

A46 Newark Bypass

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7.45 Additional Junction Assessment for Nottinghamshire County Council

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**The Infrastructure Planning
(Applications: Prescribed Forms
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A46 Newark Bypass

Development Consent Order 202[x]

**7.45 Additional Junction Assessment for Nottinghamshire
County Council**

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Rev 1	November 2024	Deadline 3 Submission
Rev 2	December 2024	Deadline 4 Submission

1. Overview

Nottinghamshire County Council (NCC) has requested additional peak hour junction modelling of the following roundabout junctions:

- B6326 Great North Road / B6166 Bar Gate
- B6326 Great North Road / Ossington Way (Waitrose junction)
- A17 / Stapleford Lane / Beckingham Road
- A17 / Long Hollow Way / Godfrey Drive

NCC has noted that the junctions are anticipated to experience significant increases in traffic volumes with the Scheme and are therefore keen to understand whether capacity will be impacted.

The locations of the two roundabouts located on the B6326 are illustrated in Figure 1, and the two roundabouts modelled along the A17 are illustrated in Figure 2.

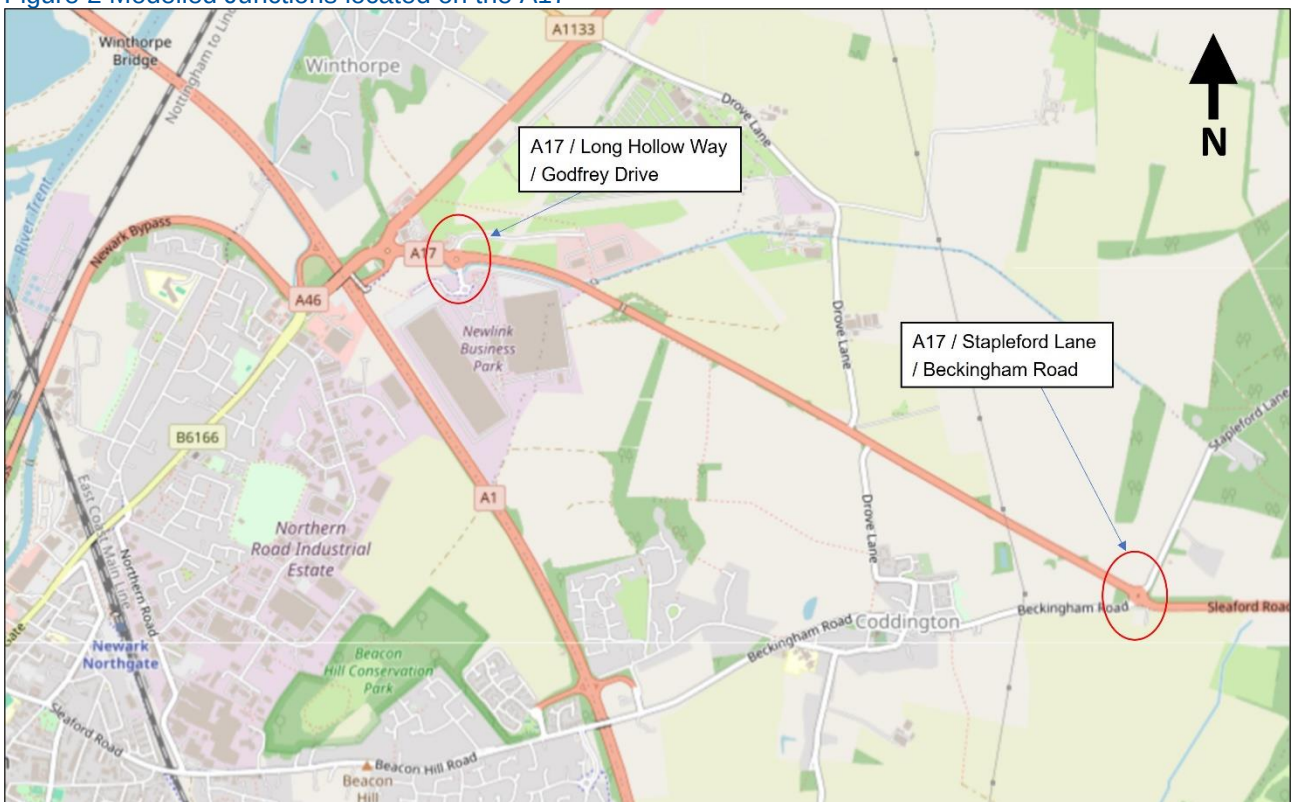
The results of the ARCADY assessment for these roundabouts are added in the Appendix A of this document.

Figure 1 Modelled Junctions located on the B6326 Great North Road



Source: [Openstreetmaps.org](https://www.openstreetmap.org)

Figure 2 Modelled Junctions located on the A17



Source: [Openstreetmaps.org](https://www.openstreetmap.org)

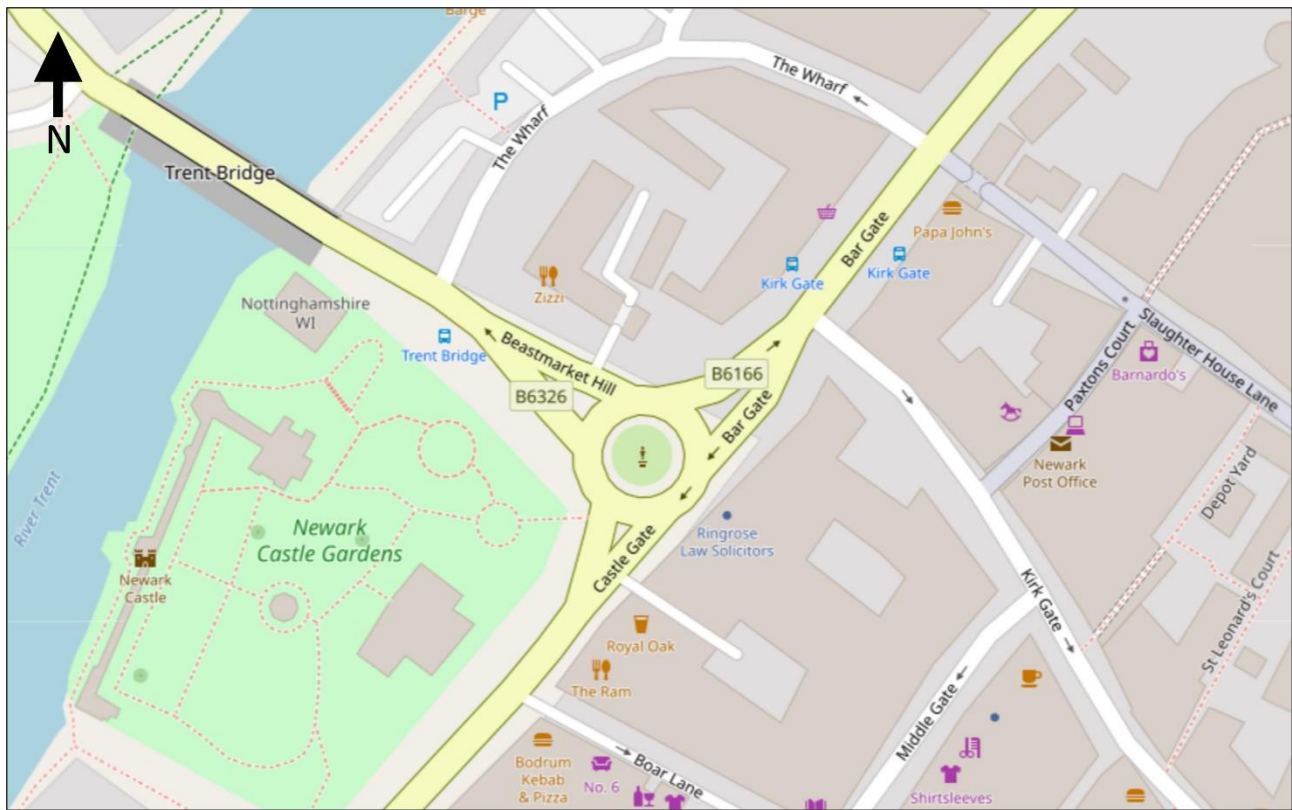
Each of the junctions has subsequently been assessed in the standalone junction modelling software ARCADY using forecast traffic flows from the A46 Newark Bypass strategic traffic model (SATURN) Core scenario. Details of the assessment and the results from the junction modelling are presented within this technical note for the 2028 and 2043 forecast years.

2. Junction Model Details

2.1 B6326 Great North Road / Bar Gate Roundabout

The B6326 Great North Road / Bar Gate Roundabout is a three-arm roundabout comprising of Bar Gate, B6166 Castle Gate and B6326 Great North Road. The junction is illustrated in Figure 3.

Figure 3 B6326 Great North Road / Bar Gate Roundabout



Source: [Openstreetmaps.org](https://www.openstreetmap.org)

This junction is modelled within ARCADY, with the measurement parameters obtained from aerial imagery.

Bar Gate is a single-carriageway with a 30mph speed limit. It has a single lane, which widens to provide two lanes on the approach to the junction. It has a zebra crossing with a refuge located approximately 8 metres to the north of the junction. B6166 Castle Gate is also a single carriageway subject to a 30mph speed limit, it has a single lane which widens to provide two lanes on the approach to the junction. It also has a zebra crossing with a refuge located approximately 25 metres south of the junction. B6326 Great North Road is a single-carriageway road subject to a 30mph speed limit. It has a single lane, which widens to provide two lanes on the approach to the junction. A zebra crossing with a refuge is located approximately 7 metres to the west of the junction on this arm.

The B6326 Great North Road / Bar Gate roundabout is represented within the A46 Newark Bypass strategic traffic model. Flows for the ARCADY assessment are therefore taken directly from SATURN for the Do Minimum and Do Something scenario.

2.2 B6326 Great North Road / Ossington Way Roundabout

The B6326 Great North Road / Ossington Way Roundabout is a three-arm mini-roundabout comprising of B6326 Great North Road (east and west), as well as Ossington Way. The junction is illustrated in Figure 4.

Figure 4 B6326 Great North Road / Ossington Way Roundabout



Source: [Openstreetmaps.org](https://www.openstreetmap.org)

This junction is modelled within ARCADY, with the measurement parameters obtained from aerial imagery.

B6326 Great North Road (east) is a single-carriageway with a 30mph speed limit. It has a single lane, which widens on the approach to the junction. It also has a kerbed central island at the junction. Ossington Way is a single-carriageway with a 30mph speed limit; it has a single lane, which widens to provide two lanes on the approach to the junction. It also has a kerbed central island at the junction. B6326 Great North Road (west) is a single-carriageway which widens on the approach to the junction with a 30mph speed limit. It also has a kerbed central island at the junction.

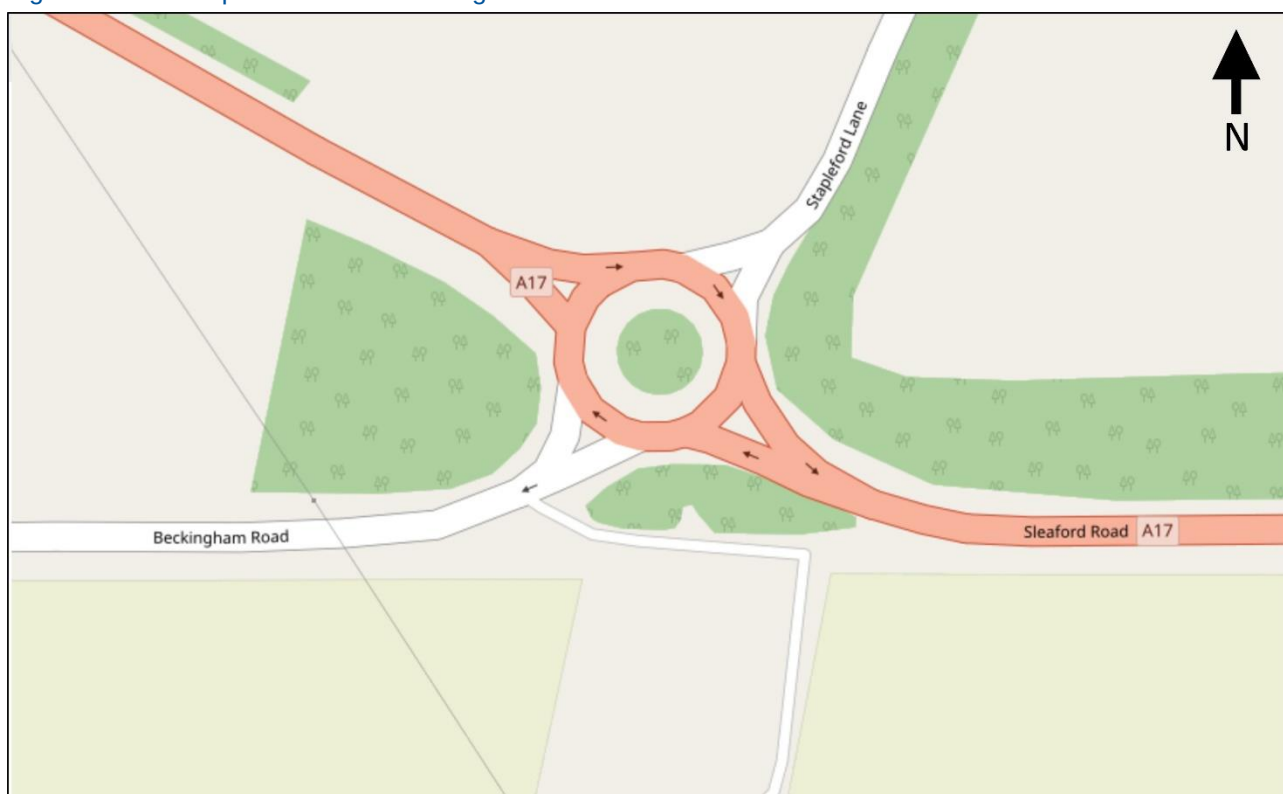
While the A46 Newark Bypass strategic traffic model includes the B6326 Great North Road, it does not explicitly model Ossington Way or the Ossington Way roundabout. For the assessment of this junction, it is, therefore, not possible to take all flows directly from SATURN.

Turning flows at this location are therefore informed by a manual classified count (MCC) (Wednesday, July 14, 2021), which is used in tandem with available forecast traffic flows from SATURN.

2.3 A17 / Stapleford Lane / Beckingham Road Roundabout

The A17 / Stapleford Lane / Beckingham Road Roundabout is a four-arm roundabout comprising of Stapleford Lane, A17 Beckingham Road, Beckingham Road and A17 west. The junction is illustrated in Figure 5.

Figure 5 A17 / Stapleford Lane / Beckingham Road Roundabout



Source: [Openstreetmaps.org](https://www.openstreetmap.org)

This junction is modelled within ARCADY, with the measurement parameters obtained from aerial imagery.

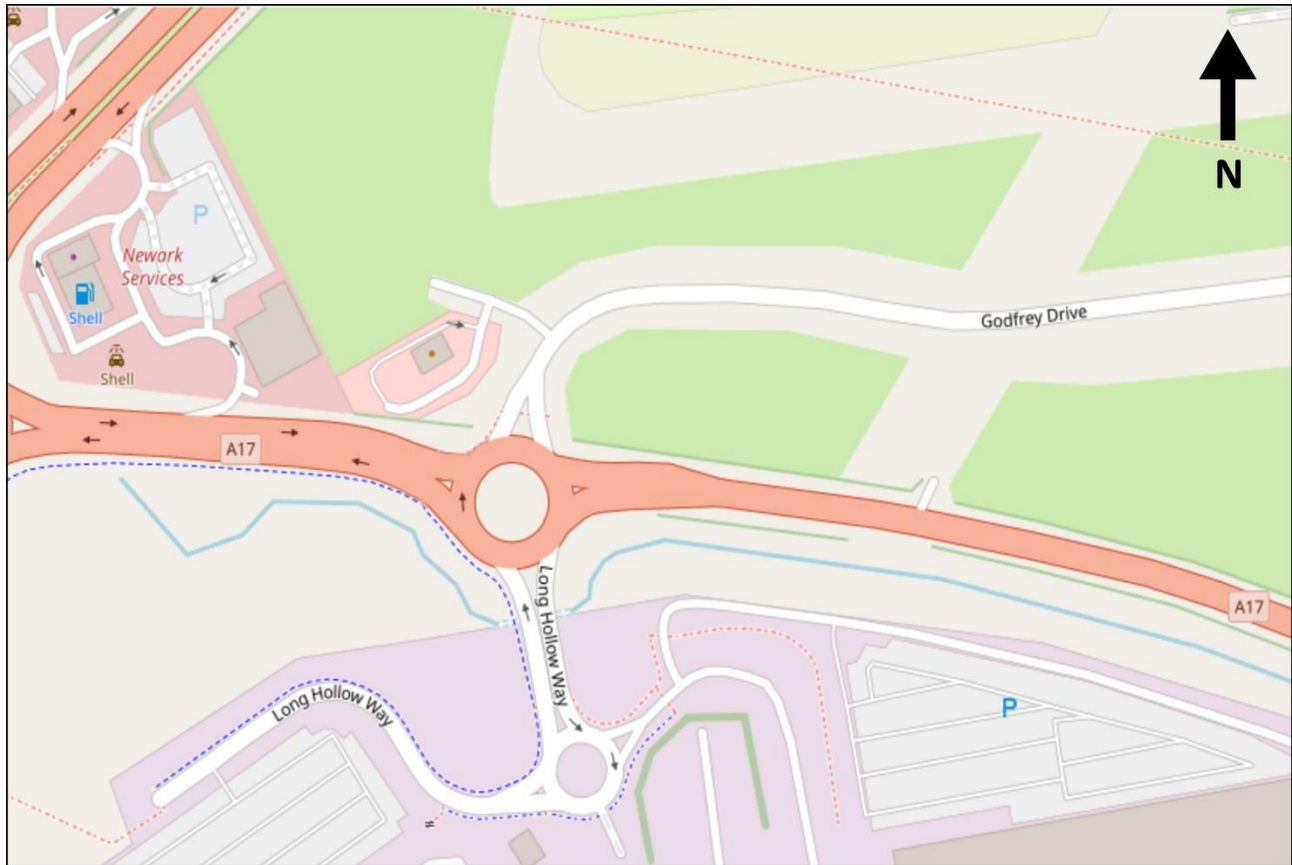
Stapleford Lane is a single-carriageway; it has a single lane which widens on the approach to the junction. A17 Beckenham Road is also a single-carriageway subject to a 40mph speed limit but increased to the national speed limit on the approach to the junction. Beckingham Road is a single-carriageway road subject to the national speed limit; it has a single lane and widens to two lanes at the junction. A17 (west) is a single-carriageway that is subject to the national speed limit.

The A17 / Stapleford Lane / Beckingham Road roundabout is represented within the A46 Newark Bypass strategic traffic model. Flows for the ARCADY assessment are therefore taken directly from SATURN for the Do Minimum and Do Something scenario.

2.4 A17 / Long Hollow Way / Godfrey Drive

The A17 / Long Hollow Way / Godfrey Drive roundabout is a four-arm roundabout comprising of Godfrey Drive, A17 east, Long Hollow Way and A17 west. The junction is illustrated in Figure 6.

Figure 6 A17 / Long Hollow Way / Godfrey Drive Roundabout



Source: [Openstreetmaps.org](https://www.openstreetmap.org)

This junction is modelled within ARCADY, with the measurement parameters obtained from aerial imagery.

Godfrey Drive is a single-carriageway with a 30mph speed limit; it has a single lane which widens on the approach to the junction. A17 (east) is also a single-carriageway subject to the national speed limit; it has a single lane, which widens to provide two lanes on the approach to the junction. Long Hollow Way is a single-carriageway road subject to a 30mph speed limit; it has two lanes on the approach to the junction and on the exit arm. A17 (west) is a dual carriageway that is subject to the national speed limit; it has two lanes on the approach to the junction as well as on the exit arm.

The strategic SATURN model is also used in part to obtain flows in part at Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout. While the A46 Newark Bypass strategic traffic model includes part of the Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout, it does not explicitly model Godfrey Drive. For the assessment of this junction, it is, therefore, not possible to take all flows directly from SATURN.

Flows are obtained for the movements between the A17 east, Long Hollow Way and A17 west. Flows to and from Godfrey Drive from MCC data obtained at the Godfrey Drive / A17 East / Long

Hollow Way / A17 West Roundabout (collected on July 13, 2022). The MCC data is also used to conduct sense checks of the SATURN model outputs.

