Paul Rynton

To: Andrew Braun
Subject: RE: East Malling Trust - Ditton Edge - TM/18/02966

From: Maria Brown <Maria.Brown@tmbc.gov.uk>
Date: 19 December 2019 at 16:46:17 GMT
To: Gregory Evans <GREvans@savills.com>
Cc: "Louise.Rowlands@kent.gov.uk" <Louise.Rowlands@kent.gov.uk>, Emma Keefe <Emma.Keefe@tmbc.gov.uk>,
Sally Flanagan <sally@eastmallingtrust.org>
Subject: FW: East Malling Trust - Ditton Edge - TM/18/02966

Dear Greg

As you are aware the above application is controversial with many objections being centred around
highway issues. There are outstanding concerns raised by KCC (H+T) as outlined in their most recent
consultation response of 4 December 2019. In particular the discrepancies highlighted in paragraph
5 under traffic generation.

In light of these concerns I recommend a new traffic survey is undertaken at the Bradbourne
Lane/A20 junction. This is a highly sensitive area and of major local concern. I also recommend that
all the updates issued since the submission of the original Transport Assessment are incorporated
into a revised Transport Assessment document, and the findings clearly laid out in a straight
forward summary. This will provide clarity for local members and residents alike.

I am copying Louise Rowland into this email for her information.

With Christmas greetings and kind regards

Maria

Maria Brown
Senior Planning Officer
Tonbridge and Malling Borough Council
01732 876294
maria.brown@tmbc.gov.uk
Have you tried contacting us at
www.tmbc.govuk/do-it-online?

From: Louise.Rowlands@kent.gov.uk [mailto:Louise.Rowlands@kent.gov.uk]
Sent: 15 November 2019 17:20
To: abraun@ardent-ce.co.uk
Cc: Maria Brown <Maria.Brown@tmbc.gov.uk>
Subject: RE: East Malling Trust - Ditton Edge - TM/18/02966

Hi Andrew

Thanks for providing all the additional information. I have been checking back through all the
information provided as I am preparing a revised consultation response for Maria. The safety audit
is agreed and the capacity assessments for A20/New road and A20/New Road/Station Road are fine
subject to the junction improvements as agreed. I am just a little concerned regarding St Peters

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Road, Bradbourne Lane and the A20/Bradbourne Lane junction as some of the survey data doesn't tally with that provided in your reports and I have found discrepancies in the traffic distribution. I am concerned that the additional traffic may have a detrimental impact on St Peters Road, Bradbourne Lane and the A20/Bradbourne Lane junction where I cant locate the source of the survey. I am sorry to be flagging this up at this stage but in view of the level of local concern I think it is important that I am clear on these points. My draft paragraphs relating to these concerns are as follows:

Traffic Generation
The additional development generated traffic movements are shown below with a comparison with the 2018 recorded traffic flows:

Ditton Edge Site B	AM Peak dev traffic	2018 flows	PM Peak dev traffic	2018 flows
Kiln Barn Road south	32	92	24	238
Kiln Barn Road north	186	280 269	151	393 330
Bradbourne Lane	17	341 345	14	271 438
New Road, Ditton	169	435 442	137	476 478

The 2018 flows are taken from the July 2018 ATC survey and since then a junction turning count survey was completed in November 2018 at the junction of Kiln Barn Road/New Road and St Peters Road. The flows from the turning count survey differ quite significantly as shown in red above.

Additionally, Fig 14 of the Technical Note, which shows the 2018 observed traffic flows, doesn't tally with the November 2018 survey. Please could this be checked.

Traffic Distribution
With regard to the distribution of traffic from the site to New Road and St Peters Road, I previously requested that an analysis of the junction survey be made in order to compare the distribution of traffic at the junction with that in the previous distribution assessment contained in the TA. I have checked against the survey and my findings indicate some differences to the proportions shown in Plate 3 of your Technical Note. The proportion for the PM peak arrivals would be significantly different with 51% arriving from New Road and 49 % from St Peters Road. The difference in the results would mean a larger percentage of development traffic using Bradbourne Lane to access the A20. Please could this also be revisited. Also please clarify the source of the junction turning movements used in the assessment of the A20/Bradbourne Lane. I am concerned that the additional traffic may have a detrimental impact on St Peters Road, Bradbourne Lane and the A20/Bradbourne Lane junction.

Perhaps we can discuss when you are next free.

Kind Regards

Louise Rowlands | Principal Transportation & Development Planner | Kent County Council | Highways, Transportation and Waste | Ashford Highway Depot | Henwood Industrial Estate, Javelin Way, Ashford, TN24 8AD | External: 03000 413787 | www.kent.gov.uk|

From: Andrew Braun <abraun@ardent-ce.co.uk>
Sent: 13 November 2019 10:01
To: Rowlands, Louise - GT HTW <Louise.Rowlands@kent.gov.uk>
Cc: Maria.Brown@tmbc.gov.uk
Subject: RE: East Malling Trust - Ditton Edge - TM/18/02966

Louise,

See attached a copy of the May 2019 Tech Note including the appendices. I have noted that the Tech Note didn't include the raw survey data from Kiln Barn Road as this was within the original TA, so I have attached these results as well for info. Also attached a re results from a peak hour count at the New Road/Kiln Barn Road/St Peter's Road junction, which were used to estimate the proportion of development traffic that would divert via St Peter's Road to/from the A20.

The discrepancy between flows from the VISUM model (i.e. turning movements at the A20) and flows show past our access on our flow figures is essentially due to these using different data sources – the modelled flows for the A20 junction and recorded peak hour flows for Kiln Barn Road further south (noting the flows taken from the VISUM model would be too high for this point). Hopefully this makes sense and helps to address your query, but please do give me a call if you need to discuss further.

I have also attached the email with the RSA1 of the Ditton Edge access and our Designer's Response – you will note that the latest version of the access drawing is Rev E to reflect the recommendations of the audit.

Hopefully these details will assist with your final comments on the application, and please do not hesitate to call should you have any further queries.

Kind regards

Andrew Braun
Associate

ARDENT
CONSULTING ENGINEERS

Office 3, The Garage Studios, 41-43 St Mary 's Gate, The Lace Market, Nottingham NG1 1PU

T 0115 697 0940
M 07792 956852

www.ardent–ce.co.uk

From: Louise.Rowlands@kent.gov.uk <Louise.Rowlands@kent.gov.uk>
Sent: 12 November 2019 16:53
To: Andrew Braun <abraun@ardent-ce.co.uk>
Cc: Maria.Brown@tmbc.gov.uk
Subject: East Malling Trust - Ditton Edge - TM/18/02966

Dear Andrew

I am reviewing my comments in respect of this application and checking through the information provided to date. I cannot find the appendices relating to your Technical Note of May 2019 on the TMBC website and I want to check through the survey data as the 2018 flows along New Road appear be significantly higher than those included in the 2031 Do Minimum scenario included in the 2019 Visum Forecast Junctions Assessments report. Also I do not appear to have received a safety audit for the proposed site access junction arrangement drawing 182600-003D.

Please could you arrange for this information to be provided?

Many Thanks

Louise Rowlands | Principal Transportation & Development Planner | Kent County Council | Highways, Transportation and Waste | Ashford Highway Depot | Henwood Industrial Estate, Javelin Way, Ashford, TN24 8AD | External: 03000 413787 | www.kent.gov.uk|

From: Andrew Braun <abraun@ardent-ce.co.uk>
Sent: 15 July 2019 17:02
To: Rowlands, Louise - GT HTW <Louise.Rowlands@kent.gov.uk>; Drury, Terry - GT HTW <Terry.Drury@kent.gov.uk>
Cc: Gregory Evans <GREvans@savills.com>; Kevin Attwood <KDA@downcourt.co.uk>; oliver@ghdean.co.uk; Sally Flanagan <sally@eastmallingtrust.org>; Paul Rynton <prynton@ardent-ce.co.uk>; Aaron Hand <ahand@ardent-ce.co.uk>; Maria.Brown@tmbc.gov.uk
Subject: RE: East Malling Trust - Ditton Edge and Parkside - Linsig

Louise/Terry,

I trust you are both well. Further to the meeting at TMBC last month we have now undertaken the additional tasks agreed at the meeting, with a view to allowing KCC to remove its current holding objections on the Ditton Edge and Parkside schemes. Please therefore see below the additional information that was requested.

Proposed S278 Improvements

Further to the above, we have updated our drawings showing the proposed S278 improvement schemes at the A20/New Road/Hotel junction and the A20/Station Road/New Road junction, both of which are attached. It has been agreed with KCC that the improvements at the A20/New/Road/Hotel junction will be delivered by the Parkside development, whilst the Ditton Edge scheme would offer the S278 works at the A20/Station Road/New Road junction.

