LAND AT A151 / A16, SPALDING

Proposed Drive-Through Coffee Shop

Transport Assessment

Prepared on behalf of SME Group Plc.

SMGR/18/4487/TA03

May 2019

RGP - Transport Planning and Infrastructure Design Consultants

E: enquiries@rgp.co.uk www.rgp.co.uk

Head Office Shackleford Suite, Mill Pool House, Mill Lane, Godalming, Surrey GU7 1EY
South Coast Suite 2, West Barn, Norton Lane, Chichester PO20 3AF
London 22 Upper Ground, London SE1 9PD

T: 01483 861681
T: 01243 210418
T: 020 7078 9662

RGP is a trading name of Russell Giles Partnership Limited • VAT Registration No. 771 9281 04 • Registered in England No. 4237910 • Registered Office: Shackleford Suite, Mill Pool House, Mill Lane, Godalming, Surrey GU71EY

DOCUMENT CONTROL

Project: **Land at A151 / A16, Spalding**
Proposed Drive-Through Coffee Shop

Document: **Transport Assessment**

Client: **SME Group Plc.**

Reference: **SMGR/18/4487/TA03**

Document Checking:

Author:	PJB	Date	30/05/2019
Checked by:	PJB	Date	30/05/2019
Approved by:	NDR	Date	30/05/2019

Status:

Issue	Date	Status	Issued by
1.	30/05/2019	Draft	PJB
2.			
3.			
4.			
5.			
6.			
7.			

© Copyright Russell Giles Partnership Limited 2019

No part of this publication may be reproduced by any means without the prior permission of Russell Giles Partnership Limited.

CONTENTS

1 INTRODUCTION 3
1.2 Report Structure 3
2 TRANSPORT POLICY REVIEW 5
2.2 The National Policy Planning Framework (February 2019) 5
2.3 National Planning Practice Guidance (March 2014) 6
2.4 South East Lincolnshire Local Plan (March 2019) 6
3 BASELINE CONDITIONS 8
3.1 Site Location and Description 8
3.2 Highway Safety Review 9
3.3 Accessibility Credentials 10
Walking and Cycling *11*
Public Transport *11*
Summary *12*
4 PROPOSED TRIP GENERATION 13
4.1 Overview 13
4.2 Drive-Thru Coffee Shop 13
5 TRIP GENERATION IMPACT 16
5.1 Methodology and Scope of Junction Modelling 16
5.2 Capacity Assessment Results 17
6 PARKING ARRANGEMENTS 19
6.1 Overview 19
6.2 Parking Policy and Standards 19
6.3 Parking Demand 19
6.4 Cycle Parking 20
ACCESS, DELIVERY AND SERVICING ARRANGEMENTS 21
6.5 Site Access 21
6.6 Deliveries and Servicing 21
6.7 Delivery Frequencies 22
6.8 Delivery Management Measures 22
7 SUMMARY AND CONCLUSIONS 23

DRAWINGS

2018/4487/002 Delivery Vehicle Swept Path
2018/4487/004 Refuse Vehicle Swept Path
2018/4487/005 Drive-Through Swept Path

APPENDICES

Appendix A Proposed Site Layout
Appendix B LCC Pre-Application Advice
Appendix C Drive Through Coffee Shop Survey Data
Appendix D A151 Traffic Survey Data
Appendix E Junction Modelling Outputs

1 INTRODUCTION

1.1.1 RGP is commissioned by SME Group Plc. to provide transport planning and highway advice in respect to a proposed development to provide a drive-through coffee shop on land at the A151 / A16, Spalding, Lincolnshire.

1.1.2 The existing site comprises a triangular plot of vacant land at the southwest corner of the A151 / A16 roundabout junction, approximately 2km from Spalding town centre. The site is currently undeveloped but is served by an existing shared access road from Fulney Lane North via the A151 to the west. The access road is also currently utilised by the adjacent tyre fitting workshop.

1.1.3 The proposals involve the provision of a drive-through coffee shop with a total of 21 car parking spaces, including 2 disabled parking bays. The proposed site layout is illustrated on the plan attached at **Appendix A**.

1.1.4 Although customer dining areas would be available, the majority of customers are expected to utilise the drive-through and then continue on an existing vehicle trip along the adjacent highway network. Access to the site would be provided via the existing shared access road which forms a route across the northern site boundary. Principal access is afforded from the A151 via Fulney Lane North.

1.1.5 Planning permission was granted in January 2019 (ref. H16-1185-18) for the construction of a KFC drive-through on land immediately to the east of the proposed drive-through coffee shop, which RGP also provided transport planning support towards. This Transport Assessment therefore considers the same scope as the previous transport report and utilises the data recently agreed as part of the adjacent planning approval.

1.1.6 In order to establish the potential highway impact, manual classified turning counts were undertaken by an independent survey company on Thursday 4th October 2018 and Saturday 6th October 2018 to assess the existing operation of the Fulney Lane North / A151 Holbeach Road roundabout junction. This data is used in order to assess the likely impact of the proposals in relation to this junction which would afford access to the site.

1.1.7 As background, RGP has been involved with similar consented developments, including drive-through coffee shop operations. As a result, RGP holds bespoke trip rate survey data which enables an accurate and representative assessment to be carried out within this document regarding the likely operation of the site at Spalding.

1.2 Report Structure

1.2.1 The principal focus of this report is to consider the impact of the proposals with specific detailed consideration given to the anticipated trip generation, car parking requirements and the delivery and servicing arrangements for the site.

1.2.2 The remainder of this report comprises the following sections:

(i) Section 2: Transport Policy Overview – A review of relevant national, regional and local policy relevant to the proposals from a transport perspective;

(ii) Section 3: Baseline Conditions – A review of the site's location relative to the local highway network, public transport facilities and pedestrian infrastructure;

(iii) Section 4: Proposed Trip Generation – An overview of the proposed site operation and an assessment of its trip generation credentials using survey data specific to drive-through coffee shops;

(iv) Section 5: Trip Generation Impact – An assessment of the Fulney Lane North / A151 4-arm roundabout and consideration of how the proposals would impact on its operation;

(v) Section 6: Parking Arrangements – An assessment of the anticipated car parking demand with reference to local parking standards and bespoke data;

(vi) Section 7: Access and Servicing Arrangements – Overview of the proposed access arrangements and details of the proposed delivery / servicing strategy, supported by swept path drawings; and

(vii) Section 8: Summary and Conclusions.

1.2.3 RGP has received pre-application advice from Lincolnshire County Council via email correspondence, dated 26th September 2018. As part of discussions held with the Council, the above scope to be addressed within this Transport Assessment has been agreed. It was advised that details are included within this report regarding the anticipated trip distribution and an associated assessment incorporating forecast traffic growth for 2023.

1.2.4 Owing to the time elapsed since the initial correspondence, the traffic growth has been factored up by a further year to reflect 2024 conditions for robustness. For further reference, the Council's response is attached at **Appendix B**.

2 TRANSPORT POLICY REVIEW

2.1.1 This section of the report summarises the key transport policy information at a national, regional and local level. These policies are assessed in relation to the scale and type of development proposed, as well as the site's location.

2.2 The National Policy Planning Framework (February 2019)

2.2.1 The National Planning Policy Framework (NPPF) set out the Government's planning policies for England and how these are expected to be enforced. It urges the local planning authorities to support development which facilitates the use of sustainable modes of transport.

2.2.2 Paragraph 108 outlines the basic transport requirements for developments to provide, and states that "*In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:*

(i) Appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;

(ii) Safe and suitable access to the site can be achieved for all users; and

(iii) *Any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*"

2.2.3 Paragraph 111 states that "*all developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.*"

2.2.4 The development complies with the above in that a Transport Assessment has been provided which fully assesses the impact of the proposed development proposals.

2.2.5 The site is located in a semi-rural area adjacent to major highway links and this Transport Assessment will therefore consider the proposals in the context if its location, whilst seeking to outline the potential for trips (particularly those made by staff) to the site to be made via sustainable modes in order to limit car dependency on journeys made.

2.2.6 Of further note, paragraph 109 of the NPPF states that "*development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.*"

2.3 National Planning Practice Guidance (March 2014)

2.3.1 The National Planning Practice Guidance (NPPG) provides additional information to support the NPPF. In relation to Travel Plans, Transport Assessments and Transport Statements it notes that:

"They support national planning policy which sets out that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable."

2.3.2 This document provides an assessment of the proposed development in the context of its location and proposed use.

2.4 South East Lincolnshire Local Plan (March 2019)

2.4.1 The South East Lincolnshire Local Plan was adopted in March 2019 and sets out the key policies against which new development will be assessed.

2.4.2 Chapter 8 of the Local Plan contains policies relating to efficient and effective transport, with **Policy 33** outlining a commitment to deliver improvements to the A151 / A17 junction to the northeast of the site at Holbeach. This would afford enhanced journeys towards the site from the A17 via Holbeach Road.

2.4.3 This policy also states a commitment to protect existing footpaths, cycle routes and public rights of way from new development. As highlighted above, the site would not impact the pedestrian or cycle infrastructure in the vicinity of the site, with particular consideration given to the cycle routes on the A151.

2.4.4 The Local Plan also includes defined parking standards within Appendix 6 of the which all new development should adhere to, unless a "*high quality design can demonstrate that a lower standard of provision follows the requirements set out in 1-4 below*". The requirements (in the context of non-residential development) outlined in **Policy 36** state the following:

(i) "Parking spaces are fit for their intended use in terms of their size and design;

(ii) Secure, covered, convenient storage for bicycles for employees should be provided close to an entrance to the building. Changing and shower facilities should be provided where possible;

(iii) Secure, covered bicycle storage for visitors are located close to the main entrance to the building;

(iv) Where more than 50 parking spaces are provided, at least one double electric vehicle charge point will be required (2 spaces). For each additional 50 spaces, one double point should be provided up to a maximum of three (6 spaces); and

(v) Parking is well-integrated within the townscape or landscape, through an appropriate use of materials and landscaping".

3 BASELINE CONDITIONS

3.1 Site Location and Description

3.1.1 The local area is characterised by a range of land uses, with several commercial properties located in the immediate vicinity of the site to the north and south, agricultural land to the east and residential areas to the west.

3.1.2 The site would be accessed from Fulney Lane North via the existing shared access road which forms a route across the site's northern boundary. This access road also serves a tyre-fitting workshop and an industrial warehouse, both of which are located immediately to the west of the site. Fulney Lane North forms the southern arm of its roundabout junction with the A151 and Camel Gate. To the north, Camel Gate provides access to a retail park. The site's location in context of the local road layout is illustrated on the extract below, whilst further details of the proposed access arrangements are provided within Section 7 of this report.

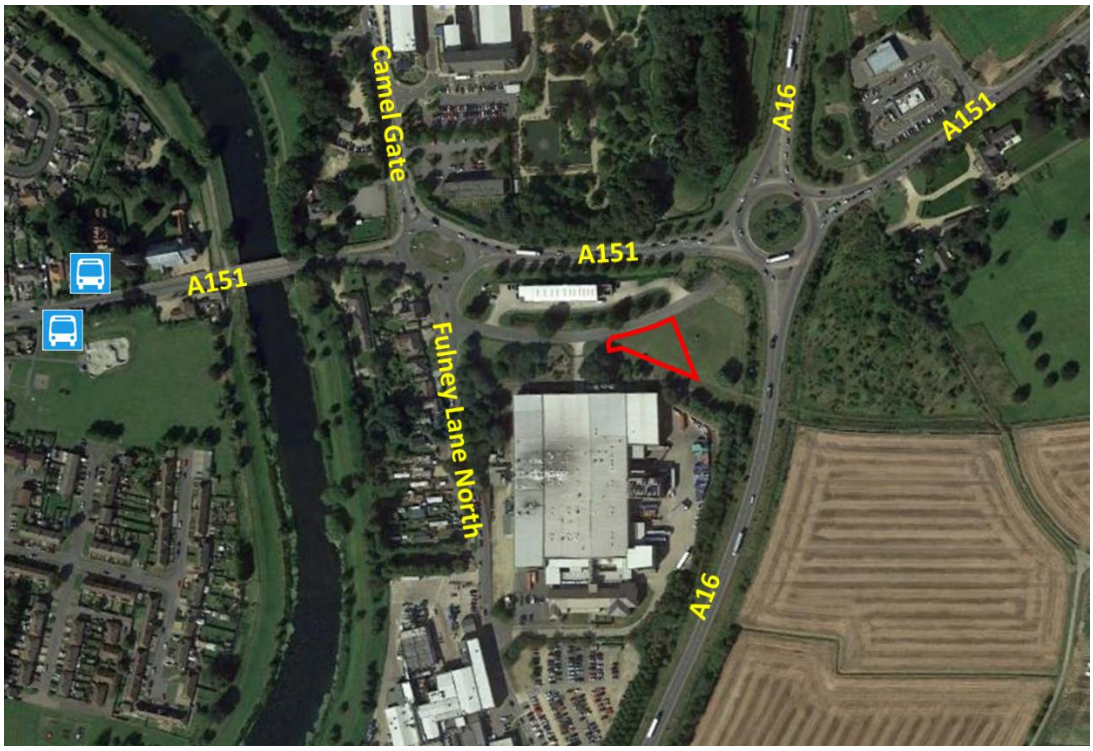


Figure 3.1. Site Location

3.1.3 Fulney Lane North continues to the south of the site, providing a gated access into the commercial estate located approximately 350m to the southwest. Principal access to the site is afforded from the A151 via its 4-arm roundabout junction with Fulney Lane North / Camel Gate.

3.1.4 The A151 provides a route into Spalding town centre, approximately 2km to the southwest and also continues to its junction with the A17 at Holbeach, 9.5km to the east. Furthermore, the A151 forms a roundabout junction with the A16, immediately to the northeast of the site.

3.1.5 The A16 continues adjacent to the site to the south, affording a route to the A15 / A47 (J20) at Dogsthorpe in the north of Peterborough. The A16 also continues to the northeast of the site, providing a route into Boston town centre.

3.1.6 The site is therefore conveniently located in terms of access from the wider strategic highway network.

3.2 Highway Safety Review

3.2.1 RGP has undertaken an investigation and review of local road accidents, particularly in consideration of the site access from Fulney Lane North as well as the A151 / A16 roundabout junction to the east, in order to identify any potential issues regarding the safety of the local highway network. This review has examined all accidents in the vicinity of the site over the latest 5 year period available (2014 – 2018 inclusive), using data provided from the Crashmap software (www.crashmap.co.uk).

3.2.2 It is evident from this assessment that there have been no reported accidents along Fulney Lane North, with just a single collision on approach to the roundabout from the A151 (recorded as 'serious' in severity). This occurred during night-time in wet conditions, when a car and motorcycle collided when slowing down on approach to the roundabout. This is therefore considered to be a result of driver error / poor conditions rather than a highway deficiency, particularly given this is an isolated incident.

3.2.3 With regard to the A151 / A16 roundabout junction to the northeast of the site, a total of 9 accidents were recorded at, or on approach to the junction over the latest 5 year period. All of these accidents were reported to have resulted in 'slight' injuries, with none classified as either 'serious' or 'fatal'.

3.2.4 The 9 accidents between 2014 and 2018 represent an accident rate of 1.8 accidents per year, on average, which corresponds to a lower rate than the national average for 4-arm roundabout junctions including dual carriageway roads, which is defined as 2.7 accidents per year in the DfT guidance document *Design Manual for Roads and Bridges*.

3.2.5 It is noted that a minor concentration of accidents has occurred on the A151, approximately 400m to the east of Fulney Lane North, involving a single accident classified as a 'serious' injury and 5 accidents which resulted in a 'slight' injury (i.e. 1.2 accidents per year). However, these accidents occurred at the Spalding service station access on Holbeach Road and are not attributed to the functioning of the roundabout junction with the A16 in the vicinity of the site.

3.2.6 When considering the accident rate and severity of accidents at both the Fulney Road North / A151 and A151 / A16 junctions, this is considered to represent a good record on the adjacent highway network to the site and no further detailed investigation is required.

3.2.7 The screenshot below provides a plan illustrating the locations of these local accidents over the 5 year period between 2014 and 2018.

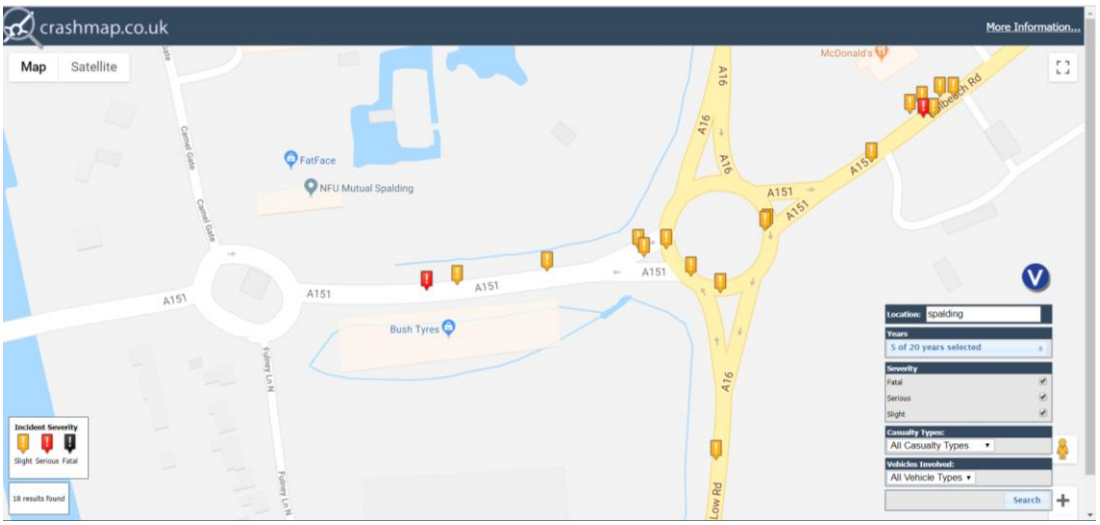


Figure 3.2. Locally Reported Road Accidents

3.3 Accessibility Credentials

3.3.1 Owing to the site's strategic location adjacent to major highway links, in addition to the nature of its proposed use to accommodate a drive-through facility, it is anticipated that the vast majority of trips to the site would be made by car.

3.3.2 Typical journeys to the site would, however, represent 'pass-by' trips whereby visitors would stop at the site as part of an existing pre-determined trip on the adjacent highway network along the A151 or A16, for example. Data analysed within Section 4 of this report indicates that 98% of customers would represent 'pass-by' trade. These trips would therefore not necessarily comprise additional new trips on the local highway network, but would instead form part of an onward journey via these routes.

3.3.3 Notwithstanding the above, there are opportunities for visitors, and particularly staff of the site, to travel via sustainable transport modes. The remainder of this section establishes the potential to make journeys to / from the site by public transport or active modes of transport (i.e. walking and cycling).

Walking and Cycling

3.3.4 A footway is provided along the western side of Fulney Lane North which continues onto both sides and in both directions along the A151 Holbeach Road to the east and west. A footway would also be provided along the southern side of the site's shared access road, affording a pedestrian link between the site and Fulney Lane North.

3.3.5 Pedestrian crossing points with dropped kerbs, tactile paving and central refuges are provided across the A151 at its arms of the roundabout junction with Fulney Lane North. There are further high quality crossing points provided along the A151 towards Spalding.

3.3.6 The footways provided along the A151 continue into the residential area of Fulney, affording safe and convenient pedestrian routes for some staff making commuting routes who are likely to reside in such locations. Additionally, these footways provide a route towards the local bus stops and town centre.

3.3.7 There is a public bridleway located between the site's eastern boundary and the A16 which would not be impacted as a result of the site's development. This bridleway is accessed via the footway on the A16 to the south of its junction with the A151 and would be retained post-development.

3.3.8 The local area is conductive to cycling with a number of dedicated cycle routes available in close proximity to the site. There footways along the A151 are allocated as shared cycleways which are signposted at regular intervals.

3.3.9 Sections of the A151 provide marked cycle lanes, including in the vicinity of the site, enabling a safe route across the Coronation Channel. These cycle lanes continue along Queens Road to the southwest, affording excellent accessibility to the site from the residential area of Fulney.

Public Transport

3.3.10 There are opportunities for future staff of the site to make commuting journeys via local bus services. The nearest bus stops to the site are located approximately 400m (a 5 minute walk) to the west of the site on the A151, as shown on **Figure 3.1** above.

3.3.11 Route number 505 calls at these stops and provides services between Spalding and Kings Lynn / Sutton Bridge with approximately 1 departure every 10-30 minutes in each direction. Full timetable information is provided at the bus stops on the A151.

3.3.12 Spalding rail station is located approximately 2.5km to the southwest and is accessible via a 10 minute cycle journey, a 6 minute drive or the local bus services. Onward rail services towards Peterborough and Lincoln are available and may be utilised by some staff making commuting trips from a further distance, or by customers making onward journeys via these rail services, albeit it is recognised this would be an infrequent occurrence.

Summary

3.3.13 As a result of the proposed drive-thru operation of the site, it is anticipated that the vast majority of trips would be made by car. However, there are realistic opportunities for future staff at the site to make regular journeys via sustainable modes of transport. It is important to note that customer trips made to the site would almost entirely represent pass-by trade associated with existing car journeys made on the adjacent highway network, as considered further within the following section of this report.

4 PROPOSED TRIP GENERATION

4.1 Overview

4.1.1 The proposed development would comprise a drive-through coffee shop with associated car parking facilities, providing a total of 21 spaces. Access to the site would be provided via the existing access road from Fulney Lane North.

4.1.2 In order to establish the impact of the development proposals RGP have undertaken a trip generation assessment using survey data from a comparable drive-through coffee shop currently in operation.

4.2 Drive-Thru Coffee Shop

4.2.1 The TRICS database does not contain trip generation data for drive-through coffee shops, with the only drive-through sites being McDonald's or Burger King fast food takeaways. These experience very different peaks in traffic to a drive-through coffee shop (i.e. predominantly lunchtime / afternoon rather than early morning) and are therefore not representative in terms of AM and PM peak hour trip generation characteristics.

4.2.2 Therefore, the vehicle trips associated with this element have also been derived from data obtained by RGP at a comparable coffee shop drive-through operator. Survey data from an existing coffee shop drive through at Banbury has been used and is attached hereto at **Appendix C**.

4.2.3 This coffee shop drive-through outlet is considered to be particularly representative of the site at Spalding, owing to its location at the southwest corner of the A422 / M40 junction (J11). The local area at Banbury is also characterised by a mix of commercial, residential and agricultural land uses. The Banbury coffee shop drive-through is served by 24 car parking spaces which is a similar proportion to the 21 proposed at the Spalding site.

4.2.4 **Figure 4.1**, below, provides an overview of the key characteristics of the Banbury coffee site and how this compares to the application site in Spalding.

Site	Distance from Town Centre	A-Road (distance)	Local Characteristics
Banbury (OX16 4AE)	1.5km	A422 (200m)	Edge of town, commercial / residential uses
Spalding	2.0km	A151 (150m)	Edge of town, commercial / residential uses

Figure 4.1. Coffee Shop Drive-Through Survey – Comparison of Site Characteristics

4.2.5 As illustrated above, the two locations are particularly comparable, being close to arterial road links and a range of commercial and residential areas. The operational characteristics of the surveyed site and the proposed coffee shop are highly comparable. This data is therefore considered to be representative of the likely operation and can be applied to the proposed drive-through coffee shop.

4.2.6 The survey was undertaken on Wednesday 18th May 2016 between 06:00 and 19:00 and comprised observations of all vehicle arrivals / departures, identifying which of these used the drive through. In addition, interviews were undertaken to ascertain further details regarding customers' purpose of travel and onward journey information. **Figure 4.2**, below, provides a summary of the interview questions asked which enable the proportion of 'pass-by' and 'primary' trips to be calculated.

1. Is the purpose of your trip for [redacted] only or on your way to elsewhere? [redacted] only: YES/NO

2. If elsewhere,
is it
a. Commute to/from work
b. Shopping trip
c. School run
d. Other (Specify)

3a. Origin Postcode: | | **3b. Home or Work?**

4. Vehicle occupants:

Figure 4.2. Coffee Shop Drive-Through Interview Questionnaire

4.2.7 **Figure 4.3**, below, provides a summary of the survey results, giving consideration to the conventional AM (08:00-09:00) and PM (17:00-18:00) peak hours as well as the total daily traffic (06:00-19:00). It is worth noting that the 08:00-09:00 period was identified as the actual peak hour at the surveyed site.

4.2.8 Although the coffee drive through at Banbury is open between 06:00 and 21:00 it can be seen from the survey results that the number of trips during the AM peak hour is significantly greater than in the PM peak hour period, and so the level of traffic after 19:00 is likely to be minimal.

	TRAFFIC GENERATION		
	Arrivals	Departures	Two-Way
AM Peak	51	39	90
PM Peak	21	18	39
Daily	**378**	**370**	**748**

Figure 4.3. Coffee Shop Drive-Through Vehicular Traffic

4.2.9 As summarised above, the coffee shop drive-through element of the site would generate a total of 748 two-way vehicle movements, comprising a maximum of 90 two-way vehicle movements during the AM peak hour.

4.2.10 It is important to note however that a significant proportion of these movements will form 'existing' trips on the network, rather than being 'new' traffic generated by the site. This is because the majority of customer visits are from people undertaking an existing journey to / from their home or office, with the coffee shop representing a convenient stop on their route. **Figure 4.4**, below, provides a summary of customers' journey purpose derived from the questionnaire survey.

