12 TRAFFIC AND TRANSPORTATION

12.1 INTRODUCTION

12.1.1 GENERAL

This Chapter of the remedial Environmental Impact Assessment Report (rEIAR) provides an assessment of the traffic and transportation impacts of the Shillelagh Quarries Ltd. Hempstown Quarry (the 'Site'), in support of an application for Substitute Consent for the existing quarry located in the townlands of Hempstown Commons, Co. Kildare.

12.1.2 TECHNICAL SCOPE

The technical scope of this assessment is to consider the potential impacts and effects that activities at the Site (as detailed in Chapter 2, Project Description) may have had on the traffic and transport infrastructure (the existing road network) during the review period.

This chapter will examine the potential traffic implications associated with the operations at the Site in terms of integration in the area and local roads network from 29 December 2019 to present. This assessment will determine and quantify the extent of trips generated by the quarry, and the impact on operational performance of these trips on the local road network.

12.1.3 GEOGRAPHICAL AND TEMPORAL SCOPE

The geographical extent of this study for the assessment covers the area within the EIA boundary (Site) the connected existing road network utilised by the Development's activities.

The temporal scope of the assessment covers the period of 29 December 2019 ('baseline conditions') to the present day ('current conditions'). This timeframe from 2019 to the present is subsequently referred to as the 'review/assessment period'. This assessment period equates to approximately five years and is identified as 'short-term' duration (lasting one to seven years).

12.2 GUIDANCE AND PRIMARY SOURCES OF INFORMATION

- "Traffic and Transport Assessment Guidelines" - (Transport Infrastructure Ireland, May 2014);
- PE-PAG02017 - Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections" - (Transport Infrastructure Ireland, Oct 2021) ;
- TII Count Site "TMU N81 010.0 S" (https://trafficdata.tii.ie/publicmultinodemap.asp)
- "PE-PAG-02039 - Project Appraisal Guidelines for National Roads Unit 16.1 – Expansion Factors for Short Period Traffic Counts - (Transport Infrastructure Ireland, Oct 2016); and
- EPA's Guidelines on the Information to be Contained in EIARs (EPA, 2022).

12.3 ASSESSMENT METHODOLOGY AND SIGNIFICANCE CRITERIA

12.3.1 METHODOLOGY ADOPTED FOR APPRAISAL AND REPORT

- Review of previous Traffic and Transport Assessment reports;
- Establishment of existing traffic flows at beginning of review/assessment period i.e. 29 December 2019;
- Trip Generation and Trip Assignment – This has been used to derive the expected increase in vehicle trips associated with the continued operation of the site. The analysis undertaken has estimated the trip generation of the site over a 12-hour period, based on historic and projected

tonnage of quarry materials excavated. Trip assignment has been determined by existing traffic movements at the site access junction;

- Localised Junction Modelling – assess the expected performance of the junction associated with the expected increase in quarry traffic in terms of both capacity and queueing as resulting from continued operation; and
- Determination of final significance of impacts in accordance with criteria in the EPA's Guidelines on the Information to be Contained in EIARs (EPA, 2022).

12.3.2 ASSUMPTIONS

- Road vehicles used for material transport are assumed as a worst case, being 5 axle hauling vehicles with capacity for 25 tonnes of material due to impact on roads maintenance scheduling by roads authorities;
- Hours of operation are assumed to be 07:00 to 18:00 Monday to Friday and 07:00 to 13:00 Saturday;
- Trips generated are assumed as evenly spread across the year and evenly throughout the day;
- For traffic growth, WSP has assumption is from TII Publications Unit 5.3 – Travel Demand Projections, PE-PAG-020171: Central Growth, HV, on basis of location and N81 National Route, Higher value to ensure potential impact maximised.

12.4 BASELINE AND SUBSEQUENT CONDITIONS (2019 TO PRESENT)

The Site is on lands at Hempstown Commons, Co. Kildare, along the Kildare/Wicklow border. Access to the Site is via the N81 National Road, and the L6030. Regionally, the nearest town is Blessington, which is located approximately 4 km to the south of the Site. Beyond this there are several other small towns and the suburbs of Dublin in the vicinity.

Three main land uses have been identified surrounding the Site, these are agricultural and single dwelling residential lands, the L6030 road and other quarry operations. The lands to the north can be characterised as rural in nature, with land uses in the area being agricultural and single dwelling residential. There is a disused quarry to the west of the site, which Google Streetview has shown to be in operation in July 2009; however, in May 2019 was shown to be dormant. The lands immediately to the northwest of the site are largely taken up by active quarrying activities operated by unrelated parties with further quarries to the southwest. There was little change in the surrounding land use over the review period, other than the addition of a single house dwelling.

It is noted that activity at the Site included the following:

- rock has been extracted within an area of ca. 5 ha through drilling, blasting and mechanical breaking of greywacke rock (Pollaphuca Formation);
- mobile crushing, and screening of the rock into specific aggregate sizes;
- temporary stockpiling of screened aggregate in an area to the south and west of the quarry void space; and
- loading aggregate materials onto road trucks for sale and distribution.

Vehicles travelling to/from the Hempstown Quarry travel via the L6030 highlighted in black in Figure 12.1 below, access to the L6030 is provided to the N81 national road in Co. Wicklow. Photos of each arm across each junction is shown in Figures 12.2 to Figures 12.8 overleaf.

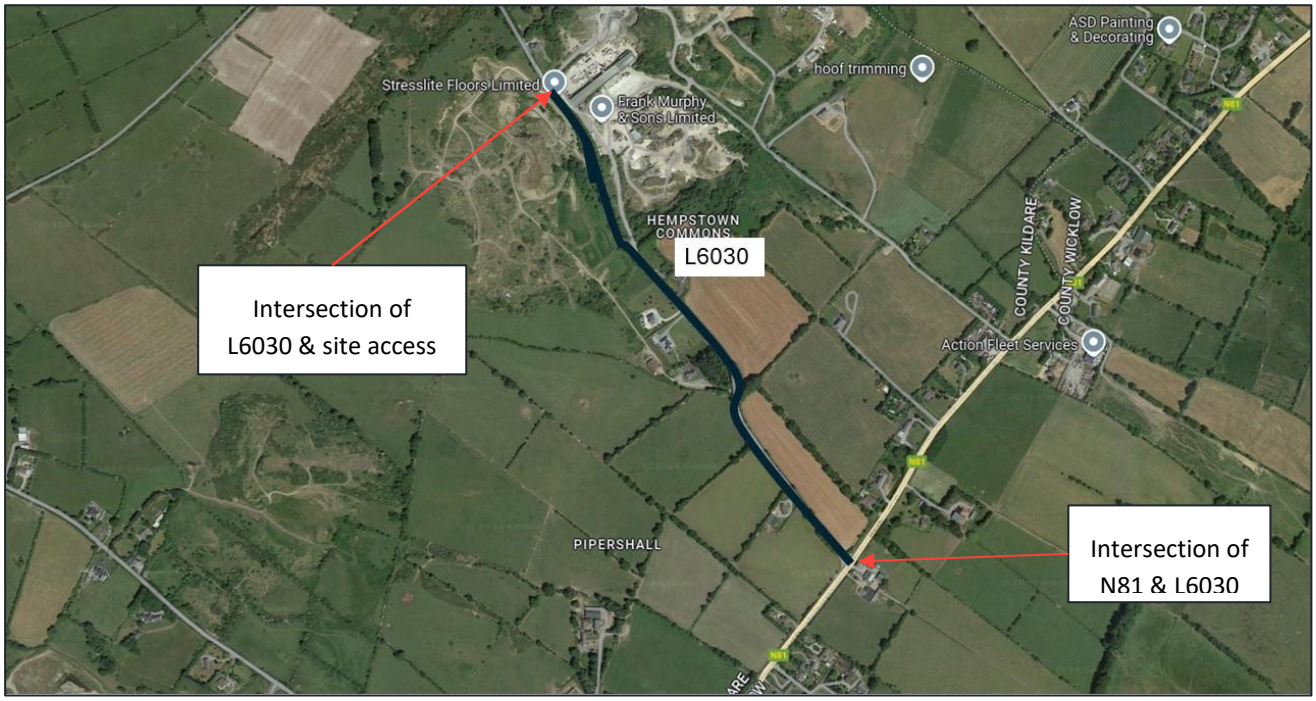


Figure 12.1 - Site Access Location

Figure 12.2 - Main Site Access viewed from L6030

Figure 12.3 - L6030 to N81 viewed from site access

Figure 12.4 - L6030 to Killyteely from site access.

Figure 12.5 - Unused access viewed from L6030

Figure 12.6 - L6030 viewed from N81 National Road

Figure 12.7 - N81 towards Dublin, viewed from junction with L6030

Figure 12.8 - N81 south view towards Blessington

12.4.1 PRIMARY ACCESS ROUTE ROADS

12.4.1.1 The N81

The N81 is a National Secondary Road, approximately 77 km in length, travelling north-to-south from its junction with the M50 motorway (Junction 11) on the outskirts of Dublin to its junction with the N80 in Closh, Co. Carlow. The N81 provides dual carriageway standard from its junction with the M50 motorway for approximately 4 km (which includes the Tallaght bypass). Beyond this, the N81 is single carriageway road subject to the national speed limit. At its junction with the L6030, the N81 is a two-way single carriageway road with lane widths of approximately 5.5 m and a hard strip of approximately 0.5 m width on both sides of the carriageway. At the junction of the N81 Northbound with the L6030 the N81 widens to two lanes for approximately 70m either side of the junction mouth to provide space for the 4060-bus stop. There are no footpath or pedestrian crossing provisions in the vicinity of this junction. Overtaking is not permitted for 1.8km north of the L6030 junction and for 850m to the south of this junction.

12.4.1.2 The L6030

The L6030 is a local road in Kildare, approximately 4.13km in length, travelling north to south from its junction with the N81 national road north of Blessington to its junction with the L8384 just south of the village of Kilteel. The main quarry access is via this L6030 local road, which is a single carriageway road, approximately 5 m wide, subject to a 60km/h speed limit, although there are unofficial speed limit signs for a 20kph zone. The road has no hard shoulder or hard strip provision on either side of the carriageway. The L6030 provides access to several residential properties before connecting to the L8384 north of the Hempstead Quarry.

12.4.2 ROAD ACCIDENT DATA

WSP has attempted to collate road traffic collision (RTC) information from the Road Safety Authority (RSA) and TII websites. However, both authorities are in the process of reviewing their RTC data sharing policies and procedures. Record-level RTC data can't be shared until this review is complete and, as such, up to date traffic accident data is currently unavailable.

12.4.3 EXISTING TRAFFIC FLOWS

12-Hour classified turning counts were carried out at two sites on 19 September 2024: at site access/L6030 junction and the N81/L6030 junction as indicated in Figure 12.1 above. The counts took place between the hours of 07:00 and 19:00 hours, which covered not only the hours of operation of the quarry but also included the peak hours on adjacent roads network. Surveyed vehicles were broken down into eight categories as follows:

1. Pedestrian
2. Cyclist
3. Motorcycles
4. Passenger Car Equivalent
5. LGV (Light Goods Vehicles)
6. OGV1 (Two and Three Axle Goods Vehicles)
7. OGV2 (Four and Five Axle Goods Vehicles)
8. PSV (Public Service Vehicle)

These figures were factored to give Passenger Car Units (PCUs) by the survey company, utilising industry standard conversion factors. The detailed results of the Traffic Survey are included in Appendix 12A, and a summary of the results has been provided overleaf in Tables 12.1 (Site Access/L6030 Junction) and 12.2 (L6030/N81 Junction). Further details are included in Appendix 12A.

Table 12.1 - Traffic Survey Results, Site Access/L6030 Junction – Passenger Car Units

Hour Ending	Site Access	L6030 East	Unused Site	L6030 West
08:00	14.8	52.8	0.0	38.0
09:00	39.0	74.3	0.0	37.3
10:00	32.2	95.5	0.0	70.8
11:00	15.7	58.7	0.0	46.0
12:00	38.8	80.5	0.0	59.3
13:00	20.4	84.5	0.0	73.1
14:00	40.5	82.4	0.0	41.9
15:00	25.4	78.5	0.0	57.1
16:00	31.0	53.1	0.0	28.1
17:00	21.7	59.9	0.0	40.2
18:00	18.2	39.0	0.0	41.8
19:00	5.0	28.2	0.0	23.2
Period Total	302.7	787.4	0.0	556.80
Period Total HGV	108.0	179.0	0.0	142.0
% HGVs	35.7%	22.7%	0.0%	25.5%

AM Peak: 09:00 – 10:00, PM 13:00 -14:00

Table 12.2 - Traffic Survey Results, L6030/N81 Junction – Passenger Car Units

Hour Ending	N81 North	N81 South	L6030
8:00	1368.4	2239.9	90.4
9:00	1043.2	1035.2	85.7
10:00	890.4	862.0	116.6
11:00	674.1	647.5	83.0
12:00	718.8	701.5	105.7
13:00	695.5	679.5	95.7
14:00	781.2	748.3	111.1
15:00	786.0	755.2	91.2
16:00	863.8	870.4	83.4
17:00	1046.0	1048.2	76.0
18:00	1097.5	1108.7	59.4
19:00	877.9	879.5	47.8
Period Total	10842.8	11575.9	1046
Period Total HGV	981.0	852.0	687.0
% HGVs	9.0%	7.4%	65.7%

AM Peak: 07:00 – 08:00, PM 17:00 -18:00

12.4.4 HISTORIC BASELINE TRAFFIC FLOWS

Whilst the above tables indicate the 2024 traffic flows through the two junctions, this assessment requires establishment of baseline flows at the beginning of the assessment period (2019). Within PMCE's Traffic & Transport Assessment – approved as part of the previous planning application (Kildare County Council ref 07/443), –2019 traffic surveys for the N81/L6030 junction are also included; however, those for the L6030/site access junction are not. Comparisons of 2024 traffic surveys for these two junctions indicate that some traffic along the L6030 between the two junctions have been generated solely by nearby businesses, farms and dwellings i.e. a proportion of traffic travelling through the N81/L6030 junction does not make it to the L6030/site access junction – an occurrence which has been captured in the differences in traffic surveys across the two junctions.

To account for the traffic growth in the intervening period between 2019 and 2024, adjustment rates have been calculated by comparing two-way traffic flows across 2019 & 2024 surveys along the L6030 at its intersection with the N81. Over this period, two-way flows have been shown to increase by 19.8% at this point and it is reasonable to assume that this growth would be consistent with flows through the L6030/site access junction. To establish 2019 baseline flows through the L6030/site access junction, the above growth rate has been applied to revert 2024 flows back to the start of the assessment period (2019), which are then subject to the traffic growth rates (see section 12.5.1.2) for future baseline flows for individual assessment years. Further details are included in Appendix 12A).

12.4.5 TRAFFIC GROWTH

Traffic Growth has been utilised as per Table 6.2 of TII Guidance – "Project Appraisal Guidelines for National Roads, Unit 5.3 – Travel Demand Projections" with the relevant extract included below in Table 12.3. A 1.0197 central growth rate for light vehicles has been applied in this case on the basis that traffic along the N81 is predominantly made up of commuters to/from the greater Dublin area.

Table 12.3 - Estimated Breakdown of Trip Rates per Day

Year	Annual Growth Rate (Kildare, LV, 2016-2030)	Cumulative Growth Rate
2019	1.0197	1.0197
2020	1.0197	1.0397
2021	1.0197	1.0602
2022	1.0197	1.0812
2023	1.0197	1.1024
2024	1.0197	1.1242

The "Traffic and Transportation Assessment Guidelines" published by Transport Infrastructure Ireland recommend the assessment of traffic in the Opening year, for the Opening Year +5 years and the Opening Year +15 years. As this is a retrospective application however, only the years of operation (2019 to 2024) are to be considered.

12.4.6 TRIP GENERATION

Chapter 2 of this rEIAR gives an overview of the development that is the subject of this assessment. It details the development of the site from baseline to current time by reviewing publicly available resources such as mapping and photography; SQL business records; and monitoring records.

12.4.6.1 Quarry Extraction Trips

Based on these resources, estimations of quarry extraction rates indicate historic extraction quantities as calculated below in Table 12.4, which have been further extrapolated on the assumptions that the quarry is operational for 50 weeks of the year, 5 days per week and 11 hours per day. It has also been assumed that capacities for typical tipper lorries using the site will be 25 tonnes.

Table 12.4 - Estimated Breakdown of Trip Rates per Day

Year	Est. Annual Material Extraction (Tonnes)	Est. Weekly Material Extraction (Tonnes)	Est. Daily Material Extraction (Tonnes)	Estimated Daily Trips (arrivals & departures)	Estimated Hourly Trips (arrivals & departures)
2020	133,290	2,666	534	48	5
2021	130,727	2,615	523	46	5
2022	130,085	2,602	521	46	5
2023	109,445	2,189	438	40	4
2024	45,758	916	184	16	2

12.4.6.2 Staff Trips

As indicated in Chapter 2 of this rEIAR, the quarry directly employed 4no plant operators and 2no administration staff on the weighbridge, all of which generated 6 arrivals and 6 departures daily, all of which are expected to generated in the first and last hour of the quarry opening hours, all of which are expected to generated in the first and last hour of the quarry opening hours, all of which are expected to generated alongside the peak periods.

12.4.6.3 Miscellaneous Trips

Other ancillary operations on site include refuelling, blasting, and waste collection each of which are carried out by a third party and would only generate ad-hoc trips. An assumption of 4no trips (2 in and 2 out) has been made for this site. For the purposes of this assessment, we have robustly assumed that these trips will take place in both the peak periods.

12.4.6.4 Derived Trip Rates

Table 12.5 below summarises the daily and peak hour arrivals/departures to be included in this assessment

Table 12.5 – Daily and Peak Hour Trips

Source of Generated Trip	Peak Daily Trips	Peak Hour Arr		Peak Hour Dep	
		AM	PM	AM	PM
Quarry Extraction	48	5	5	5	5
Directly Employed Staff	12	6	-	-	6
Miscellaneous	4	2	2	2	2
Total	64	13	7	7	13

12.4.6.5 Generated Trip Distribution

The generated trip distribution will follow existing flow patterns, which have been calculated from arrivals and departures across individual peak period under assessment. These are indicated in Figure 12.9 overleaf with total generated flows confirmed in Figure 12.10.

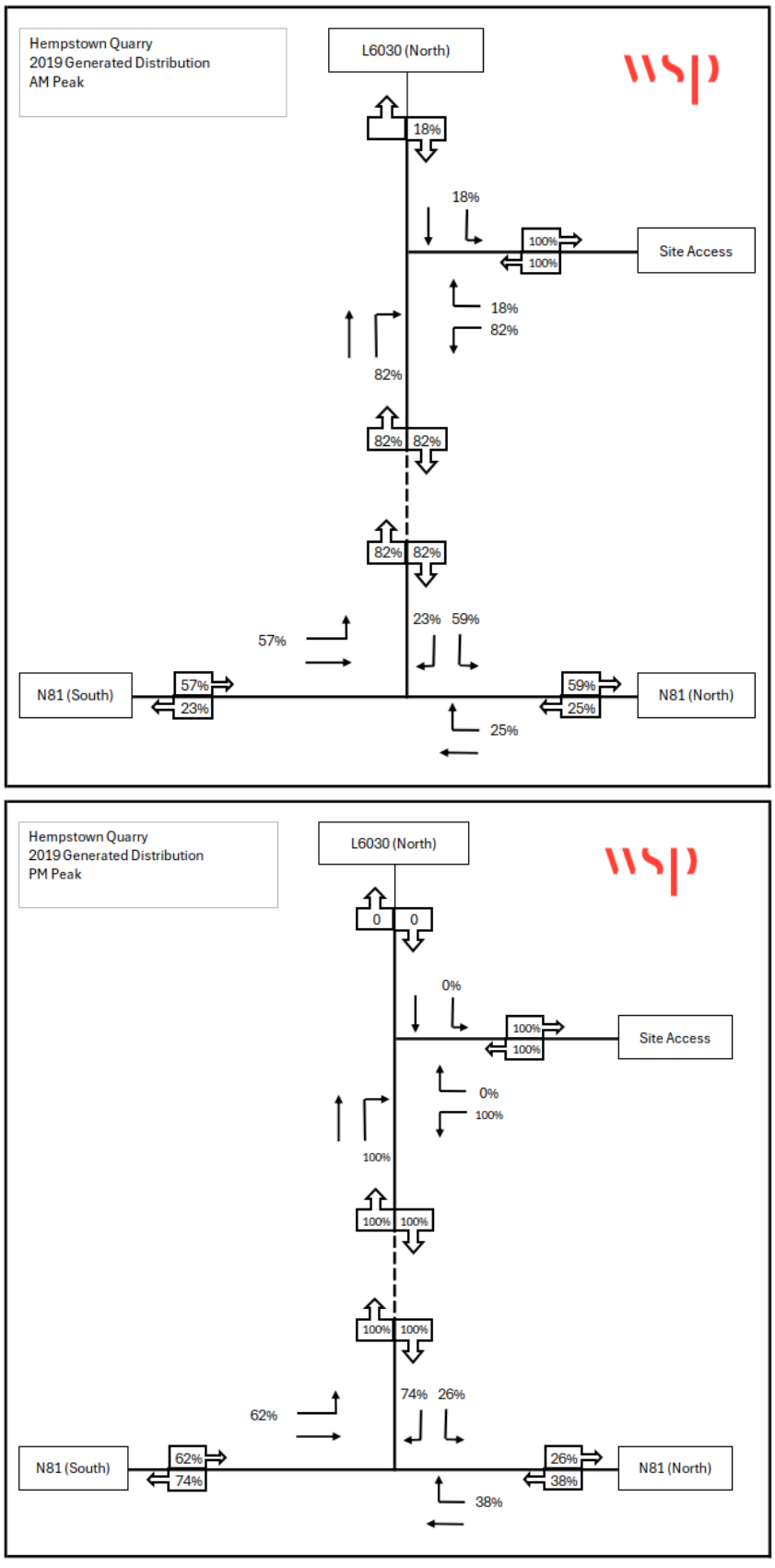


Figure 12.9 - Generated Flow Distribution across AM & PM Peaks

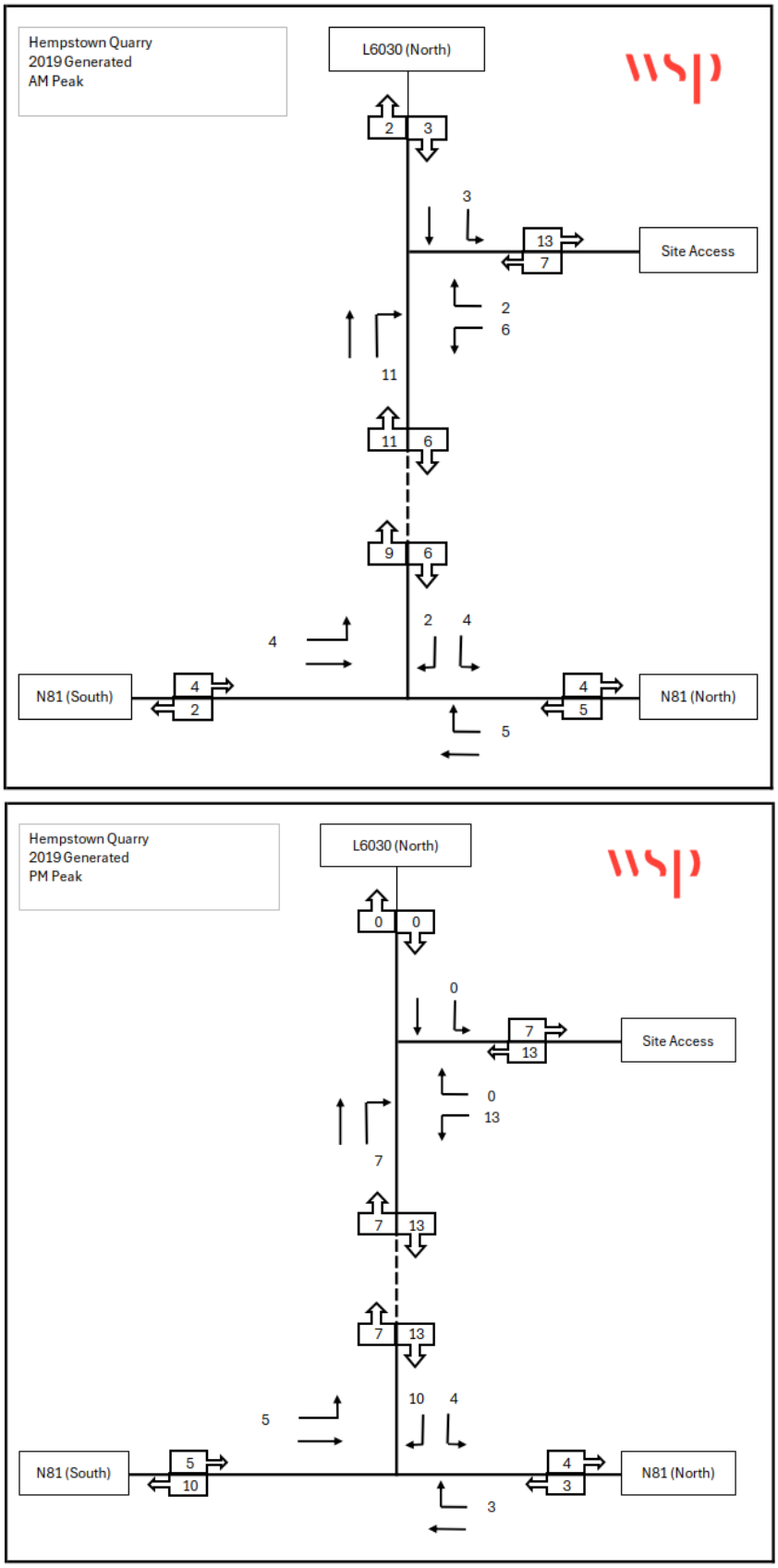


Figure 12.10 - Generated Flows across AM & PM Peaks

12.5 POTENTIAL EFFECTS

12.5.1 INFRASTRUCTURE NETWORK IMPACTS

12.5.1.1 Link Capacity Assessment

TII document “PE-PDV-02045 - Traffic and Transport Assessment Guidelines” offers advice on investigating how traffic generated by developments impact existing road infrastructure networks. Whilst it generally accepted that the existing local roads network can accommodate a certain level of additional traffic, there are specific parameters which inform whether additional studies are needed to assess network capacity.

Table 2.1 of the above document together with the “Traffic Management Guidelines” (Department of Transport, 2003) include several key thresholds beyond which incur additional assessments, namely the following:

- Traffic to and from the development exceeds 10% of the traffic flows on the adjoining road;
- Traffic to and from the development exceeds 5% of the traffic flows on the adjoining road where congestion exists, or the location is sensitive.

TII document “PE-PDV-02045 - Traffic and Transport Assessment Guidelines” also indicates that a threshold approach should also be used to establish the area of influence of the development, whereby

> *“the study area should include all road links and associated junctions where traffic to and from the development may be expected to exceed 10% of the existing traffic movements, or 5% in congested or other sensitive locations, including junctions with National Roads.”*

Figure 12.11 overleaf indicates the percentage increase in flows through each junction on opening of the quarry in the AM & PM peaks. For both junctions, the 10% threshold is exceeded and therefore requires more in-depth analyses of junction capacity.

