

Transport Statement

Crossbush Services, Arundel

10 September 2021

Prepared for

Rontec Service Stations 1A Ltd.

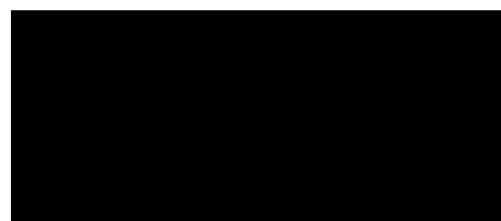


Prepared for:

Rontec Service Stations 1A Ltd.

Prepared by:

Markides Associates
2nd Floor, The Bridge
73 – 81 Southwark Bridge Road
London SE1 0NQ
United Kingdom



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A	Draft for Comment	SEC	DJT	JB	DJT	20/08/2021
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21220-MA-XX-XX-DR-C-7020 SPA-7.5T – Delivery Bay Swept Path

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1. Introduction

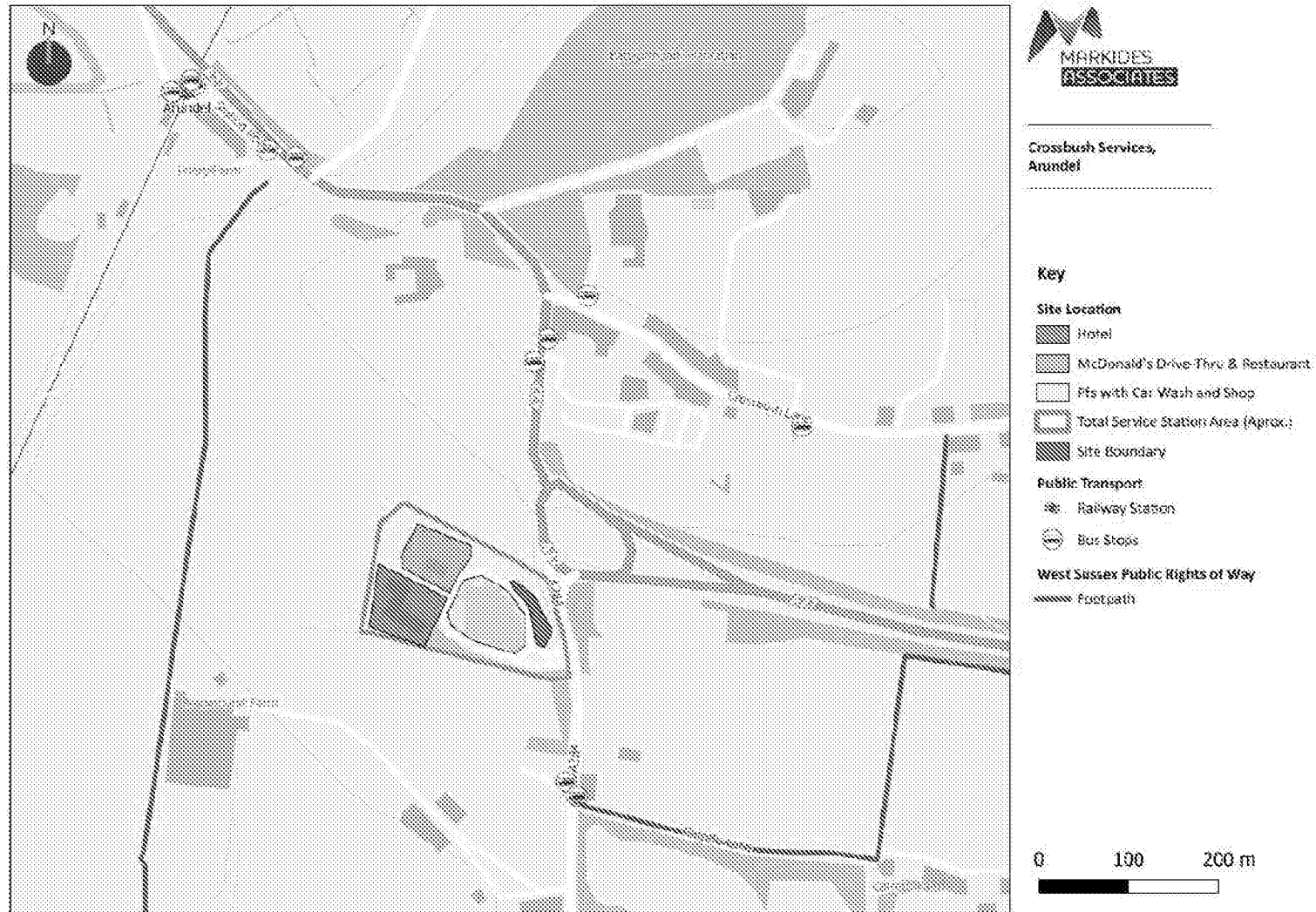
1.1 Purpose of the Report

- 1.1.1 Markides Associates (MA) have been instructed by Rontec Service Stations 1A Ltd. to prepare this Transport Statement in support of an application for a new 30sqm coffee shop Kiosk drive thru to be located at the Crossbush services, Lyminster Road, Lyminster, Littlehampton BN17 7QQ ('the site'). The site falls within the authority area of West Sussex County Council (WSCC), as highway authority, and Arun District Council (ADC) who are the planning authority.
- 1.1.2 The site is located within the wider boundary of the services and is immediately south of the Crossbush Roundabout where the A27 and A284 join, some 2km to the southeast of Arundel centre. The services are accessed from the A284 Lyminster Road via a one-way access loop which serves the existing commercial outlets, including a Comfort Inn, a McDonald's drive-thru and a BP petrol filling station (PFS) with associated car wash and shop. There is an existing Costa Express and a Subway within the BP PFS shop.
- 1.1.3 A plan showing the site in the context of the local highway and Crossbush services is provided as **Figure 1.1** overleaf.

1.2 Structure of the Report

- 1.2.1 The remainder of this report is structured as follows:
- ❖ Section 2 – Site and Proposals
 - ❖ Section 3 – Impact of Development
 - ❖ Section 4 – Summary and Conclusions

Figure 1.1 Site Context



2. Site and Proposals

2.1 Site Use and Context

- 2.1.1 The site of the proposed Drive Thru is currently occupied by scrub woodland on the edge of the service station area, north of the egress loop and adjacent to the PFS. A plan showing the site location and local roads in more detail is included as **Figure 2.1** below.

Figure 2.1 Site Location Plan



2.2 Access and Local Highway

- 2.2.1 Pedestrian access to the site is limited owing to the nature of the services as a series of drive-thru facilities outside of any settlement and adjacent to the strategic highway. From the site access, the footways do however connect to bus stops adjacent to the Beefeater to the north of the Crossbush Services, a 4-minute walk from the site. The stops are served by the number 9 and 69 bus routes, providing access to Worthing, Holmbush and Littlehampton.
- 2.2.2 The A284 Lyminster Road connects the Crossbush Roundabout adjacent to the site with the A259 at Wick to the south and continues into Littlehampton. It is a single-carriageway road subject to a 40mph speed limit.
- 2.2.3 Crossbush Roundabout is the complex junction of the A27 and the A284. The A284 forms the southern arm, with the dualled section of the A27 Arundel Road forming the eastern arms and the single-carriageway section of the A27 The Causeway forming the northern arm. Each arm has separate lanes for traffic entering and exiting the gyratory. The access to the Crossbush Services is located some 100m south of the gyratory on the A284, as shown in **Photo 2.1** below.

Photo 2.1 Access to Crossbush Services/A284



- 2.2.4 A review of Google Traffic conditions indicates congestion at the Crossbush Roundabout. Observations during a site visit noted that the signals on the approach to the roundabout on the A284 Lyminster Road arm (northbound) generates a steady level of queueing. However, queuing was not observed on the access itself, beyond 1 or 2 vehicles at a time for egress, and the internal access loop was free flowing at all times. Observations also noted a steady turnover of vehicles at both the PFS and the McDonald's drive-thru but minimal to no queuing either within the PFS forecourt or the drive-thru loop.
- 2.2.5 Currently the Crossbush Services also supports access to a highway maintenance and construction compound located on the western side of the A284 and Crossbush Roundabout. In this area, surveys are being undertaken as part of investigation works on the preferred route of the proposed A27 Arundel Bypass. The compound is shown in **Photo 2.2** overleaf.

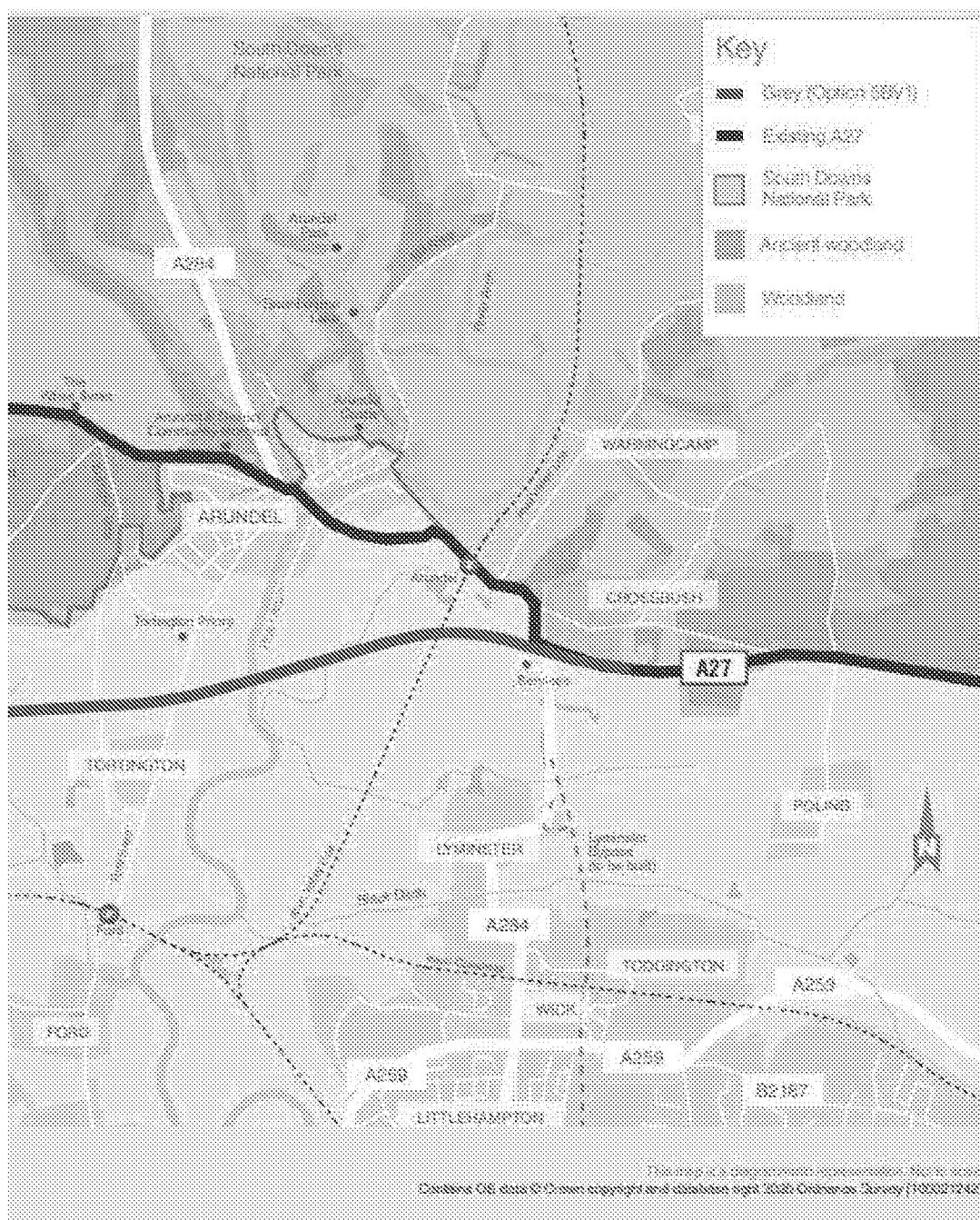
Photo 2.2 Survey Compound



- 2.2.6 The surveys are expected to be concluded by winter 2021 and are unlikely to overlap with any construction works generated by the site should the scheme be implemented. The above compound may therefore be emptied and subject to agreement with the landowner (assumed to be HE) there is the opportunity to reuse this as construction compound for the site if required. The preferred route was announced in October 2020¹ and is identified as Option 5BV1. It will pass immediately north of, but outside the boundary of, the Crossbush Services and the proposed drive-thru kiosk. The route is shown in **Figure 2.2**.

¹ https://highwaysengland.citizenspace.com/he/a27-arundel-bypass-preferred-route-announcement/supporting_documents/GFD20_0090%20Arundel%20A27%20Bypass%20Consultation_PRA%20October%202020%20PRINT.pdf

Figure 2.2 Option 5BV1 – A27 Arundel Bypass



A27 Arundel Bypass Preferred Route Announcement Brochure -- Highways England

- 2.2.7 Construction of the new bypass is not expected to commence until 2023/2024 and would not complete for some years thereafter. It is expected that if implemented, the proposed kiosk would be built and operational by that point and there would be no overlap or conflict of access for that purpose. The exact programme of the scheme is not yet known, but the announcement brochure presented by Highways England states an expectation that the examination by the Planning Inspectorate will commence following surveys concluding winter 2021 and a decision will be issued at some point in 2022. At the time of writing, the preliminary design stage has not yet been completed.

- 2.2.8 It is additionally not yet known how or if the new bypass will tie into the existing Crossbush Service Area. Regardless, the proposals are for very small-scale development and are negligible in the wider context.

2.3 Proposals

- 2.3.1 The proposals are for a 30sqm coffee shop drive-thru kiosk with no customer or direct non-staff pedestrian access. The offer will be supplementary to uses already on-site and is therefore unlikely to generate any significant number of trips in its own right, with customers already visiting the services to use the PFS or other facilities. The existing and proposed layouts are included as **Appendix A**.
- 2.3.2 Based on an understanding of other coffee shop kiosks, the operations are likely to require 5 x full time employees or equivalent, with hours of operation like to be 05:30-22:00 daily.

Access

- 2.3.3 A new drive-thru loop will be created from the existing Crossbush Services Access Loop for customers accessing the kiosk. As previously mentioned, no seating will be provided and no customer access to the kiosk excepting by vehicle. A waiting bay will be provided on the eastern side of the kiosk, and a new delivery bay on the western side, accessible from the existing access loop. This will be reserved for delivery vehicles needing to access the kiosk and suitable for standard delivery vehicles.
- 2.3.4 Swept path analysis of the new drive-thru loop, waiting bay, and proposed delivery bay has been undertaken and is included as follows:
- ✱ 21220-MA-XX-XX-DR-C-7000 SPA-LC – Large Car Swept Path
 - ✱ 21220-MA-XX-XX-DR-C-7020 SPA-7.5T – Delivery Bay Swept Path
- 2.3.5 Vehicle speeds will be low and generally not in excess of 10mph. Visibility splays at the egress can be achieved, as shown in **Drawing 21220-MA-XX-XX-DR-C-7000 SPA-LC**.

3. Impact of Development

3.1 Trip Generation

- 3.1.1 Coffee shop Kiosks, being small in nature and having no seating, are generally not trip generators in their own right but an ancillary offer to existing services or attract visits from traffic passing the site as part of another trip. On that basis, it is not expected that the proposals will generate a noticeable level of new trips.
- 3.1.2 The Kiosk style is also a relatively new drive-thru offer and is not yet well represented on the TRICS database; there are 2 survey days for relevant drive-thrus within the database, both of which undertaken during the COVID pandemic and therefore may be skewed. A summary of these sites is provided in **Table 3.1**

Table 3.1 TRICS Summary Compared to Scheme Proposed

Ref	PROPOSED SCHEME	TRICS BD-06-J-01/01	TRICS SF-06-J-01
Location	Crossbush Services	Riley Way, Kempston, Bedford MK42 7GB	Thorney Way, Stowmarket, IP14 5XF
Day of Survey	N/A	Saturday	Weekday
Size	30sqm	213 sqm	200sqm
Seats	0	28	48
Full-Time Employees (FTE)	5	5	8
Survey during Lockdown	N/A	Yes	Yes
Direct Motorway Access	No	No	No
Dedicated Parking	No	Yes	Yes
Context	Adjacent to McDonald's Drive-thru and PFS with shop and Costa Express	Adjacent to M&S foodhall and large car dealers. Within 500m of additional Costa Takeaway, KFC, Burger King, McDonalds Drive Thrus and large retail park	Adjacent to McDonald's Drive-thru and PFS, plus near to Tesco Superstore with Costa Coffee outlet inside

- 3.1.3 As shown in the table above, both survey sites are only roughly comparable to the proposals, both being larger stores which offer customer access and seating yet situated in contexts with similar levels of competition and access to the strategic highway but not a motorway. One captures weekend trips and the other weekday trips. The survey data is provided in **Appendix B** along with TRICS outputs. The trip rates have been extracted for parameters for

Full Time Employee (FTE) and for floor area. This is to provide a robust comparison, as the number of employees required gives a better indication of expected turnover than the floor area alone, particularly considering the site will not have any customer accessible floor space

3.1.4 The trip rates are summarised in **Table 3.3**.

Table 3.2 TRICS Trip Rates by Site

TRICS BD-06-J-01/01 - Saturday						
Total Vehicle Trip Rate	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Actual Surveyed Flows	27	27	54	6	13	19
Per 100sqm	12.68	12.68	25.35	7.04	7.51	14.55
Per FTE	3.38	3.38	6.75	1.88	2.00	3.88
TRICS SF-06-J-01 - Weekday						
Total Vehicle Trip Rate	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Actual Surveyed Flows	69	61	130	29	37	66
Per 100sqm	34.50	30.50	65.00	14.50	18.50	33.00
Per FTE	3.29	2.91	6.19	1.38	1.76	3.14

3.1.5 The trip generation of the proposed 30sqm/5 FTE kiosk has been calculated and is given below in **Table 3.3**.

Table 3.3 Trip Generation 30sqm kiosk

Saturday						
Total Vehicle Trip Generation	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Per 100sqm	4	4	8	2	2	4
Per FTE	17	17	34	9	10	19
Weekday						
Total Vehicle Trip Generation	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Per 100sqm	10	9	20	4	6	10
Per FTE	16	15	31	7	9	16

- 3.1.6 As shown in the table above, the FTE trip rate gives the more robust results, suggesting 31 two-way vehicle trips in the AM peak and 16 in the PM Peak.
- 3.1.7 In addition, an examination of recent coffee shop drive-thru applications has been undertaken, to identify sites in similar contexts which have achieved planning approval, and which had planning documents available to view on the relevant authority's planning portal. Three schemes were identified, which are summarised in **Table 3.4**.

Table 3.4 Summary of other Kiosk or Drive-thru Applications

Reference	Location	Type	Comments
24/17/00020	Betty's Lane, Cannock, WS119UX Sedgemoor District Council	Drive-thru kiosk and associated roadworks	Built on verge adjacent to circulation road 37sqm kiosk TS not required No objection from HE.
2017/1318	Clackett Lane Services, Westerham, TN16 3ER Tandridge District Council	Drive-thru kiosk and associated vehicle/pedestrian works	TS not required No objection from HE, subject to condition for access to the main carpark due to proximity of motorway
S.18/0104/FUL	Plot G Sperry Way, Stonehouse, GL10 3UT Stroud District Council/ Gloucestershire County Council	196sqm coffee shop with drive- thru and 42 car parking spaces for neighbouring employment use	Transport Assessment (TA) provided Accessed from A419 Customer access and seating provided In conjunction with development of new business park

- 3.1.8 As shown in the table above, 3 recent approvals have been identified, of which 2 are kiosks. Neither required a TS and neither raised objection on highways ground from either the local authority concerned or from Highways England. Only the larger drive-thru site (Sperry Way) has a detailed TA with a trip generation assessment; this has been referred to but it should be noted that the site is not directly comparable to the proposals. The Sperry Way site TA utilised bespoke surveys of other drive-thru coffee shops, applying these as an average. These are given in **Table 3.5** below and the full TA is included as **Appendix C**.
- 3.1.9 Trips have been split by an assumed rate of pass-by, linked and primary trips, which is considered acceptable for drive-through uses near to other facilities and evidenced by the bespoke surveys undertaken as part of that TA.

Table 3.5 Sperry Way Site – Trip Rates

Average Vehicle Trip Rate per 100sqm	AM Peak (08:00-09:00)				PM Peak (17:00-18:00)			
	In	Out	Total	Max Queue	In	Out	Total	Max Queue
Total (100%)	25.51	22.11	47.62	3	11.22	12.75	23.97	1
Pass-by (70%)	17.86	15.48	33.33		7.85	8.93	16.78	
Linked (20%)	5.10	4.42	9.52		2.24	2.55	4.79	
Primary (10%)	2.55	2.21	4.76		1.12	1.28	2.40	

- 3.1.10 Again, these are based on floor area, and when applied to the proposals, generate a low level of trips as demonstrated in **Table 3.6**. It was noted that the 196sqm facility at Sperry Way generated a total of 93 trips in the AM peak and 47 in the PM peak.

Table 3.6 Trip Generation based on Sperry Way Trip Rates

Average Vehicle Trip Rate per 100sqm	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Total (100%)	8	7	14	3	4	7
Pass-by (70%)	5	5	10	2	3	5
Linked (20%)	2	1	3	1	1	1
Primary (10%)	1	1	1	0	0	1

- 3.1.11 On that basis, a more robust method has been applied. The FTE-based TRICS Trip rates have been applied to the split of pass-by, Linked and Primary trips as per the Sperry Way assessment, and the results are given in **Table 3.7**. Due to the size of the kiosk and level of competition adjacent, the 10% attribution of primary trips is considered high and the assessment robust.

