

TECHNICAL NOTE

Project Name : Land West of B2132 Bilsham Road

Job No. : 14-111

Note Title : Response to WSCC Highways Comments

Author : TDM

Approved : RJH

Date : February 2018

1.0 INTRODUCTION

1.1 Odyssey have prepared this Technical Note (TN) on behalf of Gleeson Strategic Land in respect comments received from West Sussex County Council (WSCC) highways in relation to a planning application (Arun District Council (ADC) ref Y/91/17/OUT) for a proposed residential development of up to 250 dwellings.

1.2 This note is in response to consultee comments provided by West Sussex County Council (WSCC) and addresses two standing objections, these being:

“Insufficient information has been provided to enable an assessment of the ability of the highway network to accommodate the development without adding to the hazards of highway users to an unacceptable degree”; and

“The proposal would not achieve safe and convenient access by a choice of means of travel nor encourage and enable and increase in environmentally sustainable means of travel such as walking, cycling and public transport and thereby minimise the impact of car journeys.”

1.3 This TN also provides additional information to help WSCC make a fully informed decision about the impact of the proposed development. The full WSCC comments are included in **Appendix A**.

1.4 The remainder of this report is set out as follows;

- **Section 2:** Additional information requested by WSCC;
- **Section 3:** Committed Development and Sensitivity Testing;



- **Section 4:** Sustainability and Yapton to Barnham Cycle Link; and
- **Section 5:** Summary and Conclusion.

2.0 ADDITIONAL INFORMATION REQUESTED BY WSCC

Trip Rates

- 2.1 As set out in the TA, trip rates taken from TRICS were submitted as part of the planning application. WSCC have commented that:

“The Transport assessment states that only sites greater than 100 dwellings were selected however Appendix G - appears to show that a number of sites under 100 dwellings have been included within the TRICS calculation.”

- 2.2 A review of the TRICS data report shows that sites including 100-1000 dwellings was selected by the user, however for reasons unknown the TRICS data set included a range of 6-805 dwellings.
- 2.3 Regardless of this, when sites under 100 dwellings are removed from the data set, the trip rates are lower than those used in the traffic assessment (See **Appendix B**). **Table 2.1** summarises.

Table 2.1 – Trip Rates

Time-Period	Arrival	Departure	Two-Way
	Trip Rates Used in TA		
AM 08:00 – 09:00	0.141	0.368	0.509
PM 17:00 – 18:00	0.313	0.165	0.478
	Trip Rates with Sites under 100 Dwellings Removed		
AM 08:00 – 09:00	0.125	0.363	0.488
PM 17:00 – 18:00	0.298	0.170	0.468

- 2.4 **Table 2.2** summarises the difference in traffic generation because of the discrepancy in the TRICS data.

**Table 2.2 – Traffic Generation for 250 Dwellings**

Time-Period	Arrival	Departure	Two-Way
	Trip Rates Used in TA		
AM 08:00 – 09:00	35	92	127
PM 17:00 – 18:00	78	41	120
	Trip Rates with Sites over 100 Dwellings		
AM 08:00 – 09:00	31	91	122
PM 17:00 – 18:00	75	41	117
	Net Difference		
AM 08:00 – 09:00	-4	-1	-5
PM 17:00 – 18:00	-3	0	-3

- 2.5 As can be seen there is very little difference in the traffic generation calculated using the two sets of trip rates. Given that the higher trip rates have been used in the TA, it is considered that the traffic generation presented remains valid and WSCC are able to complete their appraisal of the results.

Trip Distribution and Assignment

- 2.6 WSCC have also requested additional information relating to the distribution and assignment of development traffic on the local highway network.

“Within the pre-application discussions it was requested that information would be required to confirm the assumption utilised in the production of the gravity model and the subsequent distribution. This has not been provided.”

- 2.7 As stated in the TA “Development traffic has been distributed and assigned to the local highway network using a gravity model approach, ‘based’ upon the observed turning proportions. In addition, peak hour journey times to key destinations have also been considered to reflect routes car drivers will take.”



- 2.8 Traffic Flow diagrams were included in the TA detailing:
- 2017 Observed Base AM and PM
 - 2022 Base + Committed AM and PM
 - 2022 Base + Development 250 / 300 Units AM and PM
 - 2031 Base AM and PM
 - 2031 Base + Development 250 / 300
- 2.9 The distribution method adopted was to take the observed turning movements in the 2017 Base and make logic adjustments based upon the gravity of destinations in the surrounding area i.e. to key destinations such as Littlehampton, Arundel, Bognor Regis and Chichester.
- 2.10 The routings and observed pattern of movements were validated by checking route planning facilities such as Google Maps and Waze, for the fastest routes during the peak hours.
- 2.11 For clarity additional traffic flow diagrams have been included in **Appendix C** of this TN. These show the percentage and number of development traffic vehicles assigned and distributed to the local highway network.

Impact upon the Strategic Highway Network

- 2.12 A separate response to Highways England (HE) was prepared and submitted addressing the impact of the development upon the A27 / Yapton Lane junction. As requested by HE additional committed and potentially committed developments in the local area were also considered as part of the assessment.
- 2.13 It was concluded that the development proposals will not result in a 'severe' impact upon the strategic highway network. No mitigation measures were considered necessary, especially given HE have already secured funds from other developments to improve the junction.



3.0 SENSITIVITY TESTING

3.1 Sensitivity testing of the local highway network has been undertaken to include additional proposed development sites in and around Yapton which were not committed at the time of the original Transport Assessment (TA) scoping. These include:

- Y/80/16/OUT – Land South of Ford Lane and East of North End Road, Yapton – 100 dwellings;
- WA/44/17/OUT – Land East of Tye Lane, Walberton – 175 dwellings;
- Y/5/17/OUT Cinders Nursery & Land R/O Cinders Lane, Yapton – 51 dwellings;
- Y/44/17/OUT – Land at Stakers Farm, North End Road, Yapton – 70 dwellings; and
- Y/49/17/OUT – Land at Street Buildings, North End Road, Yapton – 45 dwellings.

3.2 This gives an additional 441 dwellings being proposed in the local area. It should be noted that at the time of writing only the Y/80/16/OUT – 100 dwellings application has been granted planning consent.

Committed Development Traffic Flows

3.3 Traffic flow information has been taken from the respective application TA's submitted to the ADC planning portal.

3.4 Aside from the Cinders Nursery application which is located east of the B2132 Bilsham Road, the remaining application sites are north of Yapton, accessed off the B2132 North End Road or Ford Lane.

3.5 None of the TA's submitted to the planning portal have considered impact upon the local highway network in Yapton.

3.6 To that end the “committed development” traffic has been assigned and distributed using the same methodology as previously submitted in the TA for the Gleeson application. Traffic flow diagrams contained in **Appendix D** illustrate the committed development flows.



Sensitivity Assessment

- 3.7 To ensure a robust assessment the following scenarios have been assessed:
- 2031 AM Peak “All Committed” + Development 550 Units
 - 2031 PM Peak “All Committed” + Development 550 Units
- 3.8 These scenarios ensure that the assessment takes account of all “committed development” traffic in and around Yapton up to the end of the local plan in 2031.
- 3.9 The traffic flows used already include other committed development sites in Yapton as previously scoped for the TA submitted in the planning applications for Landlink and Gleeson, these being:
- Brookworth Homes (App No: F/15/PL) - 45 dwellings;
 - Land South of Fellows Gardens (App No: Y/30/13) - 34 dwellings;
 - Land North of Burndell Road (App No: APP/C3810/A/11/2155343) - 173 dwellings; and
 - Land at North End Road (App No: Y/93/14) – 38 dwellings.
- 3.10 This means that the sensitivity tests take account of traffic associated with 731 “committed” dwellings.
- 3.11 It should also be noted that the 2031 Base + Development 550 Unit flows used in the TA previously submitted included background growth taken from the TEMPRO database between 2022 and 2031.
- 3.12 While this could be construed as resulting in some double counting for the “committed development” totals, it does ensure that the assessment is highly robust and therefore has been retained within the “committed” traffic flows. The assessment therefore effectively assumes a total of 981 committed dwellings in and around Yapton.

Capacity results

- 3.13 The following **Tables 3.1 – 3.8** summarise the capacity assessments for the sensitivity test. For ease of comparison the results of the future 2031 Base + 550 Dwellings submitted in the TA have also been provided. **Appendix E** contains the full ARCADY and PICADY outputs.

**Table 3.1: B2233 Burndell Road / B2132 Bilsham Road Mini-Roundabout**

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	2031 Base + Development 550 Dwellings							
B2233 Burndell Road	3	0.27	0.76	C	1	0.16	0.55	A
B2132 Bilsham Road	6	0.41	0.86	C	0	0.07	0.28	A
B2233 Main Road	1	0.14	0.51	A	6	0.43	0.87	D
	2031 Sensitivity Test							
B2233 Burndell Road	4	0.32	0.79	C	2	0.19	0.62	B
B2132 Bilsham Road	14	0.88	0.96	F	1	0.08	0.35	A
B2233 Main Road	1	0.17	0.57	A	11	0.71	0.93	E

- 3.14 As was originally reported in the TAs, the Burndell Road / Bilsham Road mini-roundabout operates within capacity during both the AM and PM peaks in the final development scenario 2031 Base + Development 550 dwellings scenario built on the Landlink and Gleeson sites.
- 3.15 The sensitivity scenario indicates that the addition of 431 dwellings could result in the junction operating very close to maximum capacity with queues starting to form during the peak of the peak hours. As this is an absolute worst-case scenario, no mitigation measures are considered necessary in association with the development on the Landlink and Gleeson sites.
- 3.16 As set out in **Tables 3.2 to 3.6** the remaining junctions within Yapton assessed in the TA will continue to operate within capacity, even with the additional committed development traffic added.


Table 3.2: B2233 Main Road / Canal Road Mini-Roundabout

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	2031 Base + Development 550 Dwellings							
B2233 Main Road WB	3	0.00	0.75	A	1	0.00	0.38	A
Canal Road	2	0.01	0.68	A	0	0.00	0.15	A
B2233 Main Road EB	0	0.00	0.32	A	2	0.00	0.64	A
	2031 Sensitivity Test							
B2233 Main Road WB	4	0.00	0.81	A	1	0.00	0.44	A
Canal Road	6	0.04	0.56	A	0	0.00	0.16	A
B2233 Main Road EB	1	0.00	0.36	A	2	0.00	0.69	A

Table 3.3: B2233 Main Road / B2132 North End Road Mini-Roundabout

	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	2031 Base + Development 550 Dwellings							
B2233 Yapton Road	0	0.00	0.28	A	1	0.00	0.37	A
B2132 North End Road	0	0.00	0.22	A	5	0.01	0.83	A
B2233 Main Road	4	0.00	0.82	A	1	0.00	0.34	A
	2031 Sensitivity Test							
B2233 Yapton Road	2	0.00	0.60	A	3	0.00	0.73	A
B2132 North End Road	0	0.00	0.23	A	9	0.02	0.90	A
B2233 Main Road	7	0.00	0.88	A	1	0.00	0.41	A

**Table 3.4: B2132 Bilsham Road / Loveys Road**

	AM			PM		
	Queue (PCU)	Delay (min)	RFC	Queue (PCU)	Delay (min)	RFC
	2031 Base + Dev 550 Dwellings					
Loveys Road	0	0.18	0.071	0	0.13	0.044
B2132 Bilsham Road	0	0.14	0.033	0	0.11	0.043
	2031 Sensitivity Test					
Loveys Road	0	0.20	0.79	0	0.14	0.47
B2132 Bilsham Road	0	0.15	0.36	0	0.11	0.44

Table 3.5: B2132 Bilsham Road / Mill View / West View Drive

	AM			PM		
	Queue (PCU)	Delay (min)	RFC	Queue (PCU)	Delay (min)	RFC
	2031 Base + Dev 550 Dwellings					
B2132 Bilsham Road NB	0	0.18	0.147	0	0.13	0.028
Mill View	0	0.21	0.131	0	0.18	0.061
B2132 Bilsham Road SB	0	0.13	0.016	0	0.11	0.071
West View Drive	0	0.09	0.003	0	0.10	0.021
	2031 Sensitivity Test					
B2132 Bilsham Road NB	0	0.19	0.154	0	0.14	0.027
Mill View	0	0.22	0.139	0	0.19	0.064
B2132 Bilsham Road SB	0	0.13	0.017	0	0.11	0.073
West View Drive	0	0.10	0.004	0	0.10	0.022

Table 3.6: B2132 Bilsham Road / Graham Road

	AM			PM		
	Queue (PCU)	Delay (min)	RFC	Queue (PCU)	Delay (min)	RFC
	2031 Base + Dev 550 Dwellings					
Loveys Road	0	0.19	0.030	0	0.14	0.005
B2132 Bilsham Road	0	0.13	0.009	0	0.00	0.000
	2031 Sensitivity Test					
Loveys Road	0	0.20	0.032	0	0.14	0.005
B2132 Bilsham Road	0	0.13	0.010	0	0.00	0.000



3.17 **Tables 3.7 and 3.8** show the sensitivity test results for the proposed junction improvements at the Comet Corner and Oystercatcher junctions on the A259.

Table 3.7: Comet Corner Improvement Scheme

Arm	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	2031 Base + 550 Dwellings No Thru Link							
A259 East	0	0.0		A	0	0.0		A
B2132 Yapton Road N	1	0.2		B	0	0.2		B
A259 West	0	0.0		A	0	0.0		A
B2132 Yapton Road S	0	0.3		C	1	0.5		D
2031 Sensitivity Test								
A259 East	0	0.0		A	0	0.0		A
B2132 Yapton Road N	2	0.6		D	4	0.9		F
A259 West	0	0.0		A	0	0.0		A
B2132 Yapton Road S	1	0.7		E	1	0.6		E

Table 3.8: Oystercatcher Improvement Scheme

Arm	AM				PM			
	Queue (Veh)	Delay (min)	RFC	LOS	Queue (Veh)	Delay (min)	RFC	LOS
	2031 Base + 550 Dwellings No Thru Link							
A259 East	1	0.1		A	2	0.1		A
Climping Street	0	0.2		B	1	0.6		E
A259 West	1	0.1		A	2	0.1		A
B2233 Yapton Road	1	0.2		B	3	0.4		C
2031 Sensitivity Test								
A259 East	1	0.1		A	3	0.1		A
Climping Street	0	0.2		B	1	0.8		E
A259 West	0	0		A	2	0.1		A
B2233 Yapton Road	1	0.2		B	3	0.4		C

3.18 As can be seen the proposed junction improvements enable the additional developments to be catered for due to the step-change in capacity that they will deliver.



- 3.19 It is therefore considered that no additional improvements are required as part of the proposed development.

4.0 SUSTAINABILITY

- 4.1 One of the objections raised by WSCC stated that:

“The proposal would not achieve safe and convenient access by a choice of means of travel nor encourage and enable and increase in environmentally sustainable means of travel such as walking, cycling and public transport and thereby minimise the impact of car journeys.”

- 4.2 The ADC Local Plan describes development in Yapton as follows:

“The significant benefits arise against the social objectives, as a result of the improved housing supply, creating a mixed and more inclusive community. Through the reduced distance to where employment is, it would be expected there will be a positive impact and so this has been appraised as having a neutral or no effect with the potential to positively affect the economic objectives. However, it would not be expected that there would be a significant change to any of the environmental criteria and so this has been assessed as neutral.”

- 4.3 **Appendix F** also contains extracts from the emerging Local Plan detailing the spatial options appraisal of development in Yapton, further illustrating the site’s sustainability.

- 4.4 Given that the proposed development site is allocated within the emerging Local Plan as being suitable for residential development and that WSCC agreed in-principle that the site was sustainable at the pre-app stage this objection is considered contrary and unfounded.



Review of Existing Walking and Cycle Links

- 4.5 Figure 2 of the submitted TA illustrated the accessibility of the development site (**Appendix G**). As previously identified there are several points of access for pedestrians and cyclists.
- 4.6 The proposed access into the site will be from the B2132 Bilsham Road and provides direct connections with the existing footways. A new uncontrolled crossing is also proposed on the southern side of Graham Road.
- 4.7 The B2132 Bilsham Road features a 1.5 – 2m footway along both sides of the carriageway for most of its length from the extents of Yapton into the village centre.
- 4.8 The estate roads of the existing residential development to the north of the development site feature an extensive footway network leading to main roads and subsequently into the centre of Yapton. A secondary pedestrian, cycle and emergency access is also proposed from Gladstone Road.
- 4.9 The condition of these existing links is average to good, with the surfacing being in a reasonable state of repair and street lighting provided in most instances.
- 4.10 As was also made clear in the TA, the proposed layout will be designed according to Manual for Streets (MfS) allowing for a high-level of permeability, as well as an appropriate level of connectivity with the existing pedestrian and cycle network.
- 4.11 The Public Right of Way (PRoW) leading from Tack Lee Road to the B2233 Main Road to which the development will provide connection is currently a narrow track with wide verge along both sides. Where this PRoW crosses the site, improvements will be provided to encourage walking and cycling.
- 4.12 Given that there are several equally convenient lit routes leading into the village centre, where the route continues north of the site to the B2233 Main Road no off-site improvements are considered necessary.



Cycle Link Between Yapton and Barnham

- 4.13 As part of the pre-app discussions WSCC asked for thoughtful consideration to be given towards the provision of a cycle link between Yapton and Barnham railway station. WSCC's only direction on the matter stems from the current adopted Walking and Cycling Strategy policy document, under which the route is listed as item 82 (see extracts in **Appendix H**).
- 4.14 It is noted that WSCC have calculated contributions of up to £110,000 (refer **Appendix I**) as part of a Section 106 (S106) agreement for the development on Land at Stakers Farm (70 dwellings) to be used for the provision of a new cycle link between Yapton and Barnham. £25,000 was also secured as part of S106 agreements for the development on Land North of Burndell Road (also see **Appendix I**).
- 4.15 Given that funds are already being gathered for a cycle link scheme, it is considered appropriate for Gleeson to also provide contributions on a similar basis. The provision of contributions by way of a S106 agreement can therefore be conditioned as part of any planning permission granted.
- 4.16 The final sum will be subject to further discussions between the LPA and the applicant and will take into account other contributions that may be secured from the many other sites in Yapton currently being considered by the LPA.

5.0 SUMMARY AND CONCLUSION

- 5.1 This Technical Note has been prepared to provide additional information to WSCC to enable the highway authority to make an informed decision regarding the proposed development of 250 dwellings on Land West of the B2132 Bilsham Road, Yapton.
- 5.2 In addition, this report has also provided sensitivity assessments of the local highway network within Yapton to accommodate the proposed developments together with the cumulative impact of several other committed and potentially committed development sites. The sensitivity test has therefore taken account of 981 additional dwellings in and around Yapton.
- 5.3 As demonstrated, the sensitivity assessments reveal that most local junctions will continue to operate with plenty of spare capacity.



TECHNICAL NOTE

- 5.4 The B2233 Burndell Road / B2132 Bilsham Road mini-roundabout has been identified as operating very close to maximum capacity at the peak of the peak hour in the 2031 Sensitivity tests. This is not however considered to warrant mitigation works.
- 5.5 Furthermore, the applicant, Gleeson, have proposed significant improvements to the Oystercatcher and Comet Corner junctions on the A259 as part of mitigation works. As such these other “committed sites” will benefit significantly from capacity and safety improvements that these works will bring.
- 5.6 In addition, this report has provided additional information with respects a potential cycle link between Yapton and Barnham railway station. As the local highway authority has already started collecting S106 contributions from other development sites it is considered that the most appropriate solution would be for contributions to be discussed and agreed between the applicant and the LPA.
- 5.7 It is therefore the conclusion of the report that the development proposals are suitable and in keeping with local planning policy.

APPENDIX A

WSCC Comments

**WEST SUSSEX COUNTY COUNCIL
PLANNING SERVICES CONSULTATION**

DATE: 12th January 2018

**FROM: Stephen Gee TO: Arun District Council
FAO: David Easton**

SUBJECT: Y/91/17/OUT - Outline application for the development of up to 250 residential dwellings (Class C3), vehicular access, public open space, ancillary works and associated infrastructure. Departure from the Development Plan.

Land at, Bilsham Road, Yapton

DATE OF SITE VISIT: 1st September 2017.

RECOMMENDATION:

Advice	☐	Modification	☐	More Information	☒
Objection	☒	No Objection	☐	Refusal	☐

S106 contribution total (see below for breakdown): £

The application is for 250 homes at land east of Land at, Bilsham Road, Yapton. The site is located to the south west of Yapton.

A joint transport assessment has been provided for 300 homes at Land East of Drove Lane (Y/92/17/OUT) and Land at Bilsham Road for 250 homes (Y/91/17/OUT). The site is allocated for at least 400 dwellings within the emerging Arun Local Plan under policy SD7.

Pre application discussions took place with the applicants Highways Consultant in August 2017, a copy of which is included within the application documents.

Access

The site will be accessed via a new priority junction on the B2132 Bilsham Road approximately 25m south of Graham Road and visibility splays of 2.4m x 59m provided . A Road Safety Audit has been undertaken and designer's response provided. A 3.7m shared footway/cycleway is also proposed from Gladstone Road which could also function as an emergency access.

The two developments will be linked a single spine road designed to manual for streets standards.

85% vehicle speeds at the site access have been recorded as 34.7mph northbound and 35.5mph southbound.

Sustainability

Walking and Cycling

The TA has highlighted that there are a number of facilities within walking and cycling distance of the site, however, no information has been provided on the suitability of the routes to the local facilities or any required improvements identified.

Within the pre application response for the site, it was indicated that a cycle link should be explored between Yapton and Barnham, The TA states that following an initial review of the existing highway and PRoW network shows there is limited scope to provide a shared foot/cycleway along the B2132 Yapton Road to Barnham. The review of information should be provided.

Refuse Vehicles.

The TA states that refuse vehicles will be able to serve the site and maximum carry distances will be 25m. Detailed swept path analysis will be provided at a detailed design stage.

Parking

Parking will be provided in line with standards and confirmed as a reserved matter.

Trip Generation

The Transport assessment states that sites only sites greater than 100 dwellings were selected however Appendix G - appears to show that a number of sites under 100 dwellings have been included within the TRICS calculation.

Further clarification should be provided on the trip rates utilised until such a time clarification is provided no further assessment of the modelling work can be undertaken.

Trip Distribution and Assignment

Within the pre application discussions it was requested that information would be required to confirm the assumption utilised in the production of the gravity model and the subsequent distribution. This has not been provided.

Also no figures highlighting the flows generated by the development have been provided within the application.

Committed Developments

The list of committed developments should be checked with the Local Planning authority.

A27 Impacts

It is noted that no assessment of the impacts on the A27 has been provided, at the pre application stage the applicant was advised to contact Highways England. I cannot see that this has been undertaken.

Travel Plan

Given the TPs are identical comments we have only provided on one site (south of Main Road) as these also apply equally to the other. You will find these as mark-up in the attached. In summary, the TPs need to more closely align with our Development Travel Plans Policy (attached). The proposed measures appear to be weak and lacking in detail. I have therefore also attached some 'model comments', which explain our requirements and detail local initiatives that should be promoted to residents. I would also like to see co-ordination between the two adjacent sites to ensure a consistent approach and outcomes. Indeed, if they are linked then it may be difficult for enumerators to attribute vehicle trips to either development. It may therefore be simpler for one Travel Plan Co-ordinator to be appointed to manage both sites, and for the TPC, the measures, and any remedial measures required to be jointly funded by the two developers on a pro rata basis.

Conclusion

An objection is raised to the proposals as:

- Insufficient information has been provided to enable an assessment of the ability of the highway network to accommodate the development without adding to the hazards of highway users to an unacceptable degree
- The proposal would not achieve safe and convenient access by a choice of means of travel nor encourage and enable and increase in environmentally sustainable means of travel such as walking, cycling and public transport and thereby minimise the impact of car journeys.

Additional Information

Additional Information should be provided:

1. Review of links to local facilities
2. Work undertaken to review walking and cycling improvements to Barnham Station.
3. Confirmation of trip generation and TRICS parameters.
4. Details of the gravity model used to distribute trips.
5. A traffic flow diagram showing the impacts of the development (and in combination with the adjoining site)
6. Review of committed developments with the LPA.
7. Revised modelling following agreement of 3,4,5 & 6.
8. Liaison with Highways England over the impacts upon the A27.
9. Amendments to the Travel Plan.

Stephen Gee
Planning Services

APPENDIX B

TRICS Outputs

Calculation Reference: AUDIT-138301-180115-0118

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	WS WEST SUSSEX	2 days
03	SOUTH WEST	
	DV DEVON	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	2 days
	NY NORTH YORKSHIRE	1 days
09	NORTH	
	DH DURHAM	1 days
11	SCOTLAND	
	FA FALKIRK	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 108 to 805 (units:)
 Range Selected by User: 100 to 1000 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 28/03/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	2 days
Tuesday	1 days
Wednesday	1 days
Thursday	3 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	9 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	4
Edge of Town	3
Neighbourhood Centre (PPS6 Local Centre)	1

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	7
No Sub Category	2

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3 9 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	1 days
10,001 to 15,000	3 days
20,001 to 25,000	2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	4 days
50,001 to 75,000	1 days
75,001 to 100,000	3 days
100,001 to 125,000	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0	3 days
1.1 to 1.5	6 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	2 days
No	7 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	9 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	DH-03-A-02	MIXED HOUSES	DURHAM
	LEAZES LANE		
	ST HELEN AUCKLAND		
	BISHOP AUCKLAND		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Number of dwellings:	125	
	Survey date: MONDAY	27/03/17	Survey Type: MANUAL
2	DV-03-A-02	HOUSES & BUNGALOWS	DEVON
	MILLHEAD ROAD		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	116	
	Survey date: FRIDAY	25/09/15	Survey Type: MANUAL
3	FA-03-A-02	MIXED HOUSES	FALKIRK
	ROSEBANK AVENUE & SPRINGFIELD DRIVE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	161	
	Survey date: WEDNESDAY	29/05/13	Survey Type: MANUAL
4	NE-03-A-02	SEMI DETACHED & DETACHED	NORTH EAST LINCOLNSHIRE
	HANOVER WALK		
	SCUNTHORPE		
	Edge of Town		
	No Sub Category		
	Total Number of dwellings:	432	
	Survey date: MONDAY	12/05/14	Survey Type: MANUAL
5	NE-03-A-03	PRIVATE HOUSES	NORTH EAST LINCOLNSHIRE
	STATION ROAD		
	SCUNTHORPE		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	180	
	Survey date: TUESDAY	20/05/14	Survey Type: MANUAL
6	NY-03-A-06	BUNGALOWS & SEMI DET.	NORTH YORKSHIRE
	HORSEFAIR		
	BOROUGHBRIDGE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	115	
	Survey date: FRIDAY	14/10/11	Survey Type: MANUAL
7	SH-03-A-04	TERRACED	SHROPSHIRE
	ST MICHAEL'S STREET		
	SHREWSBURY		
	Suburban Area (PPS6 Out of Centre)		
	No Sub Category		
	Total Number of dwellings:	108	
	Survey date: THURSDAY	11/06/09	Survey Type: MANUAL
8	WS-03-A-04	MIXED HOUSES	WEST SUSSEX
	HILLS FARM LANE		
	BROADBRIDGE HEATH		
	HORSHAM		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	151	
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	WS-03-A-06	MIXED HOUSES	WEST SUSSEX
	ELLIS ROAD		
	S BROADBRIDGE HEATH		
	WEST HORSHAM		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:		805
	Survey date: THURSDAY		02/03/17
	Survey Type: MANUAL		

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	9	244	0.063	9	244	0.263	9	244	0.326
08:00 - 09:00	9	244	0.125	9	244	0.363	9	244	0.488
09:00 - 10:00	9	244	0.146	9	244	0.151	9	244	0.297
10:00 - 11:00	9	244	0.123	9	244	0.152	9	244	0.275
11:00 - 12:00	9	244	0.128	9	244	0.144	9	244	0.272
12:00 - 13:00	9	244	0.147	9	244	0.144	9	244	0.291
13:00 - 14:00	9	244	0.145	9	244	0.148	9	244	0.293
14:00 - 15:00	9	244	0.136	9	244	0.172	9	244	0.308
15:00 - 16:00	9	244	0.245	9	244	0.171	9	244	0.416
16:00 - 17:00	9	244	0.245	9	244	0.154	9	244	0.399
17:00 - 18:00	9	244	0.298	9	244	0.170	9	244	0.468
18:00 - 19:00	9	244	0.259	9	244	0.168	9	244	0.427
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.060			2.200			4.260

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Calculation Reference: AUDIT-138301-170907-0902

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : A - HOUSES PRIVATELY OWNED
VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	ES EAST SUSSEX	1 days
	HC HAMPSHIRE	1 days
	SC SURREY	1 days
	WS WEST SUSSEX	3 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	3 days
	SM SOMERSET	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	3 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	4 days
	ST STAFFORDSHIRE	1 days
	WK WARWICKSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NE NORTH EAST LINCOLNSHIRE	2 days
	NY NORTH YORKSHIRE	7 days
	SY SOUTH YORKSHIRE	1 days
	WY WEST YORKSHIRE	1 days
08	NORTH WEST	
	CH CHESHIRE	2 days
	GM GREATER MANCHESTER	1 days
	LC LANCASHIRE	1 days
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	1 days
	DH DURHAM	2 days
	TW TYNE & WEAR	2 days
10	WALES	
	PS POWYS	2 days
11	SCOTLAND	
	AG ANGUS	1 days
	FA FALKIRK	2 days
	HI HIGHLAND	2 days
	PK PERTH & KINROSS	1 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 6 to 805 (units:)
 Range Selected by User: 100 to 1000 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/09 to 28/03/17