As requested, we have updated our drawings showing these improvement schemes to include colour, which should hopefully make it easier for members and local residents to understand how the amended junctions will look. Both of the plans are at A2 scale as well to ensure the

improvements are shown at a reasonable scale. If you need any further details in respect of these proposals then please let us know and we will make the necessary updates as soon as possible.

In terms of delivering these improvements, we note that the wording of conditions for each application will need to specific that these must be implemented before occupation, which is considered acceptable.

Junction Modelling

As requested, we have updated the LinSig models for both of the above junctions to incorporate the following key changes:

- Existing junction layout models have been updated based on the latest files received from KCC (models optimised for Practical Reserve Capacity)
- Reg19 'Do Something' traffic flow scenario (i.e. the one included in the VISUM report) has been added to the results for comparison with the adjusted quanta of development for the two sites.

The model result outputs and LinSig input files are attached.

Further to the above, the tables below provide the up to date results for both junctions:

A20/New Road/Hotel junction

Scenario	AM Peak	PM Peak
Existing Layout		
2031 'Do Minimum' Background	4.4%	-1.5%
2031 'Do Minimum' Background + Site B	1.2%	-3.7%
2031 'Do Minimum' Background + Site C	3.8%	-1.9%
2031 'Do Minimum' Background + Site B and C	0.5%	-5.6%
2031 'Do Something' Background	-14.9%	-12.1%
2031 'Do Something' Background (- Site B Local Plan Flows)	-13.7%	-9.2%
2031 'Do Something' Background (- Site B Local Plan Flows) + Site B	-15.6%	-13.8%
2031 'Do Something' Background (- Site C Local Plan Flows)	-11.9%	-10.5%
2031 'Do Something' Background (- Site C Local Plan Flows) + Site C	-12.8%	-12.2%
2031 'Do Something' Background (- Site B/C Local Plan Flows)	-9.0%	-8.9%
2031 'Do Something' Background (- Site B/C Local Plan Flows) + Site B and C	-15.6%	-13.0%
Proposed S278 Improvements		
2031 'Do Minimum' Background + Site B	16.0%	11.8%
2031 'Do Minimum' Background + Site C	19.8%	13.0%
2031 'Do Minimum' Background + Site B and C	15.0%	11.1%
2031 'Do Something' Background	-3.8%	1.9%
2031 'Do Something' Background (- Site B Local Plan Flows) + Site B	-3.7%	1.2%
2031 'Do Something' Background (- Site C Local Plan Flows) + Site C	-0.9%	3.6%
2031 'Do Something' Background (- Site B/C Local Plan Flows) + Site B and C	-2.0%	3.3%

A20/Station Road/New Road

Scenario	AM Peak	PM Peak
Existing Layout		
2031 'Do Minimum' Background	-106.4%	-82.3%
2031 'Do Minimum' Background + Site B	-122.1%	-88.7%
2031 'Do Minimum' Background + Site C	-107.4%	-83.5%
2031 'Do Minimum' Background + Site B and C	-122.1%	-90.7%
2031 'Do Something' Background	-77.1%	-80.9%
2031 'Do Something' Background (- Site B Local Plan Flows)	-66.5%	-74.5%
2031 'Do Something' Background (- Site B Local Plan Flows) + Site B	-81.2%	-82.1%
2031 'Do Something' Background (- Site C Local Plan Flows)	-75.1%	-79.4%
2031 'Do Something' Background (- Site C Local Plan Flows) + Site C	-76.5%	-80.9%
2031 'Do Something' Background (- Site B/C Local Plan Flows)	-65.5%	-71.9%
2031 'Do Something' Background (- Site B/C Local Plan Flows) + Site B and C	-78.4%	-80.9%
Proposed S78 Improvements		
2031 'Do Minimum' Background + Site B	-68.6%	-37.0%
2031 'Do Minimum' Background + Site C	-48.7%	-28.0%
2031 'Do Minimum' Background + Site B and C	-69.4%	-37.0%
2031 'Do Something' Background	-32.8%	-37.8%
2031 'Do Something' Background (- Site B Local Plan Flows) + Site B	-35.3%	-41.7%
2031 'Do Something' Background (- Site C Local Plan Flows) + Site C	-31.1%	-37.7%
2031 'Do Something' Background (- Site B/C Local Plan Flows) + Site B and C	-35.3%	-40.2%

The key conclusions that can be drawn from the above results are as follows:

- The results for the 'do minimum' scenario for the existing layout, and the 'do something' scenario for the improvement layouts, generally calibrate with those presented in the VIUSM reports, which should allay any concerns over discrepancies between the modelling approaches. The only slight difference is at the Station Road junction for the do min scenario in the AM peak, but we have noted that one of the flows shown in the VISUM report differs slightly to the one included in the model that has been provided, which we assume accounts for this minor difference (-108% vs -107%).
- When comparing the Reg19 'Do Something' results with the adjusted 'Do Something' results that allow for the alternative quanta of development at Sites B and C, it is clear that the slightly different development sizes do not have a significant effect on the resulting PRCs at both junctions, with some minor increases and decreases in the PRC. For example, at the Station Road junction, the Reg19 Do Something PRC in the AM Peak is -32.8%, compared with -35.3% when the alternative development sizes for Sites B and C are substituted, which slows a slight increase. Conversely, at the A20/New Road/Hotel junction the AM peak PRC reduces from -3.8% to -2.0%. Overall, it is considered that the alternative development sizes do not have any significant impact on the VISUM model flows and associated model results.

- When comparing the 'do minimum' results against the proposed development results, it is clear that the proposed traffic increases would result in some marginal impacts at both junctions. For example the PRC at the A20/New Road/Hotel junction would reduce from 4.4% to 0.5% in the AM peak when adding in the proposed Site B and C increases. However, the results for the proposed improvements show significant improvements over and above these benefits, for example the PRC increases to 15.0% in the AM pea at the A20/New Road/Hotel junction. This demonstrates that the proposed S278 works mitigate out impacts and also help to address existing capacity issues in the do minimum scenario (to varying degrees)
- In the 'Do Something' scenarios, the results confirm that the proposed S278 improvements at both junctions would ensure the impacts of the development and wider Local Plan traffic are mitigated.

It is considered that the above details should be sufficient to demonstrate that the proposed S278 improvements offered by each scheme at these junctions would be sufficient to satisfactory mitigate the development traffic increases and ensure there are no severe impacts, whilst also offering wider benefits to mitigate Local Plan growth.

Proposed S106 Highways Contributions

Beyond the proposed S278 improvement schemes at the above two junctions, it has been agreed that no additional specific mitigating improvements will be required by the proposed development sites. However, KCC do require appropriate S106 contributions towards other strategic highway improvements further afield, including the A20/Mills Road/Hall Road junction and A20/Lunsford Lane junction, which are being progressed by KCC. As discussed, it is considered fair and proportionate to adopt the same approach to S106 contributions as that agreed with KCC by the current White Post Fields application to the east (TMBC ref: 17/01595/OAEA). It is understood that there is an in principle agreement between Gladman and TMBC for the following S106 contributions:
- £1,300,000 towards A20 corridor highway improvements (e.g. A20/Mills Road/Hall Road junction improvements).
- £798,000 towards S20 bus corridor improvements

The White Post Fields application is for 840 dwellings, meaning the above figures can be broken down at the following rates per dwelling:
- £1,547.62 per dwelling for highway improvements
- £940.00 per dwelling for bus corridor improvements

Based on the above rates, it is proposed that the following S106 contributions are offered as part of the Parkside and Ditton Edge schemes:

Parkside (106 dwellings) S106 Contributions
- £164,047.72 for A20 corridor highway improvements
- £99,640.00 for A20 corridor bus journey time improvements
- **£263,687.72 total**

Ditton Edge (300 dwellings) S106 Contributions
- £464,286.00 for A20 corridor highway improvements
- £282,000.00 for A20 corridor bus journey time improvements
- **£746,286.00 total**

To confirm, these S106 contributions will be in addition to the two proposed S278 improvement schemes that each site will be responsible for delivering (A20/New Road/Hotel Junction for Parkside and A20/Station Road/New Road for Ditton Edge).

Public Rights of Way (Ditton Edge)

At the meeting it was agreed that there should be no requirement for improvements to the existing public footpath MR100 that extends south-west from the Ditton Edge site towards East Malling Station. This route is already of sufficient width and condition within EMT's ownership to accommodate cyclists, and it is considered that any proposals to formally upgrade this to a cycleway would causes issues beyond the extents of EMT's ownership where the width of the footpath narrows (e.g. past the church), meaning cyclists would have to dismount here regardless of any change in status further north. As such, at the meeting it was agreed <u>no</u> improvements to the PROW need to be conditioned.

