit	1	1			Infinity				
	B - B2233 N	Entry	1	1	C	✓	1.00		0	99999	
				2	A	✓	1.00		0	99999	
			2	1	(A, C)	✓	4.00				
		Exit	1	1		✓	4.00				
	C - A29 Nyton Rd N	Entry	1	1	A, B	✓	3.00		0	99999	
		Exit	1	1		✓	3.00				
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	✓	4.00		0	99999	
		Exit	1	1		✓	4.00				
	B - B2233 S	Entry	1	1	C	✓	1.00		0	99999	
				2	A	✓	1.00		0	99999	
			2	1	(A, C)	✓	4.00				
		Exit	1	1		✓	3.00				
	C - Nyton Rd W	Entry	1	1	A, B		Infinity		0	99999	
		Exit	1	1			Infinity				

Summary of Entry Lane allowed movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A29 Nyton Rd S	Nyton Rd W	Nyton Rd E
1 - East Junction	A - A29 Nyton Rd S	1	1		✓	✓
	B - Nyton Rd W	1	1	✓		✓
	C - Nyton Rd E	1	1	✓		
			2		✓	
		2	1	✓	✓	

Summary of Entry Lane allowed movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A29 Westergate Rd S	B2233 N	A29 Nyton Rd N
2 - South Junction	A - A29 Westergate Rd S	1	1		✓	✓
	B - B2233 N	1	1			✓
			2	✓		
		2	1	✓		✓
	C - A29 Nyton Rd N	1	1	✓	✓	

Summary of Entry Lane allowed movements

Junction	Arm	Lane Level	Lane	Destination arm		
				Nyton Rd E	B2233 S	Nyton Rd W
3 - West Junction	A - Nyton Rd E	1	1		✓	✓
	B - B2233 S	1	1			✓
			2	✓		
		2	1	✓		✓
	C - Nyton Rd W	1	1	✓	✓	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 BEW DM	AM	ONE HOUR	07:45	09:15	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - East Junction	A - A29 Nyton Rd S	2	C	Simple (vertical queueing)	Normal	0	100.00	
	B - Nyton Rd W	3	A	Simple (vertical queueing)	Normal	0	100.00	
2 - South Junction	B - B2233 N	3	B	Simple (vertical queueing)	Normal	0	100.00	
	C - A29 Nyton Rd N	1	A	Simple (vertical queueing)	Normal	0	100.00	
3 - West Junction	A - Nyton Rd E	1	B	Simple (vertical queueing)	Normal	0	100.00	
	B - B2233 S	2	B	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - A29 Nyton Rd S	✓				
	B - Nyton Rd W	✓				
	C - Nyton Rd E		ONE HOUR	✓	947	100.000
2 - South Junction	A - A29 Westergate Rd S		ONE HOUR	✓	639	100.000
	B - B2233 N	✓				
	C - A29 Nyton Rd N	✓				
3 - West Junction	A - Nyton Rd E	✓				
	B - B2233 S	✓				
	C - Nyton Rd W		ONE HOUR	✓	291	100.000

Origin-Destination Data

1 - East Junction

Demand (PCU/hr)

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	100
	B - Nyton Rd W	0	0	100
	C - Nyton Rd E	525	422	0

2 - South Junction

Demand (PCU/hr)

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	157	482
	B - B2233 N	100	0	0
	C - A29 Nyton Rd N	100	0	0

3 - West Junction

Demand (PCU/hr)

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	100
	B - B2233 S	0	0	100
	C - Nyton Rd W	217	74	0

Vehicle Mix

1 - East Junction

Heavy Vehicle Percentages

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	0
	B - Nyton Rd W	0	0	0
	C - Nyton Rd E	4	2	0

2 - South Junction

Heavy Vehicle Percentages

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	2	6
	B - B2233 N	0	0	0
	C - A29 Nyton Rd N	0	0	0

3 - West Junction

Heavy Vehicle Percentages

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	0
	B - B2233 S	0	0	0
	C - Nyton Rd W	3	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	A - A29 Nyton Rd S	0.00	0.0	A	420	630
	B - Nyton Rd W	10.42	0.8	B	193	289
	C - Nyton Rd E	51.15	15.8	F	872	1308
2 - South Junction	A - A29 Westergate Rd S	0.00	0.0	A	589	884
	B - B2233 N	13.72	0.3	B	64	96
	C - A29 Nyton Rd N	0.00	0.0	A	462	693
3 - West Junction	A - Nyton Rd E	0.00	0.0	A	377	565
	B - B2233 S	8.74	0.5	A	141	212
	C - Nyton Rd W	4.15	0.4	A	266	400

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	344	86	344	347	398	0.0	0.0	0.000	A
	B - Nyton Rd W	155	39	156	157	323	0.0	0.2	7.488	A
	C - Nyton Rd E	721	180	722	710	500	0.0	1.6	8.304	A
2 - South Junction	A - A29 Westergate Rd S	484	121	484	486	436	0.0	0.0	0.000	A
	B - B2233 N	53	13	53	51	118	0.0	0.1	9.281	A
	C - A29 Nyton Rd N	384	96	384	380	366	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	316	79	316	309	160	0.0	0.0	0.000	A
	B - B2233 S	116	29	116	114	56	0.0	0.2	7.010	A
	C - Nyton Rd W	215	54	215	218	433	0.0	0.2	2.781	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	418	104	418	411	471	0.0	0.0	0.000	A
	B - Nyton Rd W	184	46	184	184	383	0.2	0.5	8.565	A
	C - Nyton Rd E	857	214	854	844	602	1.6	3.5	14.109	B
2 - South Junction	A - A29 Westergate Rd S	585	146	585	576	517	0.0	0.0	0.000	A
	B - B2233 N	63	16	64	64	142	0.1	0.2	10.896	B
	C - A29 Nyton Rd N	453	113	453	450	443	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	377	94	377	370	189	0.0	0.0	0.000	A
	B - B2233 S	139	35	138	138	68	0.2	0.4	7.758	A
	C - Nyton Rd W	256	64	256	259	516	0.2	0.2	3.430	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	492	123	492	496	561	0.0	0.0	0.000	A
	B - Nyton Rd W	236	59	235	231	447	0.5	0.8	10.084	B
	C - Nyton Rd E	1049	262	1008	1004	728	3.5	13.9	35.545	E
2 - South Junction	A - A29 Westergate Rd S	698	175	698	702	618	0.0	0.0	0.000	A
	B - B2233 N	77	19	77	75	176	0.2	0.2	12.854	B
	C - A29 Nyton Rd N	542	135	542	537	522	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	438	109	438	437	244	0.0	0.0	0.000	A
	B - B2233 S	173	43	174	173	81	0.4	0.4	8.744	A
	C - Nyton Rd W	326	81	325	320	611	0.2	0.4	4.153	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	499	125	499	502	582	0.0	0.0	0.000	A
	B - Nyton Rd W	237	59	237	234	465	0.8	0.7	10.422	B
	C - Nyton Rd E	1055	264	1047	1036	736	13.9	15.8	51.147	F
2 - South Junction	A - A29 Westergate Rd S	702	176	702	705	634	0.0	0.0	0.000	A
	B - B2233 N	76	19	75	76	173	0.2	0.3	13.717	B
	C - A29 Nyton Rd N	559	140	559	558	529	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	455	114	455	447	245	0.0	0.0	0.000	A
	B - B2233 S	170	43	168	168	80	0.4	0.5	8.577	A
	C - Nyton Rd W	324	81	325	321	623	0.4	0.4	3.895	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	422	105	422	415	476	0.0	0.0	0.000	A
	B - Nyton Rd W	188	47	187	189	375	0.7	0.5	8.566	A
	C - Nyton Rd E	848	212	852	896	609	15.8	3.6	23.997	C
2 - South Junction	A - A29 Westergate Rd S	582	145	582	579	520	0.0	0.0	0.000	A
	B - B2233 N	62	16	63	63	135	0.3	0.2	11.015	B
	C - A29 Nyton Rd N	457	114	457	480	447	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	369	92	369	389	194	0.0	0.0	0.000	A
	B - B2233 S	132	33	133	137	65	0.5	0.3	8.103	A
	C - Nyton Rd W	259	65	259	259	502	0.4	0.2	3.314	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	343	86	343	342	394	0.0	0.0	0.000	A
	B - Nyton Rd W	158	39	159	160	311	0.5	0.3	7.741	A
	C - Nyton Rd E	701	175	705	718	502	3.6	1.4	9.205	A
2 - South Junction	A - A29 Westergate Rd S	483	121	483	480	429	0.0	0.0	0.000	A
	B - B2233 N	52	13	52	52	118	0.2	0.1	9.805	A
	C - A29 Nyton Rd N	377	94	377	384	365	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	305	76	305	312	163	0.0	0.0	0.000	A
	B - B2233 S	116	29	116	115	55	0.3	0.3	7.183	A
	C - Nyton Rd W	219	55	218	220	421	0.2	0.2	3.049	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	344	344	347	0.0	0.0	0.000	A
		Exit	1	1		398	398	395	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	155	156	157	0.0	0.2	7.488	A
		Exit	1	1		323	323	315	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	398	398	395	0.0	0.0	0.000	A
				2	B	322	323	315	0.0	1.1	12.451	B
			2	1	(A, B)	721	720	714	0.0	0.5	2.663	A
		Exit	1	1		500	500	504	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	484	484	486	0.0	0.0	0.000	A
		Exit	1	1		436	436	431	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	52	53	51	0.0	0.1	8.397	A
			2	1	(A, C)	53	52	52	0.0	0.0	0.884	A
		Exit	1	1		118	118	118	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	384	384	380	0.0	0.0	0.000	A
		Exit	1	1		366	366	368	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	316	316	309	0.0	0.0	0.000	A
		Exit	1	1		160	160	163	0.0	0.0	0.019	A
	B - B2233 S	Entry	1	1	C	116	116	114	0.0	0.2	5.755	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	116	116	115	0.0	0.0	1.254	A
		Exit	1	1		56	56	55	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	215	215	218	0.0	0.2	2.781	A
		Exit	1	1		433	433	423	0.0	0.0	0.000	A

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	418	418	411	0.0	0.0	0.000	A
		Exit	1	1		471	471	468	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	184	184	184	0.2	0.5	8.565	A
		Exit	1	1		383	383	376	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	471	471	468	0.0	0.0	0.000	A
				2	B	383	383	376	1.1	1.5	14.318	B
			2	1	(A, B)	857	854	846	0.5	2.0	7.615	A
		Exit	1	1		602	602	595	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	585	585	576	0.0	0.0	0.000	A
		Exit	1	1		517	517	514	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	64	64	64	0.1	0.2	9.218	A
			2	1	(A, C)	63	64	64	0.0	0.0	1.689	A
		Exit	1	1		142	142	140	0.0	0.0	0.010	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	453	453	450	0.0	0.0	0.000	A
		Exit	1	1		443	443	436	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	377	377	370	0.0	0.0	0.000	A
		Exit	1	1		189	189	191	0.0	0.0	0.096	A
	B - B2233 S	Entry	1	1	C	139	138	138	0.2	0.3	5.959	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	139	139	138	0.0	0.1	1.800	A
		Exit	1	1		68	68	68	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	256	256	259	0.2	0.2	3.430	A
		Exit	1	1		516	516	507	0.0	0.0	0.000	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	492	492	496	0.0	0.0	0.000	A
		Exit	1	1		561	561	558	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	236	235	231	0.5	0.8	10.084	B
		Exit	1	1		447	447	446	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	561	561	558	0.0	0.0	0.000	A
				2	B	446	447	446	1.5	2.2	17.519	C
			2	1	(A, B)	1049	1007	1006	2.0	11.7	27.643	D
		Exit	1	1		728	728	727	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	698	698	702	0.0	0.0	0.000	A
		Exit	1	1		618	618	612	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	77	77	75	0.2	0.2	10.106	B
			2	1	(A, C)	77	77	75	0.0	0.0	2.740	A
		Exit	1	1		176	176	176	0.0	0.0	0.021	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	542	542	537	0.0	0.0	0.000	A
		Exit	1	1		522	522	526	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	438	438	437	0.0	0.0	0.000	A
		Exit	1	1		244	244	240	0.0	0.0	0.330	A
	B - B2233 S	Entry	1	1	C	174	174	173	0.3	0.3	6.170	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	173	174	173	0.1	0.1	2.572	A
		Exit	1	1		81	81	80	0.0	0.0	0.002	A
	C - Nyton Rd W	Entry	1	1	A, B	326	325	320	0.2	0.4	4.153	A
		Exit	1	1		611	611	610	0.0	0.0	0.000	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	499	499	502	0.0	0.0	0.000	A
		Exit	1	1		582	582	580	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	237	237	234	0.8	0.7	10.422	B
		Exit	1	1		465	465	456	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	582	582	580	0.0	0.0	0.000	A
				2	B	463	465	456	2.2	2.2	18.031	C
			2	1	(A, B)	1055	1046	1036	11.7	13.5	43.111	E
		Exit	1	1		736	736	736	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	702	702	705	0.0	0.0	0.000	A
		Exit	1	1		634	634	634	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	76	75	76	0.2	0.3	10.643	B
			2	1	(A, C)	76	76	76	0.0	0.0	3.059	A
		Exit	1	1		173	173	172	0.0	0.0	0.004	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	559	559	558	0.0	0.0	0.000	A
		Exit	1	1		529	529	533	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	455	455	447	0.0	0.0	0.000	A
		Exit	1	1		245	245	241	0.0	0.0	0.235	A
	B - B2233 S	Entry	1	1	C	169	168	168	0.3	0.3	6.181	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	170	169	168	0.1	0.2	2.401	A
		Exit	1	1		80	80	80	0.0	0.0	0.013	A
	C - Nyton Rd W	Entry	1	1	A, B	324	325	321	0.4	0.4	3.895	A
		Exit	1	1		623	623	615	0.0	0.0	0.000	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	422	422	415	0.0	0.0	0.000	A
		Exit	1	1		476	476	499	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	188	187	189	0.7	0.5	8.566	A
		Exit	1	1		375	375	397	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	476	476	499	0.0	0.0	0.000	A
				2	B	376	375	397	2.2	1.6	15.547	C
			2	1	(A, B)	848	853	893	13.5	2.0	17.168	C
		Exit	1	1		609	609	604	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	582	582	579	0.0	0.0	0.000	A
		Exit	1	1		520	520	542	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	62	63	63	0.3	0.2	9.246	A
			2	1	(A, C)	62	62	62	0.0	0.0	1.789	A
		Exit	1	1		135	135	139	0.0	0.0	0.001	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	457	457	480	0.0	0.0	0.000	A
		Exit	1	1		447	447	440	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	369	369	389	0.0	0.0	0.000	A
		Exit	1	1		194	194	194	0.0	0.0	0.092	A
	B - B2233 S	Entry	1	1	C	132	133	137	0.3	0.2	6.171	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	132	132	137	0.2	0.1	1.926	A
		Exit	1	1		65	65	66	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	259	259	259	0.4	0.2	3.314	A
		Exit	1	1		502	502	526	0.0	0.0	0.000	A