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday	12 days
Tuesday	12 days
Wednesday	11 days
Thursday	10 days
Friday	10 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	55 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Edge of Town Centre	6
Suburban Area (PPS6 Out of Centre)	26
Edge of Town	20
Neighbourhood Centre (PPS6 Local Centre)	3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	47
Village	1
No Sub Category	7

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C1	1 days
C3	53 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Secondary Filtering selection (Cont.):

Population within 1 mile:

1,001 to 5,000	8 days
5,001 to 10,000	15 days
10,001 to 15,000	12 days
15,001 to 20,000	7 days
20,001 to 25,000	5 days
25,001 to 50,000	8 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

5,001 to 25,000	10 days
25,001 to 50,000	7 days
50,001 to 75,000	5 days
75,001 to 100,000	14 days
100,001 to 125,000	3 days
125,001 to 250,000	8 days
250,001 to 500,000	7 days
500,001 or More	1 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	19 days
1.1 to 1.5	35 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

Yes	5 days
No	50 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present	55 days
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This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	AG-03-A-01	BUNGALOWS/DET.		ANGUS
	KEPTIE ROAD			
	ARBROATH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	7		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
2	CA-03-A-04	DETACHED		CAMBRIDGESHIRE
	THORPE PARK ROAD			
	PETERBOROUGH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	9		
	Survey date: TUESDAY	18/10/11		Survey Type: MANUAL
3	CB-03-A-04	SEMI DETACHED		CUMBRIA
	MOORCLOSE ROAD			
	SALTERBACK			
	WORKINGTON			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	82		
	Survey date: FRIDAY	24/04/09		Survey Type: MANUAL
4	CH-03-A-08	DETACHED		CHESHIRE
	WHITCHURCH ROAD			
	BOUGHTON HEATH			
	CHESTER			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	11		
	Survey date: TUESDAY	22/05/12		Survey Type: MANUAL
5	CH-03-A-09	TERRACED HOUSES		CHESHIRE
	GREYSTOKE ROAD			
	HURDSFIELD			
	MACCLESFIELD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	24		
	Survey date: MONDAY	24/11/14		Survey Type: MANUAL
6	DC-03-A-08	BUNGALOWS		DORSET
	HURSTDENE ROAD			
	CASTLE LANE WEST			
	BOURNEMOUTH			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	28		
	Survey date: MONDAY	24/03/14		Survey Type: MANUAL
7	DH-03-A-01	SEMI DETACHED		DURHAM
	GREENFIELDS ROAD			
	BISHOP AUCKLAND			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	50		
	Survey date: TUESDAY	28/03/17		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	DH-03-A-02	MIXED HOUSES	DURHAM
	LEAZES LANE		
	ST HELEN AUCKLAND		
	BISHOP AUCKLAND		
	Neighbourhood Centre (PPS6 Local Centre)		
	Residential Zone		
	Total Number of dwellings:	125	
	Survey date: MONDAY	27/03/17	Survey Type: MANUAL
9	DV-03-A-01	TERRACED HOUSES	DEVON
	BRONSHILL ROAD		
	TORQUAY		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: WEDNESDAY	30/09/15	Survey Type: MANUAL
10	DV-03-A-02	HOUSES & BUNGALOWS	DEVON
	MILLHEAD ROAD		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	116	
	Survey date: FRIDAY	25/09/15	Survey Type: MANUAL
11	DV-03-A-03	TERRACED & SEMI DETACHED	DEVON
	LOWER BRAND LANE		
	HONITON		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	70	
	Survey date: MONDAY	28/09/15	Survey Type: MANUAL
12	ES-03-A-02	PRIVATE HOUSING	EAST SUSSEX
	SOUTH COAST ROAD		
	PEACEHAVEN		
	Edge of Town		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: FRIDAY	18/11/11	Survey Type: MANUAL
13	FA-03-A-01	SEMI-DETACHED/TERRACED	FALKIRK
	MANDELA AVENUE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	37	
	Survey date: THURSDAY	30/05/13	Survey Type: MANUAL
14	FA-03-A-02	MIXED HOUSES	FALKIRK
	ROSEBANK AVENUE & SPRINGFIELD DRIVE		
	FALKIRK		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	161	
	Survey date: WEDNESDAY	29/05/13	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	GM-03-A-10 BUTT HILL DRIVE PRESTWICH MANCHESTER Edge of Town Residential Zone Total Number of dwellings: 29 Survey date: WEDNESDAY 12/10/11	DETACHED / SEMI GREATER MANCHESTER
16	HC-03-A-18 CANADA WAY LIPHOOK Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 62 Survey date: TUESDAY 29/11/16	HOUSES & FLATS HAMPSHIRE Survey Type: MANUAL
17	HI-03-A-13 KINGSMILLS ROAD INVERNESS Edge of Town Residential Zone Total Number of dwellings: 9 Survey date: THURSDAY 21/05/09	HOUSING HIGHLAND Survey Type: MANUAL
18	HI-03-A-14 KING BRUDE ROAD SCORGUIE INVERNESS Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 40 Survey date: WEDNESDAY 23/03/16	SEMI-DETACHED & TERRACED HIGHLAND Survey Type: MANUAL
19	LC-03-A-30 WATSON ROAD BLACKPOOL Edge of Town Centre Residential Zone Total Number of dwellings: 24 Survey date: FRIDAY 14/06/13	SEMI-DETACHED LANCASHIRE Survey Type: MANUAL
20	LN-03-A-03 ROOKERY LANE BOULTHAM LINCOLN Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 22 Survey date: TUESDAY 18/09/12	SEMI DETACHED LINCOLNSHIRE Survey Type: MANUAL
21	LN-03-A-04 EGERTON ROAD LINCOLN Edge of Town Centre Residential Zone Total Number of dwellings: 30 Survey date: MONDAY 29/06/15	DETACHED & SEMI-DETACHED LINCOLNSHIRE Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

22	MS-03-A-03 BEMPTON ROAD OTTERSPOOL LIVERPOOL Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 15 Survey date: FRIDAY 21/06/13	DETACHED	MERSEYSIDE	Survey Type: MANUAL
23	NE-03-A-02 HANOVER WALK SCUNTHORPE Edge of Town No Sub Category Total Number of dwellings: 432 Survey date: MONDAY 12/05/14	SEMI DETACHED & DETACHED	NORTH EAST LINCOLNSHIRE	Survey Type: MANUAL
24	NE-03-A-03 STATION ROAD SCUNTHORPE Edge of Town Centre Residential Zone Total Number of dwellings: 180 Survey date: TUESDAY 20/05/14	PRIVATE HOUSES	NORTH EAST LINCOLNSHIRE	Survey Type: MANUAL
25	NF-03-A-01 YARMOUTH ROAD CAISTER-ON-SEA Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 27 Survey date: TUESDAY 16/10/12	SEMI DET. & BUNGALOWS	NORFOLK	Survey Type: MANUAL
26	NF-03-A-02 DEREHAM ROAD NORWICH Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 98 Survey date: MONDAY 22/10/12	HOUSES & FLATS	NORFOLK	Survey Type: MANUAL
27	NF-03-A-03 HALING WAY THETFORD Edge of Town Residential Zone Total Number of dwellings: 10 Survey date: WEDNESDAY 16/09/15	DETACHED HOUSES	NORFOLK	Survey Type: MANUAL
28	NY-03-A-06 HORSEFAIR BOROUGHBRIDGE Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 115 Survey date: FRIDAY 14/10/11	BUNGALOWS & SEMI DET.	NORTH YORKSHIRE	Survey Type: MANUAL
29	NY-03-A-07 CRAVEN WAY BOROUGHBRIDGE Edge of Town No Sub Category Total Number of dwellings: 23 Survey date: TUESDAY 18/10/11	DETACHED & SEMI DET.	NORTH YORKSHIRE	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

30	NY-03-A-08	TERRACED HOUSES		NORTH YORKSHIRE
	NICHOLAS STREET			
	YORK			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	21		
	Survey date: MONDAY	16/09/13		Survey Type: MANUAL
31	NY-03-A-09	MIXED HOUSING		NORTH YORKSHIRE
	GRAMMAR SCHOOL LANE			
	NORTHALLERTON			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	52		
	Survey date: MONDAY	16/09/13		Survey Type: MANUAL
32	NY-03-A-10	HOUSES AND FLATS		NORTH YORKSHIRE
	BOROUGHBRIDGE ROAD			
	RIPON			
	Edge of Town			
	No Sub Category			
	Total Number of dwellings:	71		
	Survey date: TUESDAY	17/09/13		Survey Type: MANUAL
33	NY-03-A-11	PRIVATE HOUSING		NORTH YORKSHIRE
	HORSEFAIR			
	BOROUGHBRIDGE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	23		
	Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL
34	NY-03-A-12	TOWN HOUSES		NORTH YORKSHIRE
	RACECOURSE LANE			
	NORTHALLERTON			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	47		
	Survey date: TUESDAY	27/09/16		Survey Type: MANUAL
35	PK-03-A-01	DETAC. & BUNGALOWS		PERTH & KINROSS
	TULLYLUMB TERRACE			
	GORNHILL			
	PERTH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	36		
	Survey date: WEDNESDAY	11/05/11		Survey Type: MANUAL
36	PS-03-A-01	MIXED HOUSES		POWYS
	BRYN GLAS			
	WELSHPOOL			
	Edge of Town Centre			
	Residential Zone			
	Total Number of dwellings:	16		
	Survey date: MONDAY	11/05/15		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

37	PS-03-A-02 GUNROG ROAD	DETACHED / SEMI-DETACHED	POWYS
	WELSHPOOL Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 28 Survey date: MONDAY 11/05/15		Survey Type: MANUAL
38	SC-03-A-04 HIGH ROAD	DETACHED & TERRACED	SURREY
	BYFLEET Edge of Town Residential Zone Total Number of dwellings: 71 Survey date: THURSDAY 23/01/14		Survey Type: MANUAL
39	SF-03-A-04 NORMANSTON DRIVE	DETACHED & BUNGALOWS	SUFFOLK
	LOWESTOFT Suburban Area (PPS6 Out of Centre) Residential Zone Total Number of dwellings: 7 Survey date: TUESDAY 23/10/12		Survey Type: MANUAL
40	SF-03-A-05 VALE LANE	DETACHED HOUSES	SUFFOLK
	BURY ST EDMUNDS Edge of Town Residential Zone Total Number of dwellings: 18 Survey date: WEDNESDAY 09/09/15		Survey Type: MANUAL
41	SH-03-A-03 SOMERBY DRIVE BICTON HEATH SHREWSBURY Edge of Town No Sub Category Total Number of dwellings: 10 Survey date: FRIDAY 26/06/09	DETACHED	SHROPSHIRE
42	SH-03-A-04 ST MICHAEL'S STREET	TERRACED	SHROPSHIRE
	SHREWSBURY Suburban Area (PPS6 Out of Centre) No Sub Category Total Number of dwellings: 108 Survey date: THURSDAY 11/06/09		Survey Type: MANUAL
43	SH-03-A-05 SANDCROFT SUTTON HILL TELFORD Edge of Town Residential Zone Total Number of dwellings: 54 Survey date: THURSDAY 24/10/13	SEMI-DETACHED / TERRACED	SHROPSHIRE
			Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

44	SH-03-A-06 ELLESMERE ROAD	BUNGALOWS		SHROPSHIRE
	SHREWSBURY Edge of Town Residential Zone			
	Total Number of dwellings:	16		
	Survey date: THURSDAY	22/05/14		Survey Type: MANUAL
45	SM-03-A-01 WEMBDON ROAD	DETACHED & SEMI		SOMERSET
	NORTHFIELD BRIDGWATER Edge of Town Residential Zone			
	Total Number of dwellings:	33		
	Survey date: THURSDAY	24/09/15		Survey Type: MANUAL
46	ST-03-A-06 STANFORD ROAD	SEMI-DET. & TERRACED		STAFFORDSHIRE
	BLAKENHALL WOLVERHAMPTON Edge of Town Centre No Sub Category			
	Total Number of dwellings:	17		
	Survey date: FRIDAY	09/05/14		Survey Type: MANUAL
47	SY-03-A-01 A19 BENTLEY ROAD	SEMI DETACHED HOUSES		SOUTH YORKSHIRE
	BENTLEY RISE DONCASTER Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:	54		
	Survey date: WEDNESDAY	18/09/13		Survey Type: MANUAL
48	TW-03-A-02 WEST PARK ROAD	SEMI-DETACHED		TYNE & WEAR
	GATESHEAD Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:	16		
	Survey date: MONDAY	07/10/13		Survey Type: MANUAL
49	TW-03-A-03 STATION ROAD	MIXED HOUSES		TYNE & WEAR
	BACKWORTH NEAR NEWCASTLE Neighbourhood Centre (PPS6 Local Centre) Village			
	Total Number of dwellings:	33		
	Survey date: FRIDAY	13/11/15		Survey Type: MANUAL
50	WK-03-A-01 ARLINGTON AVENUE	TERRACED / SEMI / DET.		WARWICKSHIRE
	LEAMINGTON SPA Suburban Area (PPS6 Out of Centre) Residential Zone			
	Total Number of dwellings:	6		
	Survey date: FRIDAY	21/10/11		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

51	WK-03-A-02	BUNGALOWS		WARWICKSHIRE
	NARBERTH WAY			
	POTTERS GREEN			
	COVENTRY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	17		
	Survey date: THURSDAY	17/10/13		Survey Type: MANUAL
52	WS-03-A-04	MIXED HOUSES		WEST SUSSEX
	HILLS FARM LANE			
	BROADBRIDGE HEATH			
	HORSHAM			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	151		
	Survey date: THURSDAY	11/12/14		Survey Type: MANUAL
53	WS-03-A-05	TERRACED & FLATS		WEST SUSSEX
	UPPER SHOREHAM ROAD			
	SHOREHAM BY SEA			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:	48		
	Survey date: WEDNESDAY	18/04/12		Survey Type: MANUAL
54	WS-03-A-06	MIXED HOUSES		WEST SUSSEX
	ELLIS ROAD			
	S BROADBRIDGE HEATH			
	WEST HORSHAM			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:	805		
	Survey date: THURSDAY	02/03/17		Survey Type: MANUAL
55	WY-03-A-01	MIXED HOUSING		WEST YORKSHIRE
	SPRING VALLEY CRESCENT			
	BRAMLEY			
	LEEDS			
	Neighbourhood Centre (PPS6 Local Centre)			
	Residential Zone			
	Total Number of dwellings:	46		
	Survey date: WEDNESDAY	21/09/16		Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	55	68	0.069	55	68	0.270	55	68	0.339
08:00 - 09:00	55	68	0.141	55	68	0.368	55	68	0.509
09:00 - 10:00	55	68	0.146	55	68	0.162	55	68	0.308
10:00 - 11:00	55	68	0.128	55	68	0.151	55	68	0.279
11:00 - 12:00	55	68	0.137	55	68	0.151	55	68	0.288
12:00 - 13:00	55	68	0.153	55	68	0.151	55	68	0.304
13:00 - 14:00	55	68	0.153	55	68	0.156	55	68	0.309
14:00 - 15:00	55	68	0.146	55	68	0.178	55	68	0.324
15:00 - 16:00	55	68	0.240	55	68	0.169	55	68	0.409
16:00 - 17:00	55	68	0.262	55	68	0.161	55	68	0.423
17:00 - 18:00	55	68	0.313	55	68	0.165	55	68	0.478
18:00 - 19:00	55	68	0.246	55	68	0.160	55	68	0.406
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.134			2.242			4.376

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

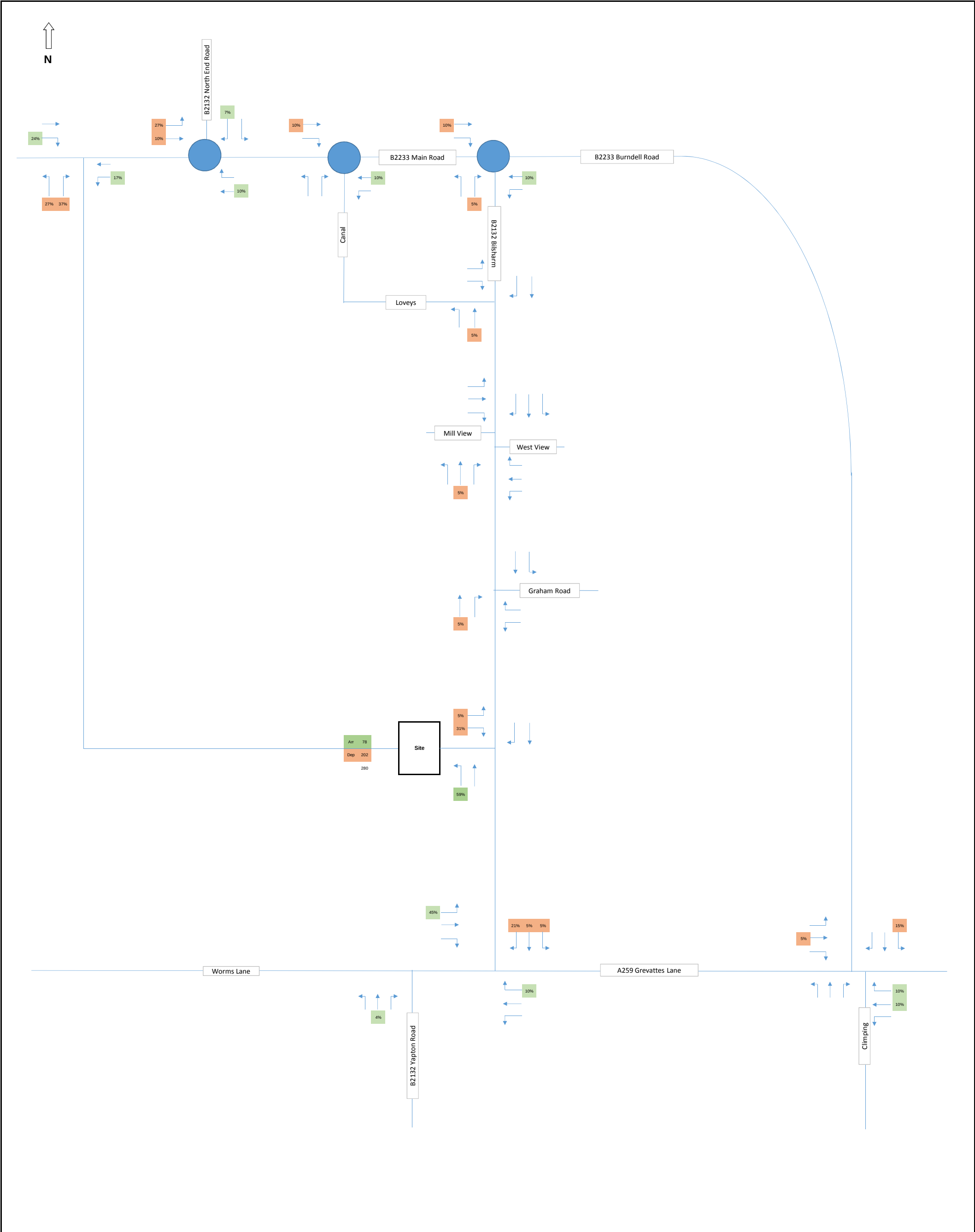
Parameter summary

Trip rate parameter range selected: 6 - 805 (units:)
 Survey date date range: 01/01/09 - 28/03/17
 Number of weekdays (Monday-Friday): 55
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 1
 Surveys manually removed from selection: 0

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

APPENDIX C

Development Traffic Distribution and Assignment



Notes ### Total Vehicle ### HGV's	Land Link / Gleeson Strategic	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: AM Development % Distribution (07:45-08:45) 550 Units	Date: -

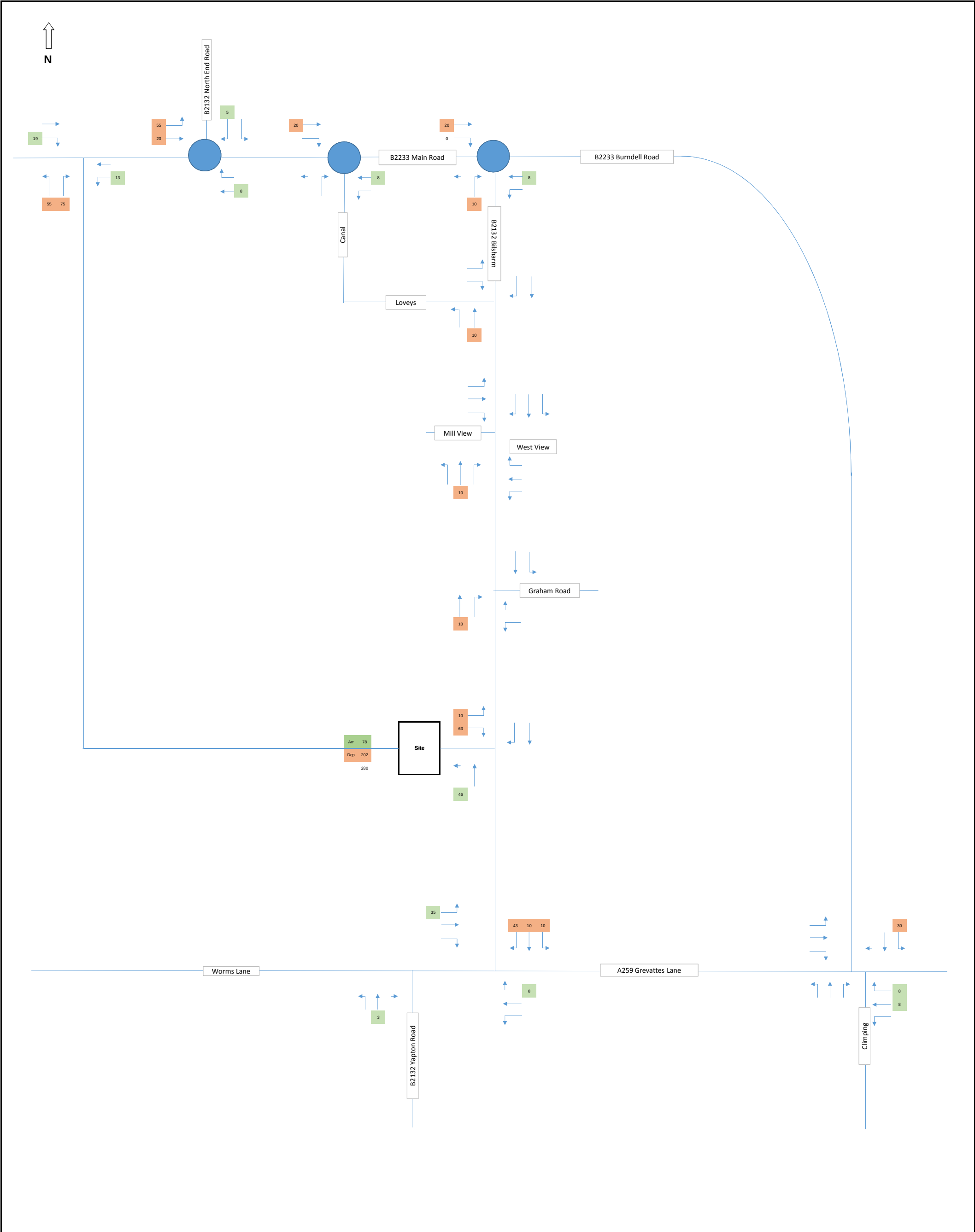


ODYSSEY
DEVELOPING JOURNEYS

Tuscany House - White Hart Lane
Basingstoke - Hampshire - RG21 4AF

T:01256 331144
F:01256 331134

E:enquiries@odysseymarkides.com
W:www.odysseymarkides.com



Notes ### Total Vehicle ### HGV's	Land Link / Gleeson Strategic	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: AM Development Assignment (07:45-08:45) 550 Units	Date: -

Tuscany House - White Hart Lane

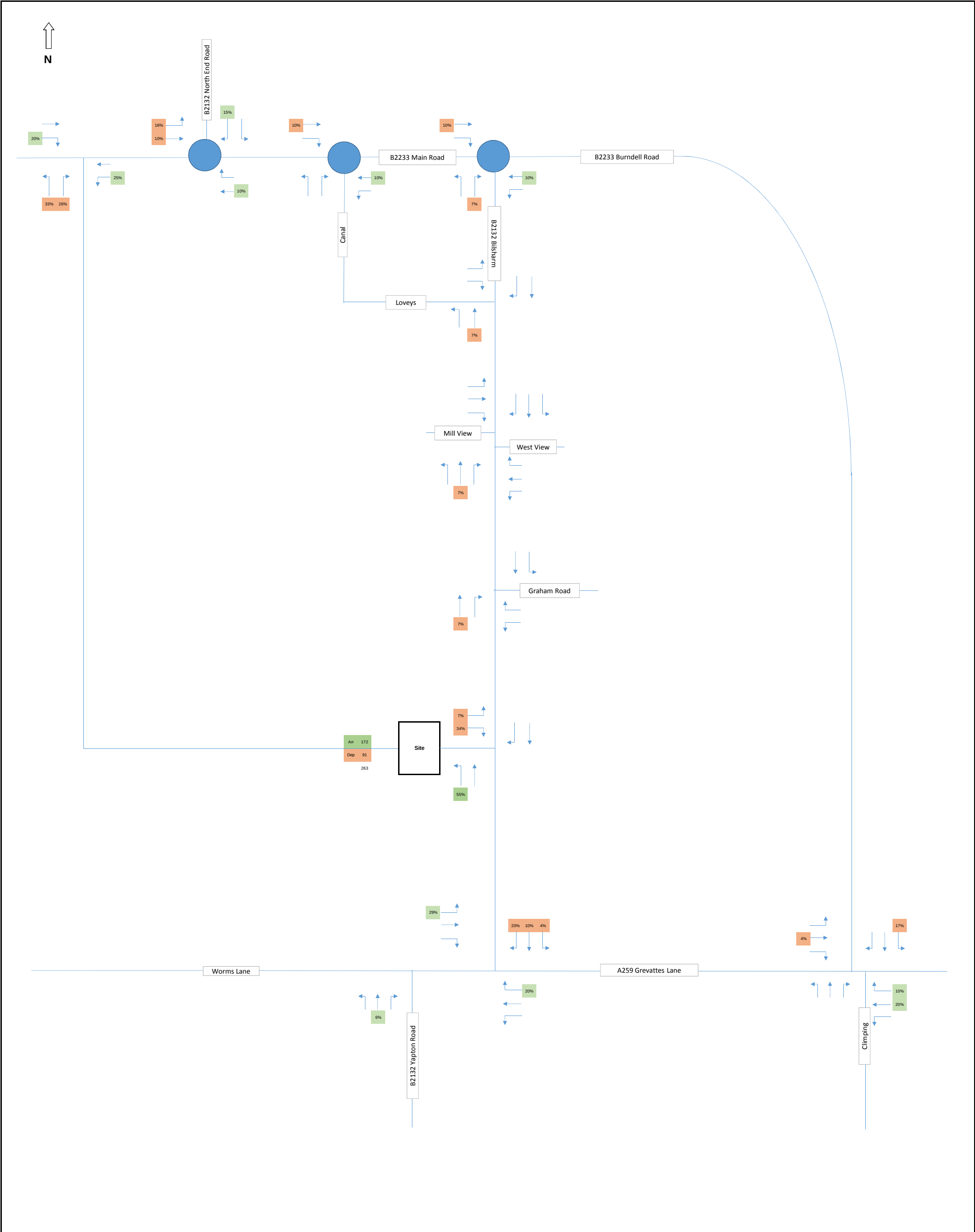
Basingstoke - Hampshire - RG21 4AF

T:01256 331144

F:01256 331134

E:enquiries@odysseymarkides.com

W:www.odysseymarkides.com



Notes ### Total Vehicle ### HGV's	Land Link / Gleeson Strategic	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: PM Development % Distribution (16:45-17:45) 550 Units	Date: -