Table 3.7 Trip Generation 30sqm kiosk by Trip Type

Total Vehicle Trip Generation by FTE	Saturday					
	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Total (100%)	17	17	34	9	10	19
Pass-by (70%)	12	12	24	7	7	14
Linked (20%)	3	3	7	2	2	4
Primary (10%)	2	2	3	1	1	2
Total Vehicle Trip Generation by FTE	Weekday					
	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	In	Out	Total	In	Out	Total
Total (100%)	16	15	31	7	9	16
Pass-by (70%)	12	10	22	5	6	11
Linked (20%)	3	3	6	1	2	3
Primary (10%)	2	1	3	1	1	2

- 3.1.12 As shown in the table above, the site may generate some 31 trips in the AM peak in total, of which 1-2 vehicles would primary trips. In the PM peak, there would be a total of 16 two-way movements, with 1 primary trip. This level of trips is not considered significant and would not pose any impact on the local highway.

3.2 Vehicle Accumulation

- 3.2.1 For a robust assessment the accumulation of the TRICS Surveyed sites has been extracted and applied directly to the site as a worst-case scenario without any other factoring. These are summarised in **Table 3.8**.

Table 3.8 Vehicle Accumulation – TRICS Sites

Day	Saturday		Weekday	
Time	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Accumulated Veh.	5	9	19	8
As percentage of total trips per peak	9%	29%	15%	12%

- 3.2.2 The percentages above give an idea of average speed of order and dwell time – despite a lower number of trips in the PM Saturday peak (31 compared to weekday PM of 66), more

vehicles accumulate if customers have a 'take your time' attitude. These percentages have been applied to the trip generation in **Table 3.7** above and the results given in **Table 3.9**.

Table 3.9 Vehicle Accumulation – Proposed Kiosk

Day	Saturday		Weekday	
Time	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)	AM Peak (08:00-09:00)	PM Peak (17:00-18:00)
Total Flows	34	19	31	16
As percentage of total trips per peak	9%	29%	15%	12%
Accumulated Veh.	3	6	5	2

- 3.2.3 As demonstrated above, the likely accumulation based on the trip assessment is some 6 vehicles at most. There is some 350m of internal loop road within the service area and the proposed new drive-thru loop will be able to accommodate 6 vehicles as shown in **Drawing 21220-MA-XX-XX-DR-C-7000 SPA-LC**.

3.3 Delivery and Servicing Movements

- 3.3.1 Delivery movements are expected to occur well in advance of the AM peak at around 05:30-06:30 or during the inter-peak period, with a maximum of 4 deliveries in a single day for beverage, food and other materials (e.g., cleaning supplies). Average loading times are expected to be no more than 20 minutes. Refuse collection in the worst case will be undertaken daily.

4. Summary and Conclusions

4.1 Summary

- 4.1.1 Markides Associates (MA) have been instructed by Rontec Service Stations 1A Ltd. to prepare this Transport Statement in support of an application for a new 30sqm coffee shop kiosk drive thru located at the Crossbush services, within the authority area of West Sussex County Council (WSCC), who are the highway authority, and Arun District Council (ADC) who are the planning authority.
- 4.1.2 The proposals are for a 30sqm drive-thru kiosk with no customer or direct non-staff pedestrian access. The offer will be supplementary to uses already on-site and is unlikely to generate any significant number of new trips, with most customers already visiting the services to use the PFS or other facilities. A trip generation assessment indicates that the proposals would not generate significant traffic or result in an impact on the strategic highway. Even assuming a worst case in which the level of trips is assumed to be exactly as per the surveyed TRICS sites, there would be a maximum of 130 trips in any peak hour (Weekday AM) and a maximum accumulation of 19 vehicles. This is considered unlikely given the scale of development proposed and can be accommodated within the service area.
- 4.1.3 A new delivery bay will be provided which will serve the new kiosk, with an expected maximum of 4 trips per day for that purpose, undertaken in small box vans plus one refuse vehicle movement.
- 4.1.4 Swept Path analysis has been undertaken for the new drive-thru loop and delivery bay, which demonstrates that the proposals are fit for purpose. The new loop can accommodate the expected level of queuing and supplies a waiting bay for customers. Visibility at the egress is achievable and traffic speeds will be low at 10mph.
- 4.1.5 On that basis, the proposals should be considered acceptable in highways and transport terms.

FIGURES

Figure 1.1	Site Context
Figure 2.1	Site Location Plan
Figure 2.2	Option 5BV1 – A27 Arundel Bypass

Crossbush Services, Arundel

Key

Site Location

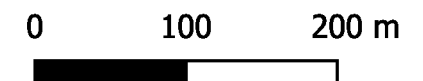
-  Hotel
-  McDonald's Drive-Thru & Restaurant
-  Pfs with Car Wash and Shop
-  Total Service Station Area (Aprox.)
-  Site Boundary

Public Transport

-  Railway Station
-  Bus Stops

West Sussex Public Rights of Way

-  Footpath





Site Location Plan

Crossbush Services, Arundel

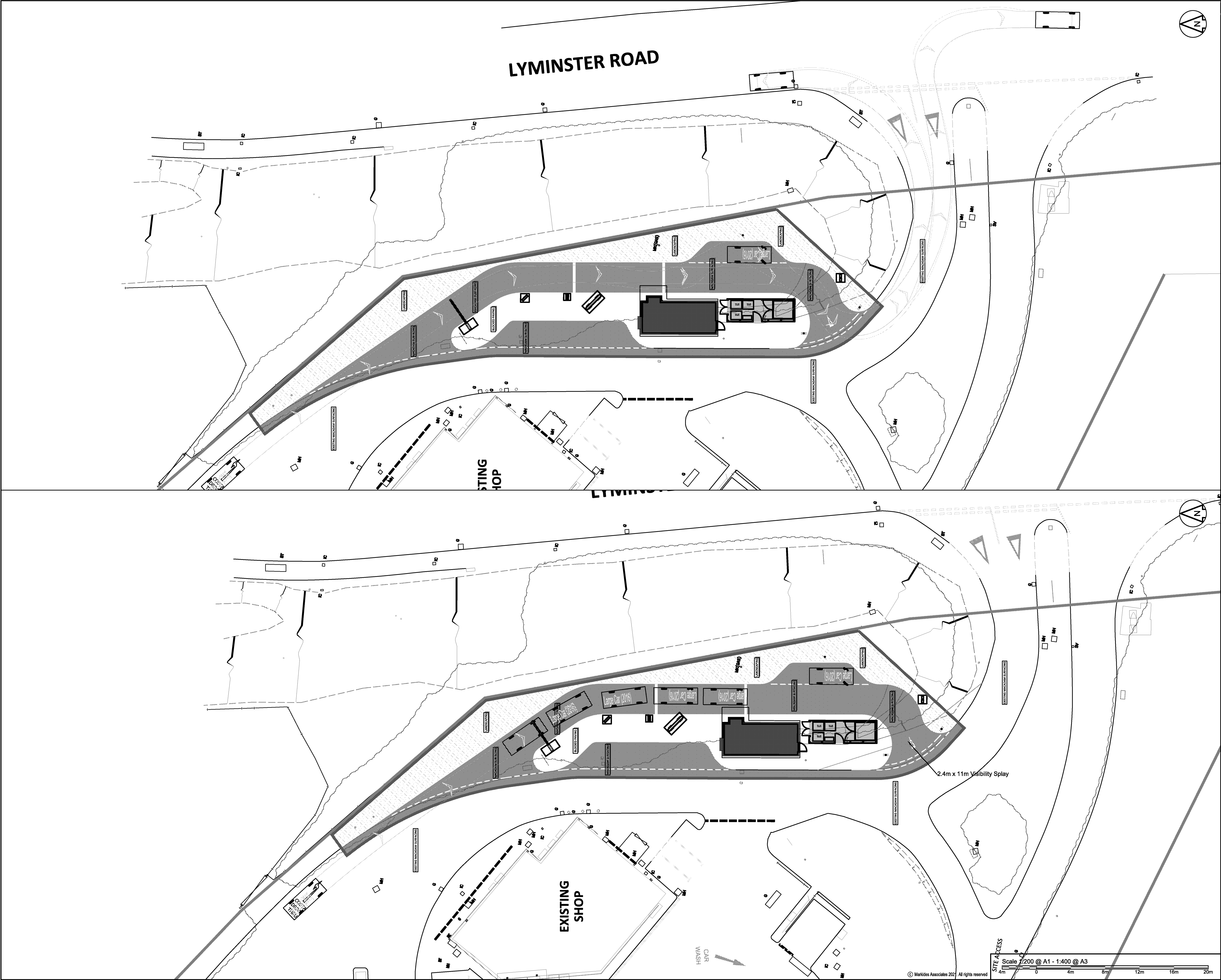
Key

- Proposed Drive-thru Location
- Existing Pfs, car wash & shop
- Existing hotel
- Existing McDonald's Drive-thru
- Proposed 1-way routing for new Drive-thru
- Vehicle Access Blocked
- Access

DRAWINGS

21220-MA-XX-XX-DR-C-7000 SPA-LC – Large Car Swept Path

21220-MA-XX-XX-DR-C-7020 SPA-7.5T – Delivery Bay Swept Path



DO NOT SCALE OFF THIS DRAWING

KEY:

- Existing layout
- Vehicle Wheel Outline
- Vehicle Body Outline

Vehicle Forward Speed: 5km/h
Vehicle Reverse Speed: 2.5km/h
No dry steering has been used.

5.116

0.388 3.035

Large Car (2016)

Overall Length 5.116m

Overall Width 1.899m

Overall Body Height 1.526m

Min Body Ground Clearance 0.311m

Track Width 1.834m

Lock to lock time 4.00s

Kerb to Kerb Turning Radius 6.150m

Revision History						
Rev	Comment	By	Chkd	Appr	Date	
P01	FOR INFORMATION	LB	SC	JB	09.08.21	

Current Revision						
Rev	Comment	By	Chkd	Appr	Date	
P01	FOR INFORMATION	LB	SC	JB	09.08.21	

S2 - FOR INFORMATION

TBC

4th floor

The Bridge

73-81 Southwell Bridge Road

Souths, S1 1LQ

Telephone: 0207 442 2225

E: enquiries@markidesassociates.co.uk

W: www.markidesassociates.co.uk

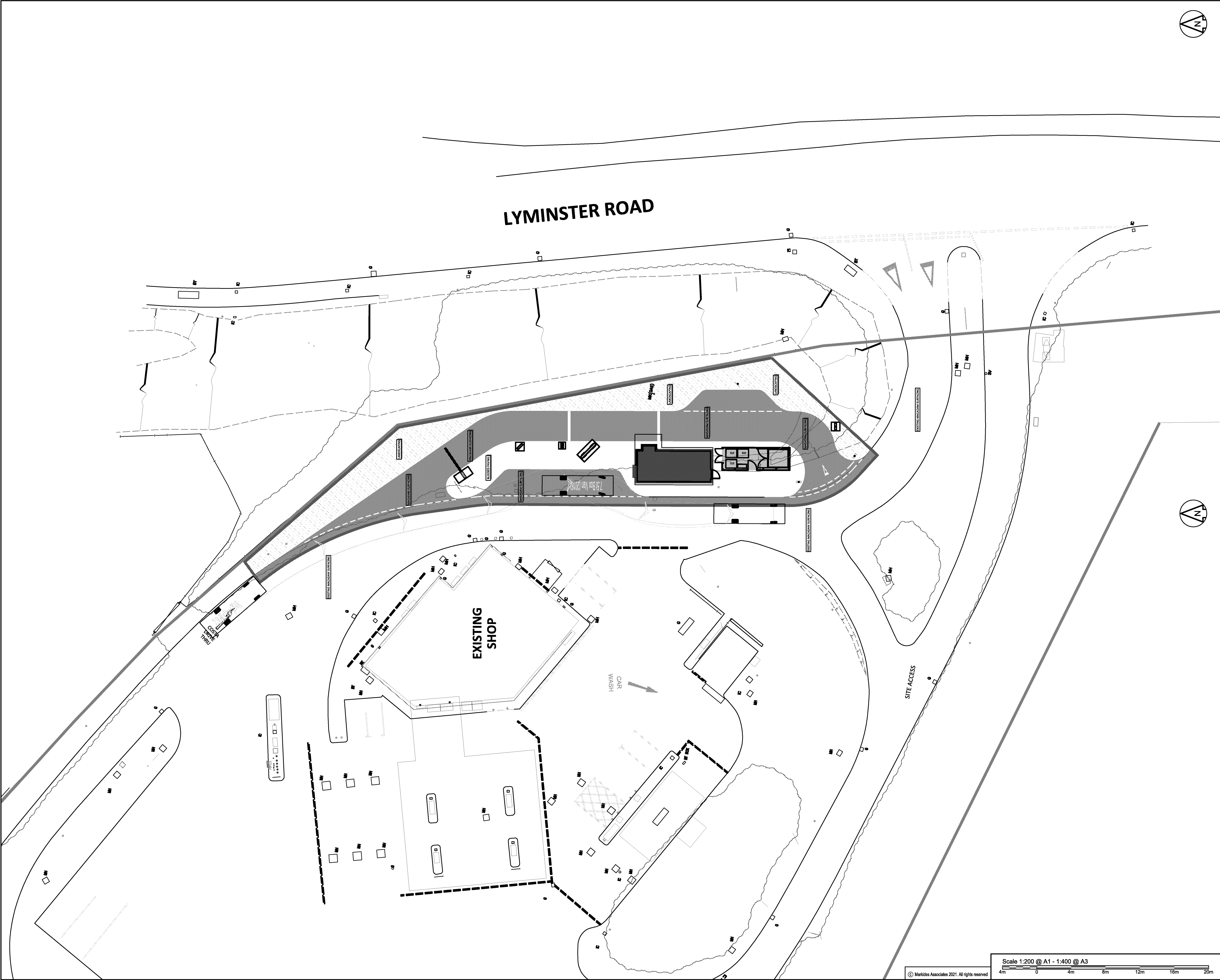
Project CROSSBUSH SERVICES, ARUNDEL

Drawing Title SWEPT PATH ANALYSIS - LARGE CAR

Markides Associates reference: 21220/01

1:200 @ A1

21220-MA-XX-XX-DR-C-7000 - P01



DO NOT SCALE OFF THIS DRAWING

KEY:

- Existing layout
- Vehicle Wheel Outline
- Vehicle Body Outline

Vehicle Forward Speed: 5km/h
Vehicle Reverse Speed: 2.5km/h
No dry steering has been used.

8.268
1.283 4.5

7.5t Box Van (2016)
Overall Length 8.268m
Overall Width 2.300m
Overall Body Height 3.575m
Min Body Ground Clearance 0.371m
Track Width 2.176m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.500m

Revision History						
Rev	Comment	By	Child	Appr	Date	
P01	FOR INFORMATION	LB	SC	JB	09.08.20	
Rev	Comment	By	Child	Appr	Date	
Current Revision						
P01	FOR INFORMATION	LB	SC	JB	09.08.20	
Rev	Comment	By	Child	Appr	Date	

S2 - FOR INFORMATION

TBC

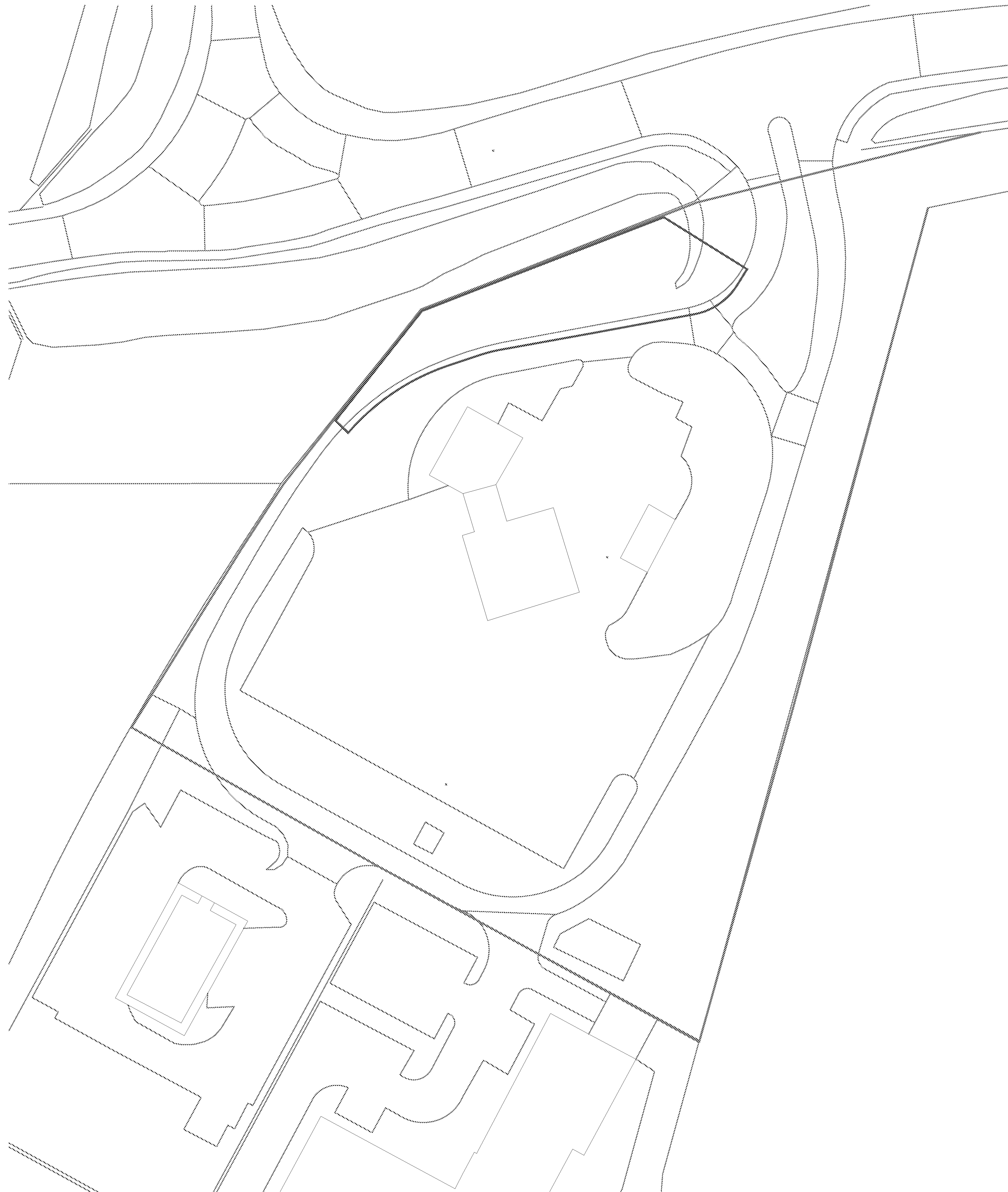
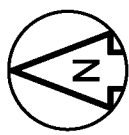
MARKIDES ASSOCIATES
TRANSPORT PLANNING AND ENGINEERING

Project: CROSSBUSH SERVICES, ARUNDEL
Drawing Title: SWEPT PATH ANALYSIS - 7.5 TN

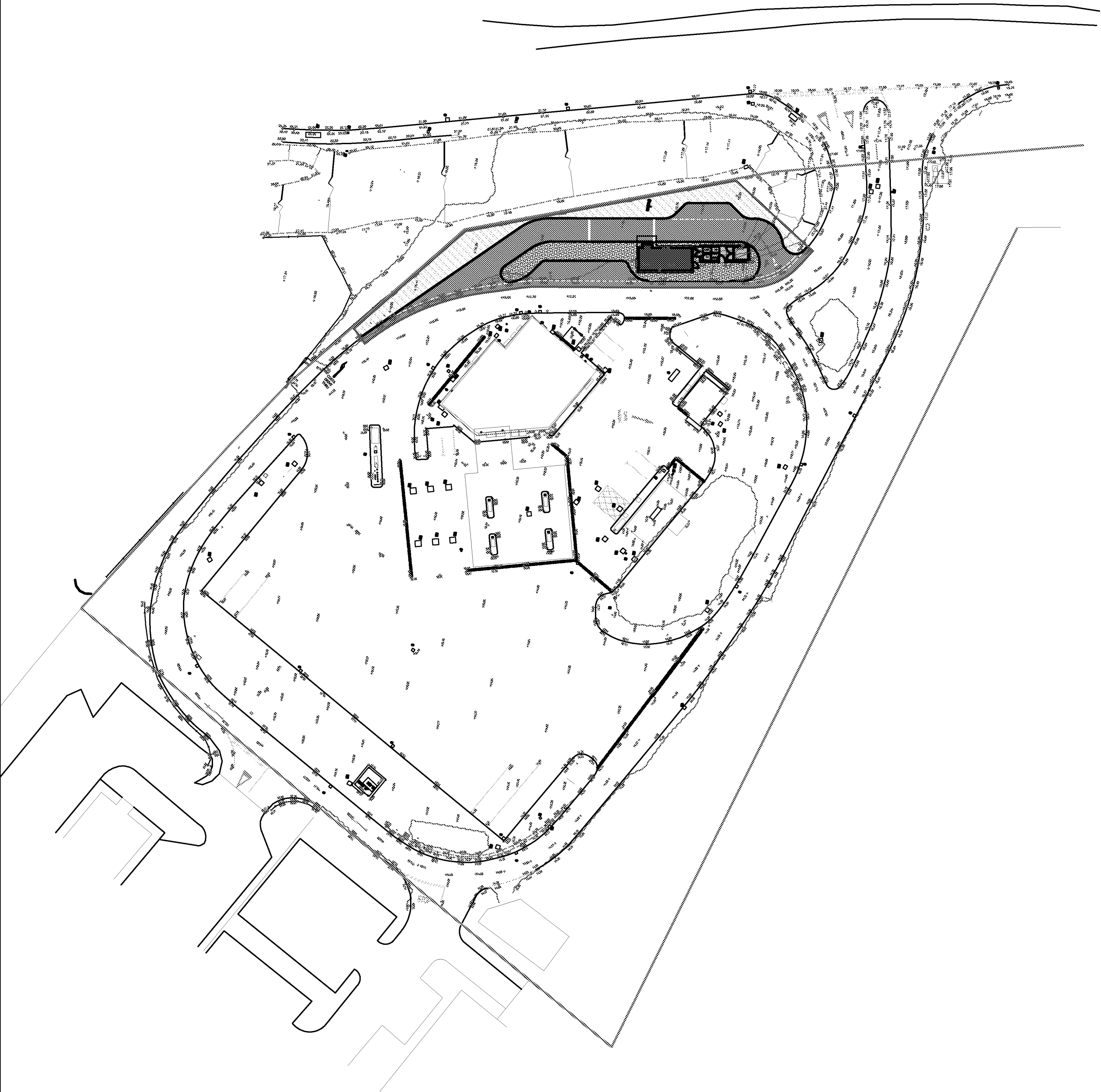
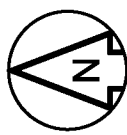
Markides Associates reference: 21220/01 1:200 @ A1
21220-MA-XX-XX-DR-C-7020 - P01