3. Model Results

This section presents the modelling outputs for each of the four junctions, including results for AM and PM peaks for the 2019 baseline scenario along with Do Minimum and Do Something forecasts for 2028 and 2043.

Overall, the junction performance of the roundabouts on the B6166 Bar Gate generally typically improved, in both scenarios the junctions operate well within capacity. Whilst the performance of the junctions modelled along the A17 typically worsens, the degree to which the performance worsens is minimal, and the junctions both operate well within capacity.

3.1 Model Results: Great North Road/Bar Gate

Table 1 through to **Table 5** present the AM and PM peak hour modelling of the B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout during the 2019 baseline scenario. These tables also present a comparison between the Core Do Minimum Scenario with the Core Do-Something scheme during the AM and PM peaks in 2028 and 2043.

Table 1 – B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout 2019 base year peak hours performance

	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B6166 Bar Gate	0.2	2.26	0.18	0.2	2.25	0.19
B6166 Castle Gate	1.0	4.05	0.47	1.6	5.92	0.60
B6326 Great North Road	0.3	2.62	0.21	0.4	3.46	0.26
Maximum	1.0	4.05	0.47	1.6	5.92	0.60

Table 2 – B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout 2028 Do Minimum and Do Something AM peak hours performance

	2028 AM Peak Do Minimum			2028 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B6166 Bar Gate	0.2	2.23	0.18	0.2	2.26	0.15
B6166 Castle Gate	1.1	4.29	0.51	0.7	3.49	0.40
B6326 Great North Road	0.3	2.64	0.20	0.4	2.71	0.26
Maximum	1.1	4.29	0.51	0.7	3.49	0.40

Table 3 – B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout 2028 Do Minimum and Do Something PM peak hours performance

	2028 PM Peak Do Minimum			2028 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B6166 Bar Gate	0.2	2.20	0.19	0.2	2.16	0.16
B6166 Castle Gate	1.2	4.47	0.54	0.7	3.50	0.42
B6326 Great North Road	0.3	2.64	0.20	0.3	2.55	0.24
Maximum	1.2	4.47	0.54	0.7	3.50	0.42

Table 4 – B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout 2043 Do Minimum and Do Something AM peak hours performance

	2043 AM Peak Do Minimum			2043 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B6166 Bar Gate	0.2	2.26	0.18	0.2	2.24	0.14
B6166 Castle Gate	1.3	4.66	0.54	0.8	3.64	0.42
B6326 Great North Road	0.2	2.69	0.19	0.4	2.73	0.27
Maximum	1.3	4.66	0.54	0.8	3.64	0.42

Table 5 – B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout 2043 Do Minimum and Do Something PM peak hours performance

	2043 PM Peak Do Minimum			2043 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B6166 Bar Gate	0.3	2.25	0.22	0.2	2.13	0.16
B6166 Castle Gate	1.2	4.51	0.54	1.2	5.13	0.53
B6326 Great North Road	0.2	2.60	0.18	0.4	3.12	0.26
Maximum	1.2	4.51	0.54	1.2	5.13	0.53

The Great North Road/Bar Gate Roundabout modelling results show that there is an improvement in the maximum Ratio Flow Capacity (RFC) in the 2028 AM peak (where it decreases by 0.11 between the Do Minimum and Do Something scenarios to 0.40) and in the 2028 PM peak (where it decreases by 0.12 between the Do Minimum and Do Something scenarios to 0.42).

In the 2043 AM peak it also improves in the Do Something scenario (it decreases by 0.12 between the Do Minimum and Do Something scenarios to 0.42) and in the 2043 PM peak (where it decreases by 0.01 between the Do Minimum and Do Something scenarios to 0.53).

Improvements in RFC are due to decreases in flows on both Castle Gate and Bar Gate with the introduction of the scheme. Flows increase on Great North Road which can be seen in increases in RFC for this arm.

3.2 Model Results: B6326 Great North Road / Ossington Road Mini-Roundabout

Table 6 through to **Table 10** present the AM and PM peak hour modelling of the B6326 Great North Road / Ossington Road Mini-Roundabout during the 2019 baseline scenario. These tables also present a comparison between the Core Do Minimum Scenario with the Core Do-Something scheme during the AM and PM peaks in 2028 and 2043.

Table 6 – B6326 Great North Road / Ossington Road Mini-Roundabout 2019 peak hours performance

	AM Peak			PM Peak		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B326 Great North Road (North)	0.4	3.67	0.26	0.4	3.55	0.27
Ossington Way	0.2	5.69	0.15	0.2	5.6	0.18
B326 Great North Road (South)	2.3	13.32	0.69	1.9	11.51	0.65
Maximum	2.3	13.32	0.69	1.9	11.51	0.65

Table 7 – B6326 Great North Road / Ossington Road Mini-Roundabout 2028 Do Minimum and Do Something AM peak hours performance

	2028 AM Peak Do Minimum			2028 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B326 Great North Road (North)	0.4	3.64	0.25	0.6	4.17	0.35
Ossington Way	0.2	5.74	0.18	0.3	6.49	0.20
B326 Great North Road (South)	2.4	13.61	0.69	2.0	12.06	0.66
Maximum	2.4	13.61	0.69	2.0	12.06	0.66

Table 8 – B6326 Great North Road / Ossington Road Mini-Roundabout 2028 Do Minimum and Do Something PM peak hours performance

	2028 PM Peak Do Minimum			2028 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B326 Great North Road (North)	0.3	3.46	0.24	0.5	3.82	0.32
Ossington Way	0.2	5.48	0.18	0.3	6.02	0.21
B326 Great North Road (South)	2.1	12.11	0.67	2.1	12.28	0.67
Maximum	2.1	12.11	0.67	2.1	12.28	0.67

Table 9 – B6326 Great North Road / Ossington Road Mini-Roundabout 2043 Do Minimum and Do Something AM peak hours performance

	2043 AM Peak Do Minimum			2043 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B326 Great North Road (North)	0.3	3.56	0.23	0.6	4.19	0.35
Ossington Way	0.2	5.62	0.17	0.3	6.52	0.20
B326 Great North Road (South)	2.2	12.73	0.67	2.0	12.14	0.66
Maximum	2.2	12.73	0.67	2.0	12.14	0.66

Table 10 – B6326 Great North Road / Ossington Road Mini-Roundabout 2043 Do Something peak performance

	2043 PM Peak Do Minimum			2043 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
B326 Great North Road (North)	0.3	3.36	0.22	0.4	3.66	0.29
Ossington Way	0.2	5.30	0.16	0.3	5.79	0.20
B326 Great North Road (South)	1.9	11.48	0.65	2.3	12.98	0.69
Maximum	1.9	11.48	0.65	2.3	12.98	0.69

The B6326 Great North Road / Ossington Road Mini-Roundabout modelling results show that there is an improvement in the maximum RFC in the 2028 AM peak (where it decreases by 0.03 between the Do Minimum and Do Something scenarios to 0.66) and in the 2028 PM peak its performance remains consistent (the maximum RFC in the Do Minimum and Do Something scenarios remain at 0.67).

In the 2043 AM peak, it also improves in the Do Something scenario (where it decreases by 0.01 between the Do Minimum and Do Something scenarios to 0.66). However, in the 2043 PM peak, the performance of the junction worsens slightly (where it increases by 0.04 between the Do Minimum and Do Something scenarios to 0.69).

Marginal improvements in RFC are due to small decreases in northbound flows on Great North Road (south) for all modelled time periods except 2043 AM. Flows increase southbound on Great North Road (north) and Ossington Way which can be seen in increases in RFC for these arms. The worst performing arm remains the northbound Great North Road (south) which only sees slight changes in flow (both increases and decreases for different time periods). The southbound Great North Road (north) RFC increases in line with forecast increases in traffic flow.

3.3 Model Results: Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout

Table 11 through to **Table 15** present the AM and PM peak hour modelling of the Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout during the 2019 baseline scenario. These tables also present a comparison between the Core Do Minimum Scenario with the Core Do-Something scheme during the AM and PM peaks in 2028 and 2043.

Table 11 – Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout 2019 peak hours performance

	2019 AM Peak			2019 PM Peak		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Godfrey Drive	0.1	2.93	0.05	0.1	2.64	0.05
A17 east	0.4	2.55	0.25	0.3	2.25	0.22
Long Hollow Way	0.1	3.71	0.06	0.1	3.68	0.07
A17 west	0.6	2.56	0.33	0.4	2.15	0.26
Maximum	0.6	3.71	0.33	0.4	3.68	0.26

Table 12 – Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout 2028 Do Minimum and Do Something AM peak hours performance

	2028 AM Peak Do Minimum			2028 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Godfrey Drive	0.0	2.65	0.04	0.1	3.29	0.05
A17 east	0.3	2.58	0.19	0.9	3.37	0.45
Long Hollow Way	0.1	3.45	0.07	0.2	4.65	0.09
A17 west	0.5	2.48	0.25	0.8	2.77	0.41
Maximum	0.5	3.45	0.25	0.9	4.65	0.41

Table 13 – Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout 2028 Do Minimum and Do Something PM peak hours performance

	2028 PM Peak Do Minimum			2028 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Godfrey Drive	0.1	2.45	0.05	0.1	2.91	0.06
A17 east	0.2	2.24	0.16	0.6	2.67	0.35
Long Hollow Way	0.1	3.43	0.07	0.2	4.24	0.09
A17 west	0.3	2.13	0.20	0.5	2.29	0.33
Maximum	0.3	3.43	0.20	0.6	4.24	0.35

Table 14 – Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout 2043 Do Minimum and Do Something AM peak hours performance

	2043 AM Peak Do Minimum			2043 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Godfrey Drive	0.0	2.60	0.04	0.1	3.59	0.05
A17 east	0.3	2.65	0.19	1.0	3.54	0.47
Long Hollow Way	0.1	3.41	0.07	0.2	4.75	0.09
A17 west	0.4	2.51	0.24	1.0	2.99	0.46
Maximum	0.4	3.41	0.24	1.0	4.75	0.47

Table 15 – Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout 2043 Do Something peak performance

	2043 PM Peak Do Minimum			2043 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Godfrey Drive	0.1	2.50	0.05	0.1	3.13	0.06
A17 east	0.2	2.26	0.17	0.8	2.99	0.42
Long Hollow Way	0.1	3.41	0.08	0.2	4.55	0.10
A17 west	0.3	2.14	0.21	0.7	2.43	0.37
Maximum	0.3	3.41	0.21	0.8	4.55	0.42

The Godfrey Drive / A17 East / Long Hollow Way / A17 West Roundabout modelling results show that the junction's performance in the 2028 AM peak worsens slightly (the maximum RFC increases by 0.16 between the Do Minimum and Do Something scenarios to 0.41), and in the

2028 PM peak, it also worsens slightly (the maximum RFC increases by 0.15 between the Do Minimum and Do Something scenarios to 0.35). Nonetheless, the junction still operates well within capacity in both scenarios in the 2028 AM and PM peaks.

In the 2043 AM peak, the junction's performance also worsens slightly (the maximum RFC increases by 0.23 between the Do Minimum and Do Something scenarios to 0.47). In the 2028 PM peak, it also worsens slightly (the maximum RFC increases by 0.21 between the Do Minimum and Do Something scenarios to 0.42). Nonetheless, the junction still operates well within capacity in both scenarios in the 2043 AM and PM peaks.

Worsening in RFC across all arms and time periods are due to increases in flows on the A17 East and West. As expected, the largest increases in RFC are on the A17 approaches, although these remain well within capacity.

3.4 Model Results: Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout

Table 16 through to **Table 20** present the AM and PM peak hour modelling of the Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout during the 2019 baseline scenario. These tables also present a comparison between the Core Do Minimum Scenario with the Core Do-Something scheme during the AM and PM peaks in 2028 and 2043.

Table 16 – Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout 2019 peak hours performance

	2019 AM Peak			2019 PM Peak		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Stapleford Lane	0.2	5.58	0.17	0.1	5.03	0.10
A17 Beckingham Road	1.2	4.88	0.52	1.1	4.47	0.51
Beckingham Road	0.3	2.99	0.23	0.4	3.01	0.26
A17 west	0.7	4.02	0.38	0.7	3.89	0.38
Maximum	1.2	5.58	0.52	1.1	5.03	0.51

Table 17 – Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout 2028 Do Minimum and Do Something AM peak hours performance

	2028 AM Peak Do Minimum			2028 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Stapleford Lane	0.2	5.40	0.17	0.2	5.56	0.14
A17 Beckingham Road	0.9	4.26	0.44	1.7	5.77	0.59
Beckingham Road	0.4	3.10	0.30	0.3	3.58	0.25
A17 west	0.5	3.95	0.29	1.0	4.34	0.48
Maximum	0.9	5.40	0.44	1.7	5.77	0.59

Table 18 – Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout 2028 Do Minimum and Do Something PM peak hours performance

	2028 PM Peak Do Minimum			2028 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Stapleford Lane	0.1	4.85	0.10	0.1	5.13	0.09
A17 Beckingham Road	0.9	4.13	0.46	1.3	4.92	0.55
Beckingham Road	0.4	2.91	0.29	0.4	3.27	0.29
A17 west	0.5	3.74	0.31	1.0	4.32	0.48
Maximum	0.9	4.85	0.46	1.3	5.13	0.55

Table 19 – Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout 2043 Do Minimum and Do Something AM peak hours performance

	2043 AM Peak Do Minimum			2043 AM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Stapleford Lane	0.4	6.66	0.26	0.2	6.52	0.18
A17 Beckingham Road	1.1	4.78	0.49	2.0	6.44	0.64
Beckingham Road	0.6	3.51	0.38	0.3	3.75	0.24
A17 west	0.5	4.36	0.29	1.4	5.12	0.56
Maximum	1.1	6.66	0.49	2.0	6.52	0.64

Table 20 – Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West 2043 Do Minimum and Do Something PM peak hours performance

	2043 PM Peak Do Minimum			2043 PM Peak Do Something		
	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)	Queue (PCUs)	Delay (Seconds)	Ratio Flow Capacity (RFC)
Stapleford Lane	0.2	5.53	0.13	0.1	5.74	0.11
A17 Beckingham Road	1.0	4.41	0.49	1.7	5.73	0.61
Beckingham Road	0.6	3.26	0.35	0.4	3.65	0.31
A17 west	0.6	4.12	0.34	1.3	4.95	0.55
Maximum	1.0	5.53	0.49	1.7	5.74	0.61

The Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout modelling results show that the junction's performance in the 2028 AM peak worsens slightly (the maximum RFC increases by 0.15 between the Do Minimum and Do Something scenarios to 0.59). In the 2028 PM peak, it also worsens slightly (the maximum RFC increases by 0.09 between the Do Minimum and Do Something scenarios to 0.55). Nonetheless, the junction still operates well within capacity in both scenarios in the 2028 AM and PM peaks.

In the 2043 AM peak, the junction's performance also worsens slightly (the maximum RFC increases by 0.15 between the Do Minimum and Do Something scenarios to 0.64). In the 2043 PM peak, it also worsens slightly (the maximum RFC increases by 0.12 between the Do Minimum and Do Something scenarios to 0.61). Nonetheless, the junction still operates well within capacity in both scenarios in the 2043 AM and PM peaks.

Worsening in RFC across all arms and time periods are due to increases in flows on the A17 East and West. As expected, the largest increases in RFC are on the A17 approaches, although these remain well within capacity.

Appendix A - ARCADY Results Files

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

Filename: B6166 Bar Gate B6166 Castle Gate B6326 Great North Road Roundabout 12.11.24.j9

Path: C:\Users\BAR95965\OneDrive - Mott MacDonald\Desktop

Report generation date: 12/11/2024 11:37:42

»Analysis Set 1 - 2019, AM
 »Analysis Set 1 - 2019, PM
 »Analysis Set 1 - 2028 Do Minimum, AM
 »Analysis Set 1 - 2028 Do Minimum, PM
 »Analysis Set 1 - 2028 Do Something, AM
 »Analysis Set 1 - 2028 Do Something, PM
 »Analysis Set 1 - 2043 Do Minimum, AM
 »Analysis Set 1 - 2043 Do Minimum, PM
 »Analysis Set 1 - 2043 Do Something, AM
 »Analysis Set 1 - 2043 Do Something, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Analysis Set 1 - 2019								
1 - B6166 Bar Gate	0.2	2.26	0.18	A	0.2	2.25	0.19	A
2 - B6166 Castle Gate	1.0	4.05	0.47	A	1.6	5.92	0.60	A
3 - B6326 Great North Road	0.3	2.62	0.21	A	0.4	3.46	0.26	A
Analysis Set 1 - 2028 Do Minimum								
1 - B6166 Bar Gate	0.2	2.23	0.18	A	0.2	2.20	0.19	A
2 - B6166 Castle Gate	1.1	4.29	0.51	A	1.2	4.47	0.54	A
3 - B6326 Great North Road	0.3	2.64	0.20	A	0.3	2.64	0.20	A
Analysis Set 1 - 2028 Do Something								
1 - B6166 Bar Gate	0.2	2.26	0.15	A	0.2	2.16	0.16	A
2 - B6166 Castle Gate	0.7	3.49	0.40	A	0.7	3.50	0.42	A
3 - B6326 Great North Road	0.4	2.71	0.26	A	0.3	2.55	0.24	A
Analysis Set 1 - 2043 Do Minimum								
1 - B6166 Bar Gate	0.2	2.26	0.18	A	0.3	2.25	0.22	A
2 - B6166 Castle Gate	1.3	4.66	0.54	A	1.2	4.51	0.54	A
3 - B6326 Great North Road	0.2	2.69	0.19	A	0.2	2.60	0.18	A
Analysis Set 1 - 2043 Do Something								
1 - B6166 Bar Gate	0.2	2.24	0.14	A	0.2	2.13	0.16	A
2 - B6166 Castle Gate	0.8	3.64	0.42	A	1.2	5.13	0.53	A
3 - B6326 Great North Road	0.4	2.73	0.27	A	0.4	3.12	0.26	A

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

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

File summary

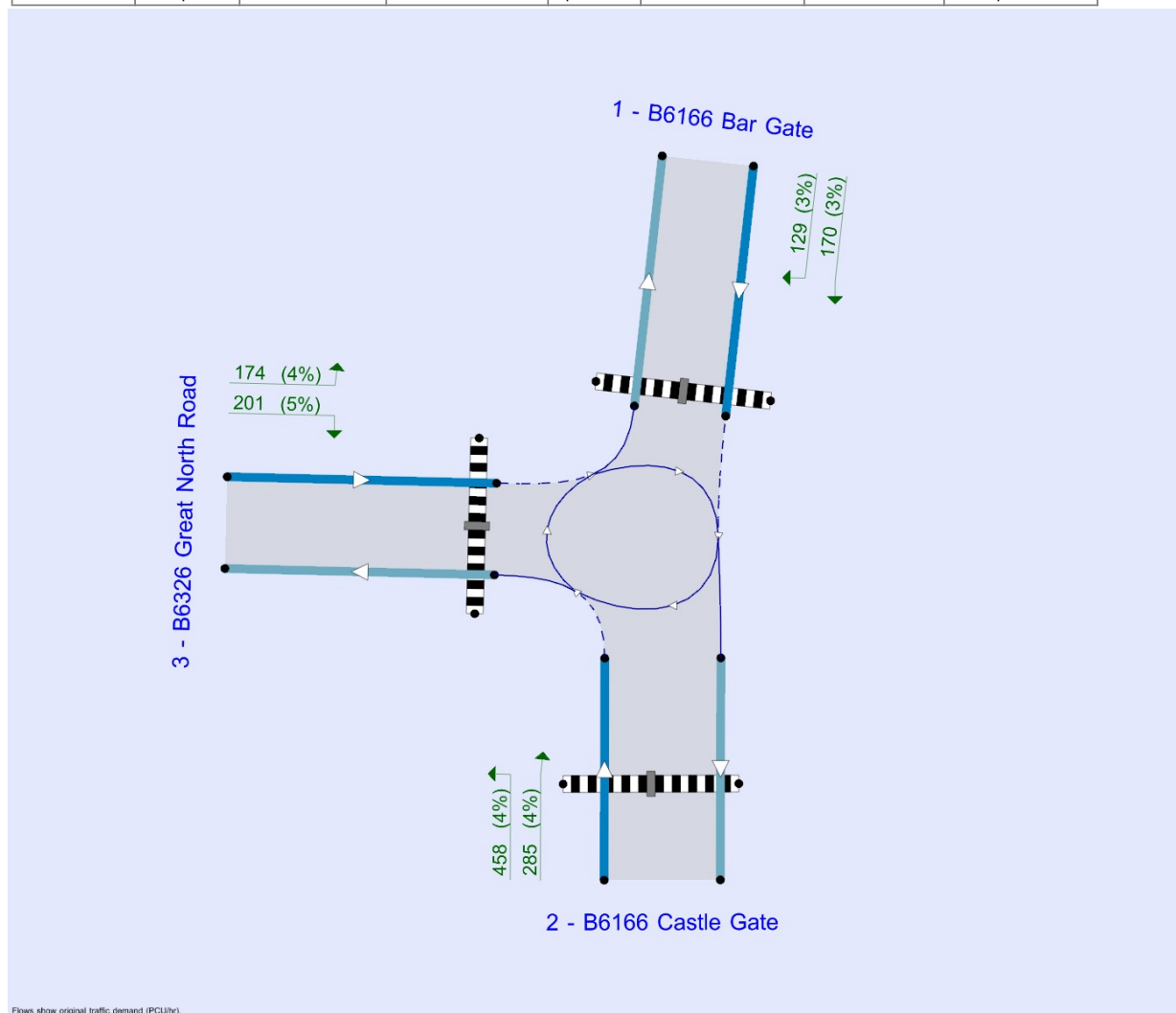
File Description

Title	NCC Model - Bar Gate Roundabout
Location	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout
Site number	
Date	31/10/2024
Version	1
Status	(new file)
Identifier	Bar Gate Roundabout
Client	Nottingham County Council