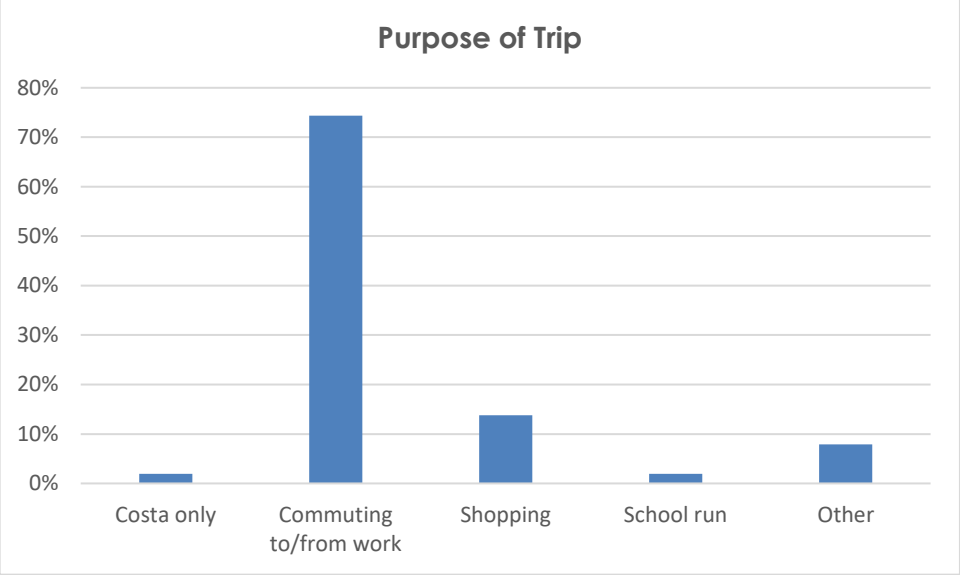


Figure 4.4. Purpose of Trip (Coffee Shop)

4.2.11 From the customer interviews conducted at the Banbury drive-through, it is apparent that 98% of the vehicle trips would already have been on the network regardless of the drive-through and therefore should not be considered as 'new' vehicle trips on the network. **Figure 4.5**, below, provides a summary of vehicle movements which would be generated by the site and considered to be entirely new traffic.

	TRAFFIC GENERATION		
	Arrivals	Departures	Two-Way
AM Peak	1	1	2
PM Peak	0	0	1
Daily	**8**	**7**	**15**

Figure 4.5. Coffee Shop Drive-Through 'Primary' Vehicle Trips

4.2.12 As summarised above, when discounting pass-by trips the coffee shop would generate a total of 15 two-way vehicle movements over the course of a typical day, comprising 2 two-way vehicle movements during the AM peak hour and 1 two-way vehicle movement during the PM peak hour.

5 TRIP GENERATION IMPACT

5.1 Methodology and Scope of Junction Modelling

5.1.1 In order to establish the potential impact of the proposals on the local highway capacity, junction modelling has been undertaken as per the scope outlined in RGP's pre-application discussions with Lincolnshire County Council (**Appendix B**), using JUNCTIONS8 modelling software. The below methodology also reflects the assessment undertaken as part of the adjacent KFC planning permission (ref. H16-1185-18).

5.1.2 The baseline conditions were established through independent traffic surveys undertaken on Thursday 4th and Saturday 6th October 2018. The surveys recorded all turning movements at the A151 / Fulney Lane North roundabout junction over the following periods:

(i) Thursday AM – 07:00 to 10:00 (observed peak hour was 08:30-09:30);

(ii) Thursday PM – 16:00 to 19:00 (observed peak hour was 16:45-17:45);

(iii) Saturday – 11:00 to 17:00 (observed peak hour was 14:00-15:00);

5.1.3 These periods are considered to represent the peak hours of operation for the surrounding highway network and therefore provide a robust assessment period. The full survey results are attached hereto at **Appendix D**.

5.1.4 The following three scenarios were subsequently modelled using the above data for each of the identified peak periods:

(i) Baseline – Existing observed flows plus committed KFC development;

(ii) Proposed – Baseline flows with proposed coffee-shop flows added;

(iii) Proposed 2024 – Flows factored to the year 2024 based on TEMRPO growth factors for the area, including the proposed development traffic;

5.1.5 The TEMPRO growth rates from 2018 to 2024 are identified as follows:

(i) South Holland (Urban, Principal): AM growth factor – 1.0777;

(ii) South Holland (Urban, Principal): PM growth factor – 1.0764;

(iii) South Holland (Urban, Principal): Saturday growth factor – 1.0821;

5.1.6 The proposed turning movements for the development traffic was derived based on the observed existing turning movements from the traffic survey for that period (i.e. during the weekday PM peak hour 40% of vehicles were observed to arrive from the eastern arm, which has also been applied to development traffic when arriving in the PM peak).

5.1.7 For robustness, despite approximately 98% of vehicles representing 'pass-by' traffic, all vehicles accessing the drive-through coffee shop are included in the junction capacity assessment, since they would predominantly represent new turning movements at the roundabout.

5.2 Capacity Assessment Results

5.2.1 RGP's full junction modelling results are attached hereto at **Appendix E**, whilst **Figure 5.2**, below, provides a summary of the key outputs. The summary information includes the maximum queue lengths, delay (in seconds), Ratio of Flow to Capacity (RFC) and Level of Service (LOS) for each scenario.

Summary of Junction Performance					
Scenario	**Period**	**Queue (PCU)**	**Delay (s)**	**RFC**	**LOS**
Baseline Junction Performance (with KFC)	AM Peak	0.81	4.57	0.44	A
	PM Peak	0.85	5.21	0.45	A
	Saturday Peak	1.39	6.17	0.58	A
Baseline + Development	AM Peak	0.90	4.83	0.47	A
	PM Peak	0.88	5.32	0.46	A
	Saturday Peak	1.39	6.18	0.58	A
2024 + Development	AM Peak	1.05	5.22	0.51	A
	PM Peak	1.03	5.73	0.50	A
	Saturday Peak	1.72	7.05	0.63	A

Figure 5.1. A151 / Fulney Lane North: Roundabout Junction Performance

5.2.2 As summarised above, the existing junction is observed to operate well within capacity at all times. Following the proposed development, the junction would continue to operate well within capacity during the current and future year scenarios.

5.2.3 Under the proposed future scenario, with the drive-through coffee shop development, the peak RFC would be 0.63 (well below the typically accepted threshold of 0.85). There would be a maximum delay of circa 7 seconds and maximum queue lengths of up to 2 vehicles. The level of service would be classed as 'A' in all scenarios, which represents the highest achievable level of service. The proposals would therefore not impact detrimentally on the capacity of the roundabout junction.

5.2.4 As part of the surveys, arrivals and departures through the site access road were also recorded. These identified that flows through the access road are currently low, with 15 two-way vehicle movements during the AM peak hours, 8 two-way vehicle movements during the PM peak hour and 6 two-way vehicle movements during the Saturday peak. This priority junction would therefore operate well, with no capacity problems anticipated.

5.2.5 Overall it is apparent the proposals would have no material impact on the operation of the surrounding highway network.

6 PARKING ARRANGEMENTS

6.1 Overview

6.1.1 As part of the proposed development, a total of 21 car parking spaces would be made available, including the provision of 2 dedicated disabled parking bays.

6.2 Parking Policy and Standards

6.2.1 The relevant local parking policy is contained within the South East Lincolnshire Local Plan (2019). The parking standards contained in this document do not provide specific reference to new drive-through developments, but states that for all developments not listed within the updated parking standards table will be assessed on a site-by-site basis.

6.2.2 Unlike typical cafes / coffee shops, many customers at drive-through outlets would order from such establishments with the intention to consume food and beverage away from the site, whilst driving or within their parked vehicle, rather than choosing to dine within the coffee shop itself. Customers would therefore not require dedicated table service and as such, would have a shorter duration of stay, thus the 'turnover' of customers utilising the car park would be far greater. The following section of this report assesses the likely operation of the car park proposed for the drive-through outlet on-site.

6.2.3 The following assessment therefore assesses and evaluates the likely operation of the proposed car park and the parking demand associated with the proposals in order to determine an appropriate level of car parking, with consideration of the aspirations of Policy 36 of the Local Plan in respect to parking.

6.3 Parking Demand

6.3.1 The following assessment has been carried out to establish the likely level of parking required to accommodate the demand generate by the proposals, to avoid overspill of parked vehicles onto the access road or to result with an overprovision of parking which would undermine transport policy aims for a sustainable approach.

6.3.2 This assessment also takes into the context that the drive-through would contain a limited amount of internal and external customer seating, whilst some customers would choose to park briefly to consume products within their cars.

6.3.3 The detailed survey data used to establish the site's operation from a trip generation perspective, as detailed within Section 4 of this report, has again been used in this assessment to determine the parking demand generated post-development.

6.3.4 The coffee shop drive-through data held by RGP does not contain detailed data with regard to the car park usage, however, it is considered that this use would generate a similar proportion of demand to the KFC drive-through owing to their comparable operational nature. This was established as part of the Transport Assessment prepared for the recent KFC planning application.

6.3.5 Operator-specific survey data for the KFC drive-through identifies that development would generate a peak demand for 20 car parking spaces, at approximately 12:30 hours. This includes staff parking.

6.3.6 The approved KFC has a floor area of 260sqm, whilst the proposed coffee shop would have a floor area of 180sqm (i.e. approximately 70% of the size). It is therefore reasonable to assume the total number of customers / staff on-site at a given time may be 70% of the KFC site (i.e. a peak of up to 14 vehicles).

6.3.7 It is anticipated that the proportion of customers requiring on-site parking at the coffee shop would be less than at the KFC, given they would be able to consume their beverage whilst driving. Moreover, the duration of stay for any customers choosing to consume their drink on-site would likely be shorter than those at KFC consuming a meal. Therefore, the maximum demand for car parking at the drive-through coffee shop would likely be less than 14 spaces.

6.3.8 It is therefore considered that 21 spaces for the drive-through coffee shop would be more than adequate to cater for all parking demands at the site.

6.3.9 It is not anticipated that there would be a risk of unauthorised parking, or 'parking abuse', associated with other local land. However, if this was observed to occur at the site, the operators would be likely to introduce a range of relevant parking management measures.

6.4 Cycle Parking

6.4.1 There are no minimum cycle parking standards defined for drive-through outlets in local policy, however, given the nature of the site's proposed operation and its location adjacent to major highway links such as the A16, it is anticipated that cycle parking for staff use only would necessary and appropriate to provide on-site.

6.4.2 As such, it is proposed that 4 dedicated cycle parking spaces would be provided on-site, in close proximity to the entrance to the building. These cycle parking spaces would be secure and well-lit, located in an area benefitting from CCTV coverage. This is consistent with the level of cycle parking included within the consented KFC development.

ACCESS, DELIVERY AND SERVICING ARRANGEMENTS

6.5 Site Access

6.5.1 Access to the site would be provided via an existing private access road from Fulney Lane North and would be shared with the adjacent tyre fitting workshop located to the west of the site. Fulney Lane North comprises the southern arm of its roundabout junction with the A151 Holbeach Road. Fulney Lane North continues to the south of this junction, providing access to several industrial units.

6.5.2 The shared access road facilitates two-way vehicle movements, measuring approximately 8m in width along its entirety. Access into the site would be afforded from the southern side of this road via a priority junction, enabling both in and out movements.

6.5.3 Additionally, a footway would be provided along the site frontage, alongside the access road, facilitating pedestrian movement between the site and Fulney Lane North. A crossing point with dropped kerbs and tactile paving would be provided at the new site access.

6.5.4 As part of the operation of the drive-through outlet, a one-way circulatory route would be provided, containing the customer order and collection points prior to re-entering the site's car parking area. Drawing **2018/4487/005**, attached hereto, demonstrates that there is sufficient space for a large car to navigate this route with ease.

6.5.5 Clear markings and signage would be provided in each section of the site to sufficiently indicate to customers and delivery vehicle drivers the required vehicle routes through the site, as illustrated on the proposed site layout (**Appendix A**).

6.6 Deliveries and Servicing

6.6.1 Deliveries to the drive-through coffee shop would be scheduled to take place outside of conventional opening hours and would be accommodated within the on-site car parking area.

6.6.2 **Drawing 2018/4487/002** demonstrates the required manoeuvring of delivery vehicles to the development. As illustrated, sufficient space would be available for vehicles to turn on-site and egress in a forward gear.

6.6.3 It is anticipated that the largest delivery vehicle required by the coffee shop operation is also a 7.5t box van.

6.6.4 Refuse collections would also take place from this location and the secure refuse store would be located on the eastern end of the building, affording convenient access to the collection point. Drawing **2018/4487/004**, attached, demonstrates that a refuse vehicle could also gain access safely to the site.

6.7 Delivery Frequencies

6.7.1 Based on RGP's experience with similar drive-through coffee shops under an alternate brand, there would be a typical requirement for 1 food delivery per day in addition to a further 2 weekly supply deliveries (i.e. 8 deliveries per week).

6.7.2 This is not considered to represent an intensive frequency and would have a minimal impact on the local highway network. Additionally, all deliveries would be scheduled outside of the conventional highway peak hour periods.

6.7.3 It should also be noted that deliveries would be managed so as to ensure only 1 vehicle is present at a given time. Based on the above assessments, it is therefore evident that all delivery and servicing activity could be suitably accommodated on-site.

6.8 Delivery Management Measures

6.8.1 It is important to apply a range of measures to ensure efficient and safe management of delivery and servicing vehicles to sites throughout the UK. To minimise the impact of deliveries, it is anticipated that principal suppliers contracted by operator are signed up to Transport for London's Fleet Operator Recognition Scheme (FORS), which is also relevant to sites outside of London.

6.8.2 FORS is a voluntary industry-led membership scheme which aims to raise the standard of the fleet and freight industry by improving operators' performance with regards to safety, fuel efficiency, economical operation and vehicle emissions. It seeks to provide a quality and performance benchmark for the freight industry.

6.8.3 Delivery vehicles to the on-site uses would likely continue to other sites locally, servicing a number of locations as part of a planned delivery route. Such journeys are carefully planned, making most efficient use of each delivery vehicle and minimising the number of journeys, distances required to travel and associated CO_2 emissions.

6.8.4 The bin store has been designed to be lockable and has drainage points to keep the area clean and secure. All refuse collections would be undertaken privately by a contractor offering recycling collections. Staff would also be sufficiently informed about the recycling processes in place.

7 SUMMARY AND CONCLUSIONS

7.1.1 This Transport Statement has considered the transport planning implications associated with the proposed development at land adjacent to the A151 / A16 in Spalding.

7.1.2 Extensive survey information has been consulted to determine the existing and post-development operation of the site in terms of trip generation and parking demand. The results show that the trips generated by the site would not be detrimental to the current functioning of the local highway network and the parking provision, as proposed, would be sufficient to accommodate demand.

7.1.3 RGP make the following conclusions of this Transport Statement:

(i) The development proposals are consistent with national, regional and local planning policy;

(ii) The site is considered to be well located for customer and delivery vehicle access, being located close to major highway links, including the A151, A16 and A17. The site also benefits from nearby public transport and pedestrian infrastructure which would facilitate sustainable travel to the site by staff making regular commuting trips;

(iii) The proposals are anticipated to attract in the region of 90 two-way vehicle movements during the AM peak hour period, whilst approximately 39 two-way movements would be generated during the PM peak hour, representing a 'worst-case scenario'. A total of 748 daily two-way vehicle trips would be generated over the course of a typical operational weekday;

(iv) The vast majority (98%) of the above vehicle trips would comprise 'pass-by' trips, whereby customers to the drive-through outlet would arrive as part of a diverted trip from an existing pre-determined journey on the adjacent highway network. The number of 'primary' vehicle trips generated by the site would equate to approximately 2 two-way movements during the AM peak hour as a worst-case and 15 over the course of the day;

(v) The proposals would not impact materially on the capacity of the surrounding junctions, as demonstrated through the JUNCTIONS8 assessment;

(vi) The proposed on-site parking provision would be appropriate to cater for the anticipated demand and is in accordance with local parking policy;

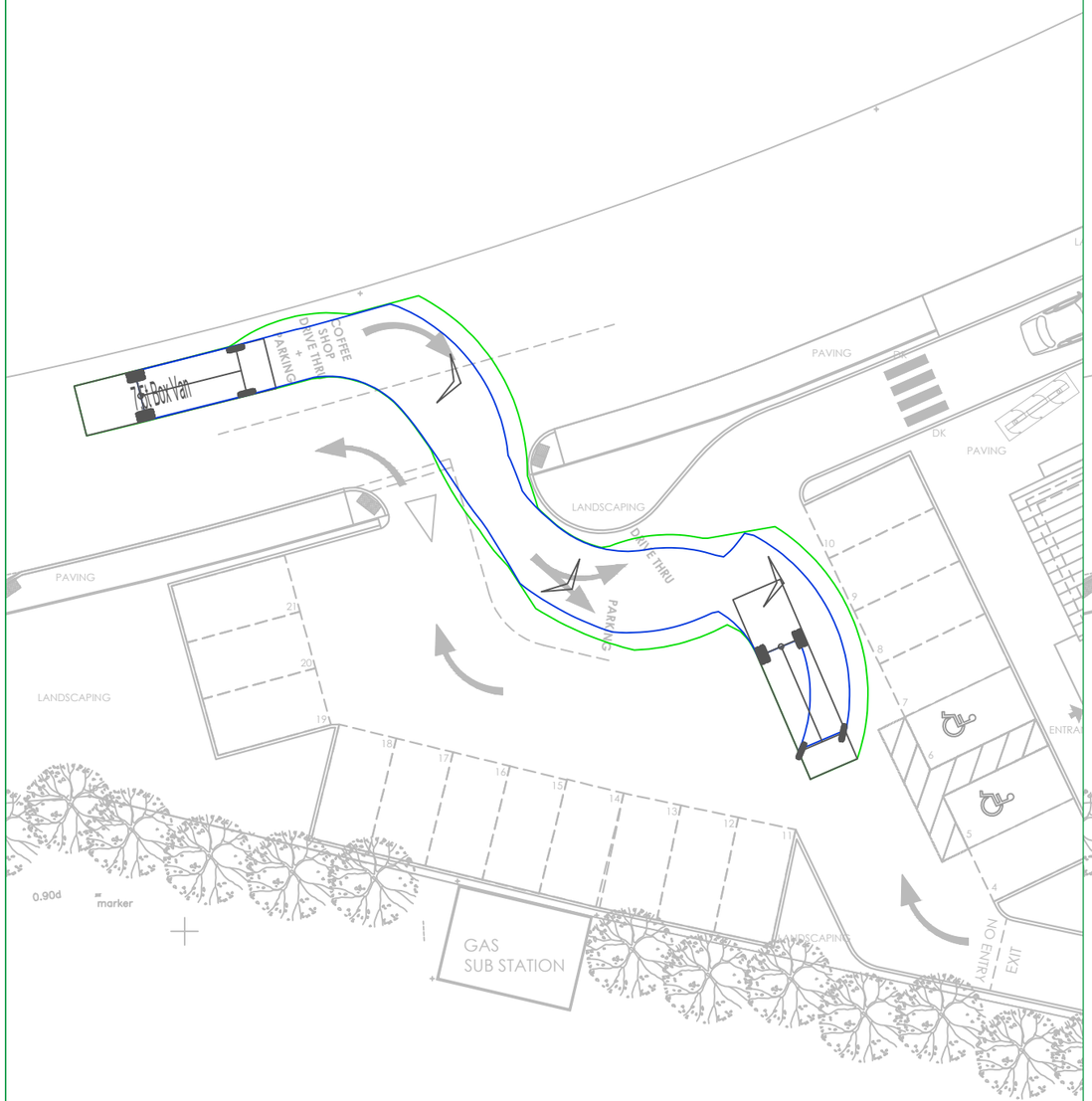
(vii) Vehicular access would be provided via a new priority junction with the existing access road at the site's northern boundary. Principal access to the site would be afforded from the A151 via its roundabout junction with Fulney Lane North;

(viii) All delivery and servicing activity would be accommodated on-site with sufficient turning space provided for the safe and convenient access and egress of delivery / refuse vehicles.

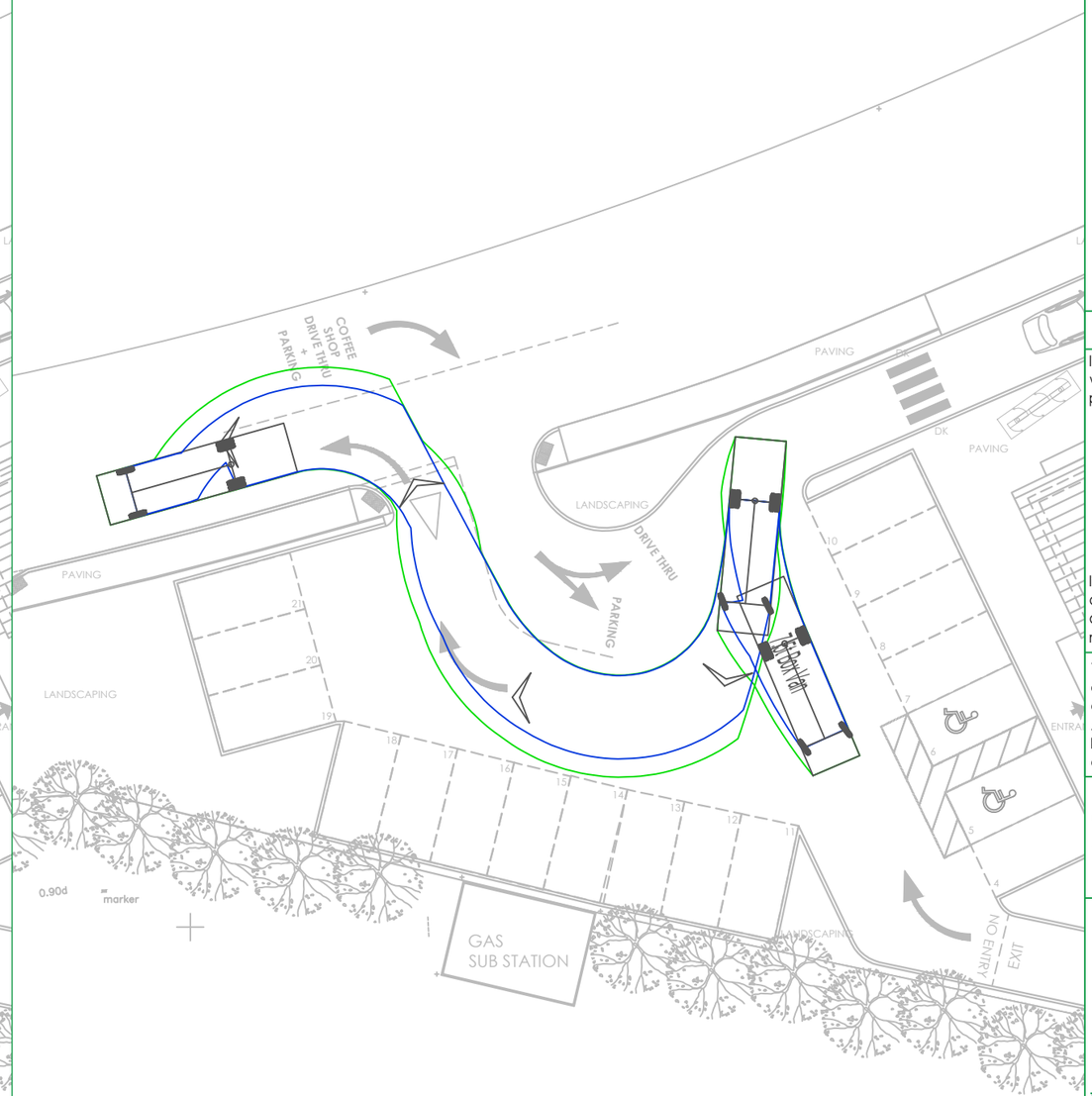
7.1.4 As a result of the data and evidence presented within this Transport Assessment, Lincolnshire County Council, as local highway authority, are respectfully requested to confirm that the proposals are satisfactory on highway grounds.

DRAWINGS

Entry Swept Path

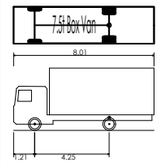


Exit Swept Path



NOTES

A3



7.5t Box Van	
Overall Length	8.010m
Overall Width	2.100m
Overall Body Height	3.556m
Min Body Ground Clearance	0.351m
Track Width	2.064m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	7.400m

RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, please note the following residual hazards:

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

This drawing has been prepared for the purposes of planning discussions and does not constitute a detailed design drawing, or Construction drawing. A Design Hazard Inventory has been prepared by RGP setting out the hazards which have been designed out. This is available upon request.