APPENDIX A – EXISTING AND PROPOSED LAYOUTS

Existing Layout



Proposed Layout



DO NOT SCALE OFF THIS DRAWING

Revision History

Revision History					
Rev	Comment	By	Chkd	Appr	Date
P01	FOR INFORMATION	LB	SC	JB	24.08.21
Rev	Comment	By	Chkd	Appr	Date
Current Revision					
P01	FOR INFORMATION	LB	SC	JB	24.08.21
Rev	Comment	By	Chkd	Appr	Date

S2 - FOR INFORMATION

TBC

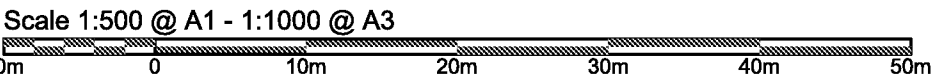


4th floor
The Bridge
73-81 Southway Bridge Road
Sutton, S11 3TQ

Telephone: 0207 442 2225
E: enquiries@markidesassociates.co.uk
W: www.markidesassociates.co.uk

Project
CROSSBUSH
SERVICES, ARUNDEL

Drawing Title
LANDSCAPING DESIGN PLAN



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Markides Associates reference: 21220/01 1:500 @ A1
21220-MA-XX-XX-DR-C-3010 - P01

APPENDIX B – TRICS SURVEY SITES

Site reference: BD-06-J-01 Survey date: 17/10/20 Day of week: Saturday

Survey type: Manual Count
 AM weather: Cold and Clear
 PM weather: Cold and Clear

Initial car park occupancy: 0 Final car park occupancy: 0

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity 100% (19 On-Site Spaces)

Data proportions in %

Motor cars	94	Motor cycles	0	Public service	0
Light goods	6	OGV (1)	0	OGV (2)	0
				Taxis	0

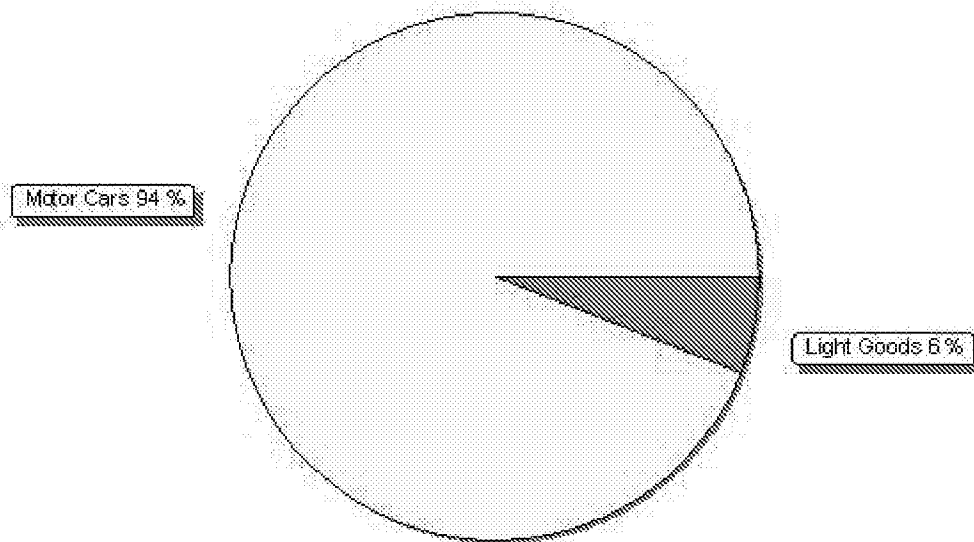
Covid-19 Restrictions Yes Survey was undertaken at a time of Covid-19 restrictions
 Servicing Vehicles count recorded No

Time	Arr 387	Dep 387	Totals 774	Parking Accum
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00	1	0	1	1
07:00-08:00	15	11	26	5
08:00-09:00	27	27	54	5
09:00-10:00	49	40	89	14
10:00-11:00	56	51	107	19
11:00-12:00	48	48	96	19
12:00-13:00	45	45	90	19
13:00-14:00	28	38	66	9
14:00-15:00	31	30	61	10
15:00-16:00	26	27	53	9
16:00-17:00	34	33	67	10
17:00-18:00	15	16	31	9
18:00-19:00	6	13	19	2
19:00-20:00	5	7	12	0
20:00-21:00	1	1	2	0
21:00-22:00				
22:00-23:00				
23:00-24:00				

Comments

No motorcycles, PSVs or OGVs arrived at or departed from the site during this survey.

Vehicle Percentages for BD-06-J-01 Surveyed: 17/10/20 Saturday



Markides Associates Ltd York Road London

Licence No: 860401

Filtering Summary

Land Use	06/J	HOTEL, FOOD & DRINK/DRIVE THROUGH COFFEE SHOPS
Selected Trip Rate Calculation Parameter Range	213-213 sqm GFA	
Actual Trip Rate Calculation Parameter Range	213-213 sqm GFA	
Date Range	Minimum: 17/10/20	Maximum: 17/10/20
Parking Spaces Range	All Surveys Included	
Days of the week selected	Saturday	1
Main Location Types selected	Edge of Town	1
Population < 1 Mile ranges selected	15,001 to 20,000	1
Population < 5 Mile ranges selected	125,001 to 250,000	1
Car Ownership < 5 Mile ranges selected	1.1 to 1.5	1
PTAL Rating	No PTAL Present	1

Calculation Reference: AUDIT-860401-210902-0927

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
 Category : J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLESSelected regions and areas:**02 SOUTH EAST**

BD BEDFORDSHIRE

1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 213 to 213 (units: sqm)
 Range Selected by User: 213 to 213 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 17/10/20 to 17/10/20

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

Selected survey days:

Saturday 1 days

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

Selected survey types:

Manual count 1 days
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town 1

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

Selected Location Sub Categories:

Retail Zone 1

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

Secondary Filtering selection:Use Class:

Not Known 1 days

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

Secondary Filtering selection (Cont.):Population within 1 mile:

15,001 to 20,000 1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*Population within 5 miles:

125,001 to 250,000 1 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*Car ownership within 5 miles:

1.1 to 1.5 1 days

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

No 1 days

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

No PTAL Present 1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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Markides Associates Ltd York Road London

Licence No: 860401

LIST OF SITES relevant to selection parameters

Site(1): BD-06-J-01
Development Name: COSTA COFFEE
Location: BEDFORD
Postcode: MK42 7GB
Main Location Type: Edge of Town
Sub-Location Type: Retail Zone
PTAL: n/a

Gross floor area: 213 sqm
Number of seats: 28
Parking spaces: 19
No of Employees: 8
Survey Date: 17/10/20
Survey Day: Saturday

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLES**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	213	0.469	1	213	0.000	1	213	0.469
07:00 - 08:00	1	213	7.042	1	213	5.164	1	213	12.206
08:00 - 09:00	1	213	12.676	1	213	12.676	1	213	25.352
09:00 - 10:00	1	213	23.005	1	213	18.779	1	213	41.784
10:00 - 11:00	1	213	26.291	1	213	23.944	1	213	50.235
11:00 - 12:00	1	213	22.535	1	213	22.535	1	213	45.070
12:00 - 13:00	1	213	21.127	1	213	21.127	1	213	42.254
13:00 - 14:00	1	213	13.146	1	213	17.840	1	213	30.986
14:00 - 15:00	1	213	14.554	1	213	14.085	1	213	28.639
15:00 - 16:00	1	213	12.207	1	213	12.676	1	213	24.883
16:00 - 17:00	1	213	15.962	1	213	15.493	1	213	31.455
17:00 - 18:00	1	213	7.042	1	213	7.512	1	213	14.554
18:00 - 19:00	1	213	2.817	1	213	6.103	1	213	8.920
19:00 - 20:00	1	213	2.347	1	213	3.286	1	213	5.633
20:00 - 21:00	1	213	0.469	1	213	0.469	1	213	0.938
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			181.689			181.689			363.378

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

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

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Parameter summary

Trip rate parameter range selected:	213 - 213 (units: sqm)
Survey date range:	17/10/20 - 17/10/20
Number of weekdays (Monday-Friday):	0
Number of Saturdays:	1
Number of Sundays:	0
Surveys automatically removed from selection:	0
Surveys manually removed from selection:	0

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

Markides Associates Ltd York Road London

Licence No: 860401

Filtering Summary

Land Use	06/J	HOTEL, FOOD & DRINK/DRIVE THROUGH COFFEE SHOPS
Selected Trip Rate Calculation Parameter Range	8-8 EMPLOY	
Actual Trip Rate Calculation Parameter Range	8-8 EMPLOY	
Date Range	Minimum: 17/10/20	Maximum: 17/10/20
Parking Spaces Range	All Surveys Included	
Days of the week selected	Saturday	1
Main Location Types selected	Edge of Town	1
Population < 1 Mile ranges selected	15,001 to 20,000	1
Population < 5 Mile ranges selected	125,001 to 250,000	1
Car Ownership < 5 Mile ranges selected	1.1 to 1.5	1
PTAL Rating	No PTAL Present	1

Calculation Reference: AUDIT-860401-210902-0948

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
 Category : J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLESSelected regions and areas:**02 SOUTH EAST**

BD BEDFORDSHIRE

1 days

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

Primary Filtering selection:

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

Parameter: No of Employees
 Actual Range: 8 to 8 (units:)
 Range Selected by User: 8 to 8 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 17/10/20 to 17/10/20

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

Selected survey days:

Saturday 1 days

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

Selected survey types:

Manual count 1 days
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town 1

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

Selected Location Sub Categories:

Retail Zone 1

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

Secondary Filtering selection:Use Class:

Not Known 1 days

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

Secondary Filtering selection (Cont.):Population within 1 mile:

15,001 to 20,000 1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*Population within 5 miles:

125,001 to 250,000 1 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*Car ownership within 5 miles:

1.1 to 1.5 1 days

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

No 1 days

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

No PTAL Present 1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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Markides Associates Ltd York Road London

Licence No: 860401

LIST OF SITES relevant to selection parameters

Site(1): BD-06-J-01
Development Name: COSTA COFFEE
Location: BEDFORD
Postcode: MK42 7GB
Main Location Type: Edge of Town
Sub-Location Type: Retail Zone
PTAL: n/a

Gross floor area: 213 sqm
Number of seats: 28
Parking spaces: 19
No of Employees: 8
Survey Date: 17/10/20
Survey Day: Saturday

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLES**Calculation factor: 1 EMPLOY****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00	1	8	0.125	1	8	0.000	1	8	0.125
07:00 - 08:00	1	8	1.875	1	8	1.375	1	8	3.250
08:00 - 09:00	1	8	3.375	1	8	3.375	1	8	6.750
09:00 - 10:00	1	8	6.125	1	8	5.000	1	8	11.125
10:00 - 11:00	1	8	7.000	1	8	6.375	1	8	13.375
11:00 - 12:00	1	8	6.000	1	8	6.000	1	8	12.000
12:00 - 13:00	1	8	5.625	1	8	5.625	1	8	11.250
13:00 - 14:00	1	8	3.500	1	8	4.750	1	8	8.250
14:00 - 15:00	1	8	3.875	1	8	3.750	1	8	7.625
15:00 - 16:00	1	8	3.250	1	8	3.375	1	8	6.625
16:00 - 17:00	1	8	4.250	1	8	4.125	1	8	8.375
17:00 - 18:00	1	8	1.875	1	8	2.000	1	8	3.875
18:00 - 19:00	1	8	0.750	1	8	1.625	1	8	2.375
19:00 - 20:00	1	8	0.625	1	8	0.875	1	8	1.500
20:00 - 21:00	1	8	0.125	1	8	0.125	1	8	0.250
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			48.375			48.375			96.750

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

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

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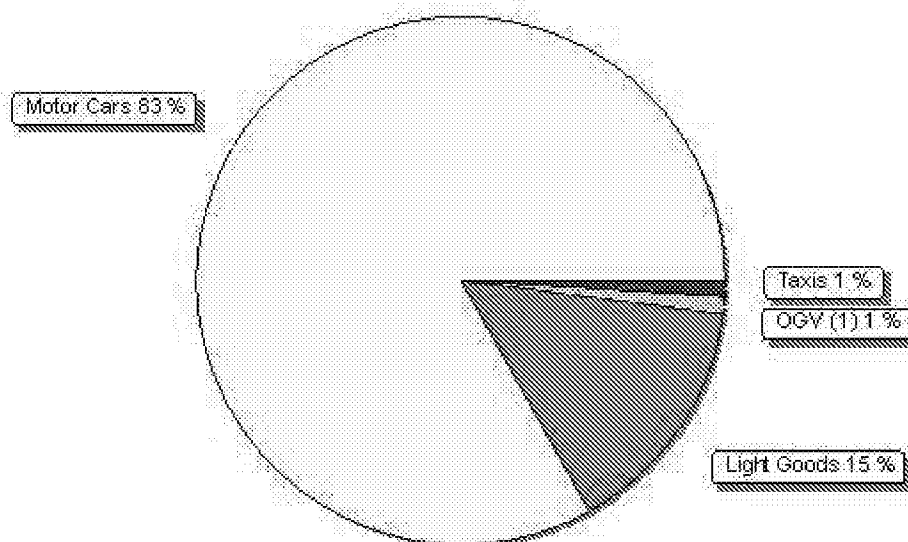
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Parameter summary

Trip rate parameter range selected: 8 - 8 (units:)
 Survey date range: 17/10/20 - 17/10/20
 Number of weekdays (Monday-Friday): 0
 Number of Saturdays: 1
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

Vehicle Percentages for SF-06-J-01 Surveyed: 25/09/20 Friday



Markides Associates Ltd York Road London

Licence No: 860401

Filtering Summary

Land Use	06/J	HOTEL, FOOD & DRINK/DRIVE THROUGH COFFEE SHOPS
Selected Trip Rate Calculation Parameter Range	200-200 sqm GFA	
Actual Trip Rate Calculation Parameter Range	200-200 sqm GFA	
Date Range	Minimum: 25/09/20	Maximum: 25/09/20
Parking Spaces Range	All Surveys Included	
Days of the week selected	Friday	1
Main Location Types selected	Edge of Town	1
Population < 1 Mile ranges selected	1,000 or Less	1
Population < 5 Mile ranges selected	5,001 to 25,000	1
Car Ownership < 5 Mile ranges selected	0.6 to 1.0	1
PTAL Rating	No PTAL Present	1

Calculation Reference: AUDIT-860401-210902-0911

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
 Category : J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLESSelected regions and areas:**04 EAST ANGLIA**

SF SUFFOLK

1 days

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

Primary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 200 to 200 (units: sqm)
 Range Selected by User: 200 to 200 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 25/09/20 to 25/09/20

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

Selected survey days:

Friday 1 days

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

Selected survey types:

Manual count 1 days
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town 1

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

Selected Location Sub Categories:

No Sub Category 1

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

Secondary Filtering selection:Use Class:

Not Known 1 days

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

Secondary Filtering selection (Cont.):Population within 1 mile:

1,000 or Less 1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*Population within 5 miles:

5,001 to 25,000 1 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*Car ownership within 5 miles:

0.6 to 1.0 1 days

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

No 1 days

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

No PTAL Present 1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
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Markides Associates Ltd York Road London

Licence No: 860401

LIST OF SITES relevant to selection parameters

Site(1):	SF-06-J-01	Gross floor area:	200 sqm
Development Name:	COSTA COFFEE	Number of seats:	48
Location:	STOWMARKET	Parking spaces:	31
Postcode:	IP14 5XF	No of Employees:	21
Main Location Type:	Edge of Town	Survey Date:	25/09/20
Sub-Location Type:	No Sub Category	Survey Day:	Friday
PTAL:	n/a		

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLES**Calculation factor: 100 sqm****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	200	0.000	1	200	0.000	1	200	0.000
06:00 - 07:00	1	200	4.000	1	200	2.000	1	200	6.000
07:00 - 08:00	1	200	25.500	1	200	22.000	1	200	47.500
08:00 - 09:00	1	200	34.500	1	200	30.500	1	200	65.000
09:00 - 10:00	1	200	31.000	1	200	27.500	1	200	58.500
10:00 - 11:00	1	200	22.000	1	200	24.500	1	200	46.500
11:00 - 12:00	1	200	24.500	1	200	25.000	1	200	49.500
12:00 - 13:00	1	200	27.500	1	200	27.000	1	200	54.500
13:00 - 14:00	1	200	25.500	1	200	26.000	1	200	51.500
14:00 - 15:00	1	200	18.500	1	200	20.500	1	200	39.000
15:00 - 16:00	1	200	22.500	1	200	20.000	1	200	42.500
16:00 - 17:00	1	200	24.000	1	200	26.500	1	200	50.500
17:00 - 18:00	1	200	14.500	1	200	18.500	1	200	33.000
18:00 - 19:00	1	200	5.000	1	200	9.000	1	200	14.000
19:00 - 20:00	1	200	0.000	1	200	0.000	1	200	0.000
20:00 - 21:00	1	200	0.000	1	200	0.000	1	200	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			279.000			279.000			558.000

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

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Parameter summary

Trip rate parameter range selected: 200 - 200 (units: sqm)
 Survey date range: 25/09/20 - 25/09/20
 Number of weekdays (Monday-Friday): 1
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

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

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Filtering Summary

Land Use	06/J	HOTEL, FOOD & DRINK/DRIVE THROUGH COFFEE SH
Selected Trip Rate Calculation Parameter Range	21-21 EMPLOY	
Actual Trip Rate Calculation Parameter Range	21-21 EMPLOY	
Date Range	Minimum: 25/09/20	Maximum: 25/09/20
Parking Spaces Range	All Surveys Included	
Days of the week selected	Friday	1
Main Location Types selected	Edge of Town	1
Population < 1 Mile ranges selected	1,000 or Less	1
Population < 5 Mile ranges selected	5,001 to 25,000	1
Car Ownership < 5 Mile ranges selected	0.6 to 1.0	1
PTAL Rating	No PTAL Present	1

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
 Category : J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLESSelected regions and areas:

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

Primary Filtering selection:

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

Parameter: No of Employees
 Actual Range: 21 to 21 (units:)
 Range Selected by User: 21 to 21 (units:)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 25/09/20 to 25/09/20

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

Selected survey days:

Friday 1 days

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

Selected survey types:

Manual count 1 days
 Directional ATC Count 0 days

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

Selected Locations:

Edge of Town 1

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

Selected Location Sub Categories:

No Sub Category 1

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

Secondary Filtering selection:Use Class:

Not Known 1 days

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

Secondary Filtering selection (Cont.):Population within 1 mile:

1,000 or Less 1 days

*This data displays the number of selected surveys within stated 1-mile radii of population.*Population within 5 miles:

5,001 to 25,000 1 days

*This data displays the number of selected surveys within stated 5-mile radii of population.*Car ownership within 5 miles:

0.6 to 1.0 1 days

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

No 1 days

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

No PTAL Present 1 days

This data displays the number of selected surveys with PTAL Ratings.

