Lane End, Kirkby in Ashfield

Highways Technical Note

Response to Highways Comments from Nottinghamshire County Council

Planning Application Reference: V/2025/0003

August 2025

AMA Project Number: 50082/JF

INTRODUCTION

This Highways Technical Note (HTN) has been prepared by Andrew Moseley Associates (AMA) in response to comments received from Nottinghamshire County Council (NCC) dated 22nd July 2025 in relation to the Transport Assessment (TA) and Travel Plan (TP) submitted for the proposed development of a drive-thru located on Lane End, Kirkby-in-Ashfield. The NCC planning reference is V/2025/0003. A copy of NCC's consultation response is included at **Appendix A**.

This response follows a meeting held between NCC and the applicant on 5th August to discuss the outstanding queries and agree a route forward. Each of the outstanding queries is addressed below. It is noted that the Travel Plan is now accepted by NCC.

PEDESTRIAN INFRASTRUCTURE

Whilst is has been demonstrated that pedestrian infrastructure in the local area is provided to a good standard, the applicant has agreed to implement the following improvements:

- Provision of a dropped kerb crossing with tactile paving at the bell mouths of Erewash Street and the unnamed road east of the site; and
- Provision of dropped kerbs and tactile paving near Millers Way to the west of the site.

NCC have requested that the dimensions of the footway along the site frontage are included in a drawing to ensure adequate provision for pedestrians. This is demonstrated in **Appendix B**, which shows that the footway along the site frontage has a continuous width of at least 2m. **Appendix B** also includes a series of drawings which demonstrate the width of the ghost island right turn lane and adjacent carriageway running Lanes on Lane End, as well as the proposed pedestrian improvements, as requested by NCC.

In previous correspondence, NCC have requested that the existing uncontrolled pedestrian crossing over Lane End at the site frontage (currently a refuge island with dropped kerbs and tactile paving) is upgraded to a signalised crossing. Whilst the applicant does not consider this is necessary to make the proposals acceptable in highway safety terms, they are willing to provide a contribution of £100,000 via a S106 agreement to enable this crossing to be upgraded.

Given that this upgrade will be brought forward by the Council, albeit funded by the applicant, it is not considered necessary for the applicant to provide a detailed drawing at this stage. Detailed drawings will be prepared by the Council and their design team. This was agreed with NCC during the meeting on 5th August.

It is considered that all queries relating to pedestrian infrastructure and improvements have now been satisfactorily addressed.

SERVICING

NCC have raised concern with drawing AMA-50082-ATR003-3.4 P01, stating that it "*shows that vehicles exiting the site to the west of Lane End would encroach into the proposed right turn lane"*.

It is important to note that in the previous iteration of the proposed access arrangements, service vehicles exiting the site were shown to encroach into the proposed right turn lane, and these drawings were considered acceptable to NCC, who, in their response from 9th July, stated that "*The submitted swept path plots show only the left-in/left-out HGV movements at the site access for the McDonalds service vehicle. Those plots are acceptable provided that the size of the service vehicle is restricted to that shown.".*

McDonald's restaurants receive three deliveries per week, with refuse collected three times per week. Therefore, the number of service vehicles using the site is very low, and on average equates to less than one vehicle per day. Servicing is undertaken during quieter trading periods.

A service vehicle turning left out of the site will wait until the right turn lane is clear before undertaking the manoeuvre. This is the same for many McDonald's restaurants across the country and also mirrors the situation along the B6020 within Kirkby in Ashfield, for example at the Aldi store opposite, Lindley's Lane and Hodgkinson Road. There is no pattern of collisions at any of these junctions that suggests this is an unsafe manoeuvre.

To avoid vehicles turning left out of the site overrunning the right turn lane, the access would have to be widened significantly. Not only would this have an impact on the deliverability of the scheme, but it would go against NCC's aim to provide an environment focussed on high quality pedestrian infrastructure.

It is therefore considered that given the low level of service vehicle movements at the site and the timing of these vehicle movements, that the proposed access arrangement is safe and appropriate.

NCC have also noted that service vehicles encroach into the pedestrian area within the development site. This pedestrian area is purposefully overrunable, to enable servicing by larger vehicles to take place within the site. Servicing of the site will be actively managed by McDonald's and Martin Brower, and staff will alert customers of the presence of a service vehicle and ensure the route for the service vehicle is clear before it arrives at the site. This is the case for McDonald's restaurants across the country and follows a tried and tested methodology.

Given the low frequency of vehicle movements associated with servicing of the site, and the timing of servicing outside of the site's busy periods, it is considered that this is an appropriate strategy to manage servicing and deliveries at the site. The applicant is willing to agree to a condition requiring the provision of a Servicing and Delivery Management Plan to provide further reassurance to NCC that this will be appropriately managed.

COMMITTED DEVELOPMENT

NCC have stated that "*the latest transport assessment submitted by the applicant in July 2025 still does not contain committed development flows. The applicant must provide this information before the Highways Authority can determine that that transport assessment is acceptable*."

No specific sites have been identified by either the LPA or LHA, therefore a review of Ashfield District Council's (ADC) planning portal has been undertaken. Searching by geographic area is not possible through the planning portal, and therefore a review of all planning applications determined since January 2023 using the key words 'Kirkby in Ashfield' has been undertaken. This review does not identify any specific sites that are of relevance to the current proposals, or that would generate a notable level of vehicle movements along the B6020. It is therefore concluded that no specific committed development sites require consideration within the TA.

Within the TA, background traffic data has been growthed to the future year scenarios using the industry standard software TEMPro. TEMPro utilises data from the National Trip End Model (NTEM) to provide traffic growth factors. NTEM forecasts future year data for population, employment, housing, car ownership, and

trip rates, which are then used to estimate traffic growth. It is therefore considered that the impact of any locally committed development sites not identified through the above search is accounted for within the assessment.