This map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office (c) Crown Copyright. Licence Number: AL100037123
This drawing is based upon Ordnance Survey mapping - RGP accept no liability for any inaccuracies with the data.

rgp
Transport Planning and Infrastructure Design Consultants
Shackleford Suite, Mill Pool House, Mill Lane, Godalming, GU7 1EY
Tel: 01483 861681 Fax: 01483 861682 www.rgp.co.uk

Client
SME Group Plc

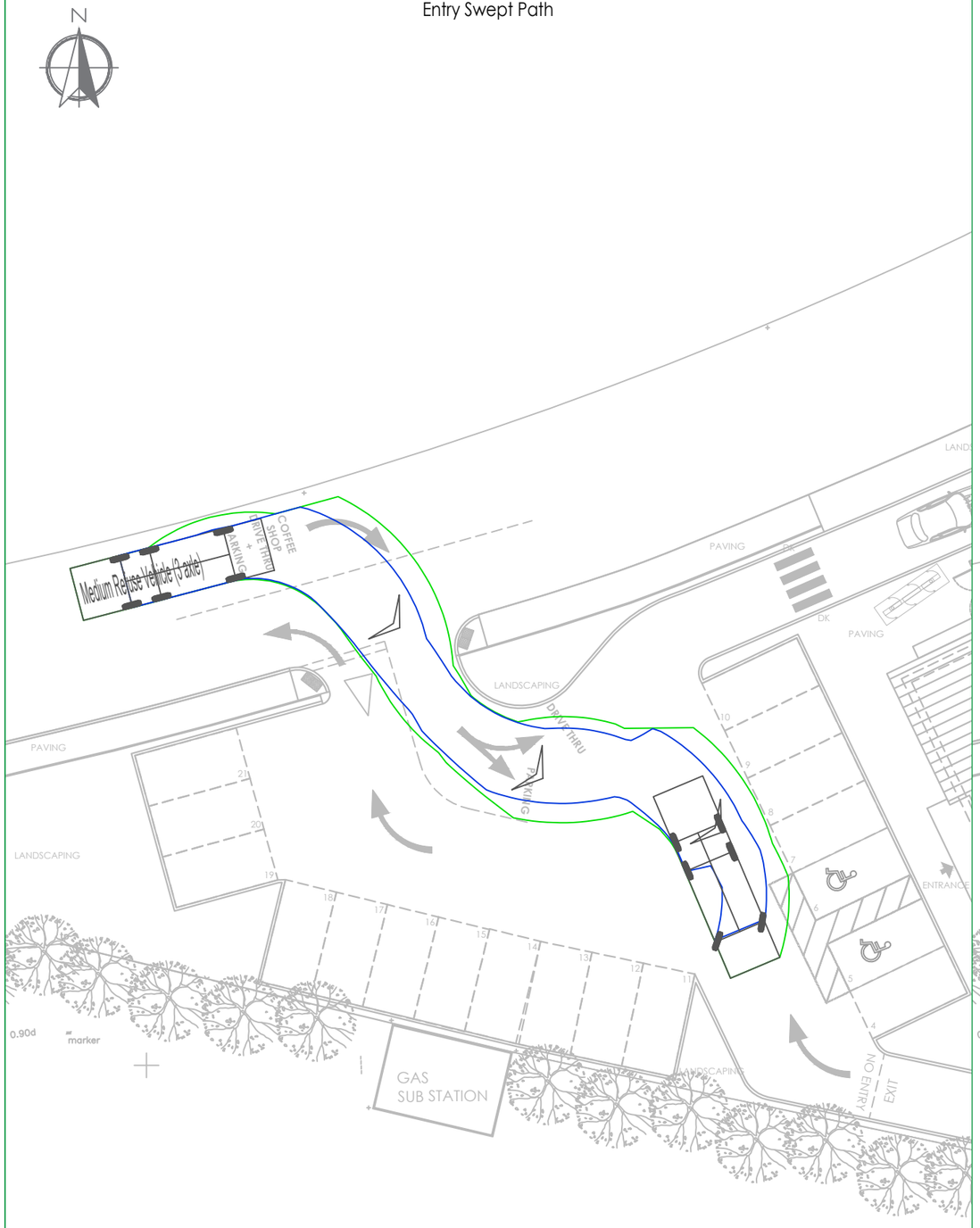
Project
Land at A151 & A6, Spalding

Drawing Title
Coffee Shop Delivery
Swept Path Analysis

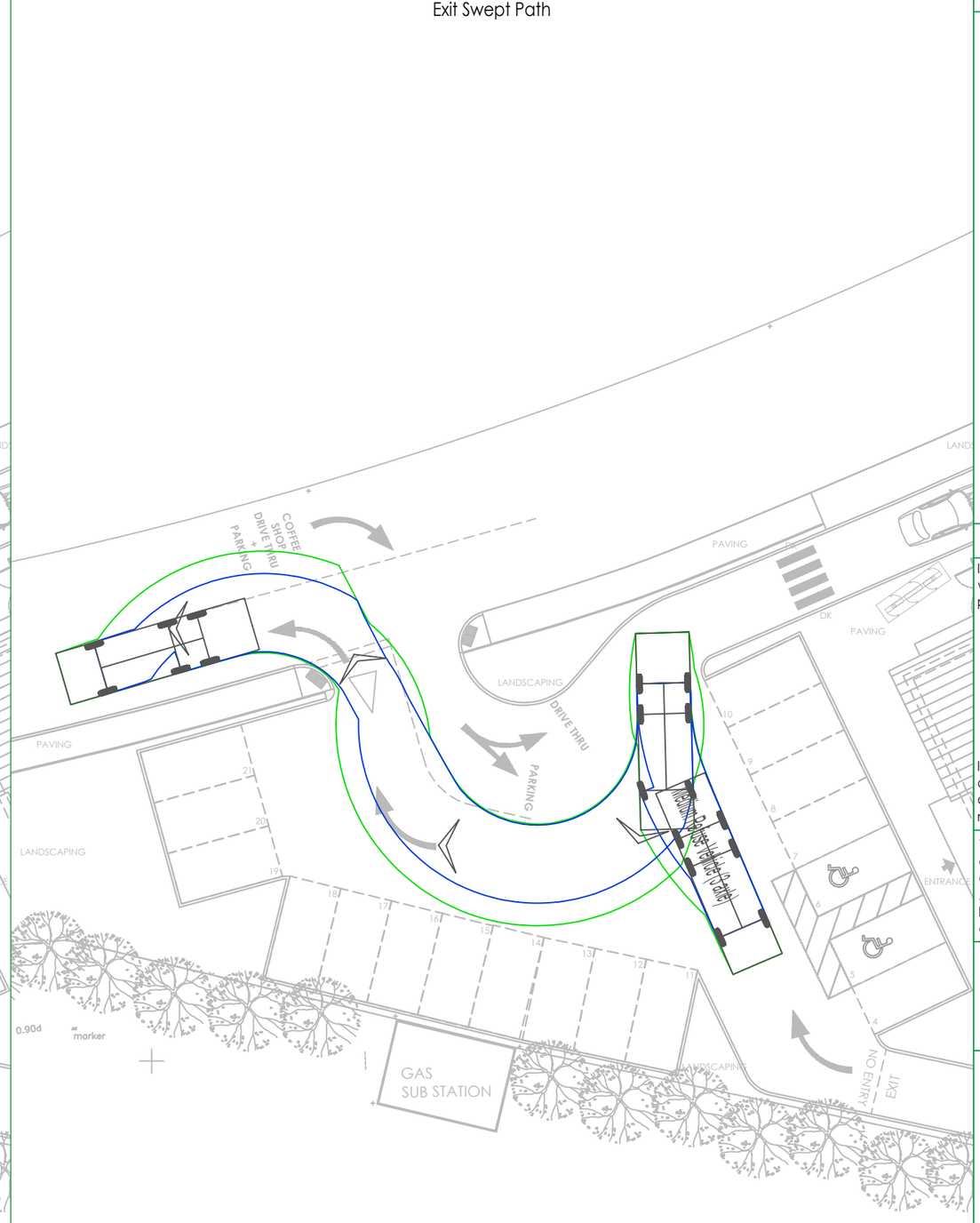
Scale	Drawn By	Checked By	Approved By
1:250	GSE	JDF	NDR

Date	Drawing No.	Rev.
May 2019	2018/4487/002	A

Entry Swept Path

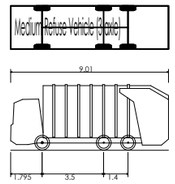


Exit Swept Path



NOTES

A3



Medium Refuse Vehicle (3 axle)	
Overall Length	9.010m
Overall Width	2.450m
Overall Body Height	3.742m
Min Body Ground Clearance	0.295m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	8.200m

RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, please note the following residual hazards:

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

This drawing has been prepared for the purposes of planning discussions and does not constitute a detailed design drawing, or Construction drawing. A Design Hazard Inventory has been prepared by RGP setting out the hazards which have been designed out. This is available upon request.

This map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office (c) Crown Copyright. Licence Number: AL100037123
This drawing is based upon Ordnance Survey mapping - RGP accept no liability for any inaccuracies with the data.

Transport Planning and Infrastructure Design Consultants
Shackleford Suite, Mill Pool House, Mill Lane, Godalming, GU7 1EY
Tel: 01483 861681 Fax: 01483 861682 www.rgp.co.uk

Client
SME Group Plc

Project
Land at A151 & A6, Spalding

Drawing Title
Coffee Shop Refuse
Swept Path Analysis

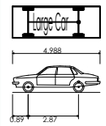
Scale	Drawn By	Checked By	Approved By
1:250	GSE	JDF	NDR

Date	Drawing No.	Rev.
May 2019	2018/4487/004	A



NOTES

A3



Large Car	
Overall Length	4.988m
Overall Width	1.793m
Overall Body Height	1.502m
Min Body Ground Clearance	0.287m
Track Width	1.700m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	6.200m

RESIDUAL HAZARDS

In addition to the hazards/risks normally associated with the type of work detailed on this drawing, please note the following residual hazards:

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved risk assessment and method statement.

This drawing has been prepared for the purposes of planning discussions and does not constitute a detailed design drawing, or Construction drawing. A Design Hazard Inventory has been prepared by RGP setting out the hazards which have been designed out. This is available upon request.

This map is based on or reproduced from Ordnance Survey material with the permission of Ordnance Survey on behalf of the controller of Her Majesty's Stationary Office (c) Crown Copyright. Licence Number: AL100037123
This drawing is based upon Ordnance Survey mapping - RGP accept no liability for any inaccuracies with the data.

rgp
Transport Planning and Infrastructure Design Consultants
Shackleford Suite, Mill Pool House, Mill Lane, Godalming, GU7 1EY
Tel: 01483 861681 Fax: 01483 861682 www.rgp.co.uk

Client
SME Group Plc

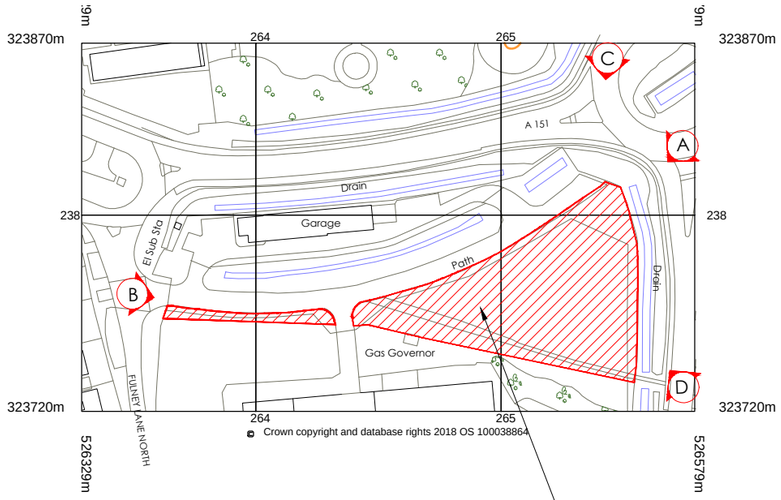
Project
Land at A151 & A6, Spalding

Drawing Title
Coffee Shop Drive-thru
Swept Path Analysis

Scale	Drawn By	Checked By	Approved By
1:200	GSE	JDF	NDR

Date	Drawing No.	Rev.
May 2019	2018/4487/005	-

APPENDIX A



Location plan

scale - 1:1250 @ A1 + 1:2500 @ A3

Proposed site



Site plan

scale - 1:250 @ A1 + 1:500 @ A3

FOR INFORMATION

ALL DIMENSIONS TO BE CHECKED ON SITE.

DO NOT SCALE FROM THIS DRAWING EXCEPT FOR THE PURPOSES OF LOCAL AUTHORITY PLANNING

rev	date	description
-	-	-

rpa:group
51-53 church road
ashford, middlesex, tw15 2ty
telephone: +44 (0) 1784 256 579
facsimile: +44 (0) 1784 247 300
website: www.therpagroup.com

NEW STORE

store address
LAND at A151/A16
SPALDING
PE12 6EP
LINCOLNSHIRE

drawing title
PROPOSED DRIVE THROUGH COFFEE SHOP
Site location plan

drawn by	checked	date
DAO	MC	15.5.10
store no.	scale	
-	as indicated @ A1	

drawing no.	revision
2006267-2019-G100	-

APPENDIX B

From: Jon Sharpe
To: Peter Batten
Subject: FW: Pre-Application Advice - Fulney Lane Spalding
Date: 26 September 2018 08:23:25
Attachments: image001.jpg
image002.png

Morning Peter.
I am advised by my Transportation colleague that your proposed scoping for this Transport Assessment is satisfactory.
He has added that we will need to agree your trip distribution methodology and you will need to provide an assessment in 2023 with traffic growth.
I am not sure if you are aware but the old line of Holbeach Road, from which your clients' proposed development would take its access, is not a Public Highway. The road having been Stopped-up under Side Road Orders when the A16 Spalding By-pass was built.
Regards,
Jon Sharpe
Principal Development Management Officer
LCC Directorate for Environment and Economy

From: Peter Batten [mailto:p.batten@rgp.co.uk]
Sent: 25 September 2018 16:18
To: DevelopmentManagement
Subject: RE: Pre-Application Advice - Fulney Lane Spalding

Dear Highways Development Management,

Please could you let me know when you may be able to review the below information and advise further?

I trust the below proposed scope of works is reasonable but if you could confirm that would be greatly appreciated.

If you have any queries then please let me know.

Many thanks,
Peter

Peter Batten
Senior Consultant

T. 020 7078 9662
E. p.batten@rgp.co.uk
W. www.rgp.co.uk

RGP

Transport Planning and Infrastructure Design Consultants

RGP is a trading name of Russell Giles Partnership Limited | Registered in England No. 4237910
This Email is confidential and is for the intended recipient only. If you are not the intended recipient, please contact the author and do not disclose or use the contents in any way. The author bears no responsibility for any legal action or disputes arising from views or professional advice expressed which do not relate to the business of Russell Giles Partnership Limited.

From: DEV_PlanningEnquiries <DEV_PlanningEnquiries@lincolnshire.gov.uk>
Sent: 20 September 2018 10:23
To: DevelopmentManagement <DevelopmentManagement@lincolnshire.gov.uk>
Cc: Peter Batten <p.batten@rgp.co.uk>
Subject: Pre-Application Advice - Fulney Lane Spalding

Dear Highways Development Management,

Please see the enquiry from Mr Batten. The Minerals and Waste Planning Authority cannot progress.

Regards

Felicity Webber
Planning Officer
Planning
2nd Floor
Lancaster House
36 Orchard Street
Lincoln
LN1 1XX

Tel: 01522 782070

From: Peter Batten [mailto:p.batten@rgp.co.uk]
Sent: 20 September 2018 10:13
To: DEV_PlanningEnquiries
Subject: Pre-Application Advice - Fulney Lane Spalding

Dear sirs,

I am assisting a developer with a proposed drive-thru facility which they intend to submit a planning application for over the coming weeks. I've tried to call on a couple of occasions to discuss and gauge your feedback but haven't been able to get through to speak to the appropriate officer and hence have summarised the key points below. I would be very grateful for a return call to discuss the details and scope of the Transport Statement / Assessment further.

The scheme is for a development of either 1 or 2 drive-thru units (comprising 1 x fast food and possibly 1 x coffee unit) on land off Fulney Lane North in Spalding (a plot of land to the west of the A16 and south of the A151). Please see the following Google Maps link for the precise location: https://www.google.co.uk/maps/place/52%C2%B047'48.2%22N+0%C2%B007'29.6%22W/@52.79673,-0.1270797,418m/data=!3m2!1e3!4b1!4m6!3m5!1s0x0:0x0!7e2!8m2!3d52.7967302!4d-0.1248912). Access would be provided from the existing priority junction on to Fulney Lane North.

An initial trip generation assessment based on surveys of comparable sites indicates that the two drive-thru units (combined) are likely to attract approximately 100 two-way vehicle movements during each of the conventional AM and PM peak hours and 1,400 two-way vehicle movements over the course of a typical weekday. Although the vast majority of these will constitute 'pass-by' traffic already on the network, as opposed to new vehicle trips generation, these will largely represent new turning movements at the site access and the adjacent roundabout junction.

We are therefore proposing to undertake assessment of the priority junction on to Fulney Lane North and for the Fulney Lane North / A151 roundabout junction during the conventional weekday peak hours and a Saturday peak. To inform these, we propose to arrange for traffic flows to be recorded by way of detailed traffic surveys capturing all turning movements on a

neutral weekday between 07:00-10:00 and 16:00-19:00 and on a Saturday between 11.00-17:00. Please could you let me know whether you are agreeable with the proposed survey hours and extents of junction modelling?

As part of the planning application RGP are preparing a Transport Assessment which I anticipated will cover the following principal areas:

1. Policy – A review of the latest national, regional and local transport policy relevant to the proposals;
2. Local Highway Network and Accessibility Credentials – A review of the local highway network, including a review of accident data, and consideration of the current accessibility opportunities for the site;
3. Trip Generation Assessment – Utilising bespoke operator data and the TRICS database to understand the potential increase in vehicles trips associated with the proposed 2 no. drive thru facilities. This would need to cover both weekdays and weekends;
4. Junction Capacity Assessment – Junction modelling would be undertaken (using JUNCTIONS8 modelling software) for the priority junction onto Fulney Lane North and the adjacent roundabout junction to demonstrate there would not be a material impact on the capacity and performance of either.
5. Parking Provision – Review of parking provision relative to parking standards and the anticipated demand (derived through the bespoke data held); and
6. Access and Servicing – Consideration of access arrangements and servicing requirements, including vehicles sizes and frequencies, supported by vehicle swept path drawings to demonstrate sufficient space would be provided for access and manoeuvring.

I trust the above scope would be satisfactory but I would be grateful for you confirmation.

If you do have any queries or require clarification please feel free to get in touch.

I look forward to your response.

Kind regards,
Peter

Peter Batten
Senior Consultant

T. 020 7078 9662
E. p.batten@rgp.co.uk
W. www.rgp.co.uk

RGP

Transport Planning and Infrastructure Design Consultants

RGP is a trading name of Russell Giles Partnership Limited | Registered in England No. 4237910
This Email is confidential and is for the intended recipient only. If you are not the intended recipient, please contact the author and do not disclose or use the contents in any way. The author bears no responsibility for any legal action or disputes arising from views or professional advice expressed which do not relate to the business of Russell Giles Partnership Limited.

Note: We are a Microsoft Office site. Our base version is 2010. Please make sure that files you send can be read in this format. Any form of reproduction, dissemination, copying, disclosure, modification, distribution and/or publication of this e-mail is strictly prohibited save unless expressly authorised by the sender. The information contained in this message is intended for the named recipients only. It may contain privileged and confidential information and if you are not the addressee or the person responsible for delivering this to the addressee, you may not copy, distribute or take action in reliance on it. If you have received this message in error, please notify the sender(s) immediately by telephone. Please also destroy and delete as soon as possible the message from your computer.

Note: We are a Microsoft Office site. Our base version is 2010. Please make sure that files you send can be read in this format. Any form of reproduction, dissemination, copying, disclosure, modification, distribution and/or publication of this e-mail is strictly prohibited save unless expressly authorised by the sender. The information contained in this message is intended for the named recipients only. It may contain privileged and confidential information and if you are not the addressee or the person responsible for delivering this to the addressee, you may not copy, distribute or take action in reliance on it. If you have received this message in error, please notify the sender(s) immediately by telephone. Please also destroy and delete as soon as possible the message from your computer.

APPENDIX C

Banbury Car Park Survey, Saturday 21st May 2016

	Drive Through	
Time	Ins	Max Queue
06:00 - 06:15	1	1
06:15 - 06:30	6	2
06:30 - 06:45	4	1
06:45 - 07:00	6	1
07:00 - 07:15	5	1
07:15 - 07:30	6	2
07:30 - 07:45	6	2
07:45 - 08:00	4	1
08:00 - 08:15	8	1
08:15 - 08:30	7	2
08:30 - 08:45	4	1
08:45 - 09:00	5	1
09:00 - 09:15	7	2
09:15 - 09:30	4	1
09:30 - 09:45	6	1
09:45 - 10:00	7	2
10:00 - 10:15	4	1
10:15 - 10:30	5	1
10:30 - 10:45	8	2
10:45 - 11:00	9	2
11:00 - 11:15	7	2
11:15 - 11:30	7	3
11:30 - 11:45	6	2
11:45 - 12:00	5	2
12:00 - 12:15	8	4
12:15 - 12:30	5	1
12:30 - 12:45	6	2
12:45 - 13:00	7	2
13:00 - 13:15	7	2
13:15 - 13:30	7	2
13:30 - 13:45	5	1
13:45 - 14:00	7	1
14:00 - 14:15	3	1
14:15 - 14:30	6	2
14:30 - 14:45	5	2
14:45 - 15:00	4	1
15:00 - 15:15	3	1
15:15 - 15:30	4	1
15:30 - 15:45	3	1
15:45 - 16:00	4	1
16:00 - 16:15	3	1
16:15 - 16:30	2	1
16:30 - 16:45	2	1
16:45 - 17:00	4	2
17:00 - 17:15	4	1
17:15 - 17:30	2	1
17:30 - 17:45	2	1
17:45 - 18:00	4	1
18:00 - 18:15	2	1
18:15 - 18:30	3	1
18:30 - 18:45	4	1

18:45 - 19:00	4	1
TOTALS	**257**	

Banbury Interview Survey, Saturday 21st May 2016

1. Is the purpose of your trip for [coffe shop] only or on your way to elsewhere? [coffee shop] only: YES/N

2. If eleswhere, is it
a. Commute to/from work
b. Shopping trip
c. School run
d. Other (Specify)

3a. Origin Postcode: **3b. Home or Work?**

4. Vehicle occupants:

Time	Q1	Q2	Q3a	Q3b	Q4
06:08	No	a	OX16	Home	1
06:19	No	a	OX16	Home	1
06:22	No	a	OX17	Home	1
06:27	No	a	OX16	Home	1
06:34	No	a	NN33	Home	1
06:41	No	Social	CV47	Home	1
06:43	No	a	OX16	Home	1
06:46	No	a	OX16	Home	1
06:50	No	a	NN11	Work	1
06:52	No	a	OX15	Home	1
06:53	No	a	OX16	Home	1
06:56	No	a	OX16	Home	2
07:00	No	a	OX16	Home	1
07:04	No	Leisure	OX16	Home	2
07:10	No	a	OX16	Home	1
07:13	No	a	OX16	Home	2
07:16	No	a	OX16	Home	1
07:20	Yes		OX16	Home	1
07:21	No	a	OX16	Home	2
07:25	No	b	OX16	Home	1
07:29	No	a	OX16	Home	1
07:33	No	Social	NN11	Home	1
07:36	No	a	OX16	Home	1
07:38	No	a	OX16	Home	1
07:40	No	a	OX17	Home	1
07:41	No	a	OX16	Home	1
07:43	Yes		OX17	Home	1
07:50	No	Holiday	OX16	Home	1
07:56	No	a	OX16	Home	1
08:01	No	a	OX16	Home	1
08:04	No	c	OX17	Home	2
08:06	No	a	NN11	Home	1
08:07	No	a	OX16	Home	1
08:09	No	a	OX16	Home	1
08:10	No	a	OX16	Home	1
08:13	No	a	OX16	Home	2
08:16	No	a	OX16	Home	1
08:20	No	a	OX16	Home	1
08:21	No	a	OX16	Home	1
08:22	No	a	OX16	Home	2
08:25	No	a	OX16	Home	1
08:26	No	a	OX16	Home	1
08:28	Yes		OX16	Home	1
08:30	No	a	OX16	Home	1
08:35	No	a	OX16	Home	1
08:44	No	a	OX16	Home	1
08:49	No	a	OX16	Home	1
08:51	No	a	NN11	Home	1
08:52	No	Dog walker	OX16	Home	1
08:54	No	Leisure	OX15	Home	1
09:02	Yes		OX15	Home	1
09:03	No	a	OX16	Home	1

Summaries	
[coffee shop] only	**20**
Commuting to/from work	**76**
Shopping	**67**
School run	**2**
Other	**37**
From home	**200**
From work	**2**
Average Occupants	**1**

09:04	Yes		OX17	Home	1
09:06	No	c	CV26	Home	2
09:07	No	b	OX16	Home	2
09:11	No	a	OX15	Home	2
09:17	No	Social	OX16	Home	1
09:21	No	Social	OX16	Home	1
09:36	No	b	NN11	Home	2
09:37	No	Leisure	OX4	Home	1
09:41	Yes		OX16	Home	2
09:44	No	Social	OX16	Home	1
09:45	Yes		OX16	Home	1
09:48	No	Leisure	OX16	Home	1
09:52	No	a	OX17	Home	1
09:53	No	Leisure	OX17	Home	1
09:53	No	a	OX16	Home	1
09:56	No	b	OX16	Home	1
09:57	No	b	OX16	Home	1
09:59	No	a	OX16	Home	1
10:02	No	b	NN13	Home	1
10:14	No	a	OX16	Work	1
10:16	No	Social	OX16	Home	1
10:21	Yes		OX16	Home	1
10:32	Yes		OX15	Home	1
10:35	No	Leisure	OX28	Home	1
10:37	No	b	OX17	Home	1
10:38	No	Social	OX17	Home	2
10:39	No	b	OX15	Home	1
10:39	Yes		OX16	Home	1
10:40	No	a	B61	Home	1
10:41	No	a	OX15	Home	1
10:43	No	a	OX15	Home	1
10:46	No	Social	OX16	Home	3
10:47	No	b	NN33	Home	2
10:48	No	Leisure	OX17	Home	1
10:50	Yes		OX16	Home	2
10:52	No	a	OX16	Home	2
11:03	No	a	OX15	Home	1
11:05	No	b	OX26	Home	1
11:08	No	a	OX16	Home	2
11:09	Yes		OX16	Home	1
11:10	No	b	CV37	Home	2
11:12	No	b	OX17	Home	2
11:13	No	b	OX16	Home	2
11:15	No	b	OX16	Home	4
11:16	No	b	OX17	Home	2
11:17	No	b	NN11	Home	3
11:20	No	b	OX15	Home	2
11:22	No	b	OX17	Home	2
11:23	No	b	OX16	Home	2
11:25	Yes		OX16	Home	2
11:27	No	b	OX16	Home	1
11:29	No	b	OX17	Home	1
11:30	Yes		OX15	Home	2
11:32	No	a	OX15	Home	1
11:33	No	a	OX16	Home	2
11:35	No	a	OX17	Home	1
11:40	No	b	OX17	Home	1
11:43	No	Social	NN11	Home	4
11:45	No	b	OX16	Home	1
11:48	No	b	OX16	Home	1
11:51	No	b	OX17	Home	2
11:55	No	a	OX17	Home	2
11:57	No	b	OX17	Home	2
11:59	No	Social	CV32	Home	2
12:01	Yes		OX16	Home	1
12:02	No	a	OX16	Home	1
12:05	No	a	OX16	Home	1
12:08	No	Social	OX17	Home	2
12:11	No	Leisure	OX17	Home	1
12:12	No	Social	OX25	Home	1
12:14	No	b	OX26	Home	1