Covid-19 Restrictions	Yes	At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions
-----------------------	-----	--

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LIST OF SITES relevant to selection parameters

Site(1):	SF-06-J-01	Gross floor area:	200 sqm
Development Name:	COSTA COFFEE	Number of seats:	48
Location:	STOWMARKET	Parking spaces:	31
Postcode:	IP14 5XF	No of Employees:	21
Main Location Type:	Edge of Town	Survey Date:	25/09/20
Sub-Location Type:	No Sub Category	Survey Day:	Friday
PTAL:	n/a		

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/J - DRIVE THROUGH COFFEE SHOP

TOTAL VEHICLES**Calculation factor: 1 EMPLOY****BOLD print indicates peak (busiest) period**

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate	No. Days	Ave. EMPLOY	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00	1	21	0.000	1	21	0.000	1	21	0.000
06:00 - 07:00	1	21	0.381	1	21	0.190	1	21	0.571
07:00 - 08:00	1	21	2.429	1	21	2.095	1	21	4.524
08:00 - 09:00	1	21	3.286	1	21	2.905	1	21	6.191
09:00 - 10:00	1	21	2.952	1	21	2.619	1	21	5.571
10:00 - 11:00	1	21	2.095	1	21	2.333	1	21	4.428
11:00 - 12:00	1	21	2.333	1	21	2.381	1	21	4.714
12:00 - 13:00	1	21	2.619	1	21	2.571	1	21	5.190
13:00 - 14:00	1	21	2.429	1	21	2.476	1	21	4.905
14:00 - 15:00	1	21	1.762	1	21	1.952	1	21	3.714
15:00 - 16:00	1	21	2.143	1	21	1.905	1	21	4.048
16:00 - 17:00	1	21	2.286	1	21	2.524	1	21	4.810
17:00 - 18:00	1	21	1.381	1	21	1.762	1	21	3.143
18:00 - 19:00	1	21	0.476	1	21	0.857	1	21	1.333
19:00 - 20:00	1	21	0.000	1	21	0.000	1	21	0.000
20:00 - 21:00	1	21	0.000	1	21	0.000	1	21	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			26.572			26.570			53.142

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

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Parameter summary

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 Survey date range: 25/09/20 - 25/09/20
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APPENDIX C – SPERRY WAY SITE TA

An Appeal by
ROBERT HITCHINS LTD

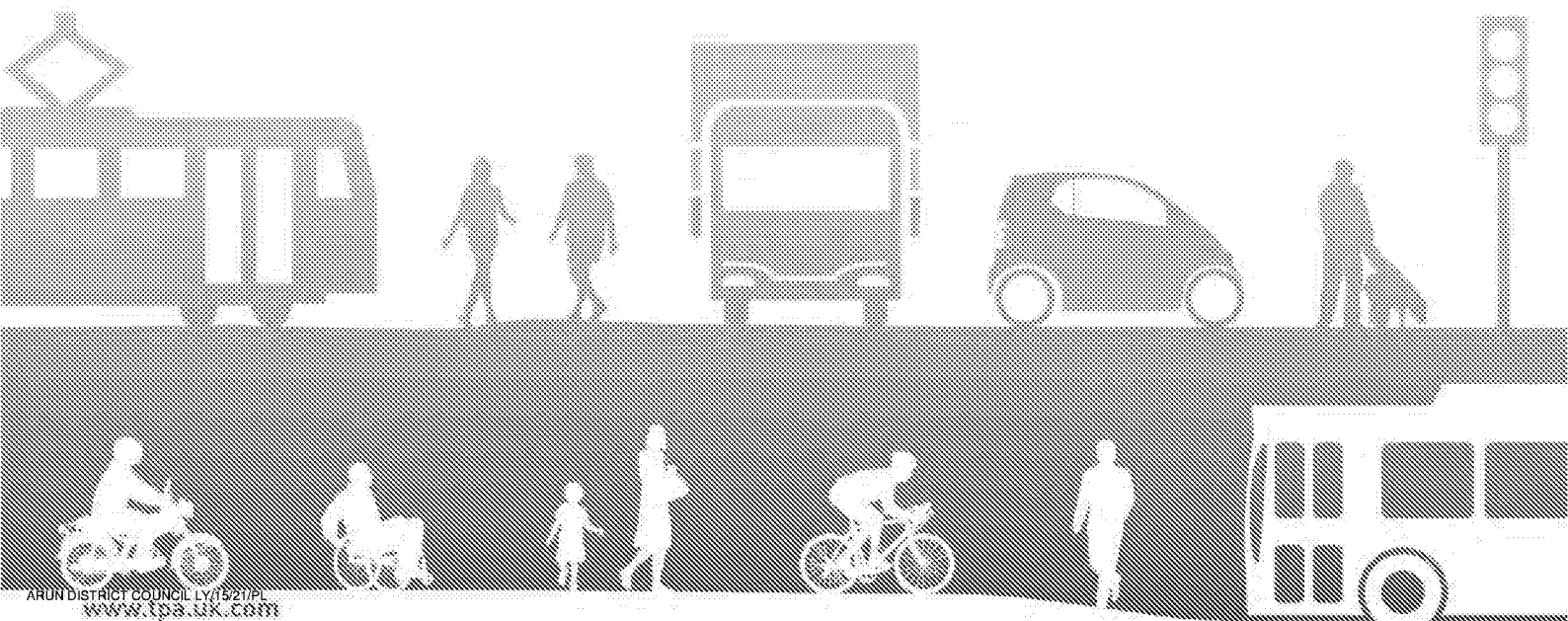
In respect of

**The construction of coffee shop with drive through facility and a
42 space car park for neighbouring employer use at Plot G,
Stonehouse Business Park, Sperry Way, Stonehouse**

Transport Statement of Case

Planning App No: S.18/0104/FUL

October 2018



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Appendix TPA/A:	Transport Assessment (1611-38/TA/01) for Planning Application S.18/0104/FUL
Appendix TPA/B:	Transport Assessment Addendum (1611-38/TN/01) for Planning Application S.18/0104/FUL
Appendix TPA/C:	GCC Highways Recommendation for Planning Application S.18/0104/FUL (the appeal proposal)
Appendix TPA/D:	Decision Notice for planning application S.18/0104/FUL (the appeal proposal)

1 COMPANY PROFILE

- 1.1 Transport Planning Associates (TPA) is a firm of consulting engineers, which specialises in transportation planning and traffic engineering. TPA's experience ranges from accessibility audits to traffic impact analysis to the detailed design of highway schemes. We advise both public and private sector clients, including those operating in the retail, commercial, residential, health and leisure sectors. The projects TPA has worked on have been located throughout the UK including sites in Stroud and elsewhere in the South West of England.
- 1.2 TPA acts as an expert witness on matters relating to transportation planning and traffic engineering at various types of planning appeals. In addition to dealing with transportation matters, TPA is involved on a daily basis with all aspects of the development industry.
- 1.3 This Hearing Statement has been prepared by James Darrall, who is an Associate Director at TPA; holds a Master of Science Degree in Transport Planning and Management, is a Member of the Chartered Institution of Highways and Transportation (MCIHT) and a Chartered Member of the Institute of Transport and Logistics (CMILT). James has been actively involved in providing highway and transportation planning advice relating to the development planning process since 2001 and has advised a wide variety of clients operating in residential, retail, leisure, industrial and office sectors.
- 1.4 In the context of this Appeal, TPA prepared the Transport Assessment submitted with the planning application.

2 SCOPE OF EVIDENCE AND BACKGROUND

Background

2.1 This Hearing Statement sets out evidence relating to the transportation matters in support of the planning appeal submitted by Robert Hitchins in accordance with the provisions of Section 78 of the Town and Country Planning Act 1990, against Stroud District Council's (SDC) decision to refuse planning permission for 'construction of coffee shop with drive through facility with associated access road, car park, landscaping and infrastructure works; and construction of 42 space car park for neighbouring employer use with associated access road, landscaping and infrastructure works' at Plot G, Stonehouse Business Park, Sperry Way, Stonehouse on 3rd August 2018 (LPA Planning Application Reference S.18/0104).

2.2 The planning authority set out one reason for refusal in its decision notice which states:

"The application site is located within an identified protected employment site, immediately adjacent to the A419, the principal trunk road into Stroud from the West and the M5. The proposed development is not a Class B employment use and by virtue of its function as a 'drive-through' facility, is not a complimentary ancillary use which improves the attractiveness of the employment site for occupiers and commercial activity as required by Policy EM1 of the Stonehouse Neighbourhood Plan.

The proposed development is therefore contrary to Stroud District Council Local Plan Policy EI1, and Stonehouse Neighbourhood Development Plan Policy EM1."

2.3 The reason for refusal is not specifically highways related. In fact, both Stroud District Council (SDC) and Gloucester County Council Highway Authority (GCC) raised no objection on highway grounds to the planning application and agree that the highways impacts of the development can be accommodated by the existing highway network.

2.4 SDC and GCC acknowledge that the impact of the proposed development would not be regarded as significant and would not result in any detrimental impacts to the local highway network.

The Appellant's Case

2.5 The Appellant's Case is explained in full within the Planning Statement of Case prepared by Savills.

Summary of Transport Assessment

2.6 A Transport Assessment dated December 2017 included at **Appendix TPA/A** and Transport Assessment Addendum dated April 2018 included at **Appendix TPA/B** was submitted and included in the planning application, LPA Planning Application Reference S.18/0104.

2.7 The Transport Assessment was produced further to discussions and a scoping exercise with Stroud District Council and Gloucester County Council.

2.8 Further to the Transport Assessment a number of post application comments were received from Gloucester County Council (GCC) highways department. The bullet points below summarise these comments:

- Provide evidence of a validated model for the A419 / Sperry Way / Oldends Road roundabout junction;
- Undertake a Stage 1 Safety Audit of the proposed site access junction; and
- Directly add traffic flows from the West of Stonehouse planning application documents to the baseline flows to derive future flows in place of Temprow growth.

2.9 The above information was obtained and provided in the Transport Assessment Addendum which concludes that the development has no material impact on the performance of the A419 / Sperry Way / Oldends Road roundabout junction, which is considered to be a result of the limited number of new trips generated by the proposed development.

Consultee Comments

2.10 Highways related consultee comments on the planning submission are set out below in italics with the TPA response.

GCC Highway Response

2.11 The GCC highway recommendation dated 16th May 2018 is included at **Appendix TPA/C**. The Recommendation considers vehicular trip generation, traffic impact, parking and accident data. Overall the officer agrees with the conclusions of the Transport Assessment but reference is made to specific sections below.

2.12 Pages 3 of the GCC report states the following:

“...As the majority of the trips to the drive-thru would have already of been on the network in the form of pass-by or linked trips whereby motorists have accessed nearby destinations and would include the visit to the store as a part of their current trip. Therefore the impact of the proposed development would not be regarded as significant and would not result in any detrimental impacts to the local highway network or effect capacity...”

2.13 The above statement is in line with the conclusions made in the Transport Assessment. Table 7.3 on page 13 of the Transport Assessment illustrates that the development will generate only 10% new vehicle trips in the peak hours, which equals nine new vehicle trips in the AM peak hour and five new vehicle trips in the PM peak hour. Furthermore, page nine paragraph 5.3 of the Transport Addendum concludes that the addition of the development traffic is not forecast to have a material impact on the operation of the Oldends Lane/A419/Sperry Way Roundabout.

2.14 Page 4 of the GCC report states the following recommendation:

“...the Highway Authority recommends that no highway objection be raised subject to the following conditions being attached to any permission granted...”

SDC Case Planning Officer's Report

2.15 The SDC case officers report is included at **Appendix TPA/D**. Page 6 of SDC's report states the following:

“...A use compliant with the local plan allocation will naturally bring an increase of vehicular activity to some degree”.

2.16 SDC acknowledges that a traditional employment use will result in additional vehicular trips.

2.17 Page 6 of SDC's report states the following:

“...It is reiterated that the proposed development is not anticipated to bring a large number of additional vehicular trips to the site as it is considered the majority of trips will be associated with the Business Park or from vehicles already travelling to/from the M5.”

2.18 TPA agrees with this statement which is supported by Paragraph 7.4 on page 13 of the Transport Assessment which demonstrates that only 10% of vehicle trips attracted to the proposed development will be primary trips and therefore additional trips to the highway network.

2.19 Table 8.3 on page 15 of the Transport Assessment indicates that the development would only generate nine additional vehicle trips to the highway network in the AM peak hour and five additional vehicle trips in the PM peak hour. Put into context, the 2018 traffic flows on the A419 in the AM peak hour included in figure 2.3 of the Transport Addendum sum to approximately 2,282 two-way vehicle trips. The addition of nine vehicle trips would result in less than a 1% impact.

2.20 Appendix E of the Transport Assessment includes survey results of three existing Costa drive through developments. The results demonstrate that the majority of trips to a Costa drive through in the morning peak hour are commuter trips and therefore employment related. As the local area surrounding the site is characterised by employment land use, it is reasonable to suggest that the proposed development would serve the local employment area.

2.21 Page 6 of SDC's report states the following:

“... it is considered that the existing highway infrastructure can accommodate the expected vehicular movements as a result of the proposed coffee shop drive-through.”

2.22 TPA agrees with this statement which is supported by the conclusions of the Transport Assessment and Addendum . Page 9, paragraph 5.3 of the Transport Addendum concludes that the development would not have a material impact on the operation of Oldends Lane / A419 / Sperry Way Roundabout. Paragraph 5.5 of the Transport Addendum concludes that there are no valid highway or transport related issues which should affect the proposed development of the site.

2.23 Whilst the refusal reason doesn't specifically reference highways reasons for refusal, the Case Officer's Review does make the following statements in relation to the drive through element of the coffee shop. It should be noted that it is unlawful for the Council to disaggregate the coffee shop proposal in this matter and this matter is dealt with in the 'Planning Statement of Case'. Notwithstanding that, each point is dealt with in turn, below.

A drive through *“altered the facility from an ancillary element to a main function of the site”* (p 4 of the SDC report)

- 2.24 As the appeal site is located in and adjacent to an employment area, it is reasonable to assume the proposed Costa drive through coffee shop will serve the local employment area including the business park.
- 2.25 The customer questionnaire survey undertaken at various Costa drive through sites and presented in Appendix E of the submitted Transport Assessment illustrates that the majority of customers surveyed were on their way to/from work. It is TPA's view that during the peak hours a Costa drive through coffee shop would in the majority serve customers that are travelling to/from work.
- 2.26 Indeed, the more recent Costa drive through survey undertaken by the Appellant, provides further evidence to support the fact that the drive through facility will be used by employees and visitors associated with Stonehouse Business park and the wider local employment area.
- ".....it is considered that the drive-through element of the cafe will attract passing trade and not provide a service to the local employment area" (page 5 of the SDC report)*
- 2.27 TPA submitted data at Appendix E the Transport Assessment illustrating that the majority of peak hour Costa drive through customers are on their commute to/from work. It is TPA's view that as the appeal site is located in and adjacent to an employment area, it is reasonable to assume the proposed Costa drive through coffee shop will serve the local employment area including the business park.
- "...the drive-through function, by its very nature, suggests an anticipated market from a wider customer base than those already on the business park" (page 5 of the SDC report)*
- 2.28 It is TPA's view that the proposed development will serve the existing business park and local employment area and there is no evidence to suggest the opposite.

Stonehouse Town Council

- 2.29 Stonehouse Town Council object to the proposal on the following grounds:
- "...it will lead to an unacceptable increase in traffic on the already busy Oldends Lane roundabout which is also a difficult crossing point for National Cycle Route 45. Stonehouse Town Council do not object to a coffee shop at this location, but do object to a drive-through coffee shop"*
- 2.30 GCC as the highway authority have audited the technical work and impact analysis included in the planning submission and conclude that the proposals will not have a significant or detrimental effect on the local highway network.
- 2.31 It is TPA's view that the proposed development will serve the existing business park and local employment area and there is no evidence to suggest the opposite.

Public

- 2.32 Only nine public comments were received at the time of writing the SDC officers report:
- Two letters support the application; and
 - Seven objected to the proposals citing traffic impact, noise issues, it is a green space that needs protecting and cooking smells.

- 2.33 In response to the public objection relating to traffic impact it is reiterated that the development would result in nine new vehicle trips in the AM peak hour and five new vehicle trips in the PM peak hour. GCC as the highway authority have audited the technical work and impact analysis that was submitted with proposal and presented in the Transport Assessment and associated Addendum and conclude that the proposals would not have a significant or detrimental effect on the local highway network.

Statement of Common Ground on Transportation Issues (SCGT)

- 2.34 TPA will submit a draft SCGT with the appeal setting out areas of agreement in connection with the highway and transportation with the appeal scheme.

Conclusions

- 2.35 A bullet point summary of conclusions is set out below:
- Appendix E of the Transport Assessment includes surveys illustrating that the majority of vehicle trips attracted to a Costa drive through during the peak hour are either travelling to or from work, with their origin or destination being an employment zone;
 - The Transport Assessment submitted with the planning application demonstrates that only 10% of vehicle trips generated by the proposed development would be new to the highway network which equals nine vehicle trips in the am peak hour and five in the pm and GCC agreed with this;
 - Page 9, paragraph 5.3 of the Transport Addendum concludes that the development would not have a material impact on the operation of Oldends Lane / A419 / Sperry Way Roundabout;
 - It is TPA's view that the majority of trips attracted to the proposed development during peak hours would be employment related. As the development sits within an employment area, it is reasonable to suggest that the proposed development will serve the local employment area including the business park; and
 - There are no highways reasons for refusal and both planning and highway authority agree that the proposals will not result in a significant impact to the local highway network.
- 2.36 This Hearing Statement should be read in conjunction with the Planning Statement of Case prepared by Savills which deals with wider planning matters in relation to reason for refusal.

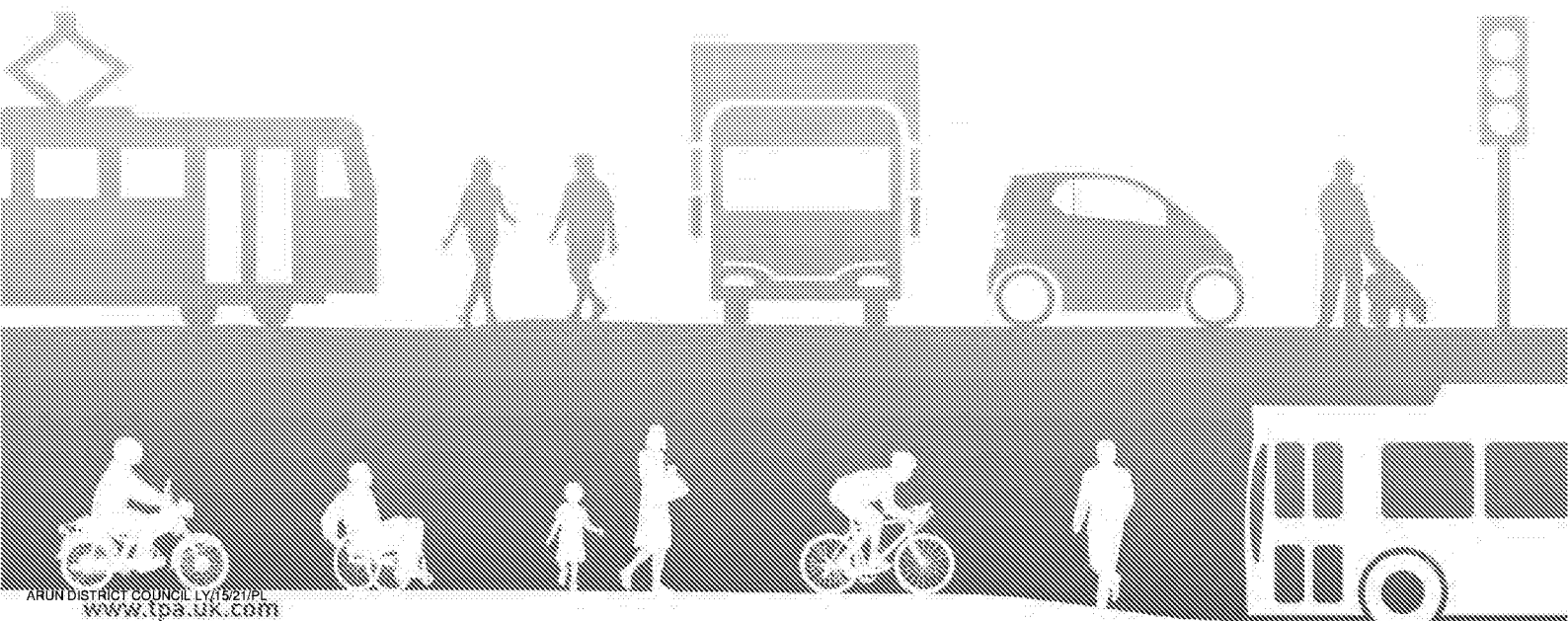
APPENDIX TPA/A

A Planning Application by
ROBERT HITCHINS LTD

In respect of
**Drive Through Coffee Shop, Stonehouse Business Park,
Stonehouse**

Transport Assessment

October 2017



DOCUMENT SIGNATURE AND REVIEW SHEET**Project Details**

Project Title:	Drive Through Coffee Shop, Stonehouse Business Park, Stonehouse		
Project No.:	1611-38	Report No.:	1611-38/TA/01
Client:	Robert Hitchins Ltd		

	Prepared By:	Checked By:	Approved for issue
Name	W Griffiths	S Moody	N Hanks
Signature			
Date	December 2017	December 2017	December 2017

Issued by:

Bristol
Cambridge
London
Oxford
Welwyn Garden City

Transport Planning Associates
25 King Street
Bristol
BS1 4PB



0117 925 9400
bristol@tpa.uk.com
www.tpa.uk.com

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3 EXISTING TRAFFIC CONDITIONS	3
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- H Junctions 9 Reports

1 INTRODUCTION

- 1.1 Transport Planning Associates (TPA) is working on behalf of Robert Hitchins to support a planning application for a drive through coffee shop on land off Sperry Way, located within Stonehouse Business Park, to the south of the A419 at Stonehouse, Gloucestershire
- 1.2 To the south of the drive through coffee shop, the proposal also includes for additional car parking to be provided to accommodate existing on-street parking within Stonehouse Business Park and potential future on-street parking demand generated by neighbouring employment uses and development.