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	343	343	342	0.0	0.0	0.000	A
		Exit	1	1		394	394	399	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	158	159	160	0.5	0.3	7.741	A
		Exit	1	1		311	311	318	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	394	394	399	0.0	0.0	0.000	A
				2	B	309	311	318	1.6	1.0	12.656	B
			2	1	(A, B)	701	703	715	2.0	0.4	3.607	A
		Exit	1	1		502	502	502	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	483	483	480	0.0	0.0	0.000	A
		Exit	1	1		429	429	437	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	52	52	52	0.2	0.1	8.487	A
			2	1	(A, C)	52	52	52	0.0	0.0	1.311	A
		Exit	1	1		118	118	117	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	377	377	384	0.0	0.0	0.000	A
		Exit	1	1		365	365	363	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	305	305	312	0.0	0.0	0.000	A
		Exit	1	1		163	163	164	0.0	0.0	0.035	A
	B - B2233 S	Entry	1	1	C	116	116	115	0.2	0.2	5.871	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	116	116	115	0.1	0.0	1.316	A
		Exit	1	1		55	55	55	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	219	218	220	0.2	0.2	3.049	A
		Exit	1	1		421	421	427	0.0	0.0	0.000	A

2024 BEW DM, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way		5.27	A
2	South Junction	T-Junction	Two-way		2.27	A
3	West Junction	T-Junction	Two-way		6.22	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 BEW DM	PM	ONE HOUR	16:45	18:15	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - East Junction	A - A29 Nyton Rd S	2	C	Simple (vertical queueing)	Normal	0	100.00	
	B - Nyton Rd W	3	A	Simple (vertical queueing)	Normal	0	100.00	
2 - South Junction	B - B2233 N	3	B	Simple (vertical queueing)	Normal	0	100.00	
	C - A29 Nyton Rd N	1	A	Simple (vertical queueing)	Normal	0	100.00	
3 - West Junction	A - Nyton Rd E	1	B	Simple (vertical queueing)	Normal	0	100.00	
	B - B2233 S	2	B	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - A29 Nyton Rd S	✓				
	B - Nyton Rd W	✓				
	C - Nyton Rd E		ONE HOUR	✓	888	100.000
2 - South Junction	A - A29 Westergate Rd S		ONE HOUR	✓	235	100.000
	B - B2233 N	✓				
	C - A29 Nyton Rd N	✓				
3 - West Junction	A - Nyton Rd E	✓				
	B - B2233 S	✓				
	C - Nyton Rd W		ONE HOUR	✓	497	100.000

Origin-Destination Data

1 - East Junction

Demand (PCU/hr)

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	100
	B - Nyton Rd W	0	0	100
	C - Nyton Rd E	635	253	0

2 - South Junction

Demand (PCU/hr)

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	157	78
	B - B2233 N	100	0	0
	C - A29 Nyton Rd N	100	0	0

3 - West Junction

Demand (PCU/hr)

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	100
	B - B2233 S	0	0	100
	C - Nyton Rd W	321	176	0

Vehicle Mix

1 - East Junction

Heavy Vehicle Percentages

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	0
	B - Nyton Rd W	0	0	0
	C - Nyton Rd E	2	4	0

2 - South Junction

Heavy Vehicle Percentages

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	1	4
	B - B2233 N	0	0	0
	C - A29 Nyton Rd N	0	0	0

Heavy Vehicle Percentages

3 - West Junction

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	0
	B - B2233 S	0	0	0
	C - Nyton Rd W	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	A - A29 Nyton Rd S	0.00	0.0	A	69	104
	B - Nyton Rd W	10.30	0.9	B	287	431
	C - Nyton Rd E	3.94	1.2	A	814	1221
2 - South Junction	A - A29 Westergate Rd S	0.00	0.0	A	217	325
	B - B2233 N	13.38	0.7	B	161	242
	C - A29 Nyton Rd N	0.00	0.0	A	573	859
3 - West Junction	A - Nyton Rd E	0.00	0.0	A	219	329
	B - B2233 S	8.10	0.5	A	143	215
	C - Nyton Rd W	8.63	1.3	A	455	682

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	57	14	57	58	480	0.0	0.0	0.000	A
	B - Nyton Rd W	236	59	237	233	184	0.0	0.5	7.542	A
	C - Nyton Rd E	668	167	664	660	294	0.0	0.7	2.621	A
2 - South Junction	A - A29 Westergate Rd S	176	44	176	179	605	0.0	0.0	0.000	A
	B - B2233 N	134	33	134	133	117	0.0	0.3	10.220	B
	C - A29 Nyton Rd N	470	118	470	468	59	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	177	44	177	175	238	0.0	0.0	0.000	A
	B - B2233 S	116	29	116	117	135	0.0	0.2	6.706	A
	C - Nyton Rd W	373	93	373	374	294	0.0	0.5	5.337	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	75	19	75	70	566	0.0	0.0	0.000	A
	B - Nyton Rd W	282	71	281	282	232	0.5	0.8	8.688	A
	C - Nyton Rd E	797	199	798	793	355	0.7	0.6	3.049	A
2 - South Junction	A - A29 Westergate Rd S	218	55	218	216	715	0.0	0.0	0.000	A
	B - B2233 N	159	40	159	156	140	0.3	0.6	10.431	B
	C - A29 Nyton Rd N	556	139	556	554	79	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	223	56	223	220	285	0.0	0.0	0.000	A
	B - B2233 S	139	35	139	141	161	0.2	0.3	7.504	A
	C - Nyton Rd W	447	112	446	445	363	0.5	0.9	6.346	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	81	20	81	81	701	0.0	0.0	0.000	A
	B - Nyton Rd W	344	86	347	343	271	0.8	0.9	10.236	B
	C - Nyton Rd E	976	244	972	980	428	0.6	1.2	3.941	A
2 - South Junction	A - A29 Westergate Rd S	260	65	260	255	880	0.0	0.0	0.000	A
	B - B2233 N	193	48	194	187	176	0.6	0.7	12.868	B
	C - A29 Nyton Rd N	686	172	686	695	84	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	260	65	260	260	348	0.0	0.0	0.000	A
	B - B2233 S	174	43	173	168	196	0.3	0.5	8.100	A
	C - Nyton Rd W	545	136	542	537	433	0.9	1.3	8.137	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	82	20	82	83	699	0.0	0.0	0.000	A
	B - Nyton Rd W	347	87	348	352	272	0.9	0.9	10.300	B
	C - Nyton Rd E	974	244	971	970	429	1.2	1.2	3.920	A
2 - South Junction	A - A29 Westergate Rd S	259	65	259	261	874	0.0	0.0	0.000	A
	B - B2233 N	189	47	187	188	175	0.7	0.7	13.385	B
	C - A29 Nyton Rd N	687	172	687	686	84	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	260	65	260	261	351	0.0	0.0	0.000	A
	B - B2233 S	173	43	172	174	191	0.5	0.4	7.953	A
	C - Nyton Rd W	543	136	542	547	433	1.3	1.3	8.631	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	70	17	70	68	578	0.0	0.0	0.000	A
	B - Nyton Rd W	286	72	286	287	226	0.9	0.8	8.914	A
	C - Nyton Rd E	803	201	804	807	355	1.2	0.7	3.206	A
2 - South Junction	A - A29 Westergate Rd S	212	53	212	209	728	0.0	0.0	0.000	A
	B - B2233 N	160	40	161	164	140	0.7	0.4	11.694	B
	C - A29 Nyton Rd N	567	142	567	563	72	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	218	54	218	223	289	0.0	0.0	0.000	A
	B - B2233 S	138	35	139	137	162	0.4	0.2	7.110	A
	C - Nyton Rd W	452	113	451	453	356	1.3	1.0	6.437	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	52	13	52	55	479	0.0	0.0	0.000	A
	B - Nyton Rd W	230	58	230	244	184	0.8	0.6	7.944	A
	C - Nyton Rd E	666	166	663	661	282	0.7	0.7	2.574	A
2 - South Junction	A - A29 Westergate Rd S	175	44	175	179	600	0.0	0.0	0.000	A
	B - B2233 N	132	33	131	131	121	0.4	0.2	9.915	A
	C - A29 Nyton Rd N	469	117	469	463	54	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	178	44	178	182	233	0.0	0.0	0.000	A
	B - B2233 S	120	30	120	120	133	0.2	0.2	6.808	A
	C - Nyton Rd W	367	92	367	377	298	1.0	0.5	5.117	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	57	57	58	0.0	0.0	0.000	A
		Exit	1	1		480	480	477	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	236	237	233	0.0	0.5	7.542	A
		Exit	1	1		184	184	183	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	480	480	477	0.0	0.0	0.000	A
				2	B	188	184	183	0.0	0.6	8.473	A
			2	1	(A, B)	668	668	662	0.0	0.1	0.282	A
		Exit	1	1		294	294	291	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	176	176	179	0.0	0.0	0.000	A
		Exit	1	1		605	605	601	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	134	134	133	0.0	0.2	7.259	A
			2	1	(A, C)	134	134	134	0.0	0.0	2.956	A
		Exit	1	1		117	117	119	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	470	470	468	0.0	0.0	0.000	A
		Exit	1	1		59	59	60	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	177	177	175	0.0	0.0	0.000	A
		Exit	1	1		238	238	238	0.0	0.0	0.106	A
	B - B2233 S	Entry	1	1	C	116	116	117	0.0	0.2	5.541	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	116	116	117	0.0	0.0	1.168	A
		Exit	1	1		135	135	136	0.0	0.0	0.016	A
	C - Nyton Rd W	Entry	1	1	A, B	373	373	374	0.0	0.5	5.337	A
		Exit	1	1		294	294	292	0.0	0.0	0.000	A

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	75	75	70	0.0	0.0	0.000	A
		Exit	1	1		566	566	564	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	282	281	282	0.5	0.8	8.688	A
		Exit	1	1		232	232	228	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	566	566	564	0.0	0.0	0.000	A
				2	B	231	232	228	0.6	0.5	9.002	A
			2	1	(A, B)	797	796	792	0.1	0.1	0.502	A
		Exit	1	1		355	355	352	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	218	218	216	0.0	0.0	0.000	A
		Exit	1	1		715	715	710	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	159	159	156	0.2	0.3	7.351	A
			2	1	(A, C)	159	159	157	0.0	0.2	3.089	A
		Exit	1	1		140	140	143	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	556	556	554	0.0	0.0	0.000	A
		Exit	1	1		79	79	73	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	223	223	220	0.0	0.0	0.000	A
		Exit	1	1		285	285	286	0.0	0.0	0.421	A
	B - B2233 S	Entry	1	1	C	138	139	141	0.2	0.2	5.821	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	139	138	141	0.0	0.1	1.684	A
		Exit	1	1		161	161	159	0.0	0.0	0.053	A
	C - Nyton Rd W	Entry	1	1	A, B	447	446	445	0.5	0.9	6.346	A
		Exit	1	1		363	363	361	0.0	0.0	0.000	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	81	81	81	0.0	0.0	0.000	A
		Exit	1	1		701	701	710	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	344	347	343	0.8	0.9	10.236	B
		Exit	1	1		271	271	270	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	701	701	710	0.0	0.0	0.000	A
				2	B	274	271	270	0.5	0.8	9.706	A
			2	1	(A, B)	976	975	981	0.1	0.4	1.292	A
		Exit	1	1		428	428	425	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	260	260	255	0.0	0.0	0.000	A
		Exit	1	1		880	880	883	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	194	194	187	0.3	0.4	8.037	A
			2	1	(A, C)	193	194	188	0.2	0.3	4.818	A
		Exit	1	1		176	176	170	0.0	0.0	0.039	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	686	686	695	0.0	0.0	0.000	A
		Exit	1	1		84	84	84	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	260	260	260	0.0	0.0	0.000	A
		Exit	1	1		346	348	347	0.0	0.0	0.955	A
	B - B2233 S	Entry	1	1	C	173	173	168	0.2	0.3	5.824	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	174	173	168	0.1	0.2	2.270	A
		Exit	1	1		195	196	190	0.0	0.0	0.065	A
	C - Nyton Rd W	Entry	1	1	A, B	545	542	537	0.9	1.3	8.137	A
		Exit	1	1		433	433	428	0.0	0.0	0.000	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	82	82	83	0.0	0.0	0.000	A
		Exit	1	1		699	699	699	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	347	348	352	0.9	0.9	10.300	B
		Exit	1	1		272	272	272	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	699	699	699	0.0	0.0	0.000	A
				2	B	272	272	272	0.8	0.8	9.780	A
			2	1	(A, B)	974	971	970	0.4	0.4	1.224	A
		Exit	1	1		429	429	435	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	259	259	261	0.0	0.0	0.000	A
		Exit	1	1		874	874	874	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	187	187	188	0.4	0.4	8.016	A
			2	1	(A, C)	189	187	188	0.3	0.3	5.373	A
		Exit	1	1		175	175	175	0.0	0.0	0.012	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	687	687	686	0.0	0.0	0.000	A
		Exit	1	1		84	84	86	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	260	260	261	0.0	0.0	0.000	A
		Exit	1	1		351	351	357	0.0	0.1	0.885	A
	B - B2233 S	Entry	1	1	C	172	172	174	0.3	0.3	5.829	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	173	172	174	0.2	0.1	2.131	A
		Exit	1	1		191	191	190	0.0	0.0	0.199	A
	C - Nyton Rd W	Entry	1	1	A, B	543	542	547	1.3	1.3	8.631	A
		Exit	1	1		433	433	435	0.0	0.0	0.000	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	70	70	68	0.0	0.0	0.000	A
		Exit	1	1		578	578	575	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	286	286	287	0.9	0.8	8.914	A
		Exit	1	1		226	226	232	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	578	578	575	0.0	0.0	0.000	A
				2	B	225	226	232	0.8	0.6	9.170	A
			2	1	(A, B)	803	803	806	0.4	0.1	0.615	A
		Exit	1	1		355	355	355	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	212	212	209	0.0	0.0	0.000	A
		Exit	1	1		728	728	727	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	161	161	164	0.4	0.3	7.645	A
			2	1	(A, C)	160	161	163	0.3	0.1	4.055	A
		Exit	1	1		140	140	138	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	567	567	563	0.0	0.0	0.000	A
		Exit	1	1		72	72	71	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	218	218	223	0.0	0.0	0.000	A
		Exit	1	1		289	289	289	0.1	0.1	0.375	A
	B - B2233 S	Entry	1	1	C	138	139	137	0.3	0.1	5.712	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	138	138	137	0.1	0.0	1.390	A
		Exit	1	1		162	162	164	0.0	0.0	0.067	A
	C - Nyton Rd W	Entry	1	1	A, B	452	451	453	1.3	1.0	6.437	A
		Exit	1	1		356	356	360	0.0	0.0	0.000	A