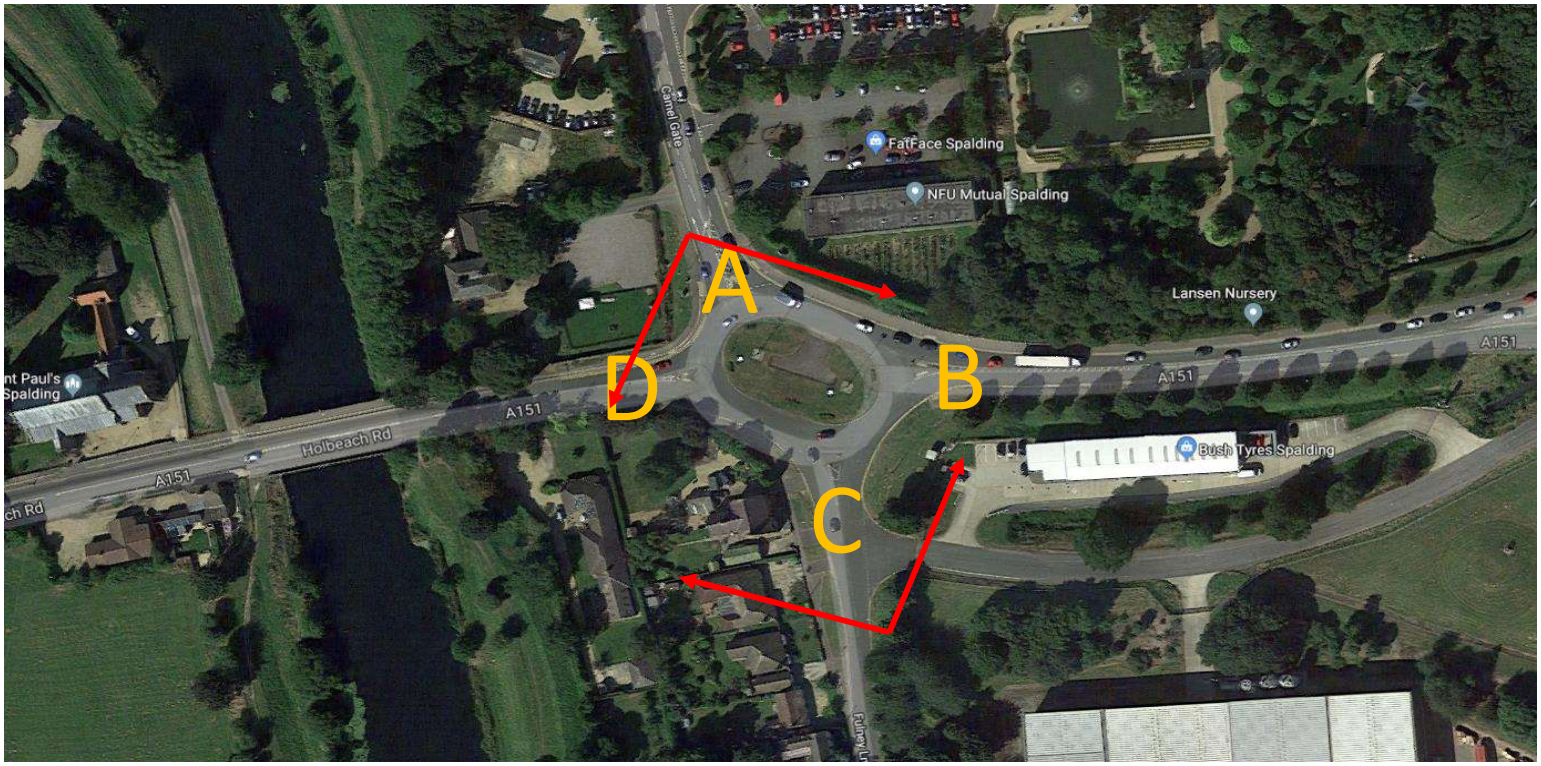
12:17	No	b	OX16	Home	1
12:24	No	b	OX16	Home	1
12:24	No	Social	MK44	Home	2
12:32	No	Social	OX17	Home	2
12:34	No	b	OX16	Home	1
12:35	No	b	OX17	Home	1
12:36	No	Leisure	HP11	Home	2
12:40	No	a	NN13	Home	1
12:42	No	Social	OX16	Home	2
12:45	No	b	OX16	Home	1
12:48	No	b	OX12	Home	1
12:52	No	b	OX16	Home	4
12:56	No	a	OX16	Home	1
12:57	No	a	NN13	Home	1
12:59	No	a	OX17	Home	1
13:04	No	a	OX16	Home	1
13:07	No	Social	OX25	Home	1
13:09	No	Leisure	CV25	Home	2
13:17	Yes		CV25	Home	1
13:21	Yes		OX16	Home	2
13:25	No	Social	OX25	Home	1
13:44	No	b	OX16	Home	2
13:48	No	b	OX16	Home	2
13:52	No	b	OX16	Home	1
13:54	No	b	OX28	Home	2
13:59	No	b	OX16	Home	2
14:01	No	b	OX15	Home	2
14:05	No	b	OX17	Home	1
14:09	No	Social	CV36	Home	2
14:13	No	Leisure	OX16	Home	2
14:15	No	b	OX16	Home	2
14:16	No	a	OX16	Home	1
14:18	Yes		OX16	Home	1
14:19	No	Social	OX16	Home	2
14:22	No	b	OX15	Home	2
14:23	No	a	NN1	Home	1
14:25	Yes		OX16	Home	1
14:27	No	b	OX15	Home	2
14:32	No	a	OX15	Home	2
14:33	No	a	OX25	Home	1
14:44	No	a	OX7	Home	1
14:36	No	a	OX15	Home	1
14:41	No	a	OX17	Home	1
14:43	No	a	OX16	Home	1
14:47	No	b	OX12	Home	1
14:49	No	a	OX27	Home	1
14:50	No	b	OX15	Home	1
14:53	No	b	OX17	Home	1
14:55	No	Leisure	OX25	Home	4
15:00	No	b	OX17	Home	2
15:07	No	Social	PO32	Home	2
15:10	No	Social	OX16	Home	1
15:15	No	b	OX16	Home	2
15:24	No	b	SP10	Home	1
15:33	No	Social	NN33	Home	2
15:45	No	b	CV47	Home	3
15:45	No	a	OX16	Home	1
15:47	No	a	OX16	Home	1
16:00	No	b	OX17	Home	1
16:21	No	a	OX16	Home	2
16:28	No	Social	OX17	Home	1
16:34	Yes		OX17	Home	2
16:48	No	b	OX16	Home	2
16:50	No	b	OX16	Home	2
16:53	No	b	OX17	Home	2
16:58	No	b	OX16	Home	1
17:04	No	b	NN11	Home	2
17:13	No	b	NN11	Home	1
17:16	No	b	OX16	Home	2
17:21	No	b	OX16	Home	1
17:30	No	b	OX15	Home	2

17:41	No	b	OX15	Home	1
17:48	No	a	NN1	Home	1
17:50	No	b	OX17	Home	2
17:53	No	b	OX17	Home	2
17:58	No	b	OX16	Home	4
18:00	No	b	OX16	Home	2
18:10	No	b	OX16	Home	1
18:19	No	a	OX15	Home	1
18:40	No	a	OX17	Home	1

APPENDIX D

FULNEY LANE, SPALDING

MODAL
modaldata.com



FULNEY LANE, SPALDING

Thursday 4th Oct 2018

MODAL
modaldata.com

A

TIME		A-B CARS	A-B LIGHT	A-B HEAVY	A-B BUSES	A-B MOTORCYCLES	A-B TOTAL MOVEMENTS	A-C CARS	A-C LIGHT	A-C HEAVY	A-C BUSES	A-C MOTORCYCLES	A-C TOTAL MOVEMENTS	A-D CARS	A-D LIGHT	A-D HEAVY	A-D BUSES	A-D MOTORCYCLES	A-D TOTAL MOVEMENTS	A-A CARS	A-A LIGHT	A-A HEAVY	A-A BUSES	A-A MOTORCYCLES	A-A TOTAL MOVEMENTS
07:00 - 07:15		7	2	1			10	0	0	0			0	2	1	1			4	0	0	0			0
07:15 - 07:30		3	0	2			5	1	0	0			1	0	0	0			0	0	0	0			0
07:30 - 07:45		2	7	2			11	0	0	0			0	1	1	0			2	0	0	0			0
07:45 - 08:00		5	2	2			9	1	0	0			1	3	2	0			5	0	0	0			0
08:00 - 08:15		4	4	2			10	0	0	1			1	3	1	0			4	0	0	0			0
08:15 - 08:30		9	3	2			14	1	0	0			1	5	1	0			6	0	0	0			0
08:30 - 08:45		9	6	1			16	1	0	0			1	3	3	0			6	0	0	0			0
08:45 - 09:00		4	7	2			13	0	0	0			0	6	1	0			7	0	0	0			0
09:00 - 09:15		10	3	1			14	0	0	0			0	16	3	0			19	0	0	0			0
09:15 - 09:30		9	8	0			17	0	0	0			0	3	1	0			4	0	0	0			0
09:30 - 09:45		5	6	1			12	0	0	0			0	2	1	0			3	0	0	0			0
09:45 - 10:00		3	2	2			7	1	0	0			1	2	1	0			3	0	0	0			0
		70	50	18	0	0	138	5	0	1	0	0	6	46	16	1	0	0	63	0	0	0	0	0	0
HOUR TOTALS																									
07:00 - 08:00		17	11	7	0	0	35	2	0	0	0	0	2	6	4	1	0	0	11	0	0	0	0	0	0
07:15 - 08:15		14	13	8	0	0	35	2	0	1	0	0	3	7	4	0	0	0	11	0	0	0	0	0	0
07:30 - 08:30		20	16	8	0	0	44	2	0	1	0	0	3	12	5	0	0	0	17	0	0	0	0	0	0
07:45 - 08:45		27	15	7	0	0	49	3	0	1	0	0	4	14	7	0	0	0	21	0	0	0	0	0	0
08:00 - 09:00		26	20	7	0	0	53	2	0	1	0	0	3	17	6	0	0	0	23	0	0	0	0	0	0
08:15 - 09:15		32	19	6	0	0	57	2	0	0	0	0	2	30	8	0	0	0	38	0	0	0	0	0	0
08:30 - 09:30		32	24	4	0	0	60	1	0	0	0	0	1	28	8	0	0	0	36	0	0	0	0	0	0
08:45 - 09:45		28	24	4	0	0	56	0	0	0	0	0	0	27	6	0	0	0	33	0	0	0	0	0	0
09:00 - 10:00		27	19	4	0	0	50	1	0	0	0	0	1	23	6	0	0	0	29	0	0	0	0	0	0

B

TIME		B - C CARS	B - C LIGHT	B - C HEAVY	B - C BUSES	B - C MOTORCYCLES	B - C TOTAL MOVEMENTS	B - D CARS	B - D LIGHT	B - D HEAVY	B - D BUSES	B - D MOTORCYCLES	B - D TOTAL MOVEMENTS	B - A CARS	B - A LIGHT	B - A HEAVY	B - A BUSES	B - A MOTORCYCLES	B - A TOTAL MOVEMENTS	B - B CARS	B - B LIGHT	B - B HEAVY	B - B BUSES	B - B MOTORCYCLES	B - B TOTAL MOVEMENTS
07:00 - 07:15		7	0	2			9	22	3	0			25	6	3	0			9	0	0	0			0
07:15 - 07:30		14	1	2			17	46	10	1			57	14	4	2			20	0	0	0			0
07:30 - 07:45		15	2	1			18	49	14	2			65	14	5	2			21	1	0	0			1
07:45 - 08:00		24	0	1			25	70	13	0			83	26	6	0			32	1	0	0			1
08:00 - 08:15		27	2	3			32	75	18	3			96	10	9	3			22	0	0	0			0
08:15 - 08:30		20	1	3			24	94	10	0			104	17	5	1			23	0	0	0			0
08:30 - 08:45		11	7	1			19	82	18	0			100	20	4	1			25	1	0	0			1
08:45 - 09:00		13	4	1			18	100	11	0			111	21	3	0			24	0	0	0			0
09:00 - 09:15		4	3	2			9	89	16	0			105	39	6	2			47	1	0	0			1
09:15 - 09:30		4	1	3			8	69	12	0			81	25	5	3			33	1	0	0			1
09:30 - 09:45		4	3	1			8	59	9	1			69	26	2	3			31	0	0	0			0
09:45 - 10:00		6	1	2			9	80	8	0			88	39	3	0			42	1	0	0			1
		149	25	22	0	0	196	835	142	7	0	0	984	257	55	17	0	0	329	6	0	0	0	0	6
HOUR TOTALS																									
07:00 - 08:00		60	3	6	0	0	69	187	40	3	0	0	230	60	18	4	0	0	82	2	0	0	0	0	2
07:15 - 08:15		80	5	7	0	0	92	240	55	6	0	0	301	64	24	7	0	0	95	2	0	0	0	0	2
07:30 - 08:30		86	5	8	0	0	99	288	55	5	0	0	348	67	25	6	0	0	98	2	0	0	0	0	2
07:45 - 08:45		82	10	8	0	0	100	321	59	3	0	0	383	73	24	5	0	0	102	2	0	0	0	0	2
08:00 - 09:00		71	14	8	0	0	93	351	57	3	0	0	411	68	21	5	0	0	94	1	0	0	0	0	1
08:15 - 09:15		48	15	7	0	0	70	365	55	0	0	0	420	97	18	4	0	0	119	2	0	0	0	0	2
08:30 - 09:30		32	15	7	0	0	54	340	57	0	0	0	397	105	18	6	0	0	129	3	0	0	0	0	3
08:45 - 09:45		25	11	7	0	0	43	317	48	1	0	0	366	111	16	8	0	0	135	2	0	0	0	0	2
09:00 - 10:00		18	8	8	0	0	34	297	45	1	0	0	343	129	16	8	0	0	153	3	0	0	0	0	3

C

TIME		C - D CARS	C - D LIGHT	C - D HEAVY	C - D BUSES	C - D MOTORCYCLES	C - D TOTAL MOVEMENTS	C - A CARS	C - A LIGHT	C - A HEAVY	C - A BUSES	C - A MOTORCYCLES	C - A TOTAL MOVEMENTS	C - B CARS	C - B LIGHT	C - B HEAVY	C - B BUSES	C - B MOTORCYCLES	C - B TOTAL MOVEMENTS	C - C CARS	C - C LIGHT	C - C HEAVY	C - C BUSES	C - C MOTORCYCLES	C - C TOTAL MOVEMENTS
07:00 - 07:15		3	0	1			4	1	0	0			1	2	0	2			4	0	0	0			0
07:15 - 07:30		0	0	0			0	0	0	0			0	1	0	1			2	0	0	0			0
07:30 - 07:45		1	1	0			2	0	0	0			0	2	1	1			4	0	0	0			0
07:45 - 08:00		1	0	0			1	0	0	0			0	3	1	0			4	0	0	0			0
08:00 - 08:15		3	0	0			3	0	0	0			0	0	0	1			1	1	0	0			1
08:15 - 08:30		2	1	0			3	0	0	0			0	3	0	0			3	0	0	0			0
08:30 - 08:45		3	0	0			3	0	1	0			1	2	2	7			11	0	0	0			0
08:45 - 09:00		1	0	0			1	0	0	0			0	2	0	2			4	0	0	0			0
09:00 - 09:15		1	0	0			1	0	0	1			1	1	2	2			5	0	0	0			0
09:15 - 09:30		4	0	0			4	1	1	1			3	3	2	3			8	0	0	0			0
09:30 - 09:45		0	2	0			2	0	0	0			0	1	3	2			6	0	0	0			0
09:45 - 10:00		3	0	0			3	1	2	0			3	0	1	0			1	0	0	0			0
		22	4	1	0	0	27	3	4	2	0	0	9	20	12	21	0	0	53	1	0	0	0	0	1
HOUR TOTALS																									
07:00 - 08:00		5	1	1	0	0	7	1	0	0	0	0	1	8	2	4	0	0	14	0	0	0	0	0	0
07:15 - 08:15		5	1	0	0	0	6	0	0	0	0	0	0	6	2	3	0	0	11	1	0	0	0	0	1
07:30 - 08:30		7	2	0	0	0	9	0	0	0	0	0	0	8	2	2	0	0	12	1	0	0	0	0	1
07:45 - 08:45		9	1	0	0	0	10	0	1	0	0	0	1	8	3	8	0	0	19	1	0	0	0	0	1
08:00 - 09:00		9	1	0	0	0	10	0	1	0	0	0	1	7	2	10	0	0	19	1	0	0	0	0	1
08:15 - 09:15		7	1	0	0	0	8	0	1	1	0	0	2	8	4	11	0	0	23	0	0	0	0	0	0
08:30 - 09:30		9	0	0	0	0	9	1	2	2	0	0	5	8	6	14	0	0	28	0	0	0	0	0	0
08:45 - 09:45		6	2	0	0	0	8	1	1	2	0	0	4	7	7	9	0	0	23	0	0	0	0	0	0
09:00 - 10:00		8	2	0	0	0	10	2	3	2	0	0	7	5	8	7	0	0	20	0	0	0	0	0	0

D

TIME		D - A CARS	D - A LIGHT	D - A HEAVY	D - A BUSES	D - A MOTORCYCLES	D - A TOTAL MOVEMENTS	D - B CARS	D - B LIGHT	D - B HEAVY	D - B BUSES	D - B MOTORCYCLES	D - B TOTAL MOVEMENTS	D - C CARS	D - C LIGHT	D - C HEAVY	D - C BUSES	D - C MOTORCYCLES	D - C TOTAL MOVEMENTS	D - D CARS	D - D LIGHT	D - D HEAVY	D - D BUSES	D - D MOTORCYCLES	D - D TOTAL MOVEMENTS
07:00 - 07:15		1	0	0			1	45	14	4			63	3	0	0			3	0	0	0			0
07:15 - 07:30		1	0	0			1	45	10	2			57	3	0	0			3	0	0	0			0
07:30 - 07:45		7	1	0			8	65	14	1			80	10	0	0			10	0	0	0			0
07:45 - 08:00		4	2	0			6	36	10	0			46	11	2	0			13	1	0	0			1
08:00 - 08:15		7	1	1			9	48	12	1			61	9	0	0			9	0	0	0			0
08:15 - 08:30		7	2	0			9	34	12	0			46	5	0	0			5	1	0	0			1
08:30 - 08:45		7	1	0			8	53	17	2			72	2	0	0			2	2	0	0			2
08:45 - 09:00		25	2	0			27	41	10	3			54	4	2	0			6	0	0	0			0
09:00 - 09:15		17	2	0			19	45	10	0			55	3	2	0			5	0	0	0			0
09:15 - 09:30		9	1	0			10	51	8	0			59	4	0	0			4	0	0	0			0
09:30 - 09:45		12	0	0			12	54	6	2			62	1	0	0			1	0	0	0			0
09:45 - 10:00		18	2	0			20	51	8	2			61	2	0	0			2	0	0	0			0
		115	14	1	0	0	130	568	131	17	0	0	716	57	6	0	0	0	63	4	0	0	0	0	4
HOUR TOTALS																									
07:00 - 08:00		13	3	0	0	0	16	191	48	7	0	0	246	27	2	0	0	0	29	1	0	0	0	0	1
07:15 - 08:15		19	4	1	0	0	24	194	46	4	0	0	244	33	2	0	0	0	35	1	0	0	0	0	1
07:30 - 08:30		25	6	1	0	0	32	183	48	2	0	0	233	35	2	0	0	0	37	2	0	0	0	0	2
07:45 - 08:45		25	6	1	0	0	32	171	51	3	0	0	225	27	2	0	0	0	29	4	0	0	0	0	4
08:00 - 09:00		46	6	1	0	0	53	176	51	6	0	0	233	20	2	0	0	0	22	3	0	0	0	0	3
08:15 - 09:15		56	7	0	0	0	63	173	49	5	0	0	227	14	4	0	0	0	18	3	0	0	0	0	3
08:30 - 09:30		58	6	0	0	0	64	190	45	5	0	0	240	13	4	0	0	0	17	2	0	0	0	0	2
08:45 - 09:45		63	5	0	0	0	68	191	34	5	0	0	230	12	4	0	0	0	16	0	0	0	0	0	0
09:00 - 10:00		56	5	0	0	0	61	201	32	4	0	0	237	10	2	0	0	0	12	0	0	0	0	0	0

FULNEY LANE, SPALDING

Thursday 4th Oct 2018

MODAL
modaldata.com

A

TIME		A-B CARS	A-B LIGHT	A-B HEAVY	A-B BUSES	A-B MOTORCYCLES	A-B TOTAL MOVEMENTS	A-C CARS	A-C LIGHT	A-C HEAVY	A-C BUSES	A-C MOTORCYCLES	A-C TOTAL MOVEMENTS	A-D CARS	A-D LIGHT	A-D HEAVY	A-D BUSES	A-D MOTORCYCLES	A-D TOTAL MOVEMENTS	A-A CARS	A-A LIGHT	A-A HEAVY	A-A BUSES	A-A MOTORCYCLES	A-A TOTAL MOVEMENTS
16:00 - 16:15		59	4	3			66	0	0	0			0	12	1	0			13	0	0	0			0
16:15 - 16:30		43	7	2			52	0	0	0			0	16	2	0			18	0	0	0			0
16:30 - 16:45		45	2	3			50	1	0	0			1	22	2	0			24	0	0	0			0
16:45 - 17:00		45	2	1			48	0	0	0			0	13	1	0			14	0	0	0			0
17:00 - 17:15		57	5	2			64	0	0	0			0	26	2	0			28	0	0	0			0
17:15 - 17:30		30	3	1			34	0	0	0			0	16	2	0			18	0	0	0			0
17:30 - 17:45		46	3	0			49	1	0	0			1	20	1	0			21	0	0	0			0
17:45 - 18:00		37	1	1			39	1	0	0			1	26	0	0			26	0	0	0			0
18:00 - 18:15		42	5	1			48	0	0	0			0	24	2	0			26	1	0	0			1
18:15 - 18:30		24	3	1			28	0	0	0			0	13	1	0			14	0	0	0			0
18:30 - 18:45		30	4	1			35	0	0	0			0	12	2	0			14	0	0	0			0
18:45 - 19:00		25	0	0			25	1	0	0			1	12	0	0			12	0	0	0			0
		483	39	16	0	0	538	4	0	0	0	0	4	212	16	0	0	0	228	1	0	0	0	0	1
HOUR TOTALS																									
16:00 - 17:00		192	15	9	0	0	216	1	0	0	0	0	1	63	6	0	0	0	69	0	0	0	0	0	0
16:15 - 17:15		190	16	8	0	0	214	1	0	0	0	0	1	77	7	0	0	0	84	0	0	0	0	0	0
16:30 - 17:30		177	12	7	0	0	196	1	0	0	0	0	1	77	7	0	0	0	84	0	0	0	0	0	0
16:45 - 17:45		178	13	4	0	0	195	1	0	0	0	0	1	75	6	0	0	0	81	0	0	0	0	0	0
17:00 - 18:00		170	12	4	0	0	186	2	0	0	0	0	2	88	5	0	0	0	93	0	0	0	0	0	0
17:15 - 18:15		155	12	3	0	0	170	2	0	0	0	0	2	86	5	0	0	0	91	1	0	0	0	0	1
17:30 - 18:30		149	12	3	0	0	164	2	0	0	0	0	2	83	4	0	0	0	87	1	0	0	0	0	1
17:45 - 18:45		133	13	4	0	0	150	1	0	0	0	0	1	75	5	0	0	0	80	1	0	0	0	0	1
18:00 - 19:00		121	12	3	0	0	136	1	0	0	0	0	1	61	5	0	0	0	66	1	0	0	0	0	1

B

TIME		B - C CARS	B - C LIGHT	B - C HEAVY	B - C BUSES	B - C MOTORCYCLES	B - C TOTAL MOVEMENTS	B - D CARS	B - D LIGHT	B - D HEAVY	B - D BUSES	B - D MOTORCYCLES	B - D TOTAL MOVEMENTS	B - A CARS	B - A LIGHT	B - A HEAVY	B - A BUSES	B - A MOTORCYCLES	B - A TOTAL MOVEMENTS	B - B CARS	B - B LIGHT	B - B HEAVY	B - B BUSES	B - B MOTORCYCLES	B - B TOTAL MOVEMENTS
16:00 - 16:15		8	0	1			9	92	12	0			104	22	2	1			25	2	0	0			2
16:15 - 16:30		4	0	1			5	81	11	0			92	21	3	1			25	0	0	0			0
16:30 - 16:45		4	0	0			4	84	15	0			99	15	2	1			18	1	0	0			1
16:45 - 17:00		3	0	2			5	96	11	1			108	16	4	0			20	1	0	0			1
17:00 - 17:15		5	2	0			7	96	13	1			110	23	3	0			26	4	0	0			4
17:15 - 17:30		5	1	0			6	104	15	1			120	25	5	1			31	1	0	0			1
17:30 - 17:45		9	0	0			9	89	7	0			96	21	1	0			22	1	1	0			2
17:45 - 18:00		7	3	0			10	72	9	1			82	19	2	1			22	3	0	0			3
18:00 - 18:15		2	0	1			3	71	18	2			91	31	2	1			34	2	0	0			2
18:15 - 18:30		0	0	0			0	65	4	1			70	42	4	0			46	0	0	0			0
18:30 - 18:45		1	0	0			1	84	8	0			92	20	1	0			21	0	0	0			0
18:45 - 19:00		2	0	0			2	68	8	1			77	19	0	0			19	0	0	0			0
		50	6	5	0	0	61	1002	131	8	0	0	1141	274	29	6	0	0	309	15	1	0	0	0	16
HOUR TOTALS																									
16:00 - 17:00		19	0	4	0	0	23	353	49	1	0	0	403	74	11	3	0	0	88	4	0	0	0	0	4
16:15 - 17:15		16	2	3	0	0	21	357	50	2	0	0	409	75	12	2	0	0	89	6	0	0	0	0	6
16:30 - 17:30		17	3	2	0	0	22	380	54	3	0	0	437	79	14	2	0	0	95	7	0	0	0	0	7
16:45 - 17:45		22	3	2	0	0	27	385	46	3	0	0	434	85	13	1	0	0	99	7	1	0	0	0	8
17:00 - 18:00		26	6	0	0	0	32	361	44	3	0	0	408	88	11	2	0	0	101	9	1	0	0	0	10
17:15 - 18:15		23	4	1	0	0	28	336	49	4	0	0	389	96	10	3	0	0	109	7	1	0	0	0	8
17:30 - 18:30		18	3	1	0	0	22	297	38	4	0	0	339	113	9	2	0	0	124	6	1	0	0	0	7
17:45 - 18:45		10	3	1	0	0	14	292	39	4	0	0	335	112	9	2	0	0	123	5	0	0	0	0	5
18:00 - 19:00		5	0	1	0	0	6	288	38	4	0	0	330	112	7	1	0	0	120	2	0	0	0	0	2