Planning Background

- 1.3 Following approval of an outline planning application (S.06/1168/VAR), the application site previously benefited from a reserved matters planning approval in September 2008 for a B1 Office use (S.08/1524/REM). This planning approval has yet to be implemented and the site remains undeveloped.

Purpose of Assessment and Structure of Report

- 1.4 This Transport Assessment (TA) has been produced to assess the transport implications of the development proposals, further to discussion regarding the TA scope with highway officers at Stroud District Council, and is structured as follows:
- **Chapter 2** provides an overview of the development site and details the surrounding local highway network;
 - **Chapter 3** sets out the existing traffic speeds and volumes within the vicinity of the site and summarises the local highway safety;
 - **Chapter 4** sets out the accessibility of the site for all modes of travel;
 - **Chapter 5** sets out the development proposals;
 - **Chapter 6** provides a review of relevant transport planning policy;
 - **Chapter 7** describes the forecast trip attraction associated with the development proposals;
 - **Chapter 8** describes the scope of the proposed junction analysis; and
 - **Chapter 9** provides results from the detailed junction assessments.
- 1.5 It is concluded that there are no valid highway or transportation reasons which should prevent the proposed development of this site.

2 EXISTING SITUATION

Site Location

- 2.1 The location of the development site and the surrounding area is shown on **Figure 2.1**.
- 2.2 Stonehouse Business Park is located west of the Bristol-Birmingham railway line and Bonds Mill Business Park and directly south of the A419. Stroudwater Business Park and Oldends Lane Industrial Estate are located to the north of the A419, opposite the development site. The M5 motorway is approximately two kilometres to the west of the development site and the centre of Stonehouse is approximately 1.3 kilometres to the east.

Local Highway Network

- 2.3 A description of the local highway network within the vicinity of the development site is provided below and shown on **Figure 2.2**.

Sperry Way

- 2.4 Sperry Way is a private single carriageway road that serves Stonehouse Business Park. The carriageway is approximately 7.3 metres wide, adheres to a 30mph speed limit and connects with the A419 and Oldends Lane at a five arm roundabout junction to the immediate north of the site. The carriageway is lit and features a two metre wide footway along the northern side and three metre wide segregated footway and cycleway along the southern side.

A419

- 2.5 The A419 is a local distributor road that serves local employment, retail and residential areas. It also provides a direct connection between Stroud to the east and the M5 motorway to the west of the site.
- 2.6 Within the vicinity of the site, the A419 comprises a single carriageway road and is approximately eight metres wide. At the Oldends Lane roundabout, opposite the site, the carriageway widens to accommodate two approach and exit lanes. To the west of the Oldends Lane roundabout, the A419 is subject to the national speed limit and to the east is subject to a 40mph speed limit.
- 2.7 The carriageway is lined with street lighting and features a segregated footway and cycleway, approximately three metres wide, along the southern side of the carriageway, west of the Oldends Lane roundabout. At the Oldends Lane roundabout, non-motorised user crossing of the A419 is facilitated by dropped kerbs, tactile paving and central refuge islands on all arms.

3 EXISTING TRAFFIC CONDITIONS

Manual Turning Count (MTC) Surveys

- 3.1 To assess the existing baseline traffic flows at the Oldends Lane roundabout junction, Gloucestershire County Council (GCC) have provided Manual Turning Count (MTC) data for a survey completed on May 14th 2015. A summary of the survey is provided below and the full report is provided at **Appendix A**.

Observed Traffic Flows at Oldends Lane Roundabout

- 3.2 The observed traffic flows (PCU's) entering the Oldends Lane roundabout are summarised in **Table 3.1** below. The observed 2015 AM and PM traffic flow diagrams are provided on **Figure 3.1** and **Figure 3.2**.

Table 3.1 – Observed Traffic Flows at Oldends Lane Roundabout

Period	Arm - 2015 Baseline Traffic Flow (pcu)					
	Oldends Lane	A419 (E)	Bonds Mill Business Park	Sperry Way	A419 (W)	Total
AM Peak (0800-0900)	63	266	4	3	306	641
PM Peak (1700-1800)	130	146	29	69	247	622

Highway Safety

- 3.3 GCC has provided Personal Injury Accident (PIA) records for the local highway network for the most recent five year period, from 1st August 2012 to 31st July 2017.
- 3.4 The full PIA report is included at **Appendix B** and a summary of the recorded PIA's is provided below.

Oldends Lane Roundabout

- 3.5 A summary of PIA's recorded at Oldends Lane roundabout during the most recent five year period is provided in **Table 3.2** below.

Table 3.2 - Summary of PIAs at Oldends Lane Roundabout

Oldends Lane Roundabout				
No:	GCC Ref:	Severity	Date/Conditions	Likely Cause
01	208382	Slight Motorcyclist	12./12/2013 1513 Dry / Street Lighting	Vehicle 2 (Motorcycle) entered roundabout from Oldends Lane intending to turn right onto westbound A419. Vehicle 1 entered roundabout from A419 (Stroud), failing to observe Vehicle 2, resulting in collision.

- 3.6 **Table 3.2** shows that one PIA has been recorded at the Oldends Lane roundabout junction during the most recent five year period, which resulted in one slight injury to a motorcyclist. The accident appears to have occurred as a result of driver error or misjudgement and is not considered to be a result of highway design.

A419

- 3.7 A summary of PIA's recorded along the A419 within the vicinity of the site during the most recent five year period is provided in **Table 3.3** below.

Table 3.3 - Summary of PIAs on A419

A419				
No:	GCC Ref:	Severity	Date/Conditions	Likely Cause
02	208428	Slight Car Driver	14/01/2014 1645 Wet / Street Lighting	Vehicle 1 approaching roundabout from A419 (E). As lanes split, Vehicle 1 has moved into right hand lane without observing Vehicle 2 already in the lane, resulting in collision.
03	209612	Slight Pedestrian	21/05/2015 0950 Dry / Daylight	Vehicle 1 travelling along A419 towards Stonehouse. Pedestrian has entered carriageway in front of Vehicle 1. Vehicle webcam confirmed pedestrian movement was intentional.

- 3.8 **Table 3.3** shows that two PIA's have been recorded along the A419 within the vicinity of the site during the most recent five year period, which resulted in one slight injury to a car driver and pedestrian. PIA no. 02 appears to have occurred as a result of driver error or misjudgement and PIA no. 03 appears to have been intentionally caused by a pedestrian. It is therefore considered that the accidents did not occur as a result of highway design.

Oldends Lane

- 3.9 A summary of PIA's recorded along Oldends Lane within the vicinity of the site during the most recent five year period is provided in **Table 3.4** below.

Table 3.4 - Summary of PIAs at Oldends Lane Roundabout

Oldends Lane				
No:	GCC Ref:	Severity	Date/Conditions	Likely Cause
04	208630	Serious Motorcyclist	11/04/2014 1350 Wet / Daylight	Vehicle 1 (motorcycle) collided with rear of Vehicle 2 which was in slow moving traffic.

- 3.10 **Table 3.4** shows that one PIA has been recorded along Oldends Lane within the vicinity of the site during the most recent five year period, which resulted in one serious injury to a motorcyclist. The PIA appears to have occurred as a result of the motorcyclist failing to stop ahead of queuing traffic. This is considered to have occurred as a result of driver error.

Conclusion on Highway Safety

- 3.11 It is considered that there is no obvious highway safety deficiency in the vicinity of the site and that the recorded PIA's occurred as a result of driver error or misjudgement. It is therefore not considered that accidents are attributed to a single factor or highway related issue.
- 3.12 The local highway network is therefore considered to operate safely within the vicinity of the site and this is expected to continue. As demonstrated in **Chapters 7** and **9**, the forecast traffic associated with the proposed development will not have a material impact on the local highway network and the operation or safety of Oldends Lane roundabout.

4 ACCESSIBILITY

Existing Pedestrian and Cycle Facilities

- 4.1 Existing pedestrian and cycle facilities within the vicinity of the site are detailed on **Figure 2.2**.
- 4.2 A two metre wide footway is located along the northern side and a three metre wide segregated footway and cycleway is located along the southern side of the Sperry Way carriageway. Both connect to a segregated footway and cycleway that routes in an east-west orientation immediately north of the site, along the A419.
- 4.3 Pedestrian crossing of the Oldends Lane roundabout is facilitated by dropped kerbs, tactile paving and central refuge islands on all arms; providing a pedestrian connection between the site and Stroudwater Business Park / Oldends Lane Industrial Estate to the north.
- 4.4 To the west of Sperry Way, the segregated footway and cycleway routes along the southern side of the A419 carriageway via the bus stop and is approximately three metres wide with street lighting. To the east of Sperry Way, the segregated footway and cycleway crosses the A419 at the Oldends Lane roundabout and routes to the east, north of the A419 carriageway, providing a continuous pedestrian connection to Stonehouse and Stroud. The route is flat and accommodates street lighting along its entirety.
- 4.5 A shared footway and cycleway is located to the east of Oldends Lane, connecting to the segregated footway and cycleway north of the A419 and providing a pedestrian connection between the site and the Oldends Lane bus stops.
- 4.6 National Cycle Network (NCN) Route 45 routes along the segregated footway and cycleway immediately north of the development site, connecting Chester with Salisbury via on-road and traffic-free sections.
- 4.7 TPA understands that GCC has obtained funding through the Local Growth Fund to improve junctions along the A419, including the Oldends Lane roundabout providing access to Stonehouse Business Park. The proposed improvements are provided at **Appendix C** and include the provision of a toucan crossing of the A419 to the east of the Oldends Lane roundabout, catering for both pedestrians and cyclists and therefore enhancing the accessibility of the development site.

Existing Public Transport Provision

Local Bus Services

- 4.8 The nearest bus stops are located on the A419 and Oldends Lane, within 300 metres of the development site, as shown on **Figure 2.2**. On the A419, eastbound and westbound bus stops comprise a flag and pole facility with bus timetable information. On Oldends Lane, the

bus stops comprise a shelter with timetable information. Both bus stops are served by the 61 service operated by Stagecoach in Gloucester.

- 4.9 Bus service details and timetable information have been obtained from Stagecoach in Gloucester and is summarised in **Table 4.1** below.

Table 4.1 –Bus Services (Oldends Lane and A419 Stops)

Service	Route Description	Operator	First/Last Service and Approximate Frequency		
			Monday - Friday	Saturday	Sunday
61	Woodmancote – Cheltenham	Stagecoach in Gloucester	Hourly (06:02 to 19:46)	Hourly (08:06 to 18:56)	No Service

- 4.10 As set out in **Table 4.1**, the 61 service operates at an hourly frequency and serves the Oldends Lane and A419 stops to the immediate north and west of the site. The service connects the proposed scheme with Stroud, Stonehouse, Eastington, Cheltenham and the wider area.

Conclusion on Accessibility of the Development Site

- 4.11 Whilst it is recognised that the nature of a drive through is that most trips are made by car and that they will already be on the local highway network, staff and some customer trips may be made by modes other than private car.
- 4.12 It is considered that the pedestrian and cycle routes linking the development site with the nearby employment facilities and surrounding residential areas are of a sufficient width, lighting and quality to enable convenient access for future staff and customers of the proposed development.
- 4.13 The site is located within 300 metres of bus stops located on the A419 and Oldends Lane. The 61 service operates at an hourly frequency and is considered suitable for accessing the proposed scheme from the surrounding area, including Stroud and Stonehouse, by both employees and customers.
- 4.14 It is therefore considered that the site enables future employees and customers to easily access the site by non-car modes as a genuine alternative to the car.

5 THE DEVELOPMENT PROPOSAL

The Scheme

- 5.1 The scheme comprises the development of land to the east of Sperry Way, located within Stonehouse Business Park, to provide for a coffee shop with drive through lane. The architect's masterplan is attached as **Appendix D**.
- 5.2 The proposed drive through coffee shop comprises of circa 167 square metres (sq.m) Gross Internal Area (GIA). A total of 32 car parking spaces will be provided on site including for three disabled spaces.
- 5.3 To the south of the proposed drive through coffee shop, the proposals also include for an additional 42 space car park. This will be provided to accommodate existing on-street parking within Stonehouse Business Park and potential future on-street parking demand generated by neighbouring employment uses and development.
- 5.4 The parking area located to the south of the proposed coffee shop scheme will therefore provide additional off-site parking within Stonehouse Business Park and ensure that staff from neighbouring employment uses can park off-street rather than on-street. This will reduce the demand for on-street parking within Stonehouse Business Park, reducing the impact upon the highway network and improving the operation of the site as a whole.
- 5.5 The car park will be served from the same priority junction as the proposed drive through coffee shop development. It will comprise 42 car parking spaces and be barrier controlled to ensure that only permitted users can gain access. It will not be for the use of customers of the proposed drive through.

Vehicular Access Arrangement

- 5.6 It is proposed that vehicular access and egress from the site will be via a new priority T-Junction with Sperry Way. **Figure 5.1** shows that the achievable visibility splay looking left and right out of the site can be achieved to a distance of 43 metres to the nearside kerb, which is considered commensurate with the posted 30mph speed limit.

Pedestrian Access Arrangement

- 5.7 It is proposed that pedestrian access to the site will be achieved via a connection to the existing shared footway and cycleway routing along the eastern side of Sperry Way, as shown on the architect's masterplan provided at **Appendix D**. This will provide a direct pedestrian connection to the site from the surrounding residential and employment facilities and bus stops located on the A419 and Oldends Lane.

Internal Layout

- 5.8 The internal site layout and car park has been designed to achieve efficient vehicular circulation, allowing users to fully utilise the available parking spaces.
- 5.9 Bespoke evidence based survey data obtained from similar drive through coffee shop sites, provided at **Appendix E**, shows that average AM and PM peak hour queues comprise approximately three and one vehicles respectively. The clockwise drive through lane of the proposed scheme will be able to accommodate approximately five large cars, reducing the likelihood of vehicles backing on to the car parking area.
- 5.10 A swept path analysis of a large car travelling through the drive through lane and accommodation of vehicles in the drive through lane is shown on **Figure 5.2**.

Parking Provision

Car Parking

- 5.11 Car parking standards are set out in Stroud District Council's *Local Plan (2015)*. The car parking standards are summarised in **Table 5.1** below.

Table 5.1 – Stroud District Council Car Parking Standards

Land Use	Stroud District Council Car Suggested Parking Standard
Public House/Restaurant	1 per 5 sq.m Public Floor Area

- 5.12 Stroud District Council's *Local Plan (2015)* also advises that one disable parking bay is to be provided for every 10 conventional parking spaces. The proposed 167 sq.m GIA drive through coffee shop includes one car parking space per 5.2 sq.m GIA, corresponding to a total provision of 32 spaces, which is considered to be in accordance with Stroud District Council suggested parking standards set out in **Table 5.2** above. The scheme also provides for the provision of three disabled parking bays. Disabled parking bays are designed to facilitate access by wheelchair users and are located close to the building entrance, as demonstrated on the architects masterplan provided at **Appendix D**.

Cycle Parking

- 5.13 Minimum cycle parking standards are set out in Stroud District Council's *Local Plan (2015)*. The minimum cycle parking standards are summarised in **Table 5.2** below.

Table 5.2 – Stroud District Council Minimum Cycle Parking Standards

Land Use	Stroud District Council Minimum Cycle Parking Standard	Minimum Cycle Parking Provision (196 sq.m GFA Drive Through Coffee Shop)
Public House/Restaurant	1 per 26 sq.m Gross Floor Area	8

- 5.14 The scheme provides a total of eight cycle parking spaces, located adjacent to the building, as demonstrated on the architect's masterplan attached as **Appendix D**. The proposed cycle parking provision is in accordance with suggested guidance provided by Stroud District Council and set out in **Table 5.2** above.

Management and Adoption

- 5.15 It is proposed that the internal road layout within the site will be maintained privately by the end operators.

Servicing Arrangements

Deliveries

- 5.16 Service vehicles will enter the site via the proposed site access and utilise the five car parking spaces located along the eastern side of the central parking area, as shown on **Figure 5.3**. Deliveries will be made out of hours when possible by a rigid delivery vehicle, with the servicing area cordoned off during delivery times. Service vehicles will egress the site in forward gear via the proposed site exit.

Refuse

- 5.17 The scheme provides a secured bin store area to the immediate north of the drive through coffee shop unit, as shown on the architect's masterplan attached as **Appendix D**. Refuse collection will be carried out by a private commercial waste collector, as per the servicing arrangements set out in **paragraph 6.16**.

6 TRANSPORTATION PLANNING POLICY AND GUIDANCE

6.1 Relevant transportation policies are set out in the following adopted documents:

- (i) National Planning Policy Framework (2012);
- (ii) National Planning Practice Guidelines (2014);
- (iii) Manual for Streets (2007);
- (iv) Manual for Streets 2 *Wider Application of the Principles* (2010);
- (v) Manual for Gloucestershire Streets 2nd Edition (2012);
- (vi) The Stroud District Local Plan (2015); and
- (vii) Gloucestershire's Local Transport Plan 2011-26 (2011).

6.2 National Planning Policy Framework (NPPF) came into force on 27th March 2012. The NPPF retains the core principle set out within the preceding national policy guidance for development to be located within sustainable locations in order to help reduce car dependency by making walking and cycling trips easier and by encouraging public transport trips between housing and jobs, shops and services. This is underpinned by a 'presumption in favour of sustainable development, as set out in paragraph 14 of the NPPF. Paragraph 32 of the NPPF also states:

"All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- safe and suitable access to the site can be achieved for all people; and*
- improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.*

6.3 **Chapter 3** confirms that the local highway network is currently operating safely. **Chapter 4** demonstrates that the site is accessibly located enabling future employees and customers to access the site by non-car modes as a genuine alternative to the car. It is also considered that the site offers excellent potential for linked trips to the nearby residential area and employment facilities. **Chapter 5** outlines that suitable access arrangements can be achieved and that the proposed car parking provision is considered to be appropriate. **Chapters 7** and **9** confirm that the proposed development will not result in material impact on the operation and safety of the local highway network.

7 FORECAST TRIP ATTRACTION

- 7.1 The TRICS database currently has no multi-modal or vehicle only surveys for drive through coffee operators. In support of previous drive through coffee planning applications, TPA has instructed independent traffic surveyors, PCC, to undertake weekday car park surveys at existing drive through coffee shop sites. The resultant bespoke evidence based survey data is used to determine trip rates and forecast trip attraction to the proposed scheme at Stonehouse Business Park.
- 7.2 Survey data from drive through coffee shop sites in Banbury, Bedford and Didcot were selected as the sites are comparable in terms of location and GFA (196 sq.m) to the proposed scheme. A summary of the site specific trip rates and average trip rates is provided in **Table 7.1** below and the complete survey data is provided at **Appendix E**.

Table 7.1 –Drive Through Coffee Shop Trip Rates

Survey Site	Trip Rate per 100 sq.m			
	AM		PM	
	Arr	Dep	Arr	Dep
Banbury	26.02	19.90	10.71	9.18
Bedford	19.90	16.33	7.14	9.69
Didcot	30.61	30.10	15.82	19.39
Average	25.51	22.11	11.22	12.75

- 7.3 Average trip rates derived from the bespoke evidence based survey data, presented in **Table 7.1** above, have been used to determine forecast trip attraction associated with the proposed scheme. A summary of weekday AM (0800 – 0900) PM (1700 – 1800) peak hour trip attraction is provided in **Table 7.2** below.

Table 7.2 – Proposed 196 sq.m Drive Through Coffee Shop - Trip Attraction

196 sq.m GFA Drive Through Coffee Shop	AM Peak (0800-0900)				PM Peak (1700-1800)			
	Trip Rates		Trips		Trip Rates		Trips	
	Arr	Dep	Arr	Dep	Arr	Dep	Arr	Dep
Vehicles	25.51	22.11	50	43	11.22	12.75	22	25

- 7.4 The bespoke evidence based survey data, provided at **Appendix E**, demonstrates that approximately 10% of trips attracted to the surveyed drive through coffee shop sites were primary trips. It was agreed in principal with highways officers at GCC on October 10th 2017 that 10% of trips attracted to the proposed scheme will be primary trips. The relevant correspondence is provided at **Appendix F**.
- 7.5 It is considered that the remaining 90% of trips will either comprise of pass-by or linked trips. In accordance with TRICS Research Report 05/01 entitled 'Trip Attraction Rates of Developments with Multiple Retail and Leisure Units', it is considered that mixed use developments reduce on average the total number of external trips by around 20% as a result of trip linking. This is also considered to be applicable to the proposed development with 20% of the trips linked with the uses within Stonehouse Business Park and the surrounding area. Further to the above it is therefore considered that the remaining 70% of trips will be pass-by. The forecast primary, pass-by and linked trips associated with the proposed development is set out in **Table 7.3** below.

Table 7.3 – Proposed 196 sq.m Drive Through Coffee Shop - Primary, Pass-By and Linked

196 sq.m GFA Drive Through Coffee Shop	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Trips		Trips	
	Arr	Dep	Arr	Dep
Total (100%)	50	43	22	25
Pass-By (70%)	35	30	15	18
Linked (20%)	10	9	4	5
Primary (10%)	5	4	2	3

Trips

*Figures subject to rounding

- 7.6 It is shown in **Table 7.3** that adjusting for pass-by and linked trips, the proposed scheme could be associated with around nine primary two-way vehicular movements in the AM peak hour and five primary two-way vehicular movements in the PM peak hour.
- 7.7 To ensure a robust assessment, the impact of primary and pass-by development trips on the local highway network, has been assessed in **Chapter 9**.