Furthermore, the assessment of the proposed site access junction shows that there is ample spare capacity. Therefore, even if traffic growth along the B6020 is greater than anticipated by TEMPro, it would not have a notable impact on the operation of the site access junction.

Given the above, it is considered that the assessment of committed development sites has been completed to a satisfactory level and that the TA complies with national guidance.

TRIP GENERATION

NCC have raised a number of queries in relation to the trip generation assessment undertaken within the TA, and in particular how the trip types have been derived. During the meeting on 5th August, it was agreed that AMA would provide additional information on the surveys used to support the trip generation assessment and further justification on the methodology applied.

McDonald Surveys and Surveyed Sites

As noted, trip data for the site has been calculated through the use of traffic counts, pedestrian counts and customer interview surveys at three McDonald's sites. These sites have been selected as they closely resemble the type of development being proposed here, i.e. they have a drive thru, are located adjacent to a key route, are located within a suburban area and are surrounded by a similar level of development.

The location of the three selected sites is shown graphically within the TA, and further detail on how they are similar to the proposed site is provided below:

Sheen Road, Bristol

- Within the immediate vicinity of the site there are a number of employment / commercial uses, meaning the propensity for shared / linked trips at the two sites is similar;
- Outside of the immediate site locality is a high level of residential development, mirroring that of the proposed development, albeit on a slightly larger scale; and
- The restaurant sits adjacent to the A38 which forms a key route connecting two other important road links, as with the proposed site, where the B6020 forms a key route through Kirkby in Ashfield, connecting to key routes in the east, northwest and southwest.

Morris Street, Wigan

- This restaurant is surrounded by residential development, alongside some other uses likely to generate shared trips, such as a supermarket and other town centre uses; and
- The restaurant is located on the A49, which forms the key route through the northern suburbs of Wigan, in much the same way as the B6020 forms the key route through Kirkby in Ashfield.

Walton Road, Liverpool

- This restaurant is located within a local centre, with similar uses as the proposed development site such as an Aldi store adjacent;
- The restaurant is surrounded by a similar density of residential development as the proposed site; and
- The restaurant is served by the A59, which forms a key route through the local built-up area, connecting with other key routes to the north and south, in a similar way to the B6020 in Kirkby in Ashfield.

The results of the surveys undertaken at the above sites are included at **Appendix C**. Each of the surveys were undertaken on a Friday between 16:00-19:00 and a Saturday between 11:00-15:00, which represent McDonald's trading peaks.

The average peak hour trip generation for the surveyed sites has been used to calculate the potential trip generation of the proposed restaurant for the PM and Saturday peak hours. In the absence of surveyed data for the AM peak, trips have been calculated from the TRICS trip rate database, as set out within the TA.

Trips by Type

In order to understand the trip types, customers were asked to confirm details of their journey. The trip types have been defined as the following within the surveys:

- Additional Trips (primary)
  - Customers have the same origin and destination and visiting the McDonald's restaurant is the sole purpose of their trip.
- Existing Trips (secondary)
  - Customers have a different origin and destination; or
  - Customers have the same origin and destination, but visiting the McDonald's restaurant was not the sole purpose of their trip.
- Shared Trips (secondary)
  - Customers visit adjacent shops and facilities before or after visiting the McDonald's restaurant.

When calculating the trip types for the proposed McDonald's restaurant, the average proportions of the three surveyed sites have been used, for each of the assessed peak periods.

This exercise has demonstrated that 19%-21% of vehicle trips to the proposed restaurant will be additional trips i.e. new to the local highway network. The remaining 79%-81% of trips will already exist on the local highway network.

In this instance, given the strategic nature of the B6020 routing through the town centre, it has been assumed that all secondary trips will already be travelling along the B6020 and will visit the site, then continue on their journey.

It is considered that the above assessment is robust, as there is no specific accounting for shared trips. For example, a customer may drive to the adjacent Aldi store, walk over to the McDonald's restaurant and return to their vehicle. This vehicle would not necessarily have impacted the site access junction but has been assessed as entering and exiting the site.

The above approach has been used to assess the trips generated by McDonald's restaurants across the country, and is considered an acceptable methodology.

The trips by type are quantified within the TA, and their distribution onto the local highway network is also detailed.

McDelivery

NCC have also made the following comment within their response: "*With regard to the number of trips generated by the development it is noted that the TA does not take into account the number of trips by independent food delivery vehicles. Uber Eats and Deliveroo often now make up a substantial portion of trips to and from fast food restaurants and the Highway Authority*."

During the meeting, the Highways Officer suggested that the option of delivery might encourage customers to order from McDonald's who otherwise would not have visited the store, thereby increasing the number of vehicle movements.

However, the use of McDelivery reduces the overall number of in-person visits made, eliminating the need for customers to drive to the restaurant. Delivery drivers can collect several online orders at once, thus making just one two-way trip to the restaurant at any one point in time.

It is therefore considered that the use of McDelivery reduces the total number of vehicle movements to restaurants. This has not been accounted for within the trip generation figures and it is therefore argued that the assessment is robust, and the total number of trips could be lower in reality.

Sensitivity Assessment

Whilst it is considered that the methodology used within the TA to quantify the impact of the proposed development on the local highway network is robust, to provide further certainty that the proposals are acceptable, a sensitivity assessment has been undertaken.