We also note that a response to the comments from KCC's PROW team is required. The consultation response is shown below, followed by Ardent's responses (shown in red):

"the treatment of public footpath MR100 has not been well considered and the proposed main access road will run adjacent the PROW. We ask that the applicant considers an alternative layout to accommodate the PROW within a wide green corridor of open space, away from the main access road, providing new residents opportunities for recreation, active travel and exercise. At the very least we ask that the application considers a wider buffer between the road and PROW." As the application is in outline, this request can be taken into account and incorporated into a final detailed site masterplan at the reserved matters stage.

Next steps

We should be grateful if you could review the above details and confirm that this will be sufficient to allow KCC to withdraw their holding objections on the two applications and advise TMBC on appropriate conditions and S106 requirements. With respect to timescales, as agreed at the meeting, East Malling Trust would like the Parkside application to be heard at the August Planning Committee (22nd August), and so KCC's updated consultation response is ideally required within the next couple of weeks (e.g. by 26th July) to ensure sufficient time for Maria to include this in her Committee Report.

As for Ditton Edge, we note from the meeting that KCC wish to wait until the status of planned improvements and associated funding for the A20/New Road/Mills Road junction is confirmed, and so we await further updates from KCC as and when there is more clarity on this matter. Subject to clarification on this point, it is understood that KCC can then support the Ditton Edge scheme in principle based on the above information.

I trust the above details are satisfactory and we look forward to receiving your response in due course. Please do not hesitate to call in the meantime should you have any queries or require further information.

Kind regards

Andrew Braun
Associate

ARDENT
CONSULTING ENGINEERS

Office 3, The Garage Studios, 41-43 St Mary 's Gate, The Lace Market, Nottingham NG1 1PU

T 0115 697 0940
M 07792 956852

www.ardent–ce.co.uk

Appendix B

Traffic Survey Information

K&M TRAFFIC SURVEYS

DATE : TUESDAY 14TH JANUARY 2020

LOCATION : DITTON, KENT

BRADBOURNE LANE / A20 LONDON ROAD PRIORITY JUNCTION

	BRADBOURNE LANE OUT LEFT TO A20 LONDON RD WEST				BRADBOURNE LANE OUT RIGHT TO A20 LONDON RD EAST				BRADBOURNE LANE RIGHT TURN IN FROM A20 LONDON RD WEST				BRADBOURNE LANE LEFT TURN IN FROM A20 LONDON RD EAST				A20 LONDON RD FROM WEST STRAIGHT AHEAD TO A20 LONDON RD EAST				A20 LONDON RD FROM EAST STRAIGHT AHEAD TO A20 LONDON RD WEST			
	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS
0730-0745	21	1	22	1	1	0	1	0	14	0	14	3	2	0	2	0	156	14	170	2	175	9	184	0
0745-0800	28	0	28	1	0	0	0	0	22	0	22	1	2	2	4	0	156	7	163	1	192	5	197	0
0800-0815	35	0	35	3	0	0	0	0	39	0	39	2	2	0	2	0	162	2	164	0	204	4	208	5
0815-0830	38	0	38	1	1	0	1	0	46	0	46	0	3	0	3	0	146	7	153	4	198	9	207	0
0830-0845	57	0	57	2	0	0	0	1	23	0	23	2	3	0	3	0	150	4	154	1	129	9	138	1
0845-0900	64	0	64	4	0	0	0	0	22	0	22	0	1	0	1	0	173	3	176	2	190	8	198	0
0900-0915	54	0	54	1	2	0	2	0	22	0	22	1	1	0	1	0	173	9	182	1	194	14	208	0
0915-0930	29	0	29	0	1	0	1	0	19	0	19	1	1	0	1	0	208	5	213	1	232	9	241	0
0730-0930	**326**	**1**	**327**	**13**	**5**	**0**	**5**	**1**	**207**	**0**	**207**	**10**	**15**	**2**	**17**	**0**	**1324**	**51**	**1375**	**12**	**1514**	**67**	**1581**	**6**
0730-0830	122	1	123	6	2	0	2	0	121	0	121	6	9	2	11	0	620	30	650	7	769	27	796	5
0745-0845	158	0	158	7	1	0	1	1	130	0	130	5	10	2	12	0	614	20	634	6	723	27	750	6
0800-0900	194	0	194	10	1	0	1	1	130	0	130	4	9	0	9	0	631	16	647	7	721	30	751	6
0815-0915	213	0	213	8	3	0	3	1	113	0	113	3	8	0	8	0	642	23	665	8	711	40	751	1
0830-0930	204	0	204	7	3	0	3	1	86	0	86	4	6	0	6	0	704	21	725	5	745	40	785	1

	BRADBOURNE LANE OUT LEFT TO A20 LONDON RD WEST				BRADBOURNE LANE OUT RIGHT TO A20 LONDON RD EAST				BRADBOURNE LANE RIGHT TURN IN FROM A20 LONDON RD WEST				BRADBOURNE LANE LEFT TURN IN FROM A20 LONDON RD EAST				A20 LONDON RD FROM WEST STRAIGHT AHEAD TO A20 LONDON RD EAST				A20 LONDON RD FROM EAST STRAIGHT AHEAD TO A20 LONDON RD WEST			
	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS	CAR	HGV	TOT	PEDS
1630-1645	12	1	13	2	1	0	1	0	19	1	20	1	3	0	3	1	151	5	156	0	150	7	157	0
1645-1700	12	0	12	0	4	0	4	0	23	0	23	0	4	0	4	0	163	6	169	1	186	4	190	1
1700-1715	23	0	23	1	2	0	2	0	36	0	36	0	4	0	4	1	168	4	172	0	126	3	129	0
1715-1730	17	0	17	0	3	0	3	0	29	0	29	1	0	0	0	0	139	1	140	1	134	0	134	1
1730-1745	17	0	17	0	1	0	1	1	34	0	34	1	2	0	2	0	175	5	180	2	163	4	167	0
1745-1800	14	0	14	2	3	0	3	0	32	0	32	1	2	0	2	1	141	4	145	1	137	2	139	0
1800-1815	17	0	17	0	0	0	0	0	34	0	34	1	3	0	3	0	165	0	165	0	116	0	116	0
1815-1830	23	0	23	0	0	0	0	0	23	0	23	0	1	0	1	0	168	2	170	0	132	4	136	2
1630-1830	**135**	**1**	**136**	**5**	**14**	**0**	**14**	**1**	**230**	**1**	**231**	**4**	**19**	**0**	**19**	**2**	**1270**	**27**	**1297**	**5**	**1144**	**24**	**1168**	**4**
1630-1730	64	1	65	3	10	0	10	0	107	1	108	2	11	0	11	2	621	16	637	2	596	14	610	2
1645-1745	69	0	69	1	10	0	10	1	122	0	122	1	10	0	10	1	645	16	661	4	609	11	620	2
1700-1800	71	0	71	3	9	0	9	1	131	0	131	2	8	0	8	1	623	14	637	4	560	9	569	1
1715-1815	65	0	65	2	7	0	7	1	129	0	129	3	7	0	7	0	620	10	630	4	550	6	556	1
1730-1830	71	0	71	2	4	0	4	1	123	0	123	2	8	0	8	0	649	11	660	3	548	10	558	2

K&M TRAFFIC SURVEYS

DATE : TUESDAY 14TH JANUARY 2020

LOCATION : DITTON, KENT

BRADBOURNE LANE / A20 LONDON ROAD PRIORITY JUNCTION

K&M TRAFFIC SURVEYS

DATE : TUESDAY 14TH JANUARY 2020   LOCATION : DITTON, KENT

	A20 / BRADBOURNE LANE					A20 / BRADBOURNE LANE			
	OUT BRADBOURNE LA	RIGHT TURN INTO BRADBOURNE LA	A20 EASTBOUND QUEUE PAST JUNCTION	A20 WESTBOUND QUEUE PAST JUNCTION		OUT BRADBOURNE LA	RIGHT TURN INTO BRADBOURNE LA	A20 EASTBOUND QUEUE PAST JUNCTION	A20 WESTBOUND QUEUE PAST JUNCTION
0735	0	0			1635	2	0		
0740	1	2			1640	0	0		
0745	1	0			1645	4	1		
0750	0	0			1650	0	0		
0755	1	0	YES		1655	0	0	F	F
0800	0	0	YES		1700	0	0	R	R
0805	2	0	YES		1705	0	0	E	E
0810	0	0	YES		1710	0	0	E	E
0815	0	0	YES		1715	2	1		
0820	1	0	YES		1720	2	0	F	F
0825	0	0	YES		1725	0	0	L	L
0830	3	0	YES	YES	1730	3	0	O	O
0835	0	0	YES	YES	1735	0	0	W	W
0840	5	0	YES	YES	1740	0	0		
0845	0	0	YES	YES	1745	3	0		
0850	2	0	YES		1750	0	0		
0855	1	0	YES		1755	0	0		
0900	3	0	YES		1800	0	0		
0905	2	0	YES		1805	0	0		
0910	4	0	YES		1810	1	2		
0915	3	0	YES		1815	0	0		
0920	0	0			1820	0	0		
0925	0	0			1825	2	0		
0930	0	0			1830	0	0		