ODYSSEY

DEVELOPING JOURNEYS

Tuscany House - White Hart Lane

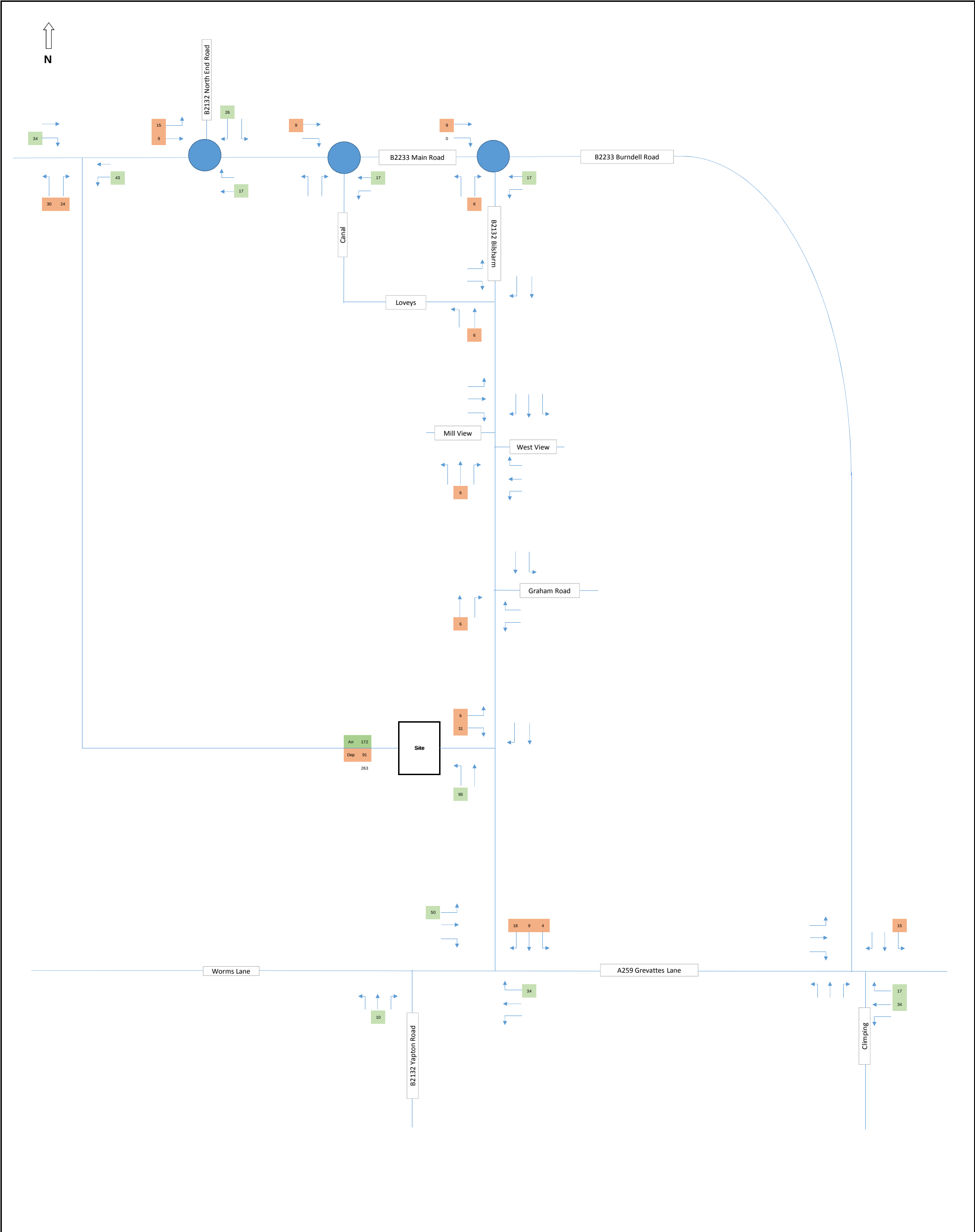
Basingstoke - Hampshire - RG21 4AF

T:01256 331144

F:01256 331134

E:enquiries@odysseymarkides.com

W:www.odysseymarkides.com



Notes ### Total Vehicle ### HGV's	Land Link / Gleeson Strategic	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: PM Development Assignment (16:45-17:45) 550 Units	Date: -

Tuscany House - White Hart Lane

Basingstoke - Hampshire - RG21 4AF

T:01256 331144

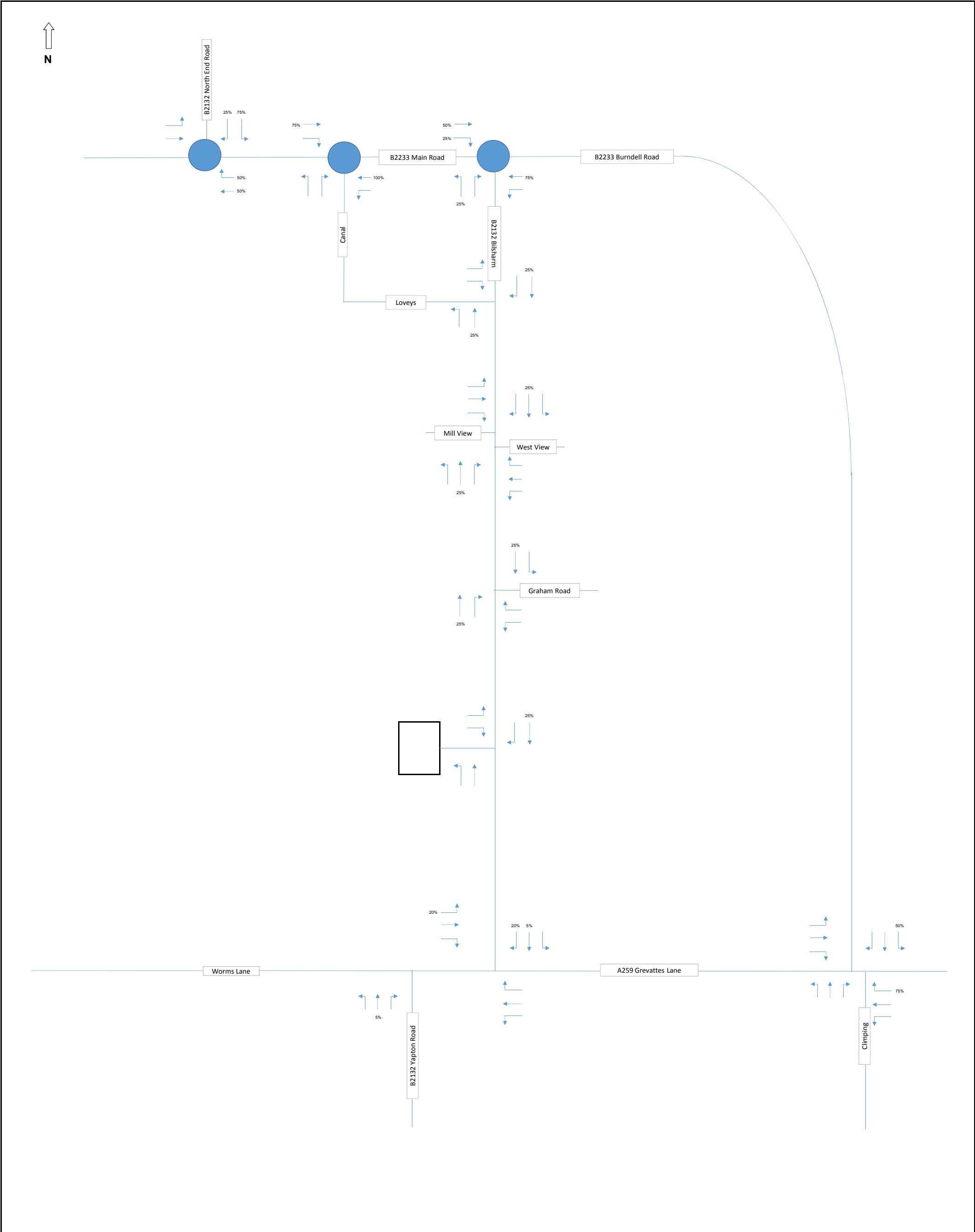
F:01256 331134

E:enquiries@odysseymarkides.com

W:www.odysseymarkides.com

APPENDIX D

Committed Development Traffic Flows

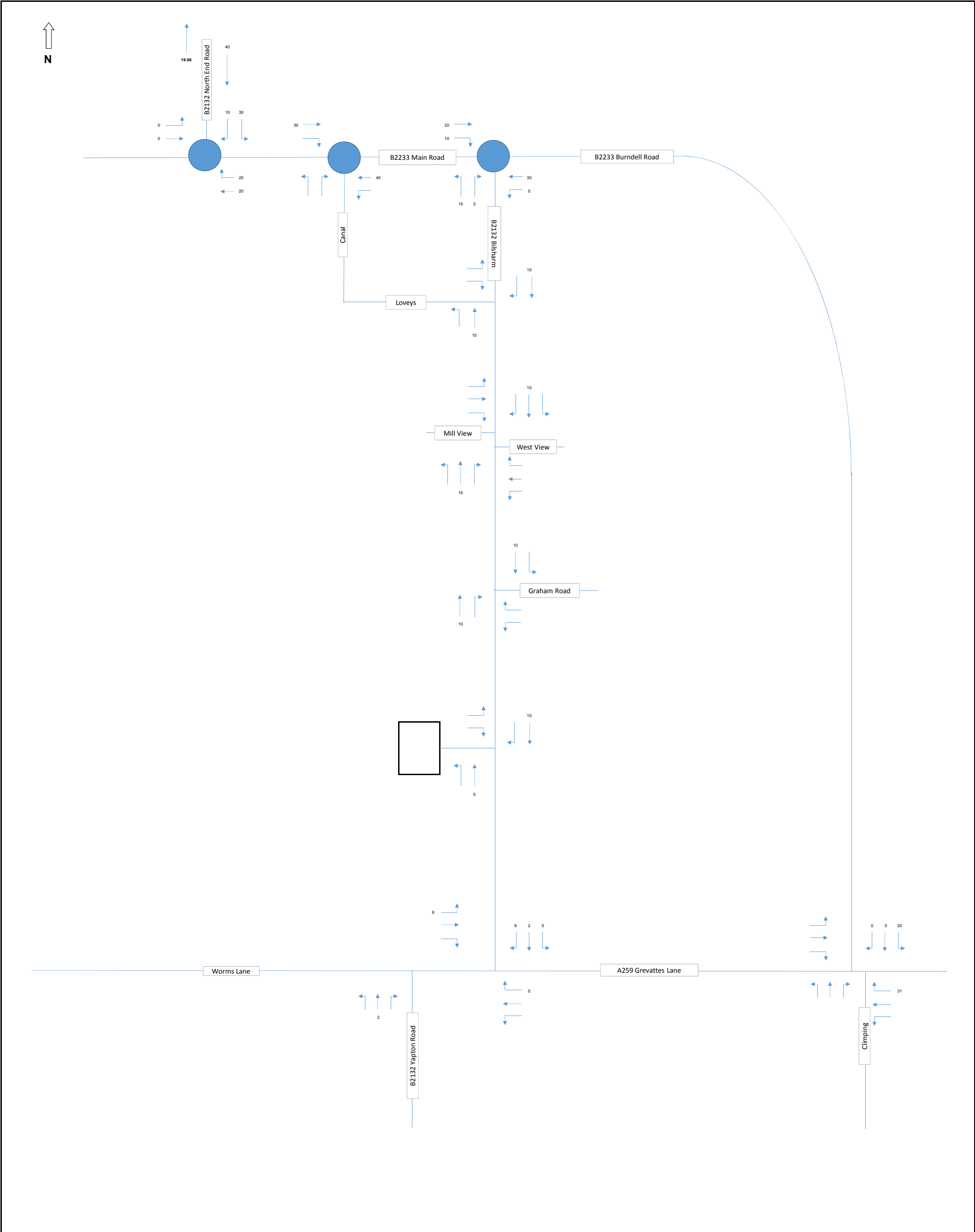


Notes ### Total Vehicle ### HGV's	Gleeson Strategic Land	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: Committed Development % Distribution AM (07:45-08:45)	Date: -



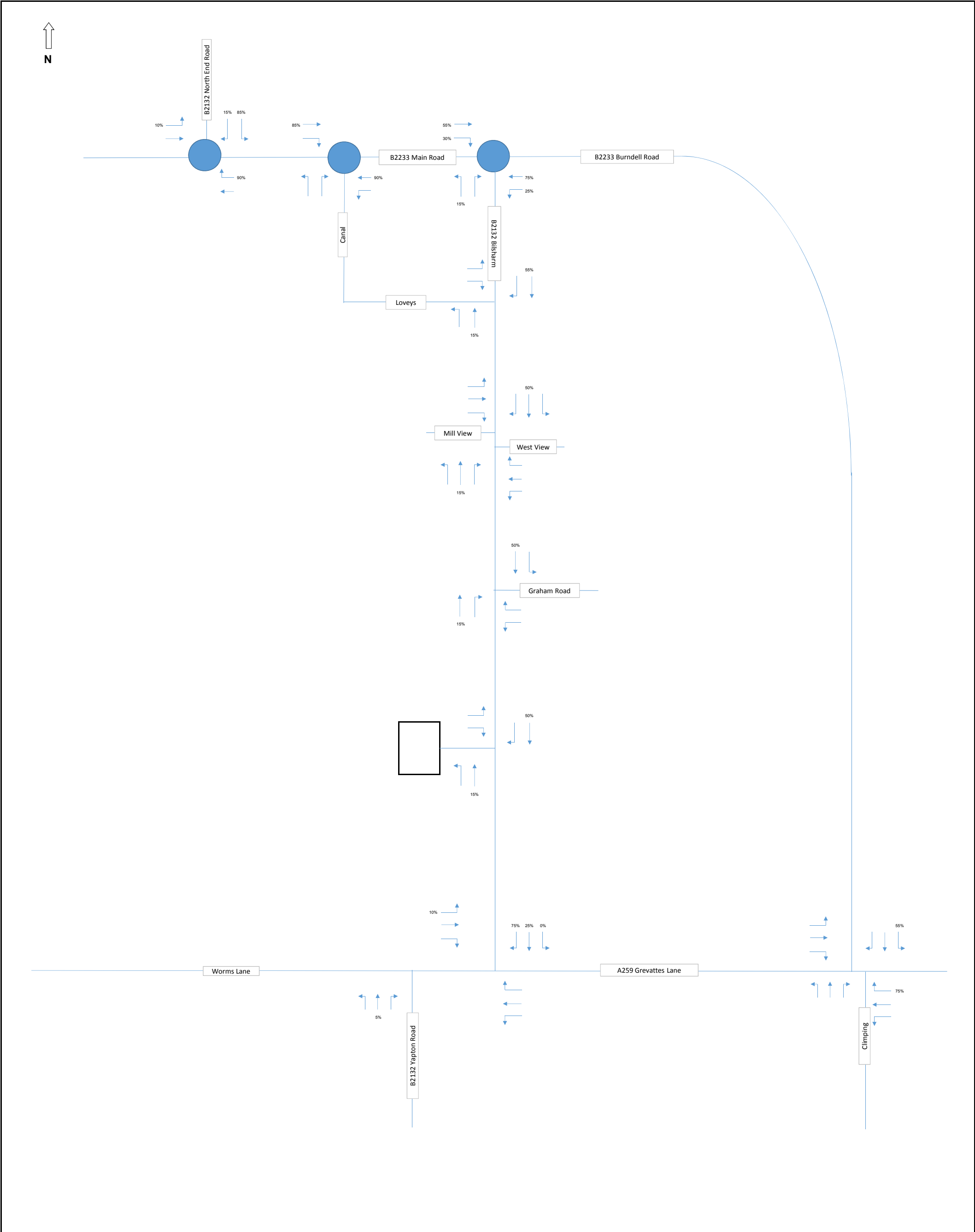
ODYSSEY

DEVELOPING JOURNEYS

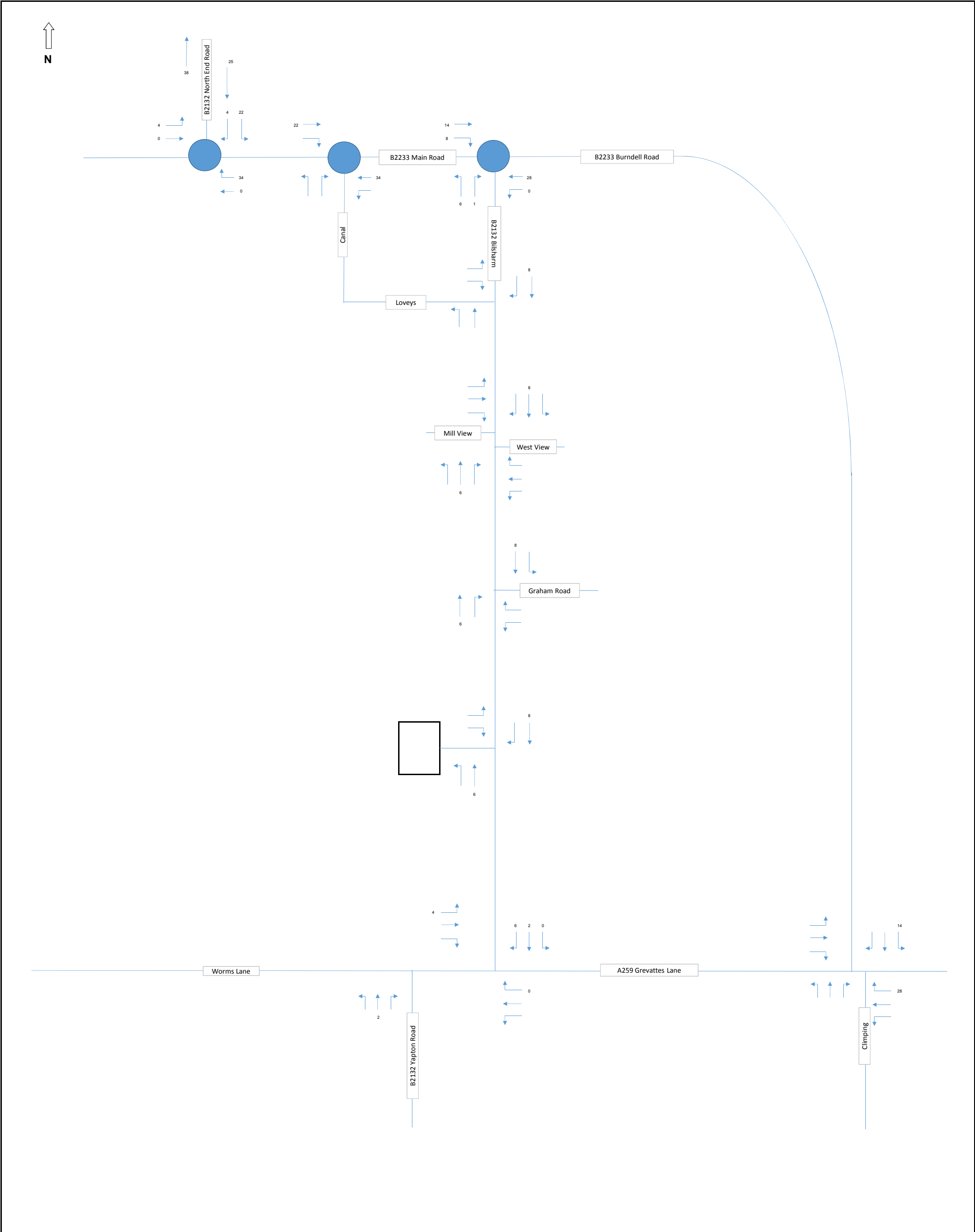


Notes ### Total Vehicle ### HGV's	Gleeson Strategic Land	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: Committed Development Traffic Flows AM (07:45-08:45)	Date: -

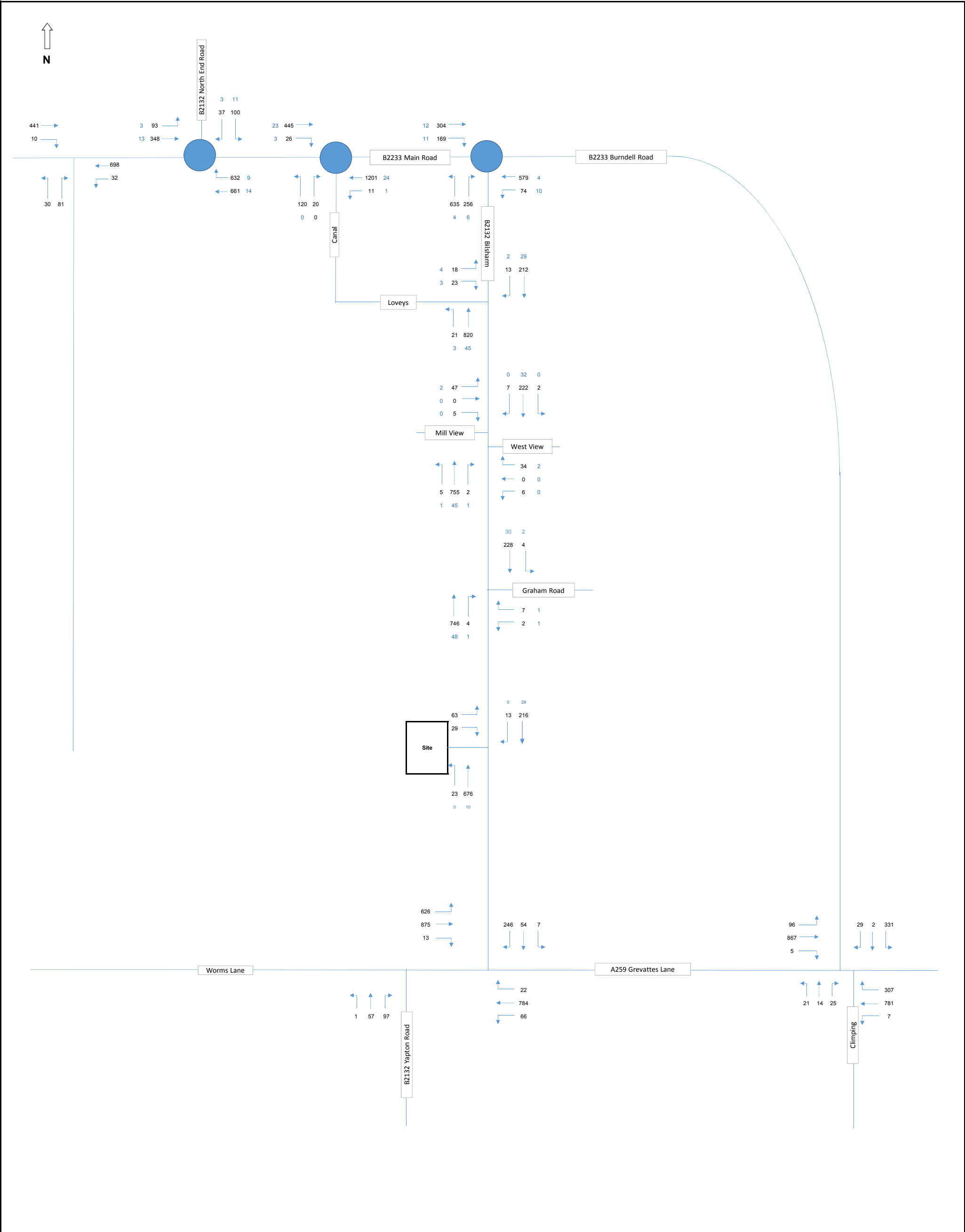




Notes ### Total Vehicle ### HGV's	Gleeson Strategic Land	-	 ODYSSEY DEVELOPING JOURNEYS
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111	
	Drawing Title: Committed Development % Distribution PM (07:45-08:45)	Date: -	



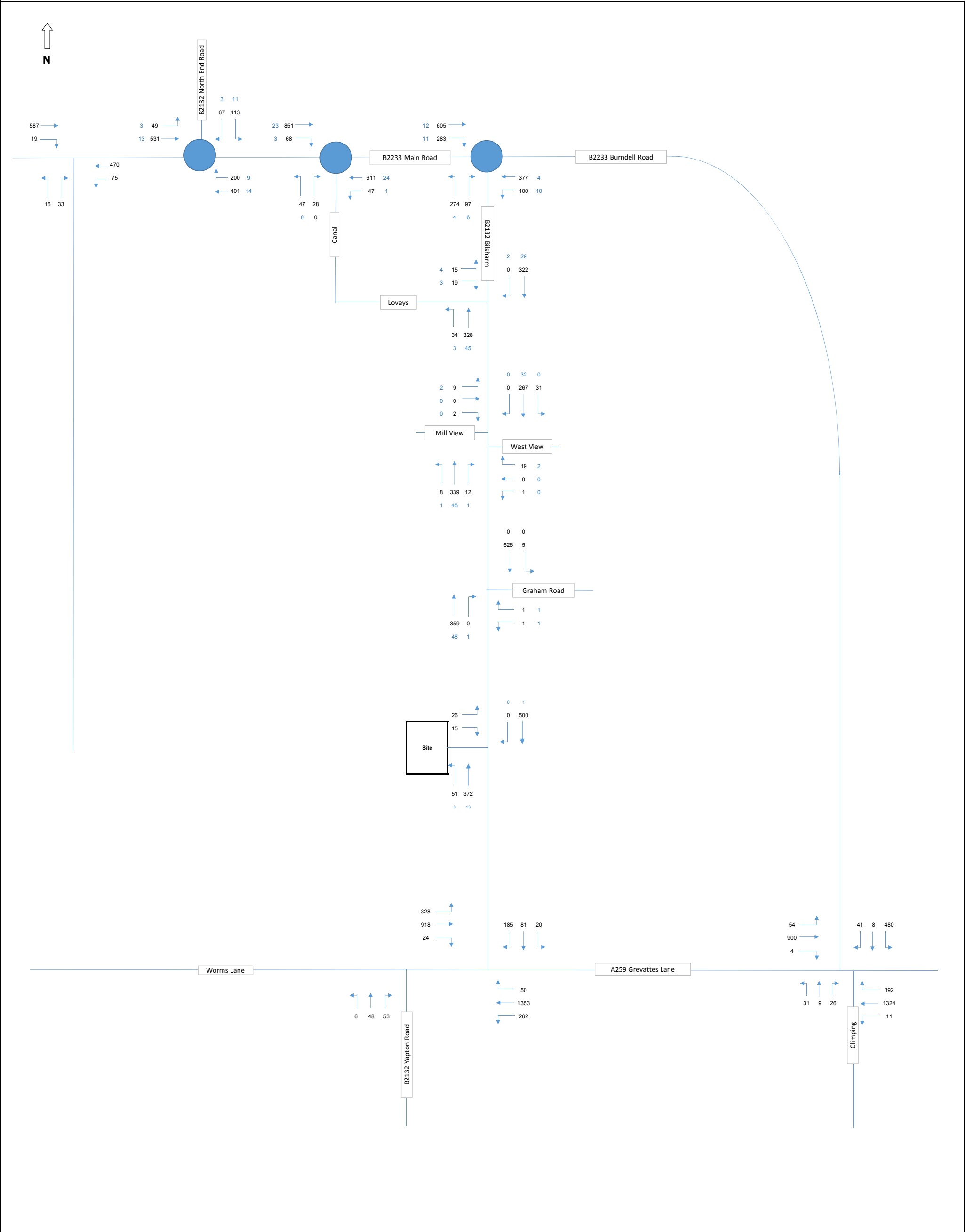
Notes ### Total Vehicle ### HGV's	Gleeson Strategic Land	-	 ODYSSEY DEVELOPING JOURNEYS
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111	
	Drawing Title: Committed Development Traffic Flows PM (07:45-08:45)	Date: -	



Notes ### Total Vehicle ### HGV's	Land Link / Gleeson Strategic	-
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111
	Drawing Title: 2031 AM Base + Committed + Development AM (07:45-08:45) 550 Units No Thru-Link	Date: -



ODYSSEY
DEVELOPING JOURNEYS



Notes ### Total Vehicle ### HGV's	Land Link / Gleeson Strategic	-	 ODYSSEY DEVELOPING JOURNEYS
	Job Title: Land West of Bilsham Road, Yapton	Job No: 14-111	
	Drawing Title: 2031 AM Base + Committed + Development PM (07:45-08:45) 550 Units No Thru-Link	Date: -	

APPENDIX E

Junction Capacity Assessment Outputs

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

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Web: www.trlsoftware.co.uk

The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	\\O..\\COMBINED 550 - No Thru Road\\B2132 Bilsham Road - Graham Road 550 UNITS.vpi
Date Run	14 February 2018
Time Run	13:05:41
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	B2132 Bilsham Road	100
Arm B	Graham Road	100
Arm C	B2132 Bilsham Road	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	B2132 Bilsham Road - Graham Road
Location	Yapton
Date	29 June 2016
Enumerator	tmoloney [W3559-ODYSSEY]
Job Number	14-111
Status	-
Client	Gleesons
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data**Geometric Parameters**

Parameter	Minor Arm B
Major Road Carriageway Width (m)	6.50

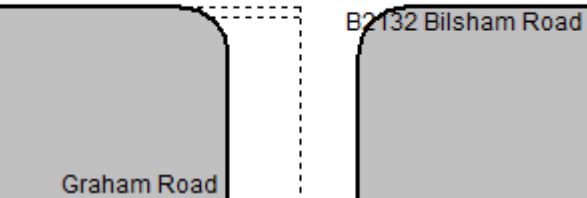
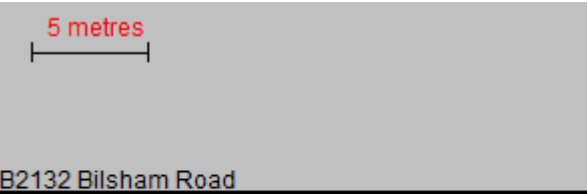
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	2.20
Minor Road First Lane Width (m)	3.00
Minor Road Visibility To Right (m)	150
Minor Road Visibility To Left (m)	15
Major Road Right Turn Visibility (m)	200
Major Road Right Turn Blocks Traffic	Yes (if over 1 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	555.614	0.099	0.250	0.157	0.357
B-C	718.366	0.108	0.272	-	-
C-B	689.785	0.261	0.261	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:30-09:00	90	15
Second Modelling Period	16:30-18:00	90	15

ODTAB Turning Counts

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

From/To	Arm A	Arm B	Arm C
Arm A	0.0	4.0	228.0
Arm B	7.0	0.0	2.0
Arm C	746.0	4.0	0.0

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

From/To	Arm A	Arm B	Arm C
Arm A	0.0	5.0	526.0
Arm B	1.0	0.0	1.0

Arm C	359.0	0.0	0.0
-------	-------	-----	-----

ODTAB Synthesised Flows

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	07:45	2.900	08:15	4.350	08:45	2.900
Arm B	07:45	0.112	08:15	0.169	08:45	0.112
Arm C	07:45	9.375	08:15	14.063	08:45	9.375