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	52	52	55	0.0	0.0	0.000	A
		Exit	1	1		479	479	473	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	230	230	244	0.8	0.6	7.944	A
		Exit	1	1		184	184	188	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	479	479	473	0.0	0.0	0.000	A
				2	B	183	184	188	0.6	0.4	8.384	A
			2	1	(A, B)	666	662	661	0.1	0.3	0.233	A
		Exit	1	1		282	282	299	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	175	175	179	0.0	0.0	0.000	A
		Exit	1	1		600	600	594	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	131	131	131	0.3	0.2	7.261	A
			2	1	(A, C)	132	131	131	0.1	0.0	2.652	A
		Exit	1	1		121	121	121	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	469	469	463	0.0	0.0	0.000	A
		Exit	1	1		54	54	58	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	178	178	182	0.0	0.0	0.000	A
		Exit	1	1		233	233	246	0.1	0.0	0.267	A
	B - B2233 S	Entry	1	1	C	120	120	120	0.1	0.1	5.538	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	120	120	120	0.0	0.0	1.274	A
		Exit	1	1		133	133	132	0.0	0.0	0.006	A
	C - Nyton Rd W	Entry	1	1	A, B	367	367	377	1.0	0.5	5.117	A
		Exit	1	1		298	298	302	0.0	0.0	0.000	A

2024 BEW DS, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way		31.07	D
2	South Junction	T-Junction	Two-way		0.78	A
3	West Junction	T-Junction	Two-way		3.06	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 BEW DS	AM	ONE HOUR	07:45	09:15	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - East Junction	A - A29 Nyton Rd S	2	C	Simple (vertical queueing)	Normal	0	100.00	
	B - Nyton Rd W	3	A	Simple (vertical queueing)	Normal	0	100.00	
2 - South Junction	B - B2233 N	3	B	Simple (vertical queueing)	Normal	0	100.00	
	C - A29 Nyton Rd N	1	A	Simple (vertical queueing)	Normal	0	100.00	
3 - West Junction	A - Nyton Rd E	1	B	Simple (vertical queueing)	Normal	0	100.00	
	B - B2233 S	2	B	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - A29 Nyton Rd S	✓				
	B - Nyton Rd W	✓				
	C - Nyton Rd E		ONE HOUR	✓	948	100.000
2 - South Junction	A - A29 Westergate Rd S		ONE HOUR	✓	639	100.000
	B - B2233 N	✓				
	C - A29 Nyton Rd N	✓				
3 - West Junction	A - Nyton Rd E	✓				
	B - B2233 S	✓				
	C - Nyton Rd W		ONE HOUR	✓	291	100.000

Origin-Destination Data

1 - East Junction

Demand (PCU/hr)

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	100
	B - Nyton Rd W	0	0	100
	C - Nyton Rd E	527	421	0

2 - South Junction

Demand (PCU/hr)

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	157	482
	B - B2233 N	100	0	0
	C - A29 Nyton Rd N	100	0	0

3 - West Junction

Demand (PCU/hr)

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	100
	B - B2233 S	0	0	100
	C - Nyton Rd W	217	74	0

Vehicle Mix

1 - East Junction

Heavy Vehicle Percentages

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	0
	B - Nyton Rd W	0	0	0
	C - Nyton Rd E	4	2	0

2 - South Junction

Heavy Vehicle Percentages

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	2	6
	B - B2233 N	0	0	0
	C - A29 Nyton Rd N	0	0	0

Heavy Vehicle Percentages

3 - West Junction

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	0
	B - B2233 S	0	0	0
	C - Nyton Rd W	3	6	0

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	A - A29 Nyton Rd S	0.00	0.0	A	418	627
	B - Nyton Rd W	10.73	0.7	B	192	287
	C - Nyton Rd E	50.56	13.4	F	866	1299
2 - South Junction	A - A29 Westergate Rd S	0.00	0.0	A	588	882
	B - B2233 N	13.57	0.3	B	64	96
	C - A29 Nyton Rd N	0.00	0.0	A	465	698
3 - West Junction	A - Nyton Rd E	0.00	0.0	A	379	568
	B - B2233 S	8.90	0.4	A	142	213
	C - Nyton Rd W	4.30	0.5	A	265	398

Main Results for each time segment

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	335	84	335	341	400	0.0	0.0	0.000	A
	B - Nyton Rd W	157	39	155	160	315	0.0	0.4	7.727	A
	C - Nyton Rd E	716	179	715	708	490	0.0	1.5	7.812	A
2 - South Junction	A - A29 Westergate Rd S	479	120	479	482	436	0.0	0.0	0.000	A
	B - B2233 N	54	14	54	53	125	0.0	0.1	9.687	A
	C - A29 Nyton Rd N	382	95	382	380	354	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	310	78	310	306	161	0.0	0.0	0.000	A
	B - B2233 S	123	31	122	117	58	0.0	0.3	7.352	A
	C - Nyton Rd W	219	55	219	223	432	0.0	0.2	3.154	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	414	104	414	410	472	0.0	0.0	0.000	A
	B - Nyton Rd W	190	47	191	190	382	0.4	0.5	8.441	A
	C - Nyton Rd E	855	214	853	837	606	1.5	4.0	14.704	B
2 - South Junction	A - A29 Westergate Rd S	582	146	582	577	515	0.0	0.0	0.000	A
	B - B2233 N	60	15	60	62	143	0.1	0.1	10.796	B
	C - A29 Nyton Rd N	455	114	455	448	439	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	374	94	374	365	198	0.0	0.0	0.000	A
	B - B2233 S	140	35	138	138	63	0.3	0.4	7.855	A
	C - Nyton Rd W	261	65	261	262	512	0.2	0.3	3.464	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	506	126	506	502	581	0.0	0.0	0.000	A
	B - Nyton Rd W	232	58	232	233	456	0.5	0.7	10.734	B
	C - Nyton Rd E	1048	262	1037	1009	738	4.0	12.4	35.321	E
2 - South Junction	A - A29 Westergate Rd S	706	177	706	703	638	0.0	0.0	0.005	A
	B - B2233 N	79	20	80	76	170	0.1	0.3	13.566	B
	C - A29 Nyton Rd N	558	140	558	543	536	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	447	112	447	437	241	0.0	0.0	0.000	A
	B - B2233 S	167	42	167	167	82	0.4	0.4	8.590	A
	C - Nyton Rd W	323	81	323	322	613	0.3	0.4	4.020	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	499	125	499	498	577	0.0	0.0	0.000	A
	B - Nyton Rd W	231	58	228	228	470	0.7	0.7	10.338	B
	C - Nyton Rd E	1027	257	1046	1031	727	12.4	13.4	50.564	F
2 - South Junction	A - A29 Westergate Rd S	702	175	702	699	634	0.0	0.0	0.000	A
	B - B2233 N	78	19	77	76	172	0.3	0.3	13.266	B
	C - A29 Nyton Rd N	557	139	557	547	529	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	458	114	458	452	237	0.0	0.0	0.000	A
	B - B2233 S	168	42	167	167	82	0.4	0.4	8.898	A
	C - Nyton Rd W	320	80	319	316	625	0.4	0.5	4.304	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	415	104	415	417	476	0.0	0.0	0.000	A
	B - Nyton Rd W	183	46	182	192	383	0.7	0.5	9.019	A
	C - Nyton Rd E	846	211	859	891	597	13.4	3.0	23.670	C
2 - South Junction	A - A29 Westergate Rd S	582	146	582	584	522	0.0	0.0	0.000	A
	B - B2233 N	63	16	63	63	142	0.3	0.2	11.707	B
	C - A29 Nyton Rd N	459	115	459	473	440	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	376	94	376	393	187	0.0	0.0	0.000	A
	B - B2233 S	139	35	139	138	67	0.4	0.3	7.994	A
	C - Nyton Rd W	253	63	255	263	515	0.5	0.2	3.556	A

09:00 - 09:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	338	84	338	336	393	0.0	0.0	0.000	A
	B - Nyton Rd W	156	39	157	158	313	0.5	0.4	7.651	A
	C - Nyton Rd E	705	176	706	717	495	3.0	1.5	8.430	A
2 - South Junction	A - A29 Westergate Rd S	475	119	475	476	431	0.0	0.0	0.000	A
	B - B2233 N	50	13	51	53	117	0.2	0.1	10.323	B
	C - A29 Nyton Rd N	380	95	380	387	358	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	308	77	308	309	162	0.0	0.0	0.000	A
	B - B2233 S	114	29	114	117	53	0.3	0.2	7.387	A
	C - Nyton Rd W	214	53	215	219	422	0.2	0.2	2.753	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:45 - 08:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	335	335	341	0.0	0.0	0.000	A
		Exit	1	1		400	400	396	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	157	155	160	0.0	0.4	7.727	A
		Exit	1	1		315	315	312	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	400	400	396	0.0	0.0	0.000	A
				2	B	316	315	312	0.0	1.0	12.131	B
			2	1	(A, B)	716	715	712	0.0	0.4	2.345	A
		Exit	1	1		490	490	501	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	479	479	482	0.0	0.0	0.000	A
		Exit	1	1		436	436	433	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	55	54	53	0.0	0.1	8.577	A
			2	1	(A, C)	54	55	54	0.0	0.0	1.110	A
		Exit	1	1		125	125	120	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	382	382	380	0.0	0.0	0.000	A
		Exit	1	1		354	354	362	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	310	310	306	0.0	0.0	0.000	A
		Exit	1	1		161	161	166	0.0	0.0	0.023	A
	B - B2233 S	Entry	1	1	C	122	122	117	0.0	0.2	5.918	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	123	122	118	0.0	0.1	1.431	A
		Exit	1	1		58	58	57	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	219	219	223	0.0	0.2	3.154	A
		Exit	1	1		432	432	423	0.0	0.0	0.000	A

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	414	414	410	0.0	0.0	0.000	A
		Exit	1	1		472	472	464	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	190	191	190	0.4	0.5	8.441	A
		Exit	1	1		382	382	372	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	472	472	464	0.0	0.0	0.000	A
				2	B	381	382	372	1.0	1.6	14.586	B
			2	1	(A, B)	855	852	839	0.4	2.3	8.108	A
		Exit	1	1		606	606	600	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	582	582	577	0.0	0.0	0.000	A
		Exit	1	1		515	515	509	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	60	60	62	0.1	0.1	9.158	A
			2	1	(A, C)	60	60	61	0.0	0.0	1.637	A
		Exit	1	1		143	143	142	0.0	0.0	0.006	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	455	455	448	0.0	0.0	0.000	A
		Exit	1	1		439	439	435	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	374	374	365	0.0	0.0	0.000	A
		Exit	1	1		198	198	197	0.0	0.0	0.066	A
	B - B2233 S	Entry	1	1	C	139	138	138	0.2	0.3	6.015	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	140	139	139	0.1	0.1	1.843	A
		Exit	1	1		63	63	65	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	261	261	262	0.2	0.3	3.464	A
		Exit	1	1		512	512	503	0.0	0.0	0.000	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	506	506	502	0.0	0.0	0.000	A
		Exit	1	1		581	581	564	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	232	232	233	0.5	0.7	10.734	B
		Exit	1	1		456	456	445	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	581	581	564	0.0	0.0	0.000	A
				2	B	460	456	445	1.6	2.4	17.319	C
			2	1	(A, B)	1048	1041	1012	2.3	10.0	27.522	D
		Exit	1	1		738	738	735	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	706	706	703	0.0	0.0	0.005	A
		Exit	1	1		638	638	620	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	79	80	76	0.1	0.3	10.516	B
			2	1	(A, C)	79	79	77	0.0	0.0	3.055	A
		Exit	1	1		170	170	170	0.0	0.0	0.035	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	558	558	543	0.0	0.0	0.000	A
		Exit	1	1		536	536	533	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	447	447	437	0.0	0.0	0.000	A
		Exit	1	1		241	241	241	0.0	0.0	0.477	A
	B - B2233 S	Entry	1	1	C	167	167	167	0.3	0.2	6.158	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	167	167	167	0.1	0.1	2.432	A
		Exit	1	1		82	82	81	0.0	0.0	0.008	A
	C - Nyton Rd W	Entry	1	1	A, B	323	323	322	0.3	0.4	4.020	A
		Exit	1	1		613	613	604	0.0	0.0	0.000	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	499	499	498	0.0	0.0	0.000	A
		Exit	1	1		577	577	569	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	231	228	228	0.7	0.7	10.338	B
		Exit	1	1		470	470	462	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	577	577	569	0.0	0.0	0.000	A
				2	B	469	470	462	2.4	2.2	18.131	C
			2	1	(A, B)	1027	1045	1031	10.0	11.2	42.396	E
		Exit	1	1		727	727	726	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	702	702	699	0.0	0.0	0.000	A
		Exit	1	1		634	634	623	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	77	77	76	0.3	0.2	10.395	B
			2	1	(A, C)	78	77	76	0.0	0.1	2.852	A
		Exit	1	1		172	172	171	0.0	0.0	0.016	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	557	557	547	0.0	0.0	0.000	A
		Exit	1	1		529	529	528	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	458	458	452	0.0	0.0	0.000	A
		Exit	1	1		237	237	235	0.0	0.0	0.353	A
	B - B2233 S	Entry	1	1	C	168	167	167	0.2	0.3	6.267	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	168	168	167	0.1	0.1	2.632	A
		Exit	1	1		82	82	81	0.0	0.0	0.003	A
	C - Nyton Rd W	Entry	1	1	A, B	320	319	316	0.4	0.5	4.304	A
		Exit	1	1		625	625	619	0.0	0.0	0.000	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	415	415	417	0.0	0.0	0.000	A
		Exit	1	1		476	476	491	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	183	182	192	0.7	0.5	9.019	A
		Exit	1	1		383	383	401	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	476	476	491	0.0	0.0	0.000	A
				2	B	380	383	401	2.2	1.4	15.546	C
			2	1	(A, B)	846	856	888	11.2	1.6	16.722	C
		Exit	1	1		597	597	610	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	582	582	584	0.0	0.0	0.000	A
		Exit	1	1		522	522	536	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	63	63	63	0.2	0.1	9.568	A
			2	1	(A, C)	63	63	63	0.1	0.0	2.166	A
		Exit	1	1		142	142	141	0.0	0.0	0.005	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	459	459	473	0.0	0.0	0.000	A
		Exit	1	1		440	440	443	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	376	376	393	0.0	0.0	0.000	A
		Exit	1	1		187	187	197	0.0	0.0	0.133	A
	B - B2233 S	Entry	1	1	C	139	139	138	0.3	0.3	6.175	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	139	139	138	0.1	0.1	1.822	A
		Exit	1	1		67	67	67	0.0	0.0	0.003	A
	C - Nyton Rd W	Entry	1	1	A, B	253	255	263	0.5	0.2	3.556	A
		Exit	1	1		515	515	531	0.0	0.0	0.000	A