Jobnumber	100103345
Enumerator	MOTTMAC\BAR95965
Description	Bar Gate Roundabout Modelling Assessment of the 2019 Baseline, 2028 Do Minimum and 2028 Do Something as well as the 2043 Do Minimum and 2043 Do Something

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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	ONE HOUR	08:00	09:30	15
D2	2019	PM	ONE HOUR	17:00	18:30	15
D3	2028 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D4	2028 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D5	2028 Do Something	AM	ONE HOUR	08:00	09:30	15
D6	2028 Do Something	PM	ONE HOUR	17:00	18:30	15
D7	2043 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D8	2043 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D9	2043 Do Something	AM	ONE HOUR	08:00	09:30	15
D10	2043 Do Something	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Description	Network flow scaling factor (%)

A1	Analysis Set 1	Assumption that Peds on all crossing have a peak hour flow of 75 Pedestrians Based on flows that do not include buses. Junction geometry based on google earth measurements	100.000
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Analysis Set 1 - 2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.30	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	B6166 Bar Gate	
2	B6166 Castle Gate	
3	B6326 Great North Road	

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 - B6166 Bar Gate	5.90	7.00	39.0	500.0	14.0	20.0	
2 - B6166 Castle Gate	3.00	8.62	23.5	19.8	16.4	18.0	
3 - B6326 Great North Road	3.65	7.40	54.3	25.7	16.8	18.0	

Zebra Crossings

Arm	Space between crossing and junction entry (Zebra) (PCU)	Vehicles queueing on exit (Zebra) (PCU)	Central Refuge	Crossing data type	Crossing length (entry side) (m)	Crossing time (entry side) (s)	Crossing length (exit side) (m)	Crossing time (exit side) (s)
1 - B6166 Bar Gate	1.74	1.04	✓	Distance	7.60	5.43	5.50	3.93
2 - B6166 Castle Gate	5.81	5.62	✓	Distance	2.65	1.89	3.75	2.68
3 - B6326 Great North Road	1.49	1.30	✓	Distance	5.94	4.24	5.83	4.16

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B6166 Bar Gate	0.809	2264
2 - B6166 Castle Gate	0.730	1951
3 - B6326 Great North Road	0.774	2143

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)
D1	2019	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	342	100.000
2 - B6166 Castle Gate		✓	795	100.000
3 - B6326 Great North Road		✓	359	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	235	107
	2 - B6166 Castle Gate	320	0	475
	3 - B6326 Great North Road	138	221	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	6	7
	2 - B6166 Castle Gate	10	0	8
	3 - B6326 Great North Road	7	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.18	2.26	0.2	A
2 - B6166 Castle Gate	0.47	4.05	1.0	A
3 - B6326 Great North Road	0.21	2.62	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	257	166	0.00	2130	0.121	257	0.1	2.043	A
2 - B6166 Castle Gate	599	80	0.00	1843	0.325	596	0.5	3.136	A
3 - B6326 Great North Road	270	240	0.00	1910	0.141	270	0.2	2.360	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	307	199	0.00	2104	0.146	307	0.2	2.130	A
2 - B6166 Castle Gate	715	96	0.00	1843	0.388	714	0.7	3.467	A
3 - B6326 Great North Road	323	287	0.00	1910	0.169	323	0.2	2.440	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	377	243	0.00	2068	0.182	376	0.2	2.262	A
2 - B6166 Castle Gate	875	118	0.00	1843	0.475	874	1.0	4.036	A
3 - B6326 Great North Road	395	352	0.00	1871	0.211	395	0.3	2.624	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	377	243	0.00	2068	0.182	377	0.2	2.262	A
2 - B6166 Castle Gate	875	118	0.00	1843	0.475	875	1.0	4.046	A
3 - B6326 Great North Road	395	352	0.00	1871	0.211	395	0.3	2.625	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	307	199	0.00	2103	0.146	308	0.2	2.132	A
2 - B6166 Castle Gate	715	96	0.00	1843	0.388	716	0.7	3.476	A
3 - B6326 Great North Road	323	288	0.00	1910	0.169	323	0.2	2.440	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	257	166	0.00	2130	0.121	258	0.1	2.045	A
2 - B6166 Castle Gate	599	81	0.00	1843	0.325	599	0.5	3.151	A
3 - B6326 Great North Road	270	241	0.00	1910	0.141	270	0.2	2.362	A

Analysis Set 1 - 2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Last Run	Last Run	2 - B6166 Castle Gate - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queuing to leave the junction in 4 timesegment(s).
Last Run	Last Run	3 - B6326 Great North Road - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queuing to leave the junction in 6 timesegment(s).

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	4.53	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)
D2	2019	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	363	100.000
2 - B6166 Castle Gate		✓	865	100.000
3 - B6326 Great North Road		✓	351	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	75.00
2 - B6166 Castle Gate	75.00
3 - B6326 Great North Road	75.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	254	109
	2 - B6166 Castle Gate	417	0	448
	3 - B6326 Great North Road	132	219	0

Vehicle Mix

Heavy Vehicle Percentages

	To			

		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	3	4
	2 - B6166 Castle Gate	4	0	5
	3 - B6326 Great North Road	5	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.19	2.25	0.2	A
2 - B6166 Castle Gate	0.60	5.92	1.6	A
3 - B6326 Great North Road	0.26	3.46	0.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	273	164	56.46	2124	0.129	273	0.2	2.009	A
2 - B6166 Castle Gate	651	82	56.46	1754	0.371	649	0.6	3.397	A
3 - B6326 Great North Road	264	313	56.46	1692	0.156	263	0.2	2.629	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	326	197	67.42	2094	0.156	326	0.2	2.103	A
2 - B6166 Castle Gate	778	98	67.42	1690	0.460	777	0.9	4.112	A
3 - B6326 Great North Road	316	374	67.42	1599	0.197	315	0.3	2.927	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	400	241	82.58	2052	0.195	399	0.2	2.250	A
2 - B6166 Castle Gate	952	120	82.58	1589	0.599	950	1.5	5.860	A
3 - B6326 Great North Road	386	458	82.58	1473	0.262	386	0.4	3.453	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	400	241	82.58	2052	0.195	400	0.2	2.250	A
2 - B6166 Castle Gate	952	120	82.58	1588	0.600	952	1.6	5.916	A
3 - B6326 Great North Road	386	459	82.58	1472	0.263	386	0.4	3.461	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	326	197	67.42	2094	0.156	327	0.2	2.106	A
2 - B6166 Castle Gate	778	98	67.42	1689	0.460	780	0.9	4.152	A
3 - B6326 Great North Road	316	376	67.42	1596	0.198	316	0.3	2.937	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	273	165	56.46	2123	0.129	273	0.2	2.011	A
2 - B6166 Castle Gate	651	82	56.46	1753	0.372	652	0.6	3.424	A
3 - B6326 Great North Road	264	314	56.46	1690	0.156	265	0.2	2.636	A

Analysis Set 1 - 2028 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.48	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)
D3	2028 Do Minimum	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	332	100.000
2 - B6166 Castle Gate		✓	852	100.000
3 - B6326 Great North Road		✓	330	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	240	92
	2 - B6166 Castle Gate	357	0	495
	3 - B6326 Great North Road	132	198	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
	1 - B6166 Bar Gate	0	6	8
	2 - B6166 Castle Gate	8	0	8
	3 - B6326 Great North Road	7	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.18	2.23	0.2	A
2 - B6166 Castle Gate	0.51	4.29	1.1	A
3 - B6326 Great North Road	0.20	2.64	0.3	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	250	149	0.00	2144	0.117	249	0.1	2.024	A
2 - B6166 Castle Gate	641	69	0.00	1843	0.348	639	0.6	3.224	A
3 - B6326 Great North Road	248	268	0.00	1910	0.130	248	0.2	2.343	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	298	178	0.00	2120	0.141	298	0.2	2.104	A
2 - B6166 Castle Gate	766	83	0.00	1843	0.416	765	0.8	3.605	A
3 - B6326 Great North Road	297	321	0.00	1895	0.157	297	0.2	2.435	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	366	218	0.00	2088	0.175	365	0.2	2.226	A
2 - B6166 Castle Gate	938	101	0.00	1843	0.509	937	1.1	4.283	A
3 - B6326 Great North Road	363	392	0.00	1840	0.198	363	0.3	2.637	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	366	218	0.00	2088	0.175	366	0.2	2.226	A
2 - B6166 Castle Gate	938	101	0.00	1843	0.509	938	1.1	4.295	A
3 - B6326 Great North Road	363	393	0.00	1839	0.198	363	0.3	2.638	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	298	178	0.00	2120	0.141	299	0.2	2.107	A
2 - B6166 Castle Gate	766	83	0.00	1843	0.416	767	0.8	3.617	A
3 - B6326 Great North Road	297	322	0.00	1895	0.157	297	0.2	2.439	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	250	149	0.00	2144	0.117	250	0.1	2.027	A
2 - B6166 Castle Gate	641	69	0.00	1843	0.348	642	0.6	3.241	A
3 - B6326 Great North Road	248	269	0.00	1910	0.130	249	0.2	2.343	A

Analysis Set 1 - 2028 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Do Minimum	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	364	100.000
2 - B6166 Castle Gate		✓	896	100.000
3 - B6326 Great North Road		✓	316	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	257	107
	2 - B6166 Castle Gate	436	0	460
	3 - B6326 Great North Road	122	194	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
	1 - B6166 Bar Gate	0	3	4
	2 - B6166 Castle Gate	8	0	5
	3 - B6326 Great North Road	5	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.19	2.20	0.2	A
2 - B6166 Castle Gate	0.54	4.47	1.2	A
3 - B6326 Great North Road	0.20	2.64	0.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	274	146	0.00	2146	0.128	273	0.2	1.985	A
2 - B6166 Castle Gate	675	80	0.00	1843	0.366	672	0.6	3.265	A
3 - B6326 Great North Road	238	327	0.00	1890	0.126	237	0.1	2.273	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	327	174	0.00	2123	0.154	327	0.2	2.070	A
2 - B6166 Castle Gate	805	96	0.00	1843	0.437	805	0.8	3.685	A
3 - B6326 Great North Road	284	392	0.00	1840	0.154	284	0.2	2.414	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	401	213	0.00	2092	0.192	401	0.2	2.198	A
2 - B6166 Castle Gate	987	118	0.00	1843	0.535	985	1.2	4.456	A
3 - B6326 Great North Road	348	479	0.00	1773	0.196	348	0.3	2.637	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	401	214	0.00	2092	0.192	401	0.2	2.198	A
2 - B6166 Castle Gate	987	118	0.00	1843	0.535	986	1.2	4.472	A
3 - B6326 Great North Road	348	480	0.00	1772	0.196	348	0.3	2.638	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	327	175	0.00	2123	0.154	327	0.2	2.070	A
2 - B6166 Castle Gate	805	96	0.00	1843	0.437	807	0.8	3.702	A
3 - B6326 Great North Road	284	393	0.00	1840	0.154	284	0.2	2.418	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	274	146	0.00	2146	0.128	274	0.2	1.986	A
2 - B6166 Castle Gate	675	81	0.00	1843	0.366	675	0.6	3.285	A
3 - B6326 Great North Road	238	329	0.00	1889	0.126	238	0.2	2.275	A

Analysis Set 1 - 2028 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	2.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2028 Do Something	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	282	100.000
2 - B6166 Castle Gate		✓	665	100.000
3 - B6326 Great North Road		✓	457	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	174	108
	2 - B6166 Castle Gate	217	0	448
	3 - B6326 Great North Road	197	260	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	9	7
	2 - B6166 Castle Gate	12	0	6
	3 - B6326 Great North Road	5	7	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.15	2.26	0.2	A
2 - B6166 Castle Gate	0.40	3.49	0.7	A
3 - B6326 Great North Road	0.26	2.71	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	212	195	0.00	2106	0.101	212	0.1	2.056	A
2 - B6166 Castle Gate	501	81	0.00	1843	0.272	499	0.4	2.885	A
3 - B6326 Great North Road	344	163	0.00	1910	0.180	343	0.2	2.437	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	254	234	0.00	2075	0.122	253	0.2	2.138	A
2 - B6166 Castle Gate	598	97	0.00	1843	0.324	597	0.5	3.117	A
3 - B6326 Great North Road	411	195	0.00	1910	0.215	411	0.3	2.547	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	310	286	0.00	2033	0.153	310	0.2	2.261	A
2 - B6166 Castle Gate	732	119	0.00	1843	0.397	731	0.7	3.492	A
3 - B6326 Great North Road	503	239	0.00	1910	0.263	503	0.4	2.714	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	310	286	0.00	2033	0.153	310	0.2	2.261	A
2 - B6166 Castle Gate	732	119	0.00	1843	0.397	732	0.7	3.494	A
3 - B6326 Great North Road	503	239	0.00	1910	0.263	503	0.4	2.714	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	254	234	0.00	2075	0.122	254	0.2	2.140	A
2 - B6166 Castle Gate	598	97	0.00	1843	0.324	599	0.5	3.124	A
3 - B6326 Great North Road	411	195	0.00	1910	0.215	411	0.3	2.548	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	212	196	0.00	2106	0.101	212	0.1	2.059	A
2 - B6166 Castle Gate	501	81	0.00	1843	0.272	501	0.4	2.896	A
3 - B6326 Great North Road	344	164	0.00	1910	0.180	344	0.2	2.441	A

Analysis Set 1 - 2028 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	2.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Do Something	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	299	100.000
2 - B6166 Castle Gate		✓	700	100.000
3 - B6326 Great North Road		✓	416	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	180	119
	2 - B6166 Castle Gate	246	0	454
	3 - B6326 Great North Road	179	237	0

Vehicle Mix

Heavy Vehicle Percentages

	To		
	1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	4
	2 - B6166 Castle Gate	5	0
	3 - B6326 Great North Road	3	3

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.16	2.16	0.2	A
2 - B6166 Castle Gate	0.42	3.50	0.7	A
3 - B6326 Great North Road	0.24	2.55	0.3	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	225	178	0.00	2120	0.106	225	0.1	1.967	A
2 - B6166 Castle Gate	527	89	0.00	1843	0.286	525	0.4	2.846	A
3 - B6326 Great North Road	313	185	0.00	1910	0.164	312	0.2	2.319	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	269	213	0.00	2092	0.128	269	0.2	2.045	A
2 - B6166 Castle Gate	629	107	0.00	1843	0.341	629	0.5	3.091	A
3 - B6326 Great North Road	374	221	0.00	1910	0.196	374	0.2	2.413	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	329	261	0.00	2053	0.160	329	0.2	2.162	A
2 - B6166 Castle Gate	771	131	0.00	1843	0.418	770	0.7	3.500	A
3 - B6326 Great North Road	458	271	0.00	1910	0.240	458	0.3	2.552	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	329	261	0.00	2053	0.160	329	0.2	2.162	A
2 - B6166 Castle Gate	771	131	0.00	1843	0.418	771	0.7	3.501	A
3 - B6326 Great North Road	458	271	0.00	1910	0.240	458	0.3	2.552	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	269	213	0.00	2092	0.129	269	0.2	2.047	A
2 - B6166 Castle Gate	629	107	0.00	1843	0.341	630	0.5	3.098	A
3 - B6326 Great North Road	374	221	0.00	1910	0.196	374	0.3	2.414	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	225	179	0.00	2120	0.106	225	0.1	1.968	A
2 - B6166 Castle Gate	527	90	0.00	1843	0.286	527	0.4	2.855	A
3 - B6326 Great North Road	313	185	0.00	1910	0.164	313	0.2	2.323	A

Analysis Set 1 - 2043 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.74	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2043 Do Minimum	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	347	100.000
2 - B6166 Castle Gate		✓	898	100.000
3 - B6326 Great North Road		✓	303	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	269	78
	2 - B6166 Castle Gate	408	0	490
	3 - B6326 Great North Road	123	180	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	8	8
	2 - B6166 Castle Gate	14	0	8
	3 - B6326 Great North Road	8	10	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.18	2.26	0.2	A
2 - B6166 Castle Gate	0.54	4.66	1.3	A
3 - B6326 Great North Road	0.19	2.69	0.2	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	261	135	0.00	2155	0.121	261	0.1	2.052	A
2 - B6166 Castle Gate	676	59	0.00	1843	0.367	674	0.6	3.398	A
3 - B6326 Great North Road	228	306	0.00	1907	0.120	228	0.1	2.341	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	312	162	0.00	2134	0.146	312	0.2	2.134	A
2 - B6166 Castle Gate	807	70	0.00	1843	0.438	806	0.9	3.838	A
3 - B6326 Great North Road	272	366	0.00	1860	0.146	272	0.2	2.475	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	382	198	0.00	2104	0.182	382	0.2	2.257	A
2 - B6166 Castle Gate	989	86	0.00	1843	0.536	987	1.3	4.644	A
3 - B6326 Great North Road	334	448	0.00	1796	0.186	333	0.2	2.686	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	382	198	0.00	2104	0.182	382	0.2	2.257	A
2 - B6166 Castle Gate	989	86	0.00	1843	0.536	989	1.3	4.661	A
3 - B6326 Great North Road	334	449	0.00	1796	0.186	334	0.2	2.687	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	312	162	0.00	2133	0.146	312	0.2	2.136	A
2 - B6166 Castle Gate	807	70	0.00	1843	0.438	809	0.9	3.856	A
3 - B6326 Great North Road	272	368	0.00	1859	0.147	273	0.2	2.479	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	261	136	0.00	2155	0.121	261	0.1	2.055	A
2 - B6166 Castle Gate	676	59	0.00	1843	0.367	677	0.6	3.417	A
3 - B6326 Great North Road	228	308	0.00	1905	0.120	228	0.1	2.343	A

Analysis Set 1 - 2043 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.58	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2043 Do Minimum	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	415	100.000
2 - B6166 Castle Gate		✓	903	100.000
3 - B6326 Great North Road		✓	288	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	319	96
	2 - B6166 Castle Gate	445	0	458
	3 - B6326 Great North Road	107	181	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
	1 - B6166 Bar Gate	0	3	3
	2 - B6166 Castle Gate	8	0	5
	3 - B6326 Great North Road	5	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.22	2.25	0.3	A
2 - B6166 Castle Gate	0.54	4.51	1.2	A
3 - B6326 Great North Road	0.18	2.60	0.2	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	312	136	0.00	2154	0.145	312	0.2	2.012	A
2 - B6166 Castle Gate	680	72	0.00	1843	0.369	677	0.6	3.280	A
3 - B6326 Great North Road	217	334	0.00	1885	0.115	216	0.1	2.251	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	373	163	0.00	2133	0.175	373	0.2	2.106	A
2 - B6166 Castle Gate	812	86	0.00	1843	0.440	811	0.8	3.708	A
3 - B6326 Great North Road	259	400	0.00	1834	0.141	259	0.2	2.384	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	457	199	0.00	2103	0.217	457	0.3	2.251	A
2 - B6166 Castle Gate	994	106	0.00	1843	0.539	993	1.2	4.497	A
3 - B6326 Great North Road	317	489	0.00	1765	0.180	317	0.2	2.594	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	457	199	0.00	2103	0.217	457	0.3	2.252	A
2 - B6166 Castle Gate	994	106	0.00	1843	0.539	994	1.2	4.513	A
3 - B6326 Great North Road	317	490	0.00	1764	0.180	317	0.2	2.595	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	373	163	0.00	2133	0.175	373	0.2	2.109	A
2 - B6166 Castle Gate	812	86	0.00	1843	0.440	813	0.8	3.729	A
3 - B6326 Great North Road	259	401	0.00	1833	0.141	259	0.2	2.388	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	312	136	0.00	2154	0.145	313	0.2	2.015	A
2 - B6166 Castle Gate	680	72	0.00	1843	0.369	681	0.6	3.298	A
3 - B6326 Great North Road	217	335	0.00	1884	0.115	217	0.1	2.255	A

Analysis Set 1 - 2043 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Pedestrian Crossing	1 - B6166 Bar Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	2 - B6166 Castle Gate - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?
Warning	Pedestrian Crossing	3 - B6326 Great North Road - Pedestrian crossing	Pedestrian crossing uses default flow of 0. Is this correct?