8 SCOPE OF JUNCTION ANALYSIS

Background

- 8.1 This chapter outlines the methodology adopted to assess the impact of the proposed development on the local highway network, as agreed with highway officers at Gloucestershire County Council. The assessment considers the impact of development traffic during weekday AM (0800 - 0900) and PM (1700 - 1800) peak periods at the following junction:

- (i) A419 / Sperry Way / Oldends Lane Roundabout

Existing and Baseline Traffic Flows

- 8.2 The observed 2015 baseline traffic flows were recorded during the Manual Classified Count (MCC) surveys undertaken on 14th May 2015.
- 8.3 The 2015 baseline traffic flows have been growthed to 2017 and to a future year of 2022 using TEMPRO 7.2. TEMPRO is based on forecast trips associated with allocated development provided within local planning documents. Given that land within Stonehouse Business Park is an allocated site within the Stroud Local Plan it is considered that surrounding committed development is accounted for within TEMPRO.
- 8.4 Growth factors have been adjusted for the National Transport Model within TEMPRO selecting urban principal as the road type and Stroud 005 (E02004655) as the geographic location. A summary of calculated growth factors is provided in **Table 8.1** below and detailed selection criteria is found at **Appendix G**.

Table 8.1 – Summary of TEMPRO Calculated Growth Rates

	Weekday Local Growth Figure	
	AM (0700 – 0959)	PM (1600 – 1859)
2015 - 2017	1.0240	1.0236
2015 - 2022	1.0947	1.0896

- 8.5 The existing 2017 and 2022 traffic flows at the Oldends Lane roundabout for the AM and PM weekday peak periods are shown on **Figure 8.1**, **Figure 8.2**, **Figure 8.3** and **Figure 8.4** respectively.

- 8.6 To provide a robust assessment, the 2022 baseline includes additional trip generation associated with proposed increase in quantum of development to the outline consented Phase 2 development of Stonehouse Business Park (S.14/2548/OUT), as set out within PFA's Transport Statement (Ref: S16-DOC02 TS Issue 2 September 2017) and summarised in **Table 8.2** below.

Table 8.2 – Coffee Shop Trip Attraction and Stonehouse Business Park Phase 2 Trip Generation

	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Trips		Trips	
	Arr	Dep	Arr	Dep
Proposed Phase 2 Development - Consented Phase 2 Development	22	2	2	23

Proposed Development Traffic

- 8.7 The impact of development traffic, comprising primary and pass-by trips as set out in **Table 8.3** below, on the operation of the Oldends Lane roundabout is assessed for the 2022 baseline. The vehicle movements associated with the proposed development have been distributed onto the local highway network using the weighting of existing turning movements at the Oldends Lane roundabout. The corresponding AM and PM peak traffic flow diagrams are provided at **Figure 8.5** and **Figure 8.6**.
- 8.8 A summary of the proposed drive through trip attraction, distinguishing between primary and pass-by trips, is provided in **Table 8.3** below.

Table 8.3 – Coffee Shop Trip Attraction and Stonehouse Business Park Phase 2 Trip Generation

	AM Peak (0800-0900)		PM Peak (1700-1800)	
	Trips		Trips	
	Arr	Dep	Arr	Dep
Proposed 196 sq.m Coffee Shop (Pass-by + Primary Trips)	40 (35 + 5)	34 (30 + 4)	17 (15 + 2)	21 (18 + 3)

- 8.9 The vehicle movements associated with the proposed drive through coffee shop and proposed increase in quantum of development to the outline consented Phase 2 development of Stonehouse Business Park have been distributed onto the local highway network using the weighting of the observed two-way flows at the Oldends Lane roundabout.
- 8.10 The 2022 baseline plus coffee shop development traffic routing through the Oldends Lane roundabout for the AM and PM peak periods is shown on **Figure 8.7** and **Figure 8.8**.

9 TRAFFIC IMPACT ASSESSMENT

- 9.1 The industry standard Junctions 9 software has been used to assess the operation of the existing Oldends Lane / A419 / Sperry Way roundabout junction.
- 9.2 The Junctions 9 results include the Ratio to Flow Capacity (RFC), delay and queuing predicted on each approach arm of the junctions. An RFC of 1.00 indicates that an arm is operating at its theoretical capacity while a RFC of 0.85 or less suggests that the arm is operating within its practical capacity.
- 9.3 The Junctions 9 reports for the 2017 baseline, 2022 baseline (including proposed Stonehouse Business Park Phase 2 extension) and 2022 baseline plus development are included at **Appendix H**.
- 9.4 The results of the capacity assessments for weekday AM and PM peak periods are summarised in **Table 9.1** below.

Table 9.1 – Oldends Lane / A419 / Sperry Way Roundabout Junction Capacity Assessments

Scenario	Time	Arm														
		Oldends Lane			A419 Stroud			Industrial Estate			Sperry Way			A419 M5		
		RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)
Weekday AM Peak (0800-0900)	2017 Existing	0.28	0.4	5.64	0.80	4.0	12.30	0.03	0.0	6.87	0.03	0.0	8.03	0.82	4.6	12.50
	2022 Baseline	0.5	0.5	6.22	0.87	6.8	19.72	0.04	0.0	7.88	0.04	0.0	8.86	0.89	7.7	19.78
	2022 Baseline + Dev	0.31	0.5	6.24	0.87	6.7	19.72	0.04	0.0	8.00	0.10	0.1	8.82	0.88	7.6	19.65
Weekday PM Peak (1700-1800)	2017 Existing	0.60	1.5	9.58	0.53	1.1	5.04	0.23	0.3	6.75	0.34	0.5	10.42	0.68	2.1	6.81
	2022 Baseline	0.67	2.0	12.08	0.57	1.3	5.59	0.26	0.4	7.59	0.45	0.8	13.83	0.73	2.7	8.11
	2022 Baseline + Dev	0.66	1.9	11.62	0.57	1.3	5.56	0.27	0.4	7.60	0.49	0.9	14.54	0.73	2.6	7.84

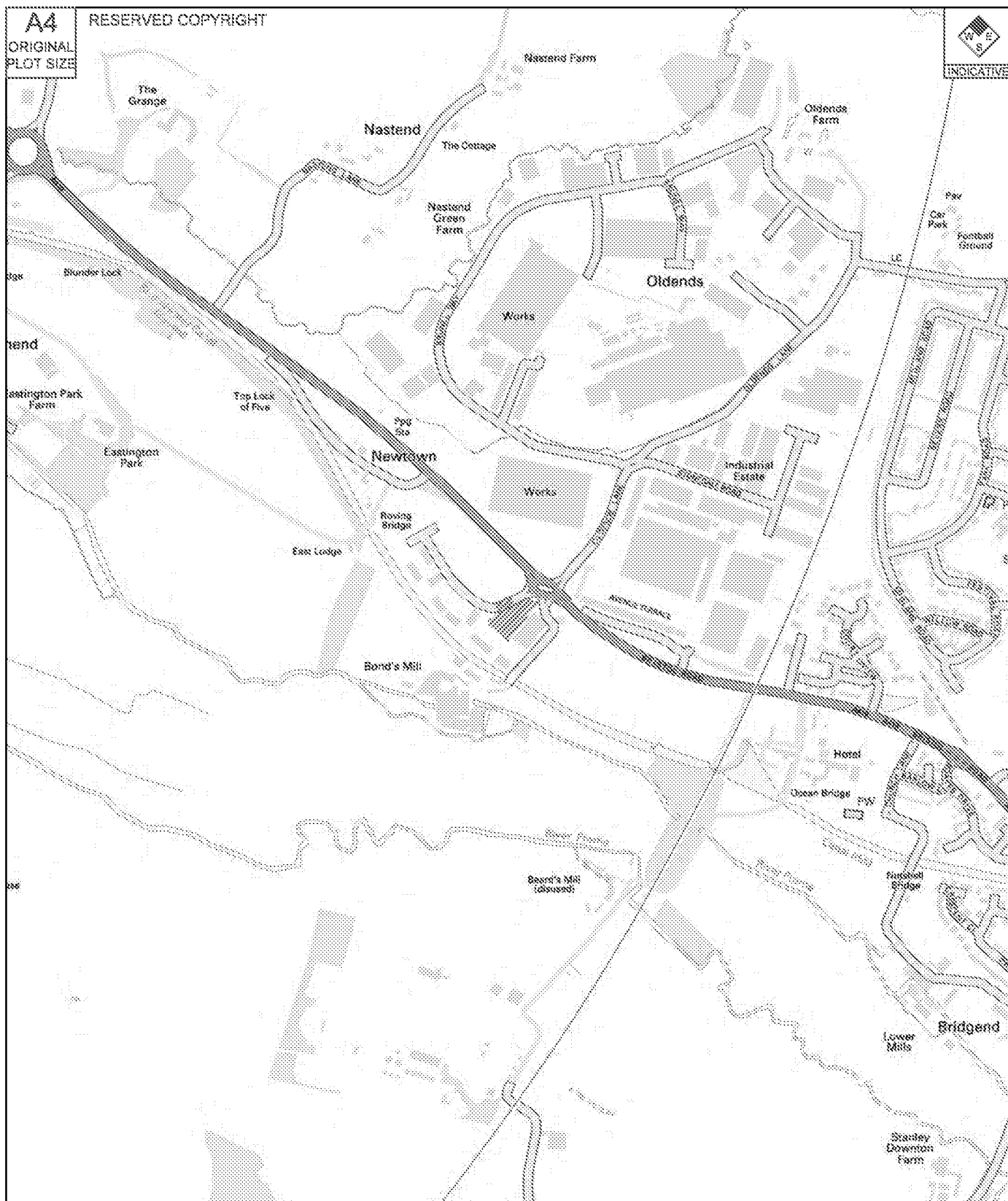
- 9.8 In the 2022 Baseline scenario, the results presented in **Table 9.1** show that the Oldends Lane / A419 / Sperry Way Roundabout is operating within theoretical capacity during the weekday AM and PM peaks. The A419 (Stroud) and A419 (M5) arms experience the highest levels of demand in the AM peak, with an RFC of 0.87 and 0.89 and corresponding queues of seven and eight vehicles respectively.

- 9.9 In the 2022 Baseline plus development scenario, the Oldends Lane / A419 / Sperry Way Roundabout continues to operate within theoretical capacity during the weekday AM and PM peaks.
- 9.10 As shown, the impact of development traffic on RFC, queues and delays at this junction is not considered to be material. In the critical AM peak hour, the RFC and queues on the A419 (Stroud) arm remains equal to the 2022 Baseline. On the A419 (M5) arm, the RFC reduces by 0.01 with corresponding queues remaining at eight vehicles. This is considered to be as a result of the redistribution of movements from pass-by movements associated with the proposed development. In the PM peak hour, all arms of the roundabout are shown to operate within the practical capacity for the 2022 Baseline plus development scenario.
- 9.11 Further to the results of the junction analysis presented within this chapter and given that the site previously benefited from reserved matters planning approval for a B1 Office unit (S.08/1524/REM), it is considered that the vehicular trips attracted to the proposed development will be immaterial.

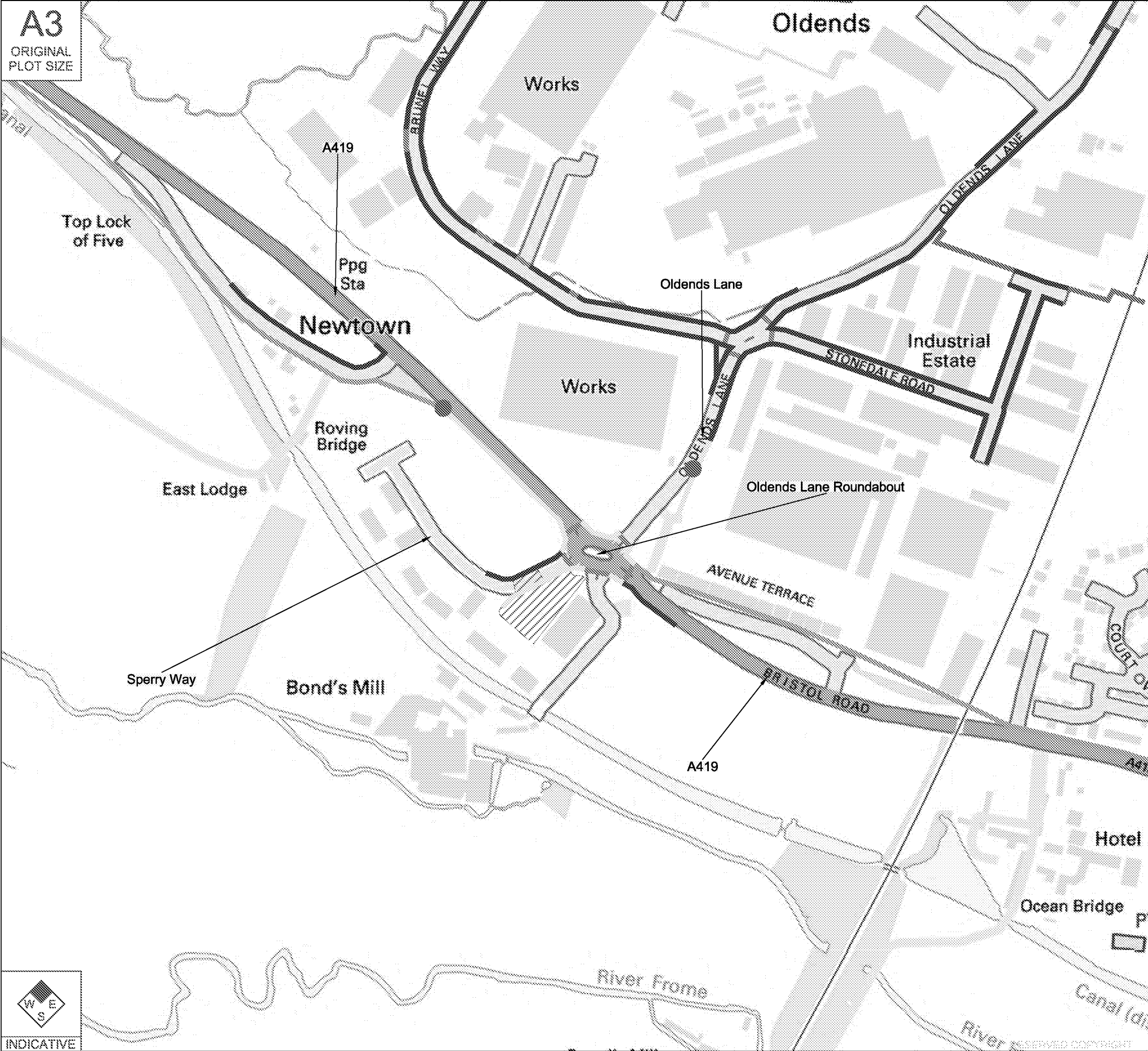
10 SUMMARY AND CONCLUSIONS

- 10.1 This TA has been prepared by TPA in order to examine the highway and transportation matters associated with the proposed development at Stonehouse Business Park, Stonehouse, for a drive through coffee shop. The TA sets out the existing highway conditions, the development proposals and the predicted traffic impact.
- 10.2 The TA demonstrates that the proposed development is accessible on foot, by cycle and by local bus services.
- 10.3 It is also demonstrated that the addition of traffic associated with the proposed development of the site is not forecast to have a material impact on the existing or future operation of the local highway network during the AM and PM peak periods, particularly when considering that the site previously benefited from reserved matters planning approval for a B1 Office unit (S.08/1524/REM).
- 10.4 It is also considered that the proposed parking provision and servicing arrangements are appropriate.
- 10.5 It is concluded that there are no valid highway or transportation reasons which should prevent the proposed development of this site

FIGURES



PROJECT:						CLIENT:					
COFFEE SHOP DRIVE THRU, STONEHOUSE						ROBERT HITCHINS LTD					
TITLE:						Bristol Cambridge London Oxford Weylyn Garden City  Transport Planning Associates					
Site Location											
KEY			STATUS:			INFORMATION					
 Site Location											
Reproduced from Ordnance Survey Supermap Data with the permission of The Controller of Her Majesty's Stationery Office. Crown Copyright - Licence No. AL10034021						SCALE: 1:10,000 DATE: 18.10.17 DRAWN: DR CHECKED: WG APPROVED: NH					
JOB NO: 1611-38 DRAWING NO: Figure 2.1 REVISION: A						25 King Street Bristol BS1 4PB 0117 925 9400 www.tpa.uk.com					
Rev	Date	Details	Drawn by	Checked by	Approved by						



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KEY

Approximate Site Location

Footway

A	27.11.17	Site boundary updated.	PSW	STM	NH
Rev	Date	Details	Drawn by	Checked by	Approved by

Bristol
Cambridge
London
Oxford
Wetwyn Garden City

tpa

Transport Planning Associates

25 King Street
Bristol
BS1 4PB
0117 925 9400
www.tpa.uk.com

CLIENT:
ROBERT HITCHINS LTD

PROJECT:
COFFEE SHOP DRIVE THRU, STONEHOUSE

TITLE:
Local Highway Network

STATUS:
INFORMATION

SCALE: 1:4000	DATE: 18.10.17	DRAWN: DR	CHECKED: WG	APPROVED: NH
JOB NO: 1611-38	DRAWING NO: Figure 2.2	REVISION: A		

W

E

S

INDICATIVE

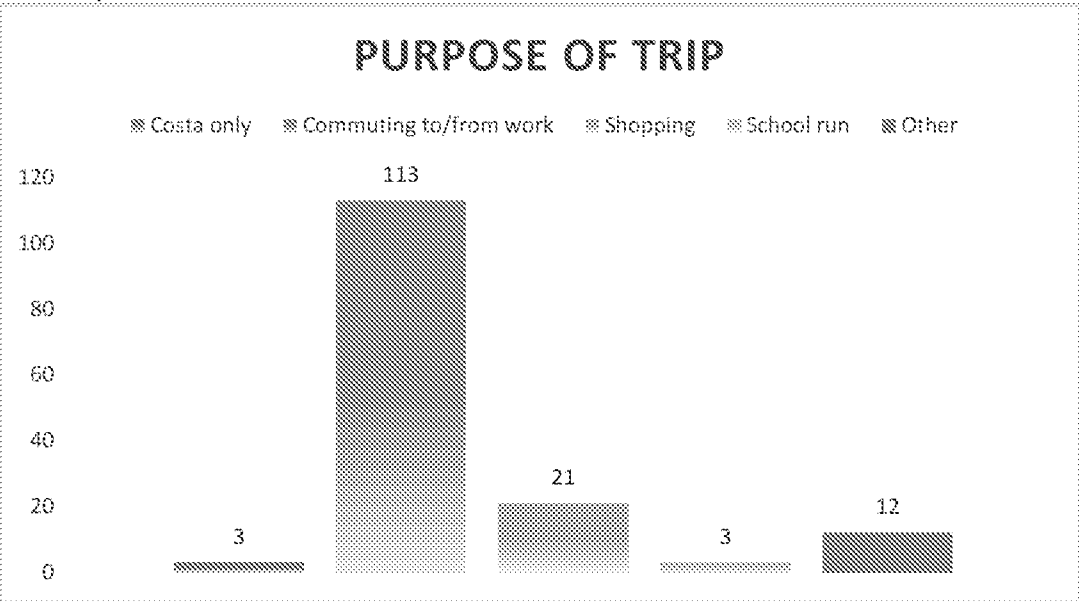
APPENDIX E

Trip Rate per 100 sq.m				
Survey Site	AM (0800-0900)		PM (1700-1800)	
	Arr	Dep	Arr	Dep
Banbury	26.02	19.90	10.71	9.18
Bedford	19.90	16.33	7.14	9.69
Didcot	30.61	30.10	15.82	19.39
Average	25.51	22.11	11.22	12.76

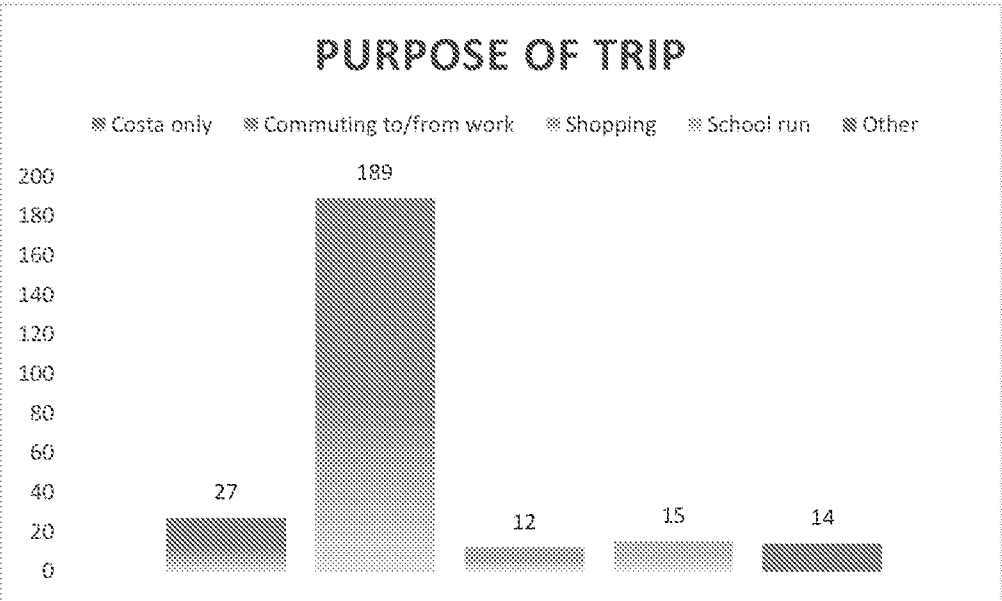
	Max Queue	
Site	AM (0800-0900)	PM (1700-1800)
Banbury	2	1
Bedord	4	1
Didcot	4	2
Average	3	1