Heavy Vehicles Percentages

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

From/To	Arm A	Arm B	Arm C
Arm A	-	67.0	20.0
Arm B	17.0	-	50.0
Arm C	9.0	33.0	-

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Queues & Delays

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:30-07:45	B-AC	0.11	6.07	0.019	-	0.00	0.02	-	0.3	0.17
	C-AB	0.05	7.95	0.006	-	0.00	0.01	-	0.1	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.05	-	-	-	-	-	-	-	-
	A-C	2.86	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-AC	0.13	5.69	0.024	-	0.02	0.02	-	0.4	0.18
	C-AB	0.06	7.82	0.008	-	0.01	0.01	-	0.1	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.06	-	-	-	-	-	-	-	-
	A-C	3.42	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:00-08:15	B-AC	0.17	5.16	0.032	-	0.02	0.03	-	0.5	0.20
	C-AB	0.07	7.63	0.010	-	0.01	0.01	-	0.1	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.07	-	-	-	-	-	-	-	-

	A-C	4.18	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-AC	0.17	5.16	0.032	-	0.03	0.03	-	0.5	0.20
	C-AB	0.07	7.63	0.010	-	0.01	0.01	-	0.1	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.07	-	-	-	-	-	-	-	-
	A-C	4.18	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-AC	0.13	5.69	0.024	-	0.03	0.02	-	0.4	0.18
	C-AB	0.06	7.82	0.008	-	0.01	0.01	-	0.1	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.06	-	-	-	-	-	-	-	-
	A-C	3.42	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-AC	0.11	6.07	0.019	-	0.02	0.02	-	0.3	0.17
	C-AB	0.05	7.95	0.006	-	0.01	0.01	-	0.1	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.05	-	-	-	-	-	-	-	-
	A-C	2.86	-	-	-	-	-	-	-	-

Demand Set: 2031 PM Sensitivity

Modelling Period: 16:30-18:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
16:30-16:45	B-AC	0.03	8.22	0.003	-	0.00	0.00	-	0.0	0.12
	C-AB	0.00	8.87	0.000	-	0.00	0.00	-	0.0	0.00
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.06	-	-	-	-	-	-	-	-
	A-C	6.60	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
16:45-17:00	B-AC	0.03	7.77	0.004	-	0.00	0.00	-	0.1	0.13
	C-AB	0.00	8.56	0.000	-	0.00	0.00	-	0.0	0.00
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.07	-	-	-	-	-	-	-	-
	A-C	7.88	-	-	-	-	-	-	-	-
Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-AC	0.04	7.15	0.005	-	0.00	0.01	-	0.1	0.14
	C-AB	0.00	8.14	0.000	-	0.00	0.00	-	0.0	0.00

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

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E-mail: software@trl.co.uk
Web: www.trlsoftware.co.uk

The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	\\O..\COMBINED 550 - No Thru Link\B2132 Bilsham Road - Loveys Road 550 UNITS.vpi
Date Run	14 February 2018
Time Run	12:19:36
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	B2132 Bilsham Road	100
Arm B	Loveys Road	100
Arm C	B2132 Bilsham Road	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	B2132 Bilsham Road - Loveys Road
Location	Yapton
Date	29 June 2016
Enumerator	tmoloney [W3559-ODYSSEY]
Job Number	14-111
Status	-
Client	Gleesons
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data**Geometric Parameters**

Parameter	Minor Arm B
Major Road Carriageway Width (m)	6.50

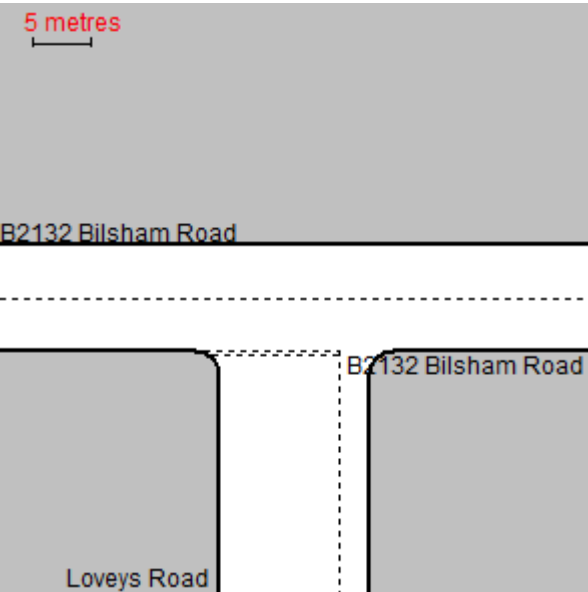
Major Road Kerbed Central Reserve Width (m)	0.00
Major Road Right Turning Lane Width (m)	2.20
Minor Road Width 0m Back from Junction (m)	10.00
Minor Road Width 5m Back from Junction (m)	4.00
Minor Road Width 10m Back from Junction (m)	2.65
Minor Road Width 15m Back from Junction (m)	2.50
Minor Road Width 20m Back from Junction (m)	2.50
Minor Road Flare Length (veh)	1
Minor Road Visibility To Right (m)	150
Minor Road Visibility To Left (m)	150
Major Road Right Turn Visibility (m)	120
Major Road Right Turn Blocks Traffic	Yes (if over 1 veh)

Slope and Intercept Values

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	0.000	0.000	0.000	0.000	0.000
B-C	0.000	0.000	0.000	-	-
C-B	643.456	0.244	0.244	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

Junction Diagram



Demand Data

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:30-09:00	90	15
Second Modelling Period	16:30-18:00	90	15

ODTAB Turning Counts

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

From/To	Arm A	Arm B	Arm C
Arm A	0.0	21.0	820.0
Arm B	23.0	0.0	18.0
Arm C	212.0	13.0	0.0

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

From/To	Arm A	Arm B	Arm C
Arm A	0.0	34.0	328.0
Arm B	19.0	0.0	15.0
Arm C	322.0	22.0	0.0

ODTAB Synthesised Flows

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	07:45	10.512	08:15	15.769	08:45	10.512
Arm B	07:45	0.512	08:15	0.769	08:45	0.512
Arm C	07:45	2.813	08:15	4.219	08:45	2.813

Heavy Vehicles Percentages

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

From/To	Arm A	Arm B	Arm C
Arm A	-	0.0	0.0
Arm B	0.0	-	0.0
Arm C	0.0	0.0	-

Queues & Delays

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:30-07:45	B-A	0.29	6.95	0.042	-	0.00	0.04	-	0.6	0.15
	B-C	0.23	10.86	0.021	-	0.00	0.02	-	0.3	0.09
	C-AB	0.16	8.15	0.020	-	0.00	0.02	-	0.3	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.26	-	-	-	-	-	-	-	-
	A-C	10.29	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-A	0.34	6.28	0.055	-	0.04	0.06	-	0.8	0.17
	B-C	0.27	10.17	0.027	-	0.02	0.03	-	0.4	0.10
	C-AB	0.19	7.65	0.025	-	0.02	0.03	-	0.4	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.31	-	-	-	-	-	-	-	-
	A-C	12.29	-	-	-	-	-	-	-	-

Segment	Stream	Demand	Capacity	RFC	Ped.	Start	End	Geometric	Delay	Mean
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		(veh/min)	(veh/min)		Flow (ped/min)	Queue (veh)	Queue (veh)	Delay (veh.min/ segment)	(veh.min/ segment)	Arriving Vehicle Delay (min)
08:00-08:15	B-A	0.42	5.35	0.079	-	0.06	0.08	-	1.2	0.20
	B-C	0.33	9.21	0.036	-	0.03	0.04	-	0.5	0.11
	C-AB	0.24	6.96	0.034	-	0.03	0.04	-	0.5	0.15
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.39	-	-	-	-	-	-	-	-
	A-C	15.05	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:15-08:30	B-A	0.42	5.35	0.079	-	0.08	0.09	-	1.3	0.20
	B-C	0.33	9.21	0.036	-	0.04	0.04	-	0.6	0.11
	C-AB	0.24	6.96	0.034	-	0.04	0.04	-	0.5	0.15
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.39	-	-	-	-	-	-	-	-
	A-C	15.05	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:30-08:45	B-A	0.34	6.28	0.055	-	0.09	0.06	-	0.9	0.17
	B-C	0.27	10.17	0.027	-	0.04	0.03	-	0.4	0.10
	C-AB	0.19	7.65	0.025	-	0.04	0.03	-	0.4	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.31	-	-	-	-	-	-	-	-
	A-C	12.29	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:45-09:00	B-A	0.29	6.95	0.042	-	0.06	0.04	-	0.7	0.15
	B-C	0.23	10.86	0.021	-	0.03	0.02	-	0.3	0.09
	C-AB	0.16	8.15	0.020	-	0.03	0.02	-	0.3	0.13
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.26	-	-	-	-	-	-	-	-
	A-C	10.29	-	-	-	-	-	-	-	-

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
16:30-16:45	B-A	0.24	8.38	0.028	-	0.00	0.03	-	0.4	0.12
	B-C	0.19	12.88	0.015	-	0.00	0.01	-	0.2	0.08
	C-AB	0.28	9.62	0.029	-	0.00	0.03	-	0.4	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.43	-	-	-	-	-	-	-	-
	A-C	4.12	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle
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										Delay (min)
16:45-17:00	B-A	0.28	7.98	0.036	-	0.03	0.04	-	0.5	0.13
	B-C	0.22	12.58	0.018	-	0.01	0.02	-	0.3	0.08
	C-AB	0.33	9.40	0.035	-	0.03	0.04	-	0.6	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.51	-	-	-	-	-	-	-	-
	A-C	4.91	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-A	0.35	7.44	0.047	-	0.04	0.05	-	0.7	0.14
	B-C	0.28	12.18	0.023	-	0.02	0.02	-	0.3	0.08
	C-AB	0.40	9.10	0.044	-	0.04	0.05	-	0.7	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.62	-	-	-	-	-	-	-	-
	A-C	6.02	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:15-17:30	B-A	0.35	7.44	0.047	-	0.05	0.05	-	0.7	0.14
	B-C	0.28	12.18	0.023	-	0.02	0.02	-	0.3	0.08
	C-AB	0.40	9.10	0.044	-	0.05	0.05	-	0.7	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.62	-	-	-	-	-	-	-	-
	A-C	6.02	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:30-17:45	B-A	0.28	7.98	0.036	-	0.05	0.04	-	0.6	0.13
	B-C	0.22	12.58	0.018	-	0.02	0.02	-	0.3	0.08
	C-AB	0.33	9.40	0.035	-	0.05	0.04	-	0.6	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.51	-	-	-	-	-	-	-	-
	A-C	4.91	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:45-18:00	B-A	0.24	8.38	0.028	-	0.04	0.03	-	0.5	0.12
	B-C	0.19	12.88	0.015	-	0.02	0.01	-	0.2	0.08
	C-AB	0.28	9.62	0.029	-	0.04	0.03	-	0.5	0.11
	C-A	-	-	-	-	-	-	-	-	-
	A-B	0.43	-	-	-	-	-	-	-	-
	A-C	4.12	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.

In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.

Delays marked with '##' could not be calculated.

PICADY 5 Run Successful

PICADY

GUI Version: 5.1 AE
Analysis Program Release: 5.0 (MAY 2010)

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The user of this computer program for the solution of an engineering problem is in no way relieved of their responsibility for the correctness of the solution

Run Analysis

Parameter	Values
File Run	\\O..\\COMBINED 550 - No Thru Link\\B2132 Mill View - West View 550 UNITS.vpi
Date Run	14 February 2018
Time Run	12:38:40
Driving Side	Drive On The Left

Arm Names and Flow Scaling Factors

Arm	Arm Name	Flow Scaling Factor (%)
Arm A	B2132 NB	100
Arm B	Mill View	100
Arm C	B2132 SB	100
Arm D	West View	100

Stream Labelling Convention

Stream A-B contains traffic going from A to B etc.

Run Information

Parameter	Values
Run Title	B2132 - Mill View - West View Staggered Junction
Location	Yapton
Date	29 June 2016
Enumerator	tmoloney [W3559-ODYSSEY]
Job Number	14-111
Status	-
Client	Gleasons
Description	-

Errors and Warnings

Parameter	Values
Warning	No Errors Or Warnings

Geometric Data**Geometric Parameters**

Parameter	Minor Arm B	Minor Arm D
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Major Road Carriageway Width (m)	6.50	6.50
Major Road Kerbed Central Reserve Width (m)	0.00	0.00
Major Road Right Turning Lane Width (m)	2.20	2.20
Minor Road First Lane Width (m)	2.25	2.25
Minor Road Visibility To Right (m)	12	12
Minor Road Visibility To Left (m)	12	12
Major Road Right Turn Visibility (m)	200	200
Major Road Right Turn Blocks Traffic	Yes (if over 1 veh)	Yes (if over 1 veh)

Stream	Intercept for Stream	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	Slope for B-D	Slope for C-A	Slope for C-B	Slope for C-D	Slope for D-B	Slope for D-C
B-C	584.074	0.080	0.203	-	-	-	-	-	-	0.080	0.203
B-AD	450.861	0.088	0.221	-	-	-	0.128	0.290	0.128	0.088	0.221
D-A	584.074	0.088	-	-	-	-	0.221	-	-	0.088	0.221
D-BC	450.861	0.128	0.128	0.290	0.203	0.080	0.203	-	0.080	-	-
C-B	689.785	0.261	0.261	-	-	-	-	-	-	0.261	0.261
A-D	689.785	-	-	-	0.261	0.261	0.261	-	0.261	-	-

Note: Streams may be combined in which case capacity will be adjusted
These values do not allow for any site-specific corrections

5 metres

B2132 SB

West View

Mill View

B2132 NB

Modelling Periods

Parameter	Period	Duration (min)	Segment Length (min)
First Modelling Period	07:30-09:00	90	15
Second Modelling Period	16:30-18:00	90	15

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

From/To	Arm A	Arm B	Arm C	Arm D
Arm A	0.0	5.0	746.0	2.0
Arm B	5.0	0.0	47.0	0.0
Arm C	217.0	7.0	0.0	2.0
Arm D	6.0	0.0	34.0	0.0

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

From/To	Arm A	Arm B	Arm C	Arm D
Arm A	0.0	8.0	334.0	12.0
Arm B	2.0	0.0	9.0	0.0
Arm C	260.0	39.0	0.0	31.0
Arm D	1.0	0.0	19.0	0.0

ODTAB Synthesised Flows

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

Arm	Rising Time	Rising Flow (veh/min)	Peak Time	Peak Flow (veh/min)	Falling Time	Falling Flow (veh/min)
Arm A	07:45	9.413	08:15	14.119	08:45	9.413
Arm B	07:45	0.650	08:15	0.975	08:45	0.650
Arm C	07:45	2.825	08:15	4.238	08:45	2.825
Arm D	07:45	0.500	08:15	0.750	08:45	0.500

Heavy Vehicles Percentages

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

From/To	Arm A	Arm B	Arm C	Arm D
Arm A	-	0.0	0.0	0.0
Arm B	0.0	-	0.0	0.0
Arm C	0.0	0.0	-	0.0
Arm D	0.0	0.0	0.0	-

Demand Set: 2031 PM Sensitivity
Modelling Period: 16:30-18:00

From/To	Arm A	Arm B	Arm C	Arm D
Arm A	-	0.0	0.0	0.0
Arm B	0.0	-	0.0	0.0
Arm C	0.0	0.0	-	0.0
Arm D	0.0	0.0	0.0	-

Queues & Delays

Demand Set: 2031 AM Sensitivity
Modelling Period: 07:30-09:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:30-07:45	B-ACD	0.65	7.24	0.090	-	0.00	0.10	-	1.4	0.15
	D-ABC	0.50	6.07	0.083	-	0.00	0.09	-	1.3	0.18
	C-ABD	0.09	8.92	0.010	-	0.00	0.01	-	0.1	0.11
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.03	10.76	0.002	-	0.00	0.00	-	0.0	0.09
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
07:45-08:00	B-ACD	0.78	6.80	0.115	-	0.10	0.13	-	1.9	0.17

	D-ABC	0.60	5.74	0.105	-	0.09	0.12	-	1.7	0.19
	C-ABD	0.10	8.42	0.012	-	0.01	0.01	-	0.2	0.12
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.03	10.62	0.003	-	0.00	0.00	-	0.0	0.09
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:00- 08:15	B-ACD	0.95	6.19	0.154	-	0.13	0.18	-	2.6	0.19
	D-ABC	0.73	5.26	0.139	-	0.12	0.16	-	2.3	0.22
	C-ABD	0.13	7.73	0.017	-	0.01	0.02	-	0.3	0.13
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.04	10.42	0.004	-	0.00	0.00	-	0.1	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:15- 08:30	B-ACD	0.95	6.19	0.154	-	0.18	0.18	-	2.7	0.19
	D-ABC	0.73	5.26	0.139	-	0.16	0.16	-	2.4	0.22
	C-ABD	0.13	7.73	0.017	-	0.02	0.02	-	0.3	0.13
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.04	10.42	0.004	-	0.00	0.00	-	0.1	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:30- 08:45	B-ACD	0.78	6.80	0.115	-	0.18	0.13	-	2.0	0.17
	D-ABC	0.60	5.73	0.105	-	0.16	0.12	-	1.8	0.20
	C-ABD	0.10	8.42	0.012	-	0.02	0.01	-	0.2	0.12
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.03	10.62	0.003	-	0.00	0.00	-	0.0	0.09
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
08:45- 09:00	B-ACD	0.65	7.23	0.090	-	0.13	0.10	-	1.5	0.15
	D-ABC	0.50	6.07	0.083	-	0.12	0.09	-	1.4	0.18
	C-ABD	0.09	8.92	0.010	-	0.01	0.01	-	0.2	0.11
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.03	10.76	0.002	-	0.00	0.00	-	0.0	0.09
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Demand Set: 2031 PM Sensitivity**Modelling Period:** 16:30-18:00

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
16:30-16:45	B-ACD	0.14	8.07	0.017	-	0.00	0.02	-	0.3	0.13
	D-ABC	0.25	6.32	0.040	-	0.00	0.04	-	0.6	0.16
	C-ABD	0.49	10.31	0.047	-	0.00	0.05	-	0.7	0.10
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.15	10.54	0.014	-	0.00	0.01	-	0.2	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
16:45-17:00	B-ACD	0.16	7.84	0.021	-	0.02	0.02	-	0.3	0.13
	D-ABC	0.30	6.07	0.049	-	0.04	0.05	-	0.8	0.17
	C-ABD	0.58	10.08	0.058	-	0.05	0.06	-	0.9	0.11
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.18	10.35	0.017	-	0.01	0.02	-	0.3	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:00-17:15	B-ACD	0.20	7.52	0.027	-	0.02	0.03	-	0.4	0.14
	D-ABC	0.37	5.73	0.064	-	0.05	0.07	-	1.0	0.19
	C-ABD	0.72	9.76	0.073	-	0.06	0.08	-	1.2	0.11
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.22	10.09	0.022	-	0.02	0.02	-	0.3	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:15-17:30	B-ACD	0.20	7.51	0.027	-	0.03	0.03	-	0.4	0.14
	D-ABC	0.37	5.73	0.064	-	0.07	0.07	-	1.0	0.19
	C-ABD	0.72	9.76	0.073	-	0.08	0.08	-	1.2	0.11
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.22	10.09	0.022	-	0.02	0.02	-	0.3	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/segment)	Delay (veh.min/segment)	Mean Arriving Vehicle Delay (min)
17:30-17:45	B-ACD	0.16	7.84	0.021	-	0.03	0.02	-	0.3	0.13
	D-ABC	0.30	6.07	0.049	-	0.07	0.05	-	0.8	0.17

	C-ABD	0.58	10.08	0.058	-	0.08	0.06	-	1.0	0.11
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.18	10.35	0.017	-	0.02	0.02	-	0.3	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Segment	Stream	Demand (veh/min)	Capacity (veh/min)	RFC	Ped. Flow (ped/min)	Start Queue (veh)	End Queue (veh)	Geometric Delay (veh.min/ segment)	Delay (veh.min/ segment)	Mean Arriving Vehicle Delay (min)
17:45- 18:00	B-ACD	0.14	8.07	0.017	-	0.02	0.02	-	0.3	0.13
	D-ABC	0.25	6.32	0.040	-	0.05	0.04	-	0.6	0.16
	C-ABD	0.49	10.31	0.047	-	0.06	0.05	-	0.8	0.10
	C-A	-	-	-	-	-	-	-	-	-
	C-D	-	-	-	-	-	-	-	-	-
	A-BCD	0.15	10.54	0.014	-	0.02	0.01	-	0.2	0.10
	A-B	-	-	-	-	-	-	-	-	-
	A-C	-	-	-	-	-	-	-	-	-

Entry capacities marked with an '(X)' are dominated by a pedestrian crossing in that time segment.

In time segments marked with a '(B)', traffic leaving the junction may block back from a crossing so impairing normal operation of the junction.

Delays marked with '##' could not be calculated.

PICADY 5 Run Successful

Junctions 9			
PICADY 9 - Priority Intersection Module			
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2018			
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Filename: Comet Corner-Oystercatcher Sensitivity.j9

Path: P:\14-111 - Land West of Bilsham Road, Yapton\Trans\Picady\Junctions 10 Modelling

Report generation date: 16/02/2018 13:01:08

«2031 Base + Dev WSCC Sensitivity, AM

- »Junction Network
- »Arms
- »Traffic Demand
- »Origin-Destination Data
- »Vehicle Mix
- »Results
- »Lane Results

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (min)	RFC	LOS	Queue (PCU)	Delay (min)	RFC	LOS
[Lane Simulation] - 2031 Base + Dev WSCC Sensitivity								
Junction 1 - Arm A	0.0	0.00		A	0.0	0.00		A
Junction 1 - Arm B	1.4	0.65		E	1.1	0.64		E
Junction 1 - Arm C	0.0	0.00		A	0.1	0.00		A
Junction 2 - Arm A	0.0	0.00		A	0.0	0.00		A
Junction 2 - Arm B	2.4	0.55		D	3.9	0.94		F
Junction 2 - Arm C	0.1	0.00		A	0.1	0.00		A
Junction 3 - Arm A	0.0	0.00		A	0.0	0.00		A
Junction 3 - Arm B	1.2	0.19		B	3.2	0.42		C
Junction 3 - Arm C	1.3	0.08		A	2.5	0.10		A
Junction 4 - Arm A	0.1	0.00		A	0.5	0.03		A
Junction 4 - Arm B	0.2	0.21		B	0.9	0.76		E
Junction 4 - Arm C	0.0	0.00		A	0.0	0.00		A

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

Values shown are the highest values encountered over all time segments. Delay is the maximum value of average delay per arriving vehicle. Arm and junction delays are averages for all movements, including movements with zero delay.

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	30/04/2015
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	
Description	

Units

Distance units	Speed units	Traffic units input	Traffic units results	Flow units	Average delay units	Total delay units	Rate of delay units
m	kph	PCU	PCU	perHour	min	-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 (min)	Queue threshold (PCU)
5.75				0.85	0.60	20.00

Lane Simulation options

Stop criteria (%)	Stop criteria time (s)	Stop criteria number of trials	Random seed	Results refresh speed (s)	Individual vehicle animation number of trials	Use crossings quick response	Last run random seed	Last run number of trials	Last run time taken (s)
1.00	100000	100000	-1	3	1	✓	252702315	222	133.57

Analysis Set Details

ID	Use Lane Simulation	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	✓	80.000	100.000

Demand Set Details

ID	Scenario name	Time Period name	Description	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 Base + Dev WSCC Sensitivity	AM	2031 AM Base + Dev WSCC Sensitivity	ONE HOUR	07:30	09:00	15	✓

2031 Base + Dev WSCC Sensitivity, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Lane Simulation	A1 - [Lane Simulation]	This analysis set uses Lane Simulation mode. This is provided as an investigative tool and the user should apply judgement when interpreting the results.
Warning	Vehicle Mix	Junction 2	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction 1	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction 4	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.
Warning	Vehicle Mix	Junction 3	HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs.

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (min)	Junction LOS
1	untitled	T-Junction	Two-way	0.04	A
2	untitled	T-Junction	Two-way	0.06	A
3	untitled	T-Junction	Two-way	0.06	A
4	untitled	T-Junction	Two-way	0.01	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Junction	Arm	Name	Description	Arm type
1	A	A259 Grevatts Lane		Major
	B	B2132 Worms Lane		Minor
	C	A259 Grevatts Lane W		Major
2	A	A259 Grevatts Lane W		Major
	B	B2132 Yapton Road		Minor
	C	A259 Grevatts Lane E		Major
3	A	A259 Grevatts Lane W		Major
	B	B2233 Burndell Road		Minor
	C	A259 Grevatts Lane E		Major
4	A	A259 Grevatts Lane E		Major
	B	Climping Street		Minor
	C	A259 Crookthorne Lanes		Major

Major Arm Geometry

Junction	Arm	Width of carriageway (m)	Has kerbed central reserve	Width of kerbed central reserve (m)	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
1	C	7.30	✓	10.00	✓	3.65	100.0		-
2	C	7.30	✓	10.00	✓	3.65	100.0	✓	14.00
3	C	7.30	✓	8.00	✓	3.50	120.0	✓	7.00
4	C	7.30	✓	8.00	✓	3.65	120.0	✓	15.00

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

Minor Arm Geometry

Junction	Arm	Minor arm type	Lane width (m)	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
1	B	One lane	3.00								70	35
2	B	One lane	3.70								200	200
3	B	One lane	4.50								240	240
4	B	One lane plus flare		10.00	6.75	4.60	3.00	3.00		2.00	50	50

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
2	B-A	851	0.120	0.302	0.190	0.432
2	B-C	802	0.116	0.293	-	-
2	C-B	732	0.267	0.267	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	633	0.089	0.225	0.141	0.321
1	B-C	646	0.093	0.236	-	-
1	C-B	732	0.267	0.267	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
4	B-A	626	0.091	0.231	0.145	0.330
4	B-C	713	0.103	0.261	-	-
4	C-B	745	0.272	0.272	-	-

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
3	B-A	932	0.136	0.343	0.216	0.491
3	B-C	891	0.129	0.326	-	-
3	C-B	734	0.268	0.268	-	-

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

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

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

Lanes

Junction	Arm	Lane Level	Lane	Destination arms	Has limited storage	Storage (PCU)	Minimum capacity (PCU/hr)	Maximum capacity (PCU/hr)
1	A	1 [Give-way line]	1	B,C	✓	3.00	0	99999
	B	1 [Give-way line]	1	A,C		Infinity	0	99999
	C	1 [Give-way line]	1	A		Infinity	0	99999
			2	B		Infinity	0	99999
2	A	1 [Give-way line]	1	B,C	✓	3.00	0	99999
	B	1 [Give-way line]	1	A,C		Infinity	0	99999
	C	1 [Give-way line]	1	A	✓	14.00	0	99999
			2	B	✓	14.00	0	99999
		2	1	(A,B)	✓	3.00		
3	A	1 [Give-way line]	1	B,C	✓	3.00	0	99999
	B	1 [Give-way line]	1	A,C		Infinity	0	99999
	C	1 [Give-way line]	1	A	✓	7.00	0	99999
			2	B	✓	7.00	0	99999
		2	1	(A,B)	✓	3.00		
4	A	1 [Give-way line]	1	B,C		Infinity	0	99999
	B	1 [Give-way line]	1	C	✓	2.00	0	99999
			2	A	✓	2.00	0	99999
		2	1	(A,C)		Infinity		
	C	1 [Give-way line]	1	A	✓	15.00	0	99999
			2	B	✓	15.00	0	99999
		2	1	(A,B)	✓	3.00		

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A	B	C
2	A	1 [Give-way line]	1		✓	✓
	B	1 [Give-way line]	1	✓		✓
	C	1 [Give-way line]	1	✓		
			2		✓	
		2	1	✓	✓	

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A	B	C
1	A	1 [Give-way line]	1		✓	✓
	B	1 [Give-way line]	1	✓		✓
	C	1 [Give-way line]	1	✓		
			2		✓	

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A	B	C
4	A	1 [Give-way line]	1		✓	✓
	B	1 [Give-way line]	1			✓
			2	✓		
		2	1	✓		✓
	C	1 [Give-way line]	1	✓		
			2		✓	
		2	1	✓	✓	

Lane Movements

Junction	Arm	Lane Level	Lane	Destination arm		
				A	B	C
3	A	1 [Give-way line]	1		✓	✓
	B	1 [Give-way line]	1	✓		✓
	C	1 [Give-way line]	1	✓		
			2		✓	
		2	1	✓	✓	

Traffic Demand

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

Linked Arm Data

Junction	Arm	Feeding Junction	Feeding Arm	Link Type	Flow source	Uniform flow (PCU/hr)	Flow multiplier (%)	Internal storage space (PCU)
1	A	2	A	Simple (vertical queueing)	Normal	0	100.00	
2	A	1	A	Simple (vertical queueing)	Normal	0	100.00	
	C	3	A	Simple (vertical queueing)	Normal	0	100.00	
3	A	2	C	Simple (vertical queueing)	Normal	0	100.00	
	C	4	C	Simple (vertical queueing)	Normal	0	100.00	
4	C	3	C	Simple (vertical queueing)	Normal	0	100.00	

Demand overview (Traffic)

Junction	Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
1	A	✓				
	B		ONE HOUR	✓	155	100.000
	C		ONE HOUR	✓	1514	100.000
2	A	✓				
	B		ONE HOUR	✓	307	100.000
	C	✓				
3	A	✓				
	B		ONE HOUR	✓	362	100.000
	C	✓				
4	A		ONE HOUR	✓	1095	100.000
	B		ONE HOUR	✓	60	100.000
	C	✓				

Origin-Destination Data

Demand (PCU/hr)

Junction 2

	To			
From		A	B	C
	A	0	626	875
	B	300	0	7
	C	850	22	0

Demand (PCU/hr)

Junction 1

	To			
From		A	B	C
	A	0	66	1030
	B	154	0	1
	C	1501	13	0

Demand (PCU/hr)