09:00 - 09:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	338	338	336	0.0	0.0	0.000	A
		Exit	1	1		393	393	402	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	156	157	158	0.5	0.4	7.651	A
		Exit	1	1		313	313	315	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	393	393	402	0.0	0.0	0.000	A
				2	B	313	313	315	1.4	1.1	12.392	B
			2	1	(A, B)	705	706	716	1.6	0.4	2.998	A
		Exit	1	1		495	495	494	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	475	475	476	0.0	0.0	0.000	A
		Exit	1	1		431	431	439	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	50	51	53	0.1	0.1	8.895	A
			2	1	(A, C)	50	50	53	0.0	0.0	1.426	A
		Exit	1	1		117	117	120	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	380	380	387	0.0	0.0	0.000	A
		Exit	1	1		358	358	356	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	308	308	309	0.0	0.0	0.000	A
		Exit	1	1		162	162	163	0.0	0.0	0.025	A
	B - B2233 S	Entry	1	1	C	114	114	117	0.3	0.2	5.869	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	114	114	117	0.1	0.0	1.513	A
		Exit	1	1		53	53	56	0.0	0.0	0.000	A
	C - Nyton Rd W	Entry	1	1	A, B	214	215	219	0.2	0.2	2.753	A
		Exit	1	1		422	422	426	0.0	0.0	0.000	A

2024 BEW DS, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	East Junction	T-Junction	Two-way		5.13	A
2	South Junction	T-Junction	Two-way		2.38	A
3	West Junction	T-Junction	Two-way		6.19	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 BEW DS	PM	ONE HOUR	16:45	18:15	15	✓

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1 - East Junction	A - A29 Nyton Rd S	2	C	Simple (vertical queueing)	Normal	0	100.00	
	B - Nyton Rd W	3	A	Simple (vertical queueing)	Normal	0	100.00	
2 - South Junction	B - B2233 N	3	B	Simple (vertical queueing)	Normal	0	100.00	
	C - A29 Nyton Rd N	1	A	Simple (vertical queueing)	Normal	0	100.00	
3 - West Junction	A - Nyton Rd E	1	B	Simple (vertical queueing)	Normal	0	100.00	
	B - B2233 S	2	B	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - East Junction	A - A29 Nyton Rd S	✓				
	B - Nyton Rd W	✓				
	C - Nyton Rd E		ONE HOUR	✓	886	100.000
2 - South Junction	A - A29 Westergate Rd S		ONE HOUR	✓	235	100.000
	B - B2233 N	✓				
	C - A29 Nyton Rd N	✓				
3 - West Junction	A - Nyton Rd E	✓				
	B - B2233 S	✓				
	C - Nyton Rd W		ONE HOUR	✓	497	100.000

Origin-Destination Data

1 - East Junction

Demand (PCU/hr)

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	100
	B - Nyton Rd W	0	0	100
	C - Nyton Rd E	637	249	0

2 - South Junction

Demand (PCU/hr)

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	157	78
	B - B2233 N	100	0	0
	C - A29 Nyton Rd N	100	0	0

3 - West Junction

Demand (PCU/hr)

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	100
	B - B2233 S	0	0	100
	C - Nyton Rd W	321	176	0

Vehicle Mix

1 - East Junction

Heavy Vehicle Percentages

		To		
		A - A29 Nyton Rd S	B - Nyton Rd W	C - Nyton Rd E
From	A - A29 Nyton Rd S	0	0	0
	B - Nyton Rd W	0	0	0
	C - Nyton Rd E	2	4	0

2 - South Junction

Heavy Vehicle Percentages

		To		
		A - A29 Westergate Rd S	B - B2233 N	C - A29 Nyton Rd N
From	A - A29 Westergate Rd S	0	1	4
	B - B2233 N	0	0	0
	C - A29 Nyton Rd N	0	0	0

Heavy Vehicle Percentages

3 - West Junction

		To		
		A - Nyton Rd E	B - B2233 S	C - Nyton Rd W
From	A - Nyton Rd E	0	0	0
	B - B2233 S	0	0	0
	C - Nyton Rd W	1	1	0

Results

Results Summary for whole modelled period

Junction	Arm	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1 - East Junction	A - A29 Nyton Rd S	0.00	0.0	A	69	104
	B - Nyton Rd W	10.16	1.1	B	295	442
	C - Nyton Rd E	3.75	1.1	A	816	1224
2 - South Junction	A - A29 Westergate Rd S	0.00	0.0	A	214	321
	B - B2233 N	14.16	0.7	B	160	239
	C - A29 Nyton Rd N	0.00	0.0	A	576	863
3 - West Junction	A - Nyton Rd E	0.00	0.0	A	220	330
	B - B2233 S	7.81	0.3	A	141	212
	C - Nyton Rd W	8.67	1.3	A	458	686

Main Results for each time segment

16:45 - 17:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	57	14	57	56	462	0.0	0.0	0.000	A
	B - Nyton Rd W	241	60	243	239	190	0.0	0.5	7.773	A
	C - Nyton Rd E	653	163	652	665	299	0.0	0.4	2.461	A
2 - South Junction	A - A29 Westergate Rd S	171	43	171	172	585	0.0	0.0	0.000	A
	B - B2233 N	132	33	132	130	113	0.0	0.3	9.773	A
	C - A29 Nyton Rd N	453	113	453	467	58	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	180	45	180	180	243	0.0	0.0	0.000	A
	B - B2233 S	112	28	112	113	134	0.0	0.2	6.408	A
	C - Nyton Rd W	375	94	376	375	293	0.0	0.5	5.088	A

17:00 - 17:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	67	17	67	68	571	0.0	0.0	0.000	A
	B - Nyton Rd W	287	72	284	282	224	0.5	0.8	8.637	A
	C - Nyton Rd E	793	198	796	797	351	0.4	0.5	2.769	A
2 - South Junction	A - A29 Westergate Rd S	210	52	210	209	716	0.0	0.0	0.000	A
	B - B2233 N	155	39	155	157	140	0.3	0.4	10.717	B
	C - A29 Nyton Rd N	561	140	561	564	70	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	215	54	215	213	290	0.0	0.0	0.000	A
	B - B2233 S	139	35	139	136	156	0.2	0.3	7.223	A
	C - Nyton Rd W	445	111	447	446	354	0.5	0.8	6.319	A

17:15 - 17:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	85	21	85	83	703	0.0	0.0	0.000	A
	B - Nyton Rd W	361	90	362	354	273	0.8	1.1	10.162	B
	C - Nyton Rd E	974	243	976	973	447	0.5	0.8	3.391	A
2 - South Junction	A - A29 Westergate Rd S	262	66	262	259	883	0.0	0.0	0.000	A
	B - B2233 N	192	48	193	190	174	0.4	0.7	13.821	B
	C - A29 Nyton Rd N	690	173	690	687	88	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	261	65	261	262	366	0.0	0.0	0.000	A
	B - B2233 S	173	43	174	171	194	0.3	0.3	7.810	A
	C - Nyton Rd W	559	140	558	551	435	0.8	1.2	8.675	A

17:30 - 17:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	84	21	84	85	714	0.0	0.0	0.000	A
	B - Nyton Rd W	346	86	345	344	279	1.1	1.1	9.982	A
	C - Nyton Rd E	996	249	993	982	428	0.8	1.1	3.753	A
2 - South Junction	A - A29 Westergate Rd S	259	65	259	260	896	0.0	0.0	0.000	A
	B - B2233 N	194	48	196	192	170	0.7	0.6	14.159	B
	C - A29 Nyton Rd N	700	175	700	692	89	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	269	67	269	267	350	0.0	0.0	0.000	A
	B - B2233 S	169	42	170	170	195	0.3	0.3	7.813	A
	C - Nyton Rd W	547	137	544	541	440	1.2	1.3	8.360	A

17:45 - 18:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	67	17	67	68	584	0.0	0.0	0.000	A
	B - Nyton Rd W	289	72	289	290	221	1.1	0.7	9.119	A
	C - Nyton Rd E	808	202	804	812	356	1.1	0.9	3.210	A
2 - South Junction	A - A29 Westergate Rd S	212	53	212	211	724	0.0	0.0	0.000	A
	B - B2233 N	150	38	151	154	143	0.6	0.4	10.713	B
	C - A29 Nyton Rd N	573	143	573	575	70	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	212	53	212	216	291	0.0	0.0	0.000	A
	B - B2233 S	141	35	141	139	151	0.3	0.3	7.279	A
	C - Nyton Rd W	438	109	442	446	353	1.3	0.6	6.214	A

18:00 - 18:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	55	14	55	55	486	0.0	0.0	0.000	A
	B - Nyton Rd W	244	61	241	240	190	0.7	0.7	7.885	A
	C - Nyton Rd E	672	168	676	675	297	0.9	0.5	2.623	A
2 - South Junction	A - A29 Westergate Rd S	171	43	171	173	612	0.0	0.0	0.000	A
	B - B2233 N	135	34	135	133	113	0.4	0.3	9.715	A
	C - A29 Nyton Rd N	477	119	477	475	58	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	183	46	183	183	246	0.0	0.0	0.000	A
	B - B2233 S	112	28	113	115	136	0.3	0.2	6.908	A
	C - Nyton Rd W	382	95	382	376	295	0.6	0.6	5.306	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

16:45 - 17:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	57	57	56	0.0	0.0	0.000	A
		Exit	1	1		462	462	477	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	241	243	239	0.0	0.5	7.773	A
		Exit	1	1		190	190	188	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	462	462	477	0.0	0.0	0.000	A
				2	B	190	190	188	0.0	0.3	7.868	A
			2	1	(A, B)	653	652	666	0.0	0.1	0.261	A
		Exit	1	1		299	299	294	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	171	171	172	0.0	0.0	0.000	A
		Exit	1	1		585	585	597	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	133	132	130	0.0	0.3	7.282	A
			2	1	(A, C)	132	133	131	0.0	0.0	2.489	A
		Exit	1	1		113	113	114	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	453	453	467	0.0	0.0	0.000	A
		Exit	1	1		58	58	58	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	180	180	180	0.0	0.0	0.000	A
		Exit	1	1		242	243	243	0.0	0.0	0.090	A
	B - B2233 S	Entry	1	1	C	112	112	113	0.0	0.1	5.311	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	112	112	113	0.0	0.0	1.095	A
		Exit	1	1		134	134	133	0.0	0.0	0.030	A
	C - Nyton Rd W	Entry	1	1	A, B	375	376	375	0.0	0.5	5.088	A
		Exit	1	1		293	293	292	0.0	0.0	0.000	A

17:00 - 17:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	67	67	68	0.0	0.0	0.000	A
		Exit	1	1		571	571	576	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	287	284	282	0.5	0.8	8.637	A
		Exit	1	1		224	224	222	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	571	571	576	0.0	0.0	0.000	A
				2	B	223	224	222	0.3	0.5	8.561	A
			2	1	(A, B)	793	794	798	0.1	0.0	0.420	A
		Exit	1	1		351	351	350	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	210	210	209	0.0	0.0	0.000	A
		Exit	1	1		716	716	721	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	154	155	157	0.3	0.3	7.437	A
			2	1	(A, C)	155	154	157	0.0	0.1	3.282	A
		Exit	1	1		140	140	138	0.0	0.0	0.001	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	561	561	564	0.0	0.0	0.000	A
		Exit	1	1		70	70	71	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	215	215	213	0.0	0.0	0.000	A
		Exit	1	1		291	290	286	0.0	0.1	0.301	A
	B - B2233 S	Entry	1	1	C	139	139	136	0.1	0.3	5.723	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	139	139	137	0.0	0.1	1.495	A
		Exit	1	1		156	156	159	0.0	0.0	0.076	A
	C - Nyton Rd W	Entry	1	1	A, B	445	447	446	0.5	0.8	6.319	A
		Exit	1	1		354	354	349	0.0	0.0	0.000	A

17:15 - 17:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	85	85	83	0.0	0.0	0.000	A
		Exit	1	1		703	703	699	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	361	362	354	0.8	1.1	10.162	B
		Exit	1	1		273	273	274	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	703	703	699	0.0	0.0	0.000	A
				2	B	272	273	274	0.5	0.7	9.519	A
			2	1	(A, B)	974	975	974	0.0	0.1	0.753	A
		Exit	1	1		447	447	436	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	262	262	259	0.0	0.0	0.000	A
		Exit	1	1		883	883	876	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	192	193	190	0.3	0.4	8.145	A
			2	1	(A, C)	192	192	190	0.1	0.3	5.670	A
		Exit	1	1		174	174	173	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	690	690	687	0.0	0.0	0.000	A
		Exit	1	1		88	88	86	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	261	261	262	0.0	0.0	0.000	A
		Exit	1	1		365	366	358	0.1	0.1	0.943	A
	B - B2233 S	Entry	1	1	C	174	174	171	0.3	0.2	5.734	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	173	174	171	0.1	0.1	2.073	A
		Exit	1	1		194	194	193	0.0	0.0	0.115	A
	C - Nyton Rd W	Entry	1	1	A, B	559	558	551	0.8	1.2	8.675	A
		Exit	1	1		435	435	434	0.0	0.0	0.000	A

17:30 - 17:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	84	84	85	0.0	0.0	0.000	A
		Exit	1	1		714	714	705	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	346	345	344	1.1	1.1	9.982	A
		Exit	1	1		279	279	277	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	714	714	705	0.0	0.0	0.000	A
				2	B	279	279	277	0.7	0.7	9.436	A
			2	1	(A, B)	996	994	982	0.1	0.4	1.117	A
		Exit	1	1		428	428	429	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	259	259	260	0.0	0.0	0.000	A
		Exit	1	1		896	896	884	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	194	196	192	0.4	0.3	8.261	A
			2	1	(A, C)	194	194	192	0.3	0.3	5.898	A
		Exit	1	1		170	170	172	0.0	0.0	0.009	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	700	700	692	0.0	0.0	0.000	A
		Exit	1	1		89	89	89	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	269	269	267	0.0	0.0	0.000	A
		Exit	1	1		349	350	348	0.1	0.0	0.677	A
	B - B2233 S	Entry	1	1	C	170	170	170	0.2	0.3	5.746	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	169	170	170	0.1	0.1	2.075	A
		Exit	1	1		195	195	193	0.0	0.0	0.159	A
	C - Nyton Rd W	Entry	1	1	A, B	547	544	541	1.2	1.3	8.360	A
		Exit	1	1		440	440	437	0.0	0.0	0.000	A