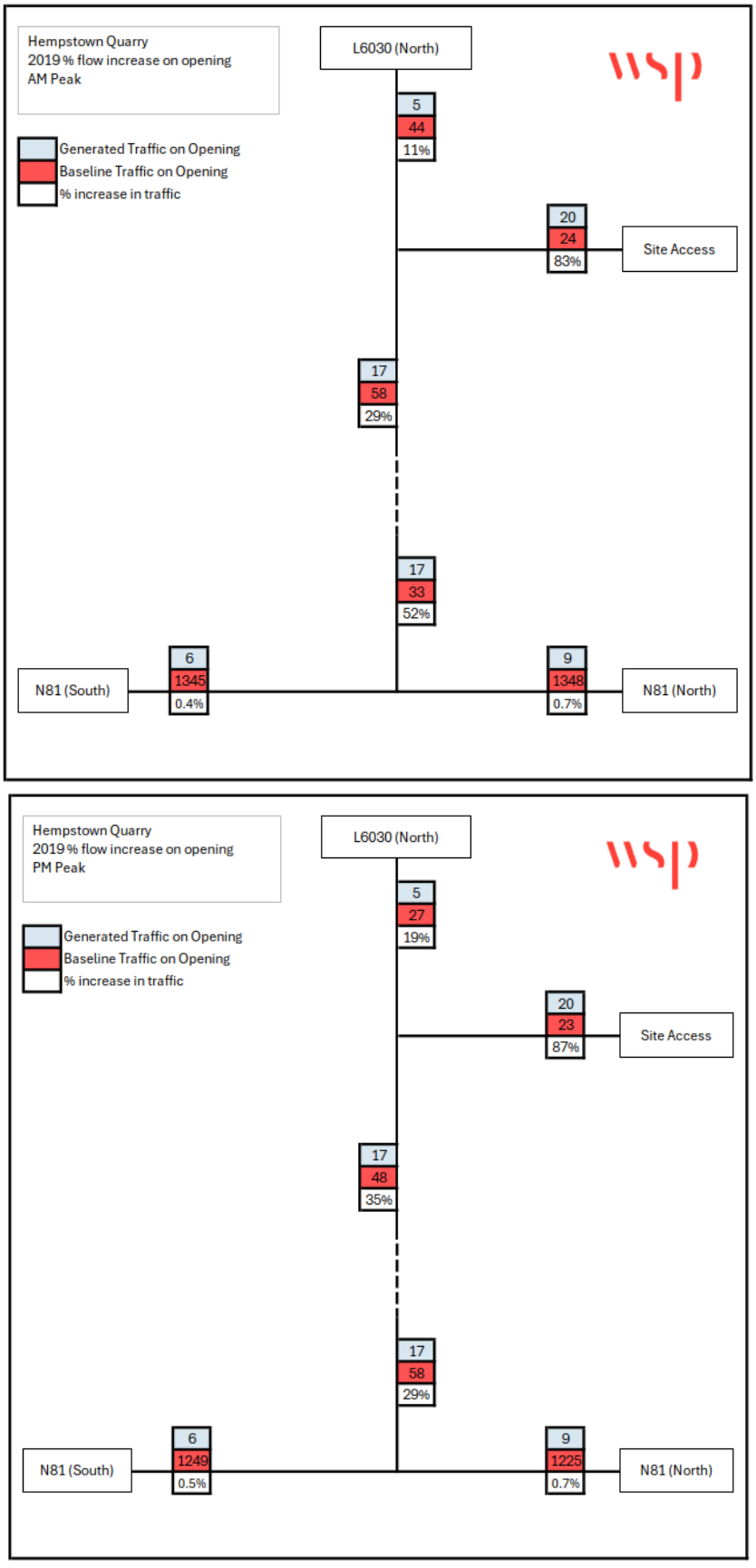


Figure 12.11 - Impact of Generated Traffic on Existing Roads Network

12.5.1.2 Junction Capacity Analysis

Junctions 9 (PICADY) models have been built for various time-based scenarios as indicated below and include existing baseline and generated traffic flows referred to previously. They assess three key criteria for both the L6030/site access junction as well as the L6030/N81 junction as follows:

- 95th percentile queue length (50th percentile is average & 100th percentile is maximum);
- Delay (average time vehicles must wait at give way/stop line before entering a junction) and
- Ratio of Flow to Capacity, RFC (how efficiently flows are moving through the junction).

Table 12.6 – Junctions 9 (PICADY) Analysis - L6030/site access junction

Assessment Scenario	Arm	95th %tile queue length (vehs)		Delay (s)		RFC	
		AM	PM	AM	PM	AM	PM
2019 Baseline	Site Access L6030 (South)	0.5 0.5	0.5 0.5	4.68 5.20	4.40 5.19	0.02 0.02	0.01 0.02
2020 Baseline	Site Access L6030 (South)	0.5 0.5	0.5 0.5	4.69 5.20	4.41 5.19	0.02 0.02	0.01 0.02
2020 Baseline + Generated	Site Access L6030 (South)	0.5 0.5	0.5 0.5	4.70 5.20	4.41 5.20	0.02 0.02	0.01 0.02
2024 Baseline	Site Access L6030 (South)	0.5 0.5	0.5 0.5	4.76 5.30	4.48 5.25	0.03 0.03	0.03 0.03
2024 Baseline + Generated	Site Access L6030 (South)	0.5 0.5	0.5 0.5	4.78 5.31	4.49 5.26	0.03 0.04	0.03 0.03

Table 12.7 – Junctions 9 (PICADY) Analysis L6030/N81 junction

Assessment Scenario	Arm	95th %tile queue length (vehs)		Delay (s)		RFC	
		AM	PM	AM	PM	AM	PM
2019 Baseline	L6030 N81 (North)	0.5 0.5	0.5 0.5	12.21 7.23	10.55 3.10	0.06 0.01	0.10 0.03
2020 Baseline	L6030 N81 (North)	0.5 0.5	0.5 0.5	12.52 7.28	10.71 3.08	0.07 0.01	0.10 0.03
2020 Baseline + Generated	L6030 N81 (North)	0.5 0.5	0.5 0.5	14.50 7.55	11.69 2.96	0.08 0.02	0.12 0.05
2024 Baseline	L6030 N81 (North)	0.5 0.5	0.5 0.6	12.97 7.57	9.89 3.14	0.09 0.05	0.13 0.06
2024 Baseline + Generated	L6030 N81 (North)	0.5 0.5	0.5 1.0	15.13 7.89	10.80 3.03	0.12 0.06	0.15 0.08

It is generally accepted by the industry that an RFC value of 0.85 indicates the point beyond which junctions operate beyond capacity. Once this point is passed, motorists begin to react slower than normal given the volumes of queuing vehicles causing a knock-on reduced efficiency of movement. The RFCs for all arms under assessment are well below this threshold, with a maximum value of 0.15.

12.5.2 ROAD SAFETY

12.5.2.1 Site Access

Site access is via the L6030, with all generated traffic accessing via its junction with the N81 and will involve a right in and left out approach. Drawing containing swept path analyses are included in Appendix 12B.

12.5.2.2 Sightlines and Visibility

To facilitate safe access through a priority junction from a minor arm onto a major arm, visibility splays are required to ensure that motorists have adequate sightlines to oncoming traffic. These are determined by the level of traffic using the minor arm and the speed of traffic along the major arms. The “x” distance is the set-back from the stop/yield line and represents the driver’s eye location when stationery at the junction and is determined using TII document DN-GEO-03060, Table 5.4. The “y” distance represents the distance that the motorist can see in both directions along the major arm of the junction and corresponds to the stopping sight distances taken from TII document DN-GEO-03031, Table 1.3.

Table 12.8 below indicates the requirements for each junction under consideration in this assessment – namely the L6030/site access junction and the N81.L6030 junction. These visibility splays are indicated in Appendix 12B.

Table 12.8 – Visibility Splays at Junctions

Junction	“x” distance	“y” distance
L6030/site access	2.0m	120m
N/81/L6030	3.0m	160m

12.5.2.3 Public Transport

Bus stops are located within proximity to the quarry access on the N81. Dublin Bus Route 65 operates between Blessington and Dublin and serves northbound bus stop 4060 approximately every 15 minutes at AM peak and every 60mins at PM peak. The southbound bus stop 4018 is served approximately every 60mins at AM peak and 30mins at PM peak. Both these bus stops re located within 1km of the site and are made up of hardstanding areas with no shelters, hailing poles and raised kerbs.

12.5.2.4 Parking

The quarry employs approximately 6 full-time staff and caters for contracted drivers during periods of high demand. There are currently 6 informal parking spaces within the site adjacent to the site offices. The formal parking provision, combined with the overflow space provides sufficient parking capacity for operations on site. It is proposed that the hardstanding parking area can be moved as operational needs require.

12.5.2.5 Pedestrians and Cyclists

There is no footpath provision on the N81 surrounding the junction with the L6030, neither is there any crossing provision to link the bus stops though there are areas of hardstanding at bus stops 4060 and 4018 located within 40m of the junction. There are no current cycle lanes or other facilities on the N81, nor are there any bespoke cycling facilities on site.

12.5.2.6 Assessment of Significance – Road Safety

There are no anticipated elements for Road Safety. The site is accessed by HGVs and Car traffic only, with no real scope for staff to access by other means. Additionally, the continued site operations have not highlighted any specific areas of concern. Effects from traffic on road safety are considered to be ***Not Significant.***

12.6 REMEDIAL MEASURES REQUIRED

There are no remedial measures required to be undertaken.

12.7 RESIDUAL EFFECTS

There are no residual effects as a result of effects during the assessment period.

12.8 CUMULATIVE EFFECTS

Cumulative effects have been considered in the assessment as part of background traffic measured and as part of the AADT for the assessment period. Potentially cumulative effects have therefore been assessed as ***Not Significant***.

12.9 SUMMARY AND CONCLUSIONS

Link capacity analysis was carried out on the L6030/site access junction and the N81/L6030 junction, which shows that the traffic generated across the period of assessment offers no detrimental impact on the operating capacity of either junction.

An assessment of the required visibility splays indicate that all provisions are within standard and offer no adverse safety arrangements during quarry operations. Effects are considered to be ***Not Significant.***

12.10 REFERENCES

Traffic and Transport Assessment Guidelines" - (Transport Infrastructure Ireland, May 2014);

PE-PAG02017 - Project Appraisal Guidelines for National Roads Unit 5.3 – Travel Demand Projections" - (Transport Infrastructure Ireland, Oct 2021) ;

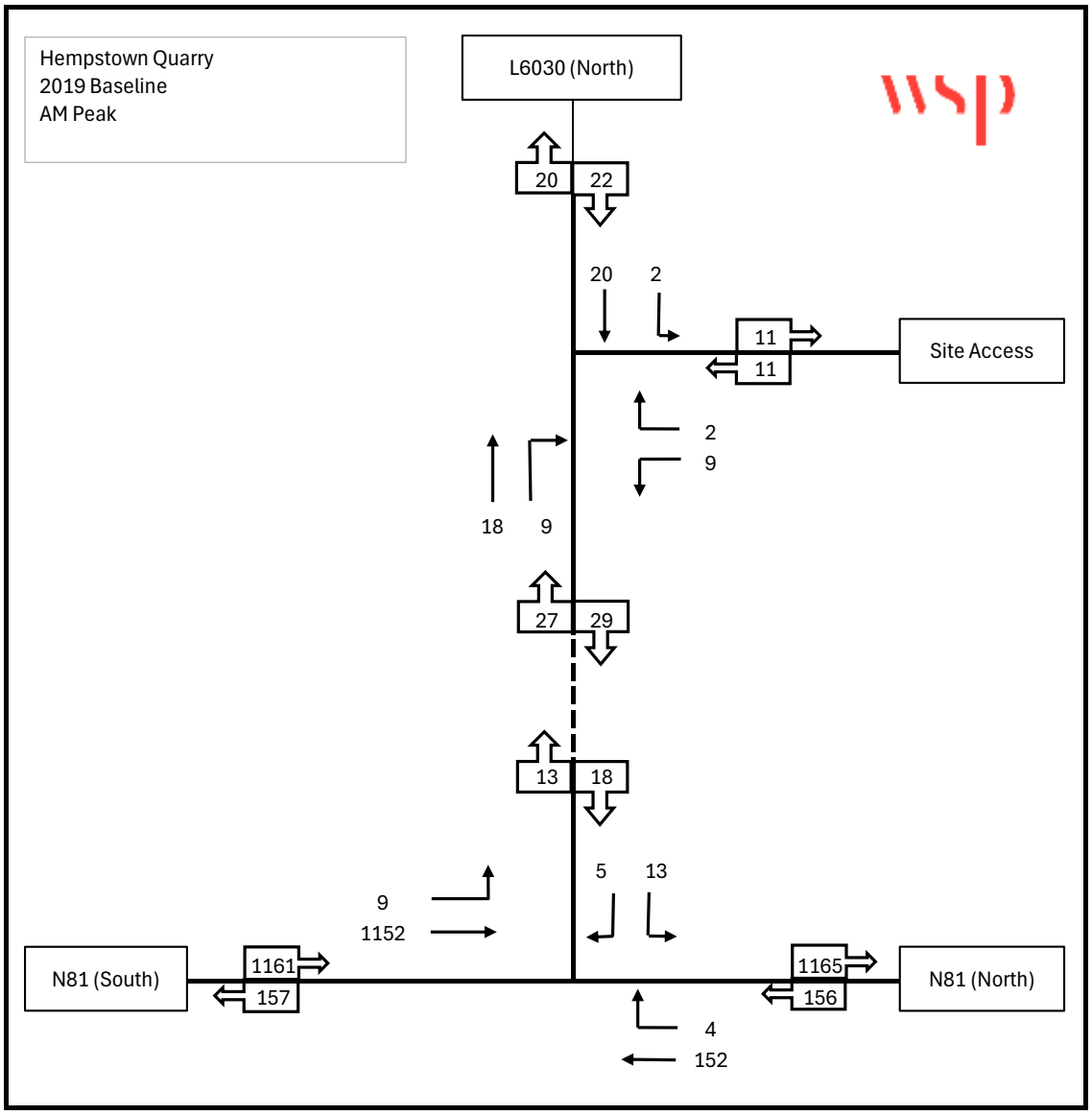
TII Count Site "TMU N81 010.0 S" (https://trafficdata.tii.ie/publicmultinodemap.asp)

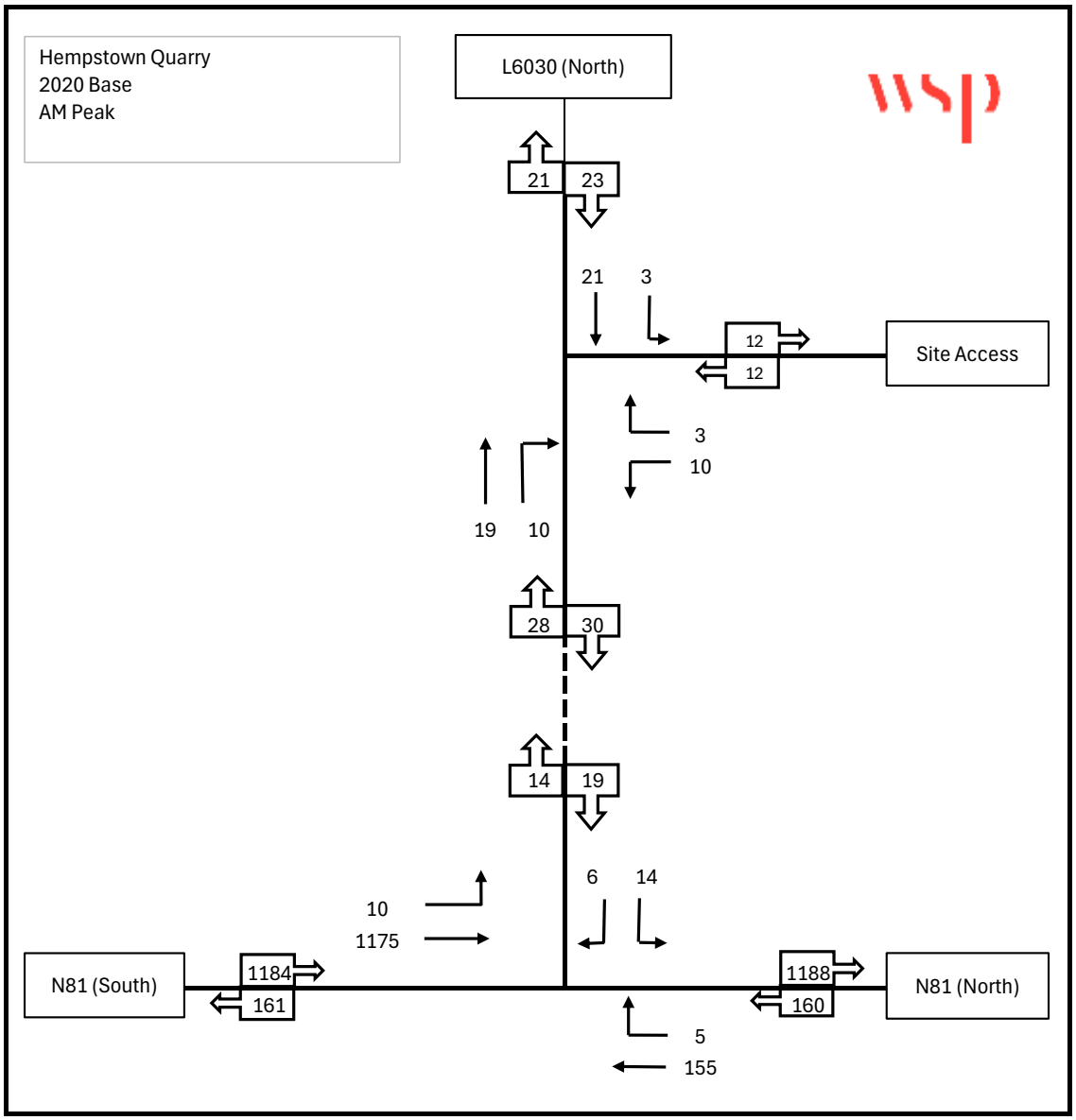
"PE-PAG-02039 - Project Appraisal Guidelines for National Roads Unit 16.1 – Expansion Factors for Short Period Traffic Counts - (Transport Infrastructure Ireland, Oct 2016); and

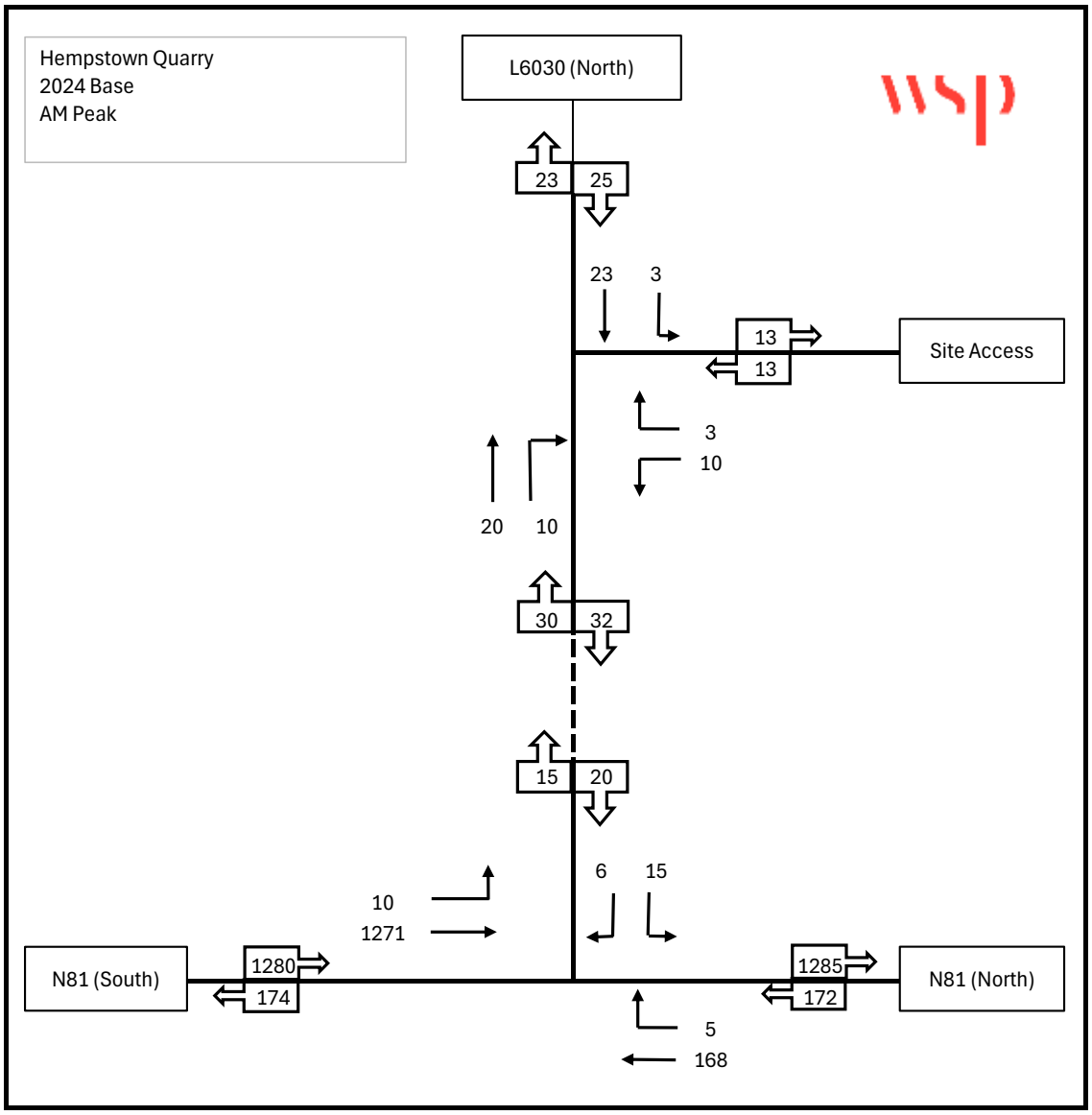
EPA's Guidelines on the Information to be Contained in EIARs (EPA, 2022).

Appendix 12A

TRAFFIC FLOW DIAGRAMS & JUNCTIONS 9 (PICADY) OUTPUTS


Hempstown Quarry
2019 Baseline
AM Peak
L6030 (North)
20
22
20
2
11
11
Site Access
2
9
18
9
27
29
13
18
5
13
9
1152
N81 (South)
1161
157
1165
156
N81 (North)
4
152


Hempstown Quarry
2020 Base
AM Peak
L6030 (North)
21
23
21
3
12
12
Site Access
3
10
19
10
28
30
14
19
6
14
10
1175
N81 (South)
1184
161
1188
160
N81 (North)
5
155