Junction 4

	To			
From		A	B	C
	A	0	7	1088
	B	25	0	35
	C	1198	7	0

Demand (PCU/hr)

Junction 3

	To			
From		A	B	C
	A	0	96	872
	B	0	0	362
	C	816	321	0

Vehicle Mix

Heavy Vehicle Percentages

Junction 2

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

Heavy Vehicle Percentages

Junction 1

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

Heavy Vehicle Percentages

Junction 4

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

Heavy Vehicle Percentages

Junction 3

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

Results

Results Summary for whole modelled period

Junction	Arm	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
1	A	0.00	0.0	A	796	1193
	B	0.65	1.4	E	112	168
	C	0.00	0.0	A	1115	1673
2	A	0.00	0.0	A	1218	1826
	B	0.55	2.4	D	222	333
	C	0.00	0.1	A	593	890
3	A	0.00	0.0	A	715	1073
	B	0.19	1.2	B	265	398
	C	0.08	1.3	A	826	1239
4	A	0.00	0.1	A	806	1209
	B	0.21	0.2	B	44	66
	C	0.00	0.0	A	909	1364

Main Results for each time segment

07:30 - 07:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	657	164	657	994	0.0	0.0	0.000	A
	B	90	22	91	48	0.0	0.3	0.201	B
	C	913	228	913	619	0.0	0.0	0.001	A
2	A	994	249	994	657	0.0	0.0	0.000	A
	B	186	46	186	429	0.0	0.5	0.157	A
	C	487	122	487	581	0.0	0.0	0.003	A
3	A	581	145	581	487	0.0	0.0	0.000	A
	B	219	55	220	241	0.0	0.4	0.118	A
	C	672	168	672	745	0.0	0.4	0.040	A
4	A	654	164	654	756	0.0	0.0	0.000	A
	B	36	9	36	8	0.0	0.1	0.126	A
	C	745	186	745	672	0.0	0.0	0.001	A

07:45 - 08:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	780	195	780	1198	0.0	0.0	0.000	A
	B	109	27	110	54	0.3	0.6	0.305	C
	C	1096	274	1096	734	0.0	0.0	0.001	A
2	A	1198	299	1198	780	0.0	0.0	0.000	A
	B	216	54	216	518	0.5	0.9	0.230	B
	C	583	146	583	698	0.0	0.0	0.004	A
3	A	698	175	698	583	0.0	0.0	0.000	A
	B	262	66	262	298	0.4	0.6	0.144	A
	C	812	203	809	889	0.4	0.8	0.052	A
4	A	793	198	793	903	0.0	0.0	0.000	A
	B	44	11	43	11	0.1	0.1	0.155	A
	C	889	222	889	812	0.0	0.0	0.001	A

08:00 - 08:15

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	949	237	949	1471	0.0	0.0	0.000	A
	B	136	34	135	69	0.6	1.3	0.535	D
	C	1349	337	1349	894	0.0	0.0	0.001	A
2	A	1471	368	1471	949	0.0	0.0	0.000	A
	B	263	66	264	621	0.9	2.4	0.489	D
	C	708	177	707	873	0.0	0.0	0.004	A
3	A	873	218	873	708	0.0	0.0	0.000	A
	B	320	80	318	372	0.6	1.2	0.185	B
	C	988	247	990	1102	0.8	1.3	0.077	A
4	A	964	241	962	1119	0.0	0.1	0.003	A
	B	55	14	55	12	0.1	0.1	0.212	B
	C	1102	275	1102	988	0.0	0.0	0.001	A

08:15 - 08:30

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	947	237	947	1453	0.0	0.0	0.000	A
	B	136	34	138	68	1.3	1.4	0.645	E
	C	1328	332	1328	892	0.0	0.0	0.001	A
2	A	1453	363	1453	947	0.0	0.0	0.000	A
	B	268	67	266	620	2.4	2.4	0.546	D
	C	706	176	706	857	0.0	0.1	0.005	A
3	A	857	214	857	706	0.0	0.0	0.000	A
	B	314	78	313	360	1.2	1.1	0.195	B
	C	980	245	979	1083	1.3	1.1	0.078	A
4	A	957	239	957	1098	0.1	0.0	0.001	A
	B	50	13	50	14	0.1	0.2	0.211	B
	C	1083	271	1083	980	0.0	0.0	0.001	A

08:30 - 08:45

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	784	196	784	1190	0.0	0.0	0.000	A
	B	111	28	111	55	1.4	0.6	0.351	C
	C	1090	272	1090	740	0.0	0.0	0.001	A
2	A	1190	298	1190	784	0.0	0.0	0.000	A
	B	217	54	216	516	2.4	0.9	0.282	C
	C	589	147	589	695	0.1	0.1	0.005	A
3	A	695	174	695	589	0.0	0.0	0.000	A
	B	260	65	260	299	1.1	0.6	0.149	A
	C	821	205	821	888	1.1	0.7	0.056	A
4	A	800	200	800	901	0.0	0.0	0.000	A
	B	45	11	45	10	0.2	0.1	0.164	A
	C	888	222	888	821	0.0	0.0	0.001	A

08:45 - 09:00

Junction	Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Throughput (PCU/hr)	Throughput (exit side) (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	655	164	655	999	0.0	0.0	0.000	A
	B	92	23	92	48	0.6	0.4	0.238	B
	C	915	229	915	615	0.0	0.0	0.001	A
2	A	999	250	999	655	0.0	0.0	0.000	A
	B	182	46	182	429	0.9	0.5	0.179	B
	C	488	122	489	586	0.1	0.0	0.003	A
3	A	586	147	586	488	0.0	0.0	0.000	A
	B	216	54	217	253	0.6	0.4	0.122	A
	C	684	171	686	747	0.7	0.4	0.046	A
4	A	668	167	668	757	0.0	0.0	0.000	A
	B	35	9	35	8	0.1	0.1	0.143	A
	C	747	187	747	684	0.0	0.0	0.000	A

Lane Results

Lane Level notation: Lane Level 1 is always closest to the junction.

Lanes: Main Results for each time segment

07:30 - 07:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	Entry	1	1	B,C	657	657	0.0	0.0	0.000	A
		Exit	1	1		994	994	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	90	91	0.0	0.3	0.201	B
		Exit	1	1		48	48	0.0	0.0	0.000	A
	C	Entry	1	1	A	904	904	0.0	0.0	0.000	A
		Exit	1	1	B	9	9	0.0	0.0	0.108	A
2	A	Entry	1	1	B,C	994	994	0.0	0.0	0.000	A
		Exit	1	1		657	657	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	186	186	0.0	0.5	0.157	A
		Exit	1	1		429	429	0.0	0.0	0.000	A
	C	Entry	1	1	A	475	475	0.0	0.0	0.000	A
				2	B	12	12	0.0	0.0	0.126	A
		Exit	1	1	(A,B)	487	487	0.0	0.0	0.000	A
				1		581	581	0.0	0.0	0.000	A
3	A	Entry	1	1	B,C	581	581	0.0	0.0	0.000	A
		Exit	1	1		487	487	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	219	220	0.0	0.4	0.118	A
		Exit	1	1		241	241	0.0	0.0	0.000	A
	C	Entry	1	1	A	487	487	0.0	0.0	0.000	A
				2	B	185	186	0.0	0.4	0.142	A
		Exit	1	1	(A,B)	672	672	0.0	0.0	0.000	A
				1		745	745	0.0	0.0	0.000	A
4	A	Entry	1	1	B,C	654	654	0.0	0.0	0.000	A
		Exit	1	1		756	756	0.0	0.0	0.000	A
	B	Entry	1	1	C	22	22	0.0	0.0	0.105	A
				2	A	14	14	0.0	0.0	0.156	A
		Exit	1	1	(A,C)	36	36	0.0	0.0	0.000	A
				1		8	8	0.0	0.0	0.000	A
	C	Entry	1	1	A	741	741	0.0	0.0	0.000	A
				2	B	4	4	0.0	0.0	0.098	A
		Exit	1	1	(A,B)	745	745	0.0	0.0	0.000	A
				1		672	672	0.0	0.0	0.000	A

07:45 - 08:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	Entry	1	1	B,C	780	780	0.0	0.0	0.000	A
		Exit	1	1		1198	1198	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	109	110	0.3	0.6	0.305	C
		Exit	1	1		54	54	0.0	0.0	0.000	A
	C	Entry	1	1	A	1088	1088	0.0	0.0	0.000	A
		Exit	1	1	B	8	8	0.0	0.0	0.115	A
2	A	Entry	1	1	B,C	1198	1198	0.0	0.0	0.000	A
		Exit	1	1		780	780	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	216	216	0.5	0.9	0.230	B
		Exit	1	1		518	518	0.0	0.0	0.000	A
	C	Entry	1	1	A	569	569	0.0	0.0	0.000	A
				2	B	14	14	0.0	0.0	0.154	A
		Exit	1	1	(A,B)	583	583	0.0	0.0	0.000	A
				1		698	698	0.0	0.0	0.000	A
3	A	Entry	1	1	B,C	698	698	0.0	0.0	0.000	A
		Exit	1	1		583	583	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	262	262	0.4	0.6	0.144	A
		Exit	1	1		298	298	0.0	0.0	0.000	A
	C	Entry	1	1	A	583	583	0.0	0.0	0.000	A
				2	B	229	226	0.4	0.8	0.185	B
		Exit	1	1	(A,B)	812	812	0.0	0.0	0.000	A
				1		889	889	0.0	0.0	0.000	A
4	A	Entry	1	1	B,C	793	793	0.0	0.0	0.000	A
		Exit	1	1		903	903	0.0	0.0	0.000	A
	B	Entry	1	1	C	24	25	0.0	0.0	0.123	A
				2	A	19	18	0.0	0.1	0.199	B
		Exit	1	1	(A,C)	44	44	0.0	0.0	0.001	A
				1		11	11	0.0	0.0	0.000	A
	C	Entry	1	1	A	884	884	0.0	0.0	0.000	A
				2	B	5	5	0.0	0.0	0.119	A
		Exit	1	1	(A,B)	889	889	0.0	0.0	0.000	A
				1		812	812	0.0	0.0	0.000	A

08:00 - 08:15

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	Entry	1	1	B,C	949	949	0.0	0.0	0.000	A
		Exit	1	1		1471	1471	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	136	135	0.6	1.3	0.535	D
		Exit	1	1		69	69	0.0	0.0	0.000	A
	C	Entry	1	1	A	1337	1337	0.0	0.0	0.000	A
		Exit	1	1	B	12	12	0.0	0.0	0.130	A
2	A	Entry	1	1	B,C	1471	1471	0.0	0.0	0.000	A
		Exit	1	1		949	949	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	263	264	0.9	2.4	0.489	D
		Exit	1	1		621	621	0.0	0.0	0.000	A
	C	Entry	1	1	A	690	690	0.0	0.0	0.000	A
				2	B	18	17	0.0	0.0	0.174	B
		Exit	1	1	(A,B)	708	708	0.0	0.0	0.000	A
				1		873	873	0.0	0.0	0.000	A
3	A	Entry	1	1	B,C	873	873	0.0	0.0	0.000	A
		Exit	1	1		708	708	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	320	318	0.6	1.2	0.185	B
		Exit	1	1		372	372	0.0	0.0	0.000	A
	C	Entry	1	1	A	708	708	0.0	0.0	0.000	A
				2	B	281	283	0.8	1.3	0.263	C
		Exit	1	1	(A,B)	988	988	0.0	0.0	0.003	A
				1		1102	1102	0.0	0.0	0.000	A
4	A	Entry	1	1	B,C	964	962	0.0	0.1	0.003	A
		Exit	1	1		1119	1119	0.0	0.0	0.000	A
	B	Entry	1	1	C	31	31	0.0	0.1	0.153	A
				2	A	24	24	0.1	0.0	0.283	C
		Exit	1	1	(A,C)	55	55	0.0	0.0	0.004	A
				1		12	12	0.0	0.0	0.000	A
	C	Entry	1	1	A	1095	1095	0.0	0.0	0.000	A
				2	B	7	7	0.0	0.0	0.119	A
		Exit	1	1	(A,B)	1102	1102	0.0	0.0	0.000	A
				1		988	988	0.0	0.0	0.002	A

08:15 - 08:30

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	Entry	1	1	B,C	947	947	0.0	0.0	0.000	A
		Exit	1	1		1453	1453	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	136	138	1.3	1.4	0.645	E
		Exit	1	1		68	68	0.0	0.0	0.000	A
	C	Entry	1	1	A	1316	1316	0.0	0.0	0.000	A
		Exit	1	1	B	12	13	0.0	0.0	0.142	A
2	A	Entry	1	1	B,C	1453	1453	0.0	0.0	0.000	A
		Exit	1	1		947	947	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	268	266	2.4	2.4	0.546	D
		Exit	1	1		620	620	0.0	0.0	0.000	A
	C	Entry	1	1	A	689	689	0.0	0.0	0.000	A
				2	B	17	17	0.0	0.1	0.191	B
		Exit	1	1	(A,B)	706	706	0.0	0.0	0.000	A
				1		857	857	0.0	0.0	0.000	A
3	A	Entry	1	1	B,C	857	857	0.0	0.0	0.000	A
		Exit	1	1		706	706	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	314	313	1.2	1.1	0.195	B
		Exit	1	1		360	360	0.0	0.0	0.000	A
	C	Entry	1	1	A	706	706	0.0	0.0	0.000	A
				2	B	274	273	1.3	1.1	0.268	C
		Exit	1	1	(A,B)	980	980	0.0	0.0	0.002	A
				1		1083	1083	0.0	0.0	0.000	A
4	A	Entry	1	1	B,C	957	957	0.1	0.0	0.001	A
		Exit	1	1		1098	1098	0.0	0.0	0.000	A
	B	Entry	1	1	C	29	29	0.1	0.1	0.153	A
				2	A	21	21	0.0	0.1	0.284	C
		Exit	1	1	(A,C)	50	50	0.0	0.0	0.002	A
				1		14	14	0.0	0.0	0.000	A
	C	Entry	1	1	A	1076	1076	0.0	0.0	0.000	A
				2	B	7	7	0.0	0.0	0.123	A
		Exit	1	1	(A,B)	1083	1083	0.0	0.0	0.000	A
				1		980	980	0.0	0.0	0.001	A

08:30 - 08:45

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	Entry	1	1	B,C	784	784	0.0	0.0	0.000	A
		Exit	1	1		1190	1190	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	111	111	1.4	0.6	0.351	C
		Exit	1	1		55	55	0.0	0.0	0.000	A
	C	Entry	1	1	A	1080	1080	0.0	0.0	0.000	A
		Exit	1	1	B	10	9	0.0	0.0	0.120	A
2	A	Entry	1	1	B,C	1190	1190	0.0	0.0	0.000	A
		Exit	1	1		784	784	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	217	216	2.4	0.9	0.282	C
		Exit	1	1		516	516	0.0	0.0	0.000	A
	C	Entry	1	1	A	573	573	0.0	0.0	0.000	A
				2	B	17	16	0.1	0.1	0.173	B
		Exit	1	1	(A,B)	589	589	0.0	0.0	0.000	A
				1		695	695	0.0	0.0	0.000	A
3	A	Entry	1	1	B,C	695	695	0.0	0.0	0.000	A
		Exit	1	1		589	589	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	260	260	1.1	0.6	0.149	A
		Exit	1	1		299	299	0.0	0.0	0.000	A
	C	Entry	1	1	A	589	589	0.0	0.0	0.000	A
				2	B	232	232	1.1	0.7	0.199	B
		Exit	1	1	(A,B)	821	821	0.0	0.0	0.000	A
				1		888	888	0.0	0.0	0.000	A
4	A	Entry	1	1	B,C	800	800	0.0	0.0	0.000	A
		Exit	1	1		901	901	0.0	0.0	0.000	A
	B	Entry	1	1	C	27	27	0.1	0.0	0.131	A
				2	A	18	18	0.1	0.1	0.208	B
		Exit	1	1	(A,C)	45	45	0.0	0.0	0.001	A
				1		10	10	0.0	0.0	0.000	A
	C	Entry	1	1	A	883	883	0.0	0.0	0.000	A
				2	B	5	5	0.0	0.0	0.130	A
		Exit	1	1	(A,B)	888	888	0.0	0.0	0.000	A
				1		821	821	0.0	0.0	0.000	A

08:45 - 09:00

Junction	Arm	Side	Lane level	Lane	Destination arms	Total Demand (PCU/hr)	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	A	Entry	1	1	B,C	655	655	0.0	0.0	0.000	A
		Exit	1	1		999	999	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	92	92	0.6	0.4	0.238	B
		Exit	1	1		48	48	0.0	0.0	0.000	A
	C	Entry	1	1	A	908	908	0.0	0.0	0.000	A
		Exit	1	1	B	7	7	0.0	0.0	0.110	A
2	A	Entry	1	1	B,C	999	999	0.0	0.0	0.000	A
		Exit	1	1		655	655	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	182	182	0.9	0.5	0.179	B
		Exit	1	1		429	429	0.0	0.0	0.000	A
	C	Entry	1	1	A	477	477	0.0	0.0	0.000	A
				2	B	11	12	0.1	0.0	0.131	A
		Exit	1	1	(A,B)	488	488	0.0	0.0	0.000	A
				1		586	586	0.0	0.0	0.000	A
3	A	Entry	1	1	B,C	586	586	0.0	0.0	0.000	A
		Exit	1	1		488	488	0.0	0.0	0.000	A
	B	Entry	1	1	A,C	216	217	0.6	0.4	0.122	A
		Exit	1	1		253	253	0.0	0.0	0.000	A
	C	Entry	1	1	A	488	488	0.0	0.0	0.000	A
				2	B	196	197	0.7	0.4	0.161	A
		Exit	1	1	(A,B)	684	684	0.0	0.0	0.000	A
				1		747	747	0.0	0.0	0.000	A
4	A	Entry	1	1	B,C	668	668	0.0	0.0	0.000	A
		Exit	1	1		757	757	0.0	0.0	0.000	A
	B	Entry	1	1	C	21	21	0.0	0.0	0.120	A
				2	A	14	14	0.1	0.1	0.174	B
		Exit	1	1	(A,C)	35	35	0.0	0.0	0.000	A
				1		8	8	0.0	0.0	0.000	A
	C	Entry	1	1	A	744	744	0.0	0.0	0.000	A
				2	B	4	4	0.0	0.0	0.096	A
		Exit	1	1	(A,B)	747	747	0.0	0.0	0.000	A
				1		684	684	0.0	0.0	0.000	A

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2018
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Filename: Burndell Road - Bilsham Road Mini Roundabout - Slope Correction.j9

Path: P:\14-111 - Land West of Bilsham Road, Yapton\Trans\Arcady\COMBINED 550 Units\Burndell Road-Bilsham Rd-Burndell Rd

Report generation date: 23/02/2018 09:39:29

»(Default Analysis Set) - 2017 Base, AM
»(Default Analysis Set) - 2022 Base + Com, AM
»(Default Analysis Set) - 2022 Base + Dev, AM
»(Default Analysis Set) - 2017 Base, PM
»(Default Analysis Set) - 2022 Base + Com, PM
»(Default Analysis Set) - 2022 Base + Dev, PM
»(Default Analysis Set) - 2031 Base + Com, AM
»(Default Analysis Set) - 2031 Base + Com, PM
»(Default Analysis Set) - 2031 Base + Dev, AM
»(Default Analysis Set) - 2031 Base + Dev, PM
»(Default Analysis Set) - 2031 Base Sensitivity, AM
»(Default Analysis Set) - 2031 Base Sensitivity, PM

Summary of junction performance

	AM						PM					
	Queue (PCU)	Delay (min)	RFC	LOS	Junction Delay (min)	Network Residual Capacity	Queue (PCU)	Delay (min)	RFC	LOS	Junction Delay (min)	Network Residual Capacity
	A1 - 2017 Base											
Arm 1	1.0	0.13	0.50	A	0.12	36 % [Arm 2]	0.6	0.11	0.37	A	0.11	56 % [Arm 3]
Arm 2	1.6	0.13	0.61	A			0.3	0.06	0.21	A		
Arm 3	0.5	0.09	0.33	A			1.4	0.12	0.58	A		
	A1 - 2022 Base + Com											
Arm 1	2.4	0.22	0.70	B	0.21	12 % [Arm 2]	1.0	0.14	0.49	A	0.15	26 % [Arm 3]
Arm 2	3.3	0.25	0.77	B			0.3	0.07	0.25	A		
Arm 3	0.7	0.10	0.39	A			2.5	0.18	0.72	B		
	A1 - 2022 Base + Dev											
Arm 1	2.5	0.23	0.71	B	0.22	11 % [Arm 2]	1.1	0.15	0.52	A	0.16	24 % [Arm 3]
Arm 2	3.6	0.27	0.79	C			0.4	0.07	0.26	A		
Arm 3	0.8	0.11	0.42	A			2.7	0.19	0.73	B		
	A1 - 2031 Base + Com											
Arm 1	3.0	0.26	0.75	C	0.28	5 % [Arm 2]	1.2	0.15	0.53	A	0.18	18 % [Arm 3]
Arm 2	5.2	0.37	0.85	C			0.4	0.07	0.28	A		
Arm 3	0.8	0.11	0.43	A			3.3	0.23	0.77	B		
	A1 - 2031 Base + Dev											
Arm 1	3.1	0.27	0.76	C	0.30	4 % [Arm 2]	1.3	0.16	0.55	A	0.18	16 % [Arm 3]
Arm 2	5.8	0.41	0.86	C			0.4	0.07	0.28	A		
Arm 3	0.9	0.11	0.46	A			3.5	0.24	0.78	B		
	A1 - 2031 Base Sensitivity											
Arm 1	3.8	0.32	0.79	C	0.52	-4 % [Arm 2]	1.7	0.19	0.62	B	0.23	9 % [Arm 3]
Arm 2	13.6	0.88	0.96	F			0.5	0.08	0.35	A		
Arm 3	1.1	0.13	0.51	A			5.0	0.32	0.84	C		

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

File summary

File Description

Title	(untitled)
Location	
Site number	
Date	26/04/2016
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	ODYSSEY-CE\tmloney
Description	

Units

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

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)
JUNCTIONS 9	5.75			✓	Delay	0.85	0.60	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017 Base	AM	ONE HOUR	07:45	09:15	15	✓
D2	2022 Base + Com	AM	ONE HOUR	07:45	09:15	15	✓
D3	2022 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2017 Base	PM	ONE HOUR	16:45	18:15	15	✓
D5	2022 Base + Com	PM	ONE HOUR	16:45	18:15	15	✓
D6	2022 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 Base + Com	AM	ONE HOUR	07:45	09:15	15	✓
D8	2031 Base + Com	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D10	2031 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D11	2031 Base Sensitivity	AM	ONE HOUR	07:45	09:15	15	✓
D12	2031 Base Sensitivity	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2017 Base, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.12	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		36	Arm 2

Arms

Arms

Arm	Name	Description
1	B2233 Burndell Road	
2	B2132 Bilsham Road	
3	B2233 Main Road	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
1	2.90	2.90	4.10	5.0	11.50	6.30	0.0	
2	3.20	3.00	6.50	10.0	9.50	8.80	0.0	
3	3.30	3.30	3.40	0.5	18.00	17.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/min)	Final slope	Final intercept (PCU/min)
1	✓	0.500	16.667	0.500	16.667
2	✓	0.500	17.500	0.500	17.500
3				0.672	16.739

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
2	Percentage		140.00
3	Percentage		125.00

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2017 Base	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	7.08	100.000
2		ONE HOUR	✓	10.93	100.000
3		ONE HOUR	✓	5.40	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	0.77	6.32
	2	3.00	0.00	7.93
	3	3.67	1.73	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	22	1
	2	3	0	1
	3	5	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.50	0.13	1.0	A	6.50	584.98
2	0.61	0.13	1.6	A	10.03	902.94
3	0.33	0.09	0.5	A	4.96	445.96

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.33	79.99	1.30	16.02	0.333	5.30	4.99	0.0	0.5	0.095	A
2	8.23	123.47	4.73	21.19	0.388	8.19	1.87	0.0	0.6	0.078	A
3	4.07	60.98	2.25	19.04	0.214	4.05	10.67	0.0	0.3	0.071	A

08:00 - 08:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.37	95.52	1.56	15.89	0.401	6.36	5.98	0.5	0.7	0.108	A
2	9.83	147.43	5.67	20.53	0.479	9.81	2.24	0.6	0.9	0.095	A
3	4.85	72.82	2.69	18.66	0.260	4.85	12.79	0.3	0.4	0.077	A

08:15 - 08:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.80	116.98	1.91	15.71	0.496	7.78	7.32	0.7	1.0	0.129	A
2	12.04	180.57	6.94	19.64	0.613	11.99	2.75	0.9	1.6	0.132	A
3	5.95	89.18	3.29	18.16	0.327	5.94	15.64	0.4	0.5	0.087	A

08:30 - 08:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.80	116.98	1.91	15.71	0.496	7.80	7.34	1.0	1.0	0.130	A
2	12.04	180.57	6.95	19.63	0.613	12.04	2.75	1.6	1.6	0.134	A
3	5.95	89.18	3.30	18.15	0.328	5.95	15.69	0.5	0.5	0.088	A

08:45 - 09:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.37	95.52	1.56	15.89	0.401	6.39	6.01	1.0	0.7	0.109	A
2	9.83	147.43	5.70	20.51	0.479	9.87	2.25	1.6	0.9	0.096	A
3	4.85	72.82	2.71	18.65	0.260	4.86	12.86	0.5	0.4	0.078	A

09:00 - 09:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.33	79.99	1.31	16.01	0.333	5.34	5.03	0.7	0.5	0.097	A
2	8.23	123.47	4.77	21.16	0.389	8.25	1.89	0.9	0.7	0.079	A
3	4.07	60.98	2.26	19.02	0.214	4.07	10.75	0.4	0.3	0.071	A

(Default Analysis Set) - 2022 Base + Com, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.21	B

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		12	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base + Com	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	9.95	100.000
2		ONE HOUR	✓	12.38	100.000
3		ONE HOUR	✓	6.17	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.12	8.83
	2	3.73	0.00	8.65
	3	4.28	1.88	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	22	1
	2	3	0	1
	3	5	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.70	0.22	2.4	B	9.13	821.73
2	0.77	0.25	3.3	B	11.36	1022.68
3	0.39	0.10	0.7	A	5.66	509.28

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.49	112.36	1.41	15.96	0.469	7.43	6.00	0.0	0.9	0.120	A
2	9.32	139.84	6.60	19.88	0.469	9.26	2.24	0.0	0.9	0.095	A
3	4.64	69.64	2.79	18.58	0.250	4.62	13.07	0.0	0.4	0.076	A

08:00 - 08:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.94	134.17	1.69	15.82	0.565	8.92	7.19	0.9	1.3	0.149	A
2	11.13	166.99	7.92	18.96	0.587	11.10	2.69	0.9	1.4	0.129	A
3	5.54	83.16	3.35	18.11	0.306	5.54	15.67	0.4	0.5	0.085	A

08:15 - 08:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	10.96	164.33	2.07	15.63	0.701	10.89	8.78	1.3	2.3	0.214	B
2	13.63	204.51	9.67	17.73	0.769	13.52	3.29	1.4	3.2	0.235	B
3	6.79	101.84	4.08	17.50	0.388	6.78	19.11	0.5	0.7	0.099	A

08:30 - 08:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	10.96	164.33	2.07	15.63	0.701	10.95	8.82	2.3	2.4	0.220	B
2	13.63	204.51	9.72	17.69	0.771	13.63	3.30	3.2	3.3	0.249	B
3	6.79	101.84	4.11	17.47	0.389	6.79	19.24	0.7	0.7	0.100	A

08:45 - 09:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.94	134.17	1.70	15.82	0.565	9.01	7.25	2.4	1.4	0.153	A
2	11.13	166.99	8.00	18.90	0.589	11.25	2.71	3.3	1.5	0.135	A
3	5.54	83.16	3.39	18.08	0.307	5.56	15.86	0.7	0.5	0.085	A

09:00 - 09:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.49	112.36	1.42	15.96	0.469	7.52	6.05	1.4	0.9	0.122	A
2	9.32	139.84	6.68	19.83	0.470	9.36	2.26	1.5	0.9	0.097	A
3	4.64	69.64	2.82	18.55	0.250	4.65	13.22	0.5	0.4	0.077	A

(Default Analysis Set) - 2022 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.22	B

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		11	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	10.08	100.000
2		ONE HOUR	✓	12.57	100.000
3		ONE HOUR	✓	6.63	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.12	8.97
	2	3.90	0.00	8.67
	3	4.68	1.95	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	22	1
	2	3	0	1
	3	5	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.71	0.23	2.5	B	9.25	832.74
2	0.79	0.27	3.6	C	11.53	1037.83
3	0.42	0.11	0.8	A	6.09	547.82

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.59	113.87	1.46	15.94	0.476	7.53	6.42	0.0	0.9	0.122	A
2	9.46	141.91	6.70	19.81	0.478	9.40	2.29	0.0	0.9	0.097	A
3	4.99	74.91	2.92	18.47	0.270	4.97	13.18	0.0	0.4	0.079	A

08:00 - 08:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.06	135.97	1.75	15.79	0.574	9.04	7.70	0.9	1.4	0.152	A
2	11.30	169.46	8.04	18.88	0.599	11.26	2.75	0.9	1.5	0.133	A
3	5.96	89.45	3.49	17.99	0.331	5.95	15.80	0.4	0.5	0.089	A