Within the three surveyed sites, the highest level of 'additional' trips observed in any one peak was 29% (observed at the Sheen Road site in the Saturday peak and at the Walton Road site in the PM peak). Therefore, this figure has been used across each of the assessed peaks to present a worst-case scenario. The results are demonstrated in **Table 1** below:

Table 1 Proposed Trips by Type

Trip Type	Friday AM Peak			Friday PM Peak			Saturday Peak		
	%	In	Out	%	In	Out	%	In	Out
Additional	29%	13	12	29%	15	24	29%	26	28
Diverted/Pass by	71%	32	30	71%	63	59	71%	64	68
Total	100%	45	43	100%	78	83	100%	91	96

For robustness, the capacity modelling of the site access has been updated. The results are summarised in **Table 2** below, with full outputs included at **Appendix D**.

Table 2 B6020 / Site Access / Modelling Summary

Arms	AM Peak		PM Peak		Saturday Peak	
	RFC	Queue	RFC	Queue	RFC	Queue
2030 Base + Development Traffic						
B6020 Lane End	0.06	0	0.09	0	0.06	0
Site Access	0.22	0	0.25	0	0.26	0

The modelling results show that the site access is expected to operate well within capacity, with no queueing observed in any scenario.

It is not considered that the proposed development will lead to a notable uplift in vehicle movements at any other local junctions. Nor is it considered that any local junctions suffer from significant capacity issues that would be impacted by the modest trip generation of the proposals.

It is considered that the information presented above should provide certainty to the local highway authority that the proposed development can be accommodated on the local highway network without resulting in any severe cumulative impacts, in accordance with the National Planning Policy Framework.

CONCLUSION

This Highways Technical Note provides responses to the comments received from NCC along with additional information where appropriate. In conclusion, the information provided within this Note and previous submissions demonstrate that the proposed development is acceptable in highways terms.

APPENDICES

Appendix A NCC Comments

Appendix B Site Access Design and Pedestrian Infrastructure

Appendix C McDonald's Surveys

Appendix D Revised Site Access Modelling

Appendix A
NCC Comments

TOWN AND COUNTRY PLANNING ACT
HIGHWAY REPORT ON PROPOSALS FOR DEVELOPMENT

DISTRICT:	Ashfield	Date received	09/01/2025
OFFICER:	Daniel Power		
PROPOSAL:	Development of a drive-thru restaurant (use class e/sul generis) with associated access, servicing, car parking, hard and soft landscaping and other associated works treatment unit, and new vehicular entrance and access drive	D.C. No.	V/2025/0003
LOCATION:	Lane End, Kirkby In Ashfield, Nottinghamshire		
APPLICANT:			

The Highway Authority's initial observations on the site layout, travel plan (TP), and transport assessment (TA) submitted in support of this planning application were issued on 29/1/25. Since then, a number of iterations of the site plan have been commented on by the Highways Authority.

The Highways Authority's last comments were published in March 2025. In response to these comments the applicant has submitted a "Highways Technical Note" (TN; July 2025), revised site plan, Transport Assessment (TA) and Travel Plan (TP).

This note provides comments on the latest Highways TN, TA, TP and site plan submitted in July 2025. The TN gives each of the outstanding issues a reference number. For the reasons of consistency this note refers to each outstanding points using the reference given in the TN.

Travel Plan

The revised Travel Plan has been forwarded to specialist colleagues for review. Their comments will be forwarded to the LPA once their response has been received.

Highways Technical Note

The remaining outstanding issues are described by the Highways Technical Note (HTN) dated July 2025. Each issue within the HTN has been allocated a reference number.

AMA6, AMA7 and AMA8 refer to pedestrian improvements to the bellmouth of Erewash Street and the unnamed road. It is stated within the HTN now accepts the need for the improvements and commits to providing them. Drawing AMA/50082/SK015 shows the location of these improvements.
As previously stated, the proposal to provide dropped kerbs and tactile paving at the refuge close to Millers Way on the B6020 to the west of the site would be acceptable in principle to the Highway Authority. Another consideration is the width of the footway along the site frontage – can the applicant provide this on a drawing to ensure adequate provision for pedestrians, in accordance with Notts Highway Design Guide, as a 2m wide footway is required to maximise connectivity to the site, encouraging pedestrian activity to/from the site.

AMA6 also discusses the need for a pedestrian crossing over Lane End between the proposed development site and the Aldi store. Drawing AMA/50082/SK015 shows improvements to the existing pedestrian refuge however the applicant has agreed to provide a signalised crossing. The Highway Authority therefore requires a detailed drawing to be provided demonstrating the location of the proposed pedestrian crossing with accurate dimensions so that this can be fully assessed.

Therefore, the applicant should provide a detailed drawing with full dimensions showing footway width along the site frontage, offsite improvements including the width of the ghost island right turn lane and adjacent carriageway running lanes on Lane End, improvements to the pedestrian route over Unnamed Road and Erewash Street and the details of the proposed pedestrian crossing over Lane End.

The Highways Authority also requires that a financial contribution of £100,000 is secured through a S106 Agreement for the provision of a pedestrian crossing on Lane End, between the application site and the ALDI site.

AMA9 and AMA12 Refer to the servicing of the proposed drive through. A number of Swept Path drawings have been provided within the HTN. The Highway Authority would raise a concern that drawing AMA-50082-ATR003 - 3.4 P01 shows that vehicles exiting the site to the west of Lane End would encroach into the proposed right turn lane. This drawing also shows the vehicle encroaching into the pedestrian area within the development site. This will need to be addressed and an amended drawing provided. See Figure 1 below.

To resolve AMA9 The applicant should provide an amendment to this drawing showing delivery vehicles safely accessing and exiting the site.