Hempstown Quarry
2024 Base
AM Peak
L6030 (North)
23
25
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3
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13
Site Access
3
10
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32
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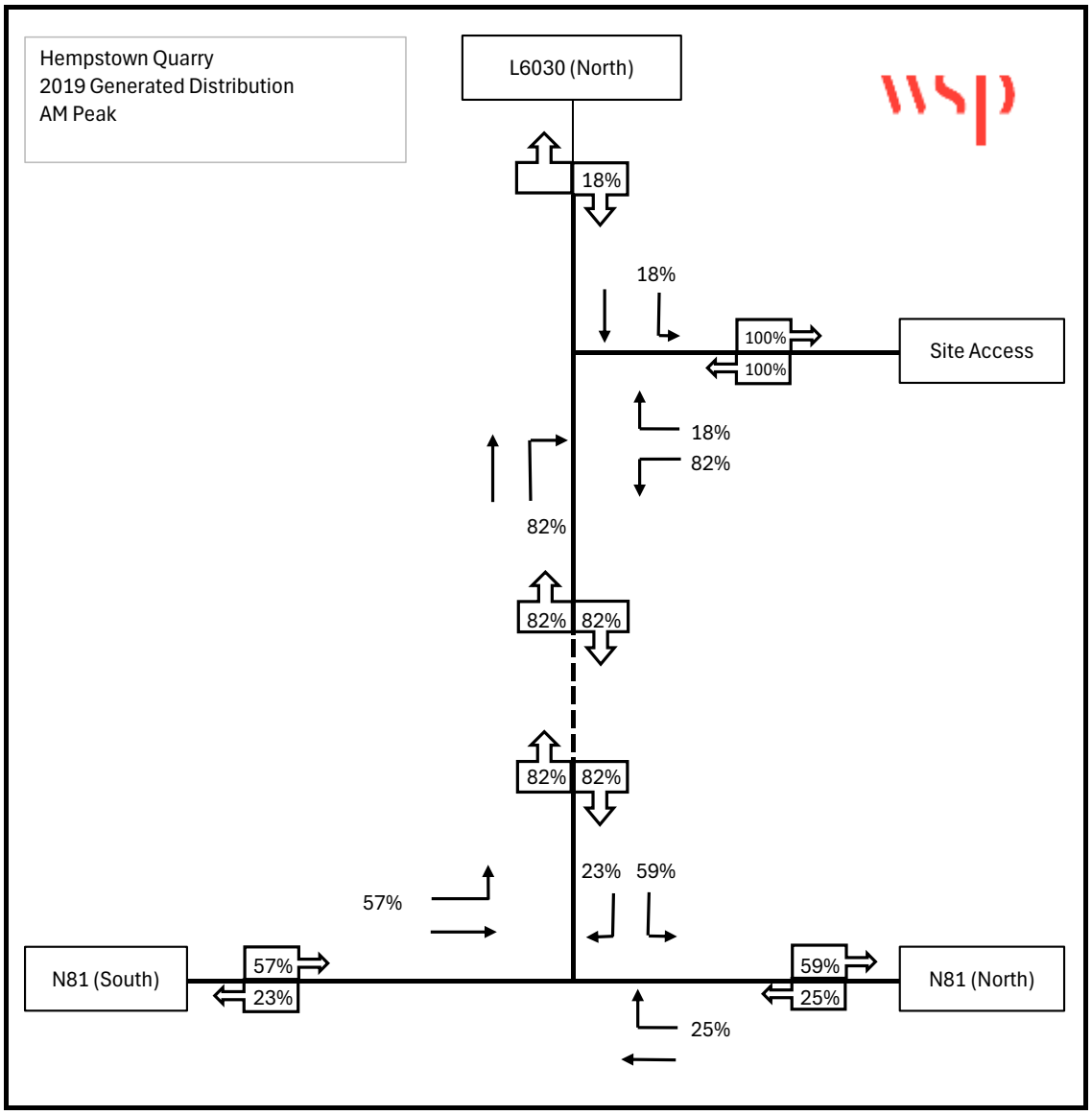
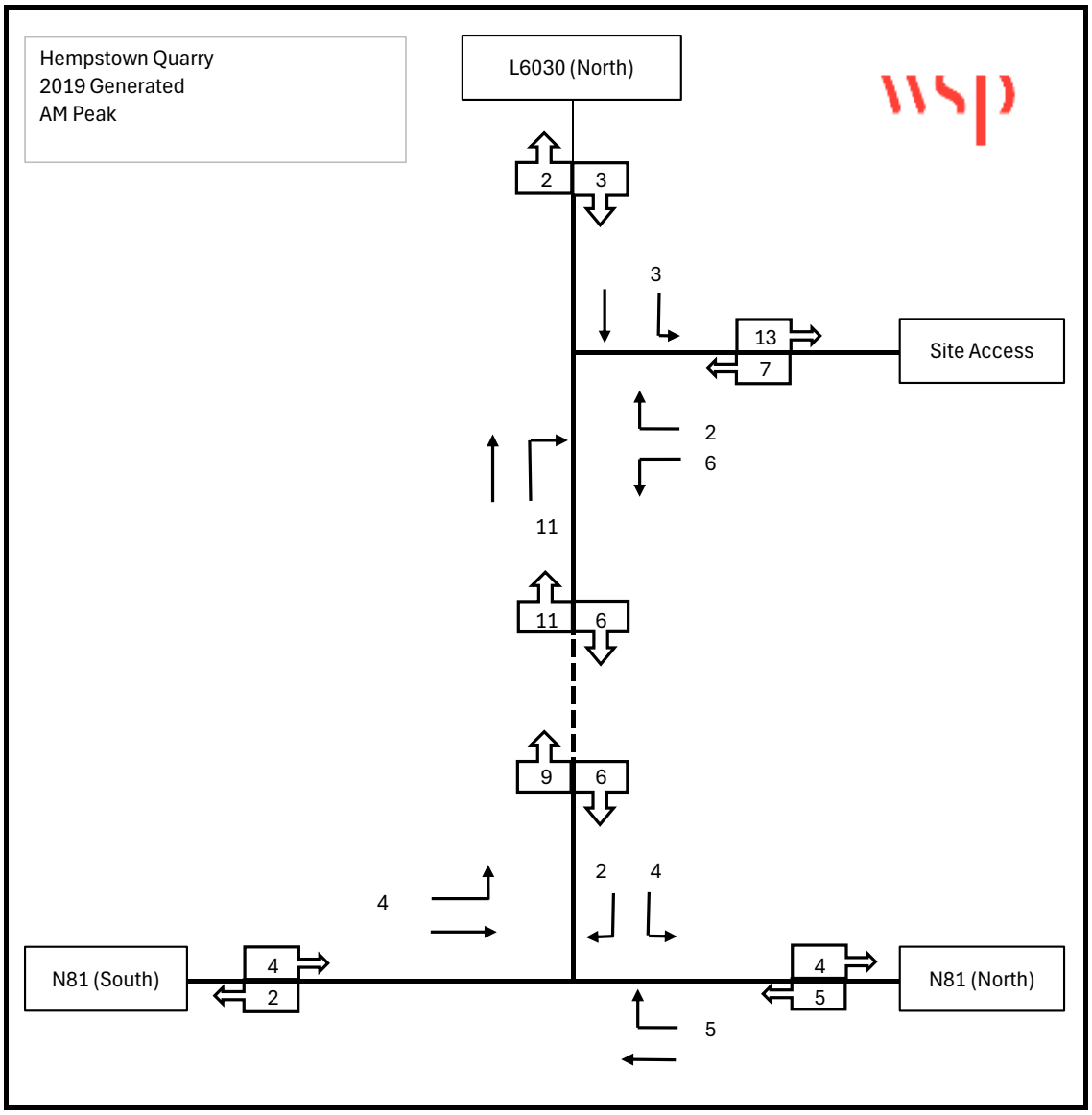
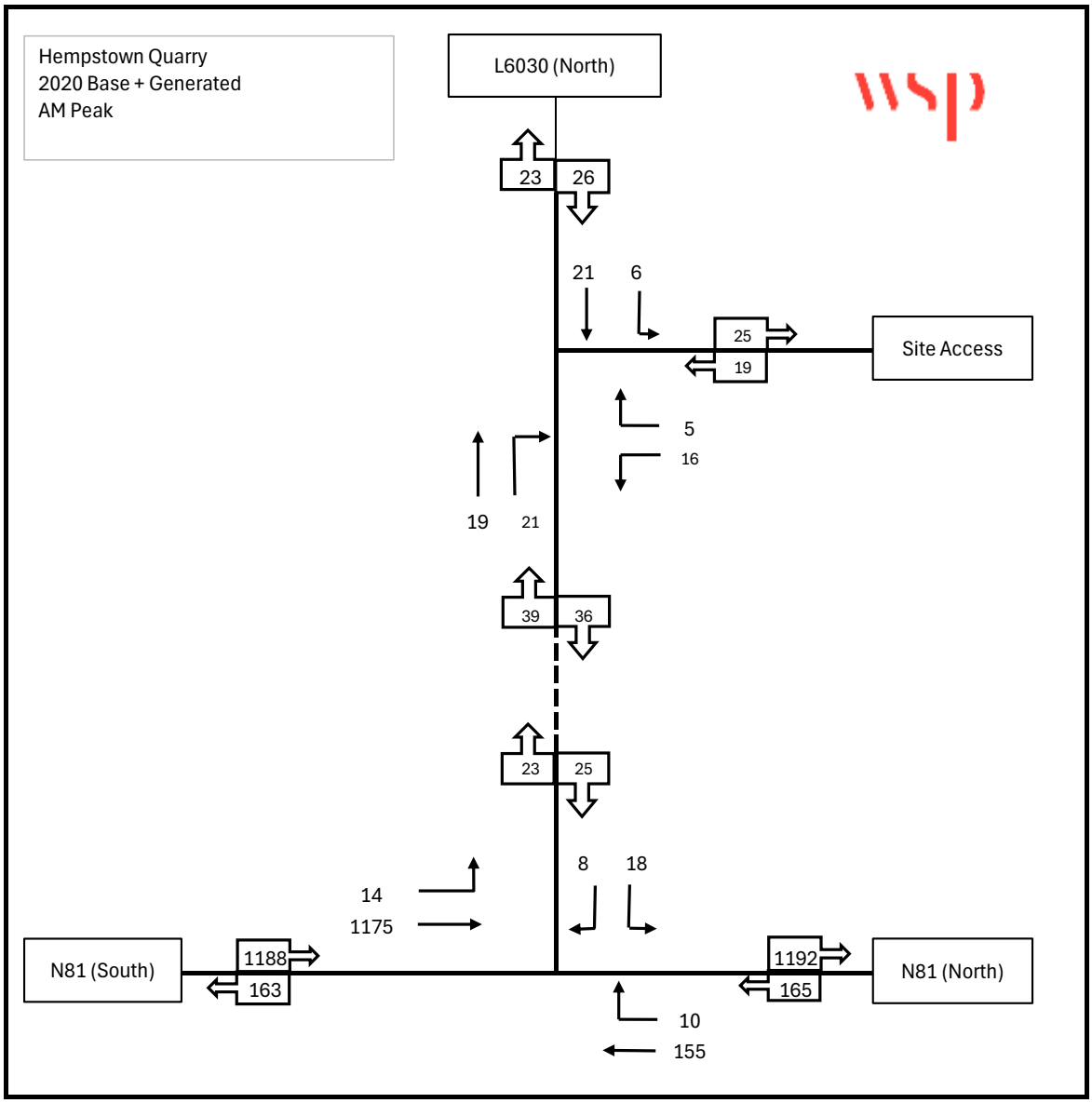
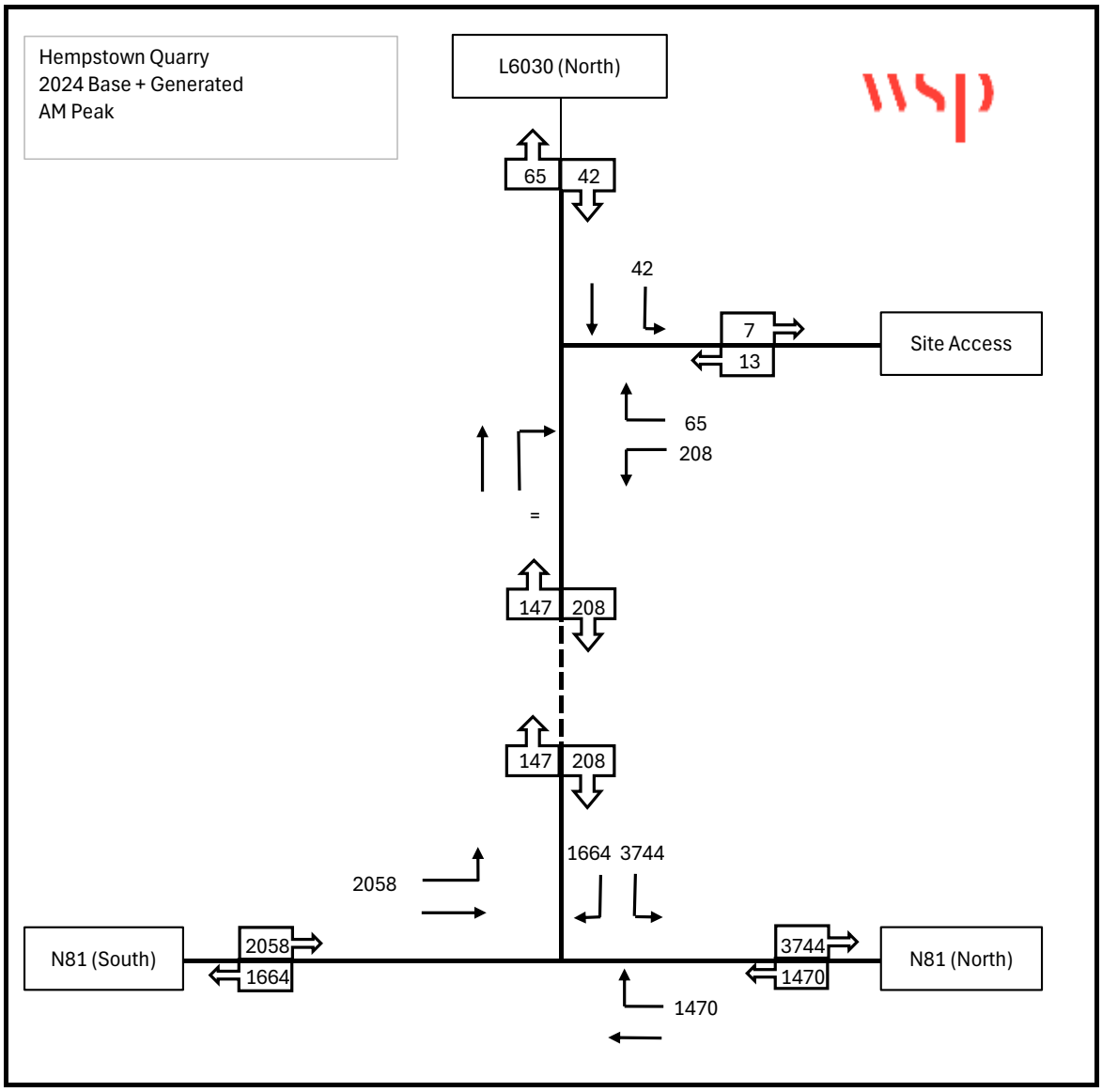
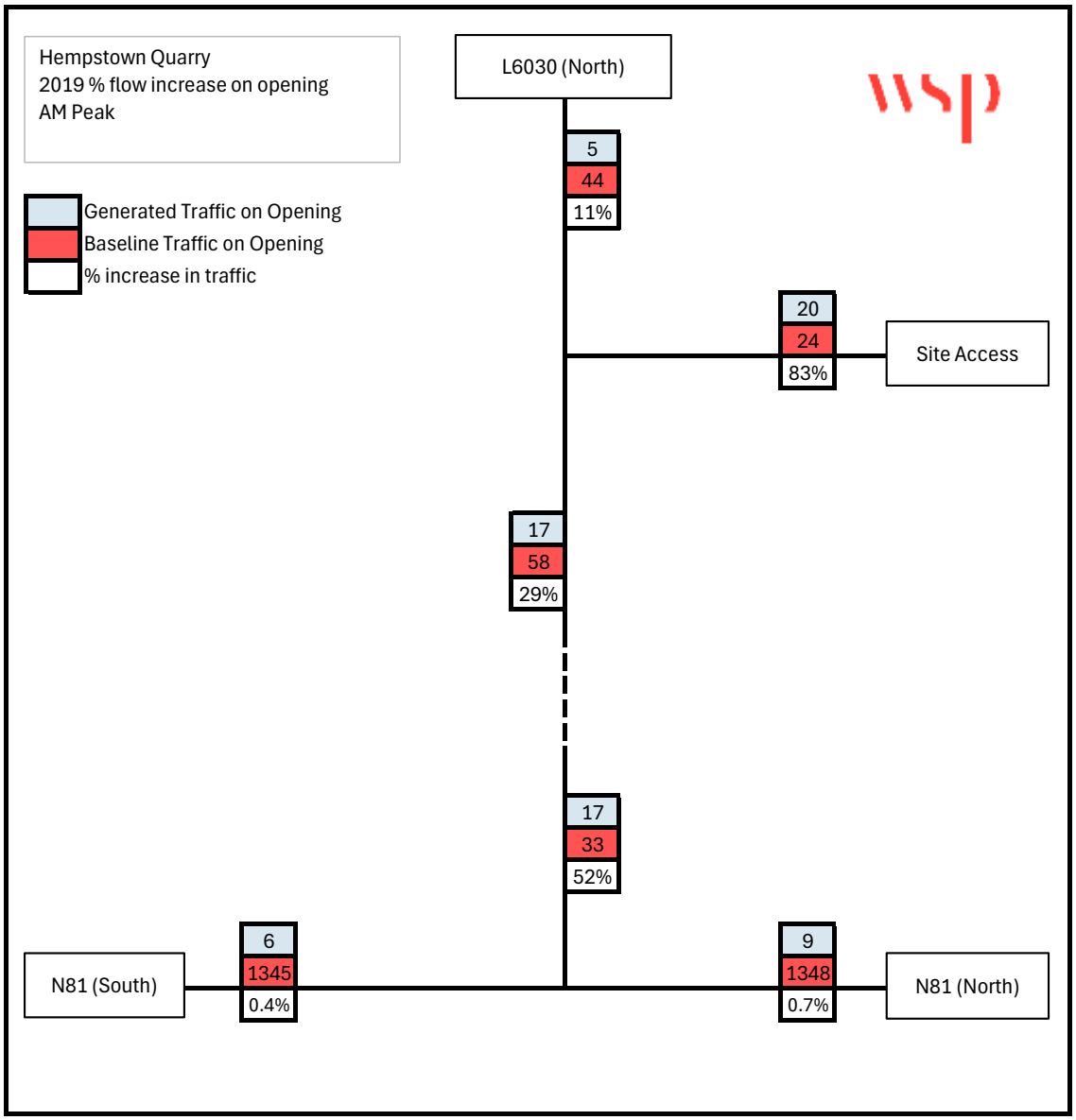
20
6
15
10
1271
N81 (South)
1280
174
1285
172
N81 (North)
5
168

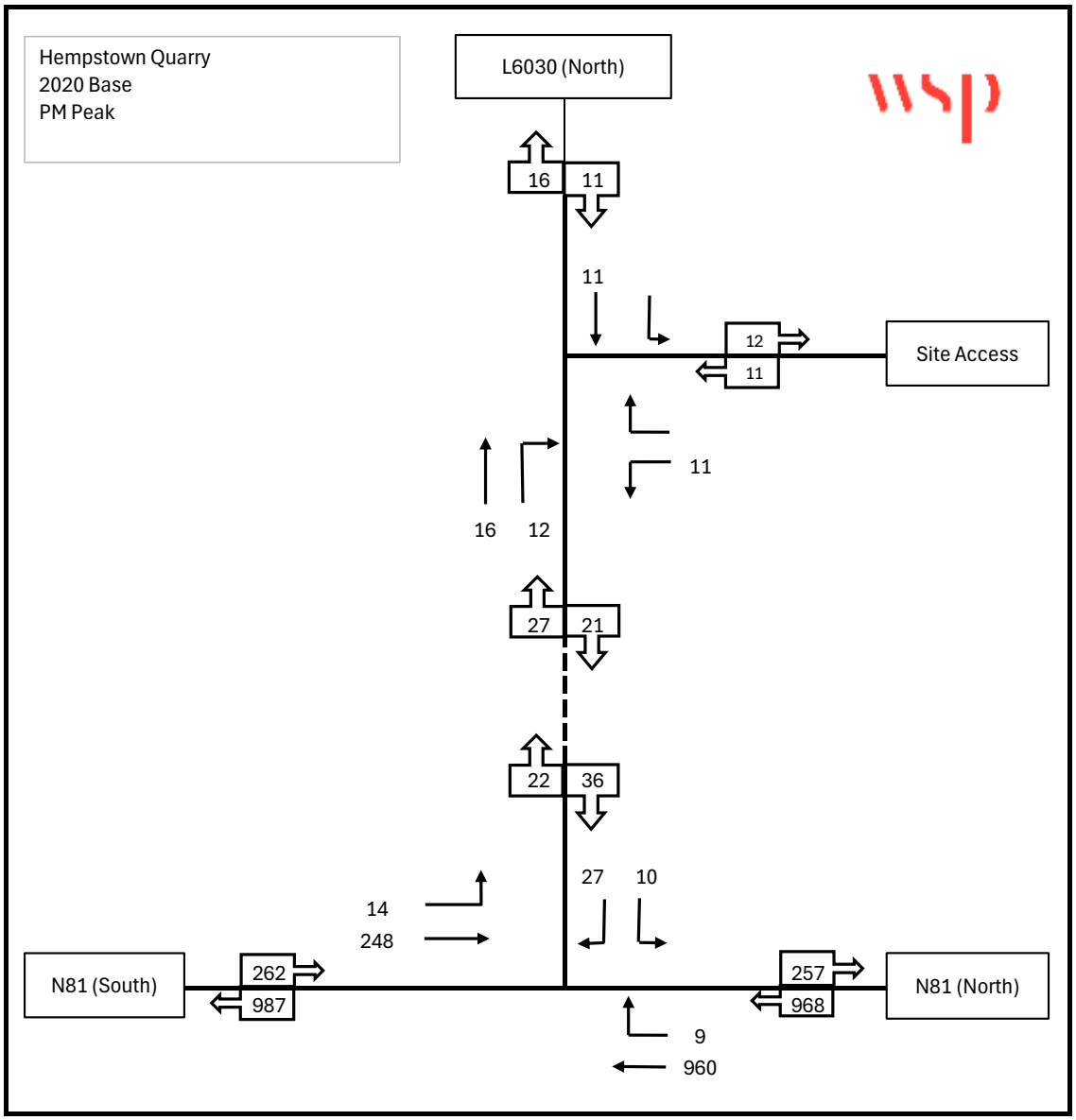

Hempstown Quarry
2019 Generated Distribution
AM Peak
L6030 (North)
18%
18%
100%
100%
Site Access
18%
82%
82%
82%
82%
82%
82%
82%
23%
59%
57%
N81 (South)
57%
23%
59%
25%
N81 (North)
25%

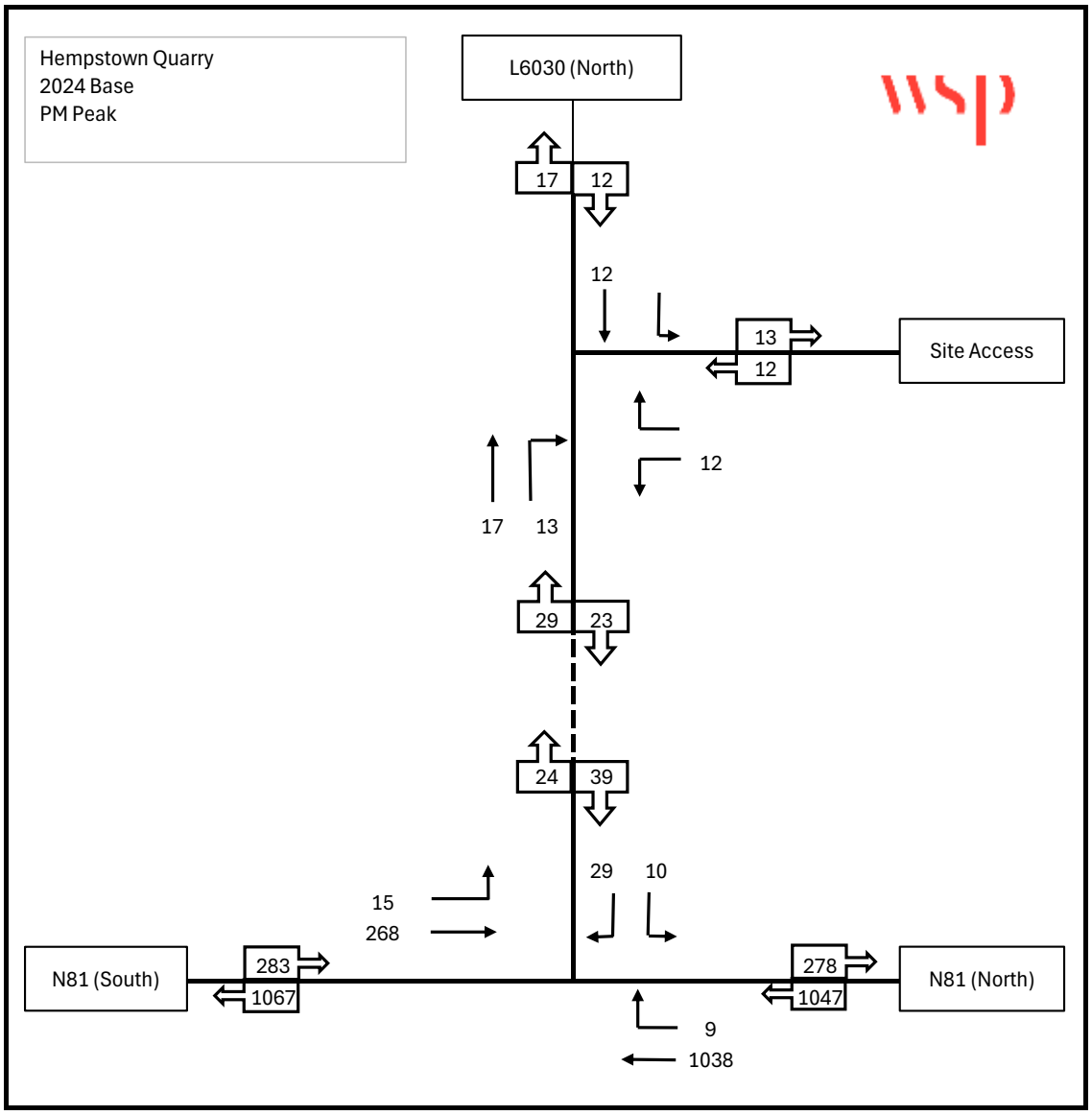

Hempstown Quarry
2019 Generated
AM Peak
L6030 (North)
2
3
3
13
7
Site Access
2
6
11
11
6
9
6
2
4
4
N81 (South)
4
2
4
5
N81 (North)
5

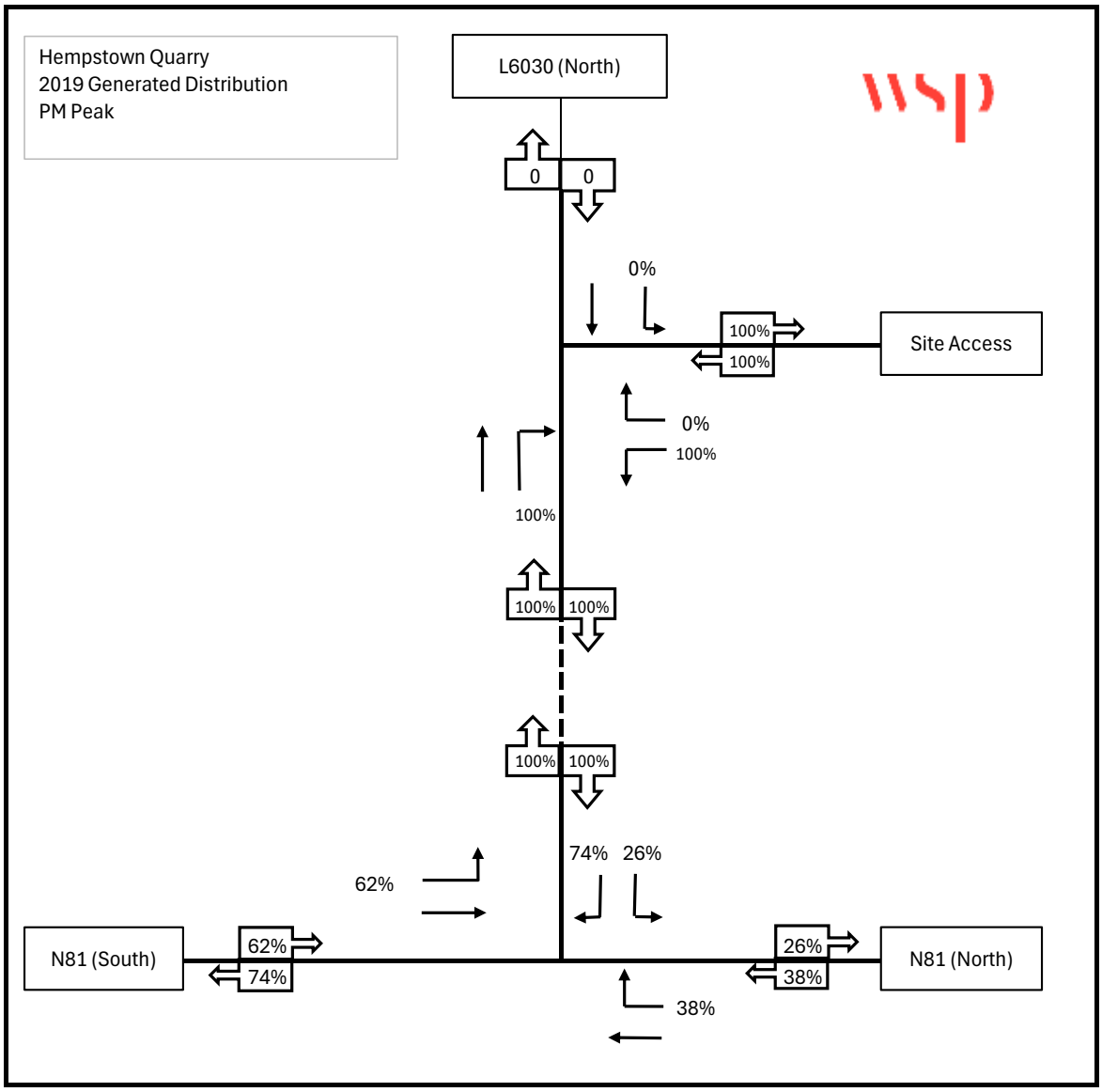

Hempstown Quarry
2020 Base + Generated
AM Peak
L6030 (North)
23
26
21
6
25
19
Site Access
5
16
19
21
39
36
23
25
8
18
14
1175
N81 (South)
1188
163
1192
165
N81 (North)
10
155