08:15 - 08:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.10	166.53	2.14	15.60	0.712	11.03	9.40	1.4	2.4	0.222	B
2	13.84	207.54	9.81	17.63	0.785	13.71	3.36	1.5	3.4	0.251	C
3	7.30	109.55	4.25	17.35	0.421	7.29	19.26	0.5	0.8	0.106	A

08:30 - 08:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.10	166.53	2.15	15.59	0.712	11.10	9.45	2.4	2.5	0.229	B
2	13.84	207.54	9.87	17.59	0.787	13.83	3.38	3.4	3.6	0.268	C
3	7.30	109.55	4.29	17.32	0.422	7.30	19.40	0.8	0.8	0.106	A

08:45 - 09:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.06	135.97	1.76	15.79	0.574	9.14	7.77	2.5	1.4	0.156	A
2	11.30	169.46	8.12	18.81	0.600	11.43	2.77	3.6	1.6	0.140	A
3	5.96	89.45	3.55	17.94	0.332	5.98	16.01	0.8	0.5	0.089	A

09:00 - 09:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.59	113.87	1.47	15.93	0.477	7.62	6.48	1.4	1.0	0.124	A
2	9.46	141.91	6.78	19.76	0.479	9.50	2.31	1.6	0.9	0.099	A
3	4.99	74.91	2.95	18.45	0.271	5.00	13.33	0.5	0.4	0.079	A

(Default Analysis Set) - 2017 Base, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.11	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		56	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2017 Base	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	4.92	100.000
2		ONE HOUR	✓	4.03	100.000
3		ONE HOUR	✓	10.45	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.10	3.82
	2	1.03	0.00	3.00
	3	7.03	3.42	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	9	2
	2	8	0	3
	3	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.37	0.11	0.6	A	4.51	406.05
2	0.21	0.06	0.3	A	3.70	333.10
3	0.58	0.12	1.4	A	9.59	863.02

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	3.70	55.52	2.56	15.39	0.241	3.68	6.04	0.0	0.3	0.088	A
2	3.04	45.55	2.86	22.50	0.135	3.03	3.38	0.0	0.2	0.053	A
3	7.87	118.01	0.78	20.27	0.388	7.82	5.11	0.0	0.6	0.081	A

17:00 - 17:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	4.42	66.30	3.07	15.13	0.292	4.41	7.24	0.3	0.4	0.096	A
2	3.63	54.39	3.43	22.10	0.164	3.62	4.05	0.2	0.2	0.056	A
3	9.39	140.92	0.93	20.14	0.466	9.38	6.12	0.6	0.9	0.094	A

17:15 - 17:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.41	81.20	3.75	14.79	0.366	5.40	8.86	0.4	0.6	0.110	A
2	4.44	66.61	4.19	21.56	0.206	4.44	4.96	0.2	0.3	0.061	A
3	11.51	172.58	1.14	19.97	0.576	11.47	7.49	0.9	1.4	0.119	A

17:30 - 17:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.41	81.20	3.76	14.79	0.366	5.41	8.88	0.6	0.6	0.110	A
2	4.44	66.61	4.20	21.56	0.206	4.44	4.97	0.3	0.3	0.061	A
3	11.51	172.58	1.14	19.97	0.576	11.50	7.51	1.4	1.4	0.120	A

17:45 - 18:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	4.42	66.30	3.08	15.13	0.292	4.43	7.27	0.6	0.4	0.097	A
2	3.63	54.39	3.44	22.09	0.164	3.63	4.07	0.3	0.2	0.056	A
3	9.39	140.92	0.93	20.14	0.466	9.43	6.14	1.4	0.9	0.095	A

18:00 - 18:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	3.70	55.52	2.58	15.38	0.241	3.71	6.08	0.4	0.3	0.089	A
2	3.04	45.55	2.88	22.48	0.135	3.04	3.41	0.2	0.2	0.054	A
3	7.87	118.01	0.78	20.27	0.388	7.88	5.14	0.9	0.7	0.082	A

(Default Analysis Set) - 2022 Base + Com, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.15	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		26	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2022 Base + Com	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	6.52	100.000
2		ONE HOUR	✓	4.70	100.000
3		ONE HOUR	✓	12.78	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.57	4.95
	2	1.42	0.00	3.28
	3	9.05	3.73	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	9	2
	2	8	0	3
	3	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.49	0.14	1.0	A	5.98	538.18
2	0.25	0.07	0.3	A	4.31	388.15
3	0.72	0.18	2.5	B	11.73	1055.72

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	4.91	73.59	2.79	15.27	0.321	4.87	7.83	0.0	0.5	0.099	A
2	3.54	53.08	3.70	21.91	0.162	3.53	3.96	0.0	0.2	0.057	A
3	9.62	144.36	1.06	20.03	0.480	9.56	6.16	0.0	0.9	0.097	A

17:00 - 17:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.86	87.88	3.35	14.99	0.391	5.85	9.39	0.5	0.7	0.113	A
2	4.23	63.38	4.44	21.39	0.198	4.22	4.75	0.2	0.3	0.061	A
3	11.49	172.38	1.27	19.86	0.579	11.46	7.39	0.9	1.4	0.121	A

17:15 - 17:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.17	107.62	4.09	14.62	0.491	7.15	11.47	0.7	1.0	0.138	A
2	5.17	77.62	5.43	20.70	0.250	5.17	5.81	0.3	0.3	0.067	A
3	14.07	211.12	1.56	19.62	0.718	14.00	9.04	1.4	2.5	0.179	B

17:30 - 17:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.17	107.62	4.11	14.61	0.491	7.17	11.52	1.0	1.0	0.139	A
2	5.17	77.62	5.45	20.69	0.250	5.17	5.83	0.3	0.3	0.067	A
3	14.07	211.12	1.56	19.61	0.718	14.07	9.06	2.5	2.5	0.183	B

17:45 - 18:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.86	87.88	3.38	14.98	0.391	5.88	9.46	1.0	0.7	0.114	A
2	4.23	63.38	4.47	21.37	0.198	4.23	4.79	0.3	0.3	0.061	A
3	11.49	172.38	1.28	19.85	0.579	11.57	7.42	2.5	1.4	0.124	A

18:00 - 18:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	4.91	73.59	2.82	15.26	0.322	4.92	7.90	0.7	0.5	0.100	A
2	3.54	53.08	3.74	21.89	0.162	3.54	4.00	0.3	0.2	0.057	A
3	9.62	144.36	1.07	20.03	0.481	9.66	6.21	1.4	1.0	0.098	A

(Default Analysis Set) - 2022 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.16	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		24	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2022 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	6.88	100.000
2		ONE HOUR	✓	4.87	100.000
3		ONE HOUR	✓	12.98	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.57	5.32
	2	1.52	0.00	3.35
	3	9.25	3.73	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	9	2
	2	8	0	3
	3	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.52	0.15	1.1	A	6.32	568.46
2	0.26	0.07	0.4	A	4.47	401.92
3	0.73	0.19	2.7	B	11.91	1072.24

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.18	77.73	2.79	15.27	0.339	5.15	8.06	0.0	0.5	0.102	A
2	3.66	54.96	3.98	21.72	0.169	3.65	3.96	0.0	0.2	0.058	A
3	9.77	146.62	1.14	19.97	0.490	9.71	6.49	0.0	1.0	0.099	A

17:00 - 17:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.19	92.82	3.35	14.99	0.413	6.18	9.66	0.5	0.7	0.117	A
2	4.38	65.63	4.77	21.16	0.207	4.37	4.75	0.2	0.3	0.062	A
3	11.67	175.08	1.36	19.78	0.590	11.64	7.78	1.0	1.4	0.124	A

17:15 - 17:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.58	113.68	4.09	14.62	0.518	7.55	11.79	0.7	1.1	0.146	A
2	5.36	80.37	5.83	20.42	0.262	5.35	5.81	0.3	0.4	0.069	A
3	14.29	214.42	1.67	19.52	0.732	14.21	9.52	1.4	2.7	0.189	B

17:30 - 17:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.58	113.68	4.11	14.61	0.519	7.58	11.85	1.1	1.1	0.147	A
2	5.36	80.37	5.85	20.40	0.263	5.36	5.83	0.4	0.4	0.069	A
3	14.29	214.42	1.67	19.52	0.732	14.29	9.54	2.7	2.7	0.194	B

17:45 - 18:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.19	92.82	3.38	14.98	0.413	6.21	9.74	1.1	0.7	0.118	A
2	4.38	65.63	4.80	21.14	0.207	4.38	4.79	0.4	0.3	0.062	A
3	11.67	175.08	1.37	19.78	0.590	11.75	7.81	2.7	1.5	0.128	A

18:00 - 18:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.18	77.73	2.82	15.26	0.340	5.20	8.13	0.7	0.5	0.103	A
2	3.66	54.96	4.01	21.69	0.169	3.67	4.00	0.3	0.2	0.058	A
3	9.77	146.62	1.14	19.96	0.490	9.81	6.54	1.5	1.0	0.101	A

(Default Analysis Set) - 2031 Base + Com, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.28	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		5	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2031 Base + Com	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	10.53	100.000
2		ONE HOUR	✓	13.30	100.000
3		ONE HOUR	✓	6.75	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
From		1	2	3
	1	0.00	1.18	9.35
	2	3.98	0.00	9.32
	3	4.65	2.10	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		1	2	3
	1	0	22	1
	2	3	0	1
	3	5	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.75	0.26	3.0	C	9.67	869.90
2	0.85	0.37	5.2	C	12.20	1098.39
3	0.43	0.11	0.8	A	6.19	557.45

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.93	118.95	1.57	15.88	0.499	7.86	6.46	0.0	1.0	0.127	A
2	10.01	150.19	6.98	19.61	0.510	9.94	2.46	0.0	1.0	0.104	A
3	5.08	76.23	2.98	18.42	0.276	5.05	13.94	0.0	0.4	0.080	A

08:00 - 08:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.47	142.04	1.89	15.72	0.602	9.44	7.74	1.0	1.5	0.163	A
2	11.96	179.35	8.38	18.64	0.642	11.91	2.94	1.0	1.8	0.150	A
3	6.07	91.02	3.57	17.93	0.338	6.06	16.72	0.4	0.5	0.090	A

08:15 - 08:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.60	173.96	2.31	15.51	0.748	11.51	9.43	1.5	2.9	0.251	C
2	14.64	219.65	10.21	17.35	0.844	14.44	3.60	1.8	4.8	0.328	C
3	7.43	111.48	4.32	17.29	0.430	7.41	20.33	0.5	0.8	0.108	A

08:30 - 08:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.60	173.96	2.31	15.51	0.748	11.59	9.50	2.9	3.0	0.262	C
2	14.64	219.65	10.29	17.30	0.847	14.62	3.61	4.8	5.2	0.372	C
3	7.43	111.48	4.38	17.25	0.431	7.43	20.53	0.8	0.8	0.109	A

08:45 - 09:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.47	142.04	1.89	15.72	0.602	9.56	7.84	3.0	1.6	0.170	B
2	11.96	179.35	8.49	18.56	0.644	12.18	2.97	5.2	1.9	0.164	A
3	6.07	91.02	3.65	17.86	0.340	6.08	17.01	0.8	0.6	0.091	A

09:00 - 09:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.93	118.95	1.58	15.87	0.500	7.97	6.52	1.6	1.0	0.131	A
2	10.01	150.19	7.07	19.55	0.512	10.07	2.48	1.9	1.1	0.108	A
3	5.08	76.23	3.02	18.39	0.276	5.09	14.12	0.6	0.4	0.080	A

(Default Analysis Set) - 2031 Base + Com, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.18	B

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		18	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2031 Base + Com	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	7.00	100.000
2		ONE HOUR	✓	5.10	100.000
3		ONE HOUR	✓	13.70	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.67	5.33
	2	1.50	0.00	3.60
	3	9.68	4.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	9	2
	2	8	0	3
	3	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.53	0.15	1.2	A	6.42	578.10
2	0.28	0.07	0.4	A	4.68	421.19
3	0.77	0.23	3.3	B	12.57	1131.42

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.27	79.05	3.00	15.17	0.348	5.23	8.36	0.0	0.5	0.104	A
2	3.84	57.59	3.99	21.71	0.177	3.82	4.25	0.0	0.2	0.058	A
3	10.31	154.71	1.12	19.98	0.516	10.24	6.69	0.0	1.1	0.104	A

17:00 - 17:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.29	94.39	3.60	14.87	0.423	6.28	10.03	0.5	0.8	0.120	A
2	4.58	68.77	4.78	21.15	0.217	4.58	5.09	0.2	0.3	0.063	A
3	12.32	184.74	1.35	19.79	0.622	12.28	8.02	1.1	1.6	0.135	A

17:15 - 17:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.71	115.61	4.39	14.47	0.533	7.68	12.24	0.8	1.2	0.152	A
2	5.62	84.23	5.85	20.40	0.275	5.61	6.22	0.3	0.4	0.071	A
3	15.08	226.26	1.65	19.54	0.772	14.98	9.81	1.6	3.2	0.218	B

17:30 - 17:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.71	115.61	4.42	14.46	0.533	7.71	12.31	1.2	1.2	0.153	A
2	5.62	84.23	5.87	20.39	0.275	5.62	6.26	0.4	0.4	0.071	A
3	15.08	226.26	1.65	19.54	0.772	15.08	9.84	3.2	3.3	0.227	B

17:45 - 18:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.29	94.39	3.64	14.85	0.424	6.32	10.13	1.2	0.8	0.122	A
2	4.58	68.77	4.81	21.13	0.217	4.59	5.15	0.4	0.3	0.063	A
3	12.32	184.74	1.35	19.79	0.622	12.42	8.06	3.3	1.7	0.140	A

18:00 - 18:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.27	79.05	3.04	15.15	0.348	5.28	8.45	0.8	0.6	0.105	A
2	3.84	57.59	4.03	21.68	0.177	3.84	4.29	0.3	0.2	0.059	A
3	10.31	154.71	1.13	19.97	0.516	10.35	6.74	1.7	1.1	0.106	A

(Default Analysis Set) - 2031 Base + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.30	C

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		4	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2031 Base + Dev	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	10.67	100.000
2		ONE HOUR	✓	13.47	100.000
3		ONE HOUR	✓	7.08	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.18	9.48
	2	4.15	0.00	9.32
	3	4.98	2.10	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	22	1
	2	3	0	1
	3	5	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.76	0.27	3.1	C	9.79	880.91
2	0.86	0.41	5.8	C	12.36	1112.15
3	0.46	0.11	0.9	A	6.50	584.98

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.03	120.46	1.57	15.88	0.506	7.96	6.83	0.0	1.0	0.129	A
2	10.14	152.08	7.08	19.55	0.519	10.07	2.46	0.0	1.1	0.106	A
3	5.33	79.99	3.10	18.32	0.291	5.30	14.04	0.0	0.4	0.082	A

08:00 - 08:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.59	143.84	1.88	15.72	0.610	9.55	8.19	1.0	1.6	0.166	A
2	12.11	181.59	8.49	18.55	0.652	12.05	2.94	1.1	1.9	0.155	A
3	6.37	95.52	3.71	17.80	0.358	6.36	16.83	0.4	0.6	0.093	A

08:15 - 08:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.74	176.16	2.31	15.51	0.757	11.65	9.97	1.6	3.0	0.260	C
2	14.83	222.41	10.36	17.25	0.860	14.60	3.60	1.9	5.3	0.355	C
3	7.80	116.98	4.50	17.15	0.455	7.78	20.45	0.6	0.9	0.114	A

08:30 - 08:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.74	176.16	2.31	15.51	0.757	11.74	10.05	3.0	3.1	0.272	C
2	14.83	222.41	10.44	17.20	0.862	14.80	3.61	5.3	5.8	0.412	C
3	7.80	116.98	4.56	17.10	0.456	7.80	20.67	0.9	0.9	0.115	A

08:45 - 09:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.59	143.84	1.89	15.72	0.610	9.69	8.30	3.1	1.7	0.173	B
2	12.11	181.59	8.61	18.47	0.655	12.36	2.97	5.8	2.0	0.173	B
3	6.37	95.52	3.81	17.73	0.359	6.39	17.16	0.9	0.6	0.094	A

09:00 - 09:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.03	120.46	1.58	15.87	0.506	8.07	6.90	1.7	1.1	0.133	A
2	10.14	152.08	7.17	19.48	0.521	10.20	2.48	2.0	1.1	0.110	A
3	5.33	79.99	3.14	18.29	0.292	5.34	14.23	0.6	0.4	0.083	A

(Default Analysis Set) - 2031 Base + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.18	B

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		16	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	7.28	100.000
2		ONE HOUR	✓	5.20	100.000
3		ONE HOUR	✓	13.83	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
		1	2	3
From	1	0.00	1.67	5.62
	2	1.60	0.00	3.60
	3	9.82	4.02	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
		1	2	3
From	1	0	9	2
	2	8	0	3
	3	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.55	0.16	1.3	A	6.68	601.50
2	0.28	0.07	0.4	A	4.77	429.44
3	0.78	0.24	3.5	B	12.69	1142.43

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.48	82.25	3.00	15.17	0.362	5.44	8.54	0.0	0.6	0.106	A
2	3.91	58.72	4.20	21.56	0.182	3.90	4.25	0.0	0.2	0.059	A
3	10.41	156.22	1.20	19.92	0.523	10.34	6.90	0.0	1.1	0.105	A

17:00 - 17:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.55	98.21	3.60	14.87	0.440	6.53	10.23	0.6	0.8	0.124	A
2	4.67	70.12	5.04	20.97	0.223	4.67	5.09	0.2	0.3	0.064	A
3	12.44	186.54	1.44	19.72	0.631	12.40	8.27	1.1	1.7	0.138	A

17:15 - 17:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.02	120.29	4.39	14.47	0.554	7.99	12.49	0.8	1.3	0.159	A
2	5.73	85.88	6.16	20.19	0.284	5.72	6.22	0.3	0.4	0.072	A
3	15.23	228.46	1.76	19.45	0.783	15.11	10.12	1.7	3.4	0.229	B

17:30 - 17:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.02	120.29	4.42	14.46	0.555	8.02	12.56	1.3	1.3	0.161	A
2	5.73	85.88	6.18	20.17	0.284	5.73	6.26	0.4	0.4	0.072	A
3	15.23	228.46	1.76	19.44	0.783	15.22	10.15	3.4	3.5	0.240	B

17:45 - 18:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	6.55	98.21	3.65	14.84	0.441	6.58	10.35	1.3	0.8	0.126	A
2	4.67	70.12	5.07	20.95	0.223	4.68	5.15	0.4	0.3	0.064	A
3	12.44	186.54	1.44	19.71	0.631	12.55	8.31	3.5	1.8	0.144	A

18:00 - 18:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.48	82.25	3.04	15.15	0.362	5.50	8.63	0.8	0.6	0.107	A
2	3.91	58.72	4.24	21.53	0.182	3.92	4.29	0.3	0.2	0.059	A
3	10.41	156.22	1.21	19.91	0.523	10.46	6.95	1.8	1.1	0.108	A

(Default Analysis Set) - 2031 Base Sensitivity, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.52	D

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		-4	Arm 2

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2031 Base Sensitivity	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	10.88	100.000
2		ONE HOUR	✓	14.85	100.000
3		ONE HOUR	✓	7.88	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
From		1	2	3
	1	0.00	1.23	9.65
	2	4.27	0.00	10.58
	3	5.07	2.82	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		1	2	3
	1	0	22	1
	2	3	0	1
	3	5	11	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.79	0.32	3.8	C	9.99	898.81
2	0.96	0.88	13.6	F	13.63	1226.40
3	0.51	0.13	1.1	A	7.23	651.05

Main Results for each time segment

07:45 - 08:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.19	122.90	2.11	15.61	0.525	8.12	6.98	0.0	1.1	0.136	A
2	11.18	167.70	7.20	19.46	0.574	11.09	3.03	0.0	1.3	0.120	A
3	5.93	89.02	3.19	18.25	0.325	5.90	15.10	0.0	0.5	0.087	A

08:00 - 08:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.78	146.76	2.53	15.40	0.635	9.74	8.36	1.1	1.7	0.181	B
2	13.35	200.25	8.64	18.45	0.723	13.27	3.63	1.3	2.5	0.193	B
3	7.09	106.30	3.81	17.72	0.400	7.07	18.10	0.5	0.7	0.100	A

08:15 - 08:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.98	179.74	3.09	15.12	0.792	11.86	10.10	1.7	3.6	0.305	C
2	16.35	245.25	10.52	17.14	0.954	15.80	4.44	2.5	10.8	0.601	E
3	8.68	130.20	4.54	17.11	0.507	8.65	21.78	0.7	1.1	0.126	A

08:30 - 08:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	11.98	179.74	3.10	15.12	0.793	11.97	10.22	3.6	3.8	0.325	C
2	16.35	245.25	10.62	17.07	0.958	16.16	4.46	10.8	13.6	0.879	F
3	8.68	130.20	4.64	17.03	0.510	8.68	22.13	1.1	1.1	0.128	A

08:45 - 09:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	9.78	146.76	2.54	15.40	0.635	9.91	8.61	3.8	1.9	0.192	B
2	13.35	200.25	8.79	18.35	0.728	14.07	3.66	13.6	2.9	0.273	C
3	7.09	106.30	4.04	17.53	0.404	7.11	18.81	1.1	0.7	0.103	A

09:00 - 09:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.19	122.90	2.13	15.60	0.525	8.24	7.06	1.9	1.2	0.141	A
2	11.18	167.70	7.31	19.39	0.577	11.28	3.06	2.9	1.4	0.127	A
3	5.93	89.02	3.24	18.20	0.326	5.95	15.34	0.7	0.5	0.087	A

(Default Analysis Set) - 2031 Base Sensitivity, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	1,2,3	0.23	B

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		9	Arm 3

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2031 Base Sensitivity	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/min)	Scaling Factor (%)
1		ONE HOUR	✓	7.95	100.000
2		ONE HOUR	✓	6.18	100.000
3		ONE HOUR	✓	14.80	100.000

Origin-Destination Data

Demand (PCU/min)

	To			
From		1	2	3
	1	0.00	1.67	6.28
	2	1.62	0.00	4.57
	3	10.08	4.72	0.00

Vehicle Mix

Heavy Vehicle Percentages

	To			
From		1	2	3
	1	0	9	2
	2	8	0	3
	3	2	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (PCU)	Max LOS	Average Demand (PCU/min)	Total Junction Arrivals (PCU)
1	0.62	0.19	1.7	B	7.30	656.56
2	0.35	0.08	0.5	A	5.67	510.65
3	0.84	0.32	5.0	C	13.58	1222.27

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.99	89.78	3.52	14.90	0.402	5.94	8.75	0.0	0.7	0.115	A
2	4.66	69.83	4.69	21.21	0.219	4.64	4.77	0.0	0.3	0.063	A
3	11.14	167.13	1.21	19.91	0.560	11.06	8.12	0.0	1.3	0.114	A

17:00 - 17:15

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.15	107.20	4.22	14.55	0.491	7.13	10.48	0.7	1.0	0.139	A
2	5.56	83.38	5.63	20.56	0.270	5.55	5.72	0.3	0.4	0.069	A
3	13.30	199.57	1.45	19.70	0.675	13.25	9.73	1.3	2.1	0.156	A

17:15 - 17:30

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.75	131.30	5.14	14.10	0.621	8.71	12.76	1.0	1.6	0.190	B
2	6.81	102.12	6.88	19.68	0.346	6.80	6.96	0.4	0.5	0.081	A
3	16.30	244.43	1.78	19.43	0.839	16.12	11.90	2.1	4.7	0.292	C

17:30 - 17:45

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	8.75	131.30	5.19	14.07	0.622	8.75	12.87	1.6	1.7	0.194	B
2	6.81	102.12	6.92	19.66	0.346	6.81	7.02	0.5	0.5	0.081	A
3	16.30	244.43	1.78	19.43	0.839	16.28	11.94	4.7	5.0	0.318	C

17:45 - 18:00

Arm	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	7.15	107.20	4.30	14.52	0.492	7.19	10.65	1.7	1.0	0.142	A
2	5.56	83.38	5.68	20.52	0.271	5.57	5.81	0.5	0.4	0.070	A
3	13.30	199.57	1.46	19.70	0.675	13.49	9.80	5.0	2.2	0.168	B

18:00 - 18:15

Am	Total Demand (PCU/min)	Junction Arrivals (PCU)	Circulating flow (PCU/min)	Capacity (PCU/min)	RFC	Throughput (PCU/min)	Throughput (exit side) (PCU/min)	Start queue (PCU)	End queue (PCU)	Delay (min)	LOS
1	5.99	89.78	3.57	14.88	0.402	6.01	8.85	1.0	0.7	0.117	A
2	4.66	69.83	4.75	21.18	0.220	4.66	4.83	0.4	0.3	0.063	A
3	11.14	167.13	1.22	19.90	0.560	11.20	8.19	2.2	1.3	0.118	A

Junctions 9											
ARCADY 9 - Roundabout Module											
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2018											
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Filename: Main Rd-Canal Rd-Main Rd COMBINED 550 - No Thru Link.j9

Path: P:\14-111 - Land West of Bilsham Road, Yapton\Trans\Arcady\COMBINED 550 Units\Main Rd-Canal Rd-Main Rd

Report generation date: 23/02/2018 09:37:06

- »(Default Analysis Set) - 2022 Base + Dev, AM
- »(Default Analysis Set) - 2022 Base + Dev, PM
- »(Default Analysis Set) - 2031 Base + Dev, AM
- »(Default Analysis Set) - 2031 Base + Dev, PM
- »(Default Analysis Set) - 2031 Base Sensitivity, AM
- »(Default Analysis Set) - 2031 Base Sensitivity, PM

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (min)	RFC	LOS	Junction Delay (min)	Network Residual Capacity	Queue (Veh)	Delay (min)	RFC	LOS	Junction Delay (min)	Network Residual Capacity
	A1 - 2022 Base + Dev											
Arm A	3.0	0.00	0.75	A	0.00	11 % [Arm B]	0.7	0.00	0.40	A	0.00	61 % [Arm C]
Arm B	1.7	0.01	0.63	A			0.2	0.00	0.14	A		
Arm C	0.5	0.00	0.33	A			1.7	0.00	0.63	A		
	A1 - 2031 Base + Dev											
Arm A	4.0	0.00	0.80	A	0.00	4 % [Arm B]	0.7	0.00	0.42	A	0.00	51 % [Arm C]
Arm B	4.5	0.03	0.82	A			0.2	0.00	0.16	A		
Arm C	0.5	0.00	0.35	A			2.1	0.00	0.67	A		
	A1 - 2031 Base Sensitivity											
Arm A	4.2	0.00	0.81	A	0.01	3 % [Arm B]	0.8	0.00	0.44	A	0.00	48 % [Arm C]
Arm B	5.9	0.04	0.86	A			0.2	0.00	0.16	A		
Arm C	0.6	0.00	0.36	A			2.2	0.00	0.69	A		

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

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

File summary

File Description

Title	Main Rd-Canal Rd-Main Rd
Location	Yapton
Site number	
Date	18/12/2015
Version	
Status	Completed
Identifier	
Client	Gleeson
Jobnumber	14-110
Enumerator	msherdan [BAS-ODYSSEY-03]
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	mph	Veh	Veh	perHour	min	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)
JUNCTIONS 9	5.75			✓	Delay	0.85	0.60	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022 Base + Dev	AM	ONE HOUR	07:30	09:00	15	✓
D6	2022 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 Base + Dev	AM	ONE HOUR	07:30	09:00	15	✓
D8	2031 Base + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 Base Sensitivity	AM	ONE HOUR	07:30	09:00	15	✓
D10	2031 Base Sensitivity	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2022 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		11	Arm B

Arms

Arms

Arm	Name	Description
A	B2233 Main Rd NB	
B	Canal Road	
C	B2233 Main Road SB	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	3.00	3.00	4.10	5.0	11.50	6.30	0.0	
B	3.20	3.00	6.50	5.0	9.50	8.80	0.0	
C	3.30	3.30	3.40	0.5	18.00	17.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
A	✓	0.500	105000	0.500	105000
B	✓	0.500	51000	0.500	51000
C	✓	0.500	90000	0.500	90000

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022 Base + Dev	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	67620	100.000
B		ONE HOUR	✓	7800	100.000
C		ONE HOUR	✓	26280	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	600	67020
	B	1140	0	6660
	C	24840	1440	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	10	1
	B	8	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.75	0.00	3.0	A	62049	93074
B	0.63	0.01	1.7	A	7157	10736
C	0.33	0.00	0.5	A	24115	36173

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	50908	12727	1084	98931	0.515	50904	19558	0.0	1.1	0.001	A
B	5872	1468	50452	25227	0.233	5871	1536	0.0	0.3	0.003	A
C	19785	4946	858	87876	0.225	19784	55465	0.0	0.3	0.001	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	60789	15197	1295	98931	0.614	60787	23355	1.1	1.6	0.002	A
B	7012	1753	60247	20337	0.345	7011	1834	0.3	0.5	0.004	A
C	23625	5906	1025	87787	0.269	23625	66234	0.3	0.4	0.001	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	74451	18613	1585	98931	0.753	74445	28603	1.6	3.0	0.002	A
B	8588	2147	73785	13580	0.632	8583	2246	0.5	1.7	0.012	A
C	28935	7234	1254	87666	0.330	28934	81113	0.4	0.5	0.001	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	74451	18613	1585	98931	0.753	74451	28605	3.0	3.0	0.002	A
B	8588	2147	73790	13577	0.633	8588	2246	1.7	1.7	0.012	A
C	28935	7234	1255	87665	0.330	28935	81123	0.5	0.5	0.001	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	60789	15197	1295	98931	0.614	60795	23357	3.0	1.6	0.002	A
B	7012	1753	60255	20333	0.345	7017	1834	1.7	0.5	0.005	A
C	23625	5906	1026	87787	0.269	23626	66246	0.5	0.4	0.001	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	50908	12727	1084	98931	0.515	50910	19560	1.6	1.1	0.001	A
B	5872	1468	50458	25224	0.233	5873	1536	0.5	0.3	0.003	A
C	19785	4946	858	87876	0.225	19785	55473	0.4	0.3	0.001	A