C

TIME		C - D CARS	C - D LIGHT	C - D HEAVY	C - D BUSES	C - D MOTORCYCLES	C - D TOTAL MOVEMENTS	C - A CARS	C - A LIGHT	C - A HEAVY	C - A BUSES	C - A MOTORCYCLES	C - A TOTAL MOVEMENTS	C - B CARS	C - B LIGHT	C - B HEAVY	C - B BUSES	C - B MOTORCYCLES	C - B TOTAL MOVEMENTS	C - C CARS	C - C LIGHT	C - C HEAVY	C - C BUSES	C - C MOTORCYCLES	C - C TOTAL MOVEMENTS
16:00 - 16:15		19	1	1			21	1	0	0			1	19	1	2			22	0	0	0			0
16:15 - 16:30		6	0	0			6	0	1	0			1	3	0	0			3	0	0	0			0
16:30 - 16:45		5	0	0			5	1	0	0			1	5	0	1			6	0	0	0			0
16:45 - 17:00		6	1	0			7	0	0	0			0	6	0	0			6	0	0	0			0
17:00 - 17:15		13	1	0			14	2	0	0			2	11	2	2			15	0	0	0			0
17:15 - 17:30		12	0	0			12	0	0	0			0	18	0	0			18	0	0	0			0
17:30 - 17:45		3	0	0			3	0	1	0			1	8	1	2			11	0	0	0			0
17:45 - 18:00		3	0	0			3	0	0	0			0	6	0	0			6	0	0	0			0
18:00 - 18:15		15	1	0			16	3	1	0			4	17	0	0			17	0	0	0			0
18:15 - 18:30		3	0	0			3	0	0	0			0	1	1	0			2	0	0	0			0
18:30 - 18:45		5	0	0			5	0	0	0			0	2	0	0			2	0	0	0			0
18:45 - 19:00		3	0	0			3	0	0	0			0	1	1	0			2	0	0	0			0
		93	4	1	0	0	98	7	3	0	0	0	10	97	6	7	0	0	110	0	0	0	0	0	0
HOUR TOTALS																									
16:00 - 17:00		36	2	1	0	0	39	2	1	0	0	0	3	33	1	3	0	0	37	0	0	0	0	0	0
16:15 - 17:15		30	2	0	0	0	32	3	1	0	0	0	4	25	2	3	0	0	30	0	0	0	0	0	0
16:30 - 17:30		36	2	0	0	0	38	3	0	0	0	0	3	40	2	3	0	0	45	0	0	0	0	0	0
16:45 - 17:45		34	2	0	0	0	36	2	1	0	0	0	3	43	3	4	0	0	50	0	0	0	0	0	0
17:00 - 18:00		31	1	0	0	0	32	2	1	0	0	0	3	43	3	4	0	0	50	0	0	0	0	0	0
17:15 - 18:15		33	1	0	0	0	34	3	2	0	0	0	5	49	1	2	0	0	52	0	0	0	0	0	0
17:30 - 18:30		24	1	0	0	0	25	3	2	0	0	0	5	32	2	2	0	0	36	0	0	0	0	0	0
17:45 - 18:45		26	1	0	0	0	27	3	1	0	0	0	4	26	1	0	0	0	27	0	0	0	0	0	0
18:00 - 19:00		26	1	0	0	0	27	3	1	0	0	0	4	21	2	0	0	0	23	0	0	0	0	0	0

D

TIME		D - A CARS	D - A LIGHT	D - A HEAVY	D - A BUSES	D - A MOTORCYCLES	D - A TOTAL MOVEMENTS	D - B CARS	D - B LIGHT	D - B HEAVY	D - B BUSES	D - B MOTORCYCLES	D - B TOTAL MOVEMENTS	D - C CARS	D - C LIGHT	D - C HEAVY	D - C BUSES	D - C MOTORCYCLES	D - C TOTAL MOVEMENTS	D - D CARS	D - D LIGHT	D - D HEAVY	D - D BUSES	D - D MOTORCYCLES	D - D TOTAL MOVEMENTS
16:00 - 16:15		9	1	0			10	74	13	1			88	5	1	0			6	0	0	0			0
16:15 - 16:30		9	0	0			9	61	10	2			73	0	0	0			0	1	0	0			1
16:30 - 16:45		13	1	0			14	75	17	0			92	2	0	0			2	1	0	0			1
16:45 - 17:00		11	3	0			14	80	15	1			96	3	0	0			3	0	0	0			0
17:00 - 17:15		10	1	1			12	94	13	1			108	3	1	0			4	0	0	0			0
17:15 - 17:30		7	1	0			8	92	15	0			107	3	0	0			3	1	0	0			1
17:30 - 17:45		19	1	0			20	87	13	0			100	5	1	0			6	2	0	0			2
17:45 - 18:00		13	0	0			13	86	8	0			94	4	1	0			5	0	0	0			0
18:00 - 18:15		16	0	0			16	94	9	0			103	4	0	0			4	1	0	0			1
18:15 - 18:30		18	1	0			19	65	7	0			72	3	0	0			3	1	0	0			1
18:30 - 18:45		12	2	0			14	55	5	0			60	1	1	0			2	0	0	0			0
18:45 - 19:00		14	1	0			15	54	7	0			61	2	0	0			2	0	0	0			0
		151	12	1	0	0	164	917	132	5	0	0	1054	35	5	0	0	0	40	7	0	0	0	0	7
HOUR TOTALS																									
16:00 - 17:00		42	5	0	0	0	47	290	55	4	0	0	349	10	1	0	0	0	11	2	0	0	0	0	2
16:15 - 17:15		43	5	1	0	0	49	310	55	4	0	0	369	8	1	0	0	0	9	2	0	0	0	0	2
16:30 - 17:30		41	6	1	0	0	48	341	60	2	0	0	403	11	1	0	0	0	12	2	0	0	0	0	2
16:45 - 17:45		47	6	1	0	0	54	353	56	2	0	0	411	14	2	0	0	0	16	3	0	0	0	0	3
17:00 - 18:00		49	3	1	0	0	53	359	49	1	0	0	409	15	3	0	0	0	18	3	0	0	0	0	3
17:15 - 18:15		55	2	0	0	0	57	359	45	0	0	0	404	16	2	0	0	0	18	4	0	0	0	0	4
17:30 - 18:30		66	2	0	0	0	68	332	37	0	0	0	369	16	2	0	0	0	18	4	0	0	0	0	4
17:45 - 18:45		59	3	0	0	0	62	300	29	0	0	0	329	12	2	0	0	0	14	2	0	0	0	0	2
18:00 - 19:00		60	4	0	0	0	64	268	28	0	0	0	296	10	1	0	0	0	11	2	0	0	0	0	2

FULNEY LANE, SPALDING

20th Sept 2018

MODAL
modaldata.com

A

TIME		A-B CARS	A-B LIGHT	A-B HEAVY	A-B BUSES	A-B MOTORCYCLES	A-B TOTAL MOVEMENTS	A-C CARS	A-C LIGHT	A-C HEAVY	A-C BUSES	A-C MOTORCYCLES	A-C TOTAL MOVEMENTS	A-D CARS	A-D LIGHT	A-D HEAVY	A-D BUSES	A-D MOTORCYCLES	A-D TOTAL MOVEMENTS	A-A CARS	A-A LIGHT	A-A HEAVY	A-A BUSES	A-A MOTORCYCLES	A-A TOTAL MOVEMENTS
11:00 - 11:15		33	3	1			37	0	0	0			0	13	1	0			14	0	0	0			0
11:15 - 11:30		35	3	0			38	0	0	0			0	11	2	0			13	0	0	0			0
11:30 - 11:45		35	4	0			39	1	0	0			1	27	3	0			30	0	0	0			0
11:45 - 12:00		50	3	3			56	1	0	0			1	14	1	0			15	1	0	0			1
12:00 - 12:15		39	7	1			47	0	0	0			0	21	3	0			24	1	0	0			1
12:15 - 12:30		38	3	0			41	2	0	0			2	16	2	0			18	0	1	0			1
12:30 - 12:45		46	4	2			52	0	0	0			0	20	0	0			20	0	0	0			0
12:45 - 13:00		47	4	1			52	0	0	0			0	29	0	0			29	1	0	0			1
13:00 - 13:15		50	1	2			53	0	1	0			1	17	1	0			18	0	0	0			0
13:15 - 13:30		44	3	3			50	0	0	0			0	17	0	0			17	0	0	0			0
13:30 - 13:45		49	5	3			57	0	0	0			0	19	0	0			19	1	0	0			1
13:45 - 14:00		45	2	0			47	0	0	0			0	20	1	0			21	1	0	0			1
		511	42	16	0	0	569	4	1	0	0	0	5	224	14	0	0	0	238	5	1	0	0	0	6
HOUR TOTALS																									
11:00 - 12:00		153	13	4	0	0	170	2	0	0	0	0	2	65	7	0	0	0	72	1	0	0	0	0	1
11:15 - 12:15		159	17	4	0	0	180	2	0	0	0	0	2	73	9	0	0	0	82	2	0	0	0	0	2
11:30 - 12:30		162	17	4	0	0	183	4	0	0	0	0	4	78	9	0	0	0	87	2	1	0	0	0	3
11:45 - 12:45		173	17	6	0	0	196	3	0	0	0	0	3	71	6	0	0	0	77	2	1	0	0	0	3
12:00 - 13:00		170	18	4	0	0	192	2	0	0	0	0	2	86	5	0	0	0	91	2	1	0	0	0	3
12:15 - 13:15		181	12	5	0	0	198	2	1	0	0	0	3	82	3	0	0	0	85	1	1	0	0	0	2
12:30 - 13:30		187	12	8	0	0	207	0	1	0	0	0	1	83	1	0	0	0	84	1	0	0	0	0	1
12:45 - 13:45		190	13	9	0	0	212	0	1	0	0	0	1	82	1	0	0	0	83	2	0	0	0	0	2
13:00 - 14:00		188	11	8	0	0	207	0	1	0	0	0	1	73	2	0	0	0	75	2	0	0	0	0	2

B

TIME		B - C CARS	B - C LIGHT	B - C HEAVY	B - C BUSES	B - C MOTORCYCLES	B - C TOTAL MOVEMENTS	B - D CARS	B - D LIGHT	B - D HEAVY	B - D BUSES	B - D MOTORCYCLES	B - D TOTAL MOVEMENTS	B - A CARS	B - A LIGHT	B - A HEAVY	B - A BUSES	B - A MOTORCYCLES	B - A TOTAL MOVEMENTS	B - B CARS	B - B LIGHT	B - B HEAVY	B - B BUSES	B - B MOTORCYCLES	B - B TOTAL MOVEMENTS
11:00 - 11:15		4	0	0			4	107	8	1			116	48	5	1			54	2	0	0			2
11:15 - 11:30		6	2	1			9	93	11	0			104	54	7	1			62	3	0	0			3
11:30 - 11:45		6	1	0			7	89	14	0			103	48	2	2			52	0	0	0			0
11:45 - 12:00		6	0	1			7	102	10	0			112	60	5	1			66	2	0	0			2
12:00 - 12:15		1	1	0			2	79	14	1			94	55	4	3			62	2	0	0			2
12:15 - 12:30		3	0	0			3	84	5	0			89	60	6	4			70	4	0	0			4
12:30 - 12:45		1	0	0			1	96	7	0			103	72	2	0			74	0	0	0			0
12:45 - 13:00		4	0	0			4	92	7	1			100	59	3	1			63	2	0	0			2
13:00 - 13:15		4	0	0			4	95	5	0			100	56	3	1			60	0	0	0			0
13:15 - 13:30		5	0	0			5	89	4	0			93	61	3	0			64	0	0	0			0
13:30 - 13:45		7	2	0			9	86	6	1			93	63	4	1			68	1	0	0			1
13:45 - 14:00		5	0	1			6	96	4	0			100	65	2	1			68	0	0	0			0
		52	6	3	0	0	61	1108	95	4	0	0	1207	701	46	16	0	0	763	16	0	0	0	0	16
HOUR TOTALS																									
11:00 - 12:00		22	3	2	0	0	27	391	43	1	0	0	435	210	19	5	0	0	234	7	0	0	0	0	7
11:15 - 12:15		19	4	2	0	0	25	363	49	1	0	0	413	217	18	7	0	0	242	7	0	0	0	0	7
11:30 - 12:30		16	2	1	0	0	19	354	43	1	0	0	398	223	17	10	0	0	250	8	0	0	0	0	8
11:45 - 12:45		11	1	1	0	0	13	361	36	1	0	0	398	247	17	8	0	0	272	8	0	0	0	0	8
12:00 - 13:00		9	1	0	0	0	10	351	33	2	0	0	386	246	15	8	0	0	269	8	0	0	0	0	8
12:15 - 13:15		12	0	0	0	0	12	367	24	1	0	0	392	247	14	6	0	0	267	6	0	0	0	0	6
12:30 - 13:30		14	0	0	0	0	14	372	23	1	0	0	396	248	11	2	0	0	261	2	0	0	0	0	2
12:45 - 13:45		20	2	0	0	0	22	362	22	2	0	0	386	239	13	3	0	0	255	3	0	0	0	0	3
13:00 - 14:00		21	2	1	0	0	24	366	19	1	0	0	386	245	12	3	0	0	260	1	0	0	0	0	1

C

TIME		C - D CARS	C - D LIGHT	C - D HEAVY	C - D BUSES	C - D MOTORCYCLES	C - D TOTAL MOVEMENTS	C - A CARS	C - A LIGHT	C - A HEAVY	C - A BUSES	C - A MOTORCYCLES	C - A TOTAL MOVEMENTS	C - B CARS	C - B LIGHT	C - B HEAVY	C - B BUSES	C - B MOTORCYCLES	C - B TOTAL MOVEMENTS	C - C CARS	C - C LIGHT	C - C HEAVY	C - C BUSES	C - C MOTORCYCLES	C - C TOTAL MOVEMENTS
11:00 - 11:15		0	0	0			0	0	0	0			0	3	0	1			4	0	0	0			0
11:15 - 11:30		1	1	0			2	0	0	0			0	3	0	0			3	0	0	0			0
11:30 - 11:45		7	0	0			7	0	0	0			0	2	0	1			3	0	0	0			0
11:45 - 12:00		1	0	0			1	0	0	0			0	4	0	1			5	0	0	0			0
12:00 - 12:15		6	0	0			6	0	0	0			0	5	0	1			6	0	0	0			0
12:15 - 12:30		5	0	0			5	0	0	0			0	3	1	0			4	0	0	0			0
12:30 - 12:45		3	0	0			3	0	0	0			0	2	1	1			4	0	0	0			0
12:45 - 13:00		3	0	0			3	0	0	0			0	1	0	0			1	0	0	0			0
13:00 - 13:15		2	0	0			2	0	1	0			1	1	1	1			3	0	0	0			0
13:15 - 13:30		1	0	0			1	1	0	0			1	1	1	1			3	0	0	0			0
13:30 - 13:45		0	1	0			1	0	0	0			0	3	0	1			4	0	0	0			0
13:45 - 14:00		4	0	0			4	0	0	0			0	2	1	0			3	0	0	0			0
		33	2	0	0	0	35	1	1	0	0	0	2	30	5	8	0	0	43	0	0	0	0	0	0
HOUR TOTALS																									
11:00 - 12:00		9	1	0	0	0	10	0	0	0	0	0	0	12	0	3	0	0	15	0	0	0	0	0	0
11:15 - 12:15		15	1	0	0	0	16	0	0	0	0	0	0	14	0	3	0	0	17	0	0	0	0	0	0
11:30 - 12:30		19	0	0	0	0	19	0	0	0	0	0	0	14	1	3	0	0	18	0	0	0	0	0	0
11:45 - 12:45		15	0	0	0	0	15	0	0	0	0	0	0	14	2	3	0	0	19	0	0	0	0	0	0
12:00 - 13:00		17	0	0	0	0	17	0	0	0	0	0	0	11	2	2	0	0	15	0	0	0	0	0	0
12:15 - 13:15		13	0	0	0	0	13	0	1	0	0	0	1	7	3	2	0	0	12	0	0	0	0	0	0
12:30 - 13:30		9	0	0	0	0	9	1	1	0	0	0	2	5	3	3	0	0	11	0	0	0	0	0	0
12:45 - 13:45		6	1	0	0	0	7	1	1	0	0	0	2	6	2	3	0	0	11	0	0	0	0	0	0
13:00 - 14:00		7	1	0	0	0	8	1	1	0	0	0	2	7	3	3	0	0	13	0	0	0	0	0	0

D

TIME		D - A CARS	D - A LIGHT	D - A HEAVY	D - A BUSES	D - A MOTORCYCLES	D - A TOTAL MOVEMENTS	D - B CARS	D - B LIGHT	D - B HEAVY	D - B BUSES	D - B MOTORCYCLES	D - B TOTAL MOVEMENTS	D - C CARS	D - C LIGHT	D - C HEAVY	D - C BUSES	D - C MOTORCYCLES	D - C TOTAL MOVEMENTS	D - D CARS	D - D LIGHT	D - D HEAVY	D - D BUSES	D - D MOTORCYCLES	D - D TOTAL MOVEMENTS
11:00 - 11:15		18	0	0			18	68	5	1			74	1	0	0			1	1	0	0			1
11:15 - 11:30		15	2	0			17	65	14	0			79	2	1	0			3	1	0	0			1
11:30 - 11:45		20	1	0			21	67	12	0			79	6	0	0			6	1	0	0			1
11:45 - 12:00		29	1	0			30	66	11	1			78	2	0	0			2	0	0	0			0
12:00 - 12:15		29	1	0			30	85	9	0			94	1	0	0			1	1	0	0			1
12:15 - 12:30		21	0	0			21	80	6	0			86	3	1	0			4	0	0	0			0
12:30 - 12:45		26	2	0			28	78	4	0			82	1	0	0			1	2	0	0			2
12:45 - 13:00		17	0	0			17	84	4	0			88	2	0	0			2	3	0	0			3
13:00 - 13:15		14	3	0			17	59	8	0			67	2	0	0			2	2	0	0			2
13:15 - 13:30		18	3	0			21	79	9	0			88	2	0	0			2	0	0	0			0
13:30 - 13:45		24	2	0			26	78	7	0			85	6	1	0			7	1	0	0			1
13:45 - 14:00		35	0	0			35	101	10	0			111	4	0	0			4	0	0	0			0
		266	15	0	0	0	281	910	99	2	0	0	1011	32	3	0	0	0	35	12	0	0	0	0	12
HOUR TOTALS																									
11:00 - 12:00		82	4	0	0	0	86	266	42	2	0	0	310	11	1	0	0	0	12	3	0	0	0	0	3
11:15 - 12:15		93	5	0	0	0	98	283	46	1	0	0	330	11	1	0	0	0	12	3	0	0	0	0	3
11:30 - 12:30		99	3	0	0	0	102	298	38	1	0	0	337	12	1	0	0	0	13	2	0	0	0	0	2
11:45 - 12:45		105	4	0	0	0	109	309	30	1	0	0	340	7	1	0	0	0	8	3	0	0	0	0	3
12:00 - 13:00		93	3	0	0	0	96	327	23	0	0	0	350	7	1	0	0	0	8	6	0	0	0	0	6
12:15 - 13:15		78	5	0	0	0	83	301	22	0	0	0	323	8	1	0	0	0	9	7	0	0	0	0	7
12:30 - 13:30		75	8	0	0	0	83	300	25	0	0	0	325	7	0	0	0	0	7	7	0	0	0	0	7
12:45 - 13:45		73	8	0	0	0	81	300	28	0	0	0	328	12	1	0	0	0	13	6	0	0	0	0	6
13:00 - 14:00		91	8	0	0	0	99	317	34	0	0	0	351	14	1	0	0	0	15	3	0	0	0	0	3

FULNEY LANE, SPALDING

20th Sept 2018

MODAL
modaldata.com

A

A-B

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	58	6	1			65
14:15	14:30	68	3	1			72
14:30	14:45	58	1	0			59
14:45	15:00	64	5	1			70
15:00	15:15	78	3	1			82
15:15	15:30	66	4	2			72
15:30	15:45	71	3	0			74
15:45	16:00	73	3	0			76
16:00	16:15	70	2	3			75
16:15	16:30	73	2	1			76
16:30	16:45	59	1	0			60
16:45	17:00	51	3	0			54
		789	36	10	0	0	835
HOUR TOTALS							
14:00	15:00	248	15	3	0	0	266
14:15	15:15	268	12	3	0	0	283
14:30	15:30	266	13	4	0	0	283
14:45	15:45	279	15	4	0	0	298
15:00	16:00	288	13	3	0	0	304
15:15	16:15	280	12	5	0	0	297
15:30	16:30	287	10	4	0	0	301
15:45	16:45	275	8	4	0	0	287
16:00	17:00	253	8	4	0	0	265

A-C

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	0	0	1			1
14:15	14:30	0	0	1			1
14:30	14:45	0	0	0			0
14:45	15:00	0	0	0			0
15:00	15:15	0	0	0			0
15:15	15:30	1	0	0			1
15:30	15:45	0	0	0			0
15:45	16:00	0	0	0			0
16:00	16:15	0	0	0			0
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	0	0	0			0
		1	0	2	0	0	3
HOUR TOTALS							
14:00	15:00	1	0	2	0	0	2
14:15	15:15	0	0	1	0	0	1
14:30	15:30	1	0	0	0	0	1
14:45	15:45	1	0	0	0	0	1
15:00	16:00	1	0	0	0	0	1
15:15	16:15	1	0	0	0	0	1
15:30	16:30	1	0	0	0	0	1
15:45	16:45	0	0	0	0	0	0
16:00	17:00	0	0	0	0	0	0

A-D

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	12	0	0			12
14:15	14:30	23	2	0			25
14:30	14:45	21	2	0			23
14:45	15:00	26	1	0			27
15:00	15:15	17	1	0			18
15:15	15:30	30	1	1			32
15:30	15:45	17	2	0			19
15:45	16:00	20	2	0			22
16:00	16:15	26	1	0			27
16:15	16:30	27	1	0			28
16:30	16:45	21	1	0			22
16:45	17:00	18	3	0			21
		258	17	1	0	0	276
HOUR TOTALS							
14:00	15:00	82	5	0	0	0	87
14:15	15:15	87	6	0	0	0	93
14:30	15:30	94	5	1	0	0	100
14:45	15:45	90	5	1	0	0	96
15:00	16:00	84	6	1	0	0	91
15:15	16:15	93	6	1	0	0	100
15:30	16:30	90	6	0	0	0	96
15:45	16:45	94	5	0	0	0	99
16:00	17:00	92	6	0	0	0	98

A-A

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	0	0	0			0
14:15	14:30	0	0	0			0
14:30	14:45	0	0	0			0
14:45	15:00	2	0	0			2
15:00	15:15	1	0	0			1
15:15	15:30	0	0	0			0
15:30	15:45	0	0	0			0
15:45	16:00	0	0	0			0
16:00	16:15	1	0	0			1
16:15	16:30	0	0	0			0
16:30	16:45	1	0	0			1
16:45	17:00	0	0	0			0
		5	0	0	0	0	5
HOUR TOTALS							
14:00	15:00	2	0	0	0	0	2
14:15	15:15	3	0	0	0	0	3
14:30	15:30	3	0	0	0	0	3
14:45	15:45	3	0	0	0	0	3
15:00	16:00	1	0	0	0	0	1
15:15	16:15	1	0	0	0	0	1
15:30	16:30	0	0	0	0	0	0
15:45	16:45	1	0	0	0	0	1
16:00	17:00	2	0	0	0	0	2

B

B - C

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	3	0	0			3
14:15	14:30	5	8	1			14
14:30	14:45	6	1	0			7
14:45	15:00	7	1	0			8
15:00	15:15	2	0	1			3
15:15	15:30	4	0	0			4
15:30	15:45	3	0	0			3
15:45	16:00	3	0	0			3
16:00	16:15	2	0	0			2
16:15	16:30	1	0	0			1
16:30	16:45	0	0	0			0
16:45	17:00	1	0	0			1
		37	10	2	0	0	49
HOUR TOTALS							
14:00	15:00	21	10	1	0	0	32
14:15	15:15	20	10	2	0	0	32
14:30	15:30	19	2	1	0	0	22
14:45	15:45	16	1	1	0	0	18
15:00	16:00	12	0	1	0	0	13
15:15	16:15	12	0	0	0	0	12
15:30	16:30	9	0	0	0	0	9
15:45	16:45	6	0	0	0	0	6
16:00	17:00	4	0	0	0	0	4

B - D

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	107	8	1			116
14:15	14:30	93	10	0			103
14:30	14:45	92	14	0			106
14:45	15:00	101	9	0			110
15:00	15:15	85	7	1			93
15:15	15:30	89	3	0			92
15:30	15:45	91	6	0			97
15:45	16:00	79	4	0			83
16:00	16:15	71	4	0			75
16:15	16:30	69	5	0			74
16:30	16:45	74	7	0			81
16:45	17:00	71	5	0			76
		1022	82	2	0	0	1106
HOUR TOTALS							
14:00	15:00	393	41	1	0	0	435
14:15	15:15	371	40	1	0	0	412
14:30	15:30	367	33	1	0	0	401
14:45	15:45	366	25	1	0	0	392
15:00	16:00	344	20	1	0	0	365
15:15	16:15	330	17	0	0	0	347
15:30	16:30	310	19	0	0	0	329
15:45	16:45	293	20	0	0	0	313
16:00	17:00	285	21	0	0	0	306

B - A

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	55	5	2			62
14:15	14:30	54	8	1			63
14:30	14:45	52	3	2			57
14:45	15:00	62	5	2			69
15:00	15:15	41	2	1			44
15:15	15:30	33	3	0			36
15:30	15:45	45	3	0			48
15:45	16:00	34	3	0			37
16:00	16:15	25	1	1			27
16:15	16:30	22	2	0			24
16:30	16:45	22	1	0			23
16:45	17:00	19	2	0			21
		464	38	9	0	0	511
HOUR TOTALS							
14:00	15:00	223	21	7	0	0	251
14:15	15:15	209	18	6	0	0	233
14:30	15:30	188	13	5	0	0	206
14:45	15:45	181	13	3	0	0	197
15:00	16:00	153	11	1	0	0	165
15:15	16:15	137	10	1	0	0	148
15:30	16:30	126	9	1	0	0	136
15:45	16:45	103	7	1	0	0	111
16:00	17:00	88	6	1	0	0	95