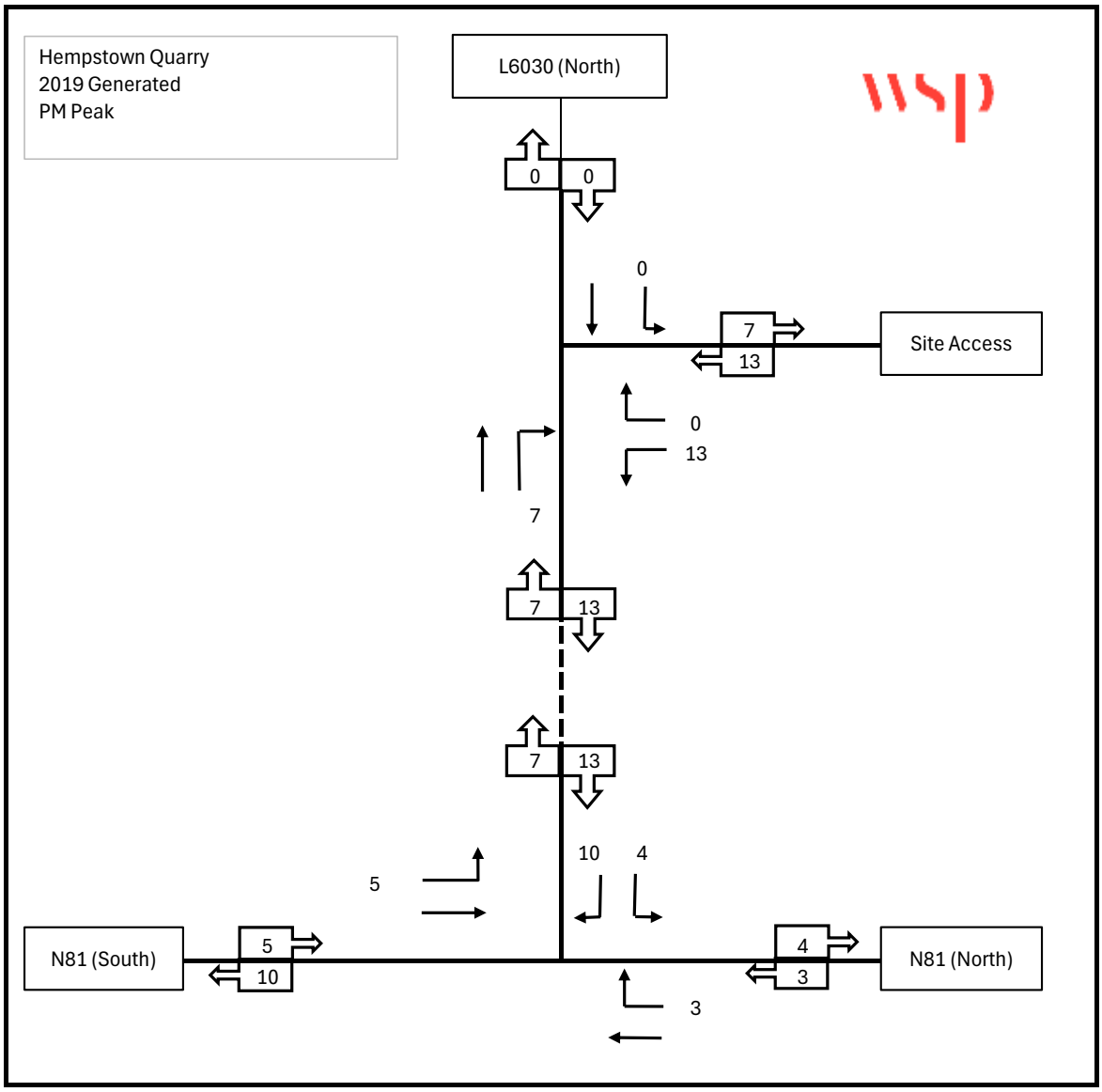

Hempstown Quarry
2024 Base + Generated
AM Peak
L6030 (North)
65
42
42
7
13
Site Access
65
208
=
147
208
147
208
1664
3744
2058
N81 (South)
2058
1664
3744
1470
N81 (North)
1470

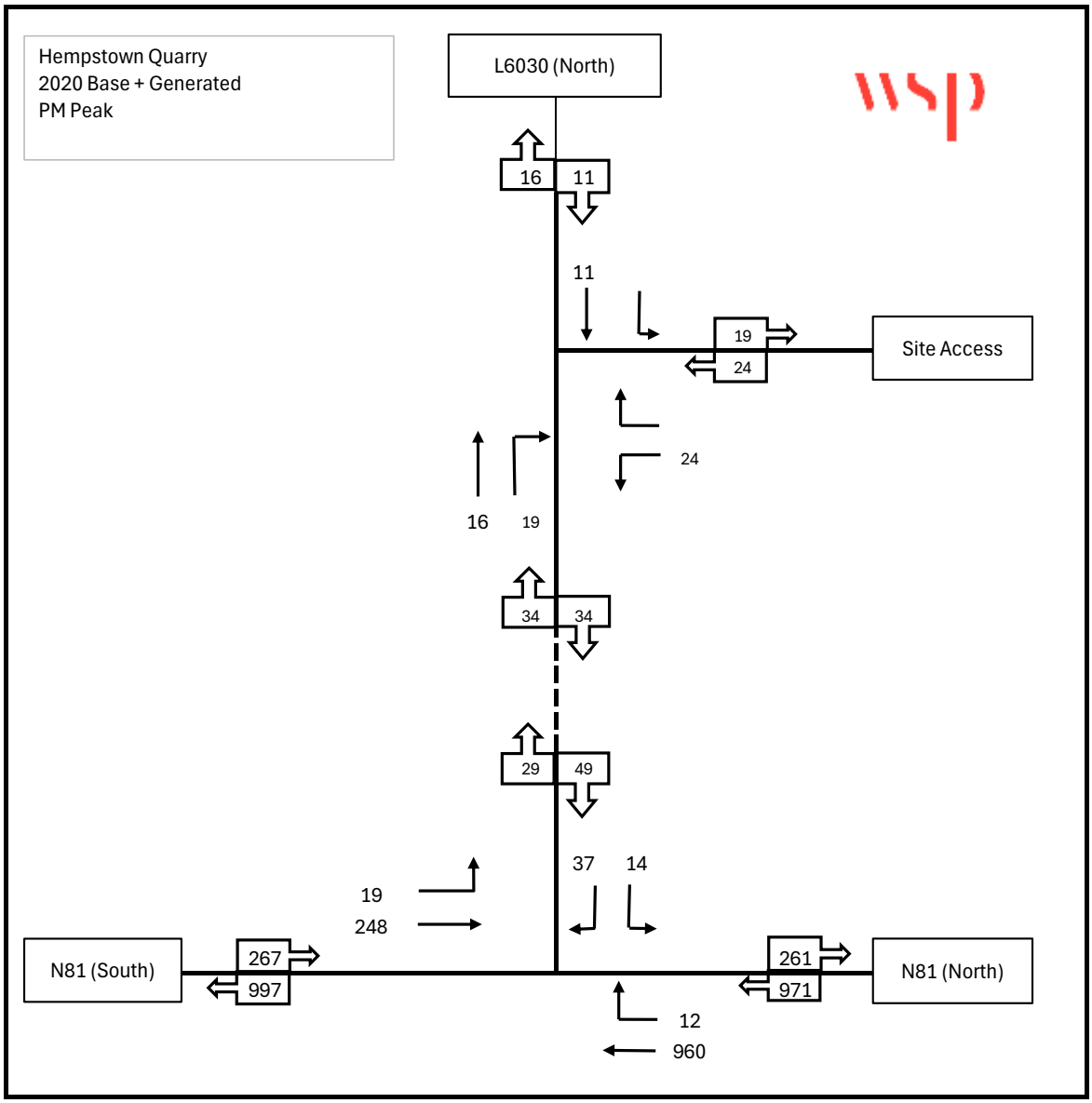

Hempstown Quarry
2019 % flow increase on opening
AM Peak
Generated Traffic on Opening
Baseline Traffic on Opening
% increase in traffic
L6030 (North)
5
44
11%
20
24
83%
Site Access
17
58
29%
17
33
52%
6
1345
0.4%
N81 (South)
9
1348
0.7%
N81 (North)

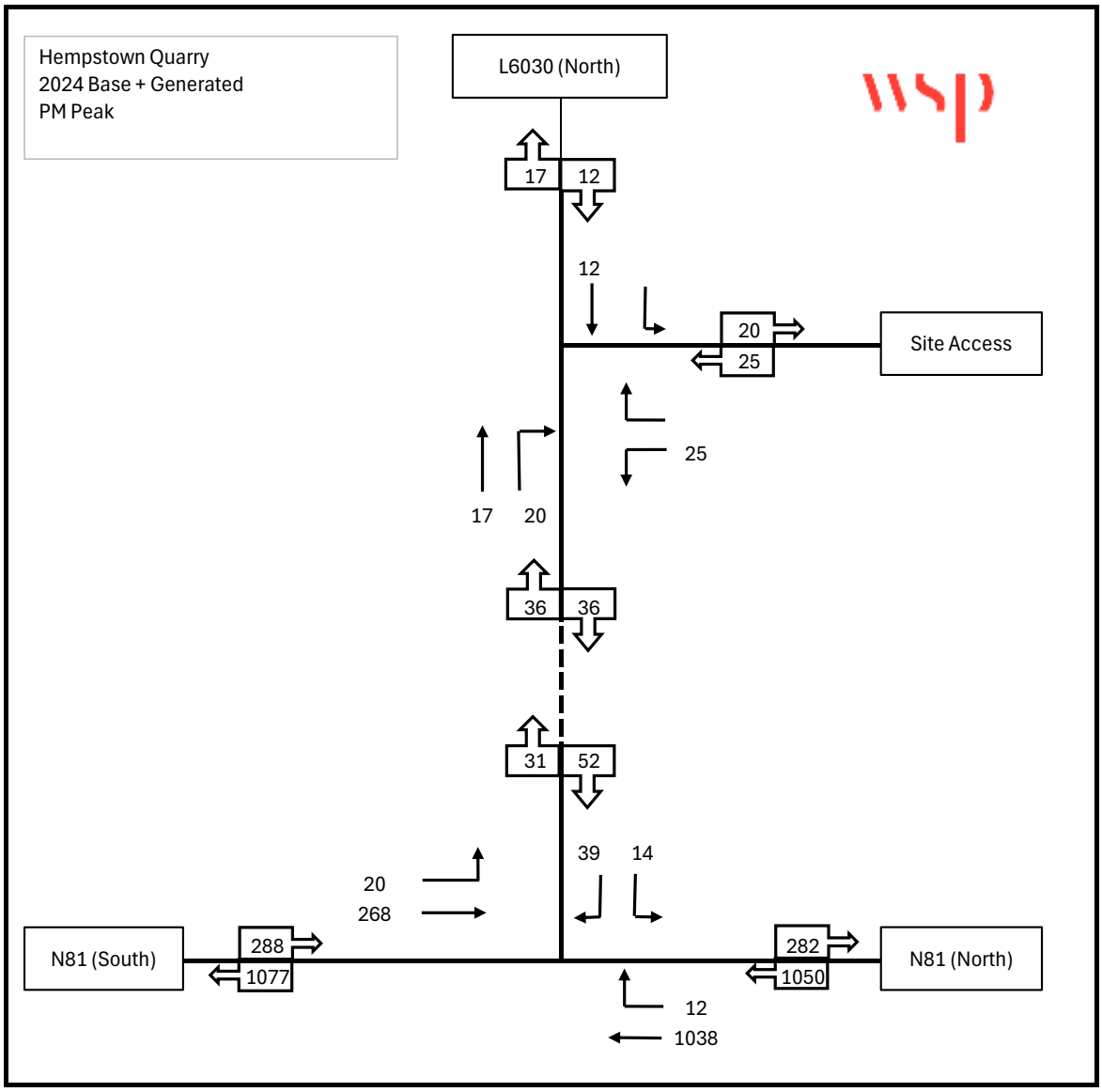

Hempstown Quarry
2020 Base
PM Peak
L6030 (North)
16
11
11
12
11
Site Access
11
16
12
27
21
22
36
27
10
14
248
N81 (South)
262
987
257
968
N81 (North)
9
960

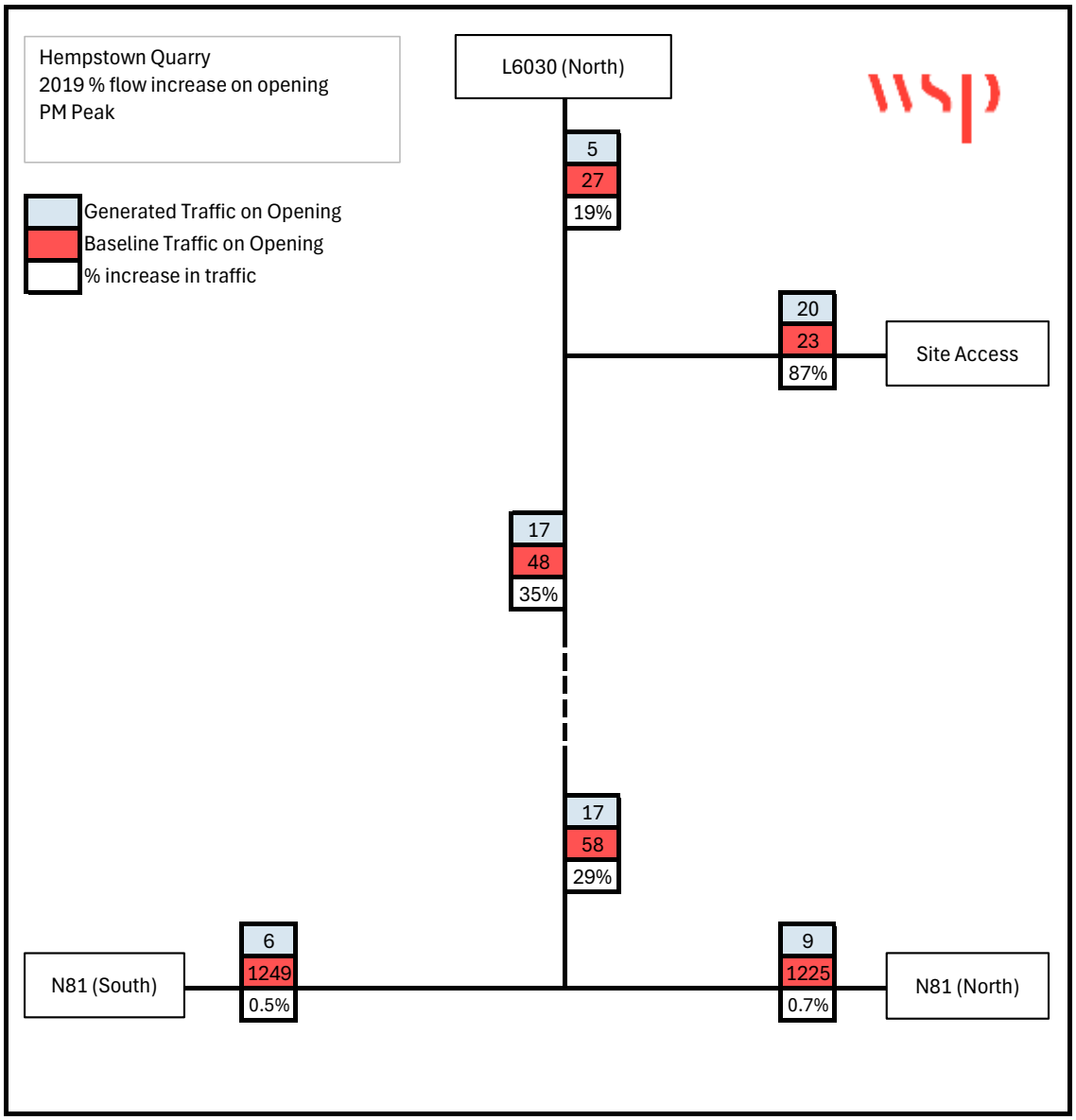

Hempstown Quarry
2024 Base
PM Peak
L6030 (North)
17
12
12
13
12
Site Access
12
17
13
29
23
24
39
29
10
15
268
N81 (South)
283
1067
278
1047
N81 (North)
9
1038


Hempstown Quarry
2019 Generated Distribution
PM Peak
L6030 (North)
0
0
0%
100%
100%
Site Access
0%
100%
100%
100%
100%
100%
100%
100%
74%
26%
62%
N81 (South)
62%
74%
26%
38%
N81 (North)
38%


Hempstown Quarry
2019 Generated
PM Peak
L6030 (North)
0
0
0
7
13
Site Access
0
13
7
7
13
7
13
10
4
5
N81 (South)
5
10
4
3
N81 (North)
3


Hempstown Quarry
2020 Base + Generated
PM Peak
L6030 (North)
16
11
11
19
24
Site Access
24
16
19
34
34
29
49
37
14
19
248
N81 (South)
267
997
261
971
N81 (North)
12
960


Hempstown Quarry
2024 Base + Generated
PM Peak
L6030 (North)
17
12
12
20
25
Site Access
25
17
20
36
36
31
52
39
14
20
268
N81 (South)
288
1077
282
1050
N81 (North)
12
1038


Hempstown Quarry
2019 % flow increase on opening
PM Peak
Generated Traffic on Opening
Baseline Traffic on Opening
% increase in traffic
L6030 (North)
5
27
19%
20
23
87%
Site Access
17
48
35%
17
58
29%
6
1249
0.5%
N81 (South)
9
1225
0.7%
N81 (North)

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.0.6896

For sales and distribution information, program advice and maintenance, contact TRL:
+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk

Filename: L6030-Site Access Junction ver1.j9
Path: C:\Users\kevin\Desktop\KH Chartered Engineers\KH Chartered Engineers - Docs\C. Jobs\WSP
Report generation date: 04/12/2024 09:34:04

Summary of junction performance

	AM			PM		
	95% Queue (Veh)	Delay (s)	RFC	95% Queue (Veh)	Delay (s)	RFC
	2019 Baseline					
Stream B-AC	0.5	4.68	0.02	0.5	4.40	0.01
Stream C-AB	0.5	5.20	0.02	0.5	5.19	0.02
	2020 Baseline					
Stream B-AC	0.5	4.69	0.02	0.5	4.41	0.01
Stream C-AB	0.5	5.20	0.02	0.5	5.19	0.02
	2024 Baseline					
Stream B-AC	0.5	4.70	0.02	0.5	4.41	0.01
Stream C-AB	0.5	5.20	0.02	0.5	5.20	0.02
	2020 Baseline + Generated					
Stream B-AC	0.5	4.76	0.03	0.5	4.48	0.03
Stream C-AB	0.5	5.30	0.03	0.5	5.25	0.03
	2024 Baseline + Generated					
Stream B-AC	0.5	4.78	0.03	0.5	4.49	0.03
Stream C-AB	0.5	5.31	0.04	0.5	5.26	0.03

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.

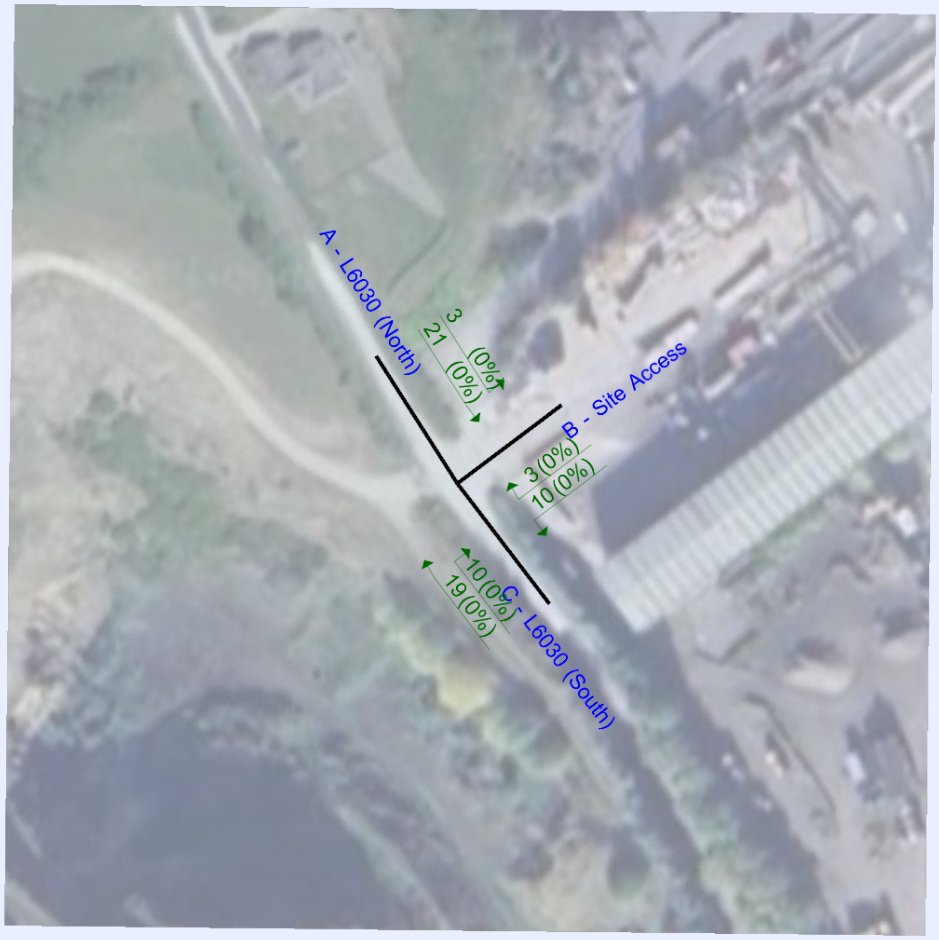
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	22/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ACER\Kevin
Description	

Units

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



Flows show original traffic demand (Veh/hr).
Streams (downstream end) show RFC ()

The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically	Relationship type	Relationship
D1	2019 Baseline	AM	ONE HOUR	08:45	10:15	15	✓	✓		
D2	2020 Baseline	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	(D1*1.0197)
D3	2024 Baseline	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	D1*1.1242
D4	2020 Generated	AM	ONE HOUR	08:45	10:15	15	✓			
D5	2020 Baseline + Generated	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	D2+D4
D6	2024 Baseline + Generated	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	D3+D4
D7	2019 Baseline	PM	ONE HOUR	12:45	14:15	15	✓	✓		
D8	2020 Baseline	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D7*1.0197
D9	2024 Baseline	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D7*1.1242
D10	2020 Generated	PM	ONE HOUR	12:45	14:15	15	✓			
D11	2020 Baseline + Generated	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D8+D10
D12	2024 Baseline + Generated	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D9+D10

Analysis Set Details

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

2019 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D1 - 2019 Baseline, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	1.73	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	L6030 (North)		Major
B	Site Access		Minor
C	L6030 (South)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - L6030 (South)	5.66			215.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	5.00	120	110

Geometric Delay Data for Priority Intersections

Arm	Entry speed (kph)	Exit speed (kph)	Entry radius from arm (m)	Exit radius into arm (m)	Stagger length (m)	Distance included upstream (m)	Distance included downstream (m)
A - L6030 (North)	60.00	60.00	3.70			252.87	252.87
B - Site Access	48.00	48.00	4.60	9.50		252.87	252.87
C - L6030 (South)	80.00	80.00				252.87	252.87

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	688	0.127	0.321	0.202	0.459
1	B-C	832	0.129	0.327	-	-
1	C-B	698	0.275	0.275	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D1	2019 Baseline	AM	ONE HOUR	08:45	10:15	15	✓	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	24	100.000
B - Site Access		ONE HOUR	✓	13	100.000
C - L6030 (South)		ONE HOUR	✓	29	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	3	21
	B - Site Access	3	0	10
	C - L6030 (South)	19	10	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.88
	B - Site Access	0.23	0.00	0.77
	C - L6030 (South)	0.66	0.34	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:45-09:00	A - L6030 (North)	18	18
	B - Site Access	10	10
	C - L6030 (South)	22	22
09:00-09:15	A - L6030 (North)	22	22
	B - Site Access	12	12
	C - L6030 (South)	26	26
09:15-09:30	A - L6030 (North)	26	26
	B - Site Access	14	14
	C - L6030 (South)	32	32
09:30-09:45	A - L6030 (North)	26	26
	B - Site Access	14	14
	C - L6030 (South)	32	32
09:45-10:00	A - L6030 (North)	22	22
	B - Site Access	12	12
	C - L6030 (South)	26	26
10:00-10:15	A - L6030 (North)	18	18
	B - Site Access	10	10
	C - L6030 (South)	22	22

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.02	4.68	0.0	0.5	A	13	13	1.01	4.65	0.01	1.38	4.64
C-AB	0.02	5.20	0.0	0.5	A	10	10	0.95	5.53	0.01	1.30	5.50
C-A						19	19					
A-B						3	3					
A-C						21	21					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.65	0.00
	B - Site Access	0.68	0.00	2.70
	C - L6030 (South)	0.00	2.26	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.61	0.00	46.75
	C - L6030 (South)	32.05	45.71	0.00

Main Results for each time segment

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	12	3	785	0.015	12	0.0	0.0	4.657	A
C-AB	9	2	703	0.013	9	0.0	0.0	5.187	A
C-A	17	4			17				
A-B	3	0.67			3				
A-C	19	5			19				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	14	4	783	0.018	14	0.0	0.0	4.685	A
C-AB	11	3	704	0.016	11	0.0	0.0	5.196	A
C-A	21	5			21				
A-B	3	0.83			3				
A-C	23	6			23				

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	14	4	783	0.018	14	0.0	0.0	4.685	A
C-AB	11	3	704	0.016	11	0.0	0.0	5.198	A
C-A	21	5			21				
A-B	3	0.83			3				
A-C	23	6			23				

09:45 - 10:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	12	3	785	0.015	12	0.0	0.0	4.657	A
C-AB	9	2	703	0.013	9	0.0	0.0	5.188	A
C-A	17	4			17				
A-B	3	0.67			3				
A-C	19	5			19				

Queueing Delay Results for each time segment

09:00 - 09:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.22	0.01	4.657	A
C-AB	0.21	0.01	5.187	A

09:15 - 09:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.27	0.02	4.685	A
C-AB	0.26	0.02	5.196	A

09:30 - 09:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.28	0.02	4.685	A
C-AB	0.26	0.02	5.198	A

09:45 - 10:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.23	0.02	4.657	A
C-AB	0.21	0.01	5.188	A

Queue Variation Results for each time segment

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.02	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

09:15 - 09:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:30 - 09:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:45 - 10:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 09:00-09:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.55	0.04
C-AB	0.37	0.02
C-A	0.00	0.00
A-B	0.11	0.01
A-C	0.00	0.00

Geometric Delay results: 09:15-09:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.67	0.04
C-AB	0.45	0.03
C-A	0.00	0.00
A-B	0.13	0.01
A-C	0.00	0.00

Geometric Delay results: 09:30-09:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.68	0.05
C-AB	0.45	0.03
C-A	0.00	0.00
A-B	0.13	0.01
A-C	0.00	0.00

Geometric Delay results: 09:45-10:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.55	0.04
C-AB	0.37	0.02
C-A	0.00	0.00
A-B	0.11	0.01
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.11	0.00
	B - Site Access	0.11	0.00	0.44
	C - L6030 (South)	0.00	0.37	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.00
	B - Site Access	0.14	0.00	0.54
	C - L6030 (South)	0.00	0.45	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.00
	B - Site Access	0.14	0.00	0.54
	C - L6030 (South)	0.00	0.45	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.11	0.00
	B - Site Access	0.11	0.00	0.44
	C - L6030 (South)	0.00	0.37	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.63	0.00	46.77
	C - L6030 (South)	31.74	45.39	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.65	0.00	46.80
	C - L6030 (South)	31.75	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.65	0.00	46.80
	C - L6030 (South)	31.75	45.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.63	0.00	46.77
	C - L6030 (South)	31.74	45.40	0.00

2020 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D2 - 2020 Baseline, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	1.73	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D2	2020 Baseline	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	(D1*1.0197)

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	24	100.000
B - Site Access		ONE HOUR	✓	13	100.000
C - L6030 (South)		ONE HOUR	✓	30	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	3	21
	B - Site Access	3	0	10
	C - L6030 (South)	19	10	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.88
	B - Site Access	0.23	0.00	0.77
	C - L6030 (South)	0.66	0.34	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:45-09:00	A - L6030 (North)	18	18
	B - Site Access	10	10
	C - L6030 (South)	22	22
09:00-09:15	A - L6030 (North)	22	22
	B - Site Access	12	12
	C - L6030 (South)	27	27
09:15-09:30	A - L6030 (North)	27	27
	B - Site Access	15	15
	C - L6030 (South)	33	33
09:30-09:45	A - L6030 (North)	27	27
	B - Site Access	15	15
	C - L6030 (South)	33	33
09:45-10:00	A - L6030 (North)	22	22
	B - Site Access	12	12
	C - L6030 (South)	27	27
10:00-10:15	A - L6030 (North)	18	18
	B - Site Access	10	10
	C - L6030 (South)	22	22