Total Trips	630
Costa	68
Primary Tr	11

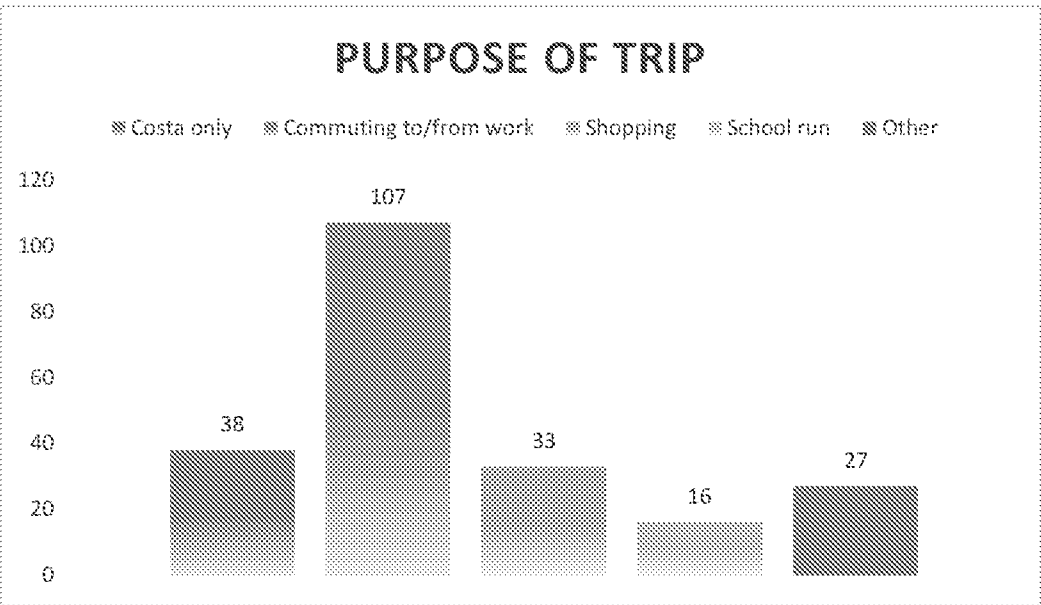
Banbury



Didcot



Bedford



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

2. If elsewhere, is it

- a. Commute to/from work
- b. Shopping trip
- c. School run
- d. Other (Specify)

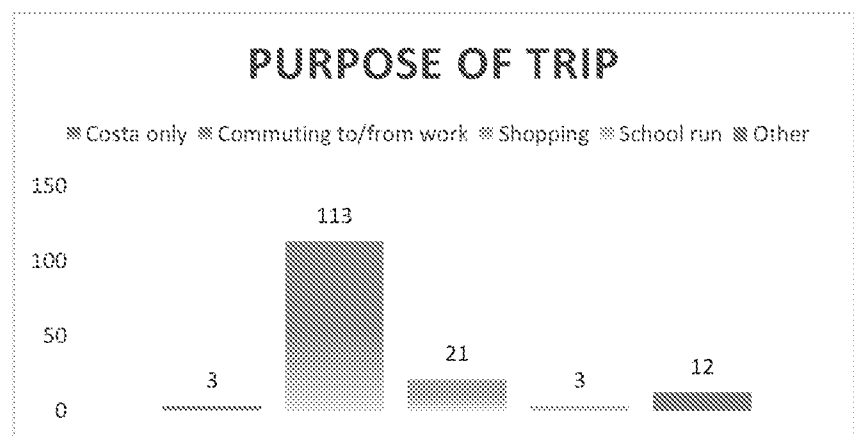
3a. Origin Postcode:

3b. Home or Work?

6. Vehicle occupants:

Time	Q1	Q2	Q3a	Q3b			Q6
06:06	No	a	OX16	Home			1
06:08	No	a	OX15	Home			1
06:11	No	a	OX15	Home			1
06:14	No	a	OX16	Home			1
06:16	No	a	SL6	Home			1
06:20	No	a	OX17	Home			1
06:27	No	a	OX16	Home			1
06:29	No	a	OX16	Home			1
06:33	No	a	OX16	Home			1
06:37	No	a	OX16	Home			1
06:40	No	a	OX16	Home			1
06:41	No	a	OX16	Home			1
06:48	No	a	OX16	Home			1
06:55	No	a	OX16	Home			2
07:01	No	a	OX17	Home			1
07:07	No	a	OX16	Home			1
07:13	No	a	OX16	Home			2
07:15	No	a	OX16	Home			1
07:18	No	a	OX16	Home			2
07:22	No	a	OX16	Home			1
07:26	No	a	OX16	Home			1
07:30	No	a	OX17	Home			1
07:33	No	a	OX17	Home			1
07:37	No	a	OX16	Home			1
07:40	No	a	OX16	Home			1
07:41	No	a	OX16	Home			1
07:45	No	a	OX16	Home			1
07:46	No	a	OX15	Home			1
07:51	No	a	OX16	Home			1
07:54	No	a	OX16	Home			1
07:58	No	a	OX16	Home			1
07:59	No	a	OX16	Home			1
08:00	No	a	OX16	Home			1
08:03	No	a	OX16	Home			1
08:04	No	a	CV37	Home			1
08:06	No	a	OX16	Home			1
08:08	No	a	OX16	Home			1
08:09	No	a	OX17	Home			1
08:11	No	a	OX15	Home			1
08:14	No	a	OX15	Home			1
08:15	No	a	OX3	Home			1
08:17	No	a	NN11	Home			1
08:19	No	a	OX16	Home			1
08:20	No	a	OX16	Home			1
08:21	No	a	NN5	Home			2
08:24	No	a	-	Home			1
08:24	No	a	OX29	Home			1
08:28	No	a	OX16	Home			1
08:32	No	a	OX16	Home			1
08:34	No	a	OX17	Home			1
08:35	No	c	OX16	Home			1
08:37	No	Hospital	OX16	Home			1
08:39	No	a	NN13	Home			1
08:40	No	a	B21	Home			1
08:40	No	a	RT21	Home			1
08:41	No	a	OX16	Home			1
08:43	No	a	NN11	Home			1
08:44	No	a	OX11	Home			2
08:46	No	a	OX11	Home			2
08:50	No	Leisure	OX15	Home			1
08:52	No	Leisure	OX15	Home			1
08:53	No	a	OX15	Home			1
08:56	No	a	OX15	Home			1
09:00	No	a	OX16	Home			1
09:03	No	a	NN1	Home			1
09:06	No	a	OX16	Home			1
09:10	No	a	OX15	Home			1
09:12	No	a	OX7	Home			1
09:20	No	a	OX16	Home			2
09:26	No	a	OX16	Home			1
09:27	No	a	OX15	Home			1
09:29	No	c	OX16	Home			1
09:30	No	a	NN6	Home			1
09:41	No	a	OX16	Home			1
09:45	No	a	OX16	Home			1
09:48	No	b	OX16	Home			2
09:50	No	a	OX15	Home			1
09:53	No	a	OX16	Home			1
10:04	No	Leisure	OX15	Home			1
10:20	No	a	OX27	Home			1
10:26	No	a	OX16	Home			2
10:40	No	b	OX15	Home			1

Summaries	
Costa only	3
Commuting to/from work	113
Shopping	21
School run	3
Other	12
From home	143
From work	9
Aged 18-30	0
Aged 30-50	0
Aged 50+	0
Males	0
Females	0
Average Occupants	1



10:48	No	a	-	Home			1
10:52	No	a	OX16	Home			1
10:56	No	a	CV35	Home			2
11:00	No	b	OX16	Home			1
11:04	No	Social	OX17	Home			1
11:05	No	a	OX16	Home			1
11:06	No	Social	OX16	Home			1
11:08	No	a	OX16	Home			1
11:12	No	b	OX16	Home			2
11:13	No	Leisure	OX16	Home			1
11:18	No	a	OX16	Home			1
11:24	No	Leisure	OX16	Home			1
11:25	No	b	OX16	Home			1
11:31	No	b	OX17	Home			1
11:37	No	a	OX16	Home			1
11:38	No	a	OX14	Home			1
11:41	No	b	OX16	Home			1
11:45	No	a	OX15	Home			1
11:48	No	b	OX16	Home			1
11:49	No	a	B8	Home			1
11:50	No	a	OX16	Home			2
11:57	No	a	OX16	Home			1
11:59	No	Leisure	OX15	Home			2
12:00	No	b	OX16	Home			2
12:04	No	a	OX16	Home			1
12:09	No	b	OX16	Home			2
12:09	No	a	OX16	Work			1
12:11	Yes		OX17	Home			1
12:13	No	b	OX16	Home			1
12:25	No	b	OX17	Home			1
12:34	No	b	OX16	Home			1
12:40	No	a	OX16	Home			1
12:43	No	a	NN1	Home			1
12:49	No	a	OX16	Home			1
12:53	Yes		OX16	Home			2
12:54	No	b	OX16	Home			1
12:56	No	b	OX16	Home			1
13:04	No	a	OX16	Work			1
13:10	No	a	OX15	Home			2
13:15	No	b	OX16	Home			1
13:22	No	a	OX16	Home			1
13:24	No	a	OX15	Home			1
13:28	No	Leisure	OX1	Home			1
13:33	No	a	OX16	Home			2
13:38	No	a	OX16	Home			1
13:40	No	b	OX11	Home			1
13:45	No	b	OX16	Home			1
13:52	Yes		OX14	Home			1
14:00	No	a	OX17	Home			2
14:04	No	a	NN1	Home			2
14:05	No	a	OX16	Home			1
14:27	No	a	OX16	Home			1
14:35	No	b	OX17	Home			2
14:38	No	b	OX25	Home			1
14:50	No	Social	OX16	Home			1
14:52	No	a	OX16	Home			1
15:01	No	a	OX16	Home			1
15:16	No	a	OX17	Home			1
15:31	No	b	OX16	Home			1
15:35	No	a	OX16	Home			1
15:46	No	a	OX15	Work			2
15:54	No	c	OX15	Work			3
16:11	No	a	OX16	Work			1
16:29	No	a	OX16	Work			1
16:32	No	a	OX16	Home			1
17:17	No	a	OX14	Work			1
17:23	No	a	OX16	Home			1
17:25	No	Leisure	OX16	Home			4
17:44	No	a	OX15	Work			1
18:41	No	a	OX16	Work			2



Costa Banbury Car Park Survey, Wednesday 18th May 2016

Car Park		
Time	Ins	Outs
06:00 - 06:15	3	3
06:15 - 06:30	8	4
06:30 - 06:45	5	8
06:45 - 07:00	8	10
07:00 - 07:15	4	4
07:15 - 07:30	4	2
07:30 - 07:45	6	4
07:45 - 08:00	8	12
08:00 - 08:15	14	8
08:15 - 08:30	14	10
08:30 - 08:45	13	10
08:45 - 09:00	10	11
09:00 - 09:15	8	6
09:15 - 09:30	15	10
09:30 - 09:45	7	11
09:45 - 10:00	10	14
10:00 - 10:15	8	7
10:15 - 10:30	9	11
10:30 - 10:45	8	8
10:45 - 11:00	3	5
11:00 - 11:15	14	9
11:15 - 11:30	11	9
11:30 - 11:45	9	8
11:45 - 12:00	11	13
12:00 - 12:15	11	7
12:15 - 12:30	8	7
12:30 - 12:45	13	8
12:45 - 13:00	6	10
13:00 - 13:15	10	3
13:15 - 13:30	12	11
13:30 - 13:45	6	11
13:45 - 14:00	7	11
14:00 - 14:15	7	10
14:15 - 14:30	6	5
14:30 - 14:45	9	9
14:45 - 15:00	4	9
15:00 - 15:15	3	2
15:15 - 15:30	6	6
15:30 - 15:45	5	5
15:45 - 16:00	9	6
16:00 - 16:15	4	6
16:15 - 16:30	3	5
16:30 - 16:45	4	8
16:45 - 17:00	2	4
17:00 - 17:15	5	3
17:15 - 17:30	7	3
17:30 - 17:45	3	5
17:45 - 18:00	6	7
18:00 - 18:15	2	2
18:15 - 18:30	0	2
18:30 - 18:45	5	3
18:45 - 19:00	5	5
TOTALS	378	370

Drive Through	
Ins	Max Queue
2	1
8	2
5	1
7	3
3	1
3	1
4	1
6	2
7	2
8	2
10	3
8	2
5	1
7	2
6	1
6	2
6	2
4	1
4	1
2	1
9	2
4	1
6	2
7	2
5	2
3	1
7	2
4	1
4	1
6	2
2	1
3	1
4	1
2	1
3	1
2	1
3	1
3	1
1	1
3	1
2	1
1	1
4	1
0	0
0	0
3	1
1	1
4	1
0	0
0	0
1	1
2	1
208	

AM trip rate per 100 sq.m		
Arrival	Departures	
26.02	19.90	
PM trip rate per 100 sq.m		
Arrival	Departures	
10.71	9.18	
AM Max Q		
PM Max Q		2
		1



Costa Bedford Interview Survey, Wednesday 25th May 2016

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

2. If elsewhere, is it

- a. Commute to/from work
- b. Shopping trip
- c. School run
- d. Other (Specify)

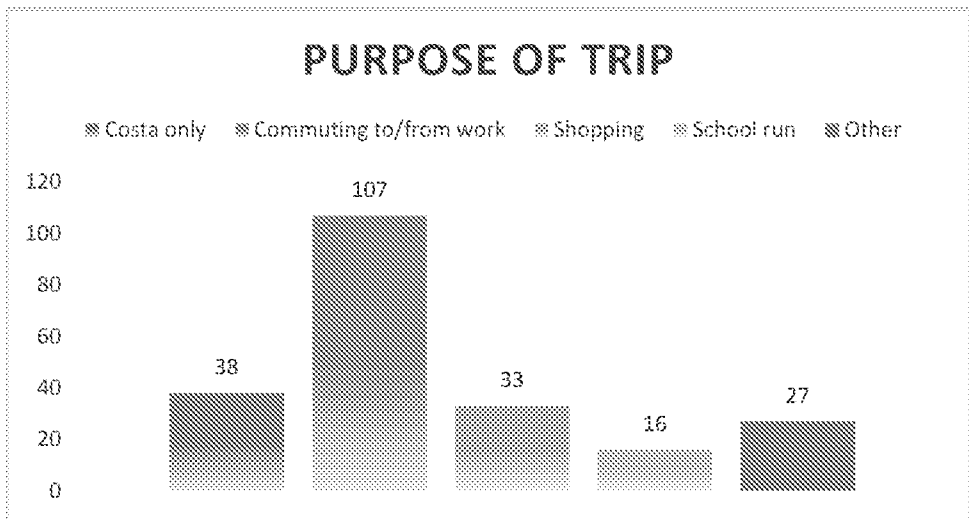
3a. Origin Postcode:

3b. Home or Work?

6. Vehicle occupants:

Time	Q1	Q2	Q3a	Q3b			Q6
06:15	No	a	LE3	Home			1
06:31	No	a	SG5	Home			1
06:44	No	a	NN10	Home			1
06:53	No	a	MK41	Home			1
06:58	No	a	MK41	Home			2
07:04	No	a	MK45	Home			1
07:06	No	a	LE16	Home			1
07:07	No	a	MK42	Home			1
07:18	No	a	MK42	Home			1
07:10	No	a	MK41	Home			1
07:11	No	a	MK41	Home			1
07:12	No	a	MK42	Home			2
07:16	No	a	MK42	Home			2
07:24	No	a	PE19	Home			1
07:31	No	a	MK42	Home			1
07:32	No	a	MK45	Home			1
07:34	No	a	MK45	Home			1
07:34	No	a	MK42	Home			3
07:37	No	Hospital	MK43	Home			1
07:41	No	a	MK45	Home			1
07:45	No	a	MK45	Home			1
07:48	No	a	MK45	Home			1
07:49	No	a	MK45	Home			2
07:52	No	a	MK42	Home			1
07:52	No	a	MK45	Home			1
07:53	No	a	MK45	Home			1
08:02	No	a	SG17	Home			1
08:03	No	a	MK43	Home			1
08:04	No	a	MK45	Home			1
08:07	No	a	LU7	Home			1
08:14	No	a	MK41	Home			1
08:15	No	a	MK45	Home			1
08:16	No	a	MK42	Home			2
08:17	No	a	MK41	Home			2
08:29	No	a	MK41	Home			1
08:32	No	c	MK42	Home			3
08:33	No	a	MK45	Home			1
08:35	No	a	MK42	Home			1
08:36	No	a	MK42	Home			2
08:38	No	a	MK42	Home			1
08:40	No	a	MK41	Home			1
08:48	No	c	MK42	Home			1
08:49	No	a	LU6	Home			1
08:50	No	a	SG19	Home			1
08:51	No	a	MK42	Home			1
08:52	No	a	CM3	Home			1
08:53	No	a	MK42	Home			1
08:55	No	c	MK43	Home			1
08:58	No	c	MK42	Home			1
09:00	No	a	SA6	Home			1
09:01	No	a	MK40	Home			1
09:03	No	c	MK40	Home			1
09:06	No	b	MK45	Home			2
09:08	No	a	MK42	Home			1
09:10	No	a	MK44	Home			1
09:17	No	a	MK42	Home			1
09:20	No	c	MK42	Home			1
09:23	Yes		MK44	Home			1
09:24	No	a	MK45	Home			1
09:27	Yes		LU3	Home			3
09:27	Yes		MK43	Home			2
09:29	No	c	MK43	Home			5
09:30	Yes		MK41	Home			1
09:33	c	a	MK42	Home			1
09:37	No	a	MK42	Home			1
09:39	No	b	MK43	Home			3
09:41	No	a	MK22	Home			1
09:42	No	a	MK41	Home			1
09:47	No	b	MK44	Home			1
09:47	No	a	SG19	Home			1
09:50	No	c	MK40	Home			2
09:51	No	Leisure	MK45	Home			2
09:53	No	a	MK42	Home			1
09:54	No	a	MK41	Home			1
09:55	No	a	MK43	Home			1
09:59	No	a	MK42	Work			2
10:01	No	Leisure	MK43	Home			2
10:02	No	Leisure	MK42	Home			2
10:03	No	Leisure	MK43	Home			2
10:05	No	a	MK45	Home			1
10:08	No	b	MK45	Home			2
10:09	No	Leisure	MK40	Home			1

Summaries	
Costa only	38
Commuting to/from work	107
Shopping	33
School run	16
Other	27
From home	210
From work	11
Aged 18-30	0
Aged 30-50	0
Aged 50+	0
Males	0
Females	0
Average Occupants	1