(Default Analysis Set) - 2022 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 95% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		61	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2022 Base + Dev	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		ONE HOUR	✓	35400	100.000
B		ONE HOUR	✓	4200	100.000
C		ONE HOUR	✓	50640	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	2640	32760
	B	1560	0	2640
	C	46860	3780	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.40	0.00	0.7	A	32484	48725
B	0.14	0.00	0.2	A	3854	5781
C	0.63	0.00	1.7	A	46468	69702

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26651	6663	2846	98182	0.271	26649	36450	0.0	0.4	0.001	A
B	3162	790	24662	38422	0.082	3162	4833	0.0	0.1	0.002	A
C	38124	9531	1174	88462	0.431	38121	26649	0.0	0.8	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	31824	7956	3398	98182	0.324	31823	43527	0.4	0.5	0.001	A
B	3776	944	29450	35980	0.105	3776	5771	0.1	0.1	0.002	A
C	45524	11381	1402	88349	0.515	45523	31823	0.8	1.1	0.001	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	38976	9744	4162	98182	0.397	38975	53309	0.5	0.7	0.001	A
B	4624	1156	36069	32605	0.142	4624	7068	0.1	0.2	0.002	A
C	55755	13939	1718	88193	0.632	55753	38975	1.1	1.7	0.002	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	38976	9744	4162	98182	0.397	38976	53311	0.7	0.7	0.001	A
B	4624	1156	36069	32605	0.142	4624	7069	0.2	0.2	0.002	A
C	55755	13939	1718	88193	0.632	55755	38976	1.7	1.7	0.002	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	31824	7956	3398	98182	0.324	31825	43531	0.7	0.5	0.001	A
B	3776	944	29451	35980	0.105	3776	5772	0.2	0.1	0.002	A
C	45524	11381	1402	88349	0.515	45527	31825	1.7	1.1	0.001	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26651	6663	2846	98182	0.271	26651	36454	0.5	0.4	0.001	A
B	3162	790	24664	38421	0.082	3162	4833	0.1	0.1	0.002	A
C	38124	9531	1174	88462	0.431	38126	26651	1.1	0.8	0.001	A

(Default Analysis Set) - 2031 Base + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		4	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2031 Base + Dev	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	71820	100.000
B		ONE HOUR	✓	8400	100.000
C		ONE HOUR	✓	27840	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	660	71160
	B	1200	0	7200
	C	26280	1560	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	10	1
	B	8	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.80	0.00	4.0	A	65903	98855
B	0.82	0.03	4.5	A	7708	11562
C	0.35	0.00	0.5	A	25546	38320

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	54070	13517	1174	98928	0.547	54065	20687	0.0	1.2	0.001	A
B	6324	1581	53568	23677	0.267	6322	1671	0.0	0.4	0.003	A
C	20959	5240	903	87854	0.239	20958	58988	0.0	0.3	0.001	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	64565	16141	1402	98928	0.653	64562	24703	1.2	1.9	0.002	A
B	7551	1888	63969	18485	0.409	7550	1996	0.4	0.7	0.005	A
C	25028	6257	1079	87761	0.285	25027	70440	0.3	0.4	0.001	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	79075	19769	1718	98928	0.799	79067	30253	1.9	4.0	0.003	A
B	9249	2312	78340	11309	0.818	9234	2444	0.7	4.4	0.029	A
C	30652	7663	1319	87633	0.350	30652	86255	0.4	0.5	0.001	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	79075	19769	1718	98928	0.799	79075	30256	4.0	4.0	0.003	A
B	9249	2312	78349	11305	0.818	9248	2444	4.4	4.5	0.029	A
C	30652	7663	1321	87632	0.350	30652	86276	0.5	0.5	0.001	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	64565	16141	1402	98928	0.653	64573	24707	4.0	1.9	0.002	A
B	7551	1888	63980	18479	0.409	7567	1996	4.5	0.7	0.006	A
C	25028	6257	1081	87759	0.285	25028	70465	0.5	0.4	0.001	A

08:45 - 09:00

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	54070	13517	1174	98928	0.547	54072	20689	1.9	1.2	0.001	A
B	6324	1581	53576	23674	0.267	6325	1671	0.7	0.4	0.003	A
C	20959	5240	904	87853	0.239	20960	58997	0.4	0.3	0.001	A

(Default Analysis Set) - 2031 Base + Dev, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 95% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		51	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2031 Base + Dev	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		ONE HOUR	✓	37440	100.000
B		ONE HOUR	✓	4500	100.000
C		ONE HOUR	✓	53880	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	2820	34620
	B	1680	0	2820
	C	49800	4080	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.42	0.00	0.7	A	34356	51534
B	0.16	0.00	0.2	A	4129	6194
C	0.67	0.00	2.1	A	49441	74162

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	28187	7047	3071	98184	0.287	28185	38754	0.0	0.4	0.001	A
B	3388	847	26062	37708	0.090	3387	5194	0.0	0.1	0.002	A
C	40564	10141	1265	88416	0.459	40560	28185	0.0	0.8	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	33658	8414	3668	98184	0.343	33657	46278	0.4	0.5	0.001	A
B	4045	1011	31122	35128	0.115	4045	6203	0.1	0.1	0.002	A
C	48437	12109	1510	88295	0.549	48435	33657	0.8	1.2	0.001	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	41222	10306	4492	98184	0.420	41222	56678	0.5	0.7	0.001	A
B	4955	1239	38117	31561	0.157	4954	7597	0.1	0.2	0.002	A
C	59323	14831	1850	88127	0.673	59319	41221	1.2	2.1	0.002	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	41222	10306	4492	98184	0.420	41222	56681	0.7	0.7	0.001	A
B	4955	1239	38117	31560	0.157	4955	7597	0.2	0.2	0.002	A
C	59323	14831	1850	88127	0.673	59323	41222	2.1	2.1	0.002	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	33658	8414	3668	98184	0.343	33659	46283	0.7	0.5	0.001	A
B	4045	1011	31123	35127	0.115	4046	6203	0.2	0.1	0.002	A
C	48437	12109	1510	88295	0.549	48440	33659	2.1	1.2	0.001	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	28187	7047	3072	98184	0.287	28187	38758	0.5	0.4	0.001	A
B	3388	847	26064	37707	0.090	3388	5195	0.1	0.1	0.002	A
C	40564	10141	1265	88416	0.459	40565	28187	1.2	0.8	0.001	A

(Default Analysis Set) - 2031 Base Sensitivity, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.01	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		3	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2031 Base Sensitivity	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	72720	100.000
B		ONE HOUR	✓	8400	100.000
C		ONE HOUR	✓	28260	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	660	72060
	B	1200	0	7200
	C	26700	1560	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	10	1
	B	8	0	0
	C	2	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.81	0.00	4.2	A	66729	100093
B	0.86	0.04	5.9	A	7708	11562
C	0.36	0.00	0.6	A	25932	38898

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	54747	13687	1174	98929	0.553	54742	21003	0.0	1.2	0.001	A
B	6324	1581	54246	23339	0.271	6322	1671	0.0	0.4	0.004	A
C	21276	5319	903	87852	0.242	21274	59665	0.0	0.3	0.001	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	65374	16343	1402	98929	0.661	65371	25081	1.2	1.9	0.002	A
B	7551	1888	64778	18081	0.418	7550	1996	0.4	0.7	0.006	A
C	25405	6351	1079	87759	0.289	25405	71249	0.3	0.4	0.001	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	80066	20016	1718	98929	0.809	80057	30715	1.9	4.2	0.003	A
B	9249	2312	79330	10815	0.855	9228	2444	0.7	5.8	0.037	A
C	31115	7779	1318	87632	0.355	31114	87241	0.4	0.6	0.001	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	80066	20016	1718	98929	0.809	80066	30718	4.2	4.2	0.003	A
B	9249	2312	79340	10810	0.856	9248	2444	5.8	5.9	0.038	A
C	31115	7779	1321	87630	0.355	31115	87267	0.6	0.6	0.001	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	65374	16343	1402	98929	0.661	65383	25085	4.2	1.9	0.002	A
B	7551	1888	64790	18075	0.418	7572	1996	5.9	0.7	0.006	A
C	25405	6351	1082	87757	0.289	25406	71280	0.6	0.4	0.001	A

08:45 - 09:00

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	54747	13687	1174	98929	0.553	54750	21005	1.9	1.2	0.001	A
B	6324	1581	54253	23335	0.271	6325	1671	0.7	0.4	0.004	A
C	21276	5319	904	87852	0.242	21276	59675	0.4	0.3	0.001	A

(Default Analysis Set) - 2031 Base Sensitivity, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 95% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		48	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2031 Base Sensitivity	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		ONE HOUR	✓	39480	100.000
B		ONE HOUR	✓	4500	100.000
C		ONE HOUR	✓	55140	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	2820	36660
	B	1680	0	2820
	C	51060	4080	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	0	2
	B	0	0	0
	C	1	2	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.44	0.00	0.8	A	36228	54341
B	0.16	0.00	0.2	A	4129	6194
C	0.69	0.00	2.2	A	50597	75896

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	29723	7431	3071	98176	0.303	29721	39702	0.0	0.4	0.001	A
B	3388	847	27598	36925	0.092	3387	5194	0.0	0.1	0.002	A
C	41512	10378	1265	88418	0.470	41509	29721	0.0	0.9	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	35492	8873	3668	98176	0.362	35491	47411	0.4	0.6	0.001	A
B	4045	1011	32956	34192	0.118	4045	6203	0.1	0.1	0.002	A
C	49570	12392	1510	88297	0.561	49568	35491	0.9	1.3	0.002	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	43468	10867	4492	98176	0.443	43467	58064	0.6	0.8	0.001	A
B	4955	1239	40363	30415	0.163	4954	7597	0.1	0.2	0.002	A
C	60710	15178	1850	88129	0.689	60707	43467	1.3	2.2	0.002	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	43468	10867	4492	98176	0.443	43468	58068	0.8	0.8	0.001	A
B	4955	1239	40363	30415	0.163	4955	7597	0.2	0.2	0.002	A
C	60710	15178	1850	88129	0.689	60710	43468	2.2	2.2	0.002	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	35492	8873	3668	98176	0.362	35493	47416	0.8	0.6	0.001	A
B	4045	1011	32957	34192	0.118	4046	6203	0.2	0.1	0.002	A
C	49570	12392	1510	88297	0.561	49573	35493	2.2	1.3	0.002	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	29723	7431	3072	98176	0.303	29723	39707	0.6	0.4	0.001	A
B	3388	847	27600	36924	0.092	3388	5195	0.1	0.1	0.002	A
C	41512	10378	1265	88418	0.470	41514	29723	1.3	0.9	0.001	A

Junctions 9											
ARCADY 9 - Roundabout Module											
Version: 9.0.1.4646 [] © Copyright TRL Limited, 2018											
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Filename: North End Rd-Yapton Rd-Main Rd Combined 550 - No Tru Link.j9

Path: P:\14-111 - Land West of Bilsham Road, Yapton\Trans\Arcady\COMBINED 550 Units\North End Rd-Yapton Rd-Main Rd

Report generation date: 23/02/2018 09:35:24

- »(Default Analysis Set) - 2022 Peak + Dev, AM
- »(Default Analysis Set) - 2022 Peak + Dev, PM
- »(Default Analysis Set) - 2031 Peak + Dev, AM
- »(Default Analysis Set) - 2031 Peak + Dev, PM
- »(Default Analysis Set) - 2017 Peak + Dev, AM
- »(Default Analysis Set) - 2017 Peak + Dev, PM
- »(Default Analysis Set) - 2031 Peak Sensitivity, AM
- »(Default Analysis Set) - 2031 Peak Sensitivity, PM

Summary of junction performance

	AM						PM					
	Queue (Veh)	Delay (min)	RFC	LOS	Junction Delay (min)	Network Residual Capacity	Queue (Veh)	Delay (min)	RFC	LOS	Junction Delay (min)	Network Residual Capacity
	A1 - 2022 Peak + Dev											
Arm A	1.2	0.00	0.55	A	0.00	25 % [Arm C]	1.7	0.00	0.63	A	0.00	19 % [Arm B]
Arm B	0.3	0.00	0.21	A			3.6	0.01	0.78	A		
Arm C	4.4	0.00	0.81	A			0.6	0.00	0.36	A		
	A1 - 2031 Peak + Dev											
Arm A	1.4	0.00	0.59	A	0.00	18 % [Arm C]	2.1	0.00	0.68	A	0.00	12 % [Arm B]
Arm B	0.3	0.00	0.23	A			5.6	0.01	0.85	A		
Arm C	6.5	0.00	0.87	A			0.6	0.00	0.38	A		
	A1 - 2017 Peak + Dev											
Arm A	0.6	0.00	0.36	A	0.00	64 % [Arm C]	0.9	0.00	0.47	A	0.00	55 % [Arm B]
Arm B	0.2	0.00	0.15	A			1.2	0.00	0.54	A		
Arm C	1.7	0.00	0.62	A			0.4	0.00	0.28	A		
	A1 - 2031 Peak Sensitivity											
Arm A	1.5	0.00	0.60	A	0.00	17 % [Arm C]	2.7	0.00	0.73	A	0.01	8 % [Arm B]
Arm B	0.3	0.00	0.23	A			8.8	0.02	0.90	A		
Arm C	7.0	0.00	0.88	A			0.7	0.00	0.41	A		

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

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

File summary

File Description

Title	North End Rd-Yapton Rd-Main Rd
Location	Yapton
Site number	
Date	18/12/2015
Version	
Status	Completed
Identifier	
Client	Gleeson
Jobnumber	14-110
Enumerator	msheridan [BAS-ODYSSEY-03]
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	mph	Veh	Veh	perHour	min	-Min	perMin

Analysis Options

Mini-roundabout model	Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	Residual capacity criteria type	RFC Threshold	Average Delay threshold (min)	Queue threshold (PCU)
JUNCTIONS 9	5.75			✓	Delay	0.85	0.60	20.00

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022 Peak + Dev	AM	ONE HOUR	07:30	09:00	15	✓
D6	2022 Peak + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 Peak + Dev	AM	ONE HOUR	07:30	09:00	15	✓
D8	2031 Peak + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D9	2017 Peak + Dev	AM	ONE HOUR	07:30	09:00	15	✓
D10	2017 Peak + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D11	2031 Peak Sensitivity	AM	ONE HOUR	07:30	09:00	15	✓
D12	2031 Peak Sensitivity	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	(Default Analysis Set)	✓	100.000	100.000

(Default Analysis Set) - 2022 Peak + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		25	Arm C

Arms

Arms

Arm	Name	Description
A	B2233 Yapton Road	
B	B2132 North End Road	
C	B2233 Main Road	

Mini Roundabout Geometry

Arm	Approach road half-width (m)	Minimum approach road half-width (m)	Entry width (m)	Effective flare length (m)	Distance to next arm (m)	Entry corner kerb line distance (m)	Gradient over 50m (%)	Kerbed central island
A	4.30	4.30	7.00	15.0	10.50	7.50	0.0	
B	3.50	3.50	4.00	6.5	9.50	5.50	0.0	
C	5.00	3.50	6.00	0.5	13.90	14.00	0.0	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final slope	Final intercept (PCU/hr)
A	✓	0.500	120000	0.500	120000
B	✓	0.500	53100	0.500	53100
C	✓	0.500	150000	0.500	150000

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

Arm Capacity Adjustments

Arm	Type	Reason	Percentage capacity adjustment (%)
A	Percentage		50.00

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2022 Peak + Dev	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	24600	100.000
B		ONE HOUR	✓	7620	100.000
C		ONE HOUR	✓	72180	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	5160	19440
	B	2040	0	5580
	C	36900	35280	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	1	1
	B	4	0	6
	C	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.55	0.00	1.2	A	22573	33860
B	0.21	0.00	0.3	A	6992	10488
C	0.81	0.00	4.4	A	66233	99350

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	18520	4630	26558	52635	0.352	18518	29313	0.0	0.5	0.002	A
B	5737	1434	14634	43341	0.132	5736	30442	0.0	0.2	0.002	A
C	54341	13585	1536	97570	0.557	54336	18834	0.0	1.3	0.001	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	22115	5529	31715	51320	0.431	22114	35005	0.5	0.8	0.002	A
B	6850	1713	17475	41981	0.163	6850	36353	0.2	0.2	0.002	A
C	64888	16222	1834	97570	0.665	64885	22492	1.3	2.0	0.002	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	27085	6771	38839	49504	0.547	27083	42869	0.8	1.2	0.003	A
B	8390	2097	21402	40100	0.209	8389	44520	0.2	0.3	0.002	A
C	79471	19868	2246	97570	0.815	79462	27546	2.0	4.4	0.003	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	27085	6771	38844	49503	0.547	27085	42874	1.2	1.2	0.003	A
B	8390	2097	21404	40100	0.209	8390	44525	0.3	0.3	0.002	A
C	79471	19868	2246	97570	0.815	79471	27548	4.4	4.4	0.003	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	22115	5529	31721	51319	0.431	22117	35011	1.2	0.8	0.002	A
B	6850	1713	17478	41980	0.163	6850	36360	0.3	0.2	0.002	A
C	64888	16222	1834	97570	0.665	64898	22494	4.4	2.0	0.002	A

08:45 - 09:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	18520	4630	26562	52634	0.352	18521	29318	0.8	0.5	0.002	A
B	5737	1434	14636	43340	0.132	5737	30447	0.2	0.2	0.002	A
C	54341	13585	1536	97570	0.557	54344	18837	2.0	1.3	0.001	A

(Default Analysis Set) - 2022 Peak + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		19	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2022 Peak + Dev	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		ONE HOUR	✓	32580	100.000
B		ONE HOUR	✓	25800	100.000
C		ONE HOUR	✓	31980	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	2580	30000
	B	3600	0	22200
	C	22680	9300	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	4	1
	B	2	0	0
	C	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.63	0.00	1.7	A	29896	44844
B	0.78	0.01	3.6	A	23675	35512
C	0.36	0.00	0.6	A	29345	44018

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	24528	6132	7001	57486	0.427	24525	19784	0.0	0.7	0.002	A
B	19424	4856	22583	41580	0.467	19420	8943	0.0	0.9	0.003	A
C	24076	6019	2710	98442	0.245	24075	39293	0.0	0.3	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	29289	7322	8360	57140	0.513	29287	23625	0.7	1.1	0.002	A
B	23194	5798	26968	39371	0.589	23191	10680	0.9	1.4	0.004	A
C	28749	7187	3236	98442	0.292	28749	46924	0.3	0.4	0.001	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	35871	8968	10239	56662	0.633	35868	28933	1.1	1.7	0.003	A
B	28406	7102	33028	36319	0.782	28398	13080	1.4	3.6	0.008	A
C	35211	8803	3962	98442	0.358	35210	57463	0.4	0.6	0.001	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	35871	8968	10239	56662	0.633	35871	28935	1.7	1.7	0.003	A
B	28406	7102	33031	36318	0.782	28406	13080	3.6	3.6	0.008	A
C	35211	8803	3964	98442	0.358	35211	57473	0.6	0.6	0.001	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	29289	7322	8361	57140	0.513	29291	23627	1.7	1.1	0.002	A
B	23194	5798	26972	39369	0.589	23202	10680	3.6	1.4	0.004	A
C	28749	7187	3238	98442	0.292	28750	46936	0.6	0.4	0.001	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	24528	6132	7002	57485	0.427	24529	19786	1.1	0.7	0.002	A
B	19424	4856	22587	41578	0.467	19426	8944	1.4	0.9	0.003	A
C	24076	6019	2711	98442	0.245	24076	39302	0.4	0.3	0.001	A

(Default Analysis Set) - 2031 Peak + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		18	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D7	2031 Peak + Dev	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	26040	100.000
B		ONE HOUR	✓	8160	100.000
C		ONE HOUR	✓	76740	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	5460	20580
	B	2220	0	5940
	C	39180	37560	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	1	1
	B	4	0	6
	C	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.59	0.00	1.4	A	23895	35842
B	0.23	0.00	0.3	A	7488	11232
C	0.87	0.00	6.5	A	70418	105627

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	19604	4901	28274	52197	0.376	19602	31165	0.0	0.6	0.002	A
B	6143	1536	15492	42934	0.143	6143	32384	0.0	0.2	0.002	A
C	57774	14444	1671	97570	0.592	57768	19963	0.0	1.5	0.001	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	23409	5852	33764	50798	0.461	23408	37216	0.6	0.9	0.002	A
B	7336	1834	18500	41494	0.177	7335	38672	0.2	0.2	0.002	A
C	68988	17247	1996	97570	0.707	68984	23840	1.5	2.4	0.002	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	28671	7168	41346	48865	0.587	28668	45574	0.9	1.4	0.003	A
B	8984	2246	22657	39503	0.227	8984	47358	0.2	0.3	0.002	A
C	84493	21123	2444	97570	0.866	84477	29197	2.4	6.4	0.005	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	28671	7168	41354	48863	0.587	28671	45582	1.4	1.4	0.003	A
B	8984	2246	22659	39502	0.227	8984	47366	0.3	0.3	0.002	A
C	84493	21123	2444	97570	0.866	84493	29199	6.4	6.5	0.005	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	23409	5852	33774	50795	0.461	23412	37226	1.4	0.9	0.002	A
B	7336	1834	18503	41492	0.177	7336	38683	0.3	0.2	0.002	A
C	68988	17247	1996	97570	0.707	69004	23843	6.5	2.4	0.002	A

08:45 - 09:00

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	19604	4901	28279	52196	0.376	19605	31170	0.9	0.6	0.002	A
B	6143	1536	15495	42933	0.143	6143	32390	0.2	0.2	0.002	A
C	57774	14444	1671	97570	0.592	57778	19967	2.4	1.5	0.002	A

(Default Analysis Set) - 2031 Peak + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		12	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D8	2031 Peak + Dev	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		ONE HOUR	✓	34620	100.000
B		ONE HOUR	✓	27240	100.000
C		ONE HOUR	✓	34080	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	2760	31860
	B	3780	0	23460
	C	24060	10020	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	4	1
	B	2	0	0
	C	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.68	0.00	2.1	A	31768	47652
B	0.85	0.01	5.6	A	24996	37494
C	0.38	0.00	0.6	A	31272	46909

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26064	6516	7543	57347	0.454	26060	20958	0.0	0.8	0.002	A
B	20508	5127	23983	40875	0.502	20504	9621	0.0	1.0	0.003	A
C	25657	6414	2845	98436	0.261	25656	41641	0.0	0.4	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	31123	7781	9008	56975	0.546	31121	25027	0.8	1.2	0.002	A
B	24488	6122	28640	38530	0.636	24485	11489	1.0	1.7	0.004	A
C	30637	7659	3398	98436	0.311	30637	49728	0.4	0.5	0.001	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	38117	9529	11032	56460	0.675	38114	30650	1.2	2.1	0.003	A
B	29992	7498	35075	35289	0.850	29976	14071	1.7	5.6	0.011	A
C	37523	9381	4160	98436	0.381	37522	60892	0.5	0.6	0.001	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	38117	9529	11032	56460	0.675	38117	30652	2.1	2.1	0.003	A
B	29992	7498	35079	35287	0.850	29992	14071	5.6	5.6	0.011	A
C	37523	9381	4162	98436	0.381	37523	60908	0.6	0.6	0.001	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	31123	7781	9008	56975	0.546	31126	25030	2.1	1.2	0.002	A
B	24488	6122	28645	38527	0.636	24504	11489	5.6	1.7	0.004	A
C	30637	7659	3400	98436	0.311	30638	49748	0.6	0.5	0.001	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26064	6516	7544	57347	0.454	26065	20960	1.2	0.8	0.002	A
B	20508	5127	23987	40873	0.502	20511	9622	1.7	1.0	0.003	A
C	25657	6414	2846	98436	0.261	25658	41652	0.5	0.4	0.001	A

(Default Analysis Set) - 2017 Peak + Dev, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		64	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D9	2017 Peak + Dev	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	17040	100.000
B		ONE HOUR	✓	5820	100.000
C		ONE HOUR	✓	55320	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	3120	13920
	B	1620	0	4200
	C	27420	27900	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	1	1
	B	4	0	6
	C	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.36	0.00	0.6	A	15636	23454
B	0.15	0.00	0.2	A	5341	8011
C	0.62	0.00	1.7	A	50763	76144

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	12829	3207	21003	54051	0.237	12827	21861	0.0	0.3	0.001	A
B	4382	1095	10479	45340	0.097	4381	23352	0.0	0.1	0.001	A
C	41648	10412	1220	97556	0.427	41645	13640	0.0	0.7	0.001	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	15319	3830	25081	53012	0.289	15318	26106	0.3	0.4	0.002	A
B	5232	1308	12513	44366	0.118	5232	27886	0.1	0.1	0.002	A
C	49732	12433	1456	97556	0.510	49731	16289	0.7	1.0	0.001	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	18761	4690	30717	51575	0.364	18761	31972	0.4	0.6	0.002	A
B	6408	1602	15326	43019	0.149	6408	34152	0.1	0.2	0.002	A
C	60909	15227	1784	97556	0.624	60906	19950	1.0	1.7	0.002	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	18761	4690	30718	51574	0.364	18761	31974	0.6	0.6	0.002	A
B	6408	1602	15326	43019	0.149	6408	34154	0.2	0.2	0.002	A
C	60909	15227	1784	97556	0.624	60909	19950	1.7	1.7	0.002	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	15319	3830	25083	53011	0.289	15319	26108	0.6	0.4	0.002	A
B	5232	1308	12514	44365	0.118	5232	27888	0.2	0.1	0.002	A
C	49732	12433	1456	97556	0.510	49734	16290	1.7	1.0	0.001	A

08:45 - 09:00

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	12829	3207	21005	54051	0.237	12829	21863	0.4	0.3	0.001	A
B	4382	1095	10480	45340	0.097	4382	23354	0.1	0.1	0.001	A
C	41648	10412	1220	97556	0.427	41649	13642	1.0	0.7	0.001	A

(Default Analysis Set) - 2017 Peak + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		55	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D10	2017 Peak + Dev	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		ONE HOUR	✓	24300	100.000
B		ONE HOUR	✓	20040	100.000
C		ONE HOUR	✓	24780	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	1920	22380
	B	2460	0	17580
	C	16620	8160	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
	A	0	4	1
	B	2	0	0
	C	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.47	0.00	0.9	A	22298	33447
B	0.54	0.00	1.2	A	18389	27583
C	0.28	0.00	0.4	A	22738	34108

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	18294	4574	6143	57704	0.317	18292	14364	0.0	0.5	0.002	A
B	15087	3772	16847	44483	0.339	15085	7588	0.0	0.5	0.002	A
C	18656	4664	1852	98367	0.190	18655	30080	0.0	0.2	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	21845	5461	7336	57401	0.381	21845	17152	0.5	0.6	0.002	A
B	18015	4504	20119	42835	0.421	18015	9062	0.5	0.7	0.002	A
C	22277	5569	2211	98367	0.226	22276	35922	0.2	0.3	0.001	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26755	6689	8984	56982	0.470	26754	21007	0.6	0.9	0.002	A
B	22064	5516	24640	40557	0.544	22062	11098	0.7	1.2	0.003	A
C	27283	6821	2708	98367	0.277	27283	43994	0.3	0.4	0.001	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26755	6689	8984	56982	0.470	26755	21007	0.9	0.9	0.002	A
B	22064	5516	24641	40557	0.544	22064	11098	1.2	1.2	0.003	A
C	27283	6821	2709	98367	0.277	27283	43997	0.4	0.4	0.001	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	21845	5461	7336	57401	0.381	21846	17153	0.9	0.6	0.002	A
B	18015	4504	20120	42834	0.421	18017	9062	1.2	0.7	0.002	A
C	22277	5569	2212	98367	0.226	22277	35926	0.4	0.3	0.001	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	18294	4574	6143	57704	0.317	18295	14365	0.6	0.5	0.002	A
B	15087	3772	16849	44482	0.339	15088	7589	0.7	0.5	0.002	A
C	18656	4664	1852	98367	0.190	18656	30085	0.3	0.2	0.001	A

(Default Analysis Set) - 2031 Peak Sensitivity, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Mini-roundabout		Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms A and C have 92% of the total flow for the roundabout for one or more time segments]

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A, B, C	0.00	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		17	Arm C

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2031 Peak Sensitivity	AM	ONE HOUR	07:30	09:00	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		ONE HOUR	✓	26460	100.000
B		ONE HOUR	✓	8220	100.000
C		ONE HOUR	✓	77580	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
From	A	0	5580	20880
	B	2220	0	6000
	C	37920	39660	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
		A	B	C
From	A	0	1	1
	B	4	0	6
	C	2	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.60	0.00	1.5	A	24280	36420
B	0.23	0.00	0.3	A	7543	11314
C	0.88	0.00	7.0	A	71189	106783

Main Results for each time segment

07:30 - 07:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	19920	4980	29855	51794	0.385	19918	30216	0.0	0.6	0.002	A
B	6188	1547	15718	42824	0.145	6188	34056	0.0	0.2	0.002	A
C	58406	14602	1671	97550	0.599	58400	20234	0.0	1.5	0.002	A

