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McDonald's Pontardawe Transport Assessment

For McDonald's Restaurants Ltd

Date: 11 July 2022

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1. INTRODUCTION

1.1 Aim of Assessment

- 1.1.1 Hydrock has been appointed by McDonald's Restaurants Ltd to prepare this Transport Assessment (TA) in support of the planning application for a proposed McDonald's Restaurant with a drive-thru facility on part of the existing Tesco car park in Pontardawe, to the north-east of Swansea.
- 1.1.2 This TA sets out details of the proposed development, parking and access arrangements and considers the transport impacts of the proposed development. It demonstrates that the proposed development is acceptable in terms of transportation, highway safety and access matters.

1.2 Pre-Application Discussions

- 1.2.1 A Transport Scoping Note (TSN) was submitted to the Local Highway Authority in April 2022 setting out the proposed scope, methodology and analysis of this TA. Although we have not received any comments regarding the scope of this report, pre-application comments were received in April 2020 regarding a proposed fast food restaurant and drive thru at the Tesco Supermarket (Pre-App Ref: Q2020/0066). The comments are attached as Appendix A.

1.3 Structure of Report

- 1.3.1 This Transport Assessment is set out in the following structure:
 - **Chapter 2:** Description of the site and surrounding area, as well as the local highway network. This chapter also provides a review of the highway safety situation in the vicinity of the site.
 - **Chapter 3:** An assessment the accessibility of the site by walking, cycling and public transport.
 - **Chapter 4:** Evaluates the national and local planning policy guidance.
 - **Chapter 5:** Description of the development proposals and provides an assessment of the access arrangements, parking provision, standards, and servicing arrangements.
 - **Chapter 6:** Presents the McDonald's survey information and TRICS data.
 - **Chapter 7:** Calculates the proposed trip types and distribution
 - **Chapter 8:** Provides an on-site assessment of the parking demand, drive thru queues and pedestrian trip generation.
 - **Chapter 9:** Assesses the traffic impact of the development on the local highway network.
 - **Chapter 10:** Discusses mitigation measures and sustainable travel initiatives for McDonald's staff.
 - **Chapter 11:** Summarises and concludes the report.

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2. EXISTING LOCAL SITE CONTEXT

2.1 Site Location

- 2.1.1 The site is located 600m to the south of Pontardawe town centre and 12.5km north-east of Swansea city centre.
- 2.1.2 The site is located within the existing car park of a Tesco Superstore (with an associated Petrol Filling Station). The site is bound by the River Tawe to the north-west, the A4067 to the south-east, a Tesco Petrol Filling Station to the north-east and Tesco Superstore parking to the south-west. The location of the site in its local context is shown in Figure 2.1.



Figure 2.1: Site Location

2.2 Local Road Network

Private Access Road (Tesco's)

- 2.2.1 The access to the site is via an unnamed access road which forms the fourth arm of a roundabout junction with the A4067. The site access road contains footways and street lighting, as well as pedestrian zebra crossings.
- 2.2.2 There are pedestrian links to this route via two separate footbridges over the River Tawe and the A4067 respectively. At the respective points where the footbridges meet the site access road, there are pedestrian zebra crossings giving access to the site.

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A4067

- 2.2.3 The A4067 runs in a south-west/north-east alignment immediately east of the site, providing vehicular access to the site via the site access roundabout to the north-east. The A4067 forms the principal vehicle route between Pontardawe and Swansea to the south-west, and also offers direct access to the strategic road network via the M4 J45 some 6.5km south-west of the site.
- 2.2.4 In the vicinity of the site the road is comprised of a single carriageway in either direction, which flares to two lanes northbound on the approach to the site access roundabout. The speed limit of the road is 40mph, but this lowers to 30mph on the approach to the site access roundabout.
- 2.2.5 There are no footways or pedestrian facilities on the A4067 to the north or south of the site, with the aforementioned footbridge providing pedestrian access over the A4067 from Lon Tanyrallt. However, to the west, pedestrian footways are provided on either side of the A4067 link road carriageway over the River Tawe.

A474

- 2.2.6 The A474 is a suburban main route in south Wales and serves a number of neighbouring settlements. The A474 forms the western and eastern arm of the A4067/A474 5 arm roundabout junction to the north of the site.
- 2.2.7 The A474 provides a key route to the site, offering direct access to High Street and the large residential areas to the north.
- 2.2.8 Footways are present on both sides of the carriageway with other pedestrian facilities including pedestrian refuge island crossings, dropped kerbs and tactile paving, and street lighting.
- 2.2.9 The road is subject to a 30mph speed limit.