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.10	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)
D9	2043 Do Something	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	251	100.000
2 - B6166 Castle Gate		✓	708	100.000
3 - B6326 Great North Road		✓	461	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	0.00
2 - B6166 Castle Gate	0.00
3 - B6326 Great North Road	0.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	151	100
	2 - B6166 Castle Gate	250	0	458
	3 - B6326 Great North Road	196	265	0

Vehicle Mix

Heavy Vehicle Percentages

	To		
	1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From			
1 - B6166 Bar Gate	0	10	8
2 - B6166 Castle Gate	11	0	6
3 - B6326 Great North Road	4	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.14	2.24	0.2	A
2 - B6166 Castle Gate	0.42	3.64	0.8	A
3 - B6326 Great North Road	0.27	2.73	0.4	A

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	189	199	0.00	2103	0.090	189	0.1	2.053	A
2 - B6166 Castle Gate	533	75	0.00	1843	0.289	531	0.4	2.952	A
3 - B6326 Great North Road	347	188	0.00	1910	0.182	346	0.2	2.444	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	226	238	0.00	2072	0.109	226	0.1	2.129	A
2 - B6166 Castle Gate	636	90	0.00	1843	0.345	636	0.6	3.210	A
3 - B6326 Great North Road	414	225	0.00	1910	0.217	414	0.3	2.557	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	276	292	0.00	2029	0.136	276	0.2	2.243	A
2 - B6166 Castle Gate	780	110	0.00	1843	0.423	779	0.8	3.638	A
3 - B6326 Great North Road	508	275	0.00	1910	0.266	507	0.4	2.726	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	276	292	0.00	2028	0.136	276	0.2	2.243	A
2 - B6166 Castle Gate	780	110	0.00	1843	0.423	780	0.8	3.644	A
3 - B6326 Great North Road	508	275	0.00	1910	0.266	508	0.4	2.726	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	226	238	0.00	2071	0.109	226	0.1	2.129	A
2 - B6166 Castle Gate	636	90	0.00	1843	0.345	637	0.6	3.217	A
3 - B6326 Great North Road	414	225	0.00	1910	0.217	415	0.3	2.560	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	189	200	0.00	2103	0.090	189	0.1	2.053	A
2 - B6166 Castle Gate	533	75	0.00	1843	0.289	534	0.4	2.963	A
3 - B6326 Great North Road	347	188	0.00	1910	0.182	347	0.2	2.447	A

Analysis Set 1 - 2043 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - B6166 Bar Gate - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	3 - B6326 Great North Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Last Run	Last Run	2 - B6166 Castle Gate - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queuing to leave the junction in 4 timesegment(s).
Last Run	Last Run	3 - B6326 Great North Road - Capacity	Pedestrian Crossing causes blocking on previous arm due to traffic queuing to leave the junction in 4 timesegment(s).

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	B6166 Bar Gate / B6166 Castle Gate / B6326 Great North Road Roundabout	Standard Roundabout		1, 2, 3	3.97	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)
D10	2043 Do Something	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B6166 Bar Gate		✓	299	100.000
2 - B6166 Castle Gate		✓	743	100.000
3 - B6326 Great North Road		✓	375	100.000

Demand overview (Pedestrians)

Arm	Average pedestrian flow (Ped/hr)
1 - B6166 Bar Gate	75.00
2 - B6166 Castle Gate	75.00
3 - B6326 Great North Road	75.00

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	170	129
	2 - B6166 Castle Gate	285	0	458
	3 - B6326 Great North Road	174	201	0

Vehicle Mix

Heavy Vehicle Percentages

	To			

		1 - B6166 Bar Gate	2 - B6166 Castle Gate	3 - B6326 Great North Road
From	1 - B6166 Bar Gate	0	3	3
	2 - B6166 Castle Gate	4	0	4
	3 - B6326 Great North Road	4	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B6166 Bar Gate	0.16	2.13	0.2	A
2 - B6166 Castle Gate	0.53	5.13	1.2	A
3 - B6326 Great North Road	0.26	3.12	0.4	A

Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	225	151	56.46	2135	0.105	225	0.1	1.941	A
2 - B6166 Castle Gate	559	97	56.46	1730	0.323	557	0.5	3.187	A
3 - B6326 Great North Road	282	214	56.46	1789	0.158	282	0.2	2.495	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	269	181	67.42	2107	0.128	269	0.2	2.017	A
2 - B6166 Castle Gate	668	116	67.42	1660	0.402	667	0.7	3.768	A
3 - B6326 Great North Road	337	256	67.42	1720	0.196	337	0.3	2.720	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	329	221	82.58	2068	0.159	329	0.2	2.132	A
2 - B6166 Castle Gate	818	142	82.58	1548	0.528	816	1.2	5.102	A
3 - B6326 Great North Road	413	313	82.58	1618	0.255	412	0.4	3.122	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	329	221	82.58	2068	0.159	329	0.2	2.132	A
2 - B6166 Castle Gate	818	142	82.58	1547	0.529	818	1.2	5.133	A
3 - B6326 Great North Road	413	314	82.58	1617	0.255	413	0.4	3.124	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	269	181	67.42	2107	0.128	269	0.2	2.019	A
2 - B6166 Castle Gate	668	116	67.42	1658	0.403	670	0.7	3.793	A
3 - B6326 Great North Road	337	257	67.42	1719	0.196	338	0.3	2.726	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Pedestrian demand (Ped/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B6166 Bar Gate	225	151	56.46	2134	0.105	225	0.1	1.943	A
2 - B6166 Castle Gate	559	97	56.46	1729	0.324	560	0.5	3.205	A
3 - B6326 Great North Road	282	215	56.46	1789	0.158	283	0.2	2.500	A

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
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Filename: B6326 Great North Road Ossington Road Mini-Roundabout Modelling 12.11.24.j9

Path: C:\Users\BAR95965\OneDrive - Mott MacDonald\Desktop

Report generation date: 12/11/2024 11:11:40

»Analysis Set 1 - 2019 Base, AM
 »Analysis Set 1 - 2019 Base, PM
 »Analysis Set 1 - 2028 Do Minimum, AM
 »Analysis Set 1 - 2028 Do Minimum, PM
 »Analysis Set 1 - 2028 Do Something, AM
 »Analysis Set 1 - 2028 Do Something, PM
 »Analysis Set 1 - 2043 Do Minimum, AM
 »Analysis Set 1 - 2043 Do Minimum, PM
 »Analysis Set 1 - 2043 Do Something, AM
 »Analysis Set 1 - 2043 Do Something, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Analysis Set 1 - 2019 Base								
1 - B326 Great North Road (North)	0.4	3.67	0.26	A	0.4	3.55	0.27	A
2 - Ossington Way	0.2	5.69	0.15	A	0.2	5.60	0.18	A
3 - B326 Great North Road (South)	2.3	13.32	0.69	B	1.9	11.51	0.65	B
Analysis Set 1 - 2028 Do Minimum								
1 - B326 Great North Road (North)	0.4	3.64	0.25	A	0.3	3.46	0.24	A
2 - Ossington Way	0.2	5.74	0.18	A	0.2	5.48	0.18	A
3 - B326 Great North Road (South)	2.4	13.61	0.69	B	2.1	12.11	0.67	B
Analysis Set 1 - 2028 Do Something								
1 - B326 Great North Road (North)	0.6	4.17	0.35	A	0.5	3.82	0.32	A
2 - Ossington Way	0.3	6.49	0.20	A	0.3	6.02	0.21	A
3 - B326 Great North Road (South)	2.0	12.06	0.66	B	2.1	12.28	0.67	B
Analysis Set 1 - 2043 Do Minimum								
1 - B326 Great North Road (North)	0.3	3.56	0.23	A	0.3	3.36	0.22	A
2 - Ossington Way	0.2	5.62	0.17	A	0.2	5.30	0.16	A
3 - B326 Great North Road (South)	2.2	12.73	0.67	B	1.9	11.48	0.65	B
Analysis Set 1 - 2043 Do Something								
1 - B326 Great North Road (North)	0.6	4.19	0.35	A	0.4	3.66	0.29	A
2 - Ossington Way	0.3	6.52	0.20	A	0.3	5.79	0.20	A
3 - B326 Great North Road (South)	2.0	12.14	0.66	B	2.3	12.98	0.69	B

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

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

File summary

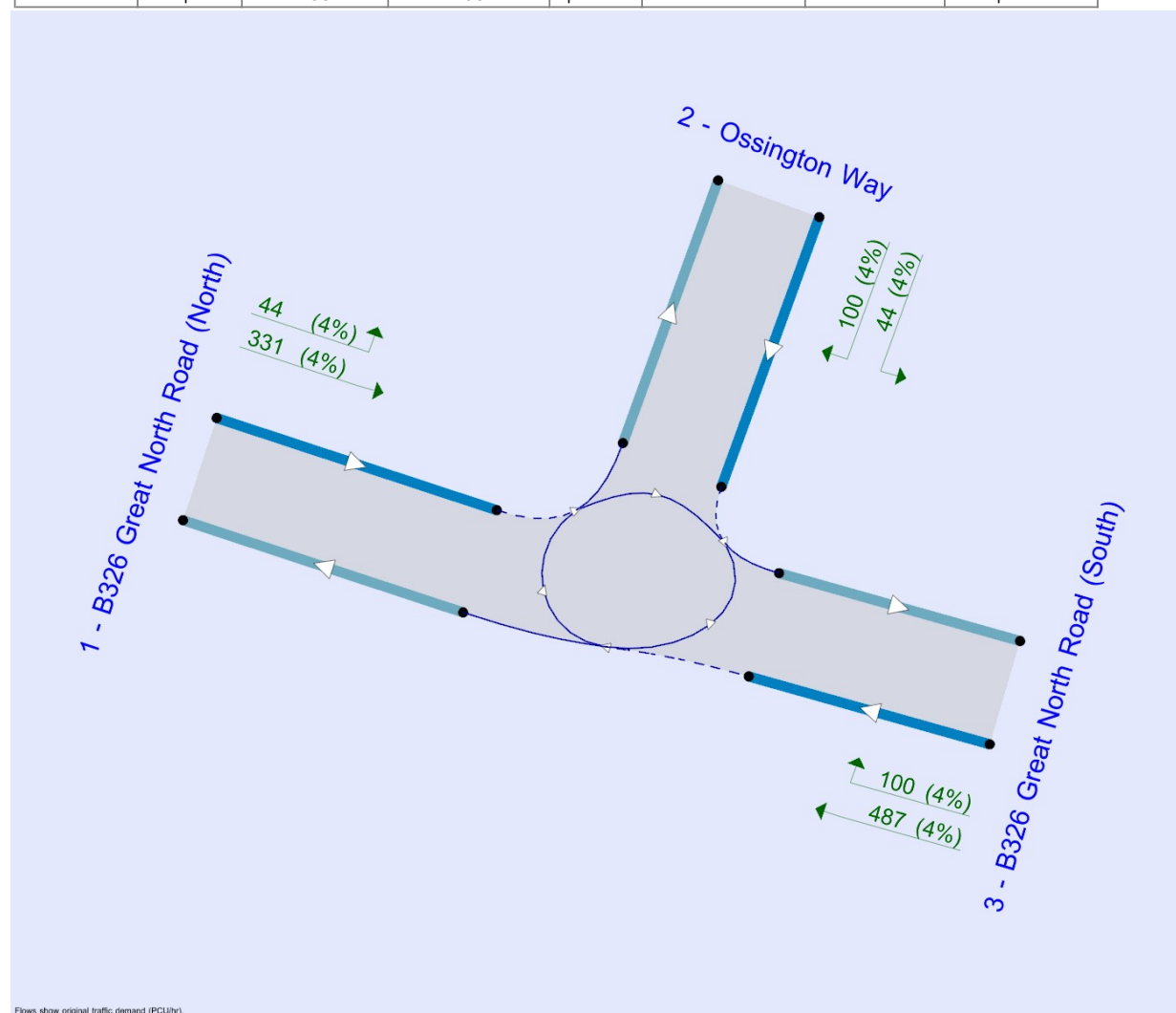
File Description

Title	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout
Location	B6326 Great North Road Ossington Road Mini-Roundabout
Site number	B6326 Great North Road Ossington Road Mini-Roundabout
Date	01/11/2024
Version	
Status	(new file)
Identifier	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout
Client	Nottingham County Council

Jobnumber	100103345
Enumerator	MOTTMAC\BAR95965
Description	Modelling Assessment of the 2019 Baseline, 2028 Do Minimum and 2028 Do Something as well as the 2043 Do Minimum and 2043 Do Something

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

Mini-roundabout model	Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
JUNCTIONS 9			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)
D1	2019 Base	AM	ONE HOUR	08:00	09:30	15
D2	2019 Base	PM	ONE HOUR	17:00	18:30	15
D3	2028 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D4	2028 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D5	2028 Do Something	AM	ONE HOUR	08:00	09:30	15
D6	2028 Do Something	PM	ONE HOUR	17:00	18:30	15
D7	2043 Do Minimum	AM	ONE HOUR	08:00	09:30	15
D8	2043 Do Minimum	PM	ONE HOUR	17:00	18:30	15
D9	2043 Do Something	AM	ONE HOUR	08:00	09:30	15
D10	2043 Do Something	PM	ONE HOUR	17:00	18:30	15

Analysis Set Details

ID	Name	Description	Network flow scaling factor (%)

A1	Analysis Set 1	Junction geometry based on google earth measurements	100.000
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Analysis Set 1 - 2019 Base, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 89% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	9.33	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Arms

Arms

Arm	Name	Description
1	B326 Great North Road (North)	
2	Ossington Way	
3	B326 Great North Road (South)	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1 - B326 Great North Road (North)	3.60	3.25	4.10	16.0	11.20	20.00	0.0	✓
2 - Ossington Way	3.62	3.40	5.30	17.5	10.70	14.30	0.0	✓
3 - B326 Great North Road (South)	3.60	3.05	4.05	27.9	18.80	8.35	0.0	✓

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - B326 Great North Road (North)	0.820	1526
2 - Ossington Way	0.565	1011
3 - B326 Great North Road (South)	0.516	991

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)
D1	2019 Base	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	338	100.000
2 - Ossington Way		✓	112	100.000
3 - B326 Great North Road (South)		✓	582	100.000

Origin-Destination Data

Demand (PCU/hr)

From	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
1 - B326 Great North Road (North)		0	8	330
2 - Ossington Way		104	0	8
3 - B326 Great North Road (South)		478	104	0

Vehicle Mix

Heavy Vehicle Percentages

From	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
1 - B326 Great North Road (North)		0	8	8
2 - Ossington Way		8	0	8
3 - B326 Great North Road (South)		8	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.26	3.67	0.4	A
2 - Ossington Way	0.15	5.69	0.2	A
3 - B326 Great North Road (South)	0.69	13.32	2.3	B

Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	254	78	1463	0.174	254	0.2	3.214	A
2 - Ossington Way	84	248	871	0.097	84	0.1	4.935	A
3 - B326 Great North Road (South)	438	78	951	0.461	435	0.9	7.480	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	304	93	1450	0.210	304	0.3	3.391	A
2 - Ossington Way	101	296	844	0.119	101	0.1	5.231	A
3 - B326 Great North Road (South)	523	93	943	0.555	522	1.3	9.194	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	372	114	1433	0.260	372	0.4	3.664	A
2 - Ossington Way	123	363	806	0.153	123	0.2	5.690	A
3 - B326 Great North Road (South)	641	114	932	0.688	637	2.3	13.009	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	372	114	1432	0.260	372	0.4	3.665	A
2 - Ossington Way	123	363	806	0.153	123	0.2	5.694	A
3 - B326 Great North Road (South)	641	115	932	0.688	641	2.3	13.324	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service

1 - B326 Great North Road (North)	304	94	1449	0.210	304	0.3	3.398	A
2 - Ossington Way	101	297	843	0.119	101	0.1	5.236	A
3 - B326 Great North Road (South)	523	94	943	0.555	527	1.4	9.438	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	254	79	1462	0.174	255	0.2	3.223	A
2 - Ossington Way	84	249	871	0.097	84	0.1	4.946	A
3 - B326 Great North Road (South)	438	78	950	0.461	440	0.9	7.640	A

Analysis Set 1 - 2019 Base, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 86% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.06	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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)
D2	2019 Base	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	351	100.000
2 - Ossington Way		✓	136	100.000
3 - B326 Great North Road (South)		✓	556	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	41	310
	2 - Ossington Way	95	0	41
	3 - B326 Great North Road (South)	461	95	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	4	4
	2 - Ossington Way	4	0	4
	3 - B326 Great North Road (South)	4	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.27	3.55	0.4	A
2 - Ossington Way	0.18	5.60	0.2	A

3 - B326 Great North Road (South)	0.65	11.51	1.9	B
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Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	264	71	1468	0.180	263	0.2	3.106	A
2 - Ossington Way	102	233	880	0.116	102	0.1	4.809	A
3 - B326 Great North Road (South)	419	71	954	0.439	415	0.8	6.910	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	316	85	1457	0.217	315	0.3	3.280	A
2 - Ossington Way	122	278	854	0.143	122	0.2	5.114	A
3 - B326 Great North Road (South)	500	85	947	0.528	498	1.1	8.323	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	386	104	1441	0.268	386	0.4	3.549	A
2 - Ossington Way	150	341	819	0.183	150	0.2	5.594	A
3 - B326 Great North Road (South)	612	104	937	0.653	609	1.9	11.312	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	386	105	1441	0.268	386	0.4	3.550	A
2 - Ossington Way	150	341	818	0.183	150	0.2	5.598	A
3 - B326 Great North Road (South)	612	105	937	0.653	612	1.9	11.511	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	316	86	1456	0.217	316	0.3	3.284	A
2 - Ossington Way	122	279	854	0.143	122	0.2	5.123	A
3 - B326 Great North Road (South)	500	86	947	0.528	503	1.2	8.489	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	264	72	1467	0.180	264	0.2	3.114	A
2 - Ossington Way	102	234	879	0.116	103	0.1	4.820	A
3 - B326 Great North Road (South)	419	72	954	0.439	420	0.8	7.030	A

Analysis Set 1 - 2028 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 87% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	9.48	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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)
D3	2028 Do Minimum	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	330	100.000
2 - Ossington Way		✓	132	100.000
3 - B326 Great North Road (South)		✓	587	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
	1 - B326 Great North Road (North)	0	27	303
	2 - Ossington Way	105	0	27
	3 - B326 Great North Road (South)	482	105	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
	1 - B326 Great North Road (North)	0	8	8
	2 - Ossington Way	8	0	8
	3 - B326 Great North Road (South)	8	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.25	3.64	0.4	A
2 - Ossington Way	0.18	5.74	0.2	A

3 - B326 Great North Road (South)	0.69	13.61	2.4	B
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Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	248	78	1462	0.170	248	0.2	3.200	A
2 - Ossington Way	99	227	883	0.113	99	0.1	4.956	A
3 - B326 Great North Road (South)	442	79	950	0.465	438	0.9	7.538	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	297	94	1449	0.205	296	0.3	3.372	A
2 - Ossington Way	119	272	858	0.138	119	0.2	5.259	A
3 - B326 Great North Road (South)	528	94	942	0.560	526	1.3	9.301	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	363	115	1432	0.254	363	0.4	3.636	A
2 - Ossington Way	145	333	823	0.177	145	0.2	5.734	A
3 - B326 Great North Road (South)	646	115	931	0.694	642	2.3	13.265	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	363	116	1432	0.254	363	0.4	3.638	A
2 - Ossington Way	145	334	823	0.177	145	0.2	5.738	A
3 - B326 Great North Road (South)	646	116	931	0.694	646	2.4	13.605	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	297	95	1448	0.205	297	0.3	3.377	A
2 - Ossington Way	119	273	857	0.138	119	0.2	5.269	A
3 - B326 Great North Road (South)	528	95	942	0.560	532	1.4	9.560	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	248	79	1461	0.170	249	0.2	3.206	A
2 - Ossington Way	99	228	882	0.113	100	0.1	4.969	A
3 - B326 Great North Road (South)	442	79	950	0.465	444	1.0	7.707	A