QUEUES RECORDED IN TOTAL NUMBER OF VEHICLES

Appendix C

TEMPro Growth Factors

Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	1.0822	1.0847
County	Kent	1.0727	1.0821
Authority	Tonbridge and Malling	1.0805	1.0796
E02005153	Tonbridge and Malling 005	1.0917	1.0831

Future Year - Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	192,511	193,226
County	Kent	33,161	34,623
Authority	Tonbridge and Malling	2,874	2,772
E02005153	Tonbridge and Malling 005	273	428

Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	2,340,656	2,281,373
County	Kent	456,136	421,486
Authority	Tonbridge and Malling	35,713	34,809
E02005153	Tonbridge and Malling 005	2,983	5,150

Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	2,533,167	2,474,599
County	Kent	489,297	456,109
Authority	Tonbridge and Malling	38,587	37,580
E02005153	Tonbridge and Malling 005	3,256	5,578

NTM AF15 Dataset

Level	Area	Local Growth Figure
Region	SE	1.123104857
County	Kent	1.116833423
Authority	Tonbridge and Malling	1.119580415
E02005153	Tonbridge and Malling 005	1.127199429

2020-2031 - AM Peak

Growth Factor

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	1.0863	1.0850
County	Kent	1.0841	1.0787
Authority	Tonbridge and Malling	1.0837	1.0863
E02005153	Tonbridge and Malling 005	1.0882	1.0958

Future Year - Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	213,054	211,601
County	Kent	38,755	37,025
Authority	Tonbridge and Malling	3,067	3,092
E02005153	Tonbridge and Malling 005	454	332

Base Year

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	2,469,633	2,489,360
County	Kent	461,083	470,233
Authority	Tonbridge and Malling	36,626	35,819
E02005153	Tonbridge and Malling 005	5,143	3,465

Future Year

Area Description		All purposes	
Level	Name	Origin	Destination
Region	SE	2,682,686	2,700,960
County	Kent	499,837	507,258
Authority	Tonbridge and Malling	39,693	38,911
E02005153	Tonbridge and Malling 005	5,597	3,797

NTM AF15 Dataset

Level	Area	Local Growth Figure
Region	SE	1.125385378
County	Kent	1.120979825
Authority	Tonbridge and Malling	1.124711587
E02005153	Tonbridge and Malling 005	1.131967791

2020-2031 - PM Peak

Appendix D

Traffic Count Summary Table

KILN BARN ROAD / ST PETERS ROAD / NEW ROAD

Time Period	KILN BARN ROAD — LEFT TO ST PETERS ROAD			KILN BARN ROAD — STRAIGHT TO NEW ROAD			ST PETERS ROAD — LEFT TO NEW ROAD			ST PETERS ROAD — RIGHT TO KILN BARN ROAD			NEW ROAD — STRAIGHT TO KILN BARN ROAD			NEW ROAD — RIGHT TO ST PETERS ROAD			Total
	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	H/T
0730-0745	14	0	14	23	1	25	12	0	12	4	1	6	16	0	16	37	1	39	
0745-0800	20	0	20	20	0	20	15	0	15	5	0	5	32	0	32	34	0	34	
0800-0815	14	1	16	20	0	20	29	0	29	9	0	9	23	0	23	26	0	26	
0815-0830	16	0	16	18	0	18	28	0	28	4	0	4	21	0	21	37	0	37	485
0830-0845	17	0	17	22	1	24	45	1	47	6	0	6	27	1	29	32	0	32	528
0845-0900	8	0	8	25	0	25	22	0	22	10	1	12	24	1	26	37	0	37	532
0900-0915	8	1	10	24	0	24	13	0	13	9	0	9	34	2	38	20	0	20	523
0915-0930	5	0	5	16	3	22	11	0	11	4	0	4	19	0	19	12	0	12	472

2-Hourly Total	67	1	106	80	1	178				24	0	55	103	1	204				
Percentage			37.3%			62.7%						21.2%			78.8%				

Time Period	KILN BARN ROAD — LEFT TO ST PETERS ROAD			KILN BARN ROAD — STRAIGHT TO NEW ROAD			ST PETERS ROAD — LEFT TO NEW ROAD			ST PETERS ROAD — RIGHT TO KILN BARN ROAD			NEW ROAD — STRAIGHT TO KILN BARN ROAD			NEW ROAD — RIGHT TO ST PETERS ROAD			Total
	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	Lights	HGV	PCU	H/T
1630-1645	6	0	6	33	0	33	14	1	16	13	0	13	25	2	29	12	0	12	
1645-1700	7	0	7	33	0	33	25	0	25	12	0	12	20	0	20	14	0	14	
1700-1715	11	0	11	41	0	41	36	1	38	15	0	15	21	0	21	15	0	15	
1715-1730	11	0	11	44	0	44	33	0	33	9	0	9	36	0	36	11	0	11	505
1730-1745	17	0	17	56	1	58	32	0	32	10	0	10	29	1	31	10	0	10	554
1745-1800	11	0	11	44	0	44	30	0	30	10	0	10	24	0	24	8	0	8	570
1800-1815	6	0	6	39	0	39	37	0	37	9	0	9	32	1	34	16	0	16	570
1815-1830	7	0	7	33	0	33	21	0	21	13	0	13	27	1	29	12	0	12	541

2-Hourly Total	50	0	76	185	1	325	131	1	133	44	0	91	110	1	224	44	0	44	
Percentage			19.0%			81.0%						28.9%			71.1%				

SUMMARY OF KILN BARN ROAD/ST PETERS ROAD/NEW ROAD, T-JUNCTION - 13/11/18

Appendix E

Capacity Modelling Output Information

TRL THE FUTURE OF TRANSPORT

Junctions 9
PICADY 9 - Priority Intersection Module
Version: 9.5.1.7462 © Copyright TRL Limited, 2019
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Filename: Bradbourne Lane_London Road Junction Rev B.j9
Path: Y:\ARDENT PROJECTS\182600 - East Malling Trust Sites B & C, Ditton\Transport\PICADY\Bradbourne Lane, London Road Junction
Report generation date: 28/01/2020 17:12:21

»**Existing Arrangement - 2031 'Do Minimum' Baseline, AM**
»**Existing Arrangement - 2031 'Do Minimum' Baseline, PM**
»**Existing Arrangement - 2031 'Do Minimum' + Site B, AM**
»**Existing Arrangement - 2031 'Do Minimum' + Site B, PM**
»**Existing Arrangement - 2031 'Do Minimum' + Site B + Site C, AM**
»**Existing Arrangement - 2031 'Do Minimum' + Site B + Site C, PM**
»**Existing Arrangement - 2031 'Do Something' Baseline, AM**
»**Existing Arrangement - 2031 'Do Something' Baseline, PM**
»**Existing Arrangement - 2031 'Do Something' + Site B, AM**
»**Existing Arrangement - 2031 'Do Something' + Site B, PM**
»**Existing Arrangement - 2031 'Do Something' + Site B + Site C, AM**
»**Existing Arrangement - 2031 'Do Something' + Site B + Site C, PM**

Summary of junction performance

		AM					PM			
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
Existing Arrangement - 2031 'Do Minimum' Baseline										
Stream B-C	D1	1.6	23.20	0.62	C	D2	0.2	9.60	0.19	A
Stream B-A		0.0	36.99	0.03	E		0.1	20.02	0.06	C
Stream C-AB		0.3	10.97	0.25	B		0.4	10.46	0.31	B
Existing Arrangement - 2031 'Do Minimum' + Site B										
Stream B-C	D3	2.0	28.52	0.68	D	D4	0.2	9.91	0.20	A
Stream B-A		0.0	49.75	0.04	E		0.1	22.09	0.07	C
Stream C-AB		0.4	11.68	0.27	B		0.5	10.96	0.33	B
Existing Arrangement - 2031 'Do Minimum' + Site B + Site C										
Stream B-C	D7	2.1	28.85	0.68	D	D8	0.3	9.99	0.20	A
Stream B-A		0.0	52.17	0.05	F		0.1	22.69	0.07	C
Stream C-AB		0.4	11.74	0.27	B		0.5	11.07	0.33	B
Existing Arrangement - 2031 'Do Something' Baseline										
Stream B-C	D9	1.6	23.20	0.62	C	D10	0.2	9.60	0.19	A
Stream B-A		0.0	36.99	0.03	E		0.1	20.02	0.06	C
Stream C-AB		0.3	10.97	0.25	B		0.4	10.46	0.31	B
Existing Arrangement - 2031 'Do Something' + Site B										
Stream B-C	D11	2.0	28.52	0.68	D	D12	0.2	9.91	0.20	A
Stream B-A		0.0	49.75	0.04	E		0.1	22.09	0.07	C
Stream C-AB		0.4	11.68	0.27	B		0.5	10.96	0.33	B
Existing Arrangement - 2031 'Do Something' + Site B + Site C										
Stream B-C	D15	2.1	28.85	0.68	D	D16	0.3	9.99	0.20	A
Stream B-A		0.0	52.17	0.05	F		0.1	22.69	0.07	C
Stream C-AB		0.4	11.74	0.27	B		0.5	11.07	0.33	B