17:45 - 18:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	67	67	68	0.0	0.0	0.000	A
		Exit	1	1		584	584	587	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	289	289	290	1.1	0.7	9.119	A
		Exit	1	1		221	221	226	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	584	584	587	0.0	0.0	0.000	A
				2	B	222	221	226	0.7	0.7	9.057	A
			2	1	(A, B)	808	806	812	0.4	0.2	0.737	A
		Exit	1	1		356	356	358	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	212	212	211	0.0	0.0	0.000	A
		Exit	1	1		724	724	729	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	150	151	154	0.3	0.3	7.629	A
			2	1	(A, C)	150	150	154	0.3	0.1	3.084	A
		Exit	1	1		143	143	140	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	573	573	575	0.0	0.0	0.000	A
		Exit	1	1		70	70	70	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	212	212	216	0.0	0.0	0.000	A
		Exit	1	1		291	291	291	0.0	0.0	0.417	A
	B - B2233 S	Entry	1	1	C	141	141	139	0.3	0.2	5.678	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	141	141	139	0.1	0.0	1.603	A
		Exit	1	1		151	151	155	0.0	0.0	0.027	A
	C - Nyton Rd W	Entry	1	1	A, B	438	442	446	1.3	0.6	6.214	A
		Exit	1	1		353	353	356	0.0	0.0	0.000	A

18:00 - 18:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Average throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - East Junction	A - A29 Nyton Rd S	Entry	1	1	B, C	55	55	55	0.0	0.0	0.000	A
		Exit	1	1		486	486	484	0.0	0.0	0.000	A
	B - Nyton Rd W	Entry	1	1	A, C	244	241	240	0.7	0.7	7.885	A
		Exit	1	1		190	190	191	0.0	0.0	0.000	A
	C - Nyton Rd E	Entry	1	1	A	486	486	484	0.0	0.0	0.000	A
				2	B	187	190	191	0.7	0.4	8.575	A
			2	1	(A, B)	672	672	674	0.2	0.1	0.258	A
		Exit	1	1		297	297	295	0.0	0.0	0.000	A
2 - South Junction	A - A29 Westergate Rd S	Entry	1	1	B, C	171	171	173	0.0	0.0	0.000	A
		Exit	1	1		612	612	609	0.0	0.0	0.000	A
	B - B2233 N	Entry	1	1	C	0	0	0	0.0	0.0	0.000	A
				2	A	134	135	133	0.3	0.2	7.167	A
			2	1	(A, C)	135	134	133	0.1	0.1	2.557	A
		Exit	1	1		113	113	115	0.0	0.0	0.000	A
	C - A29 Nyton Rd N	Entry	1	1	A, B	477	477	475	0.0	0.0	0.000	A
		Exit	1	1		58	58	58	0.0	0.0	0.000	A
3 - West Junction	A - Nyton Rd E	Entry	1	1	B, C	183	183	183	0.0	0.0	0.000	A
		Exit	1	1		246	246	242	0.0	0.0	0.120	A
	B - B2233 S	Entry	1	1	C	113	113	115	0.2	0.2	5.648	A
				2	A	0	0	0	0.0	0.0	0.000	A
			2	1	(A, C)	112	113	114	0.0	0.0	1.256	A
		Exit	1	1		136	136	134	0.0	0.0	0.015	A
	C - Nyton Rd W	Entry	1	1	A, B	382	382	376	0.6	0.6	5.306	A
		Exit	1	1		295	295	298	0.0	0.0	0.000	A

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Woodgate Road Junction 2024 BEW DM.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 13/10/2021 10:18:08

»2024 BEW DM, AM
»2024 BEW DM, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2024 BEW DM							
Stream B-AC	0.3	16.72	0.24	32 %	0.1	12.82	0.11	57 %
Stream C-AB	0.6	4.80	0.18	[Stream B-AC]	0.1	4.58	0.06	[Stream B-AC]

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	A29 Woodgate Road Junction
Location	
Site number	
Date	21/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	20-061
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2024 BEW DM	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 BEW DM	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2024 BEW DM, 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	A29 Woodgate Road Junction	T-Junction	Two-way		1.19	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	32	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	A29 N		Major
B	Woodgate Road		Minor
C	A29 S		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 - A29 S	6.95			100.0	✓	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 - Woodgate Road	One lane	3.04	19	17

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	494	0.086	0.218	0.137	0.311
1	B-C	637	0.094	0.237	-	-
1	C-B	632	0.235	0.235	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 BEW DM	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 N		ONE HOUR	✓	655	100.000
B - Woodgate Road		ONE HOUR	✓	62	100.000
C - A29 S		ONE HOUR	✓	677	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	6	649
	B - Woodgate Road	37	0	25
	C - A29 S	632	45	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	7	5
	B - Woodgate Road	1	0	1
	C - A29 S	4	3	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.24	16.72	0.3	C	57	85
C-AB	0.18	4.80	0.6	A	119	179
C-A					502	753
A-B					6	8
A-C					596	893

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	371	0.126	46	0.0	0.1	11.157	B
C-AB	76	19	856	0.089	76	0.0	0.2	4.780	A
C-A	433	108			433				
A-B	5	1			5				
A-C	489	122			489				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	336	0.166	56	0.1	0.2	12.946	B
C-AB	109	27	906	0.120	109	0.2	0.3	4.679	A
C-A	500	125			500				
A-B	5	1			5				
A-C	583	146			583				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	286	0.239	68	0.2	0.3	16.642	C
C-AB	172	43	980	0.176	171	0.3	0.6	4.623	A
C-A	573	143			573				
A-B	7	2			7				
A-C	715	179			715				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	68	17	286	0.239	68	0.3	0.3	16.721	C
C-AB	173	43	981	0.176	173	0.6	0.6	4.637	A
C-A	573	143			573				
A-B	7	2			7				
A-C	715	179			715				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	336	0.166	56	0.3	0.2	13.017	B
C-AB	110	27	907	0.121	111	0.6	0.3	4.699	A
C-A	499	125			499				
A-B	5	1			5				
A-C	583	146			583				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	47	12	371	0.126	47	0.2	0.1	11.217	B
C-AB	77	19	856	0.090	77	0.3	0.2	4.798	A
C-A	433	108			433				
A-B	5	1			5				
A-C	489	122			489				

2024 BEW DM, 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	A29 Woodgate Road Junction	T-Junction	Two-way		0.46	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	57	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 BEW DM	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 N		ONE HOUR	✓	686	100.000
B - Woodgate Road		ONE HOUR	✓	32	100.000
C - A29 S		ONE HOUR	✓	592	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	19	667
	B - Woodgate Road	14	0	18
	C - A29 S	576	16	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	1	2
	B - Woodgate Road	9	0	1
	C - A29 S	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.11	12.82	0.1	B	29	44
C-AB	0.06	4.58	0.1	A	39	59
C-A					504	756
A-B					18	26
A-C					612	918

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	24	6	407	0.059	24	0.0	0.1	9.795	A
C-AB	26	6	821	0.031	25	0.0	0.0	4.571	A
C-A	420	105			420				
A-B	14	4			14				
A-C	502	126			502				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	375	0.077	29	0.1	0.1	10.856	B
C-AB	36	9	865	0.042	36	0.0	0.1	4.391	A
C-A	496	124			496				
A-B	17	4			17				
A-C	600	150			600				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	328	0.107	35	0.1	0.1	12.809	B
C-AB	56	14	929	0.060	56	0.1	0.1	4.176	A
C-A	596	149			596				
A-B	21	5			21				
A-C	734	184			734				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	35	9	328	0.107	35	0.1	0.1	12.822	B
C-AB	56	14	929	0.060	56	0.1	0.1	4.181	A
C-A	596	149			596				
A-B	21	5			21				
A-C	734	184			734				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	29	7	375	0.077	29	0.1	0.1	10.870	B
C-AB	36	9	865	0.042	36	0.1	0.1	4.402	A
C-A	496	124			496				
A-B	17	4			17				
A-C	600	150			600				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	24	6	407	0.059	24	0.1	0.1	9.812	A
C-AB	26	6	821	0.031	26	0.1	0.0	4.578	A
C-A	420	105			420				
A-B	14	4			14				
A-C	502	126			502				

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896
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Filename: A29 Woodgate Road Junction 2024 BEW DS.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Picady
Report generation date: 13/10/2021 10:23:42

»2024 BEW DS, AM
»2024 BEW DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
	2024 BEW DS							
Stream B-AC	1.0	28.16	0.51	6 %	0.3	17.37	0.24	31 %
Stream C-AB	0.0	7.73	0.04	[Stream B-AC]	0.1	8.03	0.05	[Stream B-AC]

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	A29 Woodgate Road Junction
Location	
Site number	
Date	21/12/2020
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	20-061
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2024 BEW DS	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 BEW DS	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2024 BEW DS, 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	A29 Woodgate Road Junction	T-Junction	Two-way		2.46	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	6	Stream B-AC

Arms

Arms

Arm	Name	Description	Arm type
A	A29 N		Major
B	Woodgate Road		Minor
C	A29 S		Major

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)
C - A29 S	6.00		✓	3.00	100.0	✓	5.00

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 - Woodgate Road	One lane	3.04	19	17

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	494	0.090	0.227	0.143	0.325
1	B-C	637	0.098	0.247	-	-
1	C-B	687	0.266	0.266	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 BEW DS	AM	ONE HOUR	07:45	09:15	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 (%)
A - A29 N		ONE HOUR	✓	665	100.000
B - Woodgate Road		ONE HOUR	✓	120	100.000
C - A29 S		ONE HOUR	✓	646	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	19	646
	B - Woodgate Road	88	0	32
	C - A29 S	627	19	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	2	5
	B - Woodgate Road	0	0	1
	C - A29 S	4	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.51	28.16	1.0	D	110	165
C-AB	0.04	7.73	0.0	A	18	27
C-A					575	863
A-B					18	27
A-C					593	889

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	347	0.261	89	0.0	0.3	13.939	B
C-AB	15	4	554	0.026	14	0.0	0.0	6.742	A
C-A	472	118			472				
A-B	15	4			15				
A-C	486	122			486				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	27	311	0.347	107	0.3	0.5	17.681	C
C-AB	17	4	528	0.033	17	0.0	0.0	7.124	A
C-A	564	141			564				
A-B	17	4			17				
A-C	581	145			581				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	260	0.508	130	0.5	1.0	27.450	D
C-AB	21	5	492	0.043	21	0.0	0.0	7.726	A
C-A	690	173			690				
A-B	21	5			21				
A-C	711	178			711				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	132	33	260	0.508	132	1.0	1.0	28.156	D
C-AB	21	5	492	0.043	21	0.0	0.0	7.726	A
C-A	690	173			690				
A-B	21	5			21				
A-C	711	178			711				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	108	27	311	0.347	110	1.0	0.5	18.124	C
C-AB	17	4	528	0.033	17	0.0	0.0	7.125	A
C-A	564	141			564				
A-B	17	4			17				
A-C	581	145			581				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	90	23	347	0.261	91	0.5	0.4	14.170	B
C-AB	15	4	554	0.026	15	0.0	0.0	6.748	A
C-A	472	118			472				
A-B	15	4			15				
A-C	486	122			486				

2024 BEW DS, 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	A29 Woodgate Road Junction	T-Junction	Two-way		0.90	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	31	Stream B-AC

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2024 BEW DS	PM	ONE HOUR	16:45	18:15	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 (%)
A - A29 N		ONE HOUR	✓	727	100.000
B - Woodgate Road		ONE HOUR	✓	60	100.000
C - A29 S		ONE HOUR	✓	570	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	67	660
	B - Woodgate Road	38	0	22
	C - A29 S	547	23	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - A29 N	B - Woodgate Road	C - A29 S
From	A - A29 N	0	0	2
	B - Woodgate Road	3	0	1
	C - A29 S	2	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.24	17.37	0.3	C	55	83
C-AB	0.05	8.03	0.1	A	21	32
C-A					502	753
A-B					61	92
A-C					606	908

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	11	363	0.124	45	0.0	0.1	11.522	B
C-AB	17	4	541	0.032	17	0.0	0.0	6.867	A
C-A	412	103			412				
A-B	50	13			50				
A-C	497	124			497				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	13	328	0.164	54	0.1	0.2	13.405	B
C-AB	21	5	513	0.040	21	0.0	0.0	7.312	A
C-A	492	123			492				
A-B	60	15			60				
A-C	593	148			593				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	17	278	0.238	66	0.2	0.3	17.295	C
C-AB	25	6	474	0.053	25	0.0	0.1	8.024	A
C-A	602	151			602				
A-B	74	18			74				
A-C	727	182			727				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	66	17	278	0.238	66	0.3	0.3	17.368	C
C-AB	25	6	474	0.053	25	0.1	0.1	8.025	A
C-A	602	151			602				
A-B	74	18			74				
A-C	727	182			727				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	54	13	328	0.164	54	0.3	0.2	13.473	B
C-AB	21	5	513	0.040	21	0.1	0.0	7.313	A
C-A	492	123			492				
A-B	60	15			60				
A-C	593	148			593				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	45	11	363	0.124	45	0.2	0.1	11.585	B
C-AB	17	4	541	0.032	17	0.0	0.0	6.874	A
C-A	412	103			412				
A-B	50	13			50				
A-C	497	124			497				

Junctions 9

ARCADY 9 - Roundabout Module

Version: 9.5.0.6896
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Filename: War Memorial Roundabout - 2024.j9
Path: P:\Shared\Projects\20-061 Land East of Woodgate Road\Trans\Arcady
Report generation date: 13/10/2021 09:31:28

»2038 Do Minimum, AM
»2038 Do Minimum, PM
»2038 With Development, AM
»2038 With Development, PM
»2024 BEW DM, AM
»2024 BEW DM, PM
»2024 BEW DS, AM
»2024 BEW DS, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity	Queue (PCU)	Delay (s)	RFC	Network Residual Capacity
2038 Do Minimum								
1 - Barnham Rd	0.8	4.41	0.44	95 % [1 - Barnham Rd]	0.2	3.14	0.19	47 % [3 - Fontwell Ave]
2 - Nyton Rd	0.3	2.49	0.22		0.4	2.65	0.30	
3 - Fontwell Ave	0.5	7.98	0.33		1.0	12.51	0.49	
2038 With Development								
1 - Barnham Rd	0.8	4.53	0.46	90 % [1 - Barnham Rd]	0.2	3.12	0.18	45 % [3 - Fontwell Ave]
2 - Nyton Rd	0.3	2.50	0.23		0.4	2.64	0.29	
3 - Fontwell Ave	0.5	7.98	0.33		1.0	12.66	0.49	
2024 BEW DM								
1 - Barnham Rd	1.1	5.91	0.51	-1 % [3 - Fontwell Ave]	0.6	4.80	0.39	-20 % [3 - Fontwell Ave]
2 - Nyton Rd	1.1	3.96	0.52		0.9	3.47	0.46	
3 - Fontwell Ave	5.0	37.01	0.85		37.3	199.48	1.09	
2024 BEW DS								
1 - Barnham Rd	1.1	5.91	0.51	-1 % [3 - Fontwell Ave]	0.6	4.69	0.38	-22 % [3 - Fontwell Ave]
2 - Nyton Rd	1.1	3.98	0.52		0.9	3.47	0.46	
3 - Fontwell Ave	5.2	38.04	0.85		50.0	265.75	1.15	