Analysis Set 1 - 2028 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 86% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.55	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Do Minimum	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	316	100.000
2 - Ossington Way		✓	134	100.000
3 - B326 Great North Road (South)		✓	567	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	37	279
	2 - Ossington Way	97	0	37
	3 - B326 Great North Road (South)	470	97	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	5	5
	2 - Ossington Way	5	0	5
	3 - B326 Great North Road (South)	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.24	3.46	0.3	A
2 - Ossington Way	0.18	5.48	0.2	A

3 - B326 Great North Road (South)	0.67	12.11	2.1	B
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Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	238	72	1467	0.162	237	0.2	3.072	A
2 - Ossington Way	101	209	893	0.113	100	0.1	4.765	A
3 - B326 Great North Road (South)	427	73	953	0.448	424	0.8	7.090	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	284	87	1455	0.195	284	0.3	3.227	A
2 - Ossington Way	120	251	870	0.139	120	0.2	5.044	A
3 - B326 Great North Road (South)	510	87	946	0.539	508	1.2	8.606	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	348	106	1439	0.242	348	0.3	3.462	A
2 - Ossington Way	148	307	838	0.176	147	0.2	5.472	A
3 - B326 Great North Road (South)	624	107	936	0.667	621	2.0	11.876	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	348	107	1439	0.242	348	0.3	3.464	A
2 - Ossington Way	148	307	838	0.176	148	0.2	5.476	A
3 - B326 Great North Road (South)	624	107	936	0.667	624	2.1	12.111	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	284	88	1454	0.195	284	0.3	3.230	A
2 - Ossington Way	120	251	869	0.139	121	0.2	5.051	A
3 - B326 Great North Road (South)	510	87	946	0.539	513	1.3	8.798	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	238	73	1466	0.162	238	0.2	3.077	A
2 - Ossington Way	101	210	893	0.113	101	0.1	4.777	A
3 - B326 Great North Road (South)	427	73	953	0.448	428	0.9	7.226	A

Analysis Set 1 - 2028 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 88% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.26	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2028 Do Something	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	457	100.000
2 - Ossington Way		✓	138	100.000
3 - B326 Great North Road (South)		✓	556	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
From		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
	1 - B326 Great North Road (North)	0	38	419
	2 - Ossington Way	100	0	38
	3 - B326 Great North Road (South)	456	100	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
From		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
	1 - B326 Great North Road (North)	0	8	8
	2 - Ossington Way	8	0	8
	3 - B326 Great North Road (South)	8	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.35	4.17	0.6	A
2 - Ossington Way	0.20	6.49	0.3	A

3 - B326 Great North Road (South)	0.66	12.06	2.0	B
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Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	344	75	1465	0.235	343	0.3	3.461	A
2 - Ossington Way	104	314	834	0.125	103	0.2	5.318	A
3 - B326 Great North Road (South)	419	75	952	0.440	415	0.8	7.195	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	411	90	1453	0.283	410	0.4	3.730	A
2 - Ossington Way	124	376	799	0.155	124	0.2	5.760	A
3 - B326 Great North Road (South)	500	90	945	0.529	498	1.2	8.685	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	503	110	1437	0.350	503	0.6	4.160	A
2 - Ossington Way	152	461	751	0.202	152	0.3	6.485	A
3 - B326 Great North Road (South)	612	110	934	0.655	609	2.0	11.838	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	503	110	1436	0.350	503	0.6	4.167	A
2 - Ossington Way	152	461	751	0.202	152	0.3	6.493	A
3 - B326 Great North Road (South)	612	110	934	0.655	612	2.0	12.057	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	411	90	1452	0.283	411	0.4	3.740	A
2 - Ossington Way	124	377	798	0.155	124	0.2	5.772	A
3 - B326 Great North Road (South)	500	90	944	0.529	503	1.2	8.869	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	344	76	1464	0.235	344	0.3	3.474	A
2 - Ossington Way	104	316	833	0.125	104	0.2	5.337	A
3 - B326 Great North Road (South)	419	75	952	0.440	420	0.9	7.332	A

Analysis Set 1 - 2028 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 87% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.37	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Do Something	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	416	100.000
2 - Ossington Way		✓	146	100.000
3 - B326 Great North Road (South)		✓	573	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	48	368
	2 - Ossington Way	98	0	48
	3 - B326 Great North Road (South)	475	98	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	4	4
	2 - Ossington Way	4	0	4
	3 - B326 Great North Road (South)	4	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.32	3.82	0.5	A
2 - Ossington Way	0.21	6.02	0.3	A

3 - B326 Great North Road (South)	0.67	12.28	2.1	B
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Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	313	73	1466	0.214	312	0.3	3.240	A
2 - Ossington Way	110	276	855	0.129	109	0.2	5.014	A
3 - B326 Great North Road (South)	431	73	953	0.453	428	0.8	7.086	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	374	88	1454	0.257	374	0.4	3.464	A
2 - Ossington Way	131	331	825	0.159	131	0.2	5.397	A
3 - B326 Great North Road (South)	515	88	946	0.545	514	1.2	8.641	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	458	107	1438	0.318	458	0.5	3.815	A
2 - Ossington Way	161	405	783	0.205	160	0.3	6.015	A
3 - B326 Great North Road (South)	631	108	935	0.675	627	2.1	12.025	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	458	108	1438	0.319	458	0.5	3.819	A
2 - Ossington Way	161	405	782	0.205	161	0.3	6.022	A
3 - B326 Great North Road (South)	631	108	935	0.675	631	2.1	12.276	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	374	89	1454	0.257	374	0.4	3.470	A
2 - Ossington Way	131	331	824	0.159	132	0.2	5.409	A
3 - B326 Great North Road (South)	515	88	945	0.545	518	1.3	8.840	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	313	74	1466	0.214	313	0.3	3.249	A
2 - Ossington Way	110	277	855	0.129	110	0.2	5.031	A
3 - B326 Great North Road (South)	431	74	953	0.453	433	0.9	7.226	A

Analysis Set 1 - 2043 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 87% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	9.04	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2043 Do Minimum	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	303	100.000
2 - Ossington Way		✓	127	100.000
3 - B326 Great North Road (South)		✓	568	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	25	278
	2 - Ossington Way	102	0	25
	3 - B326 Great North Road (South)	466	102	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	9	9
	2 - Ossington Way	9	0	9
	3 - B326 Great North Road (South)	9	9	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.23	3.56	0.3	A
2 - Ossington Way	0.17	5.62	0.2	A

3 - B326 Great North Road (South)	0.67	12.73	2.2	B
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Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	228	76	1464	0.156	227	0.2	3.172	A
2 - Ossington Way	96	209	893	0.107	95	0.1	4.911	A
3 - B326 Great North Road (South)	428	76	951	0.449	424	0.9	7.392	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	272	91	1451	0.188	272	0.3	3.327	A
2 - Ossington Way	114	250	870	0.131	114	0.2	5.189	A
3 - B326 Great North Road (South)	511	92	944	0.541	509	1.3	8.997	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	334	112	1435	0.233	333	0.3	3.562	A
2 - Ossington Way	140	306	839	0.167	140	0.2	5.613	A
3 - B326 Great North Road (South)	625	112	933	0.670	622	2.1	12.469	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	334	112	1434	0.233	334	0.3	3.564	A
2 - Ossington Way	140	306	838	0.167	140	0.2	5.616	A
3 - B326 Great North Road (South)	625	112	933	0.670	625	2.2	12.731	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	272	92	1451	0.188	273	0.3	3.333	A
2 - Ossington Way	114	250	870	0.131	114	0.2	5.196	A
3 - B326 Great North Road (South)	511	92	944	0.541	514	1.3	9.210	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	228	77	1463	0.156	228	0.2	3.177	A
2 - Ossington Way	96	209	893	0.107	96	0.1	4.924	A
3 - B326 Great North Road (South)	428	77	951	0.450	429	0.9	7.540	A

Analysis Set 1 - 2043 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 86% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.26	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	Normal/unknown	

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2043 Do Minimum	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	287	100.000
2 - Ossington Way		✓	127	100.000
3 - B326 Great North Road (South)		✓	553	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	33	254
	2 - Ossington Way	94	0	33
	3 - B326 Great North Road (South)	459	94	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	5	5
	2 - Ossington Way	5	0	5
	3 - B326 Great North Road (South)	5	5	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.22	3.36	0.3	A
2 - Ossington Way	0.16	5.30	0.2	A

3 - B326 Great North Road (South)	0.65	11.48	1.9	B
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Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	216	70	1469	0.147	215	0.2	3.014	A
2 - Ossington Way	96	191	904	0.106	95	0.1	4.672	A
3 - B326 Great North Road (South)	416	70	955	0.436	413	0.8	6.942	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	258	84	1457	0.177	258	0.2	3.151	A
2 - Ossington Way	114	228	882	0.129	114	0.2	4.920	A
3 - B326 Great North Road (South)	497	84	947	0.525	496	1.1	8.344	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	316	103	1442	0.219	316	0.3	3.356	A
2 - Ossington Way	140	279	853	0.164	140	0.2	5.294	A
3 - B326 Great North Road (South)	609	103	938	0.649	606	1.9	11.291	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	316	103	1441	0.219	316	0.3	3.357	A
2 - Ossington Way	140	280	853	0.164	140	0.2	5.297	A
3 - B326 Great North Road (South)	609	103	938	0.649	609	1.9	11.485	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	258	85	1457	0.177	258	0.2	3.156	A
2 - Ossington Way	114	229	882	0.129	114	0.2	4.925	A
3 - B326 Great North Road (South)	497	85	947	0.525	500	1.2	8.508	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	216	71	1468	0.147	216	0.2	3.019	A
2 - Ossington Way	96	191	903	0.106	96	0.1	4.681	A
3 - B326 Great North Road (South)	416	71	954	0.436	418	0.8	7.062	A

Analysis Set 1 - 2043 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 88% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.30	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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)
D9	2043 Do Something	AM	ONE HOUR	08:00	09:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	461	100.000
2 - Ossington Way		✓	138	100.000
3 - B326 Great North Road (South)		✓	558	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	38	423
	2 - Ossington Way	100	0	38
	3 - B326 Great North Road (South)	458	100	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	8	8
	2 - Ossington Way	8	0	8
	3 - B326 Great North Road (South)	8	8	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.35	4.19	0.6	A
2 - Ossington Way	0.20	6.52	0.3	A

3 - B326 Great North Road (South)	0.66	12.14	2.0	B
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Main Results for each time segment

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	347	75	1465	0.237	346	0.3	3.468	A
2 - Ossington Way	104	317	832	0.125	103	0.2	5.330	A
3 - B326 Great North Road (South)	420	75	952	0.441	417	0.8	7.216	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	414	90	1453	0.285	414	0.4	3.743	A
2 - Ossington Way	124	380	797	0.156	124	0.2	5.778	A
3 - B326 Great North Road (South)	502	90	945	0.531	500	1.2	8.720	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	508	110	1437	0.353	507	0.6	4.180	A
2 - Ossington Way	152	465	748	0.203	152	0.3	6.512	A
3 - B326 Great North Road (South)	614	110	934	0.658	611	2.0	11.916	B

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	508	110	1436	0.353	508	0.6	4.187	A
2 - Ossington Way	152	466	748	0.203	152	0.3	6.521	A
3 - B326 Great North Road (South)	614	110	934	0.658	614	2.0	12.140	B

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	414	90	1452	0.285	415	0.4	3.753	A
2 - Ossington Way	124	381	796	0.156	124	0.2	5.789	A
3 - B326 Great North Road (South)	502	90	944	0.531	505	1.2	8.905	A

09:15 - 09:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	347	76	1464	0.237	347	0.3	3.484	A
2 - Ossington Way	104	319	831	0.125	104	0.2	5.350	A
3 - B326 Great North Road (South)	420	75	952	0.441	422	0.9	7.351	A

Analysis Set 1 - 2043 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 1 and 3 have 86% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	NCC Model - B6326 Great North Road Ossington Road Mini-Roundabout	Mini-roundabout		1, 2, 3	8.88	A

Junction Network Options

Driving side	Lighting	Road surface	In London
Left	Normal/unknown	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)
D10	2043 Do Something	PM	ONE HOUR	17:00	18:30	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - B326 Great North Road (North)		✓	375	100.000
2 - Ossington Way		✓	144	100.000
3 - B326 Great North Road (South)		✓	587	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	44	331
	2 - Ossington Way	100	0	44
	3 - B326 Great North Road (South)	487	100	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1 - B326 Great North Road (North)	2 - Ossington Way	3 - B326 Great North Road (South)
From	1 - B326 Great North Road (North)	0	4	4
	2 - Ossington Way	4	0	4
	3 - B326 Great North Road (South)	4	4	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - B326 Great North Road (North)	0.29	3.66	0.4	A
2 - Ossington Way	0.20	5.79	0.3	A

3 - B326 Great North Road (South)	0.69	12.98	2.3	B
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Main Results for each time segment

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	282	75	1465	0.193	281	0.2	3.159	A
2 - Ossington Way	108	248	871	0.124	108	0.1	4.903	A
3 - B326 Great North Road (South)	442	75	952	0.464	438	0.9	7.237	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	337	90	1453	0.232	337	0.3	3.354	A
2 - Ossington Way	129	297	843	0.154	129	0.2	5.242	A
3 - B326 Great North Road (South)	528	90	945	0.559	526	1.3	8.910	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	413	109	1437	0.287	412	0.4	3.653	A
2 - Ossington Way	159	364	806	0.197	158	0.3	5.781	A
3 - B326 Great North Road (South)	646	110	934	0.692	643	2.2	12.668	B

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	413	110	1436	0.288	413	0.4	3.658	A
2 - Ossington Way	159	364	805	0.197	159	0.3	5.787	A
3 - B326 Great North Road (South)	646	110	934	0.692	646	2.3	12.977	B

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	337	91	1452	0.232	338	0.3	3.362	A
2 - Ossington Way	129	298	843	0.154	130	0.2	5.252	A
3 - B326 Great North Road (South)	528	90	944	0.559	531	1.3	9.147	A

18:15 - 18:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - B326 Great North Road (North)	282	76	1464	0.193	283	0.2	3.168	A
2 - Ossington Way	108	249	870	0.125	109	0.1	4.917	A
3 - B326 Great North Road (South)	442	75	952	0.464	444	0.9	7.389	A

Junctions 9			
ARCADY 9 - Roundabout Module			
Version: 9.5.0.6896 © Copyright TRL Limited, 2018			
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Filename: Stapleford Lane A17 Beckingham Road Beckingham Road A17 West 12.11.24.j9

Path: C:\Users\BAR95965\OneDrive - Mott MacDonald\Desktop

Report generation date: 12/11/2024 16:04:45

»Analysis Set 1 - 2019, AM
 »Analysis Set 1 - 2019, PM
 »Analysis Set 1 - 2028 Do Minimum, AM
 »Analysis Set 1 - 2028 Do Minimum, PM
 »Analysis Set 1 - 2028 Do Something, AM
 »Analysis Set 1 - 2028 Do Something, PM
 »Analysis Set 1 - 2043 Do Minimum, AM
 »Analysis Set 1 - 2043 Do Minimum, PM
 »Analysis Set 1 - 2043 Do Something, AM
 »Analysis Set 1 - 2043 Do Something, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Analysis Set 1 - 2019								
1 - Stapleford Lane	0.2	5.58	0.17	A	0.1	5.03	0.10	A
2 - A17 Beckingham Road	1.2	4.88	0.52	A	1.1	4.47	0.51	A
3 - Beckingham Road	0.3	2.99	0.23	A	0.4	3.01	0.26	A
4 - A17 west	0.7	4.02	0.38	A	0.7	3.89	0.38	A
Analysis Set 1 - 2028 Do Minimum								
1 - Stapleford Lane	0.2	5.40	0.17	A	0.1	4.85	0.10	A
2 - A17 Beckingham Road	0.9	4.26	0.44	A	0.9	4.13	0.46	A
3 - Beckingham Road	0.4	3.10	0.30	A	0.4	2.91	0.29	A
4 - A17 west	0.5	3.95	0.29	A	0.5	3.74	0.31	A
Analysis Set 1 - 2028 Do Something								
1 - Stapleford Lane	0.2	5.56	0.14	A	0.1	5.13	0.09	A
2 - A17 Beckingham Road	1.7	5.77	0.59	A	1.3	4.92	0.55	A
3 - Beckingham Road	0.3	3.58	0.25	A	0.4	3.27	0.29	A
4 - A17 west	1.0	4.34	0.48	A	1.0	4.32	0.48	A
Analysis Set 1 - 2043 Do Minimum								
1 - Stapleford Lane	0.4	6.66	0.26	A	0.2	5.53	0.13	A
2 - A17 Beckingham Road	1.1	4.78	0.49	A	1.0	4.41	0.49	A
3 - Beckingham Road	0.6	3.51	0.38	A	0.6	3.26	0.35	A
4 - A17 west	0.5	4.36	0.29	A	0.6	4.12	0.34	A
Analysis Set 1 - 2043 Do Something								
1 - Stapleford Lane	0.2	6.52	0.18	A	0.1	5.74	0.11	A
2 - A17 Beckingham Road	2.0	6.44	0.64	A	1.7	5.73	0.61	A
3 - Beckingham Road	0.3	3.75	0.24	A	0.4	3.65	0.31	A
4 - A17 west	1.4	5.12	0.56	A	1.3	4.95	0.55	A

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

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

File summary

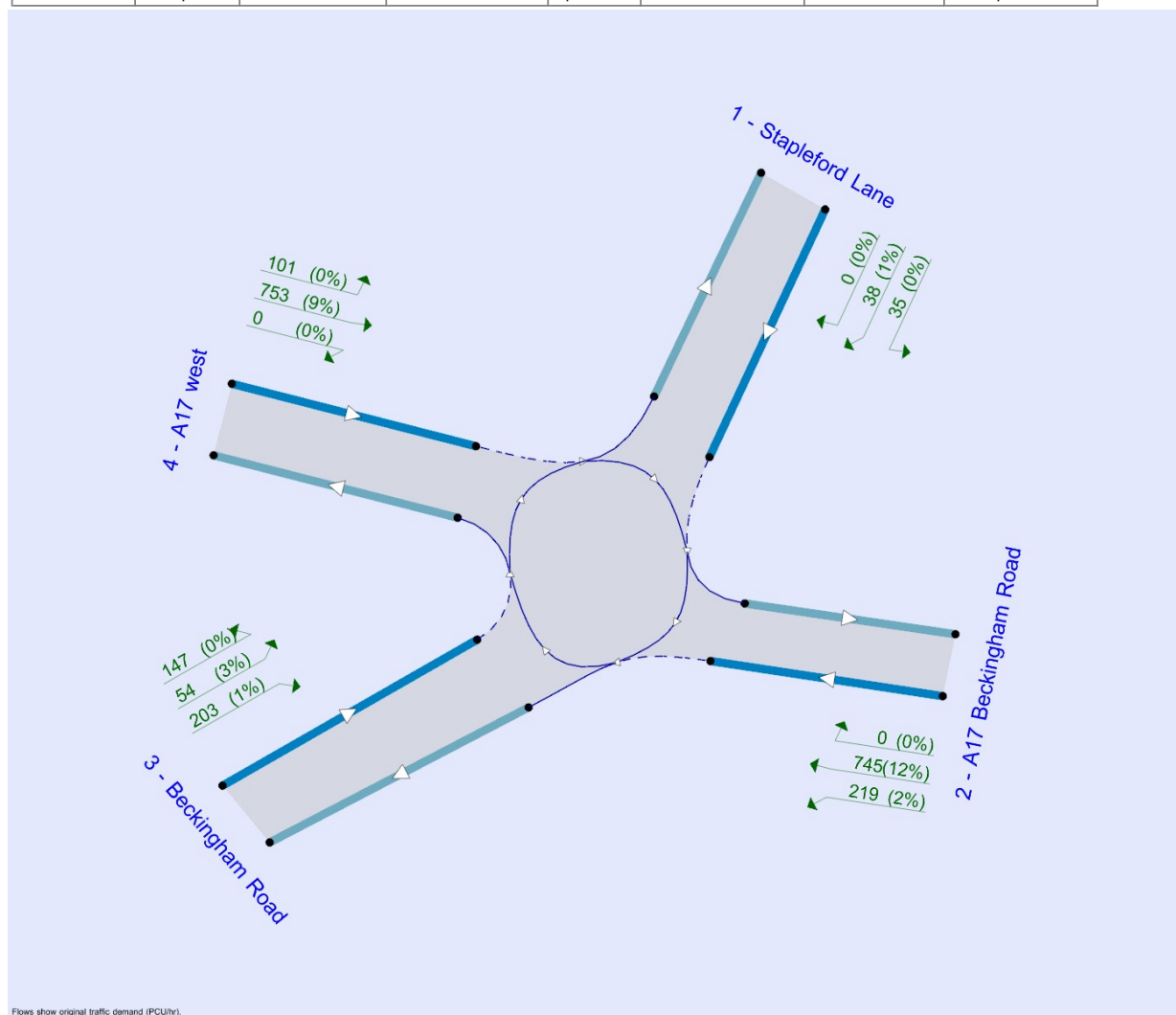
File Description

Title	NCC Model - Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout
Location	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout
Site number	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout

Date	11/11/2024
Version	
Status	(new file)
Identifier	NCC Model - Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout
Client	
Jobnumber	100103345
Enumerator	MOTTMAC\BAR95965
Description	Modelling Assessment of the 2019 Baseline, 2028 Do Minimum and 2028 Do Something as well as the 2043 Do Minimum and 2043 Do Something

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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D2	2019	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D3	2028 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D4	2028 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D5	2028 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

D6	2028 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D7	2043 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D8	2043 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D9	2043 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D10	2043 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Analysis Set 1	100.000

Analysis Set 1 - 2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	4.31	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Stapleford Lane	
2	A17 Beckingham Road	
3	Beckingham Road	
4	A17 west	

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 - Stapleford Lane	2.65	5.05	15.4	25.0	24.8	20.0	
2 - A17 Beckingham Road	3.00	7.00	27.6	25.0	35.7	26.0	
3 - Beckingham Road	3.25	7.90	33.2	24.0	23.8	18.0	
4 - A17 west	3.60	6.70	30.0	53.5	24.5	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Stapleford Lane	0.603	1345
2 - A17 Beckingham Road	0.673	1778
3 - Beckingham Road	0.752	2056
4 - A17 west	0.734	1933

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	123	100.000

2 - A17 Beckingham Road		✓	828	100.000
3 - Beckingham Road		✓	341	100.000
4 - A17 west		✓	582	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	78	45	0
	2 - A17 Beckingham Road	0	0	322	506
	3 - Beckingham Road	19	293	0	29
	4 - A17 west	48	534	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	7	0
	2 - A17 Beckingham Road	0	0	7	17
	3 - Beckingham Road	7	5	0	0
	4 - A17 west	0	18	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.17	5.58	0.2	A
2 - A17 Beckingham Road	0.52	4.88	1.2	A
3 - Beckingham Road	0.23	2.99	0.3	A
4 - A17 west	0.38	4.02	0.7	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	93	621	971	0.095	92	0.1	4.193	A
2 - A17 Beckingham Road	623	34	1755	0.355	621	0.6	3.575	A
3 - Beckingham Road	257	379	1770	0.145	256	0.2	2.486	A
4 - A17 west	438	234	1761	0.249	437	0.4	3.158	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	111	743	898	0.123	110	0.1	4.686	A
2 - A17 Beckingham Road	744	40	1751	0.425	744	0.8	4.031	A
3 - Beckingham Road	307	454	1714	0.179	306	0.2	2.676	A
4 - A17 west	523	280	1727	0.303	523	0.5	3.473	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	135	909	797	0.170	135	0.2	5.568	A
2 - A17 Beckingham Road	912	49	1745	0.522	910	1.2	4.860	A
3 - Beckingham Road	375	556	1638	0.229	375	0.3	2.984	A
4 - A17 west	641	343	1681	0.381	640	0.7	4.017	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	135	911	796	0.170	135	0.2	5.578	A

2 - A17 Beckingham Road	912	50	1745	0.523	912	1.2	4.878	A
3 - Beckingham Road	375	557	1637	0.229	375	0.3	2.986	A
4 - A17 west	641	344	1681	0.381	641	0.7	4.025	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	111	744	897	0.123	111	0.1	4.696	A
2 - A17 Beckingham Road	744	41	1751	0.425	746	0.8	4.052	A
3 - Beckingham Road	307	456	1713	0.179	307	0.2	2.681	A
4 - A17 west	523	281	1727	0.303	524	0.5	3.481	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	93	623	970	0.095	93	0.1	4.207	A
2 - A17 Beckingham Road	623	34	1755	0.355	624	0.6	3.598	A
3 - Beckingham Road	257	381	1769	0.145	257	0.2	2.492	A
4 - A17 west	438	235	1760	0.249	439	0.4	3.170	A

Analysis Set 1 - 2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	4.00	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	77	100.000
2 - A17 Beckingham Road		✓	804	100.000
3 - Beckingham Road		✓	397	100.000
4 - A17 west		✓	573	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	36	41	0
	2 - A17 Beckingham Road	0	0	318	486
	3 - Beckingham Road	47	300	0	50
	4 - A17 west	63	510	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	2	0
	2 - A17 Beckingham Road	0	0	3	10
	3 - Beckingham Road	3	2	0	0
	4 - A17 west	0	12	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.10	5.03	0.1	A
2 - A17 Beckingham Road	0.51	4.47	1.1	A
3 - Beckingham Road	0.26	3.01	0.4	A
4 - A17 west	0.38	3.89	0.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	58	608	979	0.059	58	0.1	3.948	A
2 - A17 Beckingham Road	605	31	1757	0.344	603	0.6	3.335	A
3 - Beckingham Road	299	365	1782	0.168	298	0.2	2.470	A
4 - A17 west	431	261	1742	0.248	430	0.4	3.031	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	69	728	907	0.076	69	0.1	4.343	A
2 - A17 Beckingham Road	723	37	1753	0.412	722	0.7	3.738	A
3 - Beckingham Road	357	436	1728	0.207	357	0.3	2.674	A
4 - A17 west	515	312	1704	0.302	515	0.5	3.346	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	85	891	808	0.105	85	0.1	5.027	A
2 - A17 Beckingham Road	885	45	1748	0.506	884	1.1	4.456	A
3 - Beckingham Road	437	534	1654	0.264	437	0.4	3.012	A
4 - A17 west	631	382	1653	0.382	630	0.7	3.888	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	85	892	808	0.105	85	0.1	5.031	A
2 - A17 Beckingham Road	885	45	1748	0.507	885	1.1	4.470	A
3 - Beckingham Road	437	535	1653	0.264	437	0.4	3.014	A
4 - A17 west	631	382	1652	0.382	631	0.7	3.895	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	69	729	906	0.076	69	0.1	4.349	A
2 - A17 Beckingham Road	723	37	1753	0.412	724	0.8	3.754	A
3 - Beckingham Road	357	438	1727	0.207	357	0.3	2.680	A
4 - A17 west	515	312	1704	0.302	516	0.5	3.352	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	58	610	977	0.059	58	0.1	3.958	A
2 - A17 Beckingham Road	605	31	1757	0.344	606	0.6	3.351	A
3 - Beckingham Road	299	366	1780	0.168	299	0.2	2.475	A
4 - A17 west	431	261	1741	0.248	432	0.4	3.040	A

Analysis Set 1 - 2028 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	3.95	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	126	100.000
2 - A17 Beckingham Road		✓	695	100.000
3 - Beckingham Road		✓	472	100.000
4 - A17 west		✓	416	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
From		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
	1 - Stapleford Lane	0	69	55	2
	2 - A17 Beckingham Road	0	0	314	381
	3 - Beckingham Road	13	425	0	34
	4 - A17 west	51	365	0	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
From		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
	1 - Stapleford Lane	0	0	5	22
	2 - A17 Beckingham Road	0	0	3	27
	3 - Beckingham Road	15	5	0	0
	4 - A17 west	0	27	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.17	5.40	0.2	A
2 - A17 Beckingham Road	0.44	4.26	0.9	A
3 - Beckingham Road	0.30	3.10	0.4	A
4 - A17 west	0.29	3.95	0.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	95	593	988	0.096	94	0.1	4.124	A
2 - A17 Beckingham Road	523	43	1749	0.299	521	0.5	3.362	A
3 - Beckingham Road	355	287	1840	0.193	354	0.3	2.541	A
4 - A17 west	313	329	1691	0.185	312	0.3	3.205	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	113	710	918	0.123	113	0.1	4.583	A
2 - A17 Beckingham Road	625	51	1744	0.358	624	0.6	3.693	A
3 - Beckingham Road	424	344	1797	0.236	424	0.3	2.749	A
4 - A17 west	374	393	1644	0.227	374	0.4	3.483	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	139	869	822	0.169	138	0.2	5.396	A
2 - A17 Beckingham Road	765	63	1736	0.441	764	0.9	4.252	A
3 - Beckingham Road	520	421	1739	0.299	519	0.4	3.093	A
4 - A17 west	458	482	1579	0.290	457	0.5	3.943	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	139	870	821	0.169	139	0.2	5.403	A
2 - A17 Beckingham Road	765	63	1736	0.441	765	0.9	4.261	A
3 - Beckingham Road	520	422	1739	0.299	520	0.4	3.096	A
4 - A17 west	458	482	1579	0.290	458	0.5	3.948	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	113	711	917	0.124	114	0.1	4.593	A
2 - A17 Beckingham Road	625	51	1744	0.358	626	0.6	3.706	A
3 - Beckingham Road	424	345	1796	0.236	425	0.3	2.755	A
4 - A17 west	374	394	1643	0.228	375	0.4	3.488	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	95	595	987	0.096	95	0.1	4.137	A
2 - A17 Beckingham Road	523	43	1749	0.299	524	0.5	3.379	A
3 - Beckingham Road	355	289	1839	0.193	356	0.3	2.545	A
4 - A17 west	313	330	1691	0.185	314	0.3	3.216	A

Analysis Set 1 - 2028 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	3.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	73	100.000
2 - A17 Beckingham Road		✓	731	100.000
3 - Beckingham Road		✓	457	100.000
4 - A17 west		✓	451	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	34	38	1
	2 - A17 Beckingham Road	0	0	367	364
	3 - Beckingham Road	36	379	0	42
	4 - A17 west	62	389	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	3	16
	2 - A17 Beckingham Road	0	0	1	17
	3 - Beckingham Road	2	1	0	0
	4 - A17 west	0	17	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.10	4.85	0.1	A
2 - A17 Beckingham Road	0.46	4.13	0.9	A
3 - Beckingham Road	0.29	2.91	0.4	A
4 - A17 west	0.31	3.74	0.5	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	55	576	998	0.055	55	0.1	3.882	A
2 - A17 Beckingham Road	550	29	1758	0.313	548	0.5	3.218	A
3 - Beckingham Road	344	274	1850	0.186	343	0.2	2.412	A
4 - A17 west	340	312	1704	0.199	338	0.3	3.010	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	66	690	930	0.071	66	0.1	4.239	A
2 - A17 Beckingham Road	657	35	1755	0.375	657	0.6	3.551	A
3 - Beckingham Road	411	328	1809	0.227	411	0.3	2.599	A
4 - A17 west	405	373	1659	0.244	405	0.4	3.282	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	80	845	836	0.096	80	0.1	4.845	A
2 - A17 Beckingham Road	805	43	1749	0.460	804	0.9	4.123	A
3 - Beckingham Road	503	401	1754	0.287	503	0.4	2.906	A
4 - A17 west	497	457	1598	0.311	496	0.5	3.733	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	80	846	836	0.096	80	0.1	4.848	A
2 - A17 Beckingham Road	805	43	1749	0.460	805	0.9	4.131	A
3 - Beckingham Road	503	402	1753	0.287	503	0.4	2.906	A
4 - A17 west	497	457	1597	0.311	497	0.5	3.737	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	66	691	929	0.071	66	0.1	4.246	A
2 - A17 Beckingham Road	657	35	1754	0.375	658	0.7	3.564	A
3 - Beckingham Road	411	329	1809	0.227	411	0.3	2.602	A
4 - A17 west	405	373	1659	0.244	406	0.4	3.286	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	55	579	997	0.055	55	0.1	3.891	A
2 - A17 Beckingham Road	550	29	1758	0.313	551	0.5	3.235	A
3 - Beckingham Road	344	275	1849	0.186	344	0.2	2.418	A
4 - A17 west	340	313	1703	0.199	340	0.3	3.018	A

Analysis Set 1 - 2028 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	4.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2028 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	98	100.000
2 - A17 Beckingham Road		✓	948	100.000
3 - Beckingham Road		✓	313	100.000
4 - A17 west		✓	774	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	67	31	0
	2 - A17 Beckingham Road	0	0	155	793
	3 - Beckingham Road	16	174	0	123
	4 - A17 west	71	703	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	4	0
	2 - A17 Beckingham Road	0	0	5	16
	3 - Beckingham Road	10	8	0	0
	4 - A17 west	1	13	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.14	5.56	0.2	A
2 - A17 Beckingham Road	0.59	5.77	1.7	A
3 - Beckingham Road	0.25	3.58	0.3	A
4 - A17 west	0.48	4.34	1.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	74	658	949	0.078	73	0.1	4.163	A
2 - A17 Beckingham Road	714	23	1762	0.405	711	0.8	3.893	A
3 - Beckingham Road	236	594	1609	0.146	235	0.2	2.744	A
4 - A17 west	583	143	1828	0.319	581	0.5	3.220	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	88	788	871	0.101	88	0.1	4.657	A
2 - A17 Beckingham Road	852	28	1759	0.484	851	1.1	4.515	A
3 - Beckingham Road	281	712	1520	0.185	281	0.2	3.044	A
4 - A17 west	696	171	1808	0.385	695	0.7	3.616	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	108	964	764	0.141	108	0.2	5.550	A
2 - A17 Beckingham Road	1044	34	1755	0.595	1041	1.6	5.734	A
3 - Beckingham Road	345	871	1401	0.246	344	0.3	3.568	A
4 - A17 west	852	209	1779	0.479	851	1.0	4.327	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	108	966	763	0.141	108	0.2	5.559	A
2 - A17 Beckingham Road	1044	34	1755	0.595	1044	1.7	5.771	A
3 - Beckingham Road	345	873	1399	0.246	345	0.3	3.576	A
4 - A17 west	852	209	1779	0.479	852	1.0	4.340	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	88	790	869	0.101	88	0.1	4.667	A
2 - A17 Beckingham Road	852	28	1759	0.484	855	1.1	4.549	A
3 - Beckingham Road	281	715	1518	0.185	282	0.2	3.053	A
4 - A17 west	696	171	1807	0.385	697	0.7	3.630	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	74	661	947	0.078	74	0.1	4.174	A
2 - A17 Beckingham Road	714	23	1762	0.405	715	0.8	3.923	A
3 - Beckingham Road	236	598	1606	0.147	236	0.2	2.755	A
4 - A17 west	583	143	1828	0.319	583	0.5	3.235	A

Analysis Set 1 - 2028 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	4.39	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	61	100.000
2 - A17 Beckingham Road		✓	875	100.000
3 - Beckingham Road		✓	405	100.000
4 - A17 west		✓	750	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	34	27	0
	2 - A17 Beckingham Road	0	0	268	607
	3 - Beckingham Road	35	215	0	155
	4 - A17 west	100	650	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	1	0
	2 - A17 Beckingham Road	0	0	2	12
	3 - Beckingham Road	2	1	0	0
	4 - A17 west	0	10	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.09	5.13	0.1	A
2 - A17 Beckingham Road	0.55	4.92	1.3	A
3 - Beckingham Road	0.29	3.27	0.4	A
4 - A17 west	0.48	4.32	1.0	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	46	649	954	0.048	46	0.1	3.979	A
2 - A17 Beckingham Road	659	20	1764	0.373	656	0.6	3.525	A
3 - Beckingham Road	305	455	1713	0.178	304	0.2	2.571	A
4 - A17 west	565	188	1795	0.315	563	0.5	3.165	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	55	777	877	0.063	55	0.1	4.397	A
2 - A17 Beckingham Road	787	24	1762	0.446	786	0.9	4.007	A
3 - Beckingham Road	364	545	1646	0.221	364	0.3	2.827	A
4 - A17 west	674	225	1768	0.381	674	0.7	3.569	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	67	951	772	0.087	67	0.1	5.129	A
2 - A17 Beckingham Road	963	30	1758	0.548	962	1.3	4.903	A
3 - Beckingham Road	446	667	1554	0.287	445	0.4	3.267	A
4 - A17 west	826	275	1731	0.477	824	1.0	4.304	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	67	952	771	0.087	67	0.1	5.134	A
2 - A17 Beckingham Road	963	30	1758	0.548	963	1.3	4.925	A
3 - Beckingham Road	446	668	1553	0.287	446	0.4	3.272	A
4 - A17 west	826	275	1731	0.477	826	1.0	4.317	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	55	779	876	0.063	55	0.1	4.405	A
2 - A17 Beckingham Road	787	24	1762	0.447	788	0.9	4.028	A
3 - Beckingham Road	364	547	1645	0.221	365	0.3	2.834	A
4 - A17 west	674	225	1768	0.381	675	0.7	3.584	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	46	652	952	0.048	46	0.1	3.990	A
2 - A17 Beckingham Road	659	20	1764	0.373	660	0.7	3.545	A
3 - Beckingham Road	305	458	1712	0.178	305	0.2	2.579	A
4 - A17 west	565	188	1795	0.315	565	0.5	3.182	A

Analysis Set 1 - 2043 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	4.48	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2043 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	178	100.000
2 - A17 Beckingham Road		✓	758	100.000
3 - Beckingham Road		✓	591	100.000
4 - A17 west		✓	384	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	71	100	7
	2 - A17 Beckingham Road	0	0	357	401
	3 - Beckingham Road	25	561	0	5
	4 - A17 west	47	337	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	3	21
	2 - A17 Beckingham Road	0	0	3	28
	3 - Beckingham Road	9	4	0	0
	4 - A17 west	1	30	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.26	6.66	0.4	A
2 - A17 Beckingham Road	0.49	4.78	1.1	A
3 - Beckingham Road	0.38	3.51	0.6	A
4 - A17 west	0.29	4.36	0.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	134	674	939	0.143	133	0.2	4.569	A
2 - A17 Beckingham Road	571	80	1724	0.331	568	0.6	3.573	A
3 - Beckingham Road	445	306	1826	0.244	444	0.3	2.711	A
4 - A17 west	289	440	1610	0.180	288	0.3	3.416	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	160	807	859	0.186	160	0.2	5.268	A
2 - A17 Beckingham Road	681	96	1713	0.398	681	0.8	4.002	A
3 - Beckingham Road	531	366	1780	0.298	531	0.4	3.002	A
4 - A17 west	345	526	1546	0.223	345	0.4	3.762	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	196	987	750	0.261	195	0.4	6.639	A
2 - A17 Beckingham Road	835	118	1699	0.491	833	1.1	4.768	A
3 - Beckingham Road	651	448	1718	0.379	650	0.6	3.508	A
4 - A17 west	423	644	1460	0.290	422	0.5	4.355	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	196	989	749	0.262	196	0.4	6.659	A
2 - A17 Beckingham Road	835	118	1699	0.491	835	1.1	4.784	A
3 - Beckingham Road	651	449	1718	0.379	651	0.6	3.512	A
4 - A17 west	423	645	1459	0.290	423	0.5	4.361	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	160	809	858	0.187	161	0.2	5.287	A
2 - A17 Beckingham Road	681	96	1713	0.398	683	0.8	4.018	A
3 - Beckingham Road	531	368	1779	0.299	532	0.4	3.010	A
4 - A17 west	345	528	1546	0.223	346	0.4	3.771	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	134	677	937	0.143	134	0.2	4.591	A
2 - A17 Beckingham Road	571	81	1724	0.331	571	0.6	3.593	A
3 - Beckingham Road	445	308	1824	0.244	445	0.3	2.721	A
4 - A17 west	289	442	1609	0.180	289	0.3	3.427	A