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

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

File summary

File Description

Title	Bradbourne Lane / London Road T-junction
Location	East Malling
Site number	
Date	28/01/2020
Version	
Status	Preliminary
Identifier	
Client	East Malling Trust
Jobnumber	182600
Enumerator	PR
Description	

Units

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

57 (0%)

7 (0%)

C-A

C-AB   0.034

A-C

A-B

935 (0%)

7 (0%)

0.061

0.163

B-C

B-A

230 (0%)

3 (0%)

Arm B

Flows show original traffic demand (PCU/hr).
Streams (downstream end) show RFC ()
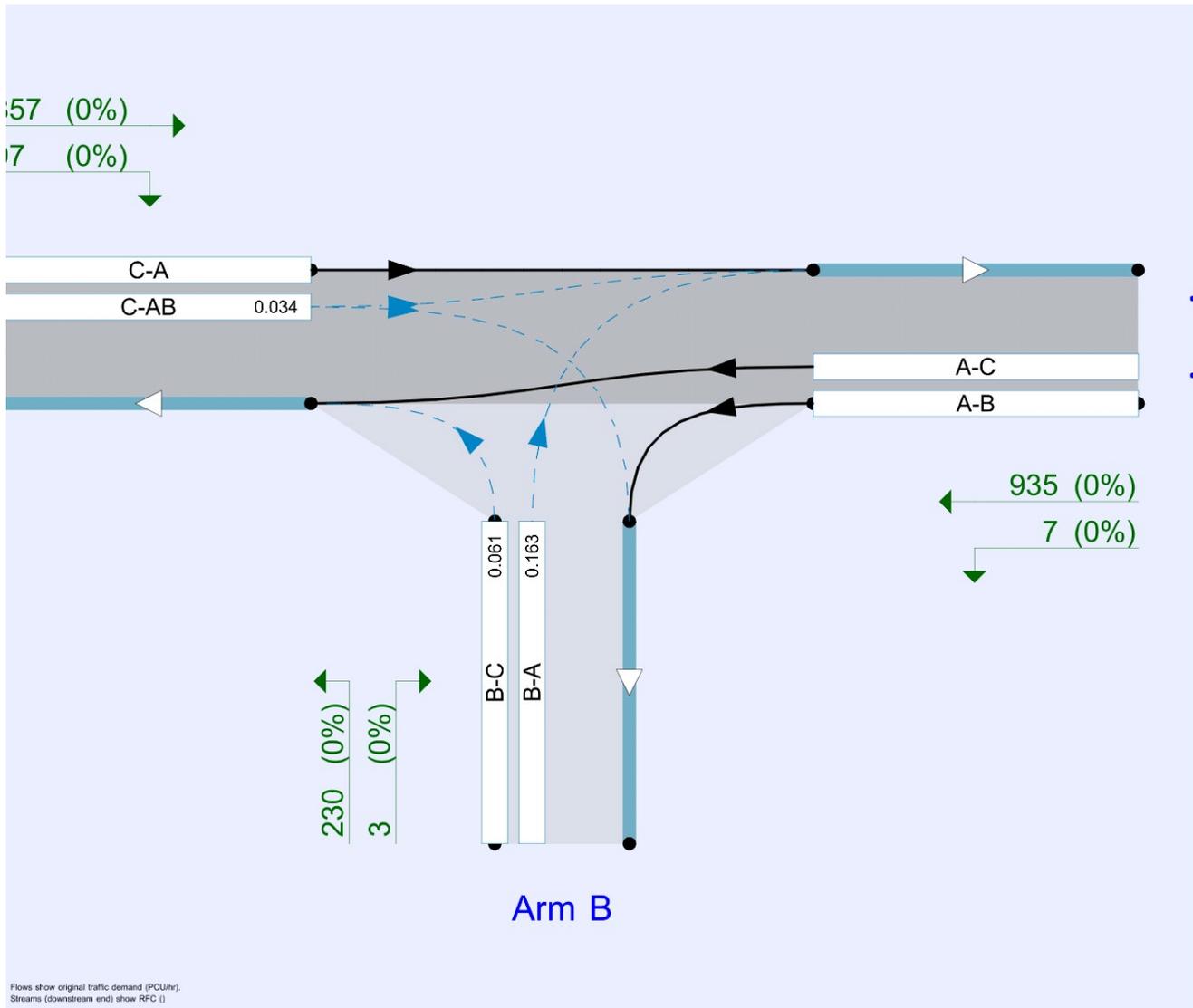
The junction diagram reflects the last run of Junctions.

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 'Do Minimum' Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D2	2031 'Do Minimum' Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D3	2031 'Do Minimum' + Site B	AM	ONE HOUR	07:45	09:15	15	✓
D4	2031 'Do Minimum' + Site B	PM	ONE HOUR	16:45	18:15	15	✓
D5	2031 'Do Minimum' + Site C	AM	ONE HOUR	07:45	09:15	15	✓
D6	2031 'Do Minimum' + Site C	PM	ONE HOUR	16:45	18:15	15	✓
D7	2031 'Do Minimum' + Site B + Site C	AM	ONE HOUR	07:45	09:15	15	✓
D8	2031 'Do Minimum' + Site B + Site C	PM	ONE HOUR	16:45	18:15	15	✓
D9	2031 'Do Something' Baseline	AM	ONE HOUR	07:45	09:15	15	✓
D10	2031 'Do Something' Baseline	PM	ONE HOUR	16:45	18:15	15	✓
D11	2031 'Do Something' + Site B	AM	ONE HOUR	07:45	09:15	15	✓
D12	2031 'Do Something' + Site B	PM	ONE HOUR	16:45	18:15	15	✓
D13	2031 'Do Something' + Site C	AM	ONE HOUR	07:45	09:15	15	✓
D14	2031 'Do Something' + Site C	PM	ONE HOUR	16:45	18:15	15	✓
D15	2031 'Do Something' + Site B + Site C	AM	ONE HOUR	07:45	09:15	15	✓
D16	2031 'Do Something' + Site B + Site C	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Name	Include in report	Use specific Demand Set(s)	Specific Demand Set(s)	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	Existing Arrangement	✓	✓	D1,D2,D3,D4,D7,D8,D9,D10,D11,D12,D15,D16	100.000	100.000

TRL THE FUTURE OF TRANSPORT

Existing Arrangement - 2031 'Do Minimum' Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		3.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	London Road (E)		Major
B	Bradbourne Lane		Minor
C	London Road (W)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Width for right turn (m)	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	6.96		✓	2.40	200.0	✓	8.00

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

Minor Arm Geometry

Arm	Minor arm type	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)
B	One lane plus flare	10.00	3.40	3.14	2.90	2.73	✓	1.00	48	19

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	603	0.105	0.266	0.167	0.380
B-C	664	0.097	0.246	-	-
C-B	705	0.262	0.262	-	-

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

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

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2031 'Do Minimum' Baseline	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	937	100.000
B		ONE HOUR	✓	233	100.000
C		ONE HOUR	✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	A	B	C
A	0	7	930
B	3	0	230
C	841	97	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.62	23.20	1.6	C	211	317
B-A	0.03	36.99	0.0	E	3	4
C-AB	0.25	10.97	0.3	B	89	134
C-A					772	1158
A-B					6	10
A-C					853	1280

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	173	43	490	0.354	171	0.0	0.5	11.229	B
B-A	2	0.56	270	0.008	2	0.0	0.0	13.429	B
C-AB	73	18	520	0.140	72	0.0	0.2	8.028	A
C-A	633	158			633				
A-B	5	1			5				
A-C	700	175			700				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	207	52	456	0.454	206	0.5	0.8	14.344	B
B-A	3	0.67	199	0.014	3	0.0	0.0	18.301	C
C-AB	87	22	484	0.180	87	0.2	0.2	9.054	A
C-A	756	189			756				
A-B	6	2			6				
A-C	836	209			836				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	253	63	408	0.621	250	0.8	1.5	22.439	C
B-A	3	0.83	102	0.032	3	0.0	0.0	36.481	E
C-AB	107	27	435	0.246	106	0.2	0.3	10.945	B
C-A	926	231			926				
A-B	8	2			8				
A-C	1024	256			1024				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	253	63	408	0.621	253	1.5	1.6	23.198	C
B-A	3	0.83	101	0.033	3	0.0	0.0	36.994	E
C-AB	107	27	435	0.246	107	0.3	0.3	10.973	B
C-A	926	231			926				
A-B	8	2			8				
A-C	1024	256			1024				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	207	52	455	0.454	210	1.6	0.9	14.814	B
B-A	3	0.67	198	0.014	3	0.0	0.0	18.460	C
C-AB	87	22	484	0.180	88	0.3	0.2	9.083	A
C-A	756	189			756				
A-B	6	2			6				
A-C	836	209			836				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	173	43	490	0.354	174	0.9	0.6	11.464	B
B-A	2	0.56	269	0.008	2	0.0	0.0	13.487	B
C-AB	73	18	520	0.140	73	0.2	0.2	8.058	A
C-A	633	158			633				
A-B	5	1			5				
A-C	700	175			700				