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	War Memorial Roundabout
Location	
Site number	
Date	30/03/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	20-061
Enumerator	CA-PC06\PLimbu
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
5.75			✓	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 segment length (min)	Run automatically
D1	2038 Do Minimum	AM	ONE HOUR	07:45	09:15	15	✓
D2	2038 Do Minimum	PM	ONE HOUR	16:45	18:15	15	✓
D3	2038 With Development	AM	ONE HOUR	07:45	09:15	15	✓
D4	2038 With Development	PM	ONE HOUR	16:45	18:15	15	✓
D5	2024 BEW DM	AM	ONE HOUR	07:45	09:15	15	✓
D6	2024 BEW DM	PM	ONE HOUR	16:45	18:15	15	✓
D7	2024 BEW DS	AM	ONE HOUR	07:45	09:15	15	✓
D8	2024 BEW DS	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

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

2038 Do Minimum, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	4.39	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	95	1 - Barnham Rd

Arms

Arms

Arm	Name	Description
1	Barnham Rd	
2	Nyton Rd	
3	Fontwell Ave	

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)	Exit only
1 - Barnham Rd	3.37	5.30	18.7	331.8	25.0	15.0	
2 - Nyton Rd	4.17	6.48	30.0	133.4	25.0	10.0	
3 - Fontwell Ave	3.23	3.75	0.5	6.3	25.0	75.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Barnham Rd	0.673	1604
2 - Nyton Rd	0.764	2028
3 - Fontwell Ave	0.384	747

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	2038 Do Minimum	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	596	100.000
2 - Nyton Rd		ONE HOUR	✓	392	100.000
3 - Fontwell Ave		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	493	103
	2 - Nyton Rd	133	0	259
	3 - Fontwell Ave	43	163	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	1	3
	2 - Nyton Rd	5	0	4
	3 - Fontwell Ave	2	3	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)
1 - Barnham Rd	0.44	4.41	0.8	A	547	820
2 - Nyton Rd	0.22	2.49	0.3	A	360	540
3 - Fontwell Ave	0.33	7.98	0.5	A	189	284

Main Results for each time segment

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
1 - Barnham Rd	449	112	122	1522	0.295	447	132	0.0	0.4	3.394	A
2 - Nyton Rd	295	74	77	1969	0.150	294	492	0.0	0.2	2.242	A
3 - Fontwell Ave	155	39	100	709	0.219	154	272	0.0	0.3	6.658	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
1 - Barnham Rd	536	134	146	1506	0.356	535	158	0.4	0.6	3.757	A
2 - Nyton Rd	352	88	93	1957	0.180	352	589	0.2	0.2	2.340	A
3 - Fontwell Ave	185	46	120	701	0.264	185	325	0.3	0.4	7.163	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
1 - Barnham Rd	656	164	179	1484	0.442	655	194	0.6	0.8	4.398	A
2 - Nyton Rd	432	108	113	1941	0.222	431	721	0.2	0.3	2.487	A
3 - Fontwell Ave	227	57	146	691	0.328	226	398	0.4	0.5	7.958	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
1 - Barnham Rd	656	164	179	1483	0.442	656	194	0.8	0.8	4.410	A
2 - Nyton Rd	432	108	113	1941	0.222	432	722	0.3	0.3	2.488	A
3 - Fontwell Ave	227	57	146	691	0.328	227	399	0.5	0.5	7.975	A

08:45 - 09:00

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
1 - Barnham Rd	536	134	147	1505	0.356	537	158	0.8	0.6	3.772	A
2 - Nyton Rd	352	88	93	1957	0.180	353	591	0.3	0.2	2.343	A
3 - Fontwell Ave	185	46	120	701	0.264	186	326	0.5	0.4	7.186	A

09:00 - 09:15

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
1 - Barnham Rd	449	112	123	1521	0.295	449	133	0.6	0.4	3.406	A
2 - Nyton Rd	295	74	78	1968	0.150	295	495	0.2	0.2	2.245	A
3 - Fontwell Ave	155	39	100	709	0.219	155	273	0.4	0.3	6.696	A

2038 Do Minimum, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	5.29	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	47	3 - Fontwell Ave

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	2038 Do Minimum	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	246	100.000
2 - Nyton Rd		ONE HOUR	✓	527	100.000
3 - Fontwell Ave		ONE HOUR	✓	266	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	163	83
	2 - Nyton Rd	341	0	186
	3 - Fontwell Ave	62	204	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	1	0	2
	3 - Fontwell Ave	1	10	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)
1 - Barnham Rd	0.19	3.14	0.2	A	226	339
2 - Nyton Rd	0.30	2.65	0.4	A	484	725
3 - Fontwell Ave	0.49	12.51	1.0	B	244	366

Main Results for each time segment

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
1 - Barnham Rd	185	46	152	1502	0.123	185	302	0.0	0.1	2.813	A
2 - Nyton Rd	397	99	62	1980	0.200	396	274	0.0	0.3	2.302	A
3 - Fontwell Ave	200	50	256	649	0.309	198	202	0.0	0.5	8.580	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
1 - Barnham Rd	221	55	183	1481	0.149	221	362	0.1	0.2	2.942	A
2 - Nyton Rd	474	118	75	1971	0.240	473	329	0.3	0.3	2.437	A
3 - Fontwell Ave	239	60	306	629	0.380	238	242	0.5	0.6	9.905	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
1 - Barnham Rd	271	68	224	1454	0.186	271	443	0.2	0.2	3.134	A
2 - Nyton Rd	580	145	91	1958	0.296	580	403	0.3	0.4	2.648	A
3 - Fontwell Ave	293	73	375	603	0.486	291	296	0.6	1.0	12.400	B

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
1 - Barnham Rd	271	68	225	1453	0.186	271	444	0.2	0.2	3.136	A
2 - Nyton Rd	580	145	91	1958	0.296	580	404	0.4	0.4	2.648	A
3 - Fontwell Ave	293	73	375	603	0.486	293	296	1.0	1.0	12.507	B

17:45 - 18:00

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
1 - Barnham Rd	221	55	184	1480	0.149	221	363	0.2	0.2	2.948	A
2 - Nyton Rd	474	118	75	1971	0.240	474	331	0.4	0.3	2.438	A
3 - Fontwell Ave	239	60	307	629	0.380	240	242	1.0	0.7	10.015	B

18:00 - 18:15

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
1 - Barnham Rd	185	46	154	1500	0.123	185	304	0.2	0.1	2.821	A
2 - Nyton Rd	397	99	63	1980	0.200	397	277	0.3	0.3	2.306	A
3 - Fontwell Ave	200	50	257	648	0.309	201	203	0.7	0.5	8.687	A

2038 With Development, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	4.45	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	90	1 - Barnham Rd

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	2038 With Development	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	616	100.000
2 - Nyton Rd		ONE HOUR	✓	398	100.000
3 - Fontwell Ave		ONE HOUR	✓	206	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	509	107
	2 - Nyton Rd	134	0	264
	3 - Fontwell Ave	44	162	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	1	3
	2 - Nyton Rd	5	0	4
	3 - Fontwell Ave	2	3	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)
1 - Barnham Rd	0.46	4.53	0.8	A	565	848
2 - Nyton Rd	0.23	2.50	0.3	A	365	548
3 - Fontwell Ave	0.33	7.98	0.5	A	189	284

Main Results for each time segment

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
1 - Barnham Rd	464	116	121	1523	0.305	462	134	0.0	0.4	3.434	A
2 - Nyton Rd	300	75	80	1966	0.152	299	503	0.0	0.2	2.251	A
3 - Fontwell Ave	155	39	101	708	0.219	154	279	0.0	0.3	6.661	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
1 - Barnham Rd	554	138	145	1506	0.368	553	160	0.4	0.6	3.826	A
2 - Nyton Rd	358	89	96	1954	0.183	358	602	0.2	0.2	2.352	A
3 - Fontwell Ave	185	46	120	701	0.264	185	333	0.3	0.4	7.167	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
1 - Barnham Rd	678	170	178	1484	0.457	677	196	0.6	0.8	4.515	A
2 - Nyton Rd	438	110	118	1938	0.226	438	738	0.2	0.3	2.504	A
3 - Fontwell Ave	227	57	147	690	0.329	226	408	0.4	0.5	7.964	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
1 - Barnham Rd	678	170	178	1484	0.457	678	196	0.8	0.8	4.527	A
2 - Nyton Rd	438	110	118	1938	0.226	438	739	0.3	0.3	2.504	A
3 - Fontwell Ave	227	57	148	690	0.329	227	408	0.5	0.5	7.982	A

08:45 - 09:00

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
1 - Barnham Rd	554	138	146	1506	0.368	555	160	0.8	0.6	3.840	A
2 - Nyton Rd	358	89	96	1954	0.183	358	604	0.3	0.2	2.353	A
3 - Fontwell Ave	185	46	121	701	0.264	186	334	0.5	0.4	7.194	A

09:00 - 09:15

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
1 - Barnham Rd	464	116	122	1522	0.305	464	134	0.6	0.4	3.453	A
2 - Nyton Rd	300	75	81	1966	0.152	300	506	0.2	0.2	2.255	A
3 - Fontwell Ave	155	39	101	708	0.219	155	280	0.4	0.3	6.699	A

2038 With Development, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	5.38	A

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	45	3 - Fontwell Ave

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	2038 With Development	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	238	100.000
2 - Nyton Rd		ONE HOUR	✓	523	100.000
3 - Fontwell Ave		ONE HOUR	✓	271	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	156	82
	2 - Nyton Rd	337	0	186
	3 - Fontwell Ave	63	208	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	1	0	2
	3 - Fontwell Ave	1	10	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)
1 - Barnham Rd	0.18	3.12	0.2	A	218	328
2 - Nyton Rd	0.29	2.64	0.4	A	480	720
3 - Fontwell Ave	0.49	12.66	1.0	B	249	373

Main Results for each time segment

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
1 - Barnham Rd	179	45	155	1500	0.119	179	300	0.0	0.1	2.805	A
2 - Nyton Rd	394	98	62	1981	0.199	393	272	0.0	0.3	2.297	A
3 - Fontwell Ave	204	51	253	650	0.314	202	201	0.0	0.5	8.629	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
1 - Barnham Rd	214	53	186	1479	0.145	214	359	0.1	0.2	2.931	A
2 - Nyton Rd	470	118	74	1971	0.239	470	327	0.3	0.3	2.430	A
3 - Fontwell Ave	244	61	303	631	0.386	243	241	0.5	0.7	9.984	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
1 - Barnham Rd	262	66	228	1451	0.181	262	440	0.2	0.2	3.118	A
2 - Nyton Rd	576	144	90	1959	0.294	575	400	0.3	0.4	2.638	A
3 - Fontwell Ave	298	75	371	605	0.493	297	295	0.7	1.0	12.548	B

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
1 - Barnham Rd	262	66	229	1450	0.181	262	440	0.2	0.2	3.120	A
2 - Nyton Rd	576	144	90	1959	0.294	576	401	0.4	0.4	2.638	A
3 - Fontwell Ave	298	75	371	605	0.494	298	295	1.0	1.0	12.663	B

17:45 - 18:00

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
1 - Barnham Rd	214	53	188	1477	0.145	214	360	0.2	0.2	2.937	A
2 - Nyton Rd	470	118	74	1971	0.239	471	328	0.4	0.3	2.431	A
3 - Fontwell Ave	244	61	303	631	0.386	245	241	1.0	0.7	10.099	B

18:00 - 18:15

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
1 - Barnham Rd	179	45	157	1498	0.120	179	301	0.2	0.1	2.813	A
2 - Nyton Rd	394	98	62	1980	0.199	394	275	0.3	0.3	2.300	A
3 - Fontwell Ave	204	51	254	650	0.314	205	202	0.7	0.5	8.740	A

2024 BEW DM, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	12.43	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	3 - Fontwell Ave

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
D5	2024 BEW DM	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	587	100.000
2 - Nyton Rd		ONE HOUR	✓	915	100.000
3 - Fontwell Ave		ONE HOUR	✓	471	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	498	89
	2 - Nyton Rd	316	0	599
	3 - Fontwell Ave	24	447	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	6	0	3
	3 - Fontwell Ave	4	3	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)
1 - Barnham Rd	0.51	5.91	1.1	A	539	808
2 - Nyton Rd	0.52	3.96	1.1	A	840	1259
3 - Fontwell Ave	0.85	37.01	5.0	E	432	648

Main Results for each time segment

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
1 - Barnham Rd	442	110	332	1381	0.320	440	255	0.0	0.5	3.934	A
2 - Nyton Rd	689	172	67	1977	0.349	687	705	0.0	0.6	2.898	A
3 - Fontwell Ave	355	89	237	656	0.541	350	516	0.0	1.2	11.947	B

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
1 - Barnham Rd	528	132	399	1336	0.395	527	305	0.5	0.7	4.582	A
2 - Nyton Rd	823	206	80	1967	0.418	822	846	0.6	0.7	3.269	A
3 - Fontwell Ave	423	106	284	638	0.664	420	618	1.2	1.9	16.805	C

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
1 - Barnham Rd	646	162	482	1280	0.505	645	373	0.7	1.0	5.825	A
2 - Nyton Rd	1007	252	98	1953	0.516	1006	1029	0.7	1.1	3.949	A
3 - Fontwell Ave	519	130	347	614	0.845	508	756	1.9	4.6	32.197	D

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
1 - Barnham Rd	646	162	491	1274	0.507	646	374	1.0	1.1	5.907	A
2 - Nyton Rd	1007	252	98	1953	0.516	1007	1039	1.1	1.1	3.961	A
3 - Fontwell Ave	519	130	348	613	0.845	517	757	4.6	5.0	37.010	E

08:45 - 09:00

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
1 - Barnham Rd	528	132	413	1326	0.398	529	307	1.1	0.7	4.659	A
2 - Nyton Rd	823	206	80	1966	0.418	824	862	1.1	0.8	3.283	A
3 - Fontwell Ave	423	106	285	638	0.664	435	620	5.0	2.1	19.205	C

09:00 - 09:15

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
1 - Barnham Rd	442	110	340	1375	0.321	443	256	0.7	0.5	3.979	A
2 - Nyton Rd	689	172	67	1976	0.349	690	716	0.8	0.6	2.911	A
3 - Fontwell Ave	355	89	238	656	0.541	358	519	2.1	1.2	12.620	B

2024 BEW DM, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	65.24	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-20	3 - Fontwell Ave

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
D6	2024 BEW DM	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	443	100.000
2 - Nyton Rd		ONE HOUR	✓	827	100.000
3 - Fontwell Ave		ONE HOUR	✓	580	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	366	77
	2 - Nyton Rd	386	0	441
	3 - Fontwell Ave	59	521	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	2	3
	2 - Nyton Rd	1	0	2
	3 - Fontwell Ave	1	3	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)
1 - Barnham Rd	0.39	4.80	0.6	A	407	610
2 - Nyton Rd	0.46	3.47	0.9	A	759	1138
3 - Fontwell Ave	1.09	199.48	37.3	F	532	798