Lon Tanyrallt

- 2.2.10 Lon Tanyrallt is a residential road that runs parallel to the A4067 located to the east of the site. Access from Lon Tanyrallt to the site is provided via a footbridge from the road over the A4067 to the Tesco superstore access road.
- 2.2.11 Lon Tanyrallt is some 5.5m in width provided with a 2.0m wide footway on the northern side of the carriageway adjacent to the residential frontages. Street lighting is also provided along Lon Tanyrallt.
- 2.2.12 The speed limit of the road varies between 20mph (near to the Alltwen Primary School to the north) and 30mph, with changes in the speed limit clearly denoted by signposts and on road markings. Traffic calming measures are also present along the road in the form of speed humps.

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2.3 Road Safety Records

2.3.1 Personal Injury Accident (PIA) data has been obtained from recorded road safety data published annually by the Department for Transport (DfT). The statistics provide recorded PIA data reported in each local authority recorded using the STATS19 accident reporting form. The most recent five-year dataset has been reviewed, covering between January 1st 2017 and 31st December 2021 inclusive within the study area as shown in Figure 2.2:

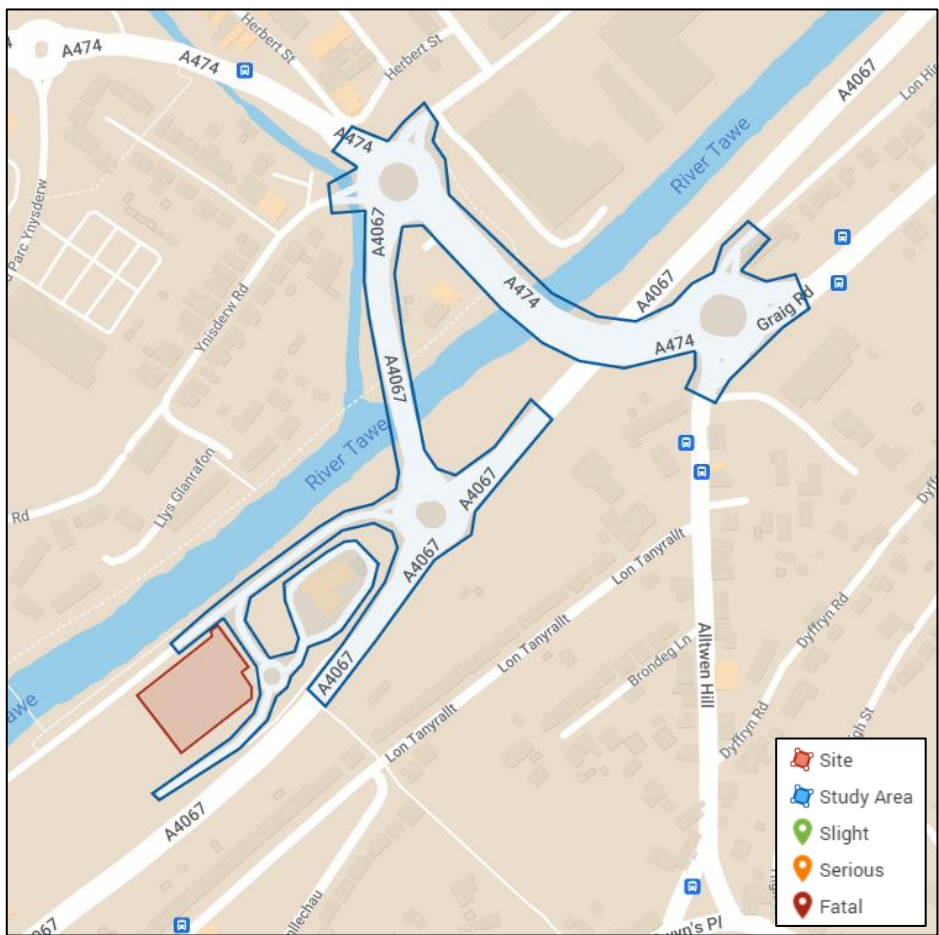


Figure 2.2: Personal Injury Accident (PIA) Study Area

- 2.3.2 The purpose of examining PIA data is to ascertain if there are elements of the highway that may be causal factors in PIA events. It is unlikely that a single incident at a particular location will be of sufficient evidential value to implicate highway design or condition as a causal factor, unless the particular highway issues is in some way extreme, so particular attention is paid to accident clusters. Notwithstanding the foregoing, weather conditions can also affect the level of highway risk but mitigating hazardous weather conditions is not usually achieved through alterations to the highway.
- 2.3.3 There have been no recorded accidents within the study area for the most recent five-year study period.
- 2.3.4 It is concluded that the accident records do not demonstrate any particular pattern or clustering of PIA's. There are therefore no apparent highway safety issues on the existing network which need to be addressed as part of this planning application.

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2.4 Existing Development Site

Existing Use

- 2.4.1 The site comprises part of the car park for the existing Tesco foodstore which operates under A1 food retail Use Class.