B - B

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	2	0	0			2
14:15	14:30	3	0	0			3
14:30	14:45	1	0	0			1
14:45	15:00	1	0	0			1
15:00	15:15	1	0	0			1
15:15	15:30	0	0	0			0
15:30	15:45	1	0	0			1
15:45	16:00	1	0	0			1
16:00	16:15	1	0	0			1
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	1	0	0			1
		12	0	0	0	0	12
HOUR TOTALS							
14:00	15:00	7	0	0	0	0	7
14:15	15:15	6	0	0	0	0	6
14:30	15:30	3	0	0	0	0	3
14:45	15:45	3	0	0	0	0	3
15:00	16:00	3	0	0	0	0	3
15:15	16:15	3	0	0	0	0	3
15:30	16:30	3	0	0	0	0	3
15:45	16:45	2	0	0	0	0	2
16:00	17:00	2	0	0	0	0	2

C

C - D

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	18	0	0			18
14:15	14:30	3	0	0			3
14:30	14:45	8	0	0			8
14:45	15:00	0	0	0			0
15:00	15:15	2	0	0			2
15:15	15:30	4	0	0			4
15:30	15:45	6	0	0			6
15:45	16:00	2	0	0			2
16:00	16:15	15	0	0			15
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	1	0	0			1
		59	0	0	0	0	59
HOUR TOTALS							
14:00	15:00	29	0	0	0	0	29
14:15	15:15	13	0	0	0	0	13
14:30	15:30	14	0	0	0	0	14
14:45	15:45	12	0	0	0	0	12
15:00	16:00	14	0	0	0	0	14
15:15	16:15	27	0	0	0	0	27
15:30	16:30	23	0	0	0	0	23
15:45	16:45	17	0	0	0	0	17
16:00	17:00	16	0	0	0	0	16

C - A

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	0	0	0			0
14:15	14:30	0	0	0			0
14:30	14:45	0	0	0			0
14:45	15:00	0	0	0			0
15:00	15:15	0	0	0			0
15:15	15:30	1	0	0			1
15:30	15:45	0	1	1			2
15:45	16:00	0	0	0			0
16:00	16:15	0	0	0			0
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	0	0	0			0
		1	1	1	0	0	3
HOUR TOTALS							
14:00	15:00	0	0	0	0	0	0
14:15	15:15	0	0	0	0	0	0
14:30	15:30	1	0	0	0	0	1
14:45	15:45	1	1	1	0	0	3
15:00	16:00	1	1	1	0	0	3
15:15	16:15	1	1	1	0	0	3
15:30	16:30	0	1	1	0	0	2
15:45	16:45	0	0	0	0	0	0
16:00	17:00	0	0	0	0	0	0

C - B

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	5	1	0			6
14:15	14:30	4	0	0			4
14:30	14:45	1	0	2			3
14:45	15:00	1	0	0			1
15:00	15:15	1	0	0			1
15:15	15:30	1	0	0			1
15:30	15:45	2	2	2			6
15:45	16:00	1	0	0			1
16:00	16:15	12	0	0			12
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	0	0	0			0
		28	3	4	0	0	35
HOUR TOTALS							
14:00	15:00	11	1	2	0	0	14
14:15	15:15	7	0	2	0	0	9
14:30	15:30	4	0	2	0	0	6
14:45	15:45	5	2	2	0	0	9
15:00	16:00	5	2	2	0	0	9
15:15	16:15	16	2	2	0	0	20
15:30	16:30	15	2	2	0	0	19
15:45	16:45	13	0	0	0	0	13
16:00	17:00	12	0	0	0	0	12

C - C

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	0	0	0			0
14:15	14:30	0	0	0			0
14:30	14:45	0	0	0			0
14:45	15:00	0	0	0			0
15:00	15:15	0	0	0			0
15:15	15:30	0	0	0			0
15:30	15:45	0	0	0			0
15:45	16:00	0	0	0			0
16:00	16:15	0	0	0			0
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	0	0	0			0
		0	0	0	0	0	0
HOUR TOTALS							
14:00	15:00	0	0	0	0	0	0
14:15	15:15	0	0	0	0	0	0
14:30	15:30	0	0	0	0	0	0
14:45	15:45	0	0	0	0	0	0
15:00	16:00	0	0	0	0	0	0
15:15	16:15	0	0	0	0	0	0
15:30	16:30	0	0	0	0	0	0
15:45	16:45	0	0	0	0	0	0
16:00	17:00	0	0	0	0	0	0

D

D - A

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	17	1	0			18
14:15	14:30	21	0	0			21
14:30	14:45	22	0	0			22
14:45	15:00	33	2	0			35
15:00	15:15	17	0	0			17
15:15	15:30	22	1	0			23
15:30	15:45	19	2	0			21
15:45	16:00	15	2	0			17
16:00	16:15	16	0	0			16
16:15	16:30	12	0	0			12
16:30	16:45	12	1	0			13
16:45	17:00	8	0	0			8
		214	9	0	0	0	223
HOUR TOTALS							
14:00	15:00	93	3	0	0	0	96
14:15	15:15	93	2	0	0	0	95
14:30	15:30	94	3	0	0	0	97
14:45	15:45	91	5	0	0	0	96
15:00	16:00	73	5	0	0	0	78
15:15	16:15	72	5	0	0	0	77
15:30	16:30	62	4	0	0	0	66
15:45	16:45	55	3	0	0	0	58
16:00	17:00	48	1	0	0	0	49

D - B

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	85	3	0			88
14:15	14:30	92	7	0			99
14:30	14:45	64	4	1			69
14:45	15:00	82	5	1			88
15:00	15:15	80	8	0			88
15:15	15:30	72	7	0			79
15:30	15:45	76	7	0			83
15:45	16:00	79	5	0			84
16:00	16:15	65	6	0			71
16:15	16:30	69	9	0			78
16:30	16:45	80	5	0			85
16:45	17:00	65	9	0			74
		909	75	2	0	0	986
HOUR TOTALS							
14:00	15:00	323	19	2	0	0	344
14:15	15:15	318	24	2	0	0	344
14:30	15:30	298	24	2	0	0	324
14:45	15:45	310	27	1	0	0	338
15:00	16:00	307	27	0	0	0	334
15:15	16:15	292	25	0	0	0	317
15:30	16:30	289	27	0	0	0	316
15:45	16:45	293	25	0	0	0	318
16:00	17:00	279	29	0	0	0	308

D - C

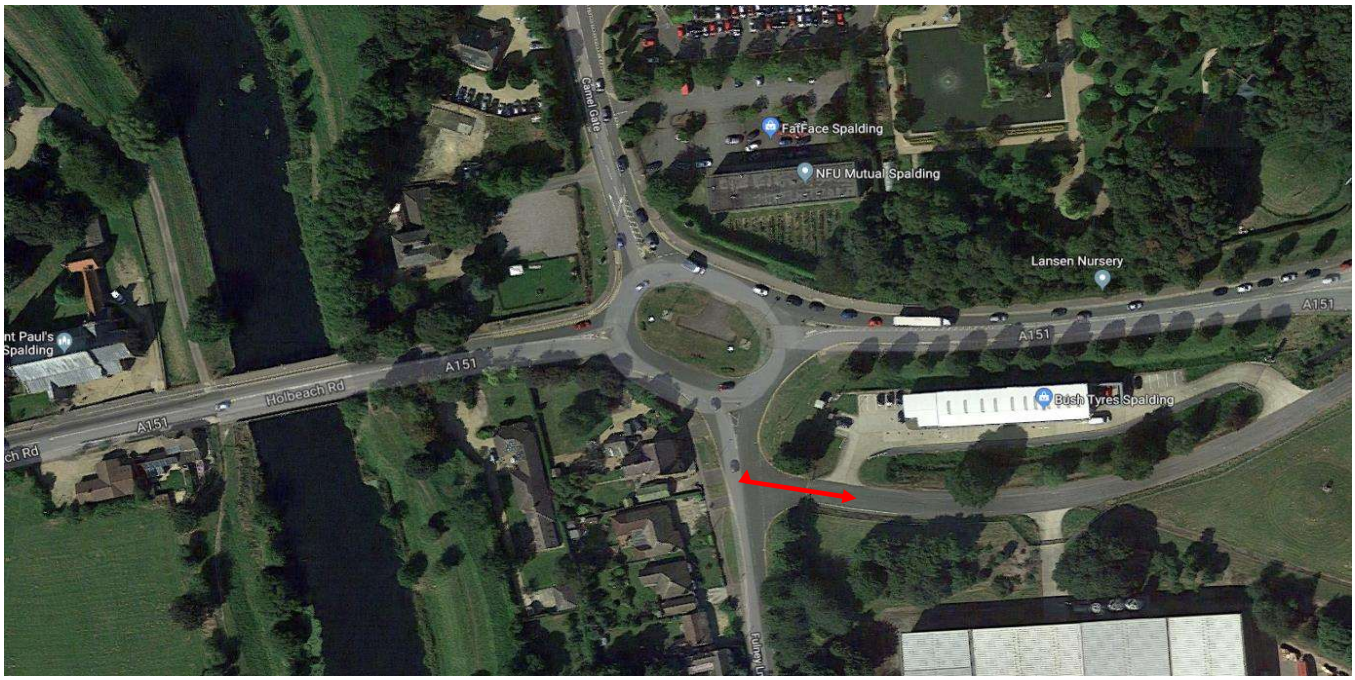
TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	2	0	0			2
14:15	14:30	0	0	0			0
14:30	14:45	1	0	0			1
14:45	15:00	2	0	0			2
15:00	15:15	1	0	0			1
15:15	15:30	2	0	0			2
15:30	15:45	6	0	0			6
15:45	16:00	8	0	0			8
16:00	16:15	1	0	0			1
16:15	16:30	0	0	0			0
16:30	16:45	0	0	0			0
16:45	17:00	0	0	0			0
		23	0	0	0	0	23
HOUR TOTALS							
14:00	15:00	5	0	0	0	0	5
14:15	15:15	4	0	0	0	0	4
14:30	15:30	6	0	0	0	0	6
14:45	15:45	11	0	0	0	0	11
15:00	16:00	17	0	0	0	0	17
15:15	16:15	17	0	0	0	0	17
15:30	16:30	15	0	0	0	0	15
15:45	16:45	9	0	0	0	0	9
16:00	17:00	1	0	0	0	0	1

D - D

TIME		CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
14:00	14:15	0	0	0			0
14:15	14:30	1	0	0			1
14:30	14:45	0	0	0			0
14:45	15:00	1	0	0			1
15:00	15:15	0	0	0			0
15:15	15:30	2	0	0			2
15:30	15:45	0	0	0			0
15:45	16:00	0	0	0			0
16:00	16:15	0	0	0			0
16:15	16:30	1	0	0			1
16:30	16:45	0	0	0			0
16:45	17:00	0	0	0			0
		5	0	0	0	0	5
HOUR TOTALS							
14:00	15:00	2	0	0	0	0	2
14:15	15:15	2	0	0	0	0	2
14:30	15:30	3	0	0	0	0	3
14:45	15:45	3	0	0	0	0	3
15:00	16:00	2	0	0	0	0	2
15:15	16:15	2	0	0	0	0	2
15:30	16:30	1	0	0	0	0	1
15:45	16:45	1	0	0	0	0	1
16:00	17:00	1	0	0	0	0	1

FULNEY LANE, SPALDING

MODAL
modaldata.com



FULNEY LANE NORTH, SPALDING

THURSDAY 4TH OCTOBER 2018

MODAL
modaldata.com

"BUSH TYRES" ACCESS ROAD

AM	IN						OUT					
TIME	CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS	CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
07:00 - 07:15	0	0	0	0	0	0	1	0	1	0	0	2
07:15 - 07:30	0	0	0	0	0	0	0	0	0	0	0	0
07:30 - 07:45	1	0	0	0	0	1	0	0	0	0	0	0
07:45 - 08:00	4	0	0	0	0	4	0	0	0	0	0	0
08:00 - 08:15	0	0	0	0	0	0	0	0	0	0	0	0
08:15 - 08:30	1	0	1	0	0	2	1	0	0	0	0	1
08:30 - 08:45	3	3	0	0	0	6	0	0	1	0	0	1
08:45 - 09:00	2	1	0	0	0	3	1	1	0	0	0	2
09:00 - 09:15	1	0	0	0	0	1	0	0	0	0	0	0
09:15 - 09:30	0	0	0	0	0	0	1	0	0	0	0	1
09:30 - 09:45	0	1	0	0	0	1	0	3	0	0	0	3
09:45 - 10:00	3	0	1	0	0	4	1	0	1	0	0	2
	15	5	2	0	0	22	5	4	3	0	0	12
HOUR TOTALS												
07:00 - 08:00	5	0	0	0	0	5	1	0	1	0	0	2
07:15 - 08:15	5	0	0	0	0	5	0	0	0	0	0	0
07:30 - 08:30	6	0	1	0	0	7	1	0	0	0	0	1
07:45 - 08:45	8	3	1	0	0	12	1	0	1	0	0	2
08:00 - 09:00	6	4	1	0	0	11	2	1	1	0	0	4
08:15 - 09:15	7	4	1	0	0	12	2	1	1	0	0	4
08:30 - 09:30	6	4	0	0	0	10	2	1	1	0	0	4
08:45 - 09:45	3	2	0	0	0	5	2	4	0	0	0	6
09:00 - 10:00	4	1	1	0	0	6	2	3	1	0	0	6

"BUSH TYRES" ACCESS ROAD

PM	IN						OUT					
TIME	CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS	CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
16:00 - 16:15	0	1	0	0	0	1	0	0	0	0	0	0
16:15 - 16:30	1	0	0	0	0	1	1	0	0	0	0	1
16:30 - 16:45	1	0	0	0	0	1	1	1	0	0	0	2
16:45 - 17:00	0	0	1	0	0	1	1	0	0	0	0	1
17:00 - 17:15	0	0	0	0	0	0	1	0	0	0	0	1
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	1	0	1	0	0	2
17:45 - 18:00	0	1	0	0	0	1	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	3	1	0	0	0	4
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0
	2	2	1	0	0	5	8	2	1	0	0	11
HOUR TOTALS												
16:00 - 17:00	2	1	1	0	0	4	3	1	0	0	0	4
16:15 - 17:15	2	0	1	0	0	3	4	1	0	0	0	5
16:30 - 17:30	1	0	1	0	0	2	3	1	0	0	0	4
16:45 - 17:45	0	0	1	0	0	1	3	0	1	0	0	4
17:00 - 18:00	0	1	0	0	0	1	2	0	1	0	0	3
17:15 - 18:15	0	1	0	0	0	1	4	1	1	0	0	6
17:30 - 18:30	0	1	0	0	0	1	4	1	1	0	0	6
17:45 - 18:45	0	1	0	0	0	1	3	1	0	0	0	4
18:00 - 19:00	0	0	0	0	0	0	3	1	0	0	0	4

FULNEY LANE NORTH, SPALDING

SATURDAY 6TH OCTOBER 2018

MODAL
modaldata.com

"BUSH TYRES" ACCESS ROAD

11.00 AM - 17.00 PM			IN						OUT					
TIME			CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS	CARS	LIGHT	HEAVY	BUSES	MOTORCYCLES	TOTAL MOVEMENTS
11:00	-	11:15	**2**	0	0	0	0	***2***	**1**	0	0	0	0	***1***
11:15	-	11:30	**2**	1	0	0	0	***3***	**1**	0	0	0	0	***1***
11:30	-	11:45	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
11:45	-	12:00	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
12:00	-	12:15	**0**	0	0	0	0	***0***	**3**	0	0	0	0	***3***
12:15	-	12:30	**2**	1	0	0	0	***3***	**2**	0	0	0	0	***2***
12:30	-	12:45	**0**	0	0	0	0	***0***	**2**	0	0	0	0	***2***
12:45	-	13:00	**0**	0	0	0	0	***0***	**2**	0	0	0	0	***2***
13:00	-	13:15	**1**	1	0	0	0	***2***	**0**	2	0	0	0	***2***
13:15	-	13:30	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
13:30	-	13:45	**1**	0	0	0	0	***1***	**0**	0	0	0	0	***0***
13:45	-	14:00	**4**	0	0	0	0	***4***	**1**	1	0	0	0	***2***
14:00	-	14:15	**3**	0	0	0	0	***3***	**2**	0	0	0	0	***2***
14:15	-	14:30	**3**	0	0	0	0	***3***	**2**	0	0	0	0	***2***
14:30	-	14:45	**0**	0	0	0	0	***0***	**6**	0	0	0	0	***6***
14:45	-	15:00	**0**	1	0	0	0	***1***	**0**	0	0	0	0	***0***
15:00	-	15:15	**2**	0	1	0	0	***3***	**2**	0	0	0	0	***2***
15:15	-	15:30	**0**	0	0	0	0	***0***	**0**	1	0	0	0	***1***
15:30	-	15:45	**0**	0	0	0	0	***0***	**0**	0	1	0	0	***1***
15:45	-	16:00	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
16:00	-	16:15	**0**	0	0	0	0	***0***	**2**	0	0	0	0	***2***
16:15	-	16:30	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
16:30	-	16:45	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
16:45	-	17:00	**0**	0	0	0	0	***0***	**0**	0	0	0	0	***0***
			20	**4**	**1**	**0**	**0**	**25**	**26**	**4**	**1**	**0**	**0**	**31**

APPENDIX E

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 15/10/2018 15:20:04

« (Default Analysis Set) - With KFC, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - With KFC			
Arm 1	0.10	3.50	0.09	A
Arm 2	0.81	4.57	0.44	A
Arm 3	0.03	2.58	0.03	A
Arm 4	0.33	3.39	0.25	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM " model duration: 08:15 - 09:45

Run using Junctions 8.0.4.487 at 15/10/2018 15:20:04

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - With KFC, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
With KFC, AM	With KFC	AM		ONE HOUR	08:15	09:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.02	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	97.00	100.000
2	ONE HOUR	✓	584.00	100.000
3	ONE HOUR	✓	43.00	100.000
4	ONE HOUR	✓	323.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	60.000	1.000	36.000
	2	129.000	3.000	55.000	397.000
	3	5.000	28.000	0.000	10.000
	4	64.000	240.000	17.000	2.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.62	0.01	0.37
	2	0.22	0.01	0.09	0.68
	3	0.12	0.65	0.00	0.23
	4	0.20	0.74	0.05	0.01

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.09	3.50	0.10	A	89.01	133.51	7.45	3.35	0.08	7.45	3.35
2	0.44	4.57	0.81	A	535.89	803.83	54.57	4.07	0.61	54.58	4.07
3	0.03	2.58	0.03	A	39.46	59.19	2.42	2.46	0.03	2.42	2.46
4	0.25	3.39	0.33	A	296.39	444.59	23.61	3.19	0.26	23.61	3.19

Main Results for each time segment

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	73.03	18.26	72.77	148.51	217.62	0.00	1225.89	552.32	0.060	0.00	0.07	3.215	A
2	439.67	109.92	437.91	248.37	42.01	0.00	1466.16	1332.81	0.300	0.00	0.44	3.600	A
3	32.37	8.09	32.29	54.75	425.18	0.00	1619.68	951.96	0.020	0.00	0.02	2.335	A
4	243.17	60.79	242.37	333.71	123.76	0.00	1483.07	944.99	0.164	0.00	0.20	2.987	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	87.20	21.80	87.14	177.84	260.52	0.00	1201.12	552.32	0.073	0.07	0.08	3.327	A
2	525.00	131.25	524.46	297.36	50.31	0.00	1461.23	1332.81	0.359	0.44	0.57	3.957	A
3	38.66	9.66	38.64	65.56	509.21	0.00	1563.17	951.96	0.025	0.02	0.03	2.431	A
4	290.37	72.59	290.16	399.65	148.19	0.00	1468.60	944.99	0.198	0.20	0.25	3.146	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	106.80	26.70	106.71	217.73	319.01	0.00	1167.36	552.30	0.091	0.08	0.10	3.495	A
2	643.00	160.75	642.06	364.12	61.60	0.00	1454.51	1332.82	0.442	0.57	0.81	4.560	A
3	47.34	11.84	47.31	80.27	623.39	0.00	1486.38	951.96	0.032	0.03	0.03	2.576	A
4	355.63	88.91	355.31	489.27	181.43	0.00	1448.90	944.99	0.245	0.25	0.33	3.390	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	106.80	26.70	106.80	218.00	319.29	0.00	1167.19	552.30	0.092	0.10	0.10	3.495	A
2	643.00	160.75	642.98	364.43	61.66	0.00	1454.48	1332.82	0.442	0.81	0.81	4.569	A
3	47.34	11.84	47.34	80.37	624.27	0.00	1485.80	951.96	0.032	0.03	0.03	2.577	A
4	355.63	88.91	355.63	489.94	181.66	0.00	1448.76	944.99	0.245	0.33	0.33	3.391	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	87.20	21.80	87.29	178.27	260.98	0.00	1200.85	552.32	0.073	0.10	0.08	3.329	A
2	525.00	131.25	525.93	297.88	50.40	0.00	1461.18	1332.81	0.359	0.81	0.58	3.968	A
3	38.66	9.66	38.69	65.73	510.59	0.00	1562.24	951.96	0.025	0.03	0.03	2.435	A
4	290.37	72.59	290.69	400.72	148.56	0.00	1468.38	944.99	0.198	0.33	0.25	3.148	A

Main results: (09:30-09:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	73.03	18.26	73.09	149.23	218.51	0.00	1225.37	552.32	0.060	0.08	0.07	3.219	A
2	439.67	109.92	440.22	249.40	42.20	0.00	1466.05	1332.81	0.300	0.58	0.44	3.618	A
3	32.37	8.09	32.39	55.02	427.39	0.00	1618.19	951.96	0.020	0.03	0.02	2.337	A
4	243.17	60.79	243.38	335.42	124.36	0.00	1482.72	944.99	0.164	0.25	0.20	2.991	A

Queueing Delay Results for each time segment

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.96	0.06	3.215	A	A
2	6.43	0.43	3.600	A	A
3	0.31	0.02	2.335	A	A
4	2.96	0.20	2.987	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.19	0.08	3.327	A	A
2	8.45	0.56	3.957	A	A
3	0.39	0.03	2.431	A	A
4	3.74	0.25	3.146	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.53	0.10	3.495	A	A
2	11.85	0.79	4.560	A	A
3	0.50	0.03	2.576	A	A
4	4.93	0.33	3.390	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.55	0.10	3.495	A	A
2	12.17	0.81	4.569	A	A
3	0.51	0.03	2.577	A	A
4	5.01	0.33	3.391	A	A

Queueing Delay results: (09:15-09:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.23	0.08	3.329	A	A
2	8.91	0.59	3.968	A	A
3	0.40	0.03	2.435	A	A
4	3.88	0.26	3.148	A	A

Queueing Delay results: (09:30-09:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	0.99	0.07	3.219	A	A
2	6.77	0.45	3.618	A	A
3	0.32	0.02	2.337	A	A
4	3.08	0.21	2.991	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 15/10/2018 15:24:29

« (Default Analysis Set) - With KFC, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - With KFC			
Arm 1	0.45	5.21	0.30	A
Arm 2	0.85	4.80	0.45	A
Arm 3	0.11	2.83	0.09	A
Arm 4	0.63	4.15	0.38	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM " model duration: 16:30 - 18:00

Run using Junctions 8.0.4.487 at 15/10/2018 15:24:28

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - With KFC, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationship
With KFC, PM	With KFC	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.50	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	283.00	100.000
2	ONE HOUR	✓	582.00	100.000
3	ONE HOUR	✓	122.00	100.000
4	ONE HOUR	✓	496.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	195.000	7.000	81.000
	2	99.000	8.000	41.000	434.000
	3	7.000	66.000	0.000	49.000
	4	54.000	411.000	28.000	3.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.69	0.02	0.29
	2	0.17	0.01	0.07	0.75
	3	0.06	0.54	0.00	0.40
	4	0.11	0.83	0.06	0.01

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.30	5.21	0.45	A	259.69	389.53	29.95	4.61	0.33	29.95	4.61
2	0.45	4.80	0.85	A	534.05	801.08	56.53	4.23	0.63	56.53	4.23
3	0.09	2.83	0.11	A	111.95	167.92	7.43	2.65	0.08	7.43	2.65
4	0.38	4.15	0.63	A	455.14	682.71	42.63	3.75	0.47	42.63	3.75

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	213.06	53.26	212.10	119.99	387.07	0.00	1128.07	492.11	0.189	0.00	0.24	4.044	A
2	438.16	109.54	436.37	509.97	89.21	0.00	1438.10	1360.41	0.305	0.00	0.45	3.695	A
3	91.85	22.96	91.60	56.99	468.58	0.00	1590.49	956.15	0.058	0.00	0.06	2.473	A
4	373.41	93.35	372.03	425.15	135.03	0.00	1476.39	1069.19	0.253	0.00	0.35	3.353	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	254.41	63.60	254.11	143.69	463.46	0.00	1083.97	492.11	0.235	0.24	0.31	4.467	A
2	523.21	130.80	522.63	610.71	106.86	0.00	1427.60	1360.41	0.366	0.45	0.59	4.094	A
3	109.68	27.42	109.61	68.25	561.24	0.00	1528.18	956.15	0.072	0.06	0.08	2.613	A
4	445.89	111.47	445.48	509.18	161.67	0.00	1460.61	1069.19	0.305	0.35	0.45	3.650	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	311.59	77.90	311.06	175.91	567.43	0.00	1023.95	492.11	0.304	0.31	0.45	5.198	A
2	640.79	160.20	639.78	747.68	130.81	0.00	1413.36	1360.41	0.453	0.59	0.85	4.787	A
3	134.32	33.58	134.22	83.55	687.03	0.00	1443.59	956.15	0.093	0.08	0.11	2.831	A
4	546.11	136.53	545.41	623.32	197.93	0.00	1439.12	1069.19	0.379	0.45	0.63	4.145	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	311.59	77.90	311.58	176.16	568.12	0.00	1023.56	492.11	0.304	0.45	0.45	5.207	A
2	640.79	160.20	640.78	748.68	131.02	0.00	1413.23	1360.41	0.453	0.85	0.85	4.799	A
3	134.32	33.58	134.32	83.68	688.12	0.00	1442.86	956.15	0.093	0.11	0.11	2.833	A
4	546.11	136.53	546.10	624.26	198.18	0.00	1438.98	1069.19	0.380	0.63	0.63	4.152	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	254.41	63.60	254.93	144.09	464.56	0.00	1083.34	492.11	0.235	0.45	0.32	4.478	A
2	523.21	130.80	524.21	612.31	107.18	0.00	1427.41	1360.41	0.367	0.85	0.60	4.109	A
3	109.68	27.42	109.78	68.44	562.95	0.00	1527.03	956.15	0.072	0.11	0.08	2.618	A
4	445.89	111.47	446.58	510.66	162.06	0.00	1460.38	1069.19	0.305	0.63	0.46	3.661	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	213.06	53.26	213.36	120.61	388.89	0.00	1127.02	492.11	0.189	0.32	0.24	4.059	A
2	438.16	109.54	438.74	512.54	89.71	0.00	1437.80	1360.41	0.305	0.60	0.45	3.715	A
3	91.85	22.96	91.91	57.29	471.17	0.00	1588.75	956.15	0.058	0.08	0.06	2.476	A
4	373.41	93.35	373.83	427.42	135.66	0.00	1476.02	1069.19	0.253	0.46	0.35	3.367	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.50	0.23	4.044	A	A
2	6.57	0.44	3.695	A	A
3	0.93	0.06	2.473	A	A
4	5.10	0.34	3.353	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.63	0.31	4.467	A	A
2	8.71	0.58	4.094	A	A
3	1.18	0.08	2.613	A	A
4	6.64	0.44	3.650	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.55	0.44	5.198	A	A
2	12.38	0.83	4.787	A	A
3	1.56	0.10	2.831	A	A
4	9.19	0.61	4.145	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.72	0.45	5.207	A	A
2	12.73	0.85	4.799	A	A
3	1.58	0.11	2.833	A	A
4	9.40	0.63	4.152	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.87	0.32	4.478	A	A
2	9.20	0.61	4.109	A	A
3	1.21	0.08	2.618	A	A
4	6.96	0.46	3.661	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.68	0.25	4.059	A	A
2	6.93	0.46	3.715	A	A
3	0.96	0.06	2.476	A	A
4	5.34	0.36	3.367	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 15/10/2018 15:26:16