Main Results for each time segment

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
1 - Barnham Rd	334	83	385	1345	0.248	332	333	0.0	0.3	3.626	A
2 - Nyton Rd	623	156	58	1983	0.314	621	659	0.0	0.5	2.679	A
3 - Fontwell Ave	437	109	290	636	0.687	428	389	0.0	2.1	17.199	C

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
1 - Barnham Rd	398	100	459	1295	0.307	398	399	0.3	0.5	4.097	A
2 - Nyton Rd	743	186	69	1975	0.376	743	788	0.5	0.6	2.965	A
3 - Fontwell Ave	521	130	347	614	0.849	511	465	2.1	4.7	32.968	D

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
1 - Barnham Rd	488	122	510	1261	0.387	487	482	0.5	0.6	4.747	A
2 - Nyton Rd	911	228	85	1963	0.464	909	912	0.6	0.9	3.466	A
3 - Fontwell Ave	639	160	425	584	1.093	568	570	4.7	22.4	104.674	F

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
1 - Barnham Rd	488	122	520	1254	0.389	488	484	0.6	0.6	4.800	A
2 - Nyton Rd	911	228	85	1963	0.464	911	923	0.9	0.9	3.472	A
3 - Fontwell Ave	639	160	425	584	1.094	579	570	22.4	37.3	199.484	F

17:45 - 18:00

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
1 - Barnham Rd	398	100	536	1243	0.320	399	408	0.6	0.5	4.359	A
2 - Nyton Rd	743	186	69	1975	0.377	744	866	0.9	0.6	2.975	A
3 - Fontwell Ave	521	130	347	614	0.850	597	466	37.3	18.3	172.453	F

18:00 - 18:15

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
1 - Barnham Rd	334	83	449	1302	0.256	334	342	0.5	0.4	3.802	A
2 - Nyton Rd	623	156	58	1983	0.314	623	725	0.6	0.5	2.690	A
3 - Fontwell Ave	437	109	291	635	0.687	500	390	18.3	2.5	37.991	E

2024 BEW DS, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	12.70	B

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-1	3 - Fontwell Ave

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	2024 BEW DS	AM	ONE HOUR	07:45	09:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	586	100.000
2 - Nyton Rd		ONE HOUR	✓	919	100.000
3 - Fontwell Ave		ONE HOUR	✓	473	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	497	89
	2 - Nyton Rd	318	0	601
	3 - Fontwell Ave	24	449	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	3	3
	2 - Nyton Rd	6	0	3
	3 - Fontwell Ave	4	3	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)
1 - Barnham Rd	0.51	5.91	1.1	A	538	807
2 - Nyton Rd	0.52	3.98	1.1	A	843	1265
3 - Fontwell Ave	0.85	38.04	5.2	E	434	651

Main Results for each time segment

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
1 - Barnham Rd	441	110	334	1380	0.320	439	256	0.0	0.5	3.935	A
2 - Nyton Rd	692	173	67	1977	0.350	690	706	0.0	0.6	2.904	A
3 - Fontwell Ave	356	89	239	655	0.543	351	518	0.0	1.2	12.025	B

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
1 - Barnham Rd	527	132	401	1334	0.395	526	307	0.5	0.7	4.583	A
2 - Nyton Rd	826	207	80	1967	0.420	825	847	0.6	0.7	3.280	A
3 - Fontwell Ave	425	106	286	637	0.667	422	620	1.2	2.0	16.987	C

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
1 - Barnham Rd	645	161	484	1278	0.505	644	375	0.7	1.0	5.823	A
2 - Nyton Rd	1012	253	98	1953	0.518	1010	1030	0.7	1.1	3.968	A
3 - Fontwell Ave	521	130	350	613	0.850	510	759	2.0	4.7	32.882	D

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
1 - Barnham Rd	645	161	493	1273	0.507	645	376	1.0	1.1	5.909	A
2 - Nyton Rd	1012	253	98	1953	0.518	1012	1040	1.1	1.1	3.979	A
3 - Fontwell Ave	521	130	350	613	0.850	519	760	4.7	5.2	38.039	E

08:45 - 09:00

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
1 - Barnham Rd	527	132	415	1325	0.398	528	309	1.1	0.7	4.663	A
2 - Nyton Rd	826	207	80	1966	0.420	828	863	1.1	0.8	3.291	A
3 - Fontwell Ave	425	106	286	637	0.667	437	621	5.2	2.2	19.535	C

09:00 - 09:15

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
1 - Barnham Rd	441	110	342	1374	0.321	442	258	0.7	0.5	3.980	A
2 - Nyton Rd	692	173	67	1976	0.350	693	716	0.8	0.6	2.920	A
3 - Fontwell Ave	356	89	240	655	0.544	360	520	2.2	1.3	12.718	B

2024 BEW DS, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	War Memorial Roundabout	Standard Roundabout		1, 2, 3	86.56	F

Junction Network Options

Driving side	Lighting	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	-22	3 - Fontwell Ave

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	2024 BEW DS	PM	ONE HOUR	16:45	18:15	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 (%)
1 - Barnham Rd		ONE HOUR	✓	439	100.000
2 - Nyton Rd		ONE HOUR	✓	827	100.000
3 - Fontwell Ave		ONE HOUR	✓	584	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	362	77
	2 - Nyton Rd	441	0	386
	3 - Fontwell Ave	61	523	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		1 - Barnham Rd	2 - Nyton Rd	3 - Fontwell Ave
From	1 - Barnham Rd	0	2	3
	2 - Nyton Rd	1	0	2
	3 - Fontwell Ave	1	3	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)
1 - Barnham Rd	0.38	4.69	0.6	A	403	604
2 - Nyton Rd	0.46	3.47	0.9	A	759	1138
3 - Fontwell Ave	1.15	265.75	50.0	F	536	804

Main Results for each time segment

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
1 - Barnham Rd	331	83	385	1345	0.246	329	376	0.0	0.3	3.617	A
2 - Nyton Rd	623	156	58	1983	0.314	621	657	0.0	0.5	2.677	A
3 - Fontwell Ave	440	110	331	620	0.709	430	347	0.0	2.3	18.709	C

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
1 - Barnham Rd	395	99	458	1296	0.305	394	450	0.3	0.4	4.078	A
2 - Nyton Rd	743	186	69	1975	0.376	743	783	0.5	0.6	2.963	A
3 - Fontwell Ave	525	131	396	595	0.882	512	416	2.3	5.7	39.081	E

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
1 - Barnham Rd	483	121	493	1272	0.380	483	542	0.4	0.6	4.654	A
2 - Nyton Rd	911	228	85	1963	0.464	909	891	0.6	0.9	3.464	A
3 - Fontwell Ave	643	161	485	561	1.147	551	509	5.7	28.8	131.677	F

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
1 - Barnham Rd	483	121	500	1268	0.381	483	544	0.6	0.6	4.689	A
2 - Nyton Rd	911	228	85	1963	0.464	911	899	0.9	0.9	3.470	A
3 - Fontwell Ave	643	161	486	561	1.147	558	510	28.8	50.0	265.752	F

17:45 - 18:00

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
1 - Barnham Rd	395	99	522	1253	0.315	395	458	0.6	0.5	4.292	A
2 - Nyton Rd	743	186	69	1975	0.377	744	848	0.9	0.6	2.973	A
3 - Fontwell Ave	525	131	397	595	0.883	583	417	50.0	35.6	265.473	F

18:00 - 18:15

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
1 - Barnham Rd	331	83	510	1261	0.262	331	392	0.5	0.4	3.957	A
2 - Nyton Rd	623	156	58	1983	0.314	623	783	0.6	0.5	2.686	A
3 - Fontwell Ave	440	110	332	619	0.710	570	349	35.6	3.0	107.248	F

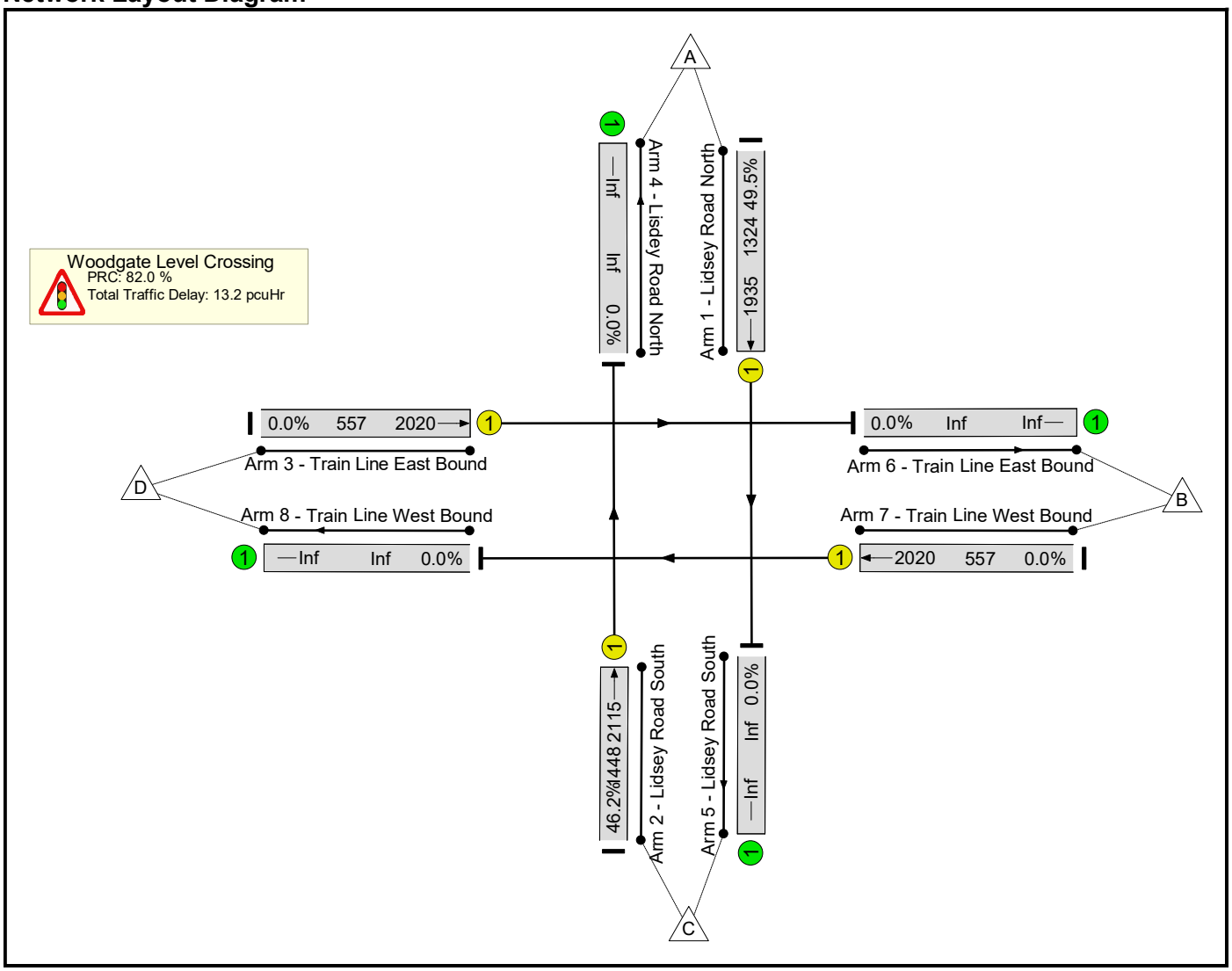
Basic Results Summary

User and Project Details

Project:	**Land East of Woodgate Road**
Title:	**Woodgate Level Crossing**
Location:	
Site Ref(s):	20-061
Additional detail:	
File name:	Woodgate Level Crossing - 2024.lsg3x
Author:	
Company:	C&A
Address:	

Scenario 1: '2024 AM BEW DM' (FG1: '2024 AM BEW DM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**49.5%**	**0**	**0**	**0**	**13.2**	-	-
Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**49.5%**	**0**	**0**	**0**	**13.2**	-	-
1/1	Lidsey Road North Ahead	U	A		1	307	-	655	1935	1324	49.5%	-	-	-	6.7	36.6	39.4
2/1	Lidsey Road South Ahead	U	B		1	307	-	669	2115	1448	46.2%	-	-	-	6.5	35.1	38.9
3/1	Train Line East Bound Ahead	U	C		1	123	-	0	2020	557	0.0%	-	-	-	0.0	0.0	0.0
7/1	Train Line West Bound Ahead	U	D		1	123	-	0	2020	557	0.0%	-	-	-	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 82.0
PRC Over All Lanes (%): 82.0

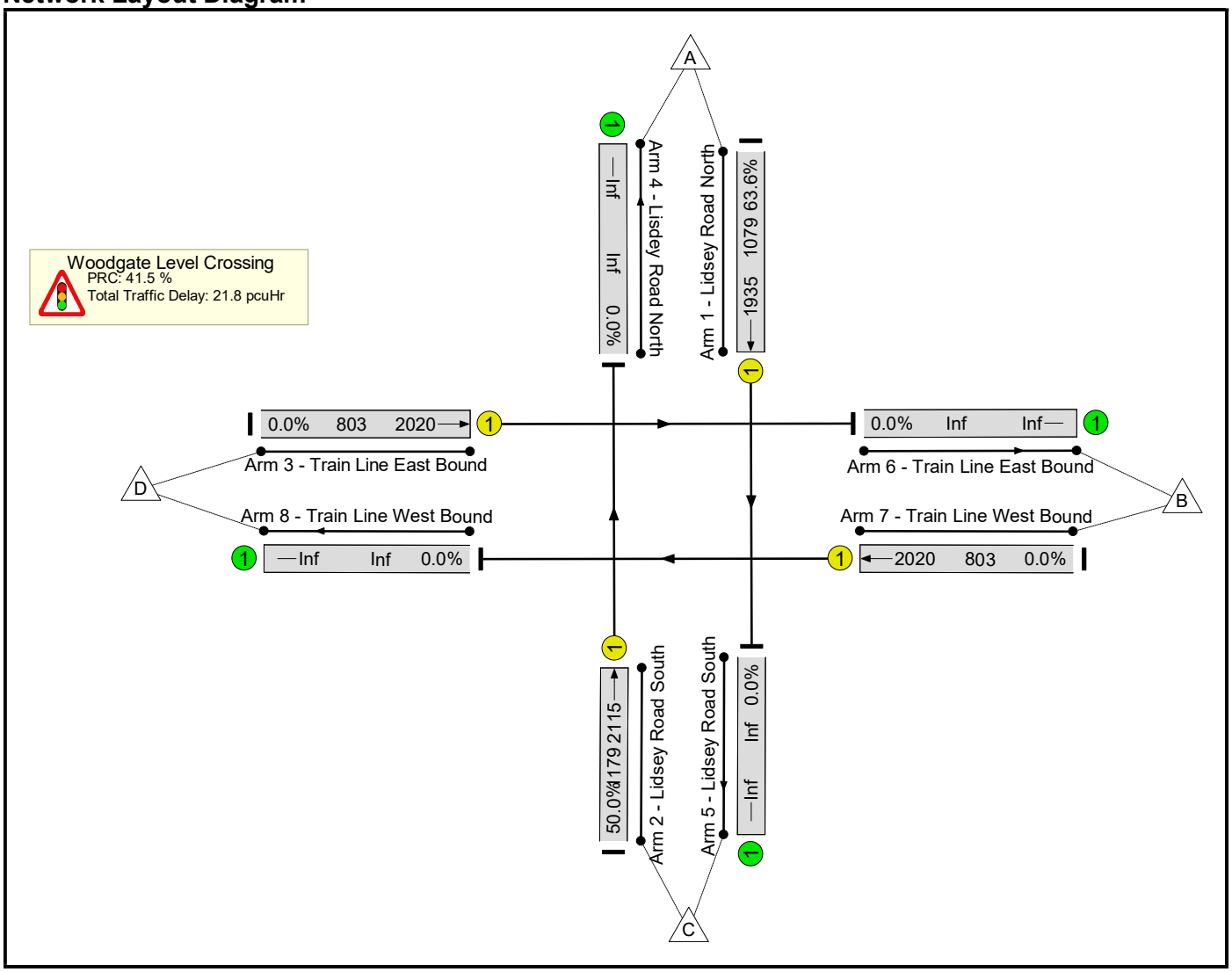
Total Delay for Signalled Lanes (pcuHr): 13.17
Total Delay Over All Lanes(pcuHr): 13.17