Access Arrangements

- 2.4.2 Vehicular access to the site is provided via the A4067 roundabout to the north-east of the site. The roundabout offers a connection to the Tesco access road, which links to the internal site car park and roundabout with the foodstore and its petrol filling station.
- 2.4.3 There are multiple points of pedestrian access into the existing site. Pedestrian access can be taken directly from the site access road which connects to the A4067 roundabout to the north-east. Alternatively, pedestrian access to the site is offered via a footbridge over the A4067 from Lon Tanyrallt to the east or via a footbridge over the River Tawe connecting to a footpath on the river's northern bank. Both footbridges are suitable for access for people with disabilities, with flat terrain and ramped entrance/exit points.

Traffic Generation

- 2.4.4 There will no offsetting from the existing use as the development will not reduce existing trips associated with Tesco as a result of the reduction in Tesco car parking spaces.

Parking Provision

- 2.4.5 The site comprises of 102 Tesco car parking spaces; the overall Tesco car park will be reduced as part of the development proposals. The existing Tesco car park comprises a total of 410 spaces; therefore, the development will reduce the Tesco car park to a total of 308 spaces.

2.5 Traffic Survey Data

- 2.5.1 Hydrock instructed independent traffic surveys of the following:

- **Manual Classified Count and Queue data:** at the Site Access/Tesco Petrol Station 3 arm roundabout junction;
- **Manual Classified Count:** at the Tesco Access Road/A4067/ Ffordd Cwm Tawe 4 arm roundabout junction; and
- **Manual Classified Count:** at the A474/A4067 5 arm roundabout junction.

- 2.5.2 Junction turning count surveys (MCC) have been carried out within school term time on Friday 29th April 2022 between the hours of 15:00 and 19:00 and a Saturday 30th April 2022 between the hours of 11:00 and 16:00 to ensure that the development and local network peak periods are captured on the surrounding local highway network.

- 2.5.3 The full survey data outputs are attached as Appendix B.

Manual Classified Counts

- 2.5.4 The traffic survey results at Site Access/Tesco Petrol Station 3 arm roundabout, Tesco Access Road/A4067/Ffordd Cwm Tawe 4 arm roundabout and A474/A4067 5 arm roundabout junctions have been analysed to ascertain the network peak hours (Friday 16:00 – 17:00 and Saturday 12:00 – 13:00). The results are summarised in Table 2.1, Table 2.2 and Table 2.3.

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2.5.5 The 2022 network peak surveyed traffic flows are shown on traffic flow diagrams attached as Appendix I.

Site Access/Tesco Petrol Station Roundabout

Table 2.1: Site Access/Tesco Petrol Station 3 arm roundabout junction Traffic Survey Results

Day:	Time:	Site Access/Tesco Petrol Station Roundabout			
		Main Access	Petrol Station	Tesco car Park	Totals
Friday	15:00	346	128	238	712
	16:00	349	120	281	750
	17:00	396	123	282	801
	18:00	297	85	283	665
Saturday	11:00	349	131	266	746
	12:00	372	124	264	760
	13:00	322	123	259	704
	14:00	282	111	210	603
	15:00	331	133	227	691

Tesco Access Road/A4067/ Ffordd Cwm Tawe Roundabout

Table 2.2: Tesco Access Road/A4067/ Ffordd Cwm Tawe 4 arm roundabout junction Traffic Survey Results

Day	Time	Tesco Access Road/A4067/ Ffordd Cwm Tawe Roundabout				
		A4067 N	A4067 E	A4067 S	Tesco Access	Totals
Friday	15:00	754	512	998	330	2594
	16:00	741	505	1016	381	2643
	17:00	730	531	962	359	2582
	18:00	673	376	779	350	2178
Saturday	11:00	809	494	652	353	2308
	12:00	785	487	761	354	2387
	13:00	710	433	681	336	2160
	14:00	616	415	719	291	2041
	15:00	608	463	701	328	2100

A474/A4067 Roundabout

Table 2.3: A474/A4067 5 arm roundabout junction Traffic Survey Results

Day	Time	A474/A4067 Roundabout					Totals
		Industrial Estate	A474 E	A4067	Ynysderw Road	A474 W	
Friday	15:00	325	645	861	35	633	2499
	16:00	273	672	882	22	588	2437
	17:00	273	582	847	31	596	2329
	18:00	241	524	720	28	535	2048
Saturday	11:00	274	539	687	22	679	2201
	12:00	278	493	718	38	674	2201
	13:00	173	480	662	30	639	1984
	14:00	159	406	632	33	488	1718
	15:00	139	470	625	20	481	1735

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Parking Beat Surveys

2.5.9 PCC Traffic Information Consultancy Ltd also undertook a parking beat survey of the existing Tesco car park. This survey captures the existing parking demand during the Friday PM peak (15:00 - 19:00) and Saturday Peak (11:00-16:00) and demonstrates the available capacity. The parking beat surveys were undertaken in 15-minute intervals. Enumerators visited the site to undertake the surveys on Friday 29th April 2022 and Saturday 30th April 2022. The location of the car park is shown in Figure 2.3.