Existing Arrangement - 2031 'Do Minimum' Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		1.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2031 'Do Minimum' Baseline	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	725	100.000
B		ONE HOUR	✓	89	100.000
C		ONE HOUR	✓	904	100.000

Origin-Destination Data

Demand (PCU/hr)

From		To A	To B	To C
	A	0	11	714
	B	11	0	78
	C	766	138	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.19	9.60	0.2	A	72	107
B-A	0.06	20.02	0.1	C	10	15
C-AB	0.31	10.46	0.4	B	127	190
C-A					703	1054
A-B					10	15
A-C					655	983

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	527	0.111	58	0.0	0.1	7.674	A
B-A	8	2	323	0.026	8	0.0	0.0	11.439	B
C-AB	104	26	562	0.185	103	0.0	0.2	7.829	A
C-A	577	144			577				
A-B	8	2			8				
A-C	538	134			538				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	500	0.140	70	0.1	0.2	8.375	A
B-A	10	2	268	0.037	10	0.0	0.0	13.954	B
C-AB	124	31	534	0.232	124	0.2	0.3	8.763	A
C-A	689	172			689				
A-B	10	2			10				
A-C	642	160			642				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	461	0.186	86	0.2	0.2	9.584	A
B-A	12	3	192	0.063	12	0.0	0.1	19.970	C
C-AB	152	38	496	0.306	151	0.3	0.4	10.431	B
C-A	843	211			843				
A-B	12	3			12				
A-C	786	197			786				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	461	0.186	86	0.2	0.2	9.599	A
B-A	12	3	192	0.063	12	0.1	0.1	20.018	C
C-AB	152	38	496	0.306	152	0.4	0.4	10.463	B
C-A	843	211			843				
A-B	12	3			12				
A-C	786	197			786				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	500	0.140	70	0.2	0.2	8.393	A
B-A	10	2	267	0.037	10	0.1	0.0	13.985	B
C-AB	124	31	534	0.232	125	0.4	0.3	8.798	A
C-A	689	172			689				
A-B	10	2			10				
A-C	642	160			642				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	527	0.111	59	0.2	0.1	7.697	A
B-A	8	2	322	0.026	8	0.0	0.0	11.469	B
C-AB	104	26	562	0.185	104	0.3	0.2	7.869	A
C-A	577	144			577				
A-B	8	2			8				
A-C	538	134			538				

Existing Arrangement - 2031 'Do Minimum' + Site B, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		3.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2031 'Do Minimum' + Site B	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	991	100.000
B		ONE HOUR	✓	246	100.000
C		ONE HOUR	✓	959	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	7	984
	B	3	0	243
	C	858	101	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.68	28.52	2.0	D	223	334
B-A	0.04	49.75	0.0	E	3	4
C-AB	0.27	11.68	0.4	B	93	139
C-A					787	1181
A-B					6	10
A-C					903	1354

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	181	0.0	0.6	11.949	B
B-A	2	0.56	254	0.009	2	0.0	0.0	14.307	B
C-AB	76	19	510	0.149	75	0.0	0.2	8.277	A
C-A	646	161			646				
A-B	5	1			5				
A-C	741	185			741				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	443	0.493	217	0.6	0.9	15.806	C
B-A	3	0.67	179	0.015	3	0.0	0.0	20.447	C
C-AB	91	23	472	0.193	91	0.2	0.2	9.440	A
C-A	771	193			771				
A-B	6	2			6				
A-C	885	221			885				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	393	0.681	263	0.9	2.0	27.022	D
B-A	3	0.83	77	0.043	3	0.0	0.0	48.439	E
C-AB	111	28	419	0.265	111	0.2	0.4	11.630	B
C-A	945	236			945				
A-B	8	2			8				
A-C	1083	271			1083				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	393	0.681	267	2.0	2.0	28.518	D
B-A	3	0.83	76	0.044	3	0.0	0.0	49.751	E
C-AB	111	28	419	0.265	111	0.4	0.4	11.683	B
C-A	945	236			945				
A-B	8	2			8				
A-C	1083	271			1083				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	443	0.493	223	2.0	1.0	16.594	C
B-A	3	0.67	177	0.015	3	0.0	0.0	20.739	C
C-AB	91	23	472	0.193	91	0.4	0.2	9.476	A
C-A	771	193			771				
A-B	6	2			6				
A-C	885	221			885				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	184	1.0	0.6	12.262	B
B-A	2	0.56	252	0.009	2	0.0	0.0	14.392	B
C-AB	76	19	510	0.149	76	0.2	0.2	8.315	A
C-A	646	161			646				
A-B	5	1			5				
A-C	741	185			741				

Existing Arrangement - 2031 'Do Minimum' + Site B, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		1.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2031 'Do Minimum' + Site B	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	745	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	951	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To		A	B	C
From	A	0	11	734
	B	11	0	83
	C	804	147	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.20	9.91	0.2	A	76	114
B-A	0.07	22.09	0.1	C	10	15
C-AB	0.33	10.96	0.5	B	135	202
C-A					738	1107
A-B					10	15
A-C					674	1010

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	523	0.119	62	0.0	0.1	7.799	A
B-A	8	2	311	0.027	8	0.0	0.0	11.871	B
C-AB	111	28	558	0.198	110	0.0	0.2	8.011	A
C-A	605	151			605				
A-B	8	2			8				
A-C	553	138			553				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	495	0.151	74	0.1	0.2	8.556	A
B-A	10	2	254	0.039	10	0.0	0.0	14.734	B
C-AB	132	33	530	0.250	132	0.2	0.3	9.044	A
C-A	723	181			723				
A-B	10	2			10				
A-C	660	165			660				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	455	0.201	91	0.2	0.2	9.889	A
B-A	12	3	175	0.069	12	0.0	0.1	22.022	C
C-AB	162	40	490	0.330	161	0.3	0.5	10.921	B
C-A	885	221			885				
A-B	12	3			12				
A-C	808	202			808				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	455	0.201	91	0.2	0.2	9.907	A
B-A	12	3	175	0.069	12	0.1	0.1	22.090	C
C-AB	162	40	490	0.330	162	0.5	0.5	10.959	B
C-A	885	221			885				
A-B	12	3			12				
A-C	808	202			808				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	495	0.151	75	0.2	0.2	8.578	A
B-A	10	2	254	0.039	10	0.1	0.0	14.781	B
C-AB	132	33	530	0.250	133	0.5	0.3	9.087	A
C-A	723	181			723				
A-B	10	2			10				
A-C	660	165			660				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	523	0.119	63	0.2	0.1	7.824	A
B-A	8	2	311	0.027	8	0.0	0.0	11.903	B
C-AB	111	28	558	0.198	111	0.3	0.3	8.059	A
C-A	605	151			605				
A-B	8	2			8				
A-C	553	138			553				

Existing Arrangement - 2031 'Do Minimum' + Site B + Site C, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		3.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	996	100.000
B		ONE HOUR	✓	246	100.000
C		ONE HOUR	✓	975	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	A	B	C
A	0	7	989
B	3	0	243
C	874	101	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.68	28.85	2.1	D	223	334
B-A	0.05	52.17	0.0	F	3	4
C-AB	0.27	11.74	0.4	B	93	139
C-A					802	1203
A-B					6	10
A-C					908	1361