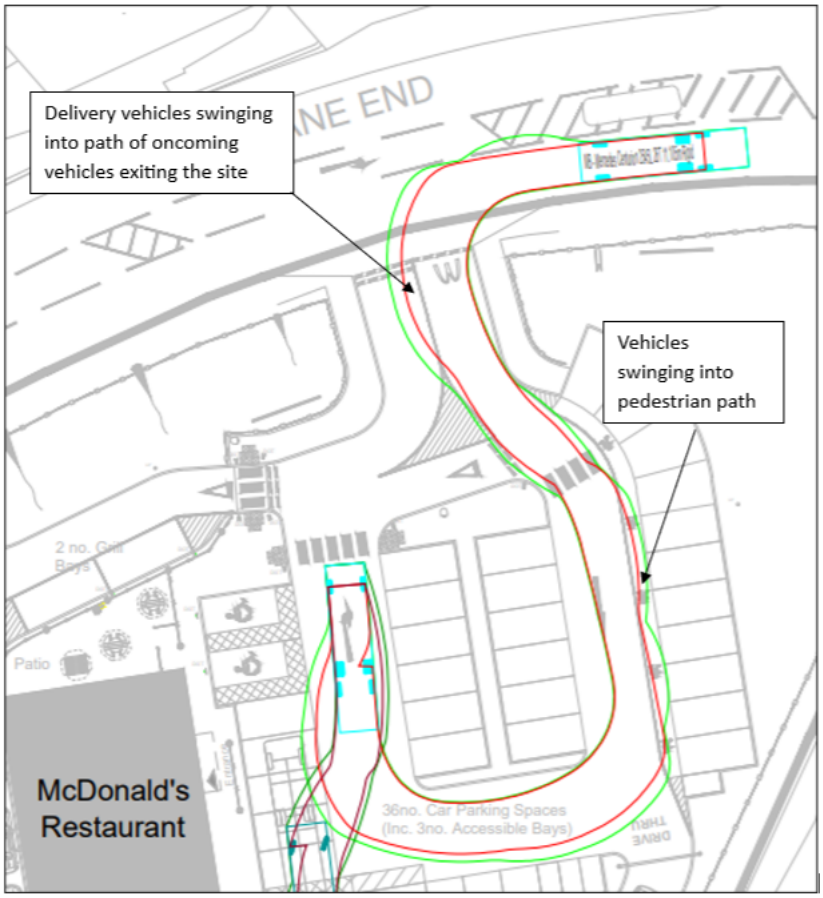

Figure 1: illustration of swept path concerns.

AMA10 refers to visibility splays at the access to the site. 46m visibility splays have been demonstrated as shown in Drawing No. 50082-SK-016 within Appendix B of the TN. This matter is now considered resolved.

AMA11 Previous comments from the Highways Authority recommended that offsite monitoring of parking should take on the unnamed road adjacent to the site. The applicant has not undertaken to carry out this monitoring. This unnamed road is not adopted by the Highways Authority. In light of the fact that the road is not adopted The Highway Authority does not require this monitoring.

AMA13 refers to the requirement for committed development traffic to be included within the transport assessment. The latest transport assessment submitted by the applicant in July 2025 still does not contain committed development flows. The

applicant must provide this information before the Highways Authority can determine that that transport assessment is acceptable.

Information on current and approved applications within the vicinity of the site can be found at the Ashfield District Council planning website:

Planning applications - Ashfield District Council

AMA14 refers to the discounting of trips within the TA. The applicant has stated that up to 80% of trips to the development could be pass by trips and assumes that they are already on the network. In light of this these trips have been discounted from the number of new trips generated by the development.

In response the TN states that “for drive-thru developments it is generally accepted a pass-by figure of up to 90%. McDonalds have site specific surveys of numerous locations across the UK, with the sites most similar to the location of the proposals selected ensuring the data is appropriate for the assessment.”

The applicant has provided survey data within Appendix K of the transport assessment however the Highways Authority does not consider this information sufficient to demonstrate that up to 90% of trips can be considered to be pass by trips. Firstly, only three sites have been surveyed to provide the data contained in Appendix K this is not a significant sample size. Secondly the data within Appendix K also suggests that in some cases the number of pass-by trips can be as low as 43%.

The Highways Authority would request that this data is submitted in order to provide evidence for the discounting of trips.

With regard to the number of trips generated by the development it is noted that the TA does not take into account the number of trips by independent food delivery vehicles. Uber Eats and Deliveroo often now make up a substantial portion of trips to and from fast food restaurants and the Highway Authority.

The Highway Authority would wish to be re-consulted once the above issues have been addressed.

JA HDC 22/07/2025

Appendix B
Site Access Design and Pedestrian Infrastructure

LANE END

LANE END (B6020)

URBAN ROAD(B6020)

Proposed Tactile Paving

Proposed Tactile Paving

LANE END (B6020)

2.4m x 46m VISIBILITY SPLAY

3.96 m
2.89 m
3.62 m
2.2 m
2.03 m
2 m
8 m
2 m
3.85 m
3.21 m
4.05 m
3.92 m
2.92 m
3.76 m

37

35

EREWASH STREET

ALLERS WAY

Overgrown limited access

Overgrown, limited access

Sign

Asphalt

Woodchip

Grass

Tall grass

Concr

Paropet 155.57

P02	Updated following comments from LHA	07.08.25	OHJ
P01	Preliminary Issue	02.07.25	OHJ

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Project:

LANE END, KIRKBY IN ASHFIELD

Client:

MCDONALDS RESTAURANTS LTD

Drawing:

PROPOSED ACCESS DESIGN

Drawn By:	Date:	
OHJ	02.07.2025	
Checked: GDM	Scale: 1:500	Paper: A3
Drawing No.: AMA-50082-SK-018 2.2		Rev.: P02

El Sub Sta

Kirkby-in-Ashfield (Station Rd)

Club

MILLERS WAY

LANE END

LANE END (B6020)