Figure 2.3: Car Park Survey Location

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Tesco Car Park

Table 2.4: Parking Beat Survey of Tesco Car Park

Tesco Car Park (410 Spaces)					
Friday			Saturday		
Time	Number of Spaces Occupied	% Of Occupancy	Time (15-mins beginning)	Number of Spaces Occupied	% Of Occupancy
15:00 - 15:15	107	24%	11:00 - 11:15	98	24%
15:15 - 15:30	98	32%	11:15 - 11:30	102	25%
15:30 - 15:45	130	31%	11:30 - 11:45	98	24%
15:45 - 16:00	128	29%	11:45 - 12:00	93	23%
16:00 - 16:15	117	28%	12:00 - 12:15	98	24%
16:15 - 16:30	115	24%	12:15 - 12:30	90	22%
16:30 - 16:45	100	25%	12:30 - 12:45	113	28%
16:45 - 17:00	101	29%	12:45 - 13:00	107	26%
17:00 - 17:15	118	36%	13:00 - 13:15	80	20%
17:15 - 17:30	148	33%	13:15 - 13:30	81	20%
17:30 - 17:45	135	33%	13:30 - 13:45	93	23%
17:45 - 18:00	135	31%	13:45 - 14:00	84	20%
18:00 - 18:15	126	21%	14:00 - 14:15	84	20%
18:15 - 18:30	87	21%	14:15 - 14:30	62	15%
18:30 - 18:45	87	21%	14:30 - 14:45	63	15%
18:45 - 19:00	88	21%	14:45 - 15:00	83	20%
			15:00 - 15:15	76	19%
			15:15 - 15:30	76	19%
			15:30 - 15:45	80	20%
			15:45 - 16:00	83	20%

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3. SITE ACCESSIBILITY AND CONNECTIVITY

3.1 Pedestrian and Cycle Infrastructure

- 3.1.1 There are a number of publications which suggest guidance for appropriate walking and cycling distances to facilities and employment. For reference, these have been summarised as follows.
- 3.1.2 Within the CIHT publication 'Providing for Journeys on Foot' (CIHT 2000) it suggests that the preferred maximum walking distance to school is 2km, with the acceptable distance being 1km and the desirable distance being 500 metres.
- 3.1.3 Department for Transport (DfT) – Although now superseded by CD143, TA91/05 does provide useful guidance on likely walking and cycling distances for Non-Motorised Users with Paragraph 2.2 stating that 2 miles is *'a distance that could easily be walked by the majority of people'*. Paragraph 2.3 also continues by stating that *'Walking is used to access a wide variety of destinations including educational facilities... and places of work, normally within a range of up to 2 miles'* (3.2km).
- 3.1.4 CIHT (2015) – Planning for Walking: In relation to shorter trips in particular, (section 2.1) states that across Britain about *'80% of journeys shorter than 1 mile (1.6km) are made wholly on foot'*.
- 3.1.5 TA91/05 also states in paragraph 2.11 that *'Cycling is used for accessing a variety of different destinations, including educational facilities and places of work, up to a range of around 5 miles (8km). Cycling is also undertaken as a leisure activity, often over much longer distances.'*
- 3.1.6 Paragraph 2.9 also states that 5 miles (c.8km) is a distance *'that could easily be cycled by the majority of people'*.
- 3.1.7 This is consistent with the statement in LTN1/20 Cycle Infrastructure Design (in paragraph 2.2.2) that *'Two out of every three personal trips are less than five miles in length – an achievable distance to cycle for most people'*.
- 3.1.8 The site is located in a sustainable location situated in the existing Tesco foodstore car park which is accessible via well-established pedestrian infrastructure.

3.2 Pedestrian Connectivity

- 3.2.1 As the proposed development is located on an existing Tesco car park, the site benefits from well-established pedestrian routes with street lighting and pedestrian crossing points.
- 3.2.2 The Tesco access road contains footways and street lighting, as well as pedestrian zebra crossings. The pedestrian links to the site are via two separate footbridges over the River Tawe and the A4067. At the respective points where the footbridges meet the site access road, there are pedestrian zebra crossings located on pedestrian desire lines to the site.
- 3.2.3 Footways are also provided along the A4067 connecting to the A474 roundabout junction providing access into the centre of Pontardawe with pedestrian refuge island crossing points on all 5 of the roundabout arms to facilitate movements around the roundabout. From here, pedestrians can use the well-established footways to access Pontardawe town centre.