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.02	4.69	0.0	0.5	A	13	13	1.03	4.65	0.01	1.41	4.64
C-AB	0.02	5.20	0.0	0.5	A	10	10	0.97	5.53	0.01	1.32	5.51
C-A						19	19					
A-B						3	3					
A-C						21	21					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.66	0.00
	B - Site Access	0.69	0.00	2.75
	C - L6030 (South)	0.00	2.31	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.61	0.00	46.76
	C - L6030 (South)	32.06	45.71	0.00

Main Results for each time segment

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	12	3	784	0.015	12	0.0	0.0	4.659	A
C-AB	9	2	703	0.013	9	0.0	0.0	5.188	A
C-A	17	4			17				
A-B	3	0.69			3				
A-C	19	5			19				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	15	4	782	0.019	15	0.0	0.0	4.688	A
C-AB	12	3	704	0.016	12	0.0	0.0	5.197	A
C-A	21	5			21				
A-B	3	0.84			3				
A-C	24	6			24				

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	15	4	782	0.019	15	0.0	0.0	4.688	A
C-AB	12	3	704	0.016	12	0.0	0.0	5.199	A
C-A	21	5			21				
A-B	3	0.84			3				
A-C	24	6			24				

09:45 - 10:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	12	3	784	0.015	12	0.0	0.0	4.661	A
C-AB	9	2	703	0.013	9	0.0	0.0	5.190	A
C-A	17	4			17				
A-B	3	0.69			3				
A-C	19	5			19				

Queueing Delay Results for each time segment

09:00 - 09:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.23	0.02	4.659	A
C-AB	0.22	0.01	5.188	A

09:15 - 09:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.28	0.02	4.688	A
C-AB	0.27	0.02	5.197	A

09:30 - 09:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.29	0.02	4.688	A
C-AB	0.27	0.02	5.199	A

09:45 - 10:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.24	0.02	4.661	A
C-AB	0.22	0.01	5.190	A

Queue Variation Results for each time segment

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.02	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

09:15 - 09:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:30 - 09:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:45 - 10:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 09:00-09:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.56	0.04
C-AB	0.38	0.03
C-A	0.00	0.00
A-B	0.11	0.01
A-C	0.00	0.00

Geometric Delay results: 09:15-09:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.69	0.05
C-AB	0.46	0.03
C-A	0.00	0.00
A-B	0.13	0.01
A-C	0.00	0.00

Geometric Delay results: 09:30-09:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.69	0.05
C-AB	0.46	0.03
C-A	0.00	0.00
A-B	0.13	0.01
A-C	0.00	0.00

Geometric Delay results: 09:45-10:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.56	0.04
C-AB	0.38	0.03
C-A	0.00	0.00
A-B	0.11	0.01
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.11	0.00
	B - Site Access	0.11	0.00	0.45
	C - L6030 (South)	0.00	0.38	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.00
	B - Site Access	0.14	0.00	0.55
	C - L6030 (South)	0.00	0.46	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.00
	B - Site Access	0.14	0.00	0.55
	C - L6030 (South)	0.00	0.46	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.11	0.00
	B - Site Access	0.11	0.00	0.45
	C - L6030 (South)	0.00	0.38	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.63	0.00	46.77
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.66	0.00	46.80
	C - L6030 (South)	31.75	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.66	0.00	46.80
	C - L6030 (South)	31.75	45.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.63	0.00	46.77
	C - L6030 (South)	31.74	45.40	0.00

2024 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D3 - 2024 Baseline, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	1.74	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D3	2024 Baseline	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	D1*1.1242

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	27	100.000
B - Site Access		ONE HOUR	✓	15	100.000
C - L6030 (South)		ONE HOUR	✓	33	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	3	24
	B - Site Access	3	0	11
	C - L6030 (South)	21	11	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.13	0.88
	B - Site Access	0.23	0.00	0.77
	C - L6030 (South)	0.66	0.34	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:45-09:00	A - L6030 (North)	20	20
	B - Site Access	11	11
	C - L6030 (South)	25	25
09:00-09:15	A - L6030 (North)	24	24
	B - Site Access	13	13
	C - L6030 (South)	29	29
09:15-09:30	A - L6030 (North)	30	30
	B - Site Access	16	16
	C - L6030 (South)	36	36
09:30-09:45	A - L6030 (North)	30	30
	B - Site Access	16	16
	C - L6030 (South)	36	36
09:45-10:00	A - L6030 (North)	24	24
	B - Site Access	13	13
	C - L6030 (South)	29	29
10:00-10:15	A - L6030 (North)	20	20
	B - Site Access	11	11
	C - L6030 (South)	25	25

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.02	4.70	0.0	0.5	A	15	15	1.14	4.66	0.01	1.56	4.65
C-AB	0.02	5.20	0.0	0.5	A	12	12	1.07	5.56	0.01	1.47	5.53
C-A						21	21					
A-B						3	3					
A-C						24	24					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.73	0.00
	B - Site Access	0.76	0.00	3.03
	C - L6030 (South)	0.00	2.54	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.62	0.00	46.77
	C - L6030 (South)	32.08	45.74	0.00

Main Results for each time segment

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	784	0.017	13	0.0	0.0	4.672	A
C-AB	10	3	704	0.015	10	0.0	0.0	5.192	A
C-A	19	5			19				
A-B	3	0.76			3				
A-C	21	5			21				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	4	781	0.021	16	0.0	0.0	4.704	A
C-AB	13	3	705	0.018	13	0.0	0.0	5.201	A
C-A	23	6			23				
A-B	4	0.93			4				
A-C	26	6			26				

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	4	781	0.021	16	0.0	0.0	4.704	A
C-AB	13	3	705	0.018	13	0.0	0.0	5.201	A
C-A	23	6			23				
A-B	4	0.93			4				
A-C	26	6			26				

09:45 - 10:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	13	3	784	0.017	13	0.0	0.0	4.672	A
C-AB	10	3	704	0.015	10	0.0	0.0	5.194	A
C-A	19	5			19				
A-B	3	0.76			3				
A-C	21	5			21				

Queueing Delay Results for each time segment

09:00 - 09:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.25	0.02	4.672	A
C-AB	0.24	0.02	5.192	A

09:15 - 09:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.31	0.02	4.704	A
C-AB	0.30	0.02	5.201	A

09:30 - 09:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.31	0.02	4.704	A
C-AB	0.30	0.02	5.201	A

09:45 - 10:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.26	0.02	4.672	A
C-AB	0.24	0.02	5.194	A

Queue Variation Results for each time segment

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.02	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

09:15 - 09:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:30 - 09:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

09:45 - 10:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 09:00-09:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.62	0.04
C-AB	0.41	0.03
C-A	0.00	0.00
A-B	0.12	0.01
A-C	0.00	0.00

Geometric Delay results: 09:15-09:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.76	0.05
C-AB	0.51	0.03
C-A	0.00	0.00
A-B	0.15	0.01
A-C	0.00	0.00

Geometric Delay results: 09:30-09:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.76	0.05
C-AB	0.51	0.03
C-A	0.00	0.00
A-B	0.15	0.01
A-C	0.00	0.00

Geometric Delay results: 09:45-10:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.62	0.04
C-AB	0.42	0.03
C-A	0.00	0.00
A-B	0.12	0.01
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.12	0.00
	B - Site Access	0.12	0.00	0.50
	C - L6030 (South)	0.00	0.41	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.15	0.00
	B - Site Access	0.15	0.00	0.61
	C - L6030 (South)	0.00	0.51	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.15	0.00
	B - Site Access	0.15	0.00	0.61
	C - L6030 (South)	0.00	0.51	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.12	0.00
	B - Site Access	0.12	0.00	0.50
	C - L6030 (South)	0.00	0.42	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.64	0.00	46.78
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.67	0.00	46.82
	C - L6030 (South)	31.75	45.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.67	0.00	46.82
	C - L6030 (South)	31.75	45.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.64	0.00	46.78
	C - L6030 (South)	31.75	45.40	0.00

2020 Baseline + Generated, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D5 - 2020 Baseline + Generated, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	2.43	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Generated	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	D2+D4

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	27	100.000
B - Site Access		ONE HOUR	✓	21	100.000
C - L6030 (South)		ONE HOUR	✓	41	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	6	21
	B - Site Access	5	0	16
	C - L6030 (South)	19	21	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.22	0.78
	B - Site Access	0.24	0.00	0.76
	C - L6030 (South)	0.48	0.52	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:45-09:00	A - L6030 (North)	21	21
	B - Site Access	16	16
	C - L6030 (South)	31	31
09:00-09:15	A - L6030 (North)	25	25
	B - Site Access	19	19
	C - L6030 (South)	36	36
09:15-09:30	A - L6030 (North)	30	30
	B - Site Access	23	23
	C - L6030 (South)	45	45
09:30-09:45	A - L6030 (North)	30	30
	B - Site Access	23	23
	C - L6030 (South)	45	45
09:45-10:00	A - L6030 (North)	25	25
	B - Site Access	19	19
	C - L6030 (South)	36	36
10:00-10:15	A - L6030 (North)	21	21
	B - Site Access	16	16
	C - L6030 (South)	31	31

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	4.76	0.0	0.5	A	21	21	1.67	4.72	0.02	2.29	4.70
C-AB	0.03	5.30	0.0	0.5	A	22	22	2.01	5.54	0.02	2.75	5.51
C-A						19	19					
A-B						6	6					
A-C						21	21					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	1.31	0.00
	B - Site Access	1.14	0.00	4.37
	C - L6030 (South)	0.00	4.80	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.67	0.00	46.82
	C - L6030 (South)	32.06	45.72	0.00

Main Results for each time segment

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	5	781	0.024	19	0.0	0.0	4.722	A
C-AB	20	5	702	0.028	20	0.0	0.0	5.271	A
C-A	17	4			17				
A-B	5	1			5				
A-C	19	5			19				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	6	779	0.030	23	0.0	0.0	4.764	A
C-AB	24	6	703	0.034	24	0.0	0.0	5.299	A
C-A	21	5			21				
A-B	7	2			7				
A-C	24	6			24				

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	23	6	779	0.030	23	0.0	0.0	4.764	A
C-AB	24	6	703	0.034	24	0.0	0.0	5.301	A
C-A	21	5			21				
A-B	7	2			7				
A-C	24	6			24				

09:45 - 10:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	19	5	781	0.024	19	0.0	0.0	4.722	A
C-AB	20	5	702	0.028	20	0.0	0.0	5.273	A
C-A	17	4			17				
A-B	5	1			5				
A-C	19	5			19				

Queueing Delay Results for each time segment

09:00 - 09:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.37	0.02	4.722	A
C-AB	0.45	0.03	5.271	A

09:15 - 09:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.46	0.03	4.764	A
C-AB	0.56	0.04	5.299	A

09:30 - 09:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.46	0.03	4.764	A
C-AB	0.56	0.04	5.301	A

09:45 - 10:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.38	0.03	4.722	A
C-AB	0.45	0.03	5.273	A

Queue Variation Results for each time segment

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.02	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

09:15 - 09:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.04	0.03	0.25	0.45	0.48			N/A	N/A

09:30 - 09:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

09:45 - 10:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 09:00-09:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.90	0.06
C-AB	0.78	0.05
C-A	0.00	0.00
A-B	0.21	0.01
A-C	0.00	0.00

Geometric Delay results: 09:15-09:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.10	0.07
C-AB	0.96	0.06
C-A	0.00	0.00
A-B	0.26	0.02
A-C	0.00	0.00

Geometric Delay results: 09:30-09:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.10	0.07
C-AB	0.96	0.06
C-A	0.00	0.00
A-B	0.26	0.02
A-C	0.00	0.00

Geometric Delay results: 09:45-10:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.90	0.06
C-AB	0.78	0.05
C-A	0.00	0.00
A-B	0.21	0.01
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.21	0.00
	B - Site Access	0.19	0.00	0.71
	C - L6030 (South)	0.00	0.78	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.26	0.00
	B - Site Access	0.23	0.00	0.87
	C - L6030 (South)	0.00	0.96	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.26	0.00
	B - Site Access	0.23	0.00	0.87
	C - L6030 (South)	0.00	0.96	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.21	0.00
	B - Site Access	0.19	0.00	0.71
	C - L6030 (South)	0.00	0.78	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.69	0.00	46.83
	C - L6030 (South)	31.82	45.48	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.73	0.00	46.88
	C - L6030 (South)	31.85	45.51	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.73	0.00	46.88
	C - L6030 (South)	31.85	45.51	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.69	0.00	46.83
	C - L6030 (South)	31.82	45.48	0.00

2024 Baseline + Generated, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D6 - 2024 Baseline + Generated, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	2.39	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D6	2024 Baseline + Generated	AM	ONE HOUR	08:45	10:15	15	✓	✓	Simple	D3+D4

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	30	100.000
B - Site Access		ONE HOUR	✓	23	100.000
C - L6030 (South)		ONE HOUR	✓	44	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	6	24
	B - Site Access	5	0	17
	C - L6030 (South)	21	22	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.21	0.79
	B - Site Access	0.24	0.00	0.76
	C - L6030 (South)	0.49	0.51	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
08:45-09:00	A - L6030 (North)	23	23
	B - Site Access	17	17
	C - L6030 (South)	33	33
09:00-09:15	A - L6030 (North)	27	27
	B - Site Access	20	20
	C - L6030 (South)	39	39
09:15-09:30	A - L6030 (North)	33	33
	B - Site Access	25	25
	C - L6030 (South)	48	48
09:30-09:45	A - L6030 (North)	33	33
	B - Site Access	25	25
	C - L6030 (South)	48	48
09:45-10:00	A - L6030 (North)	27	27
	B - Site Access	20	20
	C - L6030 (South)	39	39
10:00-10:15	A - L6030 (North)	23	23
	B - Site Access	17	17
	C - L6030 (South)	33	33

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	4.78	0.0	0.5	A	23	23	1.78	4.73	0.02	2.45	4.72
C-AB	0.04	5.31	0.0	0.5	A	23	23	2.13	5.57	0.02	2.91	5.54
C-A						21	21					
A-B						6	6					
A-C						24	24					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	1.38	0.00
	B - Site Access	1.21	0.00	4.65
	C - L6030 (South)	0.00	5.03	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.69	0.00	46.83
	C - L6030 (South)	32.09	45.75	0.00

Main Results for each time segment

09:00 - 09:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	781	0.026	20	0.0	0.0	4.735	A
C-AB	21	5	703	0.029	21	0.0	0.0	5.275	A
C-A	19	5			19				
A-B	6	1			6				
A-C	21	5			21				

09:15 - 09:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	778	0.032	25	0.0	0.0	4.780	A
C-AB	25	6	704	0.036	25	0.0	0.0	5.304	A
C-A	23	6			23				
A-B	7	2			7				
A-C	26	6			26				

09:30 - 09:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	778	0.032	25	0.0	0.0	4.780	A
C-AB	25	6	704	0.036	25	0.0	0.0	5.306	A
C-A	23	6			23				
A-B	7	2			7				
A-C	26	6			26				

09:45 - 10:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	781	0.026	20	0.0	0.0	4.735	A
C-AB	21	5	703	0.029	21	0.0	0.0	5.275	A
C-A	19	5			19				
A-B	6	1			6				
A-C	21	5			21				

Queueing Delay Results for each time segment

09:00 - 09:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.39	0.03	4.735	A
C-AB	0.47	0.03	5.275	A

09:15 - 09:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.49	0.03	4.780	A
C-AB	0.59	0.04	5.304	A

09:30 - 09:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.49	0.03	4.780	A
C-AB	0.59	0.04	5.306	A

09:45 - 10:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.41	0.03	4.735	A
C-AB	0.48	0.03	5.275	A

Queue Variation Results for each time segment

09:00 - 09:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

09:15 - 09:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.04	0.03	0.25	0.45	0.48			N/A	N/A

09:30 - 09:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

09:45 - 10:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 09:00-09:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.96	0.06
C-AB	0.82	0.05
C-A	0.00	0.00
A-B	0.23	0.02
A-C	0.00	0.00

Geometric Delay results: 09:15-09:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.17	0.08
C-AB	1.01	0.07
C-A	0.00	0.00
A-B	0.28	0.02
A-C	0.00	0.00

Geometric Delay results: 09:30-09:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.17	0.08
C-AB	1.01	0.07
C-A	0.00	0.00
A-B	0.28	0.02
A-C	0.00	0.00

Geometric Delay results: 09:45-10:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.96	0.06
C-AB	0.82	0.05
C-A	0.00	0.00
A-B	0.23	0.02
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.23	0.00
	B - Site Access	0.20	0.00	0.76
	C - L6030 (South)	0.00	0.82	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.28	0.00
	B - Site Access	0.24	0.00	0.93
	C - L6030 (South)	0.00	1.01	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.28	0.00
	B - Site Access	0.24	0.00	0.93
	C - L6030 (South)	0.00	1.01	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.23	0.00
	B - Site Access	0.20	0.00	0.76
	C - L6030 (South)	0.00	0.82	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:00-09:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.70	0.00	46.85
	C - L6030 (South)	31.83	45.48	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:15-09:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.75	0.00	46.89
	C - L6030 (South)	31.86	45.51	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:30-09:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.75	0.00	46.89
	C - L6030 (South)	31.86	45.51	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 09:45-10:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.70	0.00	46.85
	C - L6030 (South)	31.83	45.48	0.00

2019 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D7 - 2019 Baseline, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	2.23	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)	Results for central hour only	Run automatically
D7	2019 Baseline	PM	ONE HOUR	12:45	14:15	15	✓	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	10	100.000
B - Site Access		ONE HOUR	✓	10	100.000
C - L6030 (South)		ONE HOUR	✓	26	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	10
	B - Site Access	0	0	10
	C - L6030 (South)	15	11	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	1.00
	B - Site Access	0.00	0.00	1.00
	C - L6030 (South)	0.58	0.42	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
12:45-13:00	A - L6030 (North)	8	8
	B - Site Access	8	8
	C - L6030 (South)	20	20
13:00-13:15	A - L6030 (North)	9	9
	B - Site Access	9	9
	C - L6030 (South)	23	23
13:15-13:30	A - L6030 (North)	11	11
	B - Site Access	11	11
	C - L6030 (South)	29	29
13:30-13:45	A - L6030 (North)	11	11
	B - Site Access	11	11
	C - L6030 (South)	29	29
13:45-14:00	A - L6030 (North)	9	9
	B - Site Access	9	9
	C - L6030 (South)	23	23
14:00-14:15	A - L6030 (North)	8	8
	B - Site Access	8	8
	C - L6030 (South)	20	20

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.01	4.40	0.0	0.5	A	10	10	0.73	4.38	0.01	1.00	4.37
C-AB	0.02	5.19	0.0	0.5	A	11	11	1.02	5.44	0.01	1.40	5.42
C-A						15	15					
A-B						0	0					
A-C						10	10					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	2.70
	C - L6030 (South)	0.00	2.49	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.34	0.00	46.49
	C - L6030 (South)	31.97	45.63	0.00

Main Results for each time segment

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	2	829	0.011	9	0.0	0.0	4.389	A
C-AB	10	3	704	0.014	10	0.0	0.0	5.185	A
C-A	13	3			13				
A-B	0	0			0				
A-C	9	2			9				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	828	0.013	11	0.0	0.0	4.404	A
C-AB	12	3	706	0.018	12	0.0	0.0	5.192	A
C-A	16	4			16				
A-B	0	0			0				
A-C	11	3			11				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	828	0.013	11	0.0	0.0	4.404	A
C-AB	12	3	706	0.018	12	0.0	0.0	5.192	A
C-A	16	4			16				
A-B	0	0			0				
A-C	11	3			11				

13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	2	829	0.011	9	0.0	0.0	4.389	A
C-AB	10	3	704	0.014	10	0.0	0.0	5.187	A
C-A	13	3			13				
A-B	0	0			0				
A-C	9	2			9				

Queueing Delay Results for each time segment

13:00 - 13:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.16	0.01	4.389	A
C-AB	0.23	0.02	5.185	A

13:15 - 13:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.20	0.01	4.404	A
C-AB	0.28	0.02	5.192	A

13:30 - 13:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.20	0.01	4.404	A
C-AB	0.28	0.02	5.192	A

13:45 - 14:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.17	0.01	4.389	A
C-AB	0.23	0.02	5.187	A

Queue Variation Results for each time segment

13:00 - 13:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

13:15 - 13:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

13:30 - 13:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

13:45 - 14:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 13:00-13:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.44	0.03
C-AB	0.41	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:15-13:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.54	0.04
C-AB	0.50	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:30-13:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.54	0.04
C-AB	0.50	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:45-14:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.44	0.03
C-AB	0.41	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.44
	C - L6030 (South)	0.00	0.41	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.54
	C - L6030 (South)	0.00	0.50	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.54
	C - L6030 (South)	0.00	0.50	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.44
	C - L6030 (South)	0.00	0.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.36	0.00	46.50
	C - L6030 (South)	31.74	45.39	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.37	0.00	46.52
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.37	0.00	46.52
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.36	0.00	46.50
	C - L6030 (South)	31.74	45.39	0.00

2020 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D8 - 2020 Baseline, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	2.23	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D8	2020 Baseline	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D7*1.0197

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	10	100.000
B - Site Access		ONE HOUR	✓	10	100.000
C - L6030 (South)		ONE HOUR	✓	27	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	10
	B - Site Access	0	0	10
	C - L6030 (South)	15	11	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	1.00
	B - Site Access	0.00	0.00	1.00
	C - L6030 (South)	0.58	0.42	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
12:45-13:00	A - L6030 (North)	8	8
	B - Site Access	8	8
	C - L6030 (South)	20	20
13:00-13:15	A - L6030 (North)	9	9
	B - Site Access	9	9
	C - L6030 (South)	24	24
13:15-13:30	A - L6030 (North)	11	11
	B - Site Access	11	11
	C - L6030 (South)	29	29
13:30-13:45	A - L6030 (North)	11	11
	B - Site Access	11	11
	C - L6030 (South)	29	29
13:45-14:00	A - L6030 (North)	9	9
	B - Site Access	9	9
	C - L6030 (South)	24	24
14:00-14:15	A - L6030 (North)	8	8
	B - Site Access	8	8
	C - L6030 (South)	20	20

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.01	4.41	0.0	0.5	A	10	10	0.74	4.38	0.01	1.02	4.37
C-AB	0.02	5.19	0.0	0.5	A	11	11	1.04	5.44	0.01	1.42	5.42
C-A						15	15					
A-B						0	0					
A-C						10	10					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	2.75
	C - L6030 (South)	0.00	2.54	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.34	0.00	46.49
	C - L6030 (South)	31.97	45.63	0.00

Main Results for each time segment

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	2	829	0.011	9	0.0	0.0	4.390	A
C-AB	10	3	704	0.015	10	0.0	0.0	5.186	A
C-A	14	3			14				
A-B	0	0			0				
A-C	9	2			9				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	828	0.014	11	0.0	0.0	4.405	A
C-AB	13	3	706	0.018	13	0.0	0.0	5.193	A
C-A	17	4			17				
A-B	0	0			0				
A-C	11	3			11				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	11	3	828	0.014	11	0.0	0.0	4.405	A
C-AB	13	3	706	0.018	13	0.0	0.0	5.193	A
C-A	17	4			17				
A-B	0	0			0				
A-C	11	3			11				

13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	9	2	829	0.011	9	0.0	0.0	4.392	A
C-AB	10	3	704	0.015	10	0.0	0.0	5.186	A
C-A	14	3			14				
A-B	0	0			0				
A-C	9	2			9				

Queueing Delay Results for each time segment

13:00 - 13:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.16	0.01	4.390	A
C-AB	0.23	0.02	5.186	A

13:15 - 13:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.20	0.01	4.405	A
C-AB	0.29	0.02	5.193	A

13:30 - 13:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.21	0.01	4.405	A
C-AB	0.29	0.02	5.193	A

13:45 - 14:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.17	0.01	4.392	A
C-AB	0.23	0.02	5.186	A

Queue Variation Results for each time segment

13:00 - 13:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

13:15 - 13:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

13:30 - 13:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

13:45 - 14:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 13:00-13:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.45	0.03
C-AB	0.41	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:15-13:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.55	0.04
C-AB	0.51	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:30-13:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.55	0.04
C-AB	0.51	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:45-14:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.45	0.03
C-AB	0.41	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.45
	C - L6030 (South)	0.00	0.41	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.55
	C - L6030 (South)	0.00	0.51	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.55
	C - L6030 (South)	0.00	0.51	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.45
	C - L6030 (South)	0.00	0.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.36	0.00	46.50
	C - L6030 (South)	31.74	45.39	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.37	0.00	46.52
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.37	0.00	46.52
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.36	0.00	46.50
	C - L6030 (South)	31.74	45.39	0.00

2024 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D9 - 2024 Baseline, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	2.23	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D9	2024 Baseline	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D7*1.1242

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	11	100.000
B - Site Access		ONE HOUR	✓	11	100.000
C - L6030 (South)		ONE HOUR	✓	29	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	11
	B - Site Access	0	0	11
	C - L6030 (South)	17	12	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	1.00
	B - Site Access	0.00	0.00	1.00
	C - L6030 (South)	0.58	0.42	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
12:45-13:00	A - L6030 (North)	8	8
	B - Site Access	8	8
	C - L6030 (South)	22	22
13:00-13:15	A - L6030 (North)	10	10
	B - Site Access	10	10
	C - L6030 (South)	26	26
13:15-13:30	A - L6030 (North)	12	12
	B - Site Access	12	12
	C - L6030 (South)	32	32
13:30-13:45	A - L6030 (North)	12	12
	B - Site Access	12	12
	C - L6030 (South)	32	32
13:45-14:00	A - L6030 (North)	10	10
	B - Site Access	10	10
	C - L6030 (South)	26	26
14:00-14:15	A - L6030 (North)	8	8
	B - Site Access	8	8
	C - L6030 (South)	22	22

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.01	4.41	0.0	0.5	A	11	11	0.82	4.39	0.01	1.13	4.38
C-AB	0.02	5.20	0.0	0.5	A	13	13	1.15	5.46	0.01	1.58	5.44
C-A						17	17					
A-B						0	0					
A-C						11	11					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	3.03
	C - L6030 (South)	0.00	2.80	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.35	0.00	46.49
	C - L6030 (South)	31.99	45.65	0.00

Main Results for each time segment

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	10	3	829	0.012	10	0.0	0.0	4.397	A
C-AB	11	3	705	0.016	11	0.0	0.0	5.189	A
C-A	15	4			15				
A-B	0	0			0				
A-C	10	3			10				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	12	3	828	0.015	12	0.0	0.0	4.413	A
C-AB	14	3	706	0.020	14	0.0	0.0	5.198	A
C-A	18	5			18				
A-B	0	0			0				
A-C	12	3			12				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	12	3	828	0.015	12	0.0	0.0	4.413	A
C-AB	14	3	706	0.020	14	0.0	0.0	5.198	A
C-A	18	5			18				
A-B	0	0			0				
A-C	12	3			12				

13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	10	3	829	0.012	10	0.0	0.0	4.397	A
C-AB	11	3	705	0.016	11	0.0	0.0	5.189	A
C-A	15	4			15				
A-B	0	0			0				
A-C	10	3			10				

Queueing Delay Results for each time segment

13:00 - 13:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.18	0.01	4.397	A
C-AB	0.26	0.02	5.189	A