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	181	0.0	0.6	11.987	B
B-A	2	0.56	251	0.009	2	0.0	0.0	14.476	B
C-AB	76	19	509	0.150	75	0.0	0.2	8.296	A
C-A	658	164			658				
A-B	5	1			5				
A-C	745	186			745				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	442	0.494	217	0.6	0.9	15.883	C
B-A	3	0.67	175	0.015	3	0.0	0.0	20.842	C
C-AB	91	23	471	0.193	91	0.2	0.2	9.469	A
C-A	786	196			786				
A-B	6	2			6				
A-C	889	222			889				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	391	0.684	263	0.9	2.0	27.301	D
B-A	3	0.83	74	0.045	3	0.0	0.0	50.730	F
C-AB	111	28	418	0.266	111	0.2	0.4	11.701	B
C-A	962	241			962				
A-B	8	2			8				
A-C	1089	272			1089				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	391	0.684	267	2.0	2.1	28.852	D
B-A	3	0.83	72	0.046	3	0.0	0.0	52.170	F
C-AB	111	28	418	0.266	111	0.4	0.4	11.738	B
C-A	962	241			962				
A-B	8	2			8				
A-C	1089	272			1089				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	442	0.494	223	2.1	1.0	16.691	C
B-A	3	0.67	173	0.016	3	0.0	0.0	21.150	C
C-AB	91	23	471	0.193	91	0.4	0.2	9.504	A
C-A	786	196			786				
A-B	6	2			6				
A-C	889	222			889				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	184	1.0	0.6	12.303	B
B-A	2	0.56	250	0.009	2	0.0	0.0	14.563	B
C-AB	76	19	509	0.150	76	0.2	0.2	8.332	A
C-A	658	164			658				
A-B	5	1			5				
A-C	745	186			745				

Existing Arrangement - 2031 'Do Minimum' + Site B + Site C, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		1.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	756	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	957	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To		A	B	C
	A	0	11	745
	B	11	0	83
	C	810	147	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.20	9.99	0.3	A	76	114
B-A	0.07	22.69	0.1	C	10	15
C-AB	0.33	11.07	0.5	B	135	202
C-A					743	1115
A-B					10	15
A-C					684	1025

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	521	0.120	62	0.0	0.1	7.836	A
B-A	8	2	308	0.027	8	0.0	0.0	11.988	B
C-AB	111	28	556	0.199	110	0.0	0.2	8.051	A
C-A	610	152			610				
A-B	8	2			8				
A-C	561	140			561				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	493	0.152	74	0.1	0.2	8.607	A
B-A	10	2	251	0.039	10	0.0	0.0	14.950	B
C-AB	132	33	527	0.251	132	0.2	0.3	9.103	A
C-A	728	182			728				
A-B	10	2			10				
A-C	670	167			670				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	452	0.202	91	0.2	0.3	9.976	A
B-A	12	3	171	0.071	12	0.0	0.1	22.619	C
C-AB	162	40	487	0.332	161	0.3	0.5	11.025	B
C-A	892	223			892				
A-B	12	3			12				
A-C	820	205			820				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	452	0.202	91	0.3	0.3	9.994	A
B-A	12	3	171	0.071	12	0.1	0.1	22.691	C
C-AB	162	40	487	0.332	162	0.5	0.5	11.066	B
C-A	892	223			892				
A-B	12	3			12				
A-C	820	205			820				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	492	0.152	75	0.3	0.2	8.629	A
B-A	10	2	250	0.040	10	0.1	0.0	14.997	B
C-AB	132	33	527	0.251	133	0.5	0.3	9.146	A
C-A	728	182			728				
A-B	10	2			10				
A-C	670	167			670				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	521	0.120	63	0.2	0.1	7.860	A
B-A	8	2	308	0.027	8	0.0	0.0	12.024	B
C-AB	111	28	556	0.199	111	0.3	0.3	8.098	A
C-A	610	152			610				
A-B	8	2			8				
A-C	561	140			561				

TRL THE FUTURE OF TRANSPORT

Existing Arrangement - 2031 'Do Something' Baseline, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		3.09	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	937	100.000
B		ONE HOUR	✓	233	100.000
C		ONE HOUR	✓	938	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	7	930
	B	3	0	230
	C	841	97	0

Vehicle Mix

TRL THE FUTURE OF TRANSPORT

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.62	23.20	1.6	C	211	317
B-A	0.03	36.99	0.0	E	3	4
C-AB	0.25	10.97	0.3	B	89	134
C-A					772	1158
A-B					6	10
A-C					853	1280

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	173	43	490	0.354	171	0.0	0.5	11.229	B
B-A	2	0.56	270	0.008	2	0.0	0.0	13.429	B
C-AB	73	18	520	0.140	72	0.0	0.2	8.028	A
C-A	633	158			633				
A-B	5	1			5				
A-C	700	175			700				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	207	52	456	0.454	206	0.5	0.8	14.344	B
B-A	3	0.67	199	0.014	3	0.0	0.0	18.301	C
C-AB	87	22	484	0.180	87	0.2	0.2	9.054	A
C-A	756	189			756				
A-B	6	2			6				
A-C	836	209			836				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	253	63	408	0.621	250	0.8	1.5	22.439	C
B-A	3	0.83	102	0.032	3	0.0	0.0	36.481	E
C-AB	107	27	435	0.246	106	0.2	0.3	10.945	B
C-A	926	231			926				
A-B	8	2			8				
A-C	1024	256			1024				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	253	63	408	0.621	253	1.5	1.6	23.198	C
B-A	3	0.83	101	0.033	3	0.0	0.0	36.994	E
C-AB	107	27	435	0.246	107	0.3	0.3	10.973	B
C-A	926	231			926				
A-B	8	2			8				
A-C	1024	256			1024				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	207	52	455	0.454	210	1.6	0.9	14.814	B
B-A	3	0.67	198	0.014	3	0.0	0.0	18.460	C
C-AB	87	22	484	0.180	88	0.3	0.2	9.083	A
C-A	756	189			756				
A-B	6	2			6				
A-C	836	209			836				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	173	43	490	0.354	174	0.9	0.6	11.464	B
B-A	2	0.56	269	0.008	2	0.0	0.0	13.487	B
C-AB	73	18	520	0.140	73	0.2	0.2	8.058	A
C-A	633	158			633				
A-B	5	1			5				
A-C	700	175			700				

TRL THE FUTURE OF TRANSPORT

Existing Arrangement - 2031 'Do Something' Baseline, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		1.40	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

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

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	725	100.000
B		ONE HOUR	✓	89	100.000
C		ONE HOUR	✓	904	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	A	B	C
A	0	11	714
B	11	0	78
C	766	138	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.19	9.60	0.2	A	72	107
B-A	0.06	20.02	0.1	C	10	15
C-AB	0.31	10.46	0.4	B	127	190
C-A					703	1054
A-B					10	15
A-C					655	983

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	527	0.111	58	0.0	0.1	7.674	A
B-A	8	2	323	0.026	8	0.0	0.0	11.439	B
C-AB	104	26	562	0.185	103	0.0	0.2	7.829	A
C-A	577	144			577				
A-B	8	2			8				
A-C	538	134			538				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	500	0.140	70	0.1	0.2	8.375	A
B-A	10	2	268	0.037	10	0.0	0.0	13.954	B
C-AB	124	31	534	0.232	124	0.2	0.3	8.763	A
C-A	689	172			689				
A-B	10	2			10				
A-C	642	160			642				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	461	0.186	86	0.2	0.2	9.584	A
B-A	12	3	192	0.063	12	0.0	0.1	19.970	C
C-AB	152	38	496	0.306	151	0.3	0.4	10.431	B
C-A	843	211			843				
A-B	12	3			12				
A-C	786	197			786				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	86	21	461	0.186	86	0.2	0.2	9.599	A
B-A	12	3	192	0.063	12	0.1	0.1	20.018	C
C-AB	152	38	496	0.306	152	0.4	0.4	10.463	B
C-A	843	211			843				
A-B	12	3			12				
A-C	786	197			786				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	70	18	500	0.140	70	0.2	0.2	8.393	A
B-A	10	2	267	0.037	10	0.1	0.0	13.985	B
C-AB	124	31	534	0.232	125	0.4	0.3	8.798	A
C-A	689	172			689				
A-B	10	2			10				
A-C	642	160			642				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	59	15	527	0.111	59	0.2	0.1	7.697	A
B-A	8	2	322	0.026	8	0.0	0.0	11.469	B
C-AB	104	26	562	0.185	104	0.3	0.2	7.869	A
C-A	577	144			577				
A-B	8	2			8				
A-C	538	134			538				

TRL THE FUTURE OF TRANSPORT

Existing Arrangement - 2031 'Do Something' + Site B, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		3.76	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D11	2031 'Do Something' + Site B	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	991	100.000
B		ONE HOUR	✓	246	100.000
C		ONE HOUR	✓	959	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To		A	B	C
	A	0	7	984
From	B	3	0	243
	C	858	101	0

Vehicle Mix

TRL THE FUTURE OF TRANSPORT

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.68	28.52	2.0	D	223	334
B-A	0.04	49.75	0.0	E	3	4
C-AB	0.27	11.68	0.4	B	93	139
C-A					787	1181
A-B					6	10
A-C					903	1354