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3.3 Cycle Connectivity

- 3.3.1 The site is served by an existing connection to the National Cycle Network (NCN) Route 43, which runs along the western river bank of the River Tawe on the opposite side to the proposed development site. The route can be reached via a step-free footbridge over the river directly from the Tesco Superstore access road.
- 3.3.2 Route 43 is part of the National Cycle Network that connects to the Celtic Trail and Swansea with Caehopkin. The route is approximately 51km in length and is both traffic free and on-road in sections, however, locally, the NCN 43 and development site context are shown below at Figure 3.1:

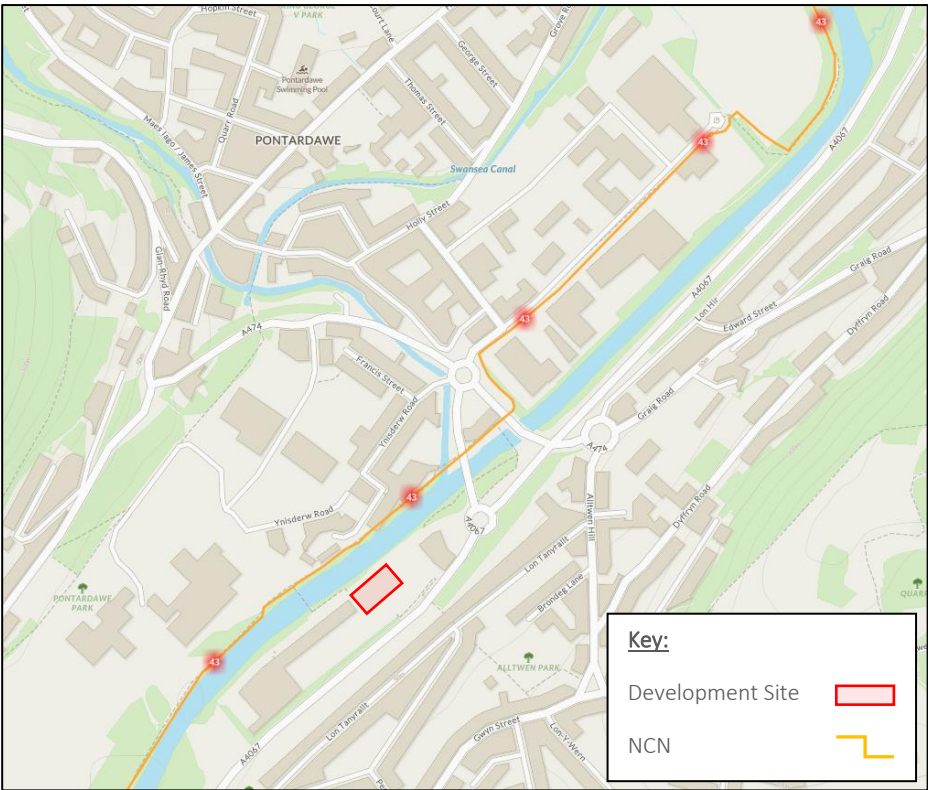


Figure 3.1: NCN in the context of Pontardawe and the site

- 3.3.3 There are well-established pedestrian and cycle infrastructure surrounding the site as expected for a town; the surrounding footways provide safe access to the residential areas within Pontardawe. This will encourage customers and employees to engage in active modes of transport to reach the site.
- ### 3.4 Public Transport
- Bus Services*
- 3.4.1 The nearest bus stop is located on Lon Tanyrallt south of the site, approximately 333m walking distance from the site equating to a 4-minute walk. This stop is accessed by travelling south via the footbridge over the A4067 which connects to Lon Tanyrallt.

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3.4.2 The ‘Lon Tanyralft Flats’ stop serves the X6 Cymru Clipper. The ‘Tan yr Allt House’ stops, located on Alltwen Hill, approximately 440m walking distance from the site provides an additional bus service the NO. 256. Timetable information for the two services is provided at Table 3.1:

Table 3.1: Lon Tanyralft Flats Bus Stop Timetable

Service No.	Route	Weekday First/Last Service	Mon-Fri Frequency (min)	Saturday Frequency (min)	Sunday Frequency (min)
X6	Swansea – Ystradgynlais	05:45 / 22:20	20	20	4*
	Ystradgynlais – Swansea	06:00 / 21:00			
256	Neath – Pontardawe	08:18 / 17:20	60	60	-
	Pontardawe – Neath	07:45 / 16:50			

*No. of services per day

3.5 Active Travel

- 3.5.1 Active travel involves travel by means of walking and cycling for everyday journeys such as commuting. It plays a key role in promoting healthier lifestyles and reducing the negative impacts of vehicular traffic on local communities.
- 3.5.2 In September 2014, the Welsh government introduced the Active Travel Act 2013 which makes it a legal requirement for Local Authorities in Wales to map and plan active travel routes within certain locations as designated by the Welsh government.
- 3.5.3 The act also requires local authorities to consider the need for new road schemes (including road improvement schemes) to accommodate the needs of pedestrians and cyclists in active travel.