Cycle Time (s): 450

Basic Results Summary

Scenario 2: '2024 PM BEW DM' (FG2: '2024 PM BEW DM', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**63.6%**	**0**	**0**	**0**	**21.8**	-	-
Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**63.6%**	**0**	**0**	**0**	**21.8**	-	-
1/1	Lidsey Road North Ahead	U	A		1	222	-	686	1935	1079	63.6%	-	-	-	12.4	65.2	53.1
2/1	Lidsey Road South Ahead	U	B		1	222	-	589	2115	1179	50.0%	-	-	-	9.4	57.3	40.6
3/1	Train Line East Bound Ahead	U	C		1	158	-	0	2020	803	0.0%	-	-	-	0.0	0.0	0.0
7/1	Train Line West Bound Ahead	U	D		1	158	-	0	2020	803	0.0%	-	-	-	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 41.5
PRC Over All Lanes (%): 41.5

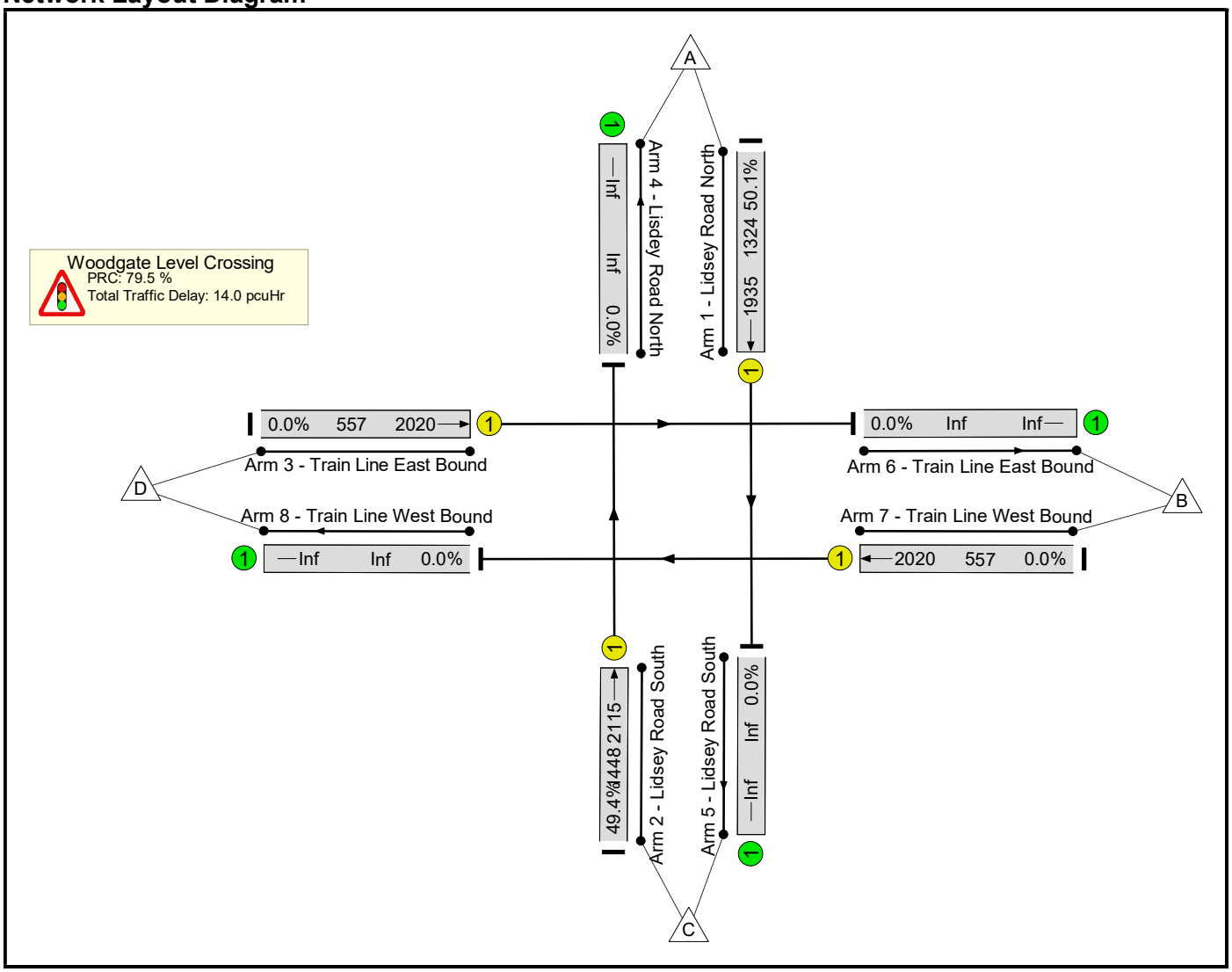
Total Delay for Signalled Lanes (pcuHr): 21.81
Total Delay Over All Lanes(pcuHr): 21.81

Cycle Time (s): 400

Basic Results Summary

Scenario 3: '2024 AM BEW DS' (FG3: '2024 AM BEW DS', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**50.1%**	**0**	**0**	**0**	**14.0**	-	-
Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**50.1%**	**0**	**0**	**0**	**14.0**	-	-
1/1	Lidsey Road North Ahead	U	A		1	307	-	664	1935	1324	50.1%	-	-	-	6.8	36.8	40.3
2/1	Lidsey Road South Ahead	U	B		1	307	-	715	2115	1448	49.4%	-	-	-	7.2	36.3	43.0
3/1	Train Line East Bound Ahead	U	C		1	123	-	0	2020	557	0.0%	-	-	-	0.0	0.0	0.0
7/1	Train Line West Bound Ahead	U	D		1	123	-	0	2020	557	0.0%	-	-	-	0.0	0.0	0.0

C1

PRC for Signalled Lanes (%): 79.5
PRC Over All Lanes (%): 79.5

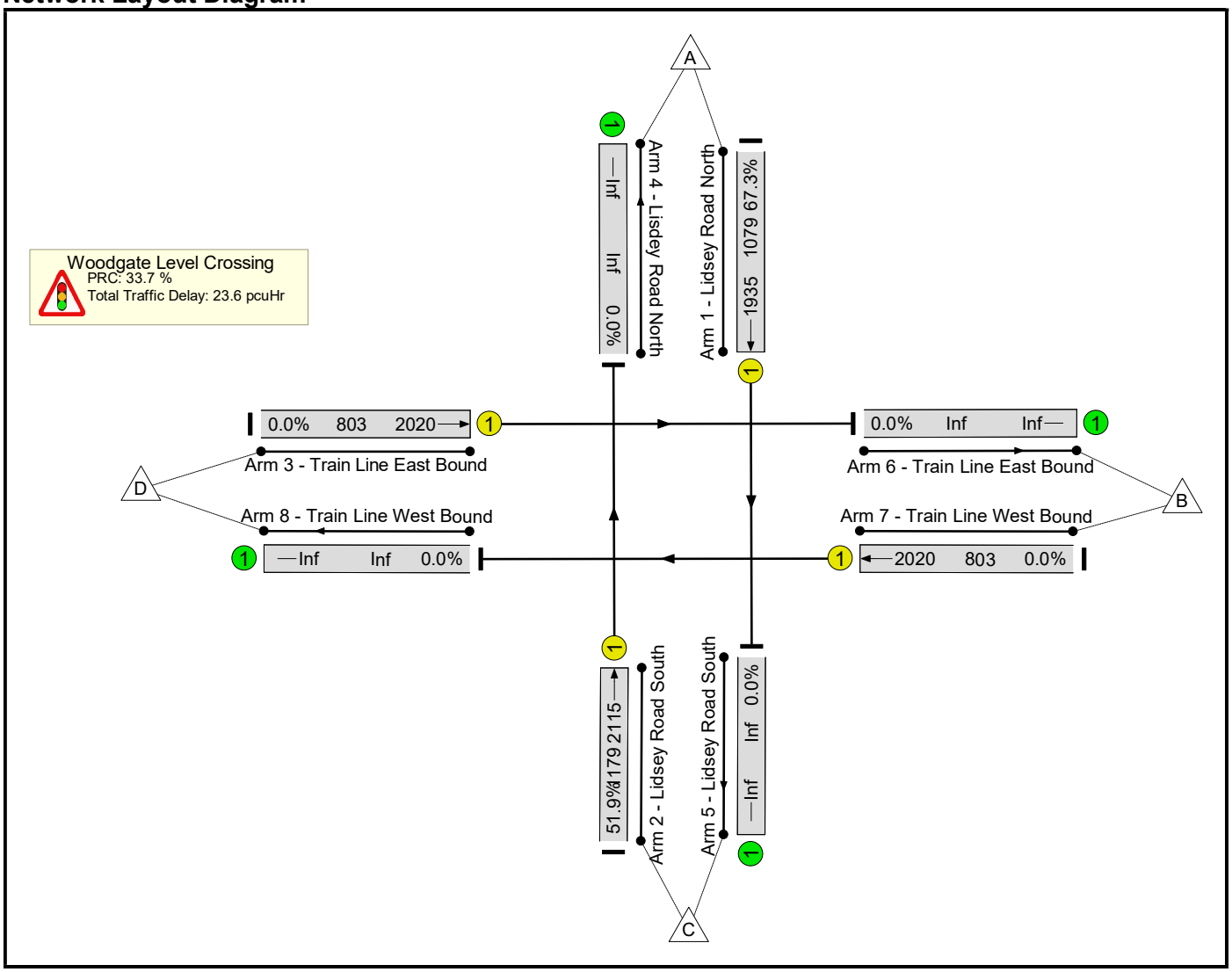
Total Delay for Signalled Lanes (pcuHr): 14.00
Total Delay Over All Lanes(pcuHr): 14.00

Cycle Time (s): 450

Basic Results Summary

Scenario 4: '2024 PM BEW DS' (FG4: '2024 PM BEW DS', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**67.3%**	**0**	**0**	**0**	**23.6**	-	-
Woodgate Level Crossing	-	-	-		-	-	-	-	-	-	**67.3%**	**0**	**0**	**0**	**23.6**	-	-
1/1	Lidsey Road North Ahead	U	A		1	222	-	726	1935	1079	67.3%	-	-	-	13.7	67.8	58.1
2/1	Lidsey Road South Ahead	U	B		1	222	-	612	2115	1179	51.9%	-	-	-	9.9	58.3	42.9
3/1	Train Line East Bound Ahead	U	C		1	158	-	0	2020	803	0.0%	-	-	-	0.0	0.0	0.0
7/1	Train Line West Bound Ahead	U	D		1	158	-	0	2020	803	0.0%	-	-	-	0.0	0.0	0.0

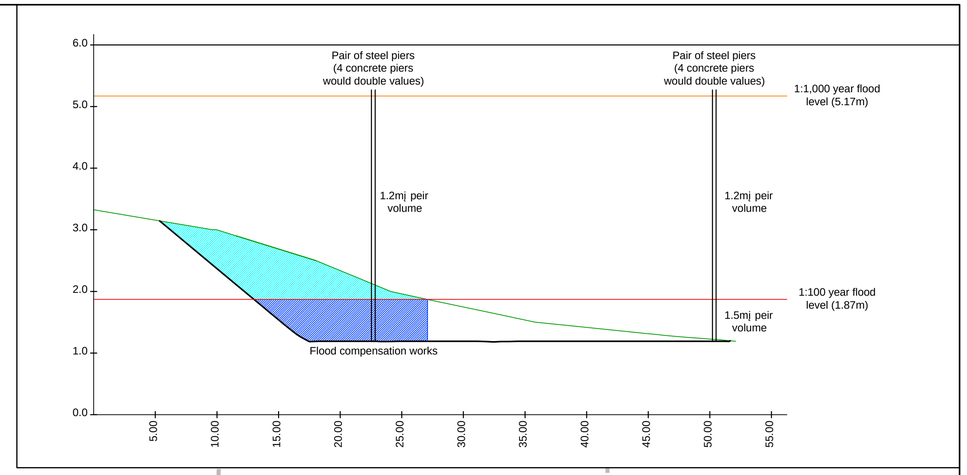
C1

PRC for Signalled Lanes (%): 33.7
PRC Over All Lanes (%): 33.7

Total Delay for Signalled Lanes (pcuHr): 23.57
Total Delay Over All Lanes(pcuHr): 23.57

Cycle Time (s): 400

Appendix K Cycle/Foot Bridge Drawing 20-061-027 Rev A



NOTES

Bridge and approaches are yet to be designed fully, this drawing is for discussion purposes only

The following amount of flood compensation would be required due to the piers (Steelwork option lower value whilst concrete option is higher value):

3.09 to 6.17mj flood zone 2 (west)

0.15 to 0.31mj flood zone 3 (west)

~3.9 to ~7.8mj flood zone 2 (east)

~0.25 to ~0.5mj flood zone 3 (east)

Volumes east of the river are approximate and are for others to compensate for

Volumes assume no impact on existing ground levels from construction methods

Rev	Amendments	Drn	Chk	App	Date
A	Updated following changes to bridge options	GW	GAC	GAC	July 21

Charles & Associates

Issued by

Landmark House
Station Road
Hook
Hampshire
RG27 9HA
01256 638420

Park House
Park Farm
East Malling Trust Estate
Bradbourne Lane
Aylesford
Kent
ME20 6SN
01732 448120

enquiries@c-a-uk.com
www.c-a-uk.com

Job Title

Land East of Woodgate Lane

Drawing Title

Footbridge

Client

Pye Homes

Scale	Date	Designed
1:250 @ A1	June 21	GPW
Drawn	Checked	Approved
GPW	GAC	GAC
Job No	Drawing No	Rev
20-061	20-061-027	A