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	181	0.0	0.6	11.949	B
B-A	2	0.56	254	0.009	2	0.0	0.0	14.307	B
C-AB	76	19	510	0.149	75	0.0	0.2	8.277	A
C-A	646	161			646				
A-B	5	1			5				
A-C	741	185			741				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	443	0.493	217	0.6	0.9	15.806	C
B-A	3	0.67	179	0.015	3	0.0	0.0	20.447	C
C-AB	91	23	472	0.193	91	0.2	0.2	9.440	A
C-A	771	193			771				
A-B	6	2			6				
A-C	885	221			885				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	393	0.681	263	0.9	2.0	27.022	D
B-A	3	0.83	77	0.043	3	0.0	0.0	48.439	E
C-AB	111	28	419	0.265	111	0.2	0.4	11.630	B
C-A	945	236			945				
A-B	8	2			8				
A-C	1083	271			1083				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	393	0.681	267	2.0	2.0	28.518	D
B-A	3	0.83	76	0.044	3	0.0	0.0	49.751	E
C-AB	111	28	419	0.265	111	0.4	0.4	11.683	B
C-A	945	236			945				
A-B	8	2			8				
A-C	1083	271			1083				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	443	0.493	223	2.0	1.0	16.594	C
B-A	3	0.67	177	0.015	3	0.0	0.0	20.739	C
C-AB	91	23	472	0.193	91	0.4	0.2	9.476	A
C-A	771	193			771				
A-B	6	2			6				
A-C	885	221			885				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	184	1.0	0.6	12.262	B
B-A	2	0.56	252	0.009	2	0.0	0.0	14.392	B
C-AB	76	19	510	0.149	76	0.2	0.2	8.315	A
C-A	646	161			646				
A-B	5	1			5				
A-C	741	185			741				

TRL THE FUTURE OF TRANSPORT

Existing Arrangement - 2031 'Do Something' + Site B, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		1.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D12	2031 'Do Something' + Site B	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	745	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	951	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A	B	C
From	A	0	11	734
	B	11	0	83
	C	804	147	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.20	9.91	0.2	A	76	114
B-A	0.07	22.09	0.1	C	10	15
C-AB	0.33	10.96	0.5	B	135	202
C-A					738	1107
A-B					10	15
A-C					674	1010

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	523	0.119	62	0.0	0.1	7.799	A
B-A	8	2	311	0.027	8	0.0	0.0	11.871	B
C-AB	111	28	558	0.198	110	0.0	0.2	8.011	A
C-A	605	151			605				
A-B	8	2			8				
A-C	553	138			553				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	495	0.151	74	0.1	0.2	8.556	A
B-A	10	2	254	0.039	10	0.0	0.0	14.734	B
C-AB	132	33	530	0.250	132	0.2	0.3	9.044	A
C-A	723	181			723				
A-B	10	2			10				
A-C	660	165			660				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	455	0.201	91	0.2	0.2	9.889	A
B-A	12	3	175	0.069	12	0.0	0.1	22.022	C
C-AB	162	40	490	0.330	161	0.3	0.5	10.921	B
C-A	885	221			885				
A-B	12	3			12				
A-C	808	202			808				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	455	0.201	91	0.2	0.2	9.907	A
B-A	12	3	175	0.069	12	0.1	0.1	22.090	C
C-AB	162	40	490	0.330	162	0.5	0.5	10.959	B
C-A	885	221			885				
A-B	12	3			12				
A-C	808	202			808				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	495	0.151	75	0.2	0.2	8.578	A
B-A	10	2	254	0.039	10	0.1	0.0	14.781	B
C-AB	132	33	530	0.250	133	0.5	0.3	9.087	A
C-A	723	181			723				
A-B	10	2			10				
A-C	660	165			660				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	523	0.119	63	0.2	0.1	7.824	A
B-A	8	2	311	0.027	8	0.0	0.0	11.903	B
C-AB	111	28	558	0.198	111	0.3	0.3	8.059	A
C-A	605	151			605				
A-B	8	2			8				
A-C	553	138			553				

Existing Arrangement - 2031 'Do Something' + Site B + Site C, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		3.77	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D15	2031 'Do Something' + Site B + Site C	AM	ONE HOUR	07:45	09:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	996	100.000
B		ONE HOUR	✓	246	100.000
C		ONE HOUR	✓	975	100.000

Origin-Destination Data

Demand (PCU/hr)

From \ To	A	B	C
A	0	7	989
B	3	0	243
C	874	101	0

Vehicle Mix

TRL THE FUTURE OF TRANSPORT

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.68	28.85	2.1	D	223	334
B-A	0.05	52.17	0.0	F	3	4
C-AB	0.27	11.74	0.4	B	93	139
C-A					802	1203
A-B					6	10
A-C					908	1361

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	181	0.0	0.6	11.987	B
B-A	2	0.56	251	0.009	2	0.0	0.0	14.476	B
C-AB	76	19	509	0.150	75	0.0	0.2	8.296	A
C-A	658	164			658				
A-B	5	1			5				
A-C	745	186			745				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	442	0.494	217	0.6	0.9	15.883	C
B-A	3	0.67	175	0.015	3	0.0	0.0	20.842	C
C-AB	91	23	471	0.193	91	0.2	0.2	9.469	A
C-A	786	196			786				
A-B	6	2			6				
A-C	889	222			889				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	391	0.684	263	0.9	2.0	27.301	D
B-A	3	0.83	74	0.045	3	0.0	0.0	50.730	F
C-AB	111	28	418	0.266	111	0.2	0.4	11.701	B
C-A	962	241			962				
A-B	8	2			8				
A-C	1089	272			1089				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	268	67	391	0.684	267	2.0	2.1	28.852	D
B-A	3	0.83	72	0.046	3	0.0	0.0	52.170	F
C-AB	111	28	418	0.266	111	0.4	0.4	11.738	B
C-A	962	241			962				
A-B	8	2			8				
A-C	1089	272			1089				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	218	55	442	0.494	223	2.1	1.0	16.691	C
B-A	3	0.67	173	0.016	3	0.0	0.0	21.150	C
C-AB	91	23	471	0.193	91	0.4	0.2	9.504	A
C-A	786	196			786				
A-B	6	2			6				
A-C	889	222			889				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	183	46	479	0.382	184	1.0	0.6	12.303	B
B-A	2	0.56	250	0.009	2	0.0	0.0	14.563	B
C-AB	76	19	509	0.150	76	0.2	0.2	8.332	A
C-A	658	164			658				
A-B	5	1			5				
A-C	745	186			745				

TRL THE FUTURE OF TRANSPORT

Existing Arrangement - 2031 'Do Something' + Site B + Site C, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm B - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	Bradbourne Lane / London Road T-junction	T-Junction	Two-way		1.50	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D16	2031 'Do Something' + Site B + Site C	PM	ONE HOUR	16:45	18:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A		ONE HOUR	✓	756	100.000
B		ONE HOUR	✓	94	100.000
C		ONE HOUR	✓	957	100.000

Origin-Destination Data

Demand (PCU/hr)

From		To		
		A	B	C
	A	0	11	745
	B	11	0	83
	C	810	147	0

Vehicle Mix

TRL THE FUTURE OF TRANSPORT

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-C	0.20	9.99	0.3	A	76	114
B-A	0.07	22.69	0.1	C	10	15
C-AB	0.33	11.07	0.5	B	135	202
C-A					743	1115
A-B					10	15
A-C					684	1025

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	521	0.120	62	0.0	0.1	7.836	A
B-A	8	2	308	0.027	8	0.0	0.0	11.988	B
C-AB	111	28	556	0.199	110	0.0	0.2	8.051	A
C-A	610	152			610				
A-B	8	2			8				
A-C	561	140			561				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	493	0.152	74	0.1	0.2	8.607	A
B-A	10	2	251	0.039	10	0.0	0.0	14.950	B
C-AB	132	33	527	0.251	132	0.2	0.3	9.103	A
C-A	728	182			728				
A-B	10	2			10				
A-C	670	167			670				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	452	0.202	91	0.2	0.3	9.976	A
B-A	12	3	171	0.071	12	0.0	0.1	22.619	C
C-AB	162	40	487	0.332	161	0.3	0.5	11.025	B
C-A	892	223			892				
A-B	12	3			12				
A-C	820	205			820				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	91	23	452	0.202	91	0.3	0.3	9.994	A
B-A	12	3	171	0.071	12	0.1	0.1	22.691	C
C-AB	162	40	487	0.332	162	0.5	0.5	11.066	B
C-A	892	223			892				
A-B	12	3			12				
A-C	820	205			820				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	75	19	492	0.152	75	0.3	0.2	8.629	A
B-A	10	2	250	0.040	10	0.1	0.0	14.997	B
C-AB	132	33	527	0.251	133	0.5	0.3	9.146	A
C-A	728	182			728				
A-B	10	2			10				
A-C	670	167			670				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-C	62	16	521	0.120	63	0.2	0.1	7.860	A
B-A	8	2	308	0.027	8	0.0	0.0	12.024	B
C-AB	111	28	556	0.199	111	0.3	0.3	8.098	A
C-A	610	152			610				
A-B	8	2			8				
A-C	561	140			561				