Existing Route Maps

- 3.5.4 As part of the act, Neath Port Talbot Council have produced existing active travel route maps which show existing active travel routes within the area. The existing route maps (ERMs) are reviewed and updated every three years to ensure that they remain current. The latest ERM covering Pontardawe is shown at Figure 3.2:

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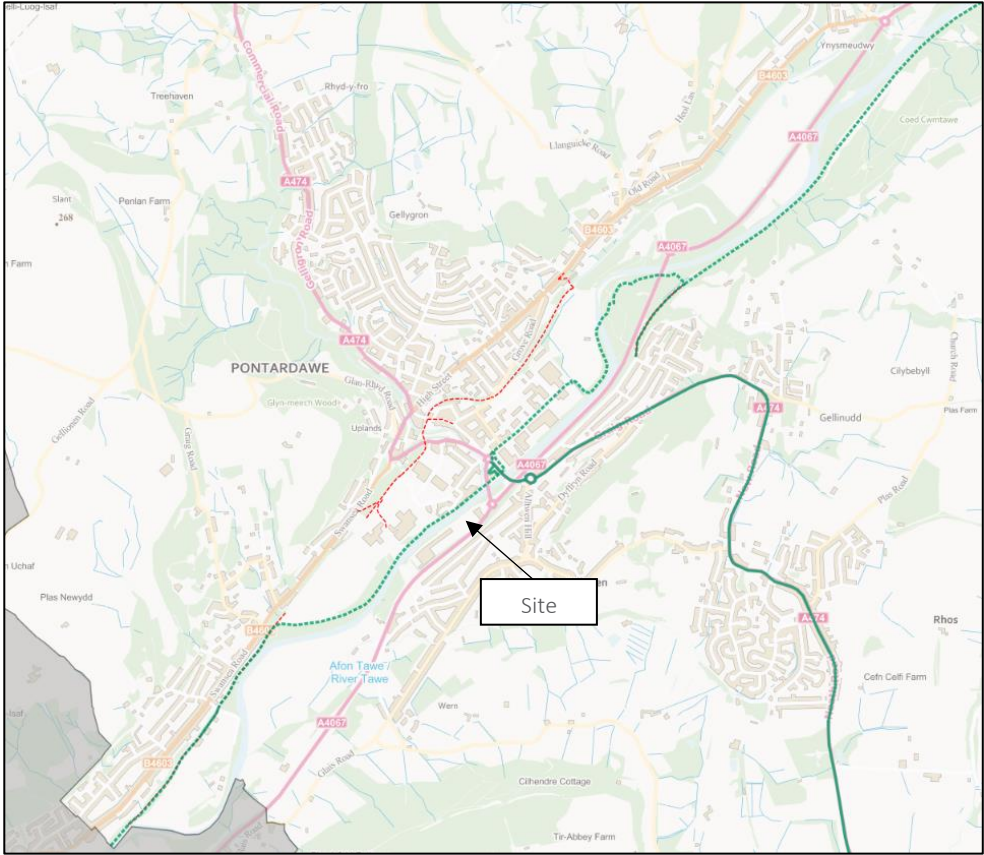


Figure 3.2: Pontardawe Active Travel Existing Route Map

- 3.5.5 Three existing active travel routes are provided in the immediate vicinity of the site, and provide access from the site to the north and south via a mixture of off-road and on-road routes.

Integrated Network Maps

- 3.5.6 The Active Travel Act 2014 also required the council to produce Integrated Network Maps (INMs) which outline the Local Authority’s plans to develop a network of active travel routes beyond the ERM over the next 15 years. INM proposals have been developed through extensive consultation with the aim of improving access to key services and facilities in town centres and expanding the existing active travel network.
- 3.5.7 NPTCC’s INM proposals include additions to the integrated walking and cycling network in the immediate vicinity of the site. The INM proposals are shown at Figure 3.3:

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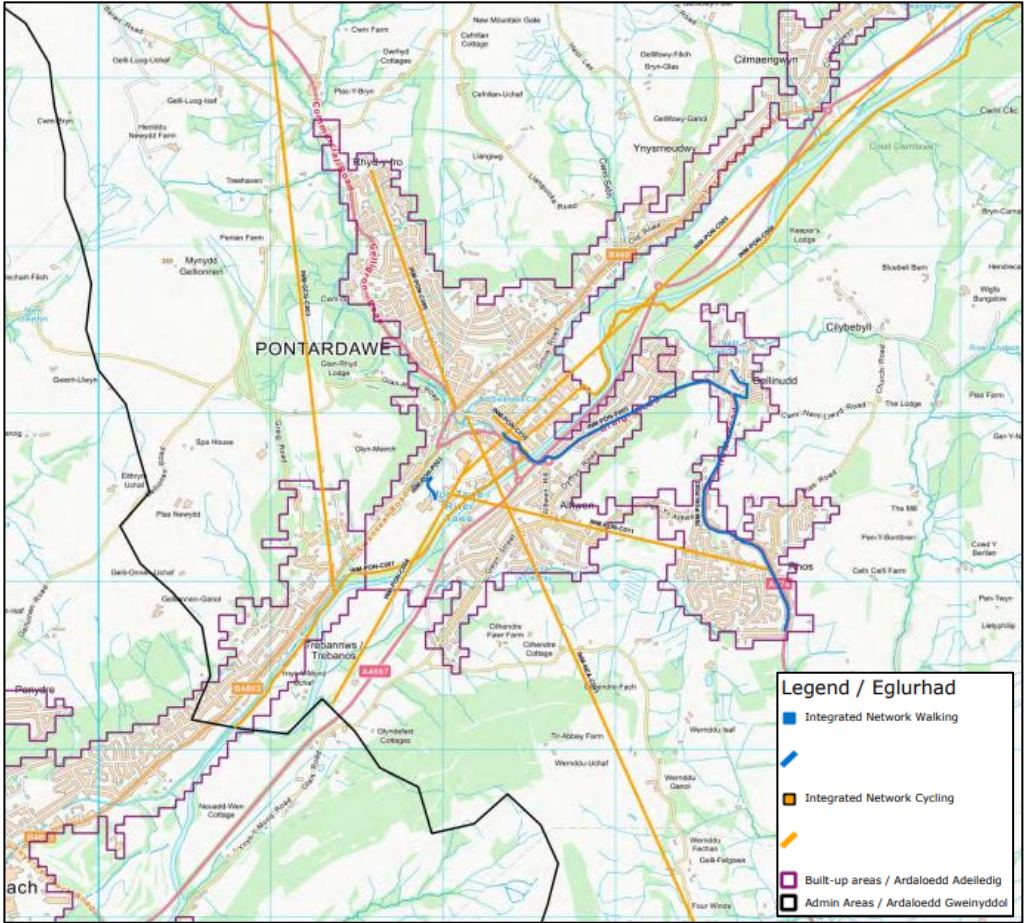


Figure 3.3: Pontardawe Integrated Network Map in Vicinity of Site

3.6 Accessibility Summary

- 3.6.1 Due to the site being centrally located within Pontardawe, it is considered that employees and customers will be able to benefit from the diverse range of sustainable travel options that are available when travelling to/from the site.
- 3.6.2 The site has a high level of pedestrian permeability within Pontardawe, and will offer potential for commuting and customer trips to be made on foot due to the extensive network of footways and active travel routes within the vicinity of the site. Similarly, the provision of cycle routes (including those that are designated active travel routes) will provide opportunities for trips to be made by cycling.
- 3.6.3 There are a number of existing Active Travel routes within Pontardawe which contribute to the site’s accessibility. These will be further enhanced as per NPTCC’s Integrated Network Map, with the supply of active travel routes within Pontardawe plentiful.
- 3.6.4 There are a number of bus services located within walking/cycling distance of the development site in Pontardawe. Frequent bus services will encourage an uptake of bus use by employees/customers from the outset.
- 3.6.5 Consequently, it is considered that there are ample opportunities for employees and customers of the proposed development to be able to travel by sustainable modes of transport.

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4. PLANNING POLICY CONTEXT

4.1 Preface

4.1.1 In producing this assessment due regard has been given to the following Local and National Transport Policies and it is considered that the development accords fully in Transport/Highway terms:

4.2 Planning Policy Wales (Edition 10 December 2018)

4.2.1 The Planning Policy Wales Edition 10 (adopted December 2018) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales.

4.2.2 Chapter 4.0 of PWW covers the theme of ‘Active and Social Places’ and the transportation components of place making.

4.2.3 The principle of the PWW policy is to encourage sustainable travel as set out in paragraph 4.1.1:

“4.1.1 The planning system should enable people to access jobs and services through shorter, more efficient and sustainable journeys, by walking, cycling and public transport. By influencing the location, scale, density, mix of uses and design of new development, the planning system can improve choice in transport and secure accessibility in a way which supports sustainable development, increases physical activity, improves health and helps to tackle the causes of climate change and airborne pollution by:

- Enabling More Sustainable Travel Choices – measures to increase walking, cycling and public transport, reduce dependency on the car for daily travel;*
- Network Management – measures to make best use of the available capacity, supported by targeted new infrastructure; and*
- Demand Management – the application of strategies and policies to reduce travel demand, specifically that of single-occupancy private vehicles.*

4.2.4 The proposed development site is accessible by walking, cycling and public transport. The majority of vehicle trips to the restaurant would be existing on the network in any event.