« (Default Analysis Set) - With KFC, Saturday
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - With KFC			
Arm 1	0.59	5.29	0.36	A
Arm 2	1.39	6.17	0.58	A
Arm 3	0.06	2.96	0.05	A
Arm 4	0.60	4.30	0.37	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday " model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 15/10/2018 15:26:15

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - With KFC, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relatio
With KFC, Saturday	With KFC	Saturday		ONE HOUR	13:45	15:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				5.32	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	363.00	100.000
2	ONE HOUR	✓	741.00	100.000
3	ONE HOUR	✓	66.00	100.000
4	ONE HOUR	✓	457.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	266.000	10.000	87.000
	2	251.000	7.000	48.000	435.000
	3	7.000	28.000	0.000	31.000
	4	96.000	344.000	15.000	2.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.73	0.03	0.24
	2	0.34	0.01	0.06	0.59
	3	0.11	0.42	0.00	0.47
	4	0.21	0.75	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.36	5.29	0.59	A	333.10	499.64	38.91	4.67	0.43	38.91	4.67
2	0.58	6.17	1.39	A	679.95	1019.93	87.18	5.13	0.97	87.19	5.13
3	0.05	2.96	0.06	A	60.56	90.84	4.16	2.75	0.05	4.16	2.75
4	0.37	4.30	0.60	A	419.35	629.03	40.38	3.85	0.45	40.39	3.85

Main Results for each time segment

Main results: (13:45-14:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	273.29	68.32	272.05	265.35	297.02	0.00	1180.05	667.34	0.232	0.00	0.31	4.079	A
2	557.86	139.47	555.28	483.62	85.45	0.00	1440.33	1363.42	0.387	0.00	0.65	4.178	A
3	49.69	12.42	49.55	54.71	586.01	0.00	1511.52	937.70	0.033	0.00	0.03	2.536	A
4	344.05	86.01	342.75	415.95	219.61	0.00	1426.28	980.46	0.241	0.00	0.33	3.417	A

Main results: (14:00-14:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	326.33	81.58	325.94	317.82	355.66	0.00	1146.20	667.34	0.285	0.31	0.41	4.518	A
2	666.14	166.54	665.17	579.23	102.36	0.00	1430.27	1363.42	0.466	0.65	0.89	4.840	A
3	59.33	14.83	59.29	65.54	702.00	0.00	1433.53	937.70	0.041	0.03	0.04	2.697	A
4	410.83	102.71	410.44	498.25	263.04	0.00	1400.54	980.46	0.293	0.33	0.43	3.742	A

Main results: (14:15-14:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	399.67	99.92	398.97	388.95	435.42	0.00	1100.16	667.34	0.363	0.41	0.58	5.282	A
2	815.86	203.96	813.90	709.08	125.30	0.00	1416.63	1363.42	0.576	0.89	1.38	6.132	A
3	72.67	18.17	72.61	80.21	859.00	0.00	1327.95	937.70	0.055	0.04	0.06	2.953	A
4	503.17	125.79	502.48	609.72	321.89	0.00	1365.67	980.46	0.368	0.43	0.60	4.292	A

Main results: (14:30-14:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	399.67	99.92	399.66	389.74	436.00	0.00	1099.83	667.34	0.363	0.58	0.59	5.295	A
2	815.86	203.96	815.81	710.14	125.51	0.00	1416.51	1363.42	0.576	1.38	1.39	6.172	A
3	72.67	18.17	72.67	80.37	860.96	0.00	1326.63	937.70	0.055	0.06	0.06	2.956	A
4	503.17	125.79	503.16	611.04	322.58	0.00	1365.26	980.46	0.369	0.60	0.60	4.300	A

Main results: (14:45-15:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	326.33	81.58	327.02	319.04	356.57	0.00	1145.67	667.34	0.285	0.59	0.41	4.532	A
2	666.14	166.54	668.07	580.90	102.69	0.00	1430.08	1363.42	0.466	1.39	0.91	4.877	A
3	59.33	14.83	59.39	65.79	704.97	0.00	1431.53	937.70	0.041	0.06	0.04	2.701	A
4	410.83	102.71	411.51	500.26	264.10	0.00	1399.91	980.46	0.293	0.60	0.43	3.753	A

Main results: (15:00-15:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	273.29	68.32	273.69	266.94	298.47	0.00	1179.21	667.34	0.232	0.41	0.31	4.098	A
2	557.86	139.47	558.87	486.21	85.95	0.00	1440.04	1363.42	0.387	0.91	0.66	4.212	A
3	49.69	12.42	49.73	55.05	589.77	0.00	1509.00	937.70	0.033	0.04	0.04	2.540	A
4	344.05	86.01	344.46	418.54	220.96	0.00	1425.48	980.46	0.241	0.43	0.33	3.430	A

Queueing Delay Results for each time segment

Queueing Delay results: (13:45-14:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.52	0.30	4.079	A	A
2	9.42	0.63	4.178	A	A
3	0.52	0.03	2.536	A	A
4	4.78	0.32	3.417	A	A

Queueing Delay results: (14:00-14:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.99	0.40	4.518	A	A
2	13.01	0.87	4.840	A	A
3	0.66	0.04	2.697	A	A
4	6.27	0.42	3.742	A	A

Queueing Delay results: (14:15-14:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.53	0.57	5.282	A	A
2	19.92	1.33	6.132	A	A
3	0.88	0.06	2.953	A	A
4	8.76	0.58	4.292	A	A

Queueing Delay results: (14:30-14:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.76	0.58	5.295	A	A
2	20.76	1.38	6.172	A	A
3	0.89	0.06	2.956	A	A
4	8.97	0.60	4.300	A	A

Queueing Delay results: (14:45-15:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.33	0.42	4.532	A	A
2	14.01	0.93	4.877	A	A
3	0.68	0.05	2.701	A	A
4	6.58	0.44	3.753	A	A

Queueing Delay results: (15:00-15:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.77	0.32	4.098	A	A
2	10.06	0.67	4.212	A	A
3	0.53	0.04	2.540	A	A
4	5.02	0.33	3.430	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding - Doug.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 16/10/2018 15:18:08

« (Default Analysis Set) - Baseline With KFC & Coffee, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Baseline With KFC & Coffee			
Arm 1	0.11	3.58	0.10	A
Arm 2	0.90	4.83	0.47	A
Arm 3	0.05	2.62	0.05	A
Arm 4	0.36	3.49	0.26	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday" model duration: 13:45 - 15:15
"D7 - 2023 With KFC, AM" model duration: 08:15 - 09:45
"D8 - 2023 With KFC, PM" model duration: 16:30 - 18:00
"D9 - 2023 With KFC, Saturday" model duration: 13:45 - 15:15
"D16 - Baseline With KFC & Coffee, AM " model duration: 08:15 - 09:45
"D17 - Baseline With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D18 - Baseline With KFC & Coffee, Saturday" model duration: 13:45 - 15:15
"D19 - 2023 With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D20 - 2023 With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D21 - 2023 With KFC & Coffee, Saturday" model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 16/10/2018 15:18:07

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - Baseline With KFC & Coffee, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationsh
Baseline With KFC & Coffee, AM	Baseline With KFC & Coffee	AM		ONE HOUR	08:15	09:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.19	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	102.00	100.000
2	ONE HOUR	✓	612.00	100.000
3	ONE HOUR	✓	63.00	100.000
4	ONE HOUR	✓	339.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	60.000	6.000	36.000
	2	129.000	3.000	83.000	397.000
	3	13.000	41.000	0.000	9.000
	4	64.000	240.000	33.000	2.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.59	0.06	0.35
	2	0.21	0.00	0.14	0.65
	3	0.21	0.65	0.00	0.14
	4	0.19	0.71	0.10	0.01

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.10	3.58	0.11	A	93.60	140.40	7.99	3.41	0.09	7.99	3.41
2	0.47	4.83	0.90	A	561.58	842.37	59.77	4.26	0.66	59.77	4.26
3	0.05	2.62	0.05	A	57.81	86.71	3.59	2.49	0.04	3.59	2.49
4	0.26	3.49	0.36	A	311.07	466.61	25.37	3.26	0.28	25.37	3.26

Main Results for each time segment

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	76.79	19.20	76.51	154.50	239.37	0.00	1213.33	557.16	0.063	0.00	0.07	3.261	A
2	460.75	115.19	458.85	258.12	57.77	0.00	1456.79	1300.99	0.316	0.00	0.47	3.710	A
3	47.43	11.86	47.31	91.49	425.13	0.00	1619.71	1013.67	0.029	0.00	0.03	2.357	A
4	255.22	63.80	254.36	332.92	139.52	0.00	1473.74	875.28	0.173	0.00	0.21	3.039	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	91.70	22.92	91.63	185.01	286.57	0.00	1186.08	557.16	0.077	0.07	0.09	3.387	A
2	550.18	137.54	549.57	309.03	69.17	0.00	1450.01	1300.99	0.379	0.47	0.63	4.115	A
3	56.64	14.16	56.61	109.57	509.17	0.00	1563.19	1013.67	0.036	0.03	0.04	2.460	A
4	304.75	76.19	304.53	398.72	167.05	0.00	1457.42	875.28	0.209	0.21	0.27	3.216	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	112.30	28.08	112.20	226.51	350.90	0.00	1148.95	557.15	0.098	0.09	0.11	3.576	A
2	673.82	168.46	672.74	378.40	84.70	0.00	1440.78	1300.99	0.468	0.63	0.90	4.821	A
3	69.36	17.34	69.32	134.14	623.30	0.00	1486.44	1013.67	0.047	0.04	0.05	2.616	A
4	373.25	93.31	372.89	488.11	204.52	0.00	1435.22	875.28	0.260	0.27	0.36	3.490	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	112.30	28.08	112.30	226.81	351.22	0.00	1148.76	557.15	0.098	0.11	0.11	3.576	A
2	673.82	168.46	673.81	378.75	84.78	0.00	1440.73	1300.99	0.468	0.90	0.90	4.834	A
3	69.36	17.34	69.36	134.32	624.26	0.00	1485.80	1013.67	0.047	0.05	0.05	2.617	A
4	373.25	93.31	373.24	488.84	204.79	0.00	1435.06	875.28	0.260	0.36	0.36	3.491	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	91.70	22.92	91.79	185.49	287.09	0.00	1185.78	557.16	0.077	0.11	0.09	3.391	A
2	550.18	137.54	551.24	309.59	69.30	0.00	1449.94	1300.99	0.379	0.90	0.63	4.132	A
3	56.64	14.16	56.68	109.86	510.68	0.00	1562.18	1013.67	0.036	0.05	0.04	2.464	A
4	304.75	76.19	305.10	399.88	167.48	0.00	1457.17	875.28	0.209	0.36	0.27	3.221	A

Main results: (09:30-09:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	76.79	19.20	76.86	155.27	240.37	0.00	1212.76	557.16	0.063	0.09	0.07	3.263	A
2	460.75	115.19	461.37	259.20	58.02	0.00	1456.64	1300.99	0.316	0.63	0.48	3.729	A
3	47.43	11.86	47.46	91.96	427.43	0.00	1618.16	1013.67	0.029	0.04	0.03	2.360	A
4	255.22	63.80	255.44	334.70	140.19	0.00	1473.34	875.28	0.173	0.27	0.22	3.046	A

Queueing Delay Results for each time segment

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.02	0.07	3.261	A	A
2	6.93	0.46	3.710	A	A
3	0.46	0.03	2.357	A	A
4	3.16	0.21	3.039	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.27	0.08	3.387	A	A
2	9.20	0.61	4.115	A	A
3	0.57	0.04	2.460	A	A
4	4.01	0.27	3.216	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.64	0.11	3.576	A	A
2	13.10	0.87	4.821	A	A
3	0.75	0.05	2.616	A	A
4	5.32	0.35	3.490	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.67	0.11	3.576	A	A
2	13.48	0.90	4.834	A	A
3	0.75	0.05	2.617	A	A
4	5.41	0.36	3.491	A	A

Queueing Delay results: (09:15-09:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.32	0.09	3.391	A	A
2	9.73	0.65	4.132	A	A
3	0.59	0.04	2.464	A	A
4	4.16	0.28	3.221	A	A

Queueing Delay results: (09:30-09:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.06	0.07	3.263	A	A
2	7.32	0.49	3.729	A	A
3	0.47	0.03	2.360	A	A
4	3.29	0.22	3.046	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding - Doug.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 16/10/2018 15:19:43

« (Default Analysis Set) - Baseline With KFC & Coffee, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Baseline With KFC & Coffee			
Arm 1	0.47	5.32	0.31	A
Arm 2	0.88	4.91	0.46	A
Arm 3	0.12	2.87	0.11	A
Arm 4	0.65	4.22	0.39	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday" model duration: 13:45 - 15:15
"D7 - 2023 With KFC, AM" model duration: 08:15 - 09:45
"D8 - 2023 With KFC, PM" model duration: 16:30 - 18:00
"D9 - 2023 With KFC, Saturday" model duration: 13:45 - 15:15
"D16 - Baseline With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D17 - Baseline With KFC & Coffee, PM " model duration: 16:30 - 18:00
"D18 - Baseline With KFC & Coffee, Saturday" model duration: 13:45 - 15:15
"D19 - 2023 With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D20 - 2023 With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D21 - 2023 With KFC & Coffee, Saturday" model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 16/10/2018 15:19:42

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - Baseline With KFC & Coffee, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationsh
Baseline With KFC & Coffee, PM	Baseline With KFC & Coffee	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.57	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	288.00	100.000
2	ONE HOUR	✓	590.00	100.000
3	ONE HOUR	✓	139.00	100.000
4	ONE HOUR	✓	503.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	195.000	12.000	81.000
	2	99.000	8.000	49.000	434.000
	3	9.000	74.000	0.000	56.000
	4	54.000	411.000	35.000	3.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.68	0.04	0.28
	2	0.17	0.01	0.08	0.74
	3	0.06	0.53	0.00	0.40
	4	0.11	0.82	0.07	0.01

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.31	5.32	0.47	A	264.27	396.41	30.99	4.69	0.34	30.99	4.69
2	0.46	4.91	0.88	A	541.39	812.09	58.28	4.31	0.65	58.29	4.31
3	0.11	2.87	0.12	A	127.55	191.32	8.56	2.68	0.10	8.56	2.68
4	0.39	4.22	0.65	A	461.56	692.34	43.78	3.79	0.49	43.78	3.79

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	216.82	54.21	215.84	121.48	398.32	0.00	1121.58	491.57	0.193	0.00	0.25	4.090	A
2	444.18	111.05	442.34	515.96	98.20	0.00	1432.75	1348.87	0.310	0.00	0.46	3.738	A
3	104.65	26.16	104.36	71.98	468.56	0.00	1590.50	976.62	0.066	0.00	0.07	2.495	A
4	378.68	94.67	377.26	430.38	142.54	0.00	1471.95	1065.90	0.257	0.00	0.35	3.382	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	258.91	64.73	258.59	145.48	476.93	0.00	1076.20	491.57	0.241	0.25	0.32	4.535	A
2	530.40	132.60	529.80	617.89	117.63	0.00	1421.19	1348.87	0.373	0.46	0.61	4.157	A
3	124.96	31.24	124.88	86.21	561.23	0.00	1528.19	976.62	0.082	0.07	0.09	2.641	A
4	452.19	113.05	451.76	515.45	170.65	0.00	1455.29	1065.90	0.311	0.35	0.46	3.692	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	317.09	79.27	316.53	178.10	583.91	0.00	1014.44	491.57	0.313	0.32	0.46	5.308	A
2	649.60	162.40	648.53	756.45	144.00	0.00	1405.52	1348.87	0.462	0.61	0.88	4.891	A
3	153.04	38.26	152.92	105.53	686.99	0.00	1443.61	976.62	0.106	0.09	0.12	2.872	A
4	553.81	138.45	553.08	630.99	208.93	0.00	1432.61	1065.90	0.387	0.46	0.64	4.212	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	317.09	79.27	317.09	178.36	584.63	0.00	1014.02	491.57	0.313	0.46	0.47	5.319	A
2	649.60	162.40	649.58	757.49	144.23	0.00	1405.38	1348.87	0.462	0.88	0.88	4.905	A
3	153.04	38.26	153.04	105.70	688.12	0.00	1442.86	976.62	0.106	0.12	0.12	2.874	A
4	553.81	138.45	553.80	631.97	209.19	0.00	1432.45	1065.90	0.387	0.64	0.65	4.219	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	258.91	64.73	259.46	145.90	478.08	0.00	1075.53	491.57	0.241	0.47	0.33	4.546	A
2	530.40	132.60	531.45	619.54	118.00	0.00	1420.98	1348.87	0.373	0.88	0.62	4.174	A
3	124.96	31.24	125.08	86.46	562.99	0.00	1527.00	976.62	0.082	0.12	0.09	2.644	A
4	452.19	113.05	452.91	517.00	171.07	0.00	1455.04	1065.90	0.311	0.65	0.47	3.704	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	216.82	54.21	217.14	122.12	400.20	0.00	1120.49	491.57	0.194	0.33	0.25	4.105	A
2	444.18	111.05	444.79	518.58	98.76	0.00	1432.42	1348.87	0.310	0.62	0.47	3.755	A
3	104.65	26.16	104.72	72.37	471.18	0.00	1588.74	976.62	0.066	0.09	0.07	2.498	A
4	378.68	94.67	379.12	432.71	143.20	0.00	1471.56	1065.90	0.257	0.47	0.36	3.394	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.60	0.24	4.090	A	A
2	6.73	0.45	3.738	A	A
3	1.07	0.07	2.495	A	A
4	5.21	0.35	3.382	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.78	0.32	4.535	A	A
2	8.96	0.60	4.157	A	A
3	1.36	0.09	2.641	A	A
4	6.81	0.45	3.692	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.81	0.45	5.308	A	A
2	12.81	0.85	4.891	A	A
3	1.80	0.12	2.872	A	A
4	9.47	0.63	4.212	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.99	0.47	5.319	A	A
2	13.19	0.88	4.905	A	A
3	1.83	0.12	2.874	A	A
4	9.69	0.65	4.219	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.03	0.34	4.546	A	A
2	9.48	0.63	4.174	A	A
3	1.40	0.09	2.644	A	A
4	7.14	0.48	3.704	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	3.79	0.25	4.105	A	A
2	7.11	0.47	3.755	A	A
3	1.10	0.07	2.498	A	A
4	5.47	0.36	3.394	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2018

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding - Doug.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 16/10/2018 15:22:57

« (Default Analysis Set) - Baseline With KFC & Coffee, Saturday
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - Baseline With KFC & Coffee			
Arm 1	0.59	5.30	0.36	A
Arm 2	1.39	6.18	0.58	A
Arm 3	0.07	2.99	0.07	A
Arm 4	0.60	4.31	0.37	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday" model duration: 13:45 - 15:15
"D7 - 2023 With KFC, AM" model duration: 08:15 - 09:45
"D8 - 2023 With KFC, PM" model duration: 16:30 - 18:00
"D9 - 2023 With KFC, Saturday" model duration: 13:45 - 15:15
"D16 - Baseline With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D17 - Baseline With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D18 - Baseline With KFC & Coffee, Saturday " model duration: 13:45 - 15:15
"D19 - 2023 With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D20 - 2023 With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D21 - 2023 With KFC & Coffee, Saturday" model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 16/10/2018 15:22:57

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - Baseline With KFC & Coffee, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relatio
Baseline With KFC & Coffee, Saturday	Baseline With KFC & Coffee	Saturday		ONE HOUR	13:45	15:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				5.31	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	363.00	100.000
2	ONE HOUR	✓	742.00	100.000
3	ONE HOUR	✓	79.00	100.000
4	ONE HOUR	✓	457.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	266.000	10.000	87.000
	2	251.000	7.000	49.000	435.000
	3	8.000	29.000	0.000	42.000
	4	96.000	344.000	15.000	2.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.73	0.03	0.24
	2	0.34	0.01	0.07	0.59
	3	0.10	0.37	0.00	0.53
	4	0.21	0.75	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.36	5.30	0.59	A	333.10	499.64	38.93	4.68	0.43	38.94	4.68
2	0.58	6.18	1.39	A	680.87	1021.31	87.42	5.14	0.97	87.43	5.14
3	0.07	2.99	0.07	A	72.49	108.74	5.02	2.77	0.06	5.02	2.77
4	0.37	4.31	0.60	A	419.35	629.03	40.43	3.86	0.45	40.43	3.86

Main Results for each time segment

Main results: (13:45-14:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	273.29	68.32	272.05	266.10	297.77	0.00	1179.62	682.09	0.232	0.00	0.31	4.081	A
2	558.62	139.65	556.03	484.37	85.45	0.00	1440.33	1360.29	0.388	0.00	0.65	4.182	A
3	59.48	14.87	59.31	55.46	586.01	0.00	1511.52	938.34	0.039	0.00	0.04	2.553	A
4	344.05	86.01	342.75	424.20	221.11	0.00	1425.39	1015.72	0.241	0.00	0.33	3.420	A

Main results: (14:00-14:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	326.33	81.58	325.93	318.72	356.55	0.00	1145.68	682.09	0.285	0.31	0.41	4.521	A
2	667.04	166.76	666.07	580.13	102.36	0.00	1430.27	1360.29	0.466	0.65	0.89	4.846	A
3	71.02	17.75	70.97	66.44	701.99	0.00	1433.53	938.34	0.050	0.04	0.05	2.720	A
4	410.83	102.71	410.44	508.13	264.84	0.00	1399.48	1015.72	0.294	0.33	0.43	3.746	A

Main results: (14:15-14:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	399.67	99.92	398.97	390.05	436.52	0.00	1099.53	682.09	0.363	0.41	0.58	5.287	A
2	816.96	204.24	815.00	710.18	125.30	0.00	1416.63	1360.29	0.577	0.89	1.38	6.143	A
3	86.98	21.75	86.91	81.30	859.00	0.00	1327.95	938.34	0.066	0.05	0.07	2.987	A
4	503.17	125.79	502.48	621.82	324.08	0.00	1364.37	1015.72	0.369	0.43	0.60	4.298	A

Main results: (14:30-14:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	399.67	99.92	399.66	390.85	437.10	0.00	1099.19	682.09	0.364	0.58	0.59	5.300	A
2	816.96	204.24	816.91	711.24	125.51	0.00	1416.51	1360.29	0.577	1.38	1.39	6.183	A
3	86.98	21.75	86.98	81.47	860.95	0.00	1326.63	938.34	0.066	0.07	0.07	2.990	A
4	503.17	125.79	503.16	623.15	324.79	0.00	1363.95	1015.72	0.369	0.60	0.60	4.307	A

Main results: (14:45-15:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	326.33	81.58	327.02	319.94	357.47	0.00	1145.15	682.09	0.285	0.59	0.41	4.535	A
2	667.04	166.76	668.97	581.80	102.69	0.00	1430.08	1360.29	0.466	1.39	0.91	4.885	A
3	71.02	17.75	71.09	66.69	704.97	0.00	1431.52	938.34	0.050	0.07	0.05	2.727	A
4	410.83	102.71	411.51	510.16	265.90	0.00	1398.84	1015.72	0.294	0.60	0.43	3.760	A

Main results: (15:00-15:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	273.29	68.32	273.69	267.69	299.23	0.00	1178.78	682.09	0.232	0.41	0.31	4.099	A
2	558.62	139.65	559.62	486.97	85.95	0.00	1440.04	1360.29	0.388	0.91	0.66	4.217	A
3	59.48	14.87	59.52	55.80	589.77	0.00	1508.99	938.34	0.039	0.05	0.04	2.559	A
4	344.05	86.01	344.46	426.83	222.46	0.00	1424.59	1015.72	0.242	0.43	0.33	3.436	A

Queueing Delay Results for each time segment

Queueing Delay results: (13:45-14:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.52	0.30	4.081	A	A
2	9.44	0.63	4.182	A	A
3	0.62	0.04	2.553	A	A
4	4.79	0.32	3.420	A	A

Queueing Delay results: (14:00-14:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.00	0.40	4.521	A	A
2	13.05	0.87	4.846	A	A
3	0.79	0.05	2.720	A	A
4	6.28	0.42	3.746	A	A

Queueing Delay results: (14:15-14:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.54	0.57	5.287	A	A
2	19.98	1.33	6.143	A	A
3	1.07	0.07	2.987	A	A
4	8.78	0.59	4.298	A	A

Queueing Delay results: (14:30-14:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.77	0.58	5.300	A	A
2	20.82	1.39	6.183	A	A
3	1.08	0.07	2.990	A	A
4	8.98	0.60	4.307	A	A

Queueing Delay results: (14:45-15:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.33	0.42	4.535	A	A
2	14.04	0.94	4.885	A	A
3	0.82	0.05	2.727	A	A
4	6.58	0.44	3.760	A	A