Analysis Set 1 - 2043 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	4.05	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2043 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	93	100.000
2 - A17 Beckingham Road		✓	768	100.000
3 - Beckingham Road		✓	555	100.000
4 - A17 west		✓	474	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	35	55	3
	2 - A17 Beckingham Road	0	0	384	384
	3 - Beckingham Road	64	450	0	41
	4 - A17 west	61	413	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	4	21
	2 - A17 Beckingham Road	0	0	2	17
	3 - Beckingham Road	3	2	0	0
	4 - A17 west	1	16	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.13	5.53	0.2	A
2 - A17 Beckingham Road	0.49	4.41	1.0	A
3 - Beckingham Road	0.35	3.26	0.6	A
4 - A17 west	0.34	4.12	0.6	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	70	648	955	0.073	70	0.1	4.184	A
2 - A17 Beckingham Road	578	43	1749	0.331	576	0.5	3.340	A
3 - Beckingham Road	418	290	1837	0.227	417	0.3	2.581	A
4 - A17 west	357	386	1650	0.216	356	0.3	3.164	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	84	775	878	0.095	83	0.1	4.662	A
2 - A17 Beckingham Road	690	52	1743	0.396	690	0.7	3.723	A
3 - Beckingham Road	499	348	1794	0.278	499	0.4	2.833	A
4 - A17 west	426	462	1594	0.267	426	0.4	3.508	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	102	949	773	0.132	102	0.2	5.519	A
2 - A17 Beckingham Road	846	64	1735	0.487	844	1.0	4.398	A
3 - Beckingham Road	611	425	1736	0.352	610	0.6	3.260	A
4 - A17 west	522	565	1518	0.344	521	0.6	4.108	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	102	950	773	0.133	102	0.2	5.527	A
2 - A17 Beckingham Road	846	64	1735	0.487	846	1.0	4.410	A
3 - Beckingham Road	611	426	1735	0.352	611	0.6	3.264	A
4 - A17 west	522	566	1517	0.344	522	0.6	4.115	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	84	777	877	0.095	84	0.1	4.671	A
2 - A17 Beckingham Road	690	52	1743	0.396	692	0.7	3.735	A
3 - Beckingham Road	499	349	1794	0.278	500	0.4	2.837	A
4 - A17 west	426	463	1593	0.267	427	0.4	3.514	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	70	650	953	0.073	70	0.1	4.195	A
2 - A17 Beckingham Road	578	44	1749	0.331	579	0.5	3.358	A
3 - Beckingham Road	418	292	1836	0.228	418	0.3	2.588	A
4 - A17 west	357	387	1649	0.216	357	0.3	3.176	A

Analysis Set 1 - 2043 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	5.60	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2043 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	115	100.000
2 - A17 Beckingham Road		✓	1009	100.000
3 - Beckingham Road		✓	287	100.000
4 - A17 west		✓	896	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	72	43	0
	2 - A17 Beckingham Road	0	0	135	874
	3 - Beckingham Road	27	179	0	81
	4 - A17 west	80	816	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	3	0
	2 - A17 Beckingham Road	0	0	6	15
	3 - Beckingham Road	11	8	0	0
	4 - A17 west	1	12	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.18	6.52	0.2	A
2 - A17 Beckingham Road	0.64	6.44	2.0	A
3 - Beckingham Road	0.24	3.75	0.3	A
4 - A17 west	0.56	5.12	1.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	87	746	896	0.097	86	0.1	4.495	A
2 - A17 Beckingham Road	760	32	1756	0.432	756	0.9	4.079	A
3 - Beckingham Road	216	655	1563	0.138	215	0.2	2.826	A
4 - A17 west	675	155	1819	0.371	672	0.6	3.473	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	103	893	807	0.128	103	0.1	5.171	A
2 - A17 Beckingham Road	907	39	1752	0.518	906	1.2	4.828	A
3 - Beckingham Road	258	785	1466	0.176	258	0.2	3.154	A
4 - A17 west	805	185	1797	0.448	805	0.9	4.019	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	127	1093	686	0.185	126	0.2	6.498	A
2 - A17 Beckingham Road	1111	47	1746	0.636	1108	2.0	6.392	A
3 - Beckingham Road	316	960	1334	0.237	316	0.3	3.739	A
4 - A17 west	987	227	1767	0.558	985	1.4	5.094	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	127	1095	685	0.185	127	0.2	6.517	A
2 - A17 Beckingham Road	1111	47	1746	0.636	1111	2.0	6.440	A
3 - Beckingham Road	316	962	1332	0.237	316	0.3	3.749	A
4 - A17 west	987	227	1766	0.559	986	1.4	5.120	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	103	897	805	0.128	104	0.1	5.194	A
2 - A17 Beckingham Road	907	39	1752	0.518	910	1.2	4.878	A
3 - Beckingham Road	258	788	1463	0.176	258	0.2	3.166	A
4 - A17 west	805	185	1797	0.448	807	0.9	4.045	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	87	750	893	0.097	87	0.1	4.513	A
2 - A17 Beckingham Road	760	32	1756	0.433	761	0.9	4.120	A
3 - Beckingham Road	216	659	1560	0.139	216	0.2	2.838	A
4 - A17 west	675	155	1819	0.371	676	0.7	3.497	A

Analysis Set 1 - 2043 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	3 - Beckingham Road - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Stapleford Lane / A17 Beckingham Road / Beckingham Road / A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	5.07	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2043 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Stapleford Lane		✓	73	100.000
2 - A17 Beckingham Road		✓	964	100.000
3 - Beckingham Road		✓	404	100.000
4 - A17 west		✓	854	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	35	38	0
	2 - A17 Beckingham Road	0	0	219	745
	3 - Beckingham Road	54	203	0	147
	4 - A17 west	101	753	0	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Stapleford Lane	2 - A17 Beckingham Road	3 - Beckingham Road	4 - A17 west
From	1 - Stapleford Lane	0	0	1	0
	2 - A17 Beckingham Road	0	0	2	12
	3 - Beckingham Road	3	1	0	0
	4 - A17 west	0	9	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Stapleford Lane	0.11	5.74	0.1	A
2 - A17 Beckingham Road	0.61	5.73	1.7	A
3 - Beckingham Road	0.31	3.65	0.4	A
4 - A17 west	0.55	4.95	1.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	55	717	913	0.060	55	0.1	4.214	A
2 - A17 Beckingham Road	726	28	1759	0.413	723	0.8	3.795	A
3 - Beckingham Road	304	559	1636	0.186	303	0.2	2.724	A
4 - A17 west	643	193	1791	0.359	641	0.6	3.367	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	66	858	828	0.079	66	0.1	4.746	A
2 - A17 Beckingham Road	867	34	1755	0.494	865	1.1	4.428	A
3 - Beckingham Road	363	669	1553	0.234	363	0.3	3.052	A
4 - A17 west	768	231	1763	0.435	767	0.8	3.893	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	80	1051	712	0.113	80	0.1	5.726	A
2 - A17 Beckingham Road	1061	42	1750	0.607	1059	1.7	5.686	A
3 - Beckingham Road	445	818	1440	0.309	444	0.4	3.644	A
4 - A17 west	940	283	1725	0.545	938	1.3	4.923	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	80	1053	711	0.113	80	0.1	5.738	A
2 - A17 Beckingham Road	1061	42	1750	0.607	1061	1.7	5.727	A
3 - Beckingham Road	445	820	1439	0.309	445	0.4	3.652	A
4 - A17 west	940	283	1725	0.545	940	1.3	4.946	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	66	861	826	0.079	66	0.1	4.759	A
2 - A17 Beckingham Road	867	34	1755	0.494	869	1.1	4.464	A
3 - Beckingham Road	363	672	1551	0.234	364	0.3	3.060	A
4 - A17 west	768	231	1763	0.435	770	0.8	3.915	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Stapleford Lane	55	721	911	0.060	55	0.1	4.229	A
2 - A17 Beckingham Road	726	29	1759	0.413	727	0.8	3.826	A
3 - Beckingham Road	304	562	1633	0.186	304	0.2	2.735	A
4 - A17 west	643	194	1791	0.359	644	0.6	3.387	A

Junctions 9			
ARCADY 9 - Roundabout Module			
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Filename: Godfrey Drive A17 East Long Hollow Way A17 West Roundabout Modelling 12.11.24.j9

Path: C:\Users\BAR95965\OneDrive - Mott MacDonald\Desktop

Report generation date: 12/11/2024 15:39:37

»Analysis Set 1 - 2019, AM
 »Analysis Set 1 - 2019, PM
 »Analysis Set 1 - 2028 Do Minimum, AM
 »Analysis Set 1 - 2028 Do Minimum, PM
 »Analysis Set 1 - 2028 Do Something, AM
 »Analysis Set 1 - 2028 Do Something, PM
 »Analysis Set 1 - 2043 Do Minimum, AM
 »Analysis Set 1 - 2043 Do Minimum, PM
 »Analysis Set 1 - 2043 Do Something, AM
 »Analysis Set 1 - 2043 Do Something, PM

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
Analysis Set 1 - 2019								
1 - Godfrey Drive	0.1	2.93	0.05	A	0.1	2.64	0.05	A
2 - A17 East	0.4	2.55	0.25	A	0.3	2.25	0.22	A
3 - Long Hollow Way	0.1	3.71	0.06	A	0.1	3.68	0.07	A
4 - A17 West	0.6	2.56	0.33	A	0.4	2.15	0.26	A
Analysis Set 1 - 2028 Do Minimum								
1 - Godfrey Drive	0.0	2.65	0.04	A	0.1	2.45	0.05	A
2 - A17 East	0.3	2.58	0.19	A	0.2	2.24	0.16	A
3 - Long Hollow Way	0.1	3.45	0.07	A	0.1	3.43	0.07	A
4 - A17 West	0.5	2.48	0.25	A	0.3	2.13	0.20	A
Analysis Set 1 - 2028 Do Something								
1 - Godfrey Drive	0.1	3.29	0.05	A	0.1	2.91	0.06	A
2 - A17 East	0.9	3.37	0.45	A	0.6	2.67	0.35	A
3 - Long Hollow Way	0.2	4.65	0.09	A	0.2	4.24	0.09	A
4 - A17 West	0.8	2.77	0.41	A	0.5	2.29	0.33	A
Analysis Set 1 - 2043 Do Minimum								
1 - Godfrey Drive	0.0	2.60	0.04	A	0.1	2.50	0.05	A
2 - A17 East	0.3	2.65	0.19	A	0.2	2.26	0.17	A
3 - Long Hollow Way	0.1	3.41	0.07	A	0.1	3.41	0.08	A
4 - A17 West	0.4	2.51	0.24	A	0.3	2.14	0.21	A
Analysis Set 1 - 2043 Do Something								
1 - Godfrey Drive	0.1	3.59	0.05	A	0.1	3.13	0.06	A
2 - A17 East	1.0	3.54	0.47	A	0.8	2.99	0.42	A
3 - Long Hollow Way	0.2	4.75	0.09	A	0.2	4.55	0.10	A
4 - A17 West	1.0	2.99	0.46	A	0.7	2.43	0.37	A

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

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

File summary

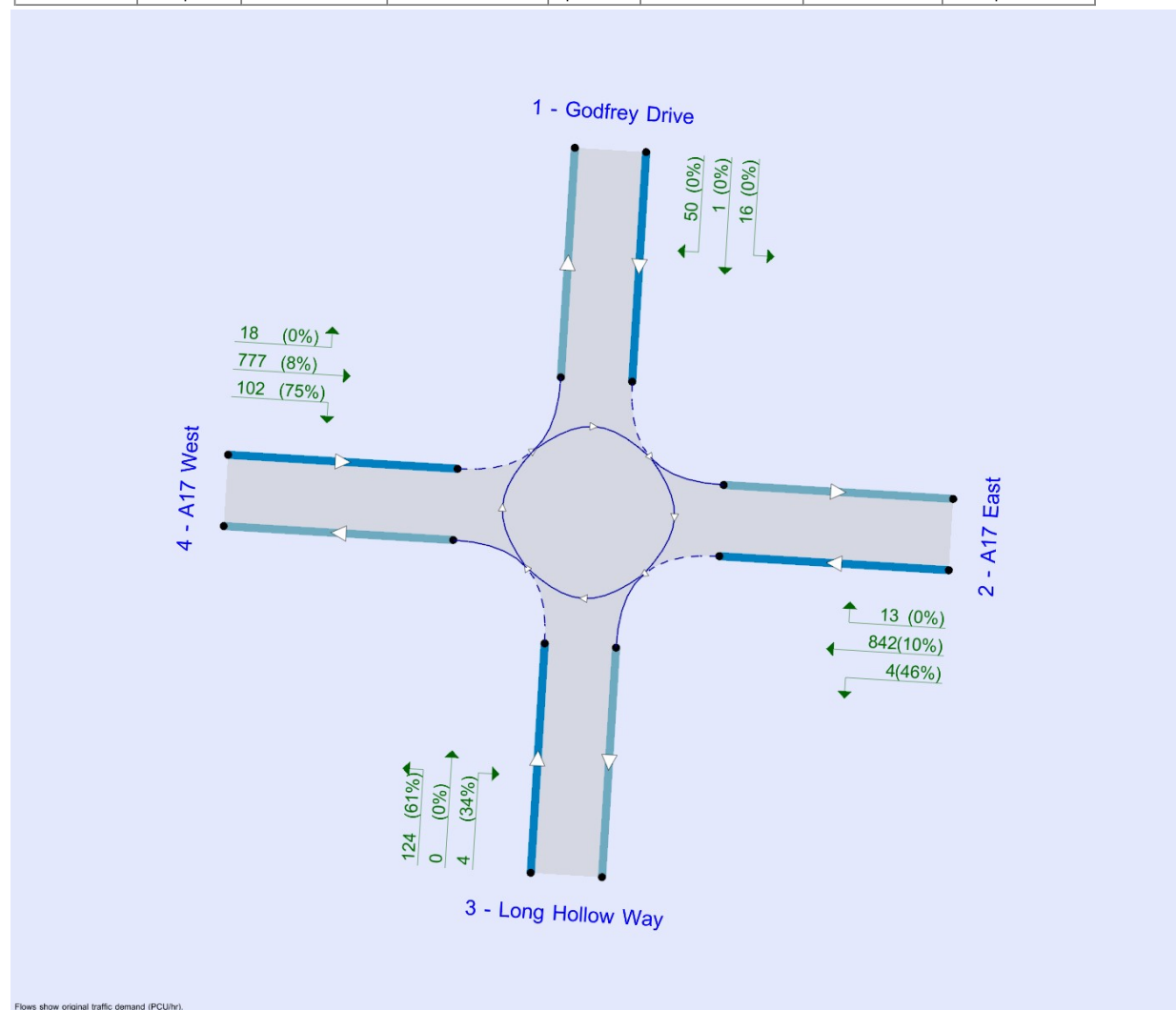
File Description

Title	1
Location	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout
Site number	
Date	11/11/2024

Version	Version 1
Status	(new file)
Identifier	
Client	Nottinghamshire County Council
Jobnumber	100103345
Enumerator	MOTTMAC\BAR95965
Description	DIP: A46 Newark Bypass - Fixed Price

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

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D2	2019	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D3	2028 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D4	2028 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D5	2028 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D6	2028 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

D7	2043 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D8	2043 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15
D9	2043 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15
D10	2043 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

Analysis Set Details

ID	Name	Network flow scaling factor (%)
A1	Analysis Set 1	100.000

Analysis Set 1 - 2019, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.65	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	Godfrey Drive	
2	A17 East	
3	Long Hollow Way	
4	A17 West	

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 - Godfrey Drive	3.40	7.50	37.5	20.0	28.8	38.0	
2 - A17 East	5.20	8.00	51.4	22.5	29.3	18.0	
3 - Long Hollow Way	6.40	7.80	5.5	15.0	29.1	28.0	
4 - A17 West	6.45	8.50	121.6	22.5	29.7	17.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1 - Godfrey Drive	0.691	1896
2 - A17 East	0.818	2406
3 - Long Hollow Way	0.749	2153
4 - A17 West	0.873	2672

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D1	2019	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	56	100.000
2 - A17 East		✓	495	100.000
3 - Long Hollow Way		✓	101	100.000
4 - A17 West		✓	785	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	11	4	41
	2 - A17 East	27	0	4	464
	3 - Long Hollow Way	1	6	0	94
	4 - A17 West	86	525	174	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	8
	2 - A17 East	4	0	28	19
	3 - Long Hollow Way	0	44	0	68
	4 - A17 West	1	18	88	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.05	2.93	0.1	A
2 - A17 East	0.25	2.55	0.4	A
3 - Long Hollow Way	0.06	3.71	0.1	A
4 - A17 West	0.33	2.56	0.6	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	529	1531	0.028	42	0.0	2.556	A
2 - A17 East	373	164	2272	0.164	372	0.2	2.237	A
3 - Long Hollow Way	76	400	1854	0.041	76	0.1	3.345	A
4 - A17 West	591	26	2650	0.223	590	0.4	2.202	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	633	1459	0.035	50	0.0	2.701	A
2 - A17 East	445	197	2245	0.198	445	0.3	2.361	A
3 - Long Hollow Way	91	478	1795	0.051	91	0.1	3.489	A
4 - A17 West	706	31	2646	0.267	705	0.5	2.339	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	776	1361	0.045	62	0.1	2.929	A
2 - A17 East	545	241	2209	0.247	545	0.4	2.555	A
3 - Long Hollow Way	111	585	1715	0.065	111	0.1	3.708	A
4 - A17 West	864	37	2640	0.327	864	0.6	2.556	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	776	1360	0.045	62	0.1	2.930	A
2 - A17 East	545	241	2209	0.247	545	0.4	2.555	A
3 - Long Hollow Way	111	586	1714	0.065	111	0.1	3.709	A
4 - A17 West	864	37	2640	0.327	864	0.6	2.556	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	634	1458	0.035	50	0.0	2.705	A
2 - A17 East	445	197	2245	0.198	445	0.3	2.365	A
3 - Long Hollow Way	91	479	1795	0.051	91	0.1	3.493	A
4 - A17 West	706	31	2646	0.267	706	0.5	2.342	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	531	1530	0.028	42	0.0	2.558	A
2 - A17 East	373	165	2271	0.164	373	0.2	2.240	A
3 - Long Hollow Way	76	401	1853	0.041	76	0.1	3.347	A
4 - A17 West	591	26	2650	0.223	591	0.4	2.206	A

Analysis Set 1 - 2019, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.35	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D2	2019	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	67	100.000
2 - A17 East		✓	453	100.000
3 - Long Hollow Way		✓	112	100.000
4 - A17 West		✓	615	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	16	1	50
	2 - A17 East	13	0	5	435
	3 - Long Hollow Way	0	6	0	106
	4 - A17 West	18	503	94	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	0
	2 - A17 East	0	0	61	11
	3 - Long Hollow Way	0	44	0	67

	4 - A17 West	0	12	79	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.05	2.64	0.1	A
2 - A17 East	0.22	2.25	0.3	A
3 - Long Hollow Way	0.07	3.68	0.1	A
4 - A17 West	0.26	2.15	0.4	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	453	1584	0.032	50	0.0	2.347	A
2 - A17 East	341	109	2317	0.147	340	0.2	2.022	A
3 - Long Hollow Way	84	374	1873	0.045	84	0.1	3.331	A
4 - A17 West	463	14	2660	0.174	462	0.2	1.937	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	542	1522	0.040	60	0.0	2.462	A
2 - A17 East	407	130	2300	0.177	407	0.2	2.111	A
3 - Long Hollow Way	101	447	1818	0.055	101	0.1	3.470	A
4 - A17 West	553	17	2657	0.208	553	0.3	2.024	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	664	1438	0.051	74	0.1	2.638	A
2 - A17 East	499	160	2276	0.219	498	0.3	2.248	A
3 - Long Hollow Way	123	548	1743	0.071	123	0.1	3.679	A
4 - A17 West	677	21	2654	0.255	677	0.4	2.154	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	664	1438	0.051	74	0.1	2.638	A
2 - A17 East	499	160	2276	0.219	499	0.3	2.249	A
3 - Long Hollow Way	123	548	1743	0.071	123	0.1	3.680	A
4 - A17 West	677	21	2654	0.255	677	0.4	2.154	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	542	1522	0.040	60	0.0	2.464	A
2 - A17 East	407	130	2300	0.177	408	0.2	2.114	A
3 - Long Hollow Way	101	448	1818	0.055	101	0.1	3.471	A
4 - A17 West	553	17	2657	0.208	553	0.3	2.025	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	454	1583	0.032	50	0.0	2.349	A
2 - A17 East	341	109	2317	0.147	341	0.2	2.023	A
3 - Long Hollow Way	84	375	1872	0.045	84	0.1	3.333	A
4 - A17 West	463	14	2660	0.174	463	0.3	1.941	A

Analysis Set 1 - 2028 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.61	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D3	2028 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	56	100.000
2 - A17 East		✓	382	100.000
3 - Long Hollow Way		✓	107	100.000
4 - A17 West		✓	605	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	11	4	41
	2 - A17 East	27	0	9	346
	3 - Long Hollow Way	1	6	0	100
	4 - A17 West	86	341	178	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	8
	2 - A17 East	4	0	49	30
	3 - Long Hollow Way	0	42	0	65