13:15 - 13:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.22	0.01	4.413	A
C-AB	0.32	0.02	5.198	A

13:30 - 13:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.23	0.02	4.413	A
C-AB	0.32	0.02	5.198	A

13:45 - 14:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.19	0.01	4.397	A
C-AB	0.26	0.02	5.189	A

Queue Variation Results for each time segment

13:00 - 13:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.01	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.02	0.25	0.45	0.48			N/A	N/A

13:15 - 13:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

13:30 - 13:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.02	0.00	0.00	0.02	0.02			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

13:45 - 14:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.01	0.00	0.00	0.01	0.01			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 13:00-13:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.50	0.03
C-AB	0.46	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:15-13:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.61	0.04
C-AB	0.56	0.04
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:30-13:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.61	0.04
C-AB	0.56	0.04
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:45-14:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.50	0.03
C-AB	0.46	0.03
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.50
	C - L6030 (South)	0.00	0.46	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.61
	C - L6030 (South)	0.00	0.56	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.61
	C - L6030 (South)	0.00	0.56	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	0.50
	C - L6030 (South)	0.00	0.46	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.37	0.00	46.51
	C - L6030 (South)	31.74	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.38	0.00	46.53
	C - L6030 (South)	31.75	45.40	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.38	0.00	46.53
	C - L6030 (South)	31.75	45.41	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.37	0.00	46.51
	C - L6030 (South)	31.74	45.40	0.00

2020 Baseline + Generated, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D11 - 2020 Baseline + Generated, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	3.02	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically	Relationship type	Relationship
D11	2020 Baseline + Generated	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D8+D10

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	10	100.000
B - Site Access		ONE HOUR	✓	23	100.000
C - L6030 (South)		ONE HOUR	✓	34	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	10
	B - Site Access	0	0	23
	C - L6030 (South)	15	18	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	1.00
	B - Site Access	0.00	0.00	1.00
	C - L6030 (South)	0.46	0.54	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
12:45-13:00	A - L6030 (North)	8	8
	B - Site Access	17	17
	C - L6030 (South)	25	25
13:00-13:15	A - L6030 (North)	9	9
	B - Site Access	21	21
	C - L6030 (South)	30	30
13:15-13:30	A - L6030 (North)	11	11
	B - Site Access	26	26
	C - L6030 (South)	37	37
13:30-13:45	A - L6030 (North)	11	11
	B - Site Access	26	26
	C - L6030 (South)	37	37
13:45-14:00	A - L6030 (North)	9	9
	B - Site Access	21	21
	C - L6030 (South)	30	30
14:00-14:15	A - L6030 (North)	8	8
	B - Site Access	17	17
	C - L6030 (South)	25	25

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	4.48	0.0	0.5	A	23	23	1.72	4.45	0.02	2.36	4.44
C-AB	0.03	5.25	0.0	0.5	A	19	19	1.69	5.45	0.02	2.32	5.43
C-A						15	15					
A-B						0	0					
A-C						10	10					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	6.26
	C - L6030 (South)	0.00	4.12	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.41	0.00	46.55
	C - L6030 (South)	31.98	45.64	0.00

Main Results for each time segment

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	21	5	829	0.025	21	0.0	0.0	4.454	A
C-AB	17	4	704	0.024	17	0.0	0.0	5.234	A
C-A	13	3			13				
A-B	0	0			0				
A-C	9	2			9				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	6	828	0.031	26	0.0	0.0	4.484	A
C-AB	21	5	706	0.029	21	0.0	0.0	5.253	A
C-A	16	4			16				
A-B	0	0			0				
A-C	11	3			11				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	26	6	828	0.031	26	0.0	0.0	4.484	A
C-AB	21	5	706	0.029	21	0.0	0.0	5.253	A
C-A	16	4			16				
A-B	0	0			0				
A-C	11	3			11				

13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	21	5	829	0.025	21	0.0	0.0	4.456	A
C-AB	17	4	704	0.024	17	0.0	0.0	5.234	A
C-A	13	3			13				
A-B	0	0			0				
A-C	9	2			9				

Queueing Delay Results for each time segment

13:00 - 13:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.38	0.03	4.454	A
C-AB	0.38	0.03	5.234	A

13:15 - 13:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.47	0.03	4.484	A
C-AB	0.47	0.03	5.253	A

13:30 - 13:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.48	0.03	4.484	A
C-AB	0.47	0.03	5.253	A

13:45 - 14:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.39	0.03	4.456	A
C-AB	0.38	0.03	5.234	A

Queue Variation Results for each time segment

13:00 - 13:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

13:15 - 13:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

13:30 - 13:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

13:45 - 14:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 13:00-13:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.02	0.07
C-AB	0.67	0.04
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:15-13:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.25	0.08
C-AB	0.82	0.05
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:30-13:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.25	0.08
C-AB	0.82	0.05
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:45-14:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.02	0.07
C-AB	0.67	0.04
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.02
	C - L6030 (South)	0.00	0.67	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.25
	C - L6030 (South)	0.00	0.82	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.25
	C - L6030 (South)	0.00	0.82	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.02
	C - L6030 (South)	0.00	0.67	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.42	0.00	46.57
	C - L6030 (South)	31.79	45.44	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.45	0.00	46.60
	C - L6030 (South)	31.80	45.46	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.45	0.00	46.60
	C - L6030 (South)	31.80	45.46	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.43	0.00	46.57
	C - L6030 (South)	31.79	45.44	0.00

2024 Baseline + Generated, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Major arm width	C - L6030 (South) - Major arm geometry	For two-way major roads, please interpret results with caution if the total major carriageway width is less than 6m.
Warning	Demand Sets	D12 - 2024 Baseline + Generated, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	L6030-Site Access Junction	T-Junction	Two-way		✓	2.97	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D12	2024 Baseline + Generated	PM	ONE HOUR	12:45	14:15	15	✓	✓	Simple	D9+D10

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - L6030 (North)		ONE HOUR	✓	11	100.000
B - Site Access		ONE HOUR	✓	24	100.000
C - L6030 (South)		ONE HOUR	✓	36	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	11
	B - Site Access	0	0	24
	C - L6030 (South)	17	19	0

Proportions

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	1.00
	B - Site Access	0.00	0.00	1.00
	C - L6030 (South)	0.47	0.53	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0	0	0
	B - Site Access	0	0	0
	C - L6030 (South)	0	0	0

Average PCU Per Veh

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	1.000	1.000	1.000
	B - Site Access	1.000	1.000	1.000
	C - L6030 (South)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
12:45-13:00	A - L6030 (North)	8	8
	B - Site Access	18	18
	C - L6030 (South)	27	27
13:00-13:15	A - L6030 (North)	10	10
	B - Site Access	22	22
	C - L6030 (South)	33	33
13:15-13:30	A - L6030 (North)	12	12
	B - Site Access	27	27
	C - L6030 (South)	40	40
13:30-13:45	A - L6030 (North)	12	12
	B - Site Access	27	27
	C - L6030 (South)	40	40
13:45-14:00	A - L6030 (North)	10	10
	B - Site Access	22	22
	C - L6030 (South)	33	33
14:00-14:15	A - L6030 (North)	8	8
	B - Site Access	18	18
	C - L6030 (South)	27	27

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.03	4.49	0.0	0.5	A	24	24	1.80	4.45	0.02	2.47	4.44
C-AB	0.03	5.26	0.0	0.5	A	20	20	1.81	5.48	0.02	2.48	5.45
C-A						16	16					
A-B						0	0					
A-C						11	11					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	9.46	0.00
	B - Site Access	9.83	0.00	11.77
	C - L6030 (South)	0.00	9.86	0.00

Inclusive Geometric Delay (Veh-min) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	6.54
	C - L6030 (South)	0.00	4.38	0.00

Point to Point Journey Times Summary (s) - 1 - L6030-Site Access Junction

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.41	0.00	46.56
	C - L6030 (South)	32.00	45.66	0.00

Main Results for each time segment

13:00 - 13:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	5	829	0.026	22	0.0	0.0	4.461	A
C-AB	18	4	705	0.025	18	0.0	0.0	5.238	A
C-A	15	4			15				
A-B	0	0			0				
A-C	10	3			10				

13:15 - 13:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	27	7	828	0.032	27	0.0	0.0	4.492	A
C-AB	22	5	706	0.031	22	0.0	0.0	5.258	A
C-A	18	4			18				
A-B	0	0			0				
A-C	12	3			12				

13:30 - 13:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	27	7	828	0.032	27	0.0	0.0	4.492	A
C-AB	22	5	706	0.031	22	0.0	0.0	5.260	A
C-A	18	4			18				
A-B	0	0			0				
A-C	12	3			12				

13:45 - 14:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	5	829	0.026	22	0.0	0.0	4.461	A
C-AB	18	4	705	0.025	18	0.0	0.0	5.238	A
C-A	15	4			15				
A-B	0	0			0				
A-C	10	3			10				

Queueing Delay Results for each time segment

13:00 - 13:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.40	0.03	4.461	A
C-AB	0.40	0.03	5.238	A

13:15 - 13:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.49	0.03	4.492	A
C-AB	0.50	0.03	5.258	A

13:30 - 13:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.50	0.03	4.492	A
C-AB	0.50	0.03	5.260	A

13:45 - 14:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.41	0.03	4.461	A
C-AB	0.41	0.03	5.238	A

Queue Variation Results for each time segment

13:00 - 13:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

13:15 - 13:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

13:30 - 13:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

13:45 - 14:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.03	0.00	0.00	0.03	0.03			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 13:00-13:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.07	0.07
C-AB	0.71	0.05
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:15-13:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.31	0.09
C-AB	0.88	0.06
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:30-13:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.31	0.09
C-AB	0.88	0.06
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Geometric Delay results: 13:45-14:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.07	0.07
C-AB	0.72	0.05
C-A	0.00	0.00
A-B	0.00	0.00
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.07
	C - L6030 (South)	0.00	0.71	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.31
	C - L6030 (South)	0.00	0.88	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.31
	C - L6030 (South)	0.00	0.88	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	0.00	0.00
	B - Site Access	0.00	0.00	1.07
	C - L6030 (South)	0.00	0.72	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:00-13:15

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.43	0.00	46.57
	C - L6030 (South)	31.79	45.44	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:15-13:30

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.46	0.00	46.60
	C - L6030 (South)	31.81	45.47	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:30-13:45

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.46	0.00	46.60
	C - L6030 (South)	31.81	45.47	0.00

Point to Point Journey Times By Turn (s) - 1 - L6030-Site Access Junction - 13:45-14:00

		To		
		A - L6030 (North)	B - Site Access	C - L6030 (South)
From	A - L6030 (North)	0.00	43.59	26.55
	B - Site Access	48.43	0.00	46.57
	C - L6030 (South)	31.79	45.45	0.00

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: N81-L6030 Junction ver1.j9
Path: C:\Users\kevin\Desktop\KH Chartered Engineers\KH Chartered Engineers - Docs\C. Jobs\WSP
Report generation date: 04/12/2024 11:13:01

Summary of junction performance

	AM			PM		
	95% Queue (Veh)	Delay (s)	RFC	95% Queue (Veh)	Delay (s)	RFC
	2019 Baseline					
Stream B-AC	0.5	12.21	0.06	0.5	10.55	0.10
Stream C-AB	0.5	7.23	0.01	0.5	3.10	0.03
	2020 Baseline					
Stream B-AC	0.5	12.52	0.07	0.5	10.71	0.10
Stream C-AB	0.5	7.28	0.01	0.5	3.08	0.03
	2024 Baseline					
Stream B-AC	0.5	14.50	0.08	0.5	11.69	0.12
Stream C-AB	0.5	7.55	0.02	0.5	2.96	0.05
	2020 Baseline + Generated					
Stream B-AC	0.5	12.97	0.09	0.5	9.89	0.13
Stream C-AB	0.5	7.57	0.05	0.6	3.14	0.06
	2024 Baseline + Generated					
Stream B-AC	0.5	15.13	0.12	0.5	10.80	0.15
Stream C-AB	0.5	7.89	0.06	1.0	3.03	0.08

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.

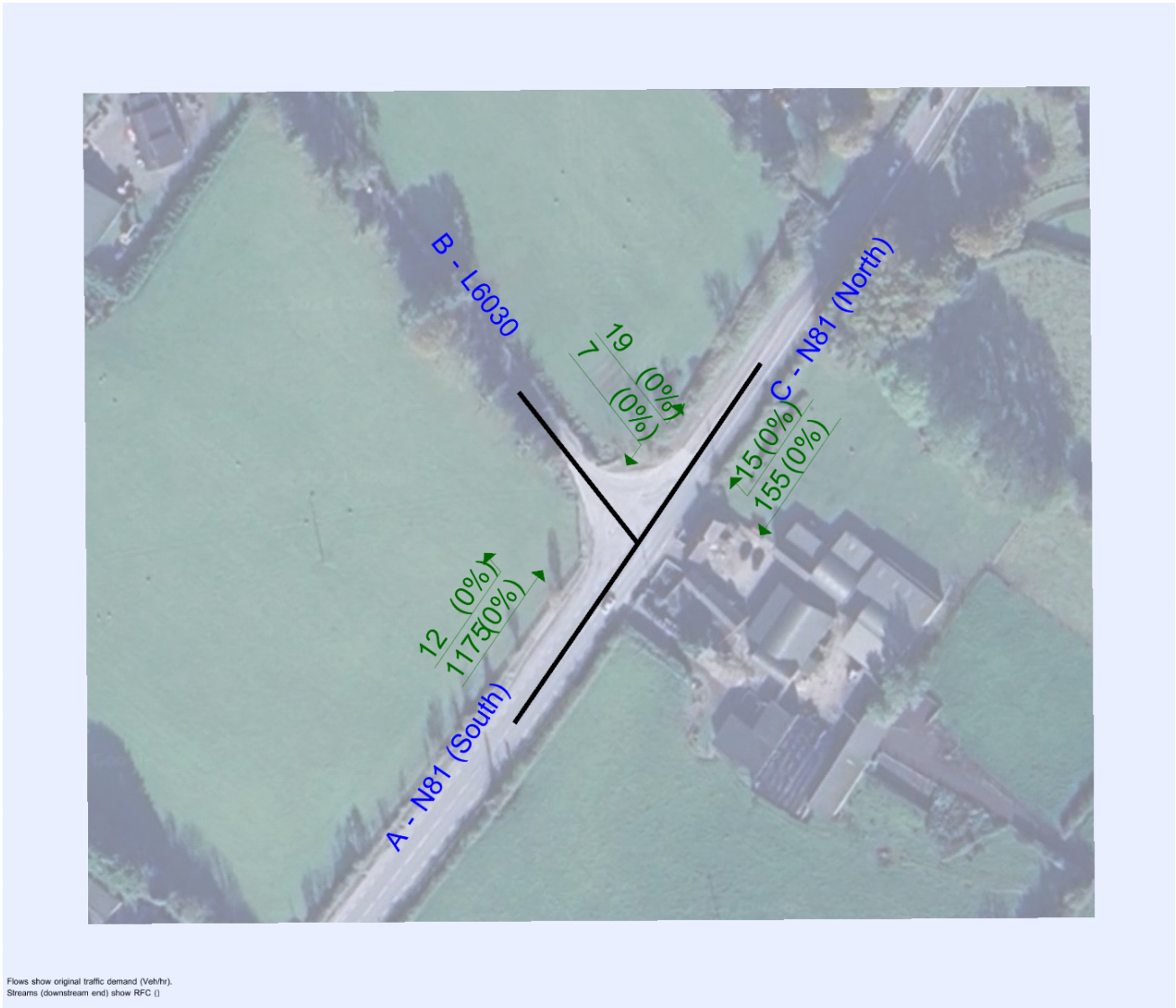
File summary

File Description

Title	(untitled)
Location	
Site number	
Date	22/04/2019
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ACER\Kevin
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically	Relationship type	Relationship
D1	2019 Baseline	AM	ONE HOUR	06:45	08:15	15	✓	✓		
D2	2020 Baseline	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	(D1*1.0197)
D3	2024 Baseline	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	D1*1.1242
D4	2020 Generated	AM	ONE HOUR	06:45	08:15	15	✓			
D5	2020 Baseline + Generated	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	D2+D4
D6	2024 Baseline + Generated	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	D3+D4
D7	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓	✓		
D8	2020 Baseline	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D7*1.0197
D9	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D7*1.1242
D10	2020 Generated	PM	ONE HOUR	16:45	18:15	15	✓			
D11	2020 Baseline + Generated	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D10
D12	2024 Baseline + Generated	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D9+D10

Analysis Set Details

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

2019 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D1 - 2019 Baseline, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.20	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	N81 (South)		Major
B	L6030		Minor
C	N81 (North)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - N81 (North)	7.30			215.0	✓	0.00

Geometries for Arm C are measured opposite Arm B. Geometries for Arm A (if relevant) are measured opposite Arm D.

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - L6030	One lane	3.00	90	113

Geometric Delay Data for Priority Intersections

Arm	Entry speed (kph)	Exit speed (kph)	Entry radius from arm (m)	Exit radius into arm (m)	Stagger length (m)	Distance included upstream (m)	Distance included downstream (m)
A - N81 (South)	100.00	100.00	35.00			252.87	252.87
B - L6030	48.00	48.00	19.00	11.00		252.87	252.87
C - N81 (North)	80.00	80.00				252.87	252.87

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (Veh/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	564	0.097	0.245	0.154	0.350
1	B-C	695	0.101	0.254	-	-
1	C-B	698	0.255	0.255	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically
D1	2019 Baseline	AM	ONE HOUR	06:45	08:15	15	✓	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	1161	100.000
B - L6030		ONE HOUR	✓	18	100.000
C - N81 (North)		ONE HOUR	✓	156	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	9	1152
	B - L6030	5	0	13
	C - N81 (North)	152	4	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.01	0.99
	B - L6030	0.28	0.00	0.72
	C - N81 (North)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A - N81 (South)	874	874
	B - L6030	14	14
	C - N81 (North)	117	117
07:00-07:15	A - N81 (South)	1044	1044
	B - L6030	16	16
	C - N81 (North)	140	140
07:15-07:30	A - N81 (South)	1278	1278
	B - L6030	20	20
	C - N81 (North)	172	172
07:30-07:45	A - N81 (South)	1278	1278
	B - L6030	20	20
	C - N81 (North)	172	172
07:45-08:00	A - N81 (South)	1044	1044
	B - L6030	16	16
	C - N81 (North)	140	140
08:00-08:15	A - N81 (South)	874	874
	B - L6030	14	14
	C - N81 (North)	117	117

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.06	12.21	0.1	0.5	B	18	18	3.30	11.01	0.04	4.29	10.39
C-AB	0.01	7.23	0.0	0.5	A	6	6	0.74	7.75	0.01	0.95	7.52
C-A						150	150					
A-B						9	9					
A-C						1152	1152					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	1.60	0.00
	B - L6030	1.69	0.00	2.53
	C - N81 (North)	0.00	0.87	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.21	0.00	49.22
	C - N81 (North)	28.01	47.38	0.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	4	378	0.043	16	0.0	0.0	9.935	A
C-AB	5	1	536	0.009	5	0.0	0.0	6.778	A
C-A	135	34			135				
A-B	8	2			8				
A-C	1036	259			1036				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	315	0.063	20	0.0	0.1	12.198	B
C-AB	7	2	505	0.013	7	0.0	0.0	7.224	A
C-A	165	41			165				
A-B	10	2			10				
A-C	1268	317			1268				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	315	0.063	20	0.1	0.1	12.206	B
C-AB	7	2	505	0.013	7	0.0	0.0	7.227	A
C-A	165	41			165				
A-B	10	2			10				
A-C	1268	317			1268				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	16	4	378	0.043	16	0.1	0.0	9.944	A
C-AB	5	1	536	0.009	5	0.0	0.0	6.779	A
C-A	135	34			135				
A-B	8	2			8				
A-C	1036	259			1036				

Queueing Delay Results for each time segment

07:00 - 07:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.65	0.04	9.935	A
C-AB	0.15	0.01	6.778	A

07:15 - 07:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.96	0.06	12.198	B
C-AB	0.22	0.01	7.224	A

07:30 - 07:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.00	0.07	12.206	B
C-AB	0.22	0.01	7.227	A

07:45 - 08:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.70	0.05	9.944	A
C-AB	0.15	0.01	6.779	A

Queue Variation Results for each time segment

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.04	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 07:00-07:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.69	0.05
C-AB	0.14	0.01
C-A	0.00	0.00
A-B	0.26	0.02
A-C	0.00	0.00

Geometric Delay results: 07:15-07:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.84	0.06
C-AB	0.17	0.01
C-A	0.00	0.00
A-B	0.32	0.02
A-C	0.00	0.00

Geometric Delay results: 07:30-07:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.84	0.06
C-AB	0.17	0.01
C-A	0.00	0.00
A-B	0.32	0.02
A-C	0.00	0.00

Geometric Delay results: 07:45-08:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.69	0.05
C-AB	0.14	0.01
C-A	0.00	0.00
A-B	0.26	0.02
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.26	0.00
	B - L6030	0.28	0.00	0.41
	C - N81 (North)	0.00	0.14	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.32	0.00
	B - L6030	0.34	0.00	0.50
	C - N81 (North)	0.00	0.17	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.32	0.00
	B - L6030	0.34	0.00	0.51
	C - N81 (North)	0.00	0.17	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.26	0.00
	B - L6030	0.28	0.00	0.42
	C - N81 (North)	0.00	0.14	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.75	0.00	48.77
	C - N81 (North)	27.26	46.63	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.02	0.00	51.03
	C - N81 (North)	27.71	47.08	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.02	0.00	51.04
	C - N81 (North)	27.71	47.08	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.76	0.00	48.78
	C - N81 (North)	27.26	46.63	0.00

2020 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D2 - 2020 Baseline, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.20	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D2	2020 Baseline	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	(D1*1.0197)

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	1184	100.000
B - L6030		ONE HOUR	✓	18	100.000
C - N81 (North)		ONE HOUR	✓	159	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	9	1175
	B - L6030	5	0	13
	C - N81 (North)	155	4	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.01	0.99
	B - L6030	0.28	0.00	0.72
	C - N81 (North)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A - N81 (South)	891	891
	B - L6030	14	14
	C - N81 (North)	120	120
07:00-07:15	A - N81 (South)	1064	1064
	B - L6030	17	17
	C - N81 (North)	143	143
07:15-07:30	A - N81 (South)	1303	1303
	B - L6030	20	20
	C - N81 (North)	175	175
07:30-07:45	A - N81 (South)	1303	1303
	B - L6030	20	20
	C - N81 (North)	175	175
07:45-08:00	A - N81 (South)	1064	1064
	B - L6030	17	17
	C - N81 (North)	143	143
08:00-08:15	A - N81 (South)	891	891
	B - L6030	14	14
	C - N81 (North)	120	120

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.07	12.52	0.1	0.5	B	18	18	3.44	11.25	0.04	4.46	10.59
C-AB	0.01	7.28	0.0	0.5	A	6	6	0.77	7.83	0.01	0.99	7.59
C-A						153	153					
A-B						9	9					
A-C						1175	1175					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	1.64	0.00
	B - L6030	1.72	0.00	2.58
	C - N81 (North)	0.00	0.89	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.41	0.00	49.42
	C - N81 (North)	28.08	47.45	0.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	373	0.044	16	0.0	0.0	10.098	B
C-AB	5	1	533	0.009	5	0.0	0.0	6.816	A
C-A	138	35			138				
A-B	8	2			8				
A-C	1056	264			1056				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	308	0.066	20	0.0	0.1	12.509	B
C-AB	7	2	502	0.014	7	0.0	0.0	7.274	A
C-A	168	42			168				
A-B	10	3			10				
A-C	1293	323			1293				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	20	5	308	0.066	20	0.1	0.1	12.517	B
C-AB	7	2	502	0.014	7	0.0	0.0	7.277	A
C-A	168	42			168				
A-B	10	3			10				
A-C	1293	323			1293				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	17	4	373	0.044	17	0.1	0.0	10.107	B
C-AB	5	1	533	0.009	5	0.0	0.0	6.819	A
C-A	138	35			138				
A-B	8	2			8				
A-C	1056	264			1056				

Queueing Delay Results for each time segment

07:00 - 07:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.67	0.04	10.098	B
C-AB	0.15	0.01	6.816	A

07:15 - 07:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.00	0.07	12.509	B
C-AB	0.23	0.02	7.274	A

07:30 - 07:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.04	0.07	12.517	B
C-AB	0.23	0.02	7.277	A

07:45 - 08:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.73	0.05	10.107	B
C-AB	0.15	0.01	6.819	A

Queue Variation Results for each time segment

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.05	0.00	0.00	0.05	0.05			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 07:00-07:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.70	0.05
C-AB	0.15	0.01
C-A	0.00	0.00
A-B	0.27	0.02
A-C	0.00	0.00

Geometric Delay results: 07:15-07:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.86	0.06
C-AB	0.18	0.01
C-A	0.00	0.00
A-B	0.33	0.02
A-C	0.00	0.00

Geometric Delay results: 07:30-07:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.86	0.06
C-AB	0.18	0.01
C-A	0.00	0.00
A-B	0.33	0.02
A-C	0.00	0.00

Geometric Delay results: 07:45-08:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.71	0.05
C-AB	0.15	0.01
C-A	0.00	0.00
A-B	0.27	0.02
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.27	0.00
	B - L6030	0.28	0.00	0.42
	C - N81 (North)	0.00	0.15	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.33	0.00
	B - L6030	0.34	0.00	0.51
	C - N81 (North)	0.00	0.18	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.33	0.00
	B - L6030	0.34	0.00	0.52
	C - N81 (North)	0.00	0.18	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.27	0.00
	B - L6030	0.28	0.00	0.42
	C - N81 (North)	0.00	0.15	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.91	0.00	48.93
	C - N81 (North)	27.30	46.67	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.33	0.00	51.34
	C - N81 (North)	27.76	47.13	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.33	0.00	51.35
	C - N81 (North)	27.76	47.13	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.92	0.00	48.94
	C - N81 (North)	27.30	46.67	0.00

2024 Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D3 - 2024 Baseline, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.23	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D3	2024 Baseline	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	D1*1.1242

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	1305	100.000
B - L6030		ONE HOUR	✓	20	100.000
C - N81 (North)		ONE HOUR	✓	175	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	10	1295
	B - L6030	6	0	15
	C - N81 (North)	171	4	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.01	0.99
	B - L6030	0.28	0.00	0.72
	C - N81 (North)	0.97	0.03	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A - N81 (South)	983	983
	B - L6030	15	15
	C - N81 (North)	132	132
07:00-07:15	A - N81 (South)	1173	1173
	B - L6030	18	18
	C - N81 (North)	158	158
07:15-07:30	A - N81 (South)	1437	1437
	B - L6030	22	22
	C - N81 (North)	193	193
07:30-07:45	A - N81 (South)	1437	1437
	B - L6030	22	22
	C - N81 (North)	193	193
07:45-08:00	A - N81 (South)	1173	1173
	B - L6030	18	18
	C - N81 (North)	158	158
08:00-08:15	A - N81 (South)	983	983
	B - L6030	15	15
	C - N81 (North)	132	132