Ada Lovelace House

URBAN ROAD (B6020)

Proposed Tactile Paving

Proposed Tactile Paving

3.85 m

3.21 m

4.05 m

3.86 m

2.89 m

3.62 m

3.92 m

2.92 m

3.76 m

2.03 m

2.4m

2 m

2 m

8 m

2.4m x 46m VISIBILITY SPLAY

2 no. Grill Bays

Patio

McDonald's Restaurant

36no. Car Parking Spaces (Inc. 3no. Accessible Bays)

External Storage Area

Deliveries

Cycles

DRIVE THRU

PRIVATE GARDENS

PRIVATE GARDENS

EREWASH STREET

EREWASH STREET

37

35

27

2

1

13

10

17

P02	Updated following comments from LHA	07.08.25	OHJ
P01	Preliminary Issue	02.07.25	OHJ

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Project:

LANE END, KIRKBY IN ASHFIELD

Client:

MCDONALDS RESTAURANTS LTD

Drawing:

PROPOSED ACCESS DESIGN

Drawn By:	Date:	
OHJ	02.07.2025	
Checked: GDM	Scale: 1:500	Paper: A3
Drawing No. AMA-50082-SK-018 1.2		Rev. P02

Appendix C
McDonald's Surveys

SUMMARY OF McDONALD'S SURVEY DATA

BRISTOL (2014)

Table A Surveyed Traffic: Bristol

Friday			Saturday		
Time	**In**	**Out**	**Time**	**In**	**Out**
16:00	66	60	11:00	57	56
17:00	60	69	12:00	79	80
18:00	58	57	13:00	77	79
-	-	-	14:00	96	103
Total	**184**	**186**	**Total**	**309**	**318**

Table B Surveyed Pedestrians: Bristol

Friday			Saturday		
Time	**In**	**Out**	**Time**	**In**	**Out**
16:00	53	46	11:00	42	31
17:00	53 (2)	46 (2)	12:00	37 (1)	42 (1)
18:00	24	27	13:00	51	39
-	-	-	14:00	30	39
Total	**130**	**119**	**Total**	**160**	**151**

( ) Denotes cyclists inclusive

Table C Drive Thru Queues: Bristol

	Friday	Saturday
Min Q	0	0
Max Q	6	11
Average Q	3	4

Table D Surveyed Parking Demand: Bristol

Friday		Saturday	
Time	**№**	**Time**	**№**
16:00	19	11:00	21
16:15	18	11:15	19
16:30	15	11:30	19 (1)
16:45	23 (1)	11:45	19
17:00	23	12:00	24 (1)
17:15	19	12:15	27 (2)
17:30	12	12:30	23
17:45	11	12:45	18
18:00	11	13:00	25 (1)
18:15	10	13:15	25 (1)
18:30	14 (2)	13:30	20 (1)
18:45	11 (1)	13:45	19
19:00	12	14:00	23 (1)
-	-	14:15	23
-	-	14:30	16
-	-	14:45	21 (1)
-	-	15:00	14

( ) Denotes circulating vehicles inclusive

Table E Surveyed Customer Activity: Bristol

Activity		Friday		Saturday	
		№	%	№	%
1	Drive in, use restaurant, drive out	18	10%	44	15%
2	Drive in, use restaurant, eat in vehicle, drive out	18	10%	29	10%
3	Drive in, drive thru, drive out	100	58%	139	47%
4	Drive in, use drive thru, park, eat in vehicle drive out	13	8%	57	18%
5	Drive in, park, do not use restaurant, drive out	15	9%	12	4%
6	Drive in, park, use restaurant, walk off site (or vice versa), drive out	2	1%	8	3%
7	Drive in, drive straight out	7	4%	8	3%
Total		**173**	**100%**	**297**	**100%**

Table F Customer Interview Survey Results: Bristol

Trip Type	Definition	Friday		Saturday	
		№	%	№	%
Additional Trips	Same origin & destination McDonald's sole purpose of trip	14	26%	20	29%
Existing Trips	Different origin & destination	9	17%	18	26%
	Same origin & destination McDonald's not sole purpose of trip	14	26%	8	11%
Shared Trip	Visit adjacent shops and facilities before or after McDonald's	17	31%	24	34%
Total		54	100%	70	100%

SUMMARY OF McDONALD'S SURVEY DATA

MORRIS STREET, WIGAN (2015)

Table A Surveyed Traffic: Wigan

Friday			Saturday		
Time	**In**	**Out**	**Time**	**In**	**Out**
16:00	76	79	11:00	62	56
17:00	93	96	12:00	94	77
18:00	88	91	13:00	104	115
-	-	-	14:00	85	88
Total	**257**	**266**	**Total**	**345**	**336**

Table B Surveyed Pedestrians: Wigan

Friday			Saturday		
Time	**In**	**Out**	**Time**	**In**	**Out**
16:00	38	28	11:00	7	7
17:00	29	27	12:00	12	7
18:00	11	19	13:00	34	28
-	-	-	14:00	22	30
Total	**78**	**74**	**Total**	**75**	**72**

( ) Denotes cyclists inclusive

Table C Drive Thru Queues: Wigan

	Friday	Saturday
Min Q	0	0
Max Q	8	8
Average Q	4	3

Table D Surveyed Parking Demand: Wigan

Friday		Saturday	
Time	**№**	**Time**	**№**
16:00	29	11:00	13
16:15	24	11:15	21
16:30	20	11:30	18
16:45	18	11:45	16
17:00	23	12:00	19
17:15	20	12:15	18
17:30	24	12:30	25
17:45	21	12:45	31
18:00	21	13:00	31
18:15	20	13:15	30
18:30	23	13:30	28
18:45	25	13:45	25
19:00	18	14:00	22
-	-	14:15	16
-	-	14:30	23
-	-	14:45	24
-	-	15:00	22