07:45 - 08:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	23787	5947	35651	50317	0.473	23786	36083	0.6	0.9	0.002	A
B	7390	1847	18770	41363	0.179	7389	40668	0.2	0.2	0.002	A
C	69743	17436	1996	97550	0.715	69739	24164	1.5	2.5	0.002	A

08:00 - 08:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	29133	7283	43657	48276	0.603	29131	44186	0.9	1.5	0.003	A
B	9050	2263	22987	39343	0.230	9050	49801	0.2	0.3	0.002	A
C	85417	21354	2444	97550	0.876	85399	29593	2.5	7.0	0.005	A

08:15 - 08:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	29133	7283	43666	48273	0.604	29133	44195	1.5	1.5	0.003	A
B	9050	2263	22989	39342	0.230	9050	49810	0.3	0.3	0.002	A
C	85417	21354	2444	97550	0.876	85417	29595	7.0	7.0	0.005	A

08:30 - 08:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	23787	5947	35663	50314	0.473	23789	36094	1.5	0.9	0.002	A
B	7390	1847	18773	41361	0.179	7390	40680	0.3	0.2	0.002	A
C	69743	17436	1996	97550	0.715	69761	24167	7.0	2.5	0.002	A

08:45 - 09:00

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	19920	4980	29860	51793	0.385	19922	30221	0.9	0.6	0.002	A
B	6188	1547	15720	42823	0.145	6189	34061	0.2	0.2	0.002	A
C	58406	14602	1671	97550	0.599	58410	20238	2.5	1.5	0.002	A

(Default Analysis Set) - 2031 Peak Sensitivity, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction Type	Arm order	Junction Delay (min)	Junction LOS
1	(untitled)	Mini-roundabout	A,B,C	0.01	A

Junction Network Options

Driving side	Lighting	Road surface	In London	Network residual capacity (%)	First arm reaching threshold
Left	Normal/unknown	Normal/unknown		8	Arm B

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2031 Peak Sensitivity	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		ONE HOUR	✓	34800	100.000
B		ONE HOUR	✓	28800	100.000
C		ONE HOUR	✓	36060	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
	A	B	C	
From	A	0	2940	31860
	B	4020	0	24780
	C	12000	24060	0

Vehicle Mix

Heavy Vehicle Percentages

	To			
	A	B	C	
From	A	0	4	1
	B	2	0	0
	C	1	3	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max delay (min)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.73	0.00	2.7	A	31933	47900
B	0.90	0.02	8.8	A	26427	39641
C	0.41	0.00	0.7	A	33089	49634

Main Results for each time segment

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26199	6550	18113	54651	0.479	26196	12060	0.0	0.9	0.002	A
B	21682	5421	23983	40875	0.530	21678	20326	0.0	1.1	0.003	A
C	27148	6787	3026	97718	0.278	27146	42634	0.0	0.4	0.001	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	31285	7821	21629	53757	0.582	31283	14401	0.9	1.4	0.003	A
B	25891	6473	28640	38529	0.672	25887	24272	1.1	2.0	0.005	A
C	32417	8104	3613	97718	0.332	32417	50913	0.4	0.5	0.001	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	38316	9579	26490	52521	0.730	38310	17634	1.4	2.7	0.004	A
B	31709	7927	35074	35289	0.899	31683	29727	2.0	8.8	0.017	A
C	39703	9926	4422	97718	0.406	39702	62334	0.5	0.7	0.001	A

17:30 - 17:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	38316	9579	26491	52521	0.730	38316	17638	2.7	2.7	0.004	A
B	31709	7927	35079	35287	0.899	31709	29728	8.8	8.8	0.017	A
C	39703	9926	4426	97718	0.406	39703	62361	0.7	0.7	0.001	A

17:45 - 18:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	31285	7821	21630	53757	0.582	31290	14406	2.7	1.4	0.003	A
B	25891	6473	28646	38526	0.672	25918	24273	8.8	2.1	0.005	A
C	32417	8104	3618	97718	0.332	32418	50946	0.7	0.5	0.001	A

18:00 - 18:15

Am	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (min)	LOS
A	26199	6550	18114	54651	0.479	26201	12061	1.4	0.9	0.002	A
B	21682	5421	23988	40872	0.530	21686	20327	2.1	1.1	0.003	A
C	27148	6787	3027	97718	0.278	27148	42647	0.5	0.4	0.001	A

APPENDIX F

Spatial Options Appraisal Extract

Table xxxx: Detailed Appraisal Matrix for Climping/Yapton

Policy	SA Sub-objective	Scoring	Reasoning	Overall summary and any recommendations
Climping/ Yapton	Social Cohesion	++	Through the inclusion of a mix of housing plus good access to existing community facilities it would be expected that there would be a contribution towards this criteria	Mixed housing provision will have a positive effect and there would be a high level of access to green space, encouraging healthy lifestyles but there would be no improvement to community facilities and so to community engagement and so lessened impact on reducing social isolation
	Healthy Lifestyle	++	As there is a large area of open space that is in close proximity to the Yapton location and in reasonable proximity to the Climping location there would be a positive impact on achieving this criteria	
	Balanced Communities	++	Though small in scale, due to the intended mix of homes to be provided and the uses it would be expected that there would be an increased mix of the community on the site.	
	Community Engagement		As it would not be expected that any new provision of community facilities or services will be required it is not expected that there would be a change to this criteria	
	Crime		There is no data at a local level but it would not be expected that this would change significantly	
	Educational Achievement	0/+	There would be increased demand on existing educational facilities but this would not be considered to be significant enough to result in any increase in provision	
	Social Isolation	+	Though small in scale, due to the intended mix of homes to be provided and the uses it would be expected that there would be an increased mix of the community on the site helping to reduce this as well as the proximity of existing facilities	
	Housing Supply	++	Housing in this location would reduce one of the main barriers to housing and meaning people can locate closer to transport routes, as well as key goods and services	Though this would provide additional mixed housing there would be no change to the situation in
	Affordable Housing	++	This would help in terms of addressing barriers to housing and will increase the housing stock as well as and so significantly to this criteria	

	Mix of Housing	++	The SHMA Update (GL Hearn, Nov 2012) identified the types of housing needed and any scheme would need to include a mix, meaning that there would be a significant impact on the housing stock both locally and at a District level	terms of key services and facilities or increasing access to these
	High Quality Housing	++	Build standards and some specific characteristics of this area will mean that all buildings will be required to meet high standards and recognising the higher proportion of older residents will need to be adaptable for different occupiers	
	Access to Employment Opportunities		Due to a lack of employment within the immediate vicinity there would be no impact on this aspect, although there may be a reduction in distance to work overall from these locations	
	Access with capacity to Education		There will be increased demand placed on existing services although it would not be expected that there would be any change to the existing level of provision	
	Access with capacity to Health Care		Though there would be increased demand on existing facilities there would be insufficient increase to result in any additional provision	
	Access with capacity to Community Facilities		Though there would be increased demand on existing facilities there would be insufficient increase to result in any additional provision	
	Access to Green Infrastructure		There is a high level of open space and so access to green infrastructure is already high and this would not be expected to change	
	Access with capacity to Emergency and Essential Services		This is currently served from Littlehampton and this would not be expected to change	
	Access to Local Retail Facilities		There is no existing local retail in these areas and though there would be increased demand this would not be expected to result in any additional provision in the immediate vicinity	
	Access with capacity to Leisure, Entertainment and Cultural Facilities		Though there would be a slight increase in demand this would not be expected to be sufficient to require any additional provision and so there would be no real change	
	Employment Opportunities		The closest employment in the immediate vicinity is around the Ford Airfield or a greater choice around Littlehampton and this	It would not be

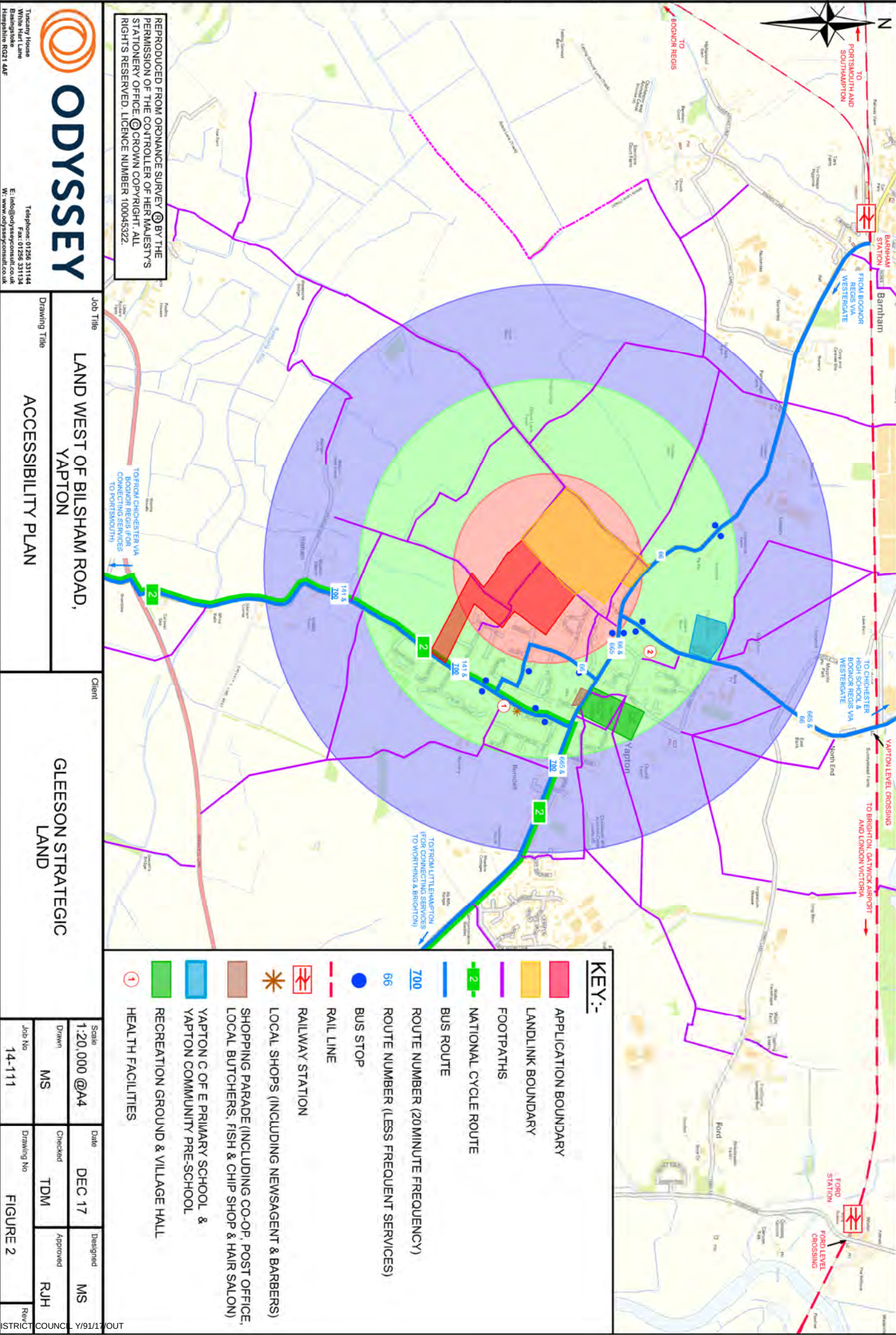
			would not be expected to change	expected there would be a significant impact on employment opportunities, skills or average wages, but would help retain local businesses and possibly to the visitor economy
Skills			Due to the situation in terms of employment and education there would not be expected to be any impact on this objective	
Income			Due to the locations for employment and the sectors that these are within it is not expected that there would be a significant change to average wages	
Inward Investment			The small scale and locations do not have significant business interest and so it would not be expected that this would be affected	
Visitor Economy	+		Due to the rural nature of these locations there might be a slight impact on this through being a suitable location for visitor accommodation or supporting aspects to this sector	
Local Business Enterprise	+		There would not be expected to be a significant impact but potentially there might be slight encouragement for local small business start-ups.	
Regeneration	+		There would be no direct impact in terms of regeneration but there may be increased custom to the town centres	Through the increased population there could be increased custom to the town centre and so potential for positive impact on regeneration and town centre retail
Night-time Economy in Town Centres			Though the increase in population might result in increased custom in the town centres this would not be expected to be significant and so there would be no real change	
Town Centre Retail	+		There would be a slight positive impact through the increase in population correlating to an increase in custom to the town centres	
Leisure, Entertainment and Culture			Though there would be an increase in demand due to the increase in population this would not be expected to result in any increase in provision	
Traffic Congestion			As shown in the Arun Transport Study (WSP, 2013) there would be an expected increase if vehicle flows to the junction with the B2233 although this would not be expected to be sufficient to have a detrimental impact	It would not be expected that there would be any significant change to movement, although if improvements to junctions were
Road Safety	0/+		Due to the increase in flows from Littlehampton to the B2233 junction there would be an increased risk of road accidents although this is not expected to be significant	
Public Transport			Though there would be an increased demand placed on the existing bus service this would not be expected to be significant	

	Walking and Cycling	+	These locations would not make a significant improvement to walking and cycling although it might allow for contributions towards delivering the aspirational cycle route along the A259	included there may be a small possibility of reduced road accidents, as well as potential improvements to pedestrian and cycling routes
	Local Distinctiveness		Due to the position of the Yapton location there would not be a significant impact on the conservation areas and although there would be a slight reduction in the space around the village this would not have a significant impact on the openness of the area and so local distinctiveness	There would not be an impact on the setting of the Conservation Area and though there would be a minor reduction in space this would not be significant to affect openness and local distinctiveness. Though the Climping area is in proximity to a designated site this would not be expected to be affected by disturbance, which could not be mitigated
	Historic Environment		Due to the position of the Yapton location there would not be a significant impact on the conservation areas and so the historic environment	
	Designated Environmental Sites		Only the Climping location is in proximity to a designated site and although there would be a slight increase in disturbance through the increased population, this could be mitigated through contributions	
	Biodiversity		Though there will be a slight impact the area is not recognised in terms of biodiversity and so there would be no real change	
	Water Quality			
	Flood Risk		These locations are within Flood Zone 1 and so this aspect would not be affected and has not therefore been appraised	
	Air Quality		Through the increased number of vehicles there would be an increase in NOx and particulate levels although this would not be expected to be significant	
	Noise Pollution		The introduction of vehicles into the area would increase noise levels generally although this would not be significant enough to affect the high tranquillity level of these locations	
	Coastal Erosion		The distance to the seafront means that these areas will not be affected by coastal erosion	

	Beach Quality		The distance of these locations from the beach mean that there is not expected to be any impact on beach quality	These would represent an efficient use of land being on the edge of existing settlements and would incorporate a higher level of reused materials. However, as the existing soil quality has been classified on as being Grade 1 and 2 there would be a detrimental impact
	Land Contamination		There are no known issues at these locations so this is not expected to change	
	Energy Supply and Demand		There will be an increase in demand but there are no known issues in terms of capacity and so this is not expected to significantly change	
	Waste		There would be an increase in waste although this would be mitigated through the extension of existing household collections	
	Water Resources		Though there would be an increase in demand on water resources this would not be above existing expected capacities in the Water Resource Management Plans	
	Efficient Use of Land	+	These locations are small in scale and on the edge of existing built up areas and so though greenfield would ensure a high level remains and so positively towards the achievement of this criteria	
	Embodied Impact of Materials	+	Through requirement of levels of recycled materials to be used through the application of the Code for Sustainable Homes and other national standards there will be an improvement in the amounts of reused materials	
	Locally Produced Food		As these areas do not contribute toward local food production there will be no impact on this criteria	
	Soil Quality	-	The Climping location is arable land and the Yapton location is Grade 2 agricultural land to the south and Grade 1 agricultural and other uses to the north, so there could be a slight detrimental impact dependent on exact implementation	
Conclusion	As can be seen in the main there would not be expected to be any significant benefits to these locations. There would be increased demand on existing services and facilities but this would be insufficient to warrant any change to the existing provision. The main benefit that would result from these locations would be against the social aspects through the additional and mix of higher quality housing that consequently would mean that there would be more inclusive and balanced communities created with reduced levels of social isolation. There could also be the potential for some slight benefits to the visitor economy and local businesses, as well as significantly in terms of efficient use of land. The only detrimental impact that may occur dependent on implementation would be in respect to soil quality.			

APPENDIX G

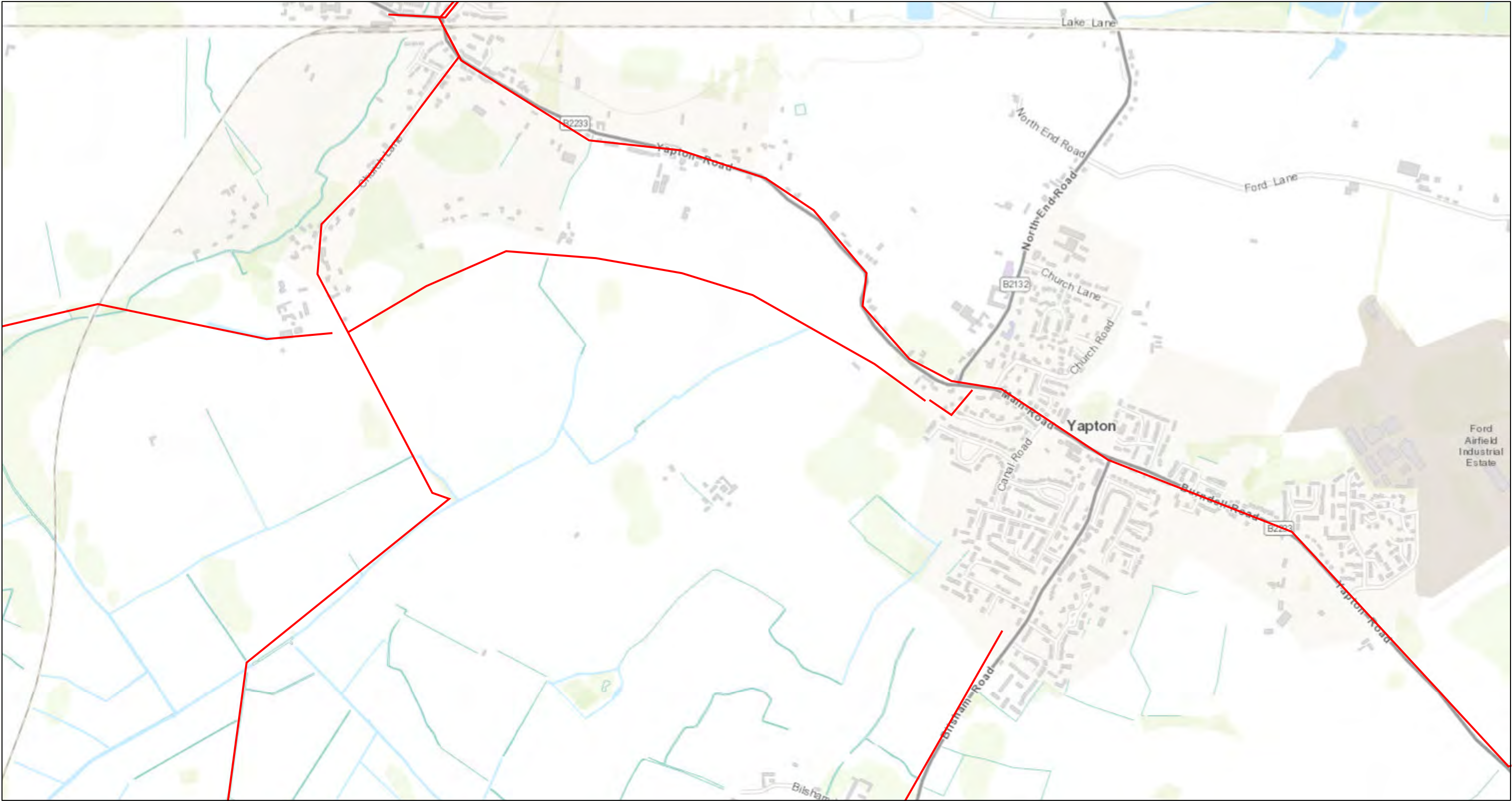
Figure 2 from TA



APPENDIX H

WSCC Walking and Cycling Policy Extracts

Suggested Cycle Routes



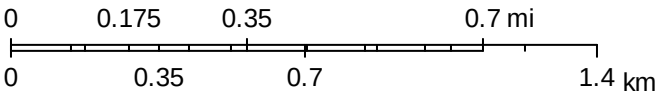
November 29, 2017

— Suggested Cycle Routes

County

District

1:18,056



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp.,
GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL,
Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong),
swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS

348	Manor Royal to Lowfield Heath Cycle Route	An off road walking and cycling route adjacent to London Road
196	NCN2 coastal alternative diversion	Seaview route
126	NCN2 feeder link to Yapton	Currently there is no safe cycle route from Yapton to NCN 2 and onwards to Littlehampton or Felpham /Bognor this proposed route will create a cycle path alongside the existing from the outskirts of the village
341	A264 crossing Horsham	Crossing along this stretch for cycles and walking (Riverside Walk)
44	Shoreham to Lancing	No description entered
85	A27 Arundel Bypass	The new Arundel Bypass motorway
42	A280 Long Furlong	An extremely dangerous road but a potentially highly useful cycle route.
82	Yapton to Climping	Littlehampton to Barnham
45	Lancing to Shoreham	Shoreham Airport to Grinstead Lane
288	NCN2 North Mundham to Chichester	Alternative route offering a route to the East side of Chichester
39	Angmering to Arundel	No description entered
345	NCN21 Spur to Felbridge	Upgrade surface and signage to existing Bridleway to connect Felbridge to the NCN21
67	Linking Lancing and Shoreham	No description entered
96	Hassocks to Lower Beeding	No description entered
229	Path from Hassocks to Burgess Hill east side of railway line	Aspiration to create a new shared use off road route
145	Chichester - Tangmere/Aldingbourne Route	Provides a better link between Portfield and A27 cycle path to Tangmere/Aldingbourne
272	Parish Lane roundabout by-pass	Provision of a two way off road path avoiding the high speed and busy roundabout at this point
374	Horsham Road Pease Pottage Cycle Lane	At the Western End an off road Cycle and Walking Route and Improved Traffic Calming at the Eastern End to provide continuous good cycle provision
19	Westergate Link	Surveyed off road route by WSCC 2014/5
231	New link from Hassocks to Hurstpierpoint	Aspiration to upgrade surfaces of 3C & 8C to link into HPP 65hu and local road network
369	West Chiltington Common to Primary School	Safer Route to School
53	Littlehampton to Arundel	No description entered
59	Worthing Cycle Network	No description entered
122	NCN 2 missing section V DANGEROUS SECTION	Missing link from North Mundham to off road cycle route to Chichester canal
175	East Preston to Ferring	Field route - currently footpath

Continued overleaf ...

From: Simon Davis
Sent: 31 August 2017 11:14
To: Planning.Responses
Subject: FW: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Further WSCC Comments. Copy pls.

Kind Regards

Simon J.Davis MRTPI | Principal Planning Officer, Planning Department, Directorate of Place, Arun District Council |
Location: 1st Floor, Arun Civic Centre, Maitravers Road, Littlehampton, BN17 5LF
Internal: 37874 | External: +44 (0) 1903 737874 | E-mail: simon.davis@arun.gov.uk

Visit Arun's web site at www.arun.gov.uk



Save the environment - think before you print.

From: Stephen Gee [REDACTED]
Sent: 25 August 2017 10:15
To: Simon Davis
Subject: RE: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Simon,

The level of contribution has been calculated as £110,530* to be put towards the implementation of a cycling improvements between Barnham and Littlehampton (scheme ID 82). Whilst Arun hasn't adopted TAD the methodology has been developed to comply with CIL tests.

This would provide a valuable link from the development site via Yapton Road to Barnham station and Main Road, Burndell Road and Yapton Road towards Littlehampton and facilitate sustainable transport.

The contribution is requested in line with the Yapton Neighbourhood Plan, Emerging Arun Local Plan and the NPPF.

*This has been calculated using the pro rata rate for the adjoining application Y/93/14 in which a £60,000 was sought for 38 homes giving a total of £1579 per dwelling.

Regards

Stephen

From: Simon Davis [<mailto:Simon.Davis@arun.gov.uk>]
Sent: 22 August 2017 17:24

APPENDIX I

S106 Extracts

To: Stephen Gee

Subject: FW: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Hi Stephen,

I see that you were copied in. Can you respond to me re their comment on the cycle improvements.

Kind Regards

Simon J Davis MRTPI | Principal Planning Officer, Planning Department, Directorate of Place, Arun District Council |
Location: 1st Floor, Arun Civic Centre, Maitravers Road, Littlehampton, BN17 5LF
Internal: 37874 | External: +44 (0) 1903 737874 | E-mail: simon.davis@arun.gov.uk

Visit Arun's web site at www.arun.gov.uk



Save the environment - think before you print.

From: Chris Barker [REDACTED]

Sent: 22 August 2017 15:28

To: Simon Davis

Cc: [REDACTED]

Subject: RE: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Simon

Following on from your email and our subsequent telephone conversation I can confirm that we would agreeable to the WSCC contributions as set out on 24 July, subject to confirmation from WSCC that they meet the relevant tests of The CIL Regulations 2010.

We would also positively review the requirements for contributions towards 'cycling improvements between Barnham and Littlehampton', however until WSCC provide the details of such works and indeed the level of contribution sought we cannot comment further.

We would also be happy to review potential pedestrian access provision through the site to the adjoining land through the Reserved Matters submissions, subject to any legal issues that may result.

I hope that we can move these matters forward, so you can instruct your legal team to commence drafting of the S.106 Agreement as discussed.

Any queries please contact me.

Kind Regards

Chris Barker MATP MRTPI

Managing Director

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From: Simon Davis [mailto:Simon.Davis@arun.gov.uk]
Sent: 22 August 2017 14:42
To: Chris Barker [REDACTED]
Subject: FW: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Chris,

Please see below.

Kind Regards

From: Simon Davis
Sent: 22 August 2017 14:41
To: Sam Sykes [REDACTED]
Subject: FW: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Dear Sam,

Please see attached comments from WSCC Highways & Strategic Development.

You will see that Highways request a contribution towards the provision of cycling improvements between Barnham and Littlehampton (scheme ID 82). I understand that your submitted TS (section 8.18) acknowledges that such a contribution is likely.

WSCC haven't specified an amount as apparently you are still to reply to the rights of way officer at WSCC (Jonathan Perks) and that any RoW improvements here could be taken of the amount, WSCC would ask for (whilst not directly applied using TAD as a starting point for the calculation).

Please advise whether you will contribute to the cycle improvements and also how much the contribution will be. Please also advise whether you agree to the other education/library/fire contributions.

Kind Regards

Simon J Davis MRTPI | Principal Planning Officer, Planning Department, Directorate of Place, Arundel District Council |
Location: 1st Floor, Arundel Civic Centre, Maitravers Road, Littlehampton, BN17 5LF
Internal: 37874 | External: +44 (0) 1903 737874 | E-mail: simon.davis@arun.gov.uk

Visit Arundel's web site at www.arundel.gov.uk



Save the environment - think before you print.

From: Stephen Gee [REDACTED]
Sent: 22 August 2017 11:54
To: Planning.Responses; Simon Davis; Simon Davis
Subject: Y/44/17 Land at Stakers Farm, North End Road, Yapton, Arundel, West Sussex

Simon,
Please find attached comments on planning application ref Y/44/17/OUT.

Regards

Stephen

Stephen Gee|Consultant (Senior Planner) County Highways (Development Management),
Planning Services, West Sussex County Council | Location: Ground Floor, Northleigh, County
Hall, Chichester, PO19 1RH | [REDACTED]

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Planning Application Reference:	Y/81/10/
Document Type:	Section 106 agreement
Date of Agreement:	17th November 2011

NB: Above text in bold to be included in free text field.

Check thoroughly for **telephone numbers/email addresses & signatures** and block.
Check **maps** for signatures and block.

Please return original to s106 Monitoring Officer

- 4.3 The planning obligations specified within this Deed shall only bind the Applicant or the Owners if and to the extent that the Secretary of State or his Inspector decides that the obligation complies with the requirements of the provisions of Regulation 122 of the Community Infrastructure Regulations 2010 such that the said obligation may lawfully be taken into account in considering whether to grant planning permission.
- 4.3 Subject to clause 4.3 above, the parties have agreed to enter into this Deed with the intention that the obligations contained herein are planning obligations and may be enforced by the ADC and/or the WSCC against the Owners, the Applicant and their respective successors in title.

5. CONTRIBUTIONS PAYABLE

- 5.1 Subject as aforesaid, the Owner and the Applicant undertake with the ADC and WSCC to make to WSCC the payments specified in the table below, for the purpose therein specified on the Due Date:

<u>Payee</u>	<u>Payment Due Date (the "Due Date")</u>	<u>Amount</u>	<u>Statutory Function/Purpose</u>
<u>The "Libraries Contribution"</u>			
WSCC	Before occupation of the 85 th dwelling	£32,301	To meet the increase in need for library facilities arising from the development
<u>The "Fire Service Contribution"</u>			
WSCC	Before occupation of the first dwelling	£3,943	To meet the increase in need for fire service facilities arising from the development
<u>The "Highway Contributions"</u>			
WSCC	Before Commencement of the Development	£10,000	For the provision of two new bus shelters at two locations on Burndell Road, as indicated on drawing number 2009/1082/015
	Before first occupation	£20,000	For the provision of real time information systems at the locations of two bus stops on Burndell Road, as indicated on drawing number 2009/1082/015
	Before first occupation	£25,000	To provide on-carriageway cycle improvements on the B2233 between Yapton village centre and Barnham railway station.
	Before first occupation	£15,000	For monitoring of the Travel plan.