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.08	14.50	0.1	0.5	B	20	20	4.29	12.72	0.05	5.49	11.82
C-AB	0.02	7.55	0.0	0.5	A	7	7	0.96	8.27	0.01	1.22	7.99
C-A						168	168					
A-B						10	10					
A-C						1295	1295					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	1.80	0.00
	B - L6030	1.90	0.00	2.85
	C - N81 (North)	0.00	0.98	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	54.64	0.00	50.65
	C - N81 (North)	28.48	47.85	0.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	18	5	343	0.053	18	0.0	0.1	11.067	B
C-AB	6	1	518	0.011	6	0.0	0.0	7.020	A
C-A	152	38			152				
A-B	9	2			9				
A-C	1164	291			1164				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	6	271	0.082	22	0.1	0.1	14.487	B
C-AB	8	2	485	0.017	8	0.0	0.0	7.546	A
C-A	185	46			185				
A-B	11	3			11				
A-C	1426	356			1426				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	22	6	271	0.082	22	0.1	0.1	14.501	B
C-AB	8	2	485	0.017	8	0.0	0.0	7.550	A
C-A	185	46			185				
A-B	11	3			11				
A-C	1426	356			1426				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	18	5	343	0.053	18	0.1	0.1	11.079	B
C-AB	6	1	518	0.011	6	0.0	0.0	7.021	A
C-A	152	38			152				
A-B	9	2			9				
A-C	1164	291			1164				

Queueing Delay Results for each time segment

07:00 - 07:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.80	0.05	11.067	B
C-AB	0.18	0.01	7.020	A

07:15 - 07:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.27	0.08	14.487	B
C-AB	0.29	0.02	7.546	A

07:30 - 07:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.33	0.09	14.501	B
C-AB	0.29	0.02	7.550	A

07:45 - 08:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.88	0.06	11.079	B
C-AB	0.19	0.01	7.021	A

Queue Variation Results for each time segment

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.01	0.01	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.09	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.02	0.00	0.00	0.02	0.02			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.06	0.00	0.00	0.06	0.06			N/A	N/A
C-AB	0.01	0.00	0.00	0.01	0.01			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 07:00-07:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.77	0.05
C-AB	0.16	0.01
C-A	0.00	0.00
A-B	0.29	0.02
A-C	0.00	0.00

Geometric Delay results: 07:15-07:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.94	0.06
C-AB	0.20	0.01
C-A	0.00	0.00
A-B	0.36	0.02
A-C	0.00	0.00

Geometric Delay results: 07:30-07:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.95	0.06
C-AB	0.20	0.01
C-A	0.00	0.00
A-B	0.36	0.02
A-C	0.00	0.00

Geometric Delay results: 07:45-08:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	0.78	0.05
C-AB	0.16	0.01
C-A	0.00	0.00
A-B	0.29	0.02
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.29	0.00
	B - L6030	0.31	0.00	0.46
	C - N81 (North)	0.00	0.16	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.36	0.00
	B - L6030	0.38	0.00	0.57
	C - N81 (North)	0.00	0.20	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.36	0.00
	B - L6030	0.38	0.00	0.57
	C - N81 (North)	0.00	0.20	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.29	0.00
	B - L6030	0.31	0.00	0.47
	C - N81 (North)	0.00	0.16	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.88	0.00	49.90
	C - N81 (North)	27.50	46.88	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	57.30	0.00	53.32
	C - N81 (North)	28.03	47.40	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	57.32	0.00	53.33
	C - N81 (North)	28.03	47.41	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.90	0.00	49.91
	C - N81 (North)	27.50	46.88	0.00

2020 Baseline + Generated, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D5 - 2020 Baseline + Generated, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.37	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Results for central hour only	Run automatically	Relationship type	Relationship
D5	2020 Baseline + Generated	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	D2+D4

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	1187	100.000
B - L6030		ONE HOUR	✓	26	100.000
C - N81 (North)		ONE HOUR	✓	170	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	12	1175
	B - L6030	7	0	19
	C - N81 (North)	155	15	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.01	0.99
	B - L6030	0.27	0.00	0.73
	C - N81 (North)	0.91	0.09	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A - N81 (South)	894	894
	B - L6030	20	20
	C - N81 (North)	128	128
07:00-07:15	A - N81 (South)	1067	1067
	B - L6030	24	24
	C - N81 (North)	153	153
07:15-07:30	A - N81 (South)	1307	1307
	B - L6030	29	29
	C - N81 (North)	187	187
07:30-07:45	A - N81 (South)	1307	1307
	B - L6030	29	29
	C - N81 (North)	187	187
07:45-08:00	A - N81 (South)	1067	1067
	B - L6030	24	24
	C - N81 (North)	153	153
08:00-08:15	A - N81 (South)	894	894
	B - L6030	20	20
	C - N81 (North)	128	128

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.09	12.97	0.1	0.5	B	26	26	5.09	11.58	0.06	6.57	10.87
C-AB	0.05	7.57	0.1	0.5	A	22	22	3.72	10.21	0.04	4.69	9.70
C-A						148	148					
A-B						12	12					
A-C						1175	1175					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.17	0.00
	B - L6030	2.40	0.00	3.75
	C - N81 (North)	0.00	3.29	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.69	0.00	49.70
	C - N81 (North)	30.18	49.55	0.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	372	0.064	24	0.0	0.1	10.320	B
C-AB	18	5	532	0.035	18	0.0	0.0	7.002	A
C-A	134	34			134				
A-B	11	3			11				
A-C	1056	264			1056				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	29	7	307	0.095	29	0.1	0.1	12.956	B
C-AB	25	6	501	0.050	25	0.0	0.1	7.567	A
C-A	162	41			162				
A-B	13	3			13				
A-C	1293	323			1293				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	29	7	307	0.095	29	0.1	0.1	12.969	B
C-AB	25	6	501	0.050	25	0.1	0.1	7.569	A
C-A	162	40			162				
A-B	13	3			13				
A-C	1293	323			1293				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	24	6	372	0.064	24	0.1	0.1	10.333	B
C-AB	18	5	532	0.035	19	0.1	0.0	7.006	A
C-A	134	34			134				
A-B	11	3			11				
A-C	1056	264			1056				

Queueing Delay Results for each time segment

07:00 - 07:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	0.98	0.07	10.320	B
C-AB	0.70	0.05	7.002	A

07:15 - 07:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.49	0.10	12.956	B
C-AB	1.14	0.08	7.567	A

07:30 - 07:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.55	0.10	12.969	B
C-AB	1.16	0.08	7.569	A

07:45 - 08:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.07	0.07	10.333	B
C-AB	0.72	0.05	7.006	A

Queue Variation Results for each time segment

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.05	0.03	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.08	0.03	0.26	0.46	0.49			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.08	0.00	0.00	0.08	0.08			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.07	0.00	0.00	0.07	0.07			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 07:00-07:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.00	0.07
C-AB	0.54	0.04
C-A	0.00	0.00
A-B	0.35	0.02
A-C	0.00	0.00

Geometric Delay results: 07:15-07:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.22	0.08
C-AB	0.66	0.04
C-A	0.00	0.00
A-B	0.43	0.03
A-C	0.00	0.00

Geometric Delay results: 07:30-07:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.23	0.08
C-AB	0.66	0.04
C-A	0.00	0.00
A-B	0.43	0.03
A-C	0.00	0.00

Geometric Delay results: 07:45-08:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.01	0.07
C-AB	0.54	0.04
C-A	0.00	0.00
A-B	0.35	0.02
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.35	0.00
	B - L6030	0.39	0.00	0.61
	C - N81 (North)	0.00	0.54	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.43	0.00
	B - L6030	0.48	0.00	0.75
	C - N81 (North)	0.00	0.66	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.43	0.00
	B - L6030	0.48	0.00	0.75
	C - N81 (North)	0.00	0.66	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.35	0.00
	B - L6030	0.39	0.00	0.62
	C - N81 (North)	0.00	0.54	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.14	0.00	49.15
	C - N81 (North)	27.48	46.86	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.77	0.00	51.79
	C - N81 (North)	28.05	47.42	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.79	0.00	51.80
	C - N81 (North)	28.05	47.42	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.15	0.00	49.16
	C - N81 (North)	27.49	46.86	0.00

2024 Baseline + Generated, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D6 - 2024 Baseline + Generated, AM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.40	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D6	2024 Baseline + Generated	AM	ONE HOUR	06:45	08:15	15	✓	✓	Simple	D3+D4

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	1308	100.000
B - L6030		ONE HOUR	✓	28	100.000
C - N81 (North)		ONE HOUR	✓	186	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	13	1295
	B - L6030	8	0	21
	C - N81 (North)	171	15	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.01	0.99
	B - L6030	0.27	0.00	0.73
	C - N81 (North)	0.92	0.08	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
06:45-07:00	A - N81 (South)	985	985
	B - L6030	21	21
	C - N81 (North)	140	140
07:00-07:15	A - N81 (South)	1176	1176
	B - L6030	25	25
	C - N81 (North)	168	168
07:15-07:30	A - N81 (South)	1440	1440
	B - L6030	31	31
	C - N81 (North)	205	205
07:30-07:45	A - N81 (South)	1440	1440
	B - L6030	31	31
	C - N81 (North)	205	205
07:45-08:00	A - N81 (South)	1176	1176
	B - L6030	25	25
	C - N81 (North)	168	168
08:00-08:15	A - N81 (South)	985	985
	B - L6030	21	21
	C - N81 (North)	140	140

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.12	15.13	0.1	0.5	C	28	28	6.19	13.16	0.07	7.89	12.19
C-AB	0.06	7.89	0.1	0.5	A	24	24	4.40	11.02	0.05	5.48	10.41
C-A						162	162					
A-B						13	13					
A-C						1295	1295					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.34	0.00
	B - L6030	2.58	0.00	4.01
	C - N81 (North)	0.00	3.38	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	55.00	0.00	51.02
	C - N81 (North)	30.89	50.26	0.00

Main Results for each time segment

07:00 - 07:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	343	0.074	25	0.1	0.1	11.339	B
C-AB	20	5	518	0.038	20	0.0	0.1	7.227	A
C-A	148	37			148				
A-B	12	3			12				
A-C	1164	291			1164				

07:15 - 07:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	269	0.116	31	0.1	0.1	15.108	C
C-AB	28	7	484	0.058	28	0.1	0.1	7.888	A
C-A	177	44			177				
A-B	14	4			14				
A-C	1426	356			1426				

07:30 - 07:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	269	0.116	31	0.1	0.1	15.133	C
C-AB	28	7	484	0.058	28	0.1	0.1	7.892	A
C-A	177	44			177				
A-B	14	4			14				
A-C	1426	356			1426				

07:45 - 08:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	25	6	343	0.074	26	0.1	0.1	11.358	B
C-AB	20	5	518	0.038	20	0.1	0.1	7.233	A
C-A	148	37			148				
A-B	12	3			12				
A-C	1164	291			1164				

Queueing Delay Results for each time segment

07:00 - 07:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.15	0.08	11.339	B
C-AB	0.80	0.05	7.227	A

07:15 - 07:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.85	0.12	15.108	C
C-AB	1.38	0.09	7.888	A

07:30 - 07:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.94	0.13	15.133	C
C-AB	1.40	0.09	7.892	A

07:45 - 08:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.26	0.08	11.358	B
C-AB	0.82	0.05	7.233	A

Queue Variation Results for each time segment

07:00 - 07:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.05	0.03	0.25	0.45	0.48			N/A	N/A

07:15 - 07:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.09	0.03	0.26	0.47	0.50			N/A	N/A

07:30 - 07:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.13	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.09	0.00	0.00	0.09	0.09			N/A	N/A

07:45 - 08:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 07:00-07:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.07	0.07
C-AB	0.55	0.04
C-A	0.00	0.00
A-B	0.38	0.03
A-C	0.00	0.00

Geometric Delay results: 07:15-07:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.31	0.09
C-AB	0.67	0.04
C-A	0.00	0.00
A-B	0.47	0.03
A-C	0.00	0.00

Geometric Delay results: 07:30-07:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.32	0.09
C-AB	0.68	0.05
C-A	0.00	0.00
A-B	0.47	0.03
A-C	0.00	0.00

Geometric Delay results: 07:45-08:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.08	0.07
C-AB	0.55	0.04
C-A	0.00	0.00
A-B	0.38	0.03
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.38	0.00
	B - L6030	0.42	0.00	0.65
	C - N81 (North)	0.00	0.55	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.47	0.00
	B - L6030	0.51	0.00	0.80
	C - N81 (North)	0.00	0.67	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.47	0.00
	B - L6030	0.52	0.00	0.80
	C - N81 (North)	0.00	0.68	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.38	0.00
	B - L6030	0.42	0.00	0.66
	C - N81 (North)	0.00	0.55	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:00-07:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	54.16	0.00	50.17
	C - N81 (North)	27.71	47.08	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:15-07:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	57.92	0.00	53.94
	C - N81 (North)	28.37	47.74	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:30-07:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	57.95	0.00	53.96
	C - N81 (North)	28.37	47.75	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 07:45-08:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	54.18	0.00	50.19
	C - N81 (North)	27.72	47.09	0.00

2019 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D7 - 2019 Baseline, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.38	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)	Results for central hour only	Run automatically
D7	2019 Baseline	PM	ONE HOUR	16:45	18:15	15	✓	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	256	100.000
B - L6030		ONE HOUR	✓	35	100.000
C - N81 (North)		ONE HOUR	✓	949	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	13	243
	B - L6030	26	0	9
	C - N81 (North)	941	8	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.05	0.95
	B - L6030	0.74	0.00	0.26
	C - N81 (North)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - N81 (South)	193	193
	B - L6030	26	26
	C - N81 (North)	714	714
17:00-17:15	A - N81 (South)	230	230
	B - L6030	31	31
	C - N81 (North)	853	853
17:15-17:30	A - N81 (South)	282	282
	B - L6030	39	39
	C - N81 (North)	1045	1045
17:30-17:45	A - N81 (South)	282	282
	B - L6030	39	39
	C - N81 (North)	1045	1045
17:45-18:00	A - N81 (South)	230	230
	B - L6030	31	31
	C - N81 (North)	853	853
18:00-18:15	A - N81 (South)	193	193
	B - L6030	26	26
	C - N81 (North)	714	714

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.10	10.55	0.1	0.5	B	35	35	5.73	9.83	0.06	7.59	9.45
C-AB	0.03	3.10	0.0	0.5	A	34	34	2.11	3.71	0.02	2.64	3.72
C-A						915	915					
A-B						13	13					
A-C						243	243					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.32	0.00
	B - L6030	8.80	0.00	1.75
	C - N81 (North)	0.00	1.75	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.27	0.00	48.29
	C - N81 (North)	24.20	43.57	0.00

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	421	0.075	31	0.1	0.1	9.245	A
C-AB	25	6	1185	0.021	25	0.0	0.0	3.103	A
C-A	828	207			828				
A-B	12	3			12				
A-C	218	55			218				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	380	0.101	38	0.1	0.1	10.544	B
C-AB	43	11	1302	0.033	43	0.0	0.0	2.859	A
C-A	1002	250			1002				
A-B	14	4			14				
A-C	268	67			268				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	380	0.101	39	0.1	0.1	10.550	B
C-AB	43	11	1302	0.033	43	0.0	0.0	2.861	A
C-A	1002	250			1002				
A-B	14	4			14				
A-C	268	67			268				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	31	8	421	0.075	32	0.1	0.1	9.252	A
C-AB	25	6	1185	0.021	25	0.0	0.0	3.103	A
C-A	828	207			828				
A-B	12	3			12				
A-C	218	55			218				

Queueing Delay Results for each time segment

17:00 - 17:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.17	0.08	9.245	A
C-AB	0.39	0.03	3.103	A

17:15 - 17:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.62	0.11	10.544	B
C-AB	0.67	0.04	2.859	A

17:30 - 17:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.68	0.11	10.550	B
C-AB	0.67	0.04	2.861	A

17:45 - 18:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.26	0.08	9.252	A
C-AB	0.39	0.03	3.103	A

Queue Variation Results for each time segment

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.03	0.26	0.47	0.50			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 17:00-17:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.72	0.11
C-AB	0.28	0.02
C-A	0.00	0.00
A-B	0.38	0.03
A-C	0.00	0.00

Geometric Delay results: 17:15-17:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.10	0.14
C-AB	0.35	0.02
C-A	0.00	0.00
A-B	0.46	0.03
A-C	0.00	0.00

Geometric Delay results: 17:30-17:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.11	0.14
C-AB	0.35	0.02
C-A	0.00	0.00
A-B	0.46	0.03
A-C	0.00	0.00

Geometric Delay results: 17:45-18:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.73	0.12
C-AB	0.29	0.02
C-A	0.00	0.00
A-B	0.38	0.03
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.38	0.00
	B - L6030	1.43	0.00	0.29
	C - N81 (North)	0.00	0.28	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.46	0.00
	B - L6030	1.75	0.00	0.35
	C - N81 (North)	0.00	0.35	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.46	0.00
	B - L6030	1.76	0.00	0.35
	C - N81 (North)	0.00	0.35	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.38	0.00
	B - L6030	1.44	0.00	0.29
	C - N81 (North)	0.00	0.29	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.06	0.00	48.08
	C - N81 (North)	23.59	42.96	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.36	0.00	49.38
	C - N81 (North)	23.34	42.71	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.37	0.00	49.38
	C - N81 (North)	23.34	42.72	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.07	0.00	48.08
	C - N81 (North)	23.59	42.96	0.00

2020 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D8 - 2020 Baseline, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.39	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D8	2020 Baseline	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D7*1.0197

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	261	100.000
B - L6030		ONE HOUR	✓	36	100.000
C - N81 (North)		ONE HOUR	✓	968	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	13	248
	B - L6030	27	0	9
	C - N81 (North)	960	8	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.05	0.95
	B - L6030	0.74	0.00	0.26
	C - N81 (North)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - N81 (South)	197	197
	B - L6030	27	27
	C - N81 (North)	729	729
17:00-17:15	A - N81 (South)	235	235
	B - L6030	32	32
	C - N81 (North)	870	870
17:15-17:30	A - N81 (South)	287	287
	B - L6030	39	39
	C - N81 (North)	1065	1065
17:30-17:45	A - N81 (South)	287	287
	B - L6030	39	39
	C - N81 (North)	1065	1065
17:45-18:00	A - N81 (South)	235	235
	B - L6030	32	32
	C - N81 (North)	870	870
18:00-18:15	A - N81 (South)	197	197
	B - L6030	27	27
	C - N81 (North)	729	729

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.10	10.71	0.1	0.5	B	36	36	5.93	9.96	0.07	7.83	9.57
C-AB	0.03	3.08	0.0	0.5	A	36	36	2.24	3.71	0.02	2.79	3.72
C-A						932	932					
A-B						13	13					
A-C						248	248					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.36	0.00
	B - L6030	8.97	0.00	1.79
	C - N81 (North)	0.00	1.78	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.39	0.00	48.40
	C - N81 (North)	24.20	43.58	0.00

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	8	417	0.077	32	0.1	0.1	9.341	A
C-AB	26	7	1195	0.022	26	0.0	0.0	3.079	A
C-A	844	211			844				
A-B	12	3			12				
A-C	223	56			223				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	375	0.105	39	0.1	0.1	10.706	B
C-AB	46	11	1315	0.035	46	0.0	0.0	2.836	A
C-A	1020	255			1020				
A-B	15	4			15				
A-C	273	68			273				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	39	10	375	0.105	39	0.1	0.1	10.715	B
C-AB	46	11	1315	0.035	46	0.0	0.0	2.836	A
C-A	1020	255			1020				
A-B	15	4			15				
A-C	273	68			273				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	32	8	417	0.077	32	0.1	0.1	9.354	A
C-AB	26	7	1195	0.022	27	0.0	0.0	3.079	A
C-A	843	211			843				
A-B	12	3			12				
A-C	223	56			223				

Queueing Delay Results for each time segment

17:00 - 17:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.21	0.08	9.341	A
C-AB	0.41	0.03	3.079	A

17:15 - 17:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.68	0.11	10.706	B
C-AB	0.71	0.05	2.836	A

17:30 - 17:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.74	0.12	10.715	B
C-AB	0.71	0.05	2.836	A

17:45 - 18:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.30	0.09	9.354	A
C-AB	0.41	0.03	3.079	A

Queue Variation Results for each time segment

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.05	0.00	0.00	0.05	0.05			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.08	0.00	0.00	0.08	0.08			N/A	N/A
C-AB	0.03	0.00	0.00	0.03	0.03			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 17:00-17:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.75	0.12
C-AB	0.29	0.02
C-A	0.00	0.00
A-B	0.39	0.03
A-C	0.00	0.00

Geometric Delay results: 17:15-17:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.14	0.14
C-AB	0.36	0.02
C-A	0.00	0.00
A-B	0.47	0.03
A-C	0.00	0.00

Geometric Delay results: 17:30-17:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.15	0.14
C-AB	0.36	0.02
C-A	0.00	0.00
A-B	0.47	0.03
A-C	0.00	0.00

Geometric Delay results: 17:45-18:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.76	0.12
C-AB	0.29	0.02
C-A	0.00	0.00
A-B	0.39	0.03
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.39	0.00
	B - L6030	1.46	0.00	0.29
	C - N81 (North)	0.00	0.29	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.47	0.00
	B - L6030	1.79	0.00	0.36
	C - N81 (North)	0.00	0.36	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.47	0.00
	B - L6030	1.79	0.00	0.36
	C - N81 (North)	0.00	0.36	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.39	0.00
	B - L6030	1.47	0.00	0.29
	C - N81 (North)	0.00	0.29	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.16	0.00	48.17
	C - N81 (North)	23.56	42.93	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.52	0.00	49.54
	C - N81 (North)	23.32	42.69	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.53	0.00	49.55
	C - N81 (North)	23.32	42.69	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.17	0.00	48.19
	C - N81 (North)	23.56	42.93	0.00

2024 Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D9 - 2024 Baseline, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.43	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D9	2024 Baseline	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D7*1.1242

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	288	100.000
B - L6030		ONE HOUR	✓	39	100.000
C - N81 (North)		ONE HOUR	✓	1067	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	15	273
	B - L6030	29	0	10
	C - N81 (North)	1058	9	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.05	0.95
	B - L6030	0.74	0.00	0.26
	C - N81 (North)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - N81 (South)	217	217
	B - L6030	30	30
	C - N81 (North)	803	803
17:00-17:15	A - N81 (South)	259	259
	B - L6030	35	35
	C - N81 (North)	959	959
17:15-17:30	A - N81 (South)	317	317
	B - L6030	43	43
	C - N81 (North)	1175	1175
17:30-17:45	A - N81 (South)	317	317
	B - L6030	43	43
	C - N81 (North)	1175	1175
17:45-18:00	A - N81 (South)	259	259
	B - L6030	35	35
	C - N81 (North)	959	959
18:00-18:15	A - N81 (South)	217	217
	B - L6030	30	30
	C - N81 (North)	803	803

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.12	11.69	0.1	0.5	B	39	39	7.04	10.73	0.08	9.24	10.23
C-AB	0.05	2.96	0.1	0.5	A	49	49	3.06	3.79	0.03	3.74	3.77
C-A						1018	1018					
A-B						15	15					
A-C						273	273					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.61	0.00
	B - L6030	9.89	0.00	1.97
	C - N81 (North)	0.00	1.96	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.05	0.00	49.06
	C - N81 (North)	24.26	43.63	0.00

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	9	398	0.089	35	0.1	0.1	9.916	A
C-AB	34	8	1249	0.027	34	0.0	0.0	2.961	A
C-A	925	231			925				
A-B	13	3			13				
A-C	246	61			246				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	43	11	351	0.123	43	0.1	0.1	11.677	B
C-AB	63	16	1383	0.046	63	0.0	0.1	2.727	A
C-A	1112	278			1112				
A-B	16	4			16				
A-C	301	75			301				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	43	11	351	0.123	43	0.1	0.1	11.689	B
C-AB	63	16	1383	0.046	63	0.1	0.1	2.729	A
C-A	1112	278			1112				
A-B	16	4			16				
A-C	301	75			301				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	35	9	398	0.089	36	0.1	0.1	9.932	A
C-AB	34	9	1249	0.027	34	0.1	0.0	2.962	A
C-A	925	231			925				
A-B	13	3			13				
A-C	246	61			246				

Queueing Delay Results for each time segment

17:00 - 17:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.41	0.09	9.916	A
C-AB	0.52	0.03	2.961	A

17:15 - 17:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	2.01	0.13	11.677	B
C-AB	1.00	0.07	2.727	A

17:30 - 17:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	2.09	0.14	11.689	B
C-AB	1.01	0.07	2.729	A

17:45 - 18:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.53	0.10	9.932	A
C-AB	0.53	0.04	2.962	A

Queue Variation Results for each time segment

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.03	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.07	0.03	0.25	0.45	0.48			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.14	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.04	0.00	0.00	0.04	0.04			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 17:00-17:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.93	0.13
C-AB	0.32	0.02
C-A	0.00	0.00
A-B	0.43	0.03
A-C	0.00	0.00

Geometric Delay results: 17:15-17:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.36	0.16
C-AB	0.39	0.03
C-A	0.00	0.00
A-B	0.52	0.03
A-C	0.00	0.00

Geometric Delay results: 17:30-17:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.37	0.16
C-AB	0.39	0.03
C-A	0.00	0.00
A-B	0.52	0.03
A-C	0.00	0.00

Geometric Delay results: 17:45-18:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	1.95	0.13
C-AB	0.32	0.02
C-A	0.00	0.00
A-B	0.43	0.03
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.43	0.00
	B - L6030	1.61	0.00	0.32
	C - N81 (North)	0.00	0.32	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.52	0.00
	B - L6030	1.97	0.00	0.39
	C - N81 (North)	0.00	0.39	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.52	0.00
	B - L6030	1.98	0.00	0.39
	C - N81 (North)	0.00	0.39	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.43	0.00
	B - L6030	1.62	0.00	0.32
	C - N81 (North)	0.00	0.32	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.73	0.00	48.75
	C - N81 (North)	23.44	42.82	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	54.49	0.00	50.51
	C - N81 (North)	23.21	42.58	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	54.51	0.00	50.52
	C - N81 (North)	23.21	42.58	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.75	0.00	48.76
	C - N81 (North)	23.44	42.82	0.00

2020 Baseline + Generated, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D11 - 2020 Baseline + Generated, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.54	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D11	2020 Baseline + Generated	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D8+D10

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	261	100.000
B - L6030		ONE HOUR	✓	49	100.000
C - N81 (North)		ONE HOUR	✓	975	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	13	248
	B - L6030	27	0	22
	C - N81 (North)	960	15	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.05	0.95
	B - L6030	0.54	0.00	0.46
	C - N81 (North)	0.98	0.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - N81 (South)	197	197
	B - L6030	37	37
	C - N81 (North)	734	734
17:00-17:15	A - N81 (South)	235	235
	B - L6030	44	44
	C - N81 (North)	876	876
17:15-17:30	A - N81 (South)	287	287
	B - L6030	54	54
	C - N81 (North)	1073	1073
17:30-17:45	A - N81 (South)	287	287
	B - L6030	54	54
	C - N81 (North)	1073	1073
17:45-18:00	A - N81 (South)	235	235
	B - L6030	44	44
	C - N81 (North)	876	876
18:00-18:15	A - N81 (South)	197	197
	B - L6030	37	37
	C - N81 (North)	734	734

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.13	9.89	0.1	0.5	A	49	49	7.49	9.23	0.08	9.93	8.89
C-AB	0.06	3.14	0.1	0.6	A	67	67	5.05	4.51	0.06	6.20	4.45
C-A						907	907					
A-B						13	13					
A-C						248	248					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.36	0.00
	B - L6030	8.97	0.00	4.32
	C - N81 (North)	0.00	3.31	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	51.71	0.00	47.72
	C - N81 (North)	24.93	44.31	0.00