Table E Surveyed Customer Activity: Wigan

Activity		Friday PM		Saturday	
		№	%	№	%
1	Drive in, use restaurant, drive out	52	21	75	23
2	Drive in, use restaurant, eat in vehicle, drive out	12	5	2	1
3	Drive in, drive thru, drive out	161	66	215	65
4	Drive in, use drive thru, park, eat in vehicle drive out	16	7	33	10
5	Drive in, park, do not use restaurant, drive out	1	0	3	1
6	Drive in, park, use restaurant, walk off site (or vice versa), drive out	0	0	0	0
7	Drive in, drive straight out	2	1	1	0
Total		**244**	**100%**	**329**	**100%**

Table F Customer Trip Types: Wigan

Trip type	Details	Friday PM		Saturday	
		№	%	№	%
Additional	McD main purpose for trip	1	2%	7	12%
Existing	Different origin/destination	0	0%	0	0%
	Same origin/destination, McD not main reason for trip	48	74%	29	51%
Shared nearby	Shared with Tesco Extra	5	24%	11	37%
	Shared with Wigan Town Centre Shopping	11		10	
Total		65	100%	57	100%

SUMMARY OF EXISTING McDONALD'S STORE DATA

WALTON ROAD, LIVERPOOL, L4 4BD

Table A Surveyed Traffic: Walton Road, Liverpool

Friday			Saturday		
Time	**In**	**Out**	**Time**	**In**	**Out**
16:00	84	85	11:00	56	55
17:00	86	90	12:00	89	79
18:00	95	87	13:00	91	94
-	-	-	14:00	88	85
Total	**265**	**262**	**Total**	**324**	**313**

Table B Surveyed Pedestrians: Walton Road, Liverpool

Friday			Saturday		
Time	**In**	**Out**	**Time**	**In**	**Out**
16:00	30	22	11:00	17	12
17:00	32	31	12:00	36	29
18:00	25	33	13:00	40	30
-	-	-	14:00	45	31
Total	**87**	**86**	**Total**	**127**	**102**

Table C Surveyed Drive Thru Queues: Walton Road, Liverpool

	Friday	Saturday
Min Q	0	0
Max Q	8	9
Average Q	4	5

Table D Surveyed Parking Demand: Walton Road, Liverpool

Friday		Saturday	
Time	**Parking Demand**	**Time**	**Parking Demand**
16:00	17	11:00	10
16:15	13	11:15	13
16:30	11	11:30	21
16:45	9	11:45	19
17:00	13	12:00	11
17:15	10	12:15	15
17:30	7	12:30	15
17:45	8	12:45	11
18:00	11	13:00	16
18:15	11	13:15	10
18:30	11	13:30	8
18:45	12	13:45	13
19:00	15	14:00	15
-	-	14:15	17
-	-	14:30	20
-	-	14:45	17
-	-	15:00	17

Table 5C Surveyed Customer Activity: Walton Road, Liverpool

Activity		Friday		Saturday	
		№	%	№	%
1	Drive in, use restaurant, drive out	45	19%	65	22%
2	Drive in, use restaurant, eat in vehicle, drive out	8	3%	3	1%
3	Drive in, drive thru, drive out	164	67%	186	61%
4	Drive in, use drive thru, park, eat in vehicle, drive out	25	10%	36	12%
5	Drive in, park, do not use restaurant, drive out	0	0%	6	2%
6	Drive in, park, use restaurant, walk off site (or visa versa), drive out	1	1%	4	1%
7	Drive in/drive out	0	0%	3	1%
Total		**243**	**100%**	**303**	**100%**

Table 5E Customer Interview Survey Results: Walton Road, Liverpool

Trip Type	Definition	Friday		Saturday	
		№	%	№	%
Additional Trips	Same origin & destination McDonald's sole purpose of trip	20	29%	17	21%
Existing Trips	Different origin & destination	17	24%	6	8%
	Same origin & destination McDonald's not sole purpose of trip	18	26%	27	33%
Shared Trip	Visit nearby foodstores (Aldi or Iceland)	15	21%	31	38%
Total		**70**	**100%**	**81**	**100%**

Appendix D
Revised Site Access Modelling

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.5.1.7462

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

Filename: B6020 Urban Road - Lane End - Site Access - Sensitivity Test.j9
Path: C:\AMA\AMA\AMA - McDonald's\002 - East\50082 - Lane End, Kirkby in Ashfield\D Models and Drawings\PICADY
Report generation date: 07/08/2025 13:58:35

Summary of junction performance

	AM					PM					SAT				
	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS	Set ID	Queue (PCU)	Delay (s)	RFC	LOS
	B6020 Urban Road / Lane End - 2030 Do Something														
Stream B-AC	D7	0.3	12.25	0.22	B	D8	0.3	13.38	0.25	B	D9	0.4	12.09	0.26	B
Stream C-AB		0.1	7.53	0.06	A		0.1	8.31	0.09	A		0.1	7.75	0.06	A