	4 - A17 West	1	29	87	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.04	2.65	0.0	A
2 - A17 East	0.19	2.58	0.3	A
3 - Long Hollow Way	0.07	3.45	0.1	A
4 - A17 West	0.25	2.48	0.5	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	394	1624	0.026	42	0.0	2.405	A
2 - A17 East	288	167	2269	0.127	287	0.2	2.327	A
3 - Long Hollow Way	81	311	1920	0.042	80	0.1	3.179	A
4 - A17 West	455	26	2650	0.172	454	0.3	2.229	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	472	1571	0.032	50	0.0	2.503	A
2 - A17 East	343	200	2242	0.153	343	0.2	2.428	A
3 - Long Hollow Way	96	372	1875	0.051	96	0.1	3.289	A
4 - A17 West	544	31	2646	0.206	544	0.4	2.330	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	578	1497	0.041	62	0.0	2.650	A
2 - A17 East	421	245	2206	0.191	420	0.3	2.583	A
3 - Long Hollow Way	118	456	1812	0.065	118	0.1	3.452	A
4 - A17 West	666	37	2640	0.252	666	0.5	2.481	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	578	1497	0.041	62	0.0	2.651	A
2 - A17 East	421	246	2205	0.191	421	0.3	2.583	A
3 - Long Hollow Way	118	456	1812	0.065	118	0.1	3.453	A
4 - A17 West	666	37	2640	0.252	666	0.5	2.481	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	472	1570	0.032	50	0.0	2.506	A
2 - A17 East	343	201	2242	0.153	344	0.2	2.431	A
3 - Long Hollow Way	96	372	1874	0.051	96	0.1	3.293	A
4 - A17 West	544	31	2646	0.206	544	0.4	2.332	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	395	1623	0.026	42	0.0	2.407	A
2 - A17 East	288	168	2269	0.127	288	0.2	2.329	A
3 - Long Hollow Way	81	312	1920	0.042	81	0.1	3.183	A
4 - A17 West	455	26	2650	0.172	456	0.3	2.232	A

Analysis Set 1 - 2028 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.34	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D4	2028 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	67	100.000
2 - A17 East		✓	333	100.000
3 - Long Hollow Way		✓	118	100.000
4 - A17 West		✓	482	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	16	1	50
	2 - A17 East	13	0	6	314
	3 - Long Hollow Way	0	4	0	114
	4 - A17 West	18	367	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	0
	2 - A17 East	0	0	50	19
	3 - Long Hollow Way	0	39	0	64

	4 - A17 West	0	18	78	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.05	2.45	0.1	A
2 - A17 East	0.16	2.24	0.2	A
3 - Long Hollow Way	0.07	3.43	0.1	A
4 - A17 West	0.20	2.13	0.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	352	1654	0.031	50	0.0	2.245	A
2 - A17 East	251	111	2315	0.108	250	0.1	2.067	A
3 - Long Hollow Way	89	283	1941	0.046	89	0.1	3.167	A
4 - A17 West	363	13	2661	0.136	362	0.2	1.968	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	421	1606	0.038	60	0.0	2.328	A
2 - A17 East	299	133	2297	0.130	299	0.2	2.135	A
3 - Long Hollow Way	106	339	1899	0.056	106	0.1	3.271	A
4 - A17 West	433	15	2659	0.163	433	0.2	2.032	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	515	1541	0.048	74	0.1	2.453	A
2 - A17 East	367	163	2273	0.161	366	0.2	2.238	A
3 - Long Hollow Way	130	415	1842	0.071	130	0.1	3.425	A
4 - A17 West	531	19	2656	0.200	530	0.3	2.128	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	515	1540	0.048	74	0.1	2.454	A
2 - A17 East	367	163	2273	0.161	367	0.2	2.238	A
3 - Long Hollow Way	130	415	1842	0.071	130	0.1	3.426	A
4 - A17 West	531	19	2656	0.200	531	0.3	2.128	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	421	1606	0.038	60	0.0	2.329	A
2 - A17 East	299	133	2297	0.130	300	0.2	2.138	A
3 - Long Hollow Way	106	339	1899	0.056	106	0.1	3.272	A
4 - A17 West	433	15	2659	0.163	434	0.2	2.033	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	353	1653	0.031	50	0.0	2.246	A
2 - A17 East	251	111	2315	0.108	251	0.1	2.069	A
3 - Long Hollow Way	89	284	1940	0.046	89	0.1	3.171	A
4 - A17 West	363	13	2661	0.136	363	0.2	1.970	A

Analysis Set 1 - 2028 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	3.15	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D5	2028 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	56	100.000
2 - A17 East		✓	898	100.000
3 - Long Hollow Way		✓	107	100.000
4 - A17 West		✓	975	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	11	4	41
	2 - A17 East	27	0	4	867
	3 - Long Hollow Way	1	5	0	101
	4 - A17 West	86	709	180	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	8
	2 - A17 East	4	0	25	14
	3 - Long Hollow Way	0	37	0	66

	4 - A17 West	1	13	87	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.05	3.29	0.1	A
2 - A17 East	0.45	3.37	0.9	A
3 - Long Hollow Way	0.09	4.65	0.2	A
4 - A17 West	0.41	2.77	0.8	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	671	1433	0.029	42	0.0	2.736	A
2 - A17 East	676	169	2268	0.298	674	0.5	2.564	A
3 - Long Hollow Way	81	702	1628	0.050	80	0.1	3.801	A
4 - A17 West	734	25	2651	0.277	732	0.5	2.260	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	803	1342	0.038	50	0.0	2.947	A
2 - A17 East	807	202	2241	0.360	807	0.6	2.852	A
3 - Long Hollow Way	96	840	1524	0.063	96	0.1	4.118	A
4 - A17 West	877	30	2646	0.331	876	0.6	2.451	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	983	1217	0.051	62	0.1	3.293	A
2 - A17 East	989	248	2204	0.449	988	0.9	3.363	A
3 - Long Hollow Way	118	1028	1383	0.085	118	0.2	4.647	A
4 - A17 West	1073	36	2641	0.407	1073	0.8	2.766	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	984	1217	0.051	62	0.1	3.295	A
2 - A17 East	989	248	2204	0.449	989	0.9	3.368	A
3 - Long Hollow Way	118	1029	1382	0.085	118	0.2	4.650	A
4 - A17 West	1073	36	2641	0.407	1073	0.8	2.768	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	805	1341	0.038	50	0.0	2.949	A
2 - A17 East	807	202	2241	0.360	808	0.6	2.859	A
3 - Long Hollow Way	96	842	1523	0.063	96	0.1	4.124	A
4 - A17 West	877	30	2646	0.331	877	0.6	2.453	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	674	1431	0.029	42	0.0	2.742	A
2 - A17 East	676	170	2268	0.298	677	0.5	2.575	A
3 - Long Hollow Way	81	705	1626	0.050	81	0.1	3.809	A
4 - A17 West	734	25	2651	0.277	735	0.5	2.266	A

Analysis Set 1 - 2028 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.62	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D6	2028 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	67	100.000
2 - A17 East		✓	731	100.000
3 - Long Hollow Way		✓	118	100.000
4 - A17 West		✓	785	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	16	1	50
	2 - A17 East	13	0	4	714
	3 - Long Hollow Way	0	3	0	115
	4 - A17 West	18	670	97	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	0
	2 - A17 East	0	0	46	9
	3 - Long Hollow Way	0	30	0	64

	4 - A17 West	0	9	78	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.06	2.91	0.1	A
2 - A17 East	0.35	2.67	0.6	A
3 - Long Hollow Way	0.09	4.24	0.2	A
4 - A17 West	0.33	2.29	0.5	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	578	1497	0.034	50	0.0	2.488	A
2 - A17 East	550	111	2315	0.238	549	0.3	2.220	A
3 - Long Hollow Way	89	584	1716	0.052	88	0.1	3.603	A
4 - A17 West	591	12	2662	0.222	590	0.3	1.984	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	692	1419	0.042	60	0.0	2.649	A
2 - A17 East	657	133	2297	0.286	657	0.4	2.391	A
3 - Long Hollow Way	106	698	1630	0.065	106	0.1	3.847	A
4 - A17 West	706	14	2660	0.265	705	0.4	2.104	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	847	1311	0.056	74	0.1	2.908	A
2 - A17 East	805	163	2273	0.354	804	0.6	2.669	A
3 - Long Hollow Way	130	855	1513	0.086	130	0.2	4.240	A
4 - A17 West	864	18	2657	0.325	864	0.5	2.293	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	848	1311	0.056	74	0.1	2.909	A
2 - A17 East	805	163	2273	0.354	805	0.6	2.671	A
3 - Long Hollow Way	130	855	1513	0.086	130	0.2	4.241	A
4 - A17 West	864	18	2657	0.325	864	0.5	2.293	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	693	1418	0.042	60	0.0	2.651	A
2 - A17 East	657	133	2297	0.286	658	0.4	2.395	A
3 - Long Hollow Way	106	699	1630	0.065	106	0.1	3.851	A
4 - A17 West	706	14	2660	0.265	706	0.4	2.107	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	580	1496	0.034	50	0.0	2.490	A
2 - A17 East	550	111	2315	0.238	551	0.3	2.225	A
3 - Long Hollow Way	89	585	1715	0.052	89	0.1	3.606	A
4 - A17 West	591	12	2662	0.222	591	0.3	1.987	A

Analysis Set 1 - 2043 Do Minimum, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.66	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D7	2043 Do Minimum	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	56	100.000
2 - A17 East		✓	380	100.000
3 - Long Hollow Way		✓	115	100.000
4 - A17 West		✓	564	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	11	4	41
	2 - A17 East	27	0	13	340
	3 - Long Hollow Way	1	13	0	101
	4 - A17 West	86	297	181	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	8
	2 - A17 East	4	0	39	34
	3 - Long Hollow Way	0	60	0	61

	4 - A17 West	1	35	87	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.04	2.60	0.0	A
2 - A17 East	0.19	2.65	0.3	A
3 - Long Hollow Way	0.07	3.41	0.1	A
4 - A17 West	0.24	2.51	0.4	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	369	1642	0.026	42	0.0	2.379	A
2 - A17 East	286	170	2267	0.126	285	0.2	2.388	A
3 - Long Hollow Way	87	306	1924	0.045	86	0.1	3.135	A
4 - A17 West	425	31	2645	0.161	424	0.3	2.272	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	441	1592	0.032	50	0.0	2.469	A
2 - A17 East	342	203	2240	0.152	341	0.2	2.492	A
3 - Long Hollow Way	103	367	1879	0.055	103	0.1	3.244	A
4 - A17 West	507	37	2640	0.192	507	0.3	2.367	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	540	1523	0.040	62	0.0	2.603	A
2 - A17 East	418	249	2203	0.190	418	0.3	2.651	A
3 - Long Hollow Way	127	449	1817	0.070	127	0.1	3.407	A
4 - A17 West	621	45	2633	0.236	621	0.4	2.510	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	541	1523	0.040	62	0.0	2.604	A
2 - A17 East	418	249	2203	0.190	418	0.3	2.651	A
3 - Long Hollow Way	127	449	1817	0.070	127	0.1	3.408	A
4 - A17 West	621	45	2633	0.236	621	0.4	2.510	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	442	1591	0.032	50	0.0	2.469	A
2 - A17 East	342	203	2240	0.153	342	0.2	2.493	A
3 - Long Hollow Way	103	367	1878	0.055	103	0.1	3.245	A
4 - A17 West	507	37	2640	0.192	507	0.3	2.370	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	370	1641	0.026	42	0.0	2.382	A
2 - A17 East	286	170	2267	0.126	286	0.2	2.389	A
3 - Long Hollow Way	87	307	1923	0.045	87	0.1	3.136	A
4 - A17 West	425	31	2645	0.161	425	0.3	2.274	A

Analysis Set 1 - 2043 Do Minimum, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.36	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D8	2043 Do Minimum	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	67	100.000
2 - A17 East		✓	356	100.000
3 - Long Hollow Way		✓	127	100.000
4 - A17 West		✓	496	100.000

Origin-Destination Data

Demand (PCU/hr)

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	16	1	50
	2 - A17 East	13	0	13	330
	3 - Long Hollow Way	0	26	0	101
	4 - A17 West	18	383	95	0

Vehicle Mix

Heavy Vehicle Percentages

		To			
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	0
	2 - A17 East	0	0	47	18
	3 - Long Hollow Way	0	60	0	60

	4 - A17 West	0	17	78	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.05	2.50	0.1	A
2 - A17 East	0.17	2.26	0.2	A
3 - Long Hollow Way	0.08	3.41	0.1	A
4 - A17 West	0.21	2.14	0.3	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	379	1635	0.031	50	0.0	2.271	A
2 - A17 East	268	110	2317	0.116	267	0.2	2.074	A
3 - Long Hollow Way	96	295	1932	0.049	95	0.1	3.135	A
4 - A17 West	373	29	2647	0.141	373	0.2	1.969	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	453	1584	0.038	60	0.0	2.362	A
2 - A17 East	320	131	2299	0.139	320	0.2	2.147	A
3 - Long Hollow Way	114	353	1889	0.060	114	0.1	3.245	A
4 - A17 West	446	35	2642	0.169	446	0.3	2.039	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	555	1513	0.049	74	0.1	2.500	A
2 - A17 East	392	161	2275	0.172	392	0.2	2.257	A
3 - Long Hollow Way	140	432	1829	0.076	140	0.1	3.408	A
4 - A17 West	546	43	2635	0.207	546	0.3	2.143	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	555	1513	0.049	74	0.1	2.500	A
2 - A17 East	392	161	2275	0.172	392	0.2	2.257	A
3 - Long Hollow Way	140	433	1829	0.076	140	0.1	3.409	A
4 - A17 West	546	43	2635	0.207	546	0.3	2.143	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	453	1583	0.038	60	0.0	2.365	A
2 - A17 East	320	131	2299	0.139	320	0.2	2.149	A
3 - Long Hollow Way	114	354	1888	0.060	114	0.1	3.248	A
4 - A17 West	446	35	2642	0.169	446	0.3	2.041	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	380	1634	0.031	50	0.0	2.272	A
2 - A17 East	268	110	2316	0.116	268	0.2	2.076	A
3 - Long Hollow Way	96	296	1931	0.050	96	0.1	3.139	A
4 - A17 West	373	29	2647	0.141	374	0.2	1.971	A

Analysis Set 1 - 2043 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	3.33	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D9	2043 Do Something	AM	AM Peak Hour 08:00-09:00	ONE HOUR	07:45	09:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	56	100.000
2 - A17 East		✓	946	100.000
3 - Long Hollow Way		✓	115	100.000
4 - A17 West		✓	1097	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	11	4	41
	2 - A17 East	27	0	5	914
	3 - Long Hollow Way	1	6	0	108
	4 - A17 West	86	823	188	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	8
	2 - A17 East	4	0	23	14
	3 - Long Hollow Way	0	36	0	63

	4 - A17 West	1	12	85	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.05	3.59	0.1	A
2 - A17 East	0.47	3.54	1.0	A
3 - Long Hollow Way	0.09	4.75	0.2	A
4 - A17 West	0.46	2.99	1.0	A

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	764	1369	0.031	42	0.0	2.868	A
2 - A17 East	712	175	2263	0.315	710	0.5	2.633	A
3 - Long Hollow Way	87	737	1601	0.054	86	0.1	3.813	A
4 - A17 West	826	26	2650	0.312	824	0.5	2.345	A

08:00 - 08:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	914	1265	0.040	50	0.0	3.132	A
2 - A17 East	850	209	2235	0.381	850	0.7	2.954	A
3 - Long Hollow Way	103	882	1493	0.069	103	0.1	4.157	A
4 - A17 West	986	31	2646	0.373	986	0.7	2.579	A

08:15 - 08:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	1119	1124	0.055	62	0.1	3.582	A
2 - A17 East	1042	256	2197	0.474	1040	1.0	3.538	A
3 - Long Hollow Way	127	1080	1345	0.094	126	0.2	4.742	A
4 - A17 West	1208	37	2640	0.458	1207	1.0	2.987	A

08:30 - 08:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	62	1120	1123	0.055	62	0.1	3.585	A
2 - A17 East	1042	257	2196	0.474	1042	1.0	3.544	A
3 - Long Hollow Way	127	1081	1344	0.094	127	0.2	4.746	A
4 - A17 West	1208	37	2640	0.458	1208	1.0	2.992	A

08:45 - 09:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	915	1264	0.040	50	0.0	3.135	A
2 - A17 East	850	210	2235	0.381	852	0.7	2.962	A
3 - Long Hollow Way	103	884	1491	0.069	104	0.1	4.165	A
4 - A17 West	986	31	2646	0.373	987	0.7	2.587	A

09:00 - 09:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	42	766	1367	0.031	42	0.0	2.872	A
2 - A17 East	712	176	2263	0.315	713	0.5	2.642	A
3 - Long Hollow Way	87	740	1599	0.054	87	0.1	3.819	A
4 - A17 West	826	26	2650	0.312	827	0.5	2.352	A

Analysis Set 1 - 2043 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	1 - Godfrey Drive - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	2 - A17 East - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.
Warning	Geometry	4 - A17 West - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	Godfrey Drive A17 East Long Hollow Way A17 West Roundabout	Standard Roundabout		1, 2, 3, 4	2.84	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)
D10	2043 Do Something	PM	PM peak hour 17:00-18:00	ONE HOUR	16:45	18:15	15

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

Demand overview (Traffic)

Arm	Linked arm	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1 - Godfrey Drive		✓	67	100.000
2 - A17 East		✓	859	100.000
3 - Long Hollow Way		✓	128	100.000
4 - A17 West		✓	897	100.000

Origin-Destination Data

Demand (PCU/hr)

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	16	1	50
	2 - A17 East	13	0	4	842
	3 - Long Hollow Way	0	4	0	124
	4 - A17 West	18	777	102	0

Vehicle Mix

Heavy Vehicle Percentages

	To				
		1 - Godfrey Drive	2 - A17 East	3 - Long Hollow Way	4 - A17 West
From	1 - Godfrey Drive	0	0	0	0
	2 - A17 East	0	0	46	10
	3 - Long Hollow Way	0	34	0	61

	4 - A17 West	0	8	75	0
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Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS
1 - Godfrey Drive	0.06	3.13	0.1	A
2 - A17 East	0.42	2.99	0.8	A
3 - Long Hollow Way	0.10	4.55	0.2	A
4 - A17 West	0.37	2.43	0.7	A

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	663	1438	0.035	50	0.0	2.593	A
2 - A17 East	647	115	2312	0.280	645	0.4	2.372	A
3 - Long Hollow Way	96	680	1644	0.059	96	0.1	3.720	A
4 - A17 West	675	13	2661	0.254	674	0.4	2.041	A

17:00 - 17:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	793	1348	0.045	60	0.0	2.794	A
2 - A17 East	772	137	2294	0.337	772	0.6	2.601	A
3 - Long Hollow Way	115	813	1544	0.075	115	0.1	4.029	A
4 - A17 West	806	15	2659	0.303	806	0.5	2.190	A

17:15 - 17:30

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	972	1225	0.060	74	0.1	3.125	A
2 - A17 East	946	168	2269	0.417	945	0.8	2.989	A
3 - Long Hollow Way	141	995	1408	0.100	141	0.2	4.546	A
4 - A17 West	988	19	2656	0.372	987	0.7	2.430	A

17:30 - 17:45

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	74	972	1225	0.060	74	0.1	3.126	A
2 - A17 East	946	168	2268	0.417	946	0.8	2.992	A
3 - Long Hollow Way	141	996	1407	0.100	141	0.2	4.548	A
4 - A17 West	988	19	2656	0.372	988	0.7	2.432	A

17:45 - 18:00

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	60	794	1348	0.045	60	0.0	2.796	A
2 - A17 East	772	138	2294	0.337	773	0.6	2.604	A
3 - Long Hollow Way	115	815	1543	0.075	115	0.1	4.033	A
4 - A17 West	806	15	2659	0.303	807	0.5	2.193	A

18:00 - 18:15

Arm	Total Demand (PCU/hr)	Circulating flow (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	Unsignalised level of service
1 - Godfrey Drive	50	665	1437	0.035	50	0.0	2.598	A
2 - A17 East	647	115	2312	0.280	647	0.4	2.380	A
3 - Long Hollow Way	96	682	1642	0.059	96	0.1	3.727	A
4 - A17 West	675	13	2661	0.254	676	0.4	2.044	A