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	44	11	458	0.096	44	0.1	0.1	8.691	A
C-AB	49	12	1195	0.041	49	0.0	0.1	3.140	A
C-A	827	207			827				
A-B	12	3			12				
A-C	223	56			223				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	13	418	0.128	53	0.1	0.1	9.882	A
C-AB	85	21	1315	0.065	85	0.1	0.1	2.927	A
C-A	988	247			988				
A-B	15	4			15				
A-C	273	68			273				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	54	13	418	0.128	54	0.1	0.1	9.891	A
C-AB	85	21	1315	0.065	85	0.1	0.1	2.930	A
C-A	988	247			988				
A-B	15	4			15				
A-C	273	68			273				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	44	11	458	0.096	44	0.1	0.1	8.704	A
C-AB	49	12	1195	0.041	49	0.1	0.1	3.141	A
C-A	827	207			827				
A-B	12	3			12				
A-C	223	56			223				

Queueing Delay Results for each time segment

17:00 - 17:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.53	0.10	8.691	A
C-AB	0.88	0.06	3.140	A

17:15 - 17:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	2.12	0.14	9.882	A
C-AB	1.64	0.11	2.927	A

17:30 - 17:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	2.19	0.15	9.891	A
C-AB	1.65	0.11	2.930	A

17:45 - 18:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.65	0.11	8.704	A
C-AB	0.89	0.06	3.141	A

Queue Variation Results for each time segment

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.10	0.00	0.00	0.10	0.10			N/A	N/A
C-AB	0.06	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.15	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.11	0.03	0.27	0.48	0.63			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.15	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.11	0.00	0.00	0.11	0.11			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.11	0.00	0.00	0.11	0.11			N/A	N/A
C-AB	0.06	0.00	0.00	0.06	0.06			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 17:00-17:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.16	0.14
C-AB	0.54	0.04
C-A	0.00	0.00
A-B	0.39	0.03
A-C	0.00	0.00

Geometric Delay results: 17:15-17:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.65	0.18
C-AB	0.66	0.04
C-A	0.00	0.00
A-B	0.47	0.03
A-C	0.00	0.00

Geometric Delay results: 17:30-17:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.66	0.18
C-AB	0.66	0.04
C-A	0.00	0.00
A-B	0.47	0.03
A-C	0.00	0.00

Geometric Delay results: 17:45-18:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.18	0.15
C-AB	0.54	0.04
C-A	0.00	0.00
A-B	0.39	0.03
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.39	0.00
	B - L6030	1.46	0.00	0.70
	C - N81 (North)	0.00	0.54	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.47	0.00
	B - L6030	1.79	0.00	0.86
	C - N81 (North)	0.00	0.66	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.47	0.00
	B - L6030	1.79	0.00	0.86
	C - N81 (North)	0.00	0.66	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.39	0.00
	B - L6030	1.47	0.00	0.71
	C - N81 (North)	0.00	0.54	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	51.51	0.00	47.52
	C - N81 (North)	23.62	43.00	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.70	0.00	48.71
	C - N81 (North)	23.41	42.78	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.71	0.00	48.72
	C - N81 (North)	23.41	42.79	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	51.52	0.00	47.54
	C - N81 (North)	23.62	43.00	0.00

2024 Baseline + Generated, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometric Delay	A - N81 (South) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 377.48 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Geometric Delay	C - N81 (North) - Geometric delay	Geometric delay: Distance included up/down-stream should be increased to 287.60 m to allow for acceleration/deceleration to/from junction speed, otherwise results may be unreliable.
Warning	Demand Sets	D12 - 2024 Baseline + Generated, PM	Time results are shown for central hour only. (Model is run for a 90 minute period.)
Warning	Demand Set Relationship	D5 - 2020 Baseline + Generated, AM	Demand Set relationships are chained. This may slow down the file.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.
Warning	Queue variations	Analysis Options	Queue percentiles may be unreliable if the mean queue in any time segment is very low or very high.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Visibilities conform to TD 42/95	Junction Delay (s)	Junction LOS
1	N81-L6030 Junction	T-Junction	Two-way		✓	0.58	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)	Results for central hour only	Run automatically	Relationship type	Relationship
D12	2024 Baseline + Generated	PM	ONE HOUR	16:45	18:15	15	✓	✓	Simple	D9+D10

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A - N81 (South)		ONE HOUR	✓	288	100.000
B - L6030		ONE HOUR	✓	52	100.000
C - N81 (North)		ONE HOUR	✓	1074	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	15	273
	B - L6030	29	0	23
	C - N81 (North)	1058	16	0

Proportions

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.05	0.95
	B - L6030	0.56	0.00	0.44
	C - N81 (North)	0.99	0.01	0.00

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0	0	0
	B - L6030	0	0	0
	C - N81 (North)	0	0	0

Average PCU Per Veh

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	1.000	1.000	1.000
	B - L6030	1.000	1.000	1.000
	C - N81 (North)	1.000	1.000	1.000

Detailed Demand Data

Demand for each time segment

Time Segment	Arm	Demand (Veh/hr)	Demand in PCU (PCU/hr)
16:45-17:00	A - N81 (South)	217	217
	B - L6030	39	39
	C - N81 (North)	808	808
17:00-17:15	A - N81 (South)	259	259
	B - L6030	47	47
	C - N81 (North)	965	965
17:15-17:30	A - N81 (South)	317	317
	B - L6030	58	58
	C - N81 (North)	1182	1182
17:30-17:45	A - N81 (South)	317	317
	B - L6030	58	58
	C - N81 (North)	1182	1182
17:45-18:00	A - N81 (South)	259	259
	B - L6030	47	47
	C - N81 (North)	965	965
18:00-18:15	A - N81 (South)	217	217
	B - L6030	39	39
	C - N81 (North)	808	808

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (Veh)	Max 95th percentile Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)	Total Queueing Delay (Veh-min)	Average Queueing Delay (s)	Rate of Queueing Delay (Veh-min/min)	Inclusive Total Queueing Delay (Veh-min)	Inclusive Average Queueing Delay (s)
B-AC	0.15	10.80	0.2	0.5	B	52	52	8.69	9.96	0.10	11.43	9.52
C-AB	0.08	3.03	0.2	1.0	A	86	86	6.76	4.70	0.08	8.12	4.61
C-A						988	988					
A-B						15	15					
A-C						273	273					

Geometric Delay Results for modelled period

Geometric Delay per light vehicle (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	7.77	0.00
	B - L6030	14.75	0.00	8.49
	C - N81 (North)	0.00	9.51	0.00

Inclusive Geometric Delay (Veh-min) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	2.61	0.00
	B - L6030	9.89	0.00	4.50
	C - N81 (North)	0.00	3.49	0.00

Point to Point Journey Times Summary (s) - 1 - N81-L6030 Junction

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.34	0.00	48.35
	C - N81 (North)	25.09	44.46	0.00

Main Results for each time segment

17:00 - 17:15

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	47	12	437	0.108	47	0.1	0.1	9.237	A
C-AB	60	15	1249	0.048	60	0.0	0.1	3.027	A
C-A	905	226			905				
A-B	13	3			13				
A-C	246	61			246				

17:15 - 17:30

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	58	14	391	0.147	57	0.1	0.2	10.790	B
C-AB	112	28	1383	0.081	112	0.1	0.2	2.832	A
C-A	1070	268			1070				
A-B	16	4			16				
A-C	301	75			301				

17:30 - 17:45

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	58	14	391	0.147	58	0.2	0.2	10.805	B
C-AB	112	28	1383	0.081	112	0.2	0.2	2.835	A
C-A	1070	268			1070				
A-B	16	4			16				
A-C	301	75			301				

17:45 - 18:00

Stream	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
B-AC	47	12	436	0.108	47	0.2	0.1	9.253	A
C-AB	61	15	1250	0.048	61	0.2	0.1	3.028	A
C-A	905	226			905				
A-B	13	3			13				
A-C	246	61			246				

Queueing Delay Results for each time segment

17:00 - 17:15

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.75	0.12	9.237	A
C-AB	1.09	0.07	3.027	A

17:15 - 17:30

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	2.48	0.17	10.790	B
C-AB	2.27	0.15	2.832	A

17:30 - 17:45

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	2.57	0.17	10.805	B
C-AB	2.29	0.15	2.835	A

17:45 - 18:00

Stream	Queueing total delay (Veh-min)	Queueing rate of delay (Veh-min/min)	Average delay per arriving vehicle (s)	Unsignalised level of service
B-AC	1.89	0.13	9.253	A
C-AB	1.11	0.07	3.028	A

Queue Variation Results for each time segment

17:00 - 17:15

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.07	0.03	0.25	0.45	0.48			N/A	N/A

17:15 - 17:30

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.26	0.47	0.49			N/A	N/A
C-AB	0.15	0.03	0.27	0.49	1.01			N/A	N/A

17:30 - 17:45

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.17	0.03	0.25	0.45	0.48			N/A	N/A
C-AB	0.15	0.00	0.00	0.15	0.15			N/A	N/A

17:45 - 18:00

Stream	Mean (Veh)	Q05 (Veh)	Q50 (Veh)	Q90 (Veh)	Q95 (Veh)	Percentile message	Marker message	Probability of reaching or exceeding marker	Probability of exactly reaching marker
B-AC	0.12	0.00	0.00	0.12	0.12			N/A	N/A
C-AB	0.07	0.00	0.00	0.07	0.07			N/A	N/A

Geometric Delay Results for each time segment

Geometric Delay results: 17:00-17:15

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.34	0.16
C-AB	0.57	0.04
C-A	0.00	0.00
A-B	0.43	0.03
A-C	0.00	0.00

Geometric Delay results: 17:15-17:30

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.87	0.19
C-AB	0.70	0.05
C-A	0.00	0.00
A-B	0.52	0.03
A-C	0.00	0.00

Geometric Delay results: 17:30-17:45

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.88	0.19
C-AB	0.70	0.05
C-A	0.00	0.00
A-B	0.52	0.03
A-C	0.00	0.00

Geometric Delay results: 17:45-18:00

Stream	Geometric total delay (Veh-min)	Geometric rate of delay (Veh-min/min)
B-AC	2.36	0.16
C-AB	0.57	0.04
C-A	0.00	0.00
A-B	0.43	0.03
A-C	0.00	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.43	0.00
	B - L6030	1.61	0.00	0.73
	C - N81 (North)	0.00	0.57	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.52	0.00
	B - L6030	1.97	0.00	0.90
	C - N81 (North)	0.00	0.70	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:30-17:45

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.52	0.00
	B - L6030	1.98	0.00	0.90
	C - N81 (North)	0.00	0.70	0.00

Total Geometric Delay By Turn (Veh-min) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	0.43	0.00
	B - L6030	1.62	0.00	0.74
	C - N81 (North)	0.00	0.57	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:00-17:15

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.05	0.00	48.07
	C - N81 (North)	23.51	42.88	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:15-17:30

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.61	0.00	49.62
	C - N81 (North)	23.31	42.69	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:30-17:45

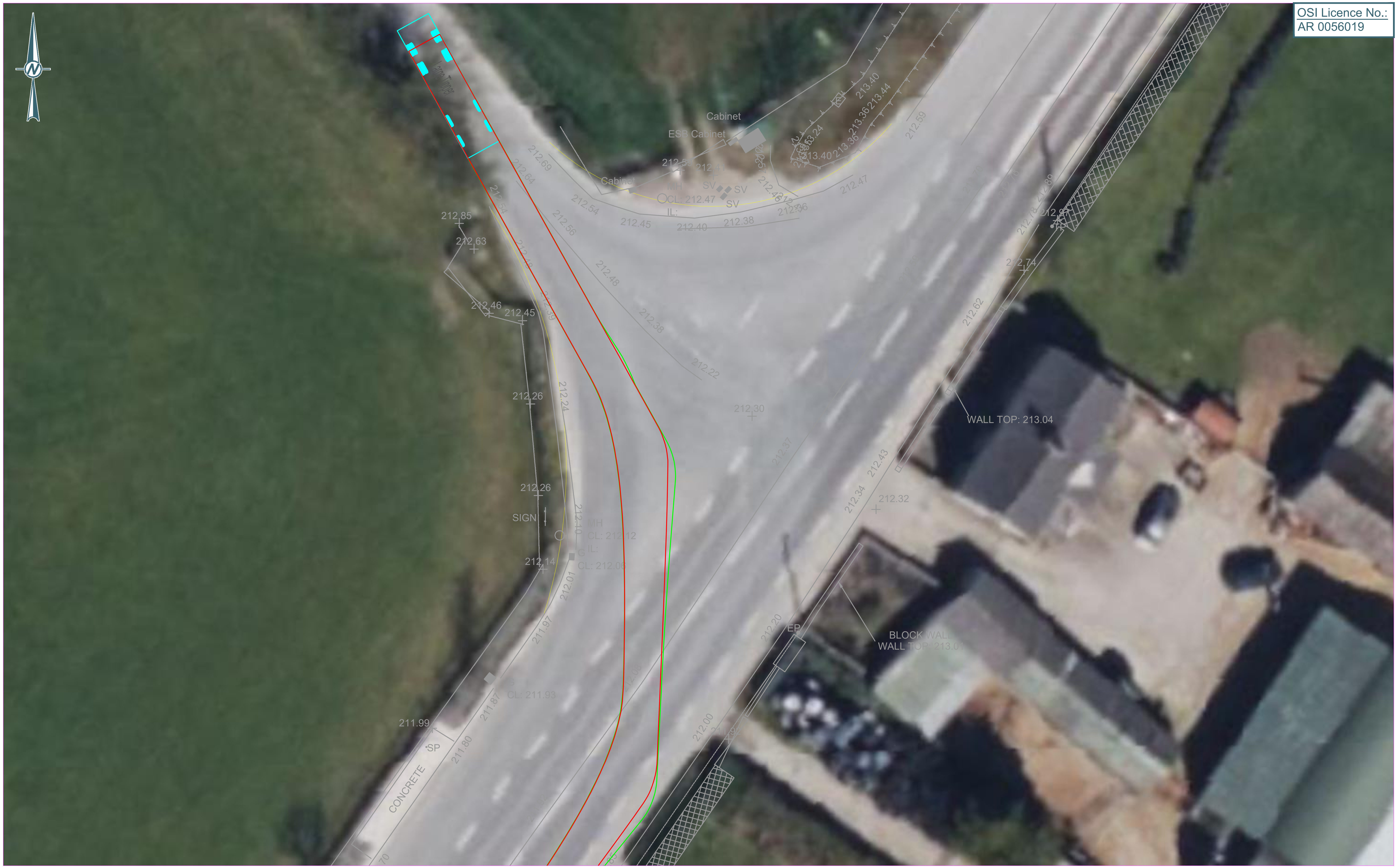
		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	53.62	0.00	49.64
	C - N81 (North)	23.32	42.69	0.00

Point to Point Journey Times By Turn (s) - 1 - N81-L6030 Junction - 17:45-18:00

		To		
		A - N81 (South)	B - L6030	C - N81 (North)
From	A - N81 (South)	0.00	35.84	20.48
	B - L6030	52.07	0.00	48.09
	C - N81 (North)	23.51	42.88	0.00

Appendix 12B

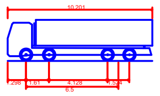
DRAWINGS



LEGEND:

Haulage Vehicle

VEHICLE PROFILE

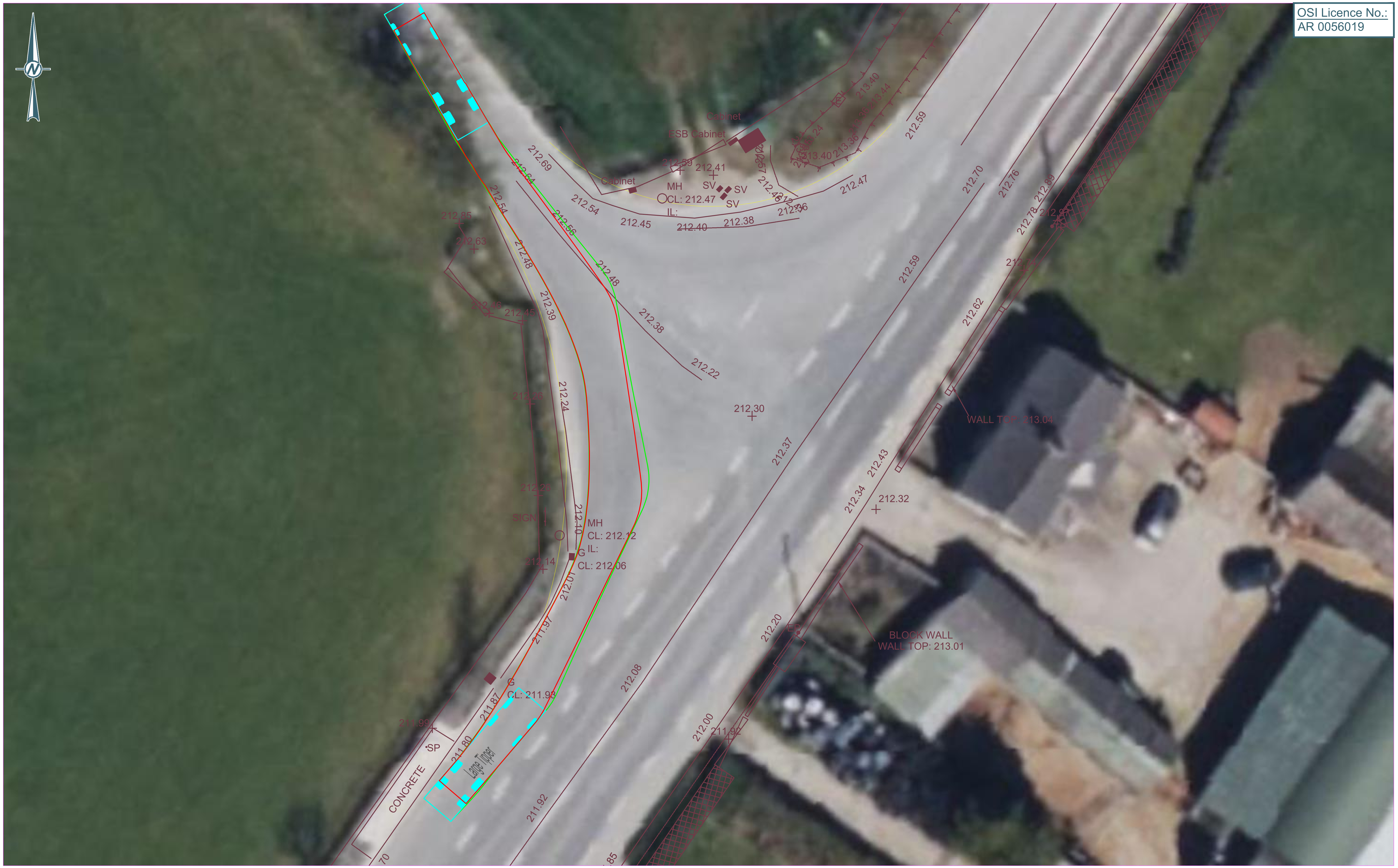


Large Tipper
Overall Length 10.201m
Overall Width 2.495m
Overall Body Height 2.890m
Min Body Ground Clearance 0.341m
Track Width 2.471m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.550m

0 5 10 15m
1:250

CLIENT	SHILLELAGH QUARRIES LTD
PROJECT	PLANNING APPLICATION, SHILLELAGH QUARRY, HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE
CONSULTANT	WSP
YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL
TITLE	N81 - OUT OF L6030, N81SOUTHBOUND
PROJECT No.	IE0037007.4788
DRAWING No.	1205
Rev.	B
SCALE	1:250 A3

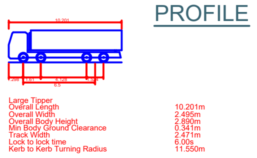
OSI Licence No.:
AR 0056019



LEGEND:

Haulage Vehicle

VEHICLE PROFILE



CLIENT

SHILLELAGH QUARRIES LTD

CONSULTANT

wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT

PLANNING APPLICATION, SHILLELAGH QUARRY, HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE

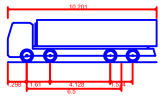
N81 - N81 SOUTHBOUND TO I6030

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1206	B	1:250 A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3

LEGEND:

Haulage Vehicle



VEHICLE PROFILE

Large Tipper	
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

0 5 10 15m
1:250

CLIENT
SHILLELAGH QUARRIES LTD

CONSULTANT
wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT
PLANNING APPLICATION, SHILLELAGH QUARRY, HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
SITE ACCESS HGV IN

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1207	B	1:250 A3


OSI Licence No.:
AR 0056019
POST & RAIL
FENCE
Cabinet
ESB Cabinet
Cabinet
MH
CL: 212.47
IL:
SV
SV
SV
Large Tipper
Large Tipper
RECENT ROAD
RESURFACING WORKS
UNDERTAKEN
(INCOMPLETE)
POST & RAIL
FENCE
SIGN
MH
CL: 212.12
IL:
G
CL: 212.06
G
CL: 211.93
WALL TOP: 213.04
DWELLING
ENTRANCE
BLOCK WALL
WALL TOP: 213.01
EP
SP
CONCRETE
POST & RAIL
FENCE
212.69
212.64
212.54
212.56
212.45
212.40
212.38
212.59
212.41
212.47
212.59
212.70
212.76
212.89
212.78
212.74
212.62
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212.85
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212.26
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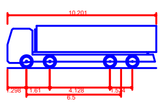
212.14
212.01
211.97
212.43
212.34
212.32
212.20
212.08
211.87
211.99
211.80
212.00
211.92
211.92

LEGEND:

Haulage Vehicle

VEHICLE PROFILE



Large Tipper
Overall Length 10.201m
Overall Width 2.495m
Overall Body Height 2.890m
Min Body Ground Clearance 0.341m
Track Width 2.471m
Lock to lock time 6.00s
Kerb to Kerb Turning Radius 11.550m

0 5 10 15m
1:250

CLIENT
SHILLELAGH QUARRIES LTD

CONSULTANT
wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT
PLANNING APPLICATION, SHILLELAGH QUARRY, HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
N81 - HGV IN AND OUT OF L6030, N81 NORTHBOUND

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1208	B	1:250 A3

OSI Licence No.:
AR 0056019

FORWARD VISIBILITY
271m

NORMAL VISIBILITY
94.1m

TANGENTIAL VISIBILITY
78.3m

TANGENTIAL VISIBILITY
193M

NORMAL VISIBILITY
271m

LEGEND:

- Normal Visibility
- Tangential Visibility
- Forward Visibility

0 20 40 60m
1:1,000

CLIENT
SHILLELAGH QUARRIES LTD

CONSULTANT
wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT
PLANNING APPLICATION, SHILLELAGH QUARRY,
HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
SITE ACCESS VISIBILITY SPLAYS - L6030

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1200	B	1:1000 A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3

0 25mm

Path: \\corp.pbwan.net\Global\ZAV\Cork_Data\Projects\41100xx\41107437 - WSP IRE-SHILLELAGH QUARRY-CAD\41 MI\02-Tech Info\01-Current\07-Incoming\FROM DAMIAN\Visibility Splays and Picady Dimension Drawings\ | File Name: IE-0030074788 - 1200 - 1203 - Visibility Geometry.dwg

OSI Licence No.:
AR 0056019

NORMAL VISIBILITY
133m

TANGENTIAL VISIBILITY
96.2m

TANGENTIAL VISIBILITY
42m

NORMAL VISIBILITY
163.3m

FORWARD VISIBILITY
377m

LEGEND:

- Normal Visibility
- Tangential Visibility
- Forward Visibility

0 50 100 150m
1:2,500

CLIENT
SHILLELAGH QUARRIES LTD

CONSULTANT
wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT
PLANNING APPLICATION, SHILLELAGH QUARRY,
HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
N81 VISIBILITY SPLAYS - L6030

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1201	B	1:2500 A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3
0 25 mm

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OSI Licence No.:
AR 0056019

LEGEND:

- Normal Visibility
- Tangential Visibility
- Forward Visibility

LEGEND:

- Geometry Measurements

0 5 10 15m
1:250

CLIENT
SHILLELAGH QUARRIES LTD

CONSULTANT
wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT
PLANNING APPLICATION, SHILLELAGH QUARRY,
HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
SITE ACCESS GEOMETRY MEASUREMENTS - L6030

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1202	B	1:250 A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3

0 25 mm

Path: \\corp.pbwan.net\Global\ZA\Central_Data\Projects\41100\xx\41107437 - WSP IRE-SHILLELAGH QUARRY-CAD\41 MI\02-Tech Info\01-Current\07-Incoming\FROM DAMIAN\Visibility Splays and Picady Dimension Drawings\ | File Name: IE-0030074788 - 1200 - 1203 - Visibility Geometry.dwg

OSI Licence No.:
AR 0056019

R16.57
11.71
2.95
2.59
Cabinet
ESB Cabinet
Cabinet
MH
CL: 212.47
IL:
SV
SV
SV
212.59
212.41
213.40
213.44
213.36
213.24
212.59
212.47
212.69
212.64
212.54
212.54
212.56
212.45
212.40
212.38
212.85
212.63
212.48
212.48
212.46
212.45
212.39
212.38
4.66
2.00
212.22
R10.00
212.30
212.59
212.70
212.76
212.78
212.89
212.87
212.74
212.62
WALL TOP: 213.04
212.26
212.24
R34.02
212.26
SIGN
212.14
212.10
MH
CL: 212.12
IL:
G
CL: 212.06
212.01
212.37
212.43
212.34
212.32
211.97
14.43
212.08
212.20
EP
BLOCK WALL
WALL TOP: 213.01
G
CL: 211.93
211.87
211.99
SP
211.80
CONCRETE
70
211.92
212.00
211.92
85

LEGEND:

Normal Visibility

Tangential Visibility

Forward Visibility

LEGEND:

Geometry Measurements

0 5 10 15m
1:250

CLIENT
SHILLELAGH QUARRIES LTD

CONSULTANT
wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT
PLANNING APPLICATION, SHILLELAGH QUARRY,
HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE
N81 - JUNCTION GEOMETRY

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1203	B	1:250 A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3
25 mm
0

Path: \\corp.pbwan.net\Global\ZA\Central_Data\Projects\41100\xx\41107437 - WSP IRE-SHILLELAGH QUARRY-CAD\41 MI\02-Tech Info\01-Current\07-Incoming\FROM DAMIAN\Visibility Splays and Picadly Dimension Drawings\ | File Name: IE.0030.074788 - 1200 - 1203 - Visibility Geometry.dwg

OSI Licence No.:
AR 0056019

HEDGE TOP: 256.71

HEDGE TOP: 253.83

Large Tipper

LEGEND:

Haulage Vehicle

VEHICLE PROFILE

Large Tipper	
Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

0 5 10 15m

1:250

CLIENT

SHILLELAGH QUARRIES LTD

CONSULTANT

wsp

YYYY-MM-DD	2024-Dec-10
PREPARED	DOR
DESIGN	DOR
REVIEW	KH
APPROVED	RL

PROJECT

PLANNING APPLICATION, SHILLELAGH QUARRY, HEMPSTOWN COMMONS, BLESSINGTON, Co. KILDARE

TITLE

SITE ACCESS HGV OUT

PROJECT No.	DRAWING No.	Rev.	SCALE
IE0037007.4788	1204	B	1:250 A3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3

25 mm

0

Path: \\corp.pbwan.net\Global\ZA\Central_Data\Projects\41100\xx\41102437 - WSP IRE-SHILLELAGH QUARRY-CAD\41 MW\02-Tech Info\01-Current\07-Incoming\FROM DAMIAN\Visibility Splays and Picady Dimension Drawings\ | File Name: IE-0030074788 - 1204 - 1205 - Swept Path Analysis - L6030 Site Out, N81 Southbound Out.dwg