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

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

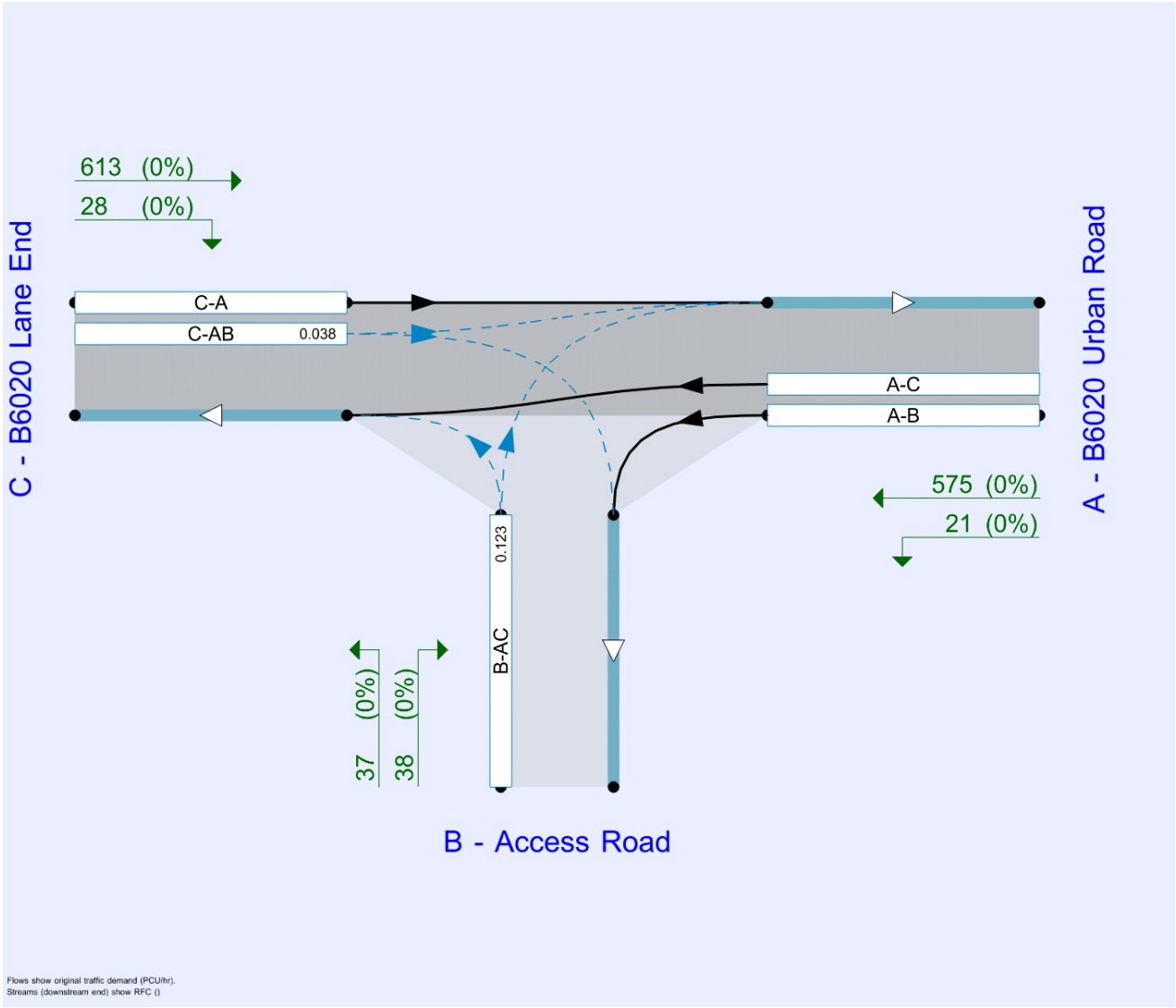
File summary

File Description

Title	B6020 Urban Road / Lane End
Location	Kirkby-in-Ashfield
Site number	
Date	09/04/2024
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	AzureAD\Modellinglaptop
Description	

Units

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



The junction diagram reflects the last run of Junctions.

Analysis Options

Vehicle length (m)	Calculate Queue Percentiles	Calculate detailed queueing delay	Calculate residual capacity	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
D7	2030 Do Something	AM	ONE HOUR	08:45	10:15	15	✓
D8	2030 Do Something	PM	ONE HOUR	16:30	18:00	15	✓
D9	2030 Do Something	SAT	ONE HOUR	12:15	13:45	15	✓

Analysis Set Details

ID	Name	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	B6020 Urban Road / Lane End	✓	100.000	100.000

B6020 Urban Road / Lane End - 2030 Do Something, AM

Data Errors and Warnings

Severity	Area	Item	Description
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	B6020 Urban Road / Lane End	T-Junction	Two-way		0.86	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	B6020 Urban Road		Major
B	Access Road		Minor
C	B6020 Lane End		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 - B6020 Lane End	7.20		✓	2.72	100.0	✓	2.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Access Road	One lane	3.60	104	51

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	569	0.098	0.248	0.156	0.355
B-C	695	0.101	0.255	-	-
C-B	668	0.245	0.245	-	-

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
D7	2030 Do Something	AM	ONE HOUR	08:45	10:15	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (PCU/hr)	Scaling Factor (%)
A - B6020 Urban Road		ONE HOUR	✓	596	100.000
B - Access Road		ONE HOUR	✓	75	100.000
C - B6020 Lane End		ONE HOUR	✓	641	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	21	575
	B - Access Road	38	0	37
	C - B6020 Lane End	613	28	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	0	0
	B - Access Road	0	0	0
	C - B6020 Lane End	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-AC	0.22	12.25	0.3	B	69	103
C-AB	0.06	7.53	0.1	A	26	39
C-A					562	844
A-B					19	29
A-C					528	791

Main Results for each time segment

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	459	0.123	56	0.0	0.1	8.913	A
C-AB	21	5	558	0.038	21	0.0	0.0	6.698	A
C-A	461	115			461				
A-B	16	4			16				
A-C	433	108			433				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	425	0.159	67	0.1	0.2	10.053	B
C-AB	25	6	537	0.047	25	0.0	0.0	7.026	A
C-A	551	138			551				
A-B	19	5			19				
A-C	517	129			517				