10:10	No	Leisure	MK45	Home			2
10:12	No	Leisure	MK41	Home			2
10:13	No	a	MK45	Home			1
10:19	Yes		MK40	Home			1
10:24	No	Leisure	MK45	Home			1
10:26	No	a	MK41	Home			1
10:27	No	a	LU7	Home			1
10:29	No	a	MK45	Home			2
10:03	No	a	MK45	Home			2
10:15	No	a	MK42	Home			1
10:22	No	a	MK43	Home			3
10:27	Yes		MK42	Home			2
10:33	No	a	MK45	Home			1
10:38	No	a	MK40	Work			1
10:44	No	Leisure	MK42	Home			2
10:45	No	a	SG18	Home			1
10:45	No	a	MK41	Home			1
10:47	Yes		MK42	Home			1
10:48	b	a	MK45	Home			1
10:49	b	a	MK45	Home			2
10:51	b	a	MK41	Home			2
10:54	No	a	MK45	Home			1
10:55	No	Leisure	MK43	Home			1
10:56	No	b	MK41	Home			2
10:59	No	a	MK43	Home			1
11:03	No	Leisure	MK45	Home			1
11:05	No	Social	MK45	Home			2
11:07	No	b	MK43	Home			1
11:16	No	a	MK45	Home			1
11:19	No	b	MK43	Home			1
11:20	No	b	MK44	Home			1
11:21	No	b	MK42	Home			2
11:22	No	Social	MK43	Home			2
11:27	No	Leisure	MK45	Home			1
11:33	No	Leisure	MK42	Home			3
11:45	No	a	MK45	Home			1
11:52	No	b	MK41	Home			1
11:54	No	a	MK45	Home			2
11:55	Yes		MK43	Home			1
11:58	Yes		MK43	Home			1
12:01	No	a	MK42	Home			1
12:06	Yes		MK45	Home			2
12:08	Yes		MK42	Home			2
12:09	Yes		MK45	Home			1
12:14	No	b	MK45	Home			1
12:23	Yes		MK42	Home			1
12:25	No	a	MK44	Home			1
12:26	Yes		MK42	Home			2
12:27	Yes		MK45	Home			2
12:29	No	a	MK40	Work			2
12:37	No	a	MK42	Work			1
12:42	No	b	MK42	Home			2
12:49	Yes		MK43	Home			1
12:50	No	a	MK41	Home			1
12:52	Yes		MK41	Home			1
12:53	No	b	MK10	Home			1
12:55	No	b	MK45	Home			1
12:58	Yes		MK42	Home			1
13:07	Yes		MK40	Home			1
13:08	Yes		MK40	Home			1
13:09	No	Social	MK45	Home			1
13:12	Yes		MK42	Home			1
13:14	No	Social	MK40	Home			2
13:17	Yes		MK42	Home			2
13:18	Yes		MK41	Home			1
13:19	Yes		MK40	Home			2
13:23	No	b	MK42	Home			1
13:29	No	b	MK42	Home			2
13:37	No	a	MK42	Home			2
13:39	No	a	MK43	Home			1
13:42	Yes		MK40	Home			1
13:50	Yes		MK42	Home			1
13:52	No	b	MK45	Home			1
13:53	No	b	MK45	Home			1
13:54	Yes	Leisure	NN9	Home			2
13:57	No	a	MK40	Home			1
13:58	Yes			Work			1
14:01	Yes			Home			1
14:03	No	a		Work			1
14:04	No	b		Home			1
14:10	Yes		MK40	Work			1
14:14	No	b	MK41	Home			2
14:24	No	c	MK43	Home			1
14:25	No	b	MK41	Home			2
14:30	No	b	MK41	Home			1
14:32	No	c	MK41	Home			2
14:33	No	b	MK45	Home			1
14:36	No	b	MK43	Home			2
14:36	No	b	MK43	Home			1
14:45	No	b	MK40	Home			2
14:47	No	b	MK43	Home			1
14:50	No	b	MK42	Home			1
14:51	No	a	MK45	Home			2
14:53	No	a	MK42	Home			1
14:54	No	a	MK42	Home			2
14:56	No	a	MK40	Home			4
14:58	No	Hospital	SG18	Home			4
14:59	Yes		MK43	Home			1
15:00	Yes		MK45	Home			1
15:06	No	a	NN10	Home			1
15:08	No	b	MK42	Home			2
15:09	Yes		MK42	Home			1
15:10	No	c	MK43	Home			2
15:13	No	Leisure	MK42	Home			1
15:16	No	a	MK45	Home			1
15:17	No	a	MK42	Home			1
15:27	No	a	MK42	Home			1
15:28	No	a	MK43	Home			2
15:29	No	Social	LU5	Home			1
15:31	Yes		MK43	Home			1
15:35	No	c	MK45	Home			2

15:38	No	c	MK40	Home			2
15:40	No	c	LU1	Work			2
15:55	No	Leisure	MK40	Home			1
15:56	No	Social	MK45	Home			1
15:59	No	b	MK44	Home			2
16:08	No	Leisure	MK40	Home			3
16:12	No	a	MK40	Home			1
16:14	No	b	MK40	Home			2
16:14	No	a	MK41	Work			1
16:25	Yes		MK42	Work			1
16:29	Yes		MK45	Home			2
16:35	No	Social	MK42	Home			1
16:37	No	a	MK42	Home			1
16:38	No	a	MK42	Home			1
16:42	No	a	MK43	Home			2
16:48	No	a	MK43	Home			3
16:57	No	c	MK42	Home			2
17:00	No	a	MK42	Home			1
17:07	No	a	MK42	Home			1
17:08	No	Leisure	MK43	Home			1
17:17	No	a	MK42	Work			2
17:44	No	Social	MK42	Home			2
17:50	Yes		MK45	Home			2
18:01	No	a	MK45	Home			1
18:26	No	c	MK43	Home			1
18:29	No	b	MK43	Home			2
18:31	No	b	MK44	Home			2
18:53	Yes		MK43	Home			3



Costa Bedford Car Park Survey, Wednesday 25th May 2016

Car Park		
Time	Ins	Outs
06:00 - 06:15	2	2
06:15 - 06:30	3	1
06:30 - 06:45	4	1
06:45 - 07:00	3	1
07:00 - 07:15	7	8
07:15 - 07:30	6	3
07:30 - 07:45	8	5
07:45 - 08:00	9	13
08:00 - 08:15	10	9
08:15 - 08:30	10	8
08:30 - 08:45	8	7
08:45 - 09:00	11	8
09:00 - 09:15	8	10
09:15 - 09:30	9	8
09:30 - 09:45	11	11
09:45 - 10:00	12	10
10:00 - 10:15	10	8
10:15 - 10:30	7	7
10:30 - 10:45	6	9
10:45 - 11:00	11	10
11:00 - 11:15	5	10
11:15 - 11:30	6	8
11:30 - 11:45	7	5
11:45 - 12:00	7	8
12:00 - 12:15	5	4
12:15 - 12:30	6	6
12:30 - 12:45	6	7
12:45 - 13:00	8	8
13:00 - 13:15	10	9
13:15 - 13:30	6	7
13:30 - 13:45	4	5
13:45 - 14:00	8	11
14:00 - 14:15	11	8
14:15 - 14:30	12	10
14:30 - 14:45	4	6
14:45 - 15:00	12	5
15:00 - 15:15	9	18
15:15 - 15:30	14	13
15:30 - 15:45	11	10
15:45 - 16:00	8	8
16:00 - 16:15	3	3
16:15 - 16:30	3	3
16:30 - 16:45	8	6
16:45 - 17:00	5	3
17:00 - 17:15	7	7
17:15 - 17:30	4	3
17:30 - 17:45	2	5
17:45 - 18:00	1	4
18:00 - 18:15	1	2
18:15 - 18:30	2	4
18:30 - 18:45	3	2
18:45 - 19:00	2	3
TOTALS	355	350

Drive Through	
Ins	Max Queue
0	1
1	1
2	1
2	1
7	5
5	3
4	4
7	5
5	3
7	3
6	4
10	4
6	2
7	6
8	6
11	3
9	5
6	3
3	3
9	6
3	3
6	4
2	1
6	2
4	2
6	3
2	2
6	6
5	3
3	3
4	2
6	3
5	3
7	2
4	3
10	9
5	7
5	3
4	2
3	2
4	3
2	1
3	3
3	1
2	2
1	1
1	1
1	1
2	2
1	1
1	1
233	

AM trip rate per 100 sq.m
Arrival Departures
19.90 16.33

PM trip rate per 100 sq.m
Arrival Departures
7.14 9.69

AM Max Q 4
PM Max Q 1



Costa Didcot Interview Survey, Wednesday 18th May 2016

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

2. If elsewhere, is it

- a. Commute to/from work
- b. Shopping trip
- c. School run
- d. Other (Specify)

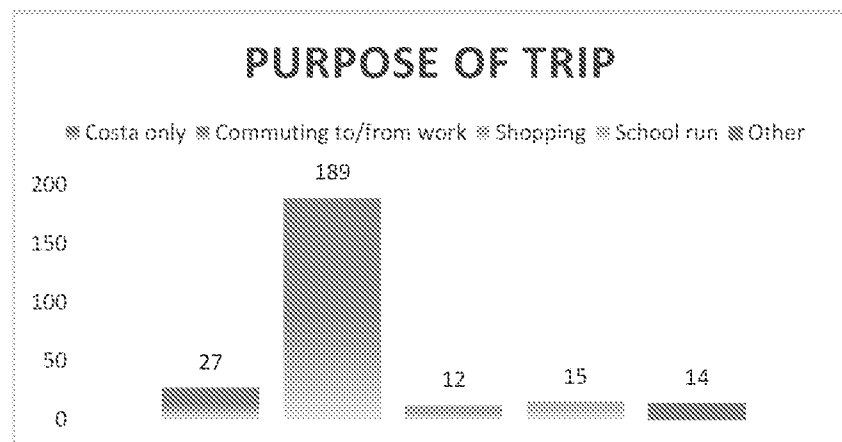
3a. Origin Postcode:

3b. Home or Work?

6. Vehicle occupants:

Time	Q1	Q2	Q3a	Q3b			Q6
06:01	No	a	OX4	Home			1
06:02	No	a	OX11	Home			1
06:05	No	a	RG20	Home			1
06:11	No	a	RG18	Home			1
06:20	No	a	OX12	Home			1
06:23	No	a	OX11	Home			1
06:26	No	a	OX14	Work			1
06:31	No	a	OX12	Home			1
06:35	No	a	RG12	Home			1
06:40	No	a	OX16	Home			1
06:44	No	a	OX16	Home			1
06:47	No	a	RG20	Home			1
06:49	No	a	RG20	Home			1
06:54	No	a	RG9	Home			1
06:55	No	a	OX11	Home			1
06:59	No	a	SN5	Home			1
07:02	No	a	OX11	Home			1
07:03	No	a	OX11	Home			1
07:05	No	a	RG15	Home			1
07:07	No	a	SN4	Home			1
07:10	No	a	B31	Home			1
07:11	No	a	OX14	Home			1
07:12	No	a	NN13	Home			1
07:14	No	a	OX3	Home			2
07:15	No	a	WD24	Home			1
07:17	No	a	OX1	Home			1
07:18	No	a	OX11	Home			1
07:19	No	a	OX11	Home			1
07:20	No	a	OX12	Home			1
07:22	No	a	OX11	Home			1
07:23	No	a	OX14	Home			2
07:25	No	a	OX14	Home			1
07:28	No	a	RG20	Home			1
07:30	No	a	OX2	Work			1
07:32	No	a	OX13	Home			1
07:33	No	a	OX14	Home			1
07:37	No	a	SN10	Home			1
07:40	No	a	OX11	Home			1
07:40	No	a	RG20	Home			1
07:41	No	c	OX11	Home			3
07:42	No	a	OX14	Home			1
07:42	No	a	DA6	Home			1
07:43	No	a	OX18	Home			1
07:44	No	a	M33	Home			1
07:44	No	a	OX4	Home			1
07:45	No	a	OX12	Home			1
07:46	No	a	OX2	Home			1
07:47	No	a	NN13	Home			1
07:49	No	a	OX44	Home			1
07:50	No	a	OX3	Home			1
07:52	No	a	OX11	Home			1
07:54	No	a	BS15	Home			1
07:54	No	a	SN1	Home			1
07:55	No	a	OX11	Home			1
07:55	No	a	OX11	Home			1
07:57	No	a	OX11	Home			1
08:00	No	a	OX18	Home			1
08:02	No	a	SP2	Home			2
08:03	No	a	HP18	Home			2
08:04	No	a	-	Home			1
08:05	No	a	OX10	Home			1
08:06	No	a	OX11	Home			1
08:07	No	a	SN5	Home			2
08:09	No	a	OX11	Home			1
08:12	No	c	OX11	Home			1
08:14	No	a	RG6	Home			1
08:17	No	a	OX14	Home			2
08:19	No	a	OX11	Home			1
08:20	No	Social	LE3	Home			3
08:23	No	a	OX2	Home			1
08:25	No	a	OX14	Home			1
08:27	No	a	OX14	Home			1
08:30	No	a	OX14	Home			1
08:31	No	a	OX11	Home			3
08:32	No	a	OX11	Home			1
08:35	No	a	OX11	Home			2
08:37	No	a	NN15	Home			1
08:38	No	a	OX13	Home			1
08:40	No	a	OX11	Home			1
08:41	No	a	OX11	Home			1
08:43	No	a	OX11	Work			1
08:45	No	a	OX14	Home			1

Summaries	
Costa only	27
Commuting to/from work	189
Shopping	12
School run	15
Other	14
From home	214
From work	43
Aged 18-30	0
Aged 30-50	0
Aged 50+	0
Males	0
Females	0
Average Occupants	1



08:49	No	a	RM8	Home			1
08:51	No	a	AP22	Home			1
08:53	No	a	OX10	Home			1
08:54	No	a	OX11	Home			1
08:54	No	a	OX26	Home			1
08:52	No	a	OX14	Home			1
08:55	No	a	RG20	Home			1
09:06	No	a	OX4	Home			1
09:09	No	a	OX14	Home			2
09:11	No	a	OX14	Home			1
09:13	No	a	OX11	Home			1
09:15	No	a	OX11	Home			1
09:18	No	a	OX11	Home			1
09:20	No	a	OX13	Home			1
09:23	No	a	RG7	Home			1
09:25	No	a	OX13	Home			1
09:26	No	a	RG8	Home			1
09:30	No	a	OX11	Home			1
09:32	No	a	OX13	Home			2
09:34	No	a	WS15	Home			1
09:35	No	a	M41	Home			1
09:37	No	a	OX11	Home			1
09:38	No	a	OX13	Home			1
09:40	No	a	OX11	Home			1
09:44	No	a	CF15	Home			1
09:53	No	a	OX16	Home			1
09:49	No	c	OX9	Home			1
09:51	No	b	OX11	Home			2
09:54	No	b	OX11	Work			2
10:06	No	a	OX11	Home			1
10:12	No	a	OX11	Work			2
10:16	No	a	OX14	Home			1
10:20	No	b	OX11	Home			2
10:21	No	a	OX11	Work			1
10:23	No	a	OX11	Work			1
10:30	No	a	OX11	Work			1
10:31	No	Social	OX11	Home			1
10:31	No	a	MK43	Home			1
10:33	No	b	OX11	Home			2
10:35	No	a	OX12	Home			2
10:36	No	a	OX10	Home			3
10:39	No	a	OX14	Work			1
10:43	No	a	WR9	Work			1
10:44	No	Social	SO19	Home			1
10:47	No	a	OX14	Home			1
10:48	No	c	OX11	Home			1
10:50	Yes		OX11	Home			1
10:53	No	a	OX27	Home			1
10:55	No	a	OX10	Home			2
10:58	No	a	OX11	Home			1
10:58	No	a	OX14	Home			1
10:58	Yes		OX14	Home			1
11:00	No	a	OX14	Home			1
11:03	No	a	OX13	Home			1
11:09	No	b	OX11	Home			1
11:10	No	b	OX11	Home			2
11:11	No	a	OX14	Home			1
11:12	No	a	OX13	Home			1
11:14	No	a	BB7	Home			2
11:17	Yes		OX14	Home			1
11:22	No	a	OX18	Home			1
11:23	No	a	BG20	Home			1
11:27	No	a	OX13	Home			1
11:30	No	Social	OX11	Home			1
11:31	No	a	PE21	Home			1
11:32	No	a	OX14	Home			1
11:35	No	a	OX11	Home			2
11:38	No	a	OX10	Home			1
11:38	Yes		OX4	Home			1
11:42	No	a	OX11	Home			1
11:43	No	a	OX3	Home			1
11:47	No	Social	OX29	Home			1
11:49	No	Social	OX14	Home			1
11:52	No	a	OX4	Home			1
11:56	No	a	OX12	Home			2
11:58	No	Social	RG20	Home			2
12:02	No	a	OX14	Home			1
12:04	No	a	OX12	Home			1
12:07	No	a	RG14	Home			1
12:12	No	a	OX4	Home			2
12:14	No	a	SN2	Home			1
12:19	No	a	OX11	Home			2
12:20	No	a	OX11	Home			2
12:23	Yes		OX11	Work			1
12:26	Yes		OX13	Home			1
12:27	Yes		OX11	Work			2
12:28	Yes		OX14	Home			2
12:32	Yes		OX11	Home			1
12:34	No	Doctors	OX12	Home			1
12:35	No	a	RG15	Work			1
12:35	No	b	OX11	Home			2
12:37	No	Dog walking	OX11	Home			1
12:40	No	a	OX11	Home			2
12:43	No	a	OX25	Home			1
12:45	No	a	OX14	Work			2
12:52	No	a	OX11	Home			1
12:53	No	a	OX11	Work			1
12:54	Yes		OX11	Work			1
12:56	Yes		OX11	Work			2
12:58	No	a	OX11	Work			2
13:06	No	a	OX11	Work			2
13:09	No	a	OX11	Work			1
13:11	No	Social	SO31	Home			2
13:12	No	a	OX14	Home			1
13:13	No	a	OX14	Home			1
13:17	No	Social	OX11	Home			1
13:22	No	a	OX11	Home			1
13:23	No	b	OX14	Home			2
13:25	No	c	OX13	Home			2
13:29	Yes		RG12	Home			1
13:31	Yes		OX14	Home			2

13:37	Yes	a	OX11	Work			1
13:39	No	a	HP11	Home			1
13:43	No	a	OX13	Work			1
13:46	No	a	OX14	Work			1
13:49	No	Social	BA5	Home			1
13:51	No	a	OX10	Home			3
14:01	No	c	OX14	Home			2
14:07	No	a	OX14	Home			1
14:19	Yes	a	OX11	Home			2
14:24	No	a	OX14	Work			1
14:33	No	a	OX11	Work			1
14:38	No	a	OX9	Home			2
14:40	Yes		OX10	Work			1
14:41	Yes		OX2	Home			1
14:42	Yes		OX11	Home			1
14:43	Yes		OX11	Home			2
14:49	Yes		-	Work			1
14:50	Yes		-	Work			1
14:51	No	Social	OX10	Home			1
14:53	No	a	OX11	Home			2
15:05	Yes		OX16	Work			1
15:12	No	c	OX11	Home			1
15:25	No	a	OX29	Home			3
15:27	No	a	OX4	Work			1
15:30	No	c	OX11	Home			2
15:34	Yes		OX11	Home			1
15:37	No	a	OX13	Home			1
15:40	Yes		OX11	Home			2
15:41	Yes		OX13	Home			2
15:42	No	a	OX33	Home			1
15:45	No	c	OX13	Home			2
15:46	No	c	OX11	Home			2
15:47	No	b	OX13	Home			2
15:50	No	b	BX11	Home			1
15:51	No	a	RG20	Work			1
16:05	No	b	OX13	Home			1
16:18	No	c	OX14	Home			4
16:30	No	a	OX11	Work			1
16:31	No	c	OX13	Home			3
16:35	No	c	OX11	Home			1
16:39	No	a	OX2	Home			1
16:40	Yes		OX14	Work			1
16:46	No	a	NN4	Work			1
16:47	No	a	-	Work			1
16:50	Yes		-	Work			1
16:55	No	a	OX11	Work			1
17:04	No	a	-	Work			1
17:17	No	a	RG20	Home			1
17:26	No	a	OX13	Home			1
17:38	No	a	OX11	Home			1
17:43	No	Social	SN7	Home			1
17:45	No	c	OX11	Work			1
17:47	No	a	OX12	Work			1
17:54	No	a	OX11	Home			1
18:06	No	a	OX12	Work			1
18:07	No	a	OX11	Work			2
18:26	No	b	BX13	Home			3
18:28	No	Social	OX10	Home			3
18:30	No	a	OX2	Home			1
18:39	No	a	OX13	Home			1
18:43	No	a	OX11	Work			1
18:45	No	a	LU7	Home			1
18:47	No	c	OX14	Home			3
18:55	No	Social	OX11	Home			1



Costa Didcot Car Park Survey, Wednesday 18th May 2016

Car Park		
Time	Ins	Outs
06:00 - 06:15	6	5
06:15 - 06:30	11	6
06:30 - 06:45	4	9
06:45 - 07:00	12	9
07:00 - 07:15	22	8
07:15 - 07:30	8	16
07:30 - 07:45	21	13
07:45 - 08:00	17	24
08:00 - 08:15	14	17
08:15 - 08:30	14	11
08:30 - 08:45	20	16
08:45 - 09:00	12	15
09:00 - 09:15	16	12
09:15 - 09:30	13	13
09:30 - 09:45	13	12
09:45 - 10:00	11	10
10:00 - 10:15	9	10
10:15 - 10:30	12	14
10:30 - 10:45	12	14
10:45 - 11:00	15	10
11:00 - 11:15	15	16
11:15 - 11:30	11	10
11:30 - 11:45	14	11
11:45 - 12:00	14	14
12:00 - 12:15	14	17
12:15 - 12:30	14	11
12:30 - 12:45	12	16
12:45 - 13:00	12	12
13:00 - 13:15	16	15
13:15 - 13:30	17	19
13:30 - 13:45	12	7
13:45 - 14:00	6	11
14:00 - 14:15	7	6
14:15 - 14:30	8	5
14:30 - 14:45	17	12
14:45 - 15:00	13	18
15:00 - 15:15	6	6
15:15 - 15:30	6	4
15:30 - 15:45	13	13
15:45 - 16:00	7	11
16:00 - 16:15	7	11
16:15 - 16:30	9	4
16:30 - 16:45	10	10
16:45 - 17:00	10	7
17:00 - 17:15	9	12
17:15 - 17:30	9	7
17:30 - 17:45	7	8
17:45 - 18:00	6	11
18:00 - 18:15	9	7
18:15 - 18:30	6	8
18:30 - 18:45	7	10
18:45 - 19:00	7	9
TOTALS	592	582

Drive Through	
Ins	Max Queue
5	1
5	2
6	1
8	1
8	3
7	2
6	5
11	3
10	3
7	4
8	3
8	5
5	3
6	4
8	4
4	2
3	3
4	3
8	4
5	3
7	2
8	5
6	3
6	5
5	4
7	4
5	3
5	4
6	3
6	4
3	2
2	2
2	1
3	2
8	4
2	1
1	1
7	4
5	3
2	2
0	0
5	4
4	3
1	1
2	2
3	2
2	1
1	1
1	1
3	2
4	2
260	

AM trip rate per 100 sq.m
Arrival Departures
30.61 30.10

PM trip rate per 100 sq.m
Arrival Departures
15.82 19.39

AM Max Q 4
PM Max Q 2