Queueing Delay results: (15:00-15:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.77	0.32	4.099	A	A
2	10.09	0.67	4.217	A	A
3	0.64	0.04	2.559	A	A
4	5.02	0.33	3.436	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2019

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding Coffee shop.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 29/05/2019 13:55:04

« (Default Analysis Set) - 2024 With KFC & Coffee, AM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	AM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2024 With KFC & Coffee			
Arm 1	0.12	3.66	0.11	A
Arm 2	1.05	5.22	0.51	A
Arm 3	0.06	2.69	0.05	A
Arm 4	0.40	3.62	0.28	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday" model duration: 13:45 - 15:15
"D7 - 2023 With KFC, AM" model duration: 08:15 - 09:45
"D8 - 2023 With KFC, PM" model duration: 16:30 - 18:00
"D9 - 2023 With KFC, Saturday" model duration: 13:45 - 15:15
"D16 - Baseline With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D17 - Baseline With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D18 - Baseline With KFC & Coffee, Saturday" model duration: 13:45 - 15:15
"D19 - 2024 With KFC & Coffee, AM " model duration: 08:15 - 09:45
"D20 - 2024 With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D21 - 2024 With KFC & Coffee, Saturday" model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 29/05/2019 13:55:04

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - 2024 With KFC & Coffee, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationshi
2024 With KFC & Coffee, AM	2024 With KFC & Coffee	AM		ONE HOUR	08:15	09:45	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.45	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	110.00	100.000
2	ONE HOUR	✓	660.00	100.000
3	ONE HOUR	✓	68.00	100.000
4	ONE HOUR	✓	366.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	65.000	6.000	39.000
	2	139.000	3.000	90.000	428.000
	3	14.000	44.000	0.000	10.000
	4	69.000	259.000	36.000	2.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.59	0.05	0.35
	2	0.21	0.00	0.14	0.65
	3	0.21	0.65	0.00	0.15
	4	0.19	0.71	0.10	0.01

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.11	3.66	0.12	A	100.94	151.41	8.79	3.48	0.10	8.79	3.48
2	0.51	5.22	1.05	A	605.63	908.44	68.40	4.52	0.76	68.40	4.52
3	0.05	2.69	0.06	A	62.40	93.60	3.97	2.54	0.04	3.97	2.54
4	0.28	3.62	0.40	A	335.85	503.77	28.22	3.36	0.31	28.22	3.36

Main Results for each time segment

Main results: (08:15-08:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	82.81	20.70	82.51	166.48	258.11	0.00	1202.51	558.12	0.069	0.00	0.08	3.310	A
2	496.88	124.22	494.76	278.36	62.26	0.00	1454.12	1301.16	0.342	0.00	0.53	3.856	A
3	51.19	12.80	51.06	98.98	458.05	0.00	1597.57	1013.64	0.032	0.00	0.03	2.397	A
4	275.54	68.89	274.60	359.11	150.00	0.00	1467.53	878.21	0.188	0.00	0.24	3.105	A

Main results: (08:30-08:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	98.89	24.72	98.81	199.37	309.02	0.00	1173.13	558.11	0.084	0.08	0.09	3.450	A
2	593.33	148.33	592.61	333.27	74.56	0.00	1446.81	1301.16	0.410	0.53	0.71	4.337	A
3	61.13	15.28	61.10	118.54	548.63	0.00	1536.66	1013.64	0.040	0.03	0.04	2.512	A
4	329.03	82.26	328.77	430.11	179.61	0.00	1449.98	878.21	0.227	0.24	0.30	3.307	A

Main results: (08:45-09:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	121.11	30.28	121.00	244.06	378.38	0.00	1133.09	558.09	0.107	0.09	0.12	3.663	A
2	726.67	181.67	725.35	408.08	91.30	0.00	1436.86	1301.16	0.506	0.71	1.04	5.202	A
3	74.87	18.72	74.82	145.11	671.54	0.00	1454.01	1013.64	0.051	0.04	0.06	2.688	A
4	402.97	100.74	402.56	526.48	219.87	0.00	1426.12	878.21	0.283	0.30	0.40	3.620	A

Main results: (09:00-09:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	121.11	30.28	121.11	244.42	378.75	0.00	1132.87	558.09	0.107	0.12	0.12	3.663	A
2	726.67	181.67	726.65	408.47	91.38	0.00	1436.80	1301.16	0.506	1.04	1.05	5.221	A
3	74.87	18.72	74.87	145.33	672.70	0.00	1453.22	1013.64	0.052	0.06	0.06	2.689	A
4	402.97	100.74	402.97	527.37	220.20	0.00	1425.93	878.21	0.283	0.40	0.40	3.623	A

Main results: (09:15-09:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	98.89	24.72	99.00	199.93	309.62	0.00	1172.78	558.11	0.084	0.12	0.10	3.455	A
2	593.33	148.33	594.63	333.91	74.70	0.00	1446.72	1301.16	0.410	1.05	0.72	4.359	A
3	61.13	15.28	61.18	118.89	550.44	0.00	1535.44	1013.64	0.040	0.06	0.04	2.516	A
4	329.03	82.26	329.43	431.51	180.12	0.00	1449.68	878.21	0.227	0.40	0.30	3.312	A

Main results: (09:30-09:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	82.81	20.70	82.89	167.34	259.22	0.00	1201.87	558.12	0.069	0.10	0.08	3.315	A
2	496.88	124.22	497.62	279.56	62.54	0.00	1453.95	1301.16	0.342	0.72	0.54	3.880	A
3	51.19	12.80	51.23	99.51	460.66	0.00	1595.82	1013.64	0.032	0.04	0.03	2.402	A
4	275.54	68.89	275.80	361.13	150.76	0.00	1467.08	878.21	0.188	0.30	0.24	3.112	A

Queueing Delay Results for each time segment

Queueing Delay results: (08:15-08:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.12	0.07	3.310	A	A
2	7.76	0.52	3.856	A	A
3	0.50	0.03	2.397	A	A
4	3.49	0.23	3.105	A	A

Queueing Delay results: (08:30-08:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.40	0.09	3.450	A	A
2	10.44	0.70	4.337	A	A
3	0.63	0.04	2.512	A	A
4	4.45	0.30	3.307	A	A

Queueing Delay results: (08:45-09:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.82	0.12	3.663	A	A
2	15.19	1.01	5.202	A	A
3	0.83	0.06	2.688	A	A
4	5.95	0.40	3.620	A	A

Queueing Delay results: (09:00-09:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.84	0.12	3.663	A	A
2	15.68	1.05	5.221	A	A
3	0.84	0.06	2.689	A	A
4	6.06	0.40	3.623	A	A

Queueing Delay results: (09:15-09:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.45	0.10	3.455	A	A
2	11.09	0.74	4.359	A	A
3	0.65	0.04	2.516	A	A
4	4.63	0.31	3.312	A	A

Queueing Delay results: (09:30-09:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	1.16	0.08	3.315	A	A
2	8.23	0.55	3.880	A	A
3	0.52	0.03	2.402	A	A
4	3.64	0.24	3.112	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2019

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding Coffee shop.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 29/05/2019 13:56:34

« (Default Analysis Set) - 2024 With KFC & Coffee, PM
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	PM			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2024 With KFC & Coffee			
Arm 1	0.54	5.73	0.35	A
Arm 2	1.03	5.30	0.50	A
Arm 3	0.14	2.98	0.12	A
Arm 4	0.74	4.48	0.42	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday" model duration: 13:45 - 15:15
"D7 - 2023 With KFC, AM" model duration: 08:15 - 09:45
"D8 - 2023 With KFC, PM" model duration: 16:30 - 18:00
"D9 - 2023 With KFC, Saturday" model duration: 13:45 - 15:15
"D16 - Baseline With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D17 - Baseline With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D18 - Baseline With KFC & Coffee, Saturday" model duration: 13:45 - 15:15
"D19 - 2024 With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D20 - 2024 With KFC & Coffee, PM " model duration: 16:30 - 18:00
"D21 - 2024 With KFC & Coffee, Saturday" model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 29/05/2019 13:56:34

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - 2024 With KFC & Coffee, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relationshi
2024 With KFC & Coffee, PM	2024 With KFC & Coffee	PM		ONE HOUR	16:30	18:00	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				4.90	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	310.00	100.000
2	ONE HOUR	✓	636.00	100.000
3	ONE HOUR	✓	150.00	100.000
4	ONE HOUR	✓	540.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	210.000	13.000	87.000
	2	107.000	9.000	53.000	467.000
	3	9.000	80.000	0.000	61.000
	4	58.000	442.000	37.000	3.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.68	0.04	0.28
	2	0.17	0.01	0.08	0.73
	3	0.06	0.53	0.00	0.41
	4	0.11	0.82	0.07	0.01

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.35	5.73	0.54	A	284.46	426.69	35.33	4.97	0.39	35.33	4.97
2	0.50	5.30	1.03	A	583.60	875.41	66.71	4.57	0.74	66.71	4.57
3	0.12	2.98	0.14	A	137.64	206.46	9.52	2.77	0.11	9.52	2.77
4	0.42	4.48	0.74	A	495.51	743.27	49.24	3.97	0.55	49.24	3.97

Main Results for each time segment

Main results: (16:30-16:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	233.38	58.35	232.29	130.46	428.27	0.00	1104.28	489.92	0.211	0.00	0.27	4.247	A
2	478.81	119.70	476.75	555.63	104.93	0.00	1428.75	1350.17	0.335	0.00	0.52	3.886	A
3	112.93	28.23	112.61	77.22	504.46	0.00	1566.36	976.87	0.072	0.00	0.08	2.550	A
4	406.54	101.64	404.97	463.30	153.77	0.00	1465.29	1067.03	0.277	0.00	0.39	3.493	A

Main results: (16:45-17:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	278.68	69.67	278.31	156.25	512.82	0.00	1055.48	489.92	0.264	0.27	0.37	4.769	A
2	571.75	142.94	571.05	665.43	125.70	0.00	1416.40	1350.17	0.404	0.52	0.69	4.382	A
3	134.85	33.71	134.76	92.49	604.26	0.00	1499.25	976.87	0.090	0.08	0.10	2.717	A
4	485.45	121.36	484.96	554.91	184.11	0.00	1447.31	1067.03	0.335	0.39	0.52	3.851	A

Main results: (17:00-17:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	341.32	85.33	340.63	191.26	627.82	0.00	989.10	489.92	0.345	0.37	0.54	5.712	A
2	700.25	175.06	698.94	814.59	153.86	0.00	1399.65	1350.17	0.500	0.69	1.02	5.282	A
3	165.15	41.29	165.01	113.21	739.59	0.00	1408.25	976.87	0.117	0.10	0.14	2.982	A
4	594.55	148.64	593.68	679.21	225.39	0.00	1422.85	1067.03	0.418	0.52	0.73	4.467	A

Main results: (17:15-17:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	341.32	85.33	341.31	191.57	628.67	0.00	988.60	489.92	0.345	0.54	0.54	5.727	A
2	700.25	175.06	700.23	815.84	154.14	0.00	1399.49	1350.17	0.500	1.02	1.03	5.302	A
3	165.15	41.29	165.15	113.40	740.96	0.00	1407.32	976.87	0.117	0.14	0.14	2.984	A
4	594.55	148.64	594.54	680.41	225.70	0.00	1422.67	1067.03	0.418	0.73	0.74	4.477	A

Main results: (17:30-17:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	278.68	69.67	279.36	156.74	514.17	0.00	1054.70	489.92	0.264	0.54	0.37	4.786	A
2	571.75	142.94	573.04	667.39	126.14	0.00	1416.14	1350.17	0.404	1.03	0.70	4.404	A
3	134.85	33.71	134.98	92.79	606.39	0.00	1497.82	976.87	0.090	0.14	0.10	2.722	A
4	485.45	121.36	486.30	556.77	184.61	0.00	1447.02	1067.03	0.335	0.74	0.52	3.864	A

Main results: (17:45-18:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	233.38	58.35	233.76	131.18	430.38	0.00	1103.07	489.92	0.212	0.37	0.28	4.267	A
2	478.81	119.70	479.54	558.59	105.56	0.00	1428.37	1350.17	0.335	0.70	0.52	3.910	A
3	112.93	28.23	113.02	77.65	507.44	0.00	1564.36	976.87	0.072	0.10	0.08	2.554	A
4	406.54	101.64	407.04	465.94	154.52	0.00	1464.85	1067.03	0.278	0.52	0.40	3.506	A

Queueing Delay Results for each time segment

Queueing Delay results: (16:30-16:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.02	0.27	4.247	A	A
2	7.54	0.50	3.886	A	A
3	1.18	0.08	2.550	A	A
4	5.77	0.38	3.493	A	A

Queueing Delay results: (16:45-17:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.40	0.36	4.769	A	A
2	10.16	0.68	4.382	A	A
3	1.51	0.10	2.717	A	A
4	7.61	0.51	3.851	A	A

Queueing Delay results: (17:00-17:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.86	0.52	5.712	A	A
2	14.86	0.99	5.282	A	A
3	2.02	0.13	2.982	A	A
4	10.75	0.72	4.467	A	A

Queueing Delay results: (17:15-17:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	8.09	0.54	5.727	A	A
2	15.35	1.02	5.302	A	A
3	2.05	0.14	2.984	A	A
4	11.03	0.74	4.477	A	A

Queueing Delay results: (17:30-17:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.71	0.38	4.786	A	A
2	10.81	0.72	4.404	A	A
3	1.55	0.10	2.722	A	A
4	8.01	0.53	3.864	A	A

Queueing Delay results: (17:45-18:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	4.25	0.28	4.267	A	A
2	7.99	0.53	3.910	A	A
3	1.22	0.08	2.554	A	A
4	6.07	0.40	3.506	A	A

Junctions 8

ARCADY 8 - Roundabout Module

Version: 8.0.4.487 [15039,24/03/2014]
© Copyright TRL Limited, 2019

For sales and distribution information, program advice and maintenance, contact TRL:
Tel: +44 (0)1344 770758 email: software@trl.co.uk Web: http://www.trlsoftware.co.uk

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

Filename: JUNCTIONS - Spalding Coffee shop.arc8
Path: P:\RGP\2018 Projects (4401-4500)\4487 Land at A151A6, Spalding\Technical Assessments\Junction Modelling
Report generation date: 29/05/2019 13:58:00

« (Default Analysis Set) - 2024 With KFC & Coffee, Saturday
» Junction Network
» Arms
» Traffic Flows
» Entry Flows
» Turning Proportions
» Vehicle Mix
» Results

Summary of junction performance

	Saturday			
	Queue (PCU)	Delay (s)	RFC	LOS
	A1 - 2024 With KFC & Coffee			
Arm 1	0.69	5.74	0.40	A
Arm 2	1.72	7.05	0.63	A
Arm 3	0.08	3.13	0.07	A
Arm 4	0.69	4.61	0.40	A

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

"D1 - Baseline, AM" model duration: 08:15 - 09:45
"D2 - Baseline, PM" model duration: 16:30 - 18:00
"D3 - Baseline, Saturday" model duration: 13:45 - 15:15
"D4 - With KFC, AM" model duration: 08:15 - 09:45
"D5 - With KFC, PM" model duration: 16:30 - 18:00
"D6 - With KFC, Saturday" model duration: 13:45 - 15:15
"D7 - 2023 With KFC, AM" model duration: 08:15 - 09:45
"D8 - 2023 With KFC, PM" model duration: 16:30 - 18:00
"D9 - 2023 With KFC, Saturday" model duration: 13:45 - 15:15
"D16 - Baseline With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D17 - Baseline With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D18 - Baseline With KFC & Coffee, Saturday" model duration: 13:45 - 15:15
"D19 - 2024 With KFC & Coffee, AM" model duration: 08:15 - 09:45
"D20 - 2024 With KFC & Coffee, PM" model duration: 16:30 - 18:00
"D21 - 2024 With KFC & Coffee, Saturday " model duration: 13:45 - 15:15

Run using Junctions 8.0.4.487 at 29/05/2019 13:57:59

File summary

Title	(untitled)
Location	
Site Number	
Date	15/10/2018
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	remotepc
Description	

Analysis Options

Vehicle Length (m)	Do Queue Variations	Calculate Residual Capacity	Residual Capacity Criteria Type	RFC Threshold	Average Delay Threshold (s)	Queue Threshold (PCU)
5.75			N/A	0.85	36.00	20.00

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

(Default Analysis Set) - 2024 With KFC & Coffee, Saturday

Data Errors and Warnings

No errors or warnings

Analysis Set Details

Name	Roundabout Capacity Model	Description	Include In Report	Use Specific Demand Set(s)	Specific Demand Set (s)	Locked	Network Flow Scaling Factor (%)	Network Capacity Scaling Factor (%)	Reason For Scaling Factors
(Default Analysis Set)	ARCADY		✓				100.000	100.000	

Demand Set Details

Name	Scenario Name	Time Period Name	Description	Traffic Profile Type	Model Start Time (HH:mm)	Model Finish Time (HH:mm)	Model Time Period Length (min)	Time Segment Length (min)	Results For Central Hour Only	Single Time Segment Only	Locked	Run Automatically	Use Relationship	Relatio
2024 With KFC & Coffee, Saturday	2024 With KFC & Coffee	Saturday		ONE HOUR	13:45	15:15	90	15				✓		

Junction Network

Junctions

Junction	Name	Junction Type	Arm Order	Grade Separated	Large Roundabout	Do Geometric Delay	Junction Delay (s)	Junction LOS
1	(untitled)	Roundabout	1,2,3,4				5.90	A

Junction Network Options

Driving Side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Arm	Name	Description
1	1	Camel Gate	
2	2	A151 (E)	
3	3	Fulney Ln N	
4	4	A151 (W)	

Capacity Options

Arm	Minimum Capacity (PCU/hr)	Maximum Capacity (PCU/hr)	Assume Flat Start Profile	Initial Queue (PCU)
1	0.00	99999.00		0.00
2	0.00	99999.00		0.00
3	0.00	99999.00		0.00
4	0.00	99999.00		0.00

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	l' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit Only
1	3.00	5.50	10.00	30.00	40.00	30.00	
2	4.00	5.50	10.00	30.00	40.00	40.00	
3	5.00	7.00	20.00	20.00	40.00	40.00	
4	4.50	6.00	10.00	15.00	40.00	45.00	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Enter slope and intercept directly	Entered slope	Entered intercept (PCU/hr)	Final Slope	Final Intercept (PCU/hr)
1		(calculated)	(calculated)	0.577	1351.510
2		(calculated)	(calculated)	0.595	1491.143
3		(calculated)	(calculated)	0.672	1905.590
4		(calculated)	(calculated)	0.593	1556.409

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

Traffic Flows

Demand Set Data Options

Default Vehicle Mix	Vehicle Mix Varies Over Time	Vehicle Mix Varies Over Turn	Vehicle Mix Varies Over Entry	Vehicle Mix Source	PCU Factor for a HV (PCU)	Default Turning Proportions	Estimate from entry/exit counts	Turning Proportions Vary Over Time	Turning Proportions Vary Over Turn	Turning Proportions Vary Over Entry
				HV Percentages	2.00				✓	✓

Entry Flows

General Flows Data

Arm	Profile Type	Use Turning Counts	Average Demand Flow (PCU/hr)	Flow Scaling Factor (%)
1	ONE HOUR	✓	393.00	100.000
2	ONE HOUR	✓	804.00	100.000
3	ONE HOUR	✓	85.00	100.000
4	ONE HOUR	✓	494.00	100.000

Turning Proportions

Turning Counts / Proportions (PCU/hr) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.000	288.000	11.000	94.000
	2	272.000	8.000	53.000	471.000
	3	9.000	31.000	0.000	45.000
	4	104.000	372.000	16.000	2.000

Turning Proportions (PCU) - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	0.00	0.73	0.03	0.24
	2	0.34	0.01	0.07	0.59
	3	0.11	0.36	0.00	0.53
	4	0.21	0.75	0.03	0.00

Vehicle Mix

Average PCU Per Vehicle - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	1.030	1.030	1.030	1.030
	2	1.030	1.030	1.030	1.030
	3	1.030	1.030	1.030	1.030
	4	1.030	1.030	1.030	1.030

Heavy Vehicle Percentages - Junction 1 (for whole period)

		To			
		1	2	3	4
From	1	3.0	3.0	3.0	3.0
	2	3.0	3.0	3.0	3.0
	3	3.0	3.0	3.0	3.0
	4	3.0	3.0	3.0	3.0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (PCU)	Max LOS	Average Demand (PCU/hr)	Total Junction Arrivals (PCU)	Total Queueing Delay (PCU-min)	Average Queueing Delay (s)	Rate Of Queueing Delay (PCU-min/min)	Inclusive Total Queueing Delay (PCU-min)	Inclusive Average Queueing Delay (s)
1	0.40	5.74	0.69	A	360.62	540.94	44.82	4.97	0.50	44.83	4.97
2	0.63	7.05	1.72	A	737.76	1106.65	104.43	5.66	1.16	104.44	5.66
3	0.07	3.13	0.08	A	78.00	117.00	5.61	2.88	0.06	5.61	2.88
4	0.40	4.61	0.69	A	453.30	679.95	46.11	4.07	0.51	46.12	4.07

Main Results for each time segment

Main results: (13:45-14:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	295.87	73.97	294.48	288.51	321.72	0.00	1165.79	684.04	0.254	0.00	0.35	4.248	A
2	605.29	151.32	602.32	524.03	92.18	0.00	1436.33	1360.50	0.421	0.00	0.74	4.430	A
3	63.99	16.00	63.81	59.95	634.55	0.00	1478.88	938.24	0.043	0.00	0.05	2.620	A
4	371.91	92.98	370.45	458.57	239.79	0.00	1414.32	1014.02	0.263	0.00	0.37	3.547	A

Main results: (14:00-14:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	353.30	88.32	352.83	345.59	385.26	0.00	1129.11	684.04	0.313	0.35	0.47	4.773	A
2	722.78	180.69	721.57	627.66	110.43	0.00	1425.48	1360.50	0.507	0.74	1.05	5.259	A
3	76.41	19.10	76.36	71.81	760.19	0.00	1394.39	938.24	0.055	0.05	0.06	2.812	A
4	444.10	111.02	443.63	549.32	287.23	0.00	1386.21	1014.02	0.320	0.37	0.48	3.932	A

Main results: (14:15-14:30)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	432.70	108.18	431.83	422.82	471.62	0.00	1079.26	684.04	0.401	0.47	0.68	5.720	A
2	885.22	221.31	882.61	768.29	135.16	0.00	1410.77	1360.50	0.627	1.05	1.70	6.985	A
3	93.59	23.40	93.50	87.86	929.91	0.00	1280.26	938.24	0.073	0.06	0.08	3.123	A
4	543.90	135.98	543.07	672.04	351.38	0.00	1348.20	1014.02	0.403	0.48	0.69	4.600	A

Main results: (14:30-14:45)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	432.70	108.18	432.69	423.87	472.33	0.00	1078.85	684.04	0.401	0.68	0.69	5.737	A
2	885.22	221.31	885.15	769.59	135.42	0.00	1410.62	1360.50	0.628	1.70	1.72	7.053	A
3	93.59	23.40	93.59	88.08	932.50	0.00	1278.52	938.24	0.073	0.08	0.08	3.128	A
4	543.90	135.98	543.89	673.78	352.30	0.00	1347.65	1014.02	0.404	0.69	0.69	4.613	A

Main results: (14:45-15:00)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	353.30	88.32	354.15	347.16	386.37	0.00	1128.48	684.04	0.313	0.69	0.47	4.795	A
2	722.78	180.69	725.36	629.68	110.83	0.00	1425.24	1360.50	0.507	1.72	1.07	5.316	A
3	76.41	19.10	76.50	72.14	764.05	0.00	1391.79	938.24	0.055	0.08	0.06	2.818	A
4	444.10	111.02	444.92	551.94	288.61	0.00	1385.39	1014.02	0.321	0.69	0.49	3.947	A

Main results: (15:00-15:15)

Arm	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Entry Flow (PCU/hr)	Exit Flow (PCU/hr)	Circulating Flow (PCU/hr)	Pedestrian Demand (Ped/hr)	Capacity (PCU/hr)	Saturation Capacity (PCU/hr)	RFC	Start Queue (PCU)	End Queue (PCU)	Delay (s)	LOS
1	295.87	73.97	296.35	290.38	323.38	0.00	1164.83	684.04	0.254	0.47	0.35	4.271	A
2	605.29	151.32	606.55	526.99	92.75	0.00	1435.99	1360.50	0.422	1.07	0.76	4.478	A
3	63.99	16.00	64.05	60.34	638.96	0.00	1475.91	938.24	0.043	0.06	0.05	2.627	A
4	371.91	92.98	372.39	461.63	241.38	0.00	1413.38	1014.02	0.263	0.49	0.37	3.562	A

Queueing Delay Results for each time segment

Queueing Delay results: (13:45-14:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.09	0.34	4.248	A	A
2	10.81	0.72	4.430	A	A
3	0.69	0.05	2.620	A	A
4	5.36	0.36	3.547	A	A

Queueing Delay results: (14:00-14:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	6.84	0.46	4.773	A	A
2	15.28	1.02	5.259	A	A
3	0.88	0.06	2.812	A	A
4	7.11	0.47	3.932	A	A

Queueing Delay results: (14:15-14:30)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	9.96	0.66	5.720	A	A
2	24.41	1.63	6.985	A	A
3	1.20	0.08	3.123	A	A
4	10.13	0.68	4.600	A	A

Queueing Delay results: (14:30-14:45)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	10.27	0.68	5.737	A	A
2	25.66	1.71	7.053	A	A
3	1.22	0.08	3.128	A	A
4	10.39	0.69	4.613	A	A

Queueing Delay results: (14:45-15:00)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	7.26	0.48	4.795	A	A
2	16.63	1.11	5.316	A	A
3	0.91	0.06	2.818	A	A
4	7.49	0.50	3.947	A	A

Queueing Delay results: (15:00-15:15)

Arm	Queueing Total Delay (PCU-min)	Queueing Rate Of Delay (PCU-min/min)	Average Delay Per Arriving Vehicle (s)	Unsignalised Level Of Service	Signalised Level Of Service
1	5.39	0.36	4.271	A	A
2	11.63	0.78	4.478	A	A
3	0.71	0.05	2.627	A	A
4	5.64	0.38	3.562	A	A