09:15 - 09:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	83	21	376	0.219	82	0.2	0.3	12.220	B
C-AB	31	8	509	0.061	31	0.0	0.1	7.526	A
C-A	675	169			675				
A-B	23	6			23				
A-C	633	158			633				

09:30 - 09:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	83	21	376	0.219	83	0.3	0.3	12.250	B
C-AB	31	8	509	0.061	31	0.1	0.1	7.526	A
C-A	675	169			675				
A-B	23	6			23				
A-C	633	158			633				

09:45 - 10:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	67	17	425	0.159	68	0.3	0.2	10.085	B
C-AB	25	6	537	0.047	25	0.1	0.0	7.028	A
C-A	551	138			551				
A-B	19	5			19				
A-C	517	129			517				

10:00 - 10:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	56	14	459	0.123	57	0.2	0.1	8.948	A
C-AB	21	5	558	0.038	21	0.0	0.0	6.701	A
C-A	461	115			461				
A-B	16	4			16				
A-C	433	108			433				

B6020 Urban Road / Lane End - 2030 Do Something, PM

Data Errors and Warnings

Severity	Area	Item	Description
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	B6020 Urban Road / Lane End	T-Junction	Two-way		1.03	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	2030 Do Something	PM	ONE HOUR	16:30	18:00	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 (PCU/hr)	Scaling Factor (%)
A - B6020 Urban Road		ONE HOUR	✓	726	100.000
B - Access Road		ONE HOUR	✓	83	100.000
C - B6020 Lane End		ONE HOUR	✓	584	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	41	685
	B - Access Road	37	0	46
	C - B6020 Lane End	545	39	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	0	0
	B - Access Road	0	0	0
	C - B6020 Lane End	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-AC	0.25	13.38	0.3	B	76	114
C-AB	0.09	8.31	0.1	A	36	54
C-A					500	750
A-B					38	56
A-C					629	943

Main Results for each time segment

16:30 - 16:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	16	451	0.138	62	0.0	0.2	9.224	A
C-AB	29	7	535	0.055	29	0.0	0.1	7.116	A
C-A	410	103			410				
A-B	31	8			31				
A-C	516	129			516				

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	414	0.180	74	0.2	0.2	10.589	B
C-AB	35	9	510	0.069	35	0.1	0.1	7.582	A
C-A	490	122			490				
A-B	37	9			37				
A-C	616	154			616				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	91	23	361	0.253	91	0.2	0.3	13.329	B
C-AB	43	11	477	0.091	43	0.1	0.1	8.305	A
C-A	600	150			600				
A-B	45	11			45				
A-C	754	189			754				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	91	23	361	0.253	91	0.3	0.3	13.375	B
C-AB	43	11	477	0.091	43	0.1	0.1	8.310	A
C-A	600	150			600				
A-B	45	11			45				
A-C	754	189			754				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	75	19	414	0.180	75	0.3	0.2	10.633	B
C-AB	35	9	510	0.069	35	0.1	0.1	7.588	A
C-A	490	122			490				
A-B	37	9			37				
A-C	616	154			616				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	62	16	451	0.138	63	0.2	0.2	9.268	A
C-AB	29	7	535	0.055	29	0.1	0.1	7.126	A
C-A	410	103			410				
A-B	31	8			31				
A-C	516	129			516				

B6020 Urban Road / Lane End - 2030 Do Something, SAT

Data Errors and Warnings

Severity	Area	Item	Description
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	B6020 Urban Road / Lane End	T-Junction	Two-way		1.13	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	2030 Do Something	SAT	ONE HOUR	12:15	13:45	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 - B6020 Urban Road		ONE HOUR	✓	649	100.000
B - Access Road		ONE HOUR	✓	96	100.000
C - B6020 Lane End		ONE HOUR	✓	472	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	49	600
	B - Access Road	42	0	54
	C - B6020 Lane End	445	27	0

Vehicle Mix

Heavy Vehicle Percentages

		To		
		A - B6020 Urban Road	B - Access Road	C - B6020 Lane End
From	A - B6020 Urban Road	0	0	0
	B - Access Road	0	0	0
	C - B6020 Lane End	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-AC	0.26	12.09	0.4	B	88	132
C-AB	0.06	7.75	0.1	A	25	37
C-A					408	612
A-B					45	67
A-C					551	826

Main Results for each time segment

12:15 - 12:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	479	0.151	72	0.0	0.2	8.817	A
C-AB	20	5	548	0.037	20	0.0	0.0	6.815	A
C-A	335	84			335				
A-B	37	9			37				
A-C	452	113			452				

12:30 - 12:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	22	448	0.193	86	0.2	0.2	9.945	A
C-AB	24	6	525	0.046	24	0.0	0.0	7.182	A
C-A	400	100			400				
A-B	44	11			44				
A-C	539	135			539				

12:45 - 13:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	106	26	403	0.262	105	0.2	0.3	12.053	B
C-AB	30	7	494	0.060	30	0.0	0.1	7.750	A
C-A	490	122			490				
A-B	54	13			54				
A-C	661	165			661				

13:00 - 13:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	106	26	403	0.262	106	0.3	0.4	12.089	B
C-AB	30	7	494	0.060	30	0.1	0.1	7.751	A
C-A	490	122			490				
A-B	54	13			54				
A-C	661	165			661				

13:15 - 13:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	86	22	448	0.193	87	0.4	0.2	9.984	A
C-AB	24	6	525	0.046	24	0.1	0.0	7.184	A
C-A	400	100			400				
A-B	44	11			44				
A-C	539	135			539				

13:30 - 13:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	72	18	479	0.151	73	0.2	0.2	8.860	A
C-AB	20	5	548	0.037	20	0.0	0.0	6.818	A
C-A	335	84			335				
A-B	37	9			37				
A-C	452	113			452				