4.2.5 As set out in paragraph 4.1.8 The Welsh Government will seek to encourage cycling:

“4.1.8 The Welsh Government is committed to reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport’.

4.2.6 It is proposed to provide cycle parking for staff and customers to encourage cycling. The site is located in a mature urban environment and would link with the existing walking/cycling infrastructure.

4.2.7 The sustainable travel:

“4.1.10 Development proposals must seek to maximise accessibility by walking, cycling and public transport, by prioritising the provision of appropriate on-site infrastructure and, where necessary, mitigating transport impacts through the provision of off-site measures, such as the development of active travel routes, bus priority infrastructure and financial support for public transport services”.

Superseded

4.2.8 The Welsh Government have set out a hierarchy for sustainable transport in relation to new development as follows:

“4.1.11 it is Welsh Government policy to require the use of a sustainable transport hierarchy in relation to new development, which prioritises walking, cycling and public transport ahead of the private motor vehicles. The transport hierarchy recognises that Ultra Low Emission Vehicles also have an important role to play in the decarbonisation of transport, particularly in rural areas with limited public transport services.”

4.2.9 Figure 4.1 indicates the sustainable transport hierarchy for planning:

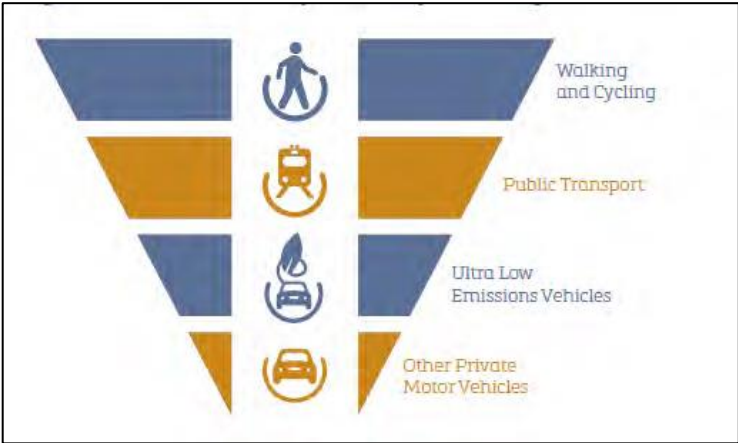


Figure 4.1: The sustainable transport hierarchy for planning

4.2.10 Pedestrians would be afforded priority through the site car park with an informal zebra crossing facility. Cycle parking would be provided for customers and staff.

4.2.11 The PPW acknowledges in para 4.1.16 that in rural areas the approach to sustainable transport will be site specific:

“4.1.16 Different approaches to sustainable transport will be required in different parts of Wales, particularly in rural areas, and new development will need to reflect local circumstances.”

4.2.12 This site is located in an urban area and the level of sustainable travel options is considered reasonable for an urban/retail park location.

4.2.13 The PPW promotes Active Travel and sets out that new development should integrate with existing active travel networks;

“4.1.29 New development places additional demand on transport infrastructure and networks, with the location, layout and design of development affecting the distance and way in which people travel. Developing local active travel networks can help to mitigate the impact of new development, by providing an alternative mode of travel to the private car, particularly for shorter journeys. Provision for active travel must be an essential component of development schemes and planning authorities must ensure new developments are designed and integrated with existing settlements and networks, in a way which makes active travel a practical, safe and attractive choice.”

4.2.14 The proposed restaurant is intended to provide a local facility primarily for existing motorists on the network in any event and shared trips with the Tesco and retail units adjacent to the site. The site however is accessible by non-car modes.

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4.2.15 The PPW sets out in relation to cycle parking that:

“4.1.34 New development must provide appropriate levels of secure, integrated, convenient and accessible cycle parking and changing facilities. As well as providing cycle parking near destinations, consideration must also be given to where people will leave their bike at home. Guidance on cycle parking is contained within the Active Travel Design Guidance. Planning authorities may alternatively wish to adopt locally specific minimum cycle parking standards and guidance.”

4.2.16 Cycle parking will be provided in accordance with the Council’s Standard.

4.2.17 The PPW sets out in relation to public transport that:

“4.1.36 Planning authorities must direct development to locations most accessible by public transport. They should ensure that development sites which are well served by public transport are used for travel intensive uses, such as housing, jobs, shopping, leisure and services, reallocating their use if necessary. In rural areas, planning authorities should designate local service centres, or clusters of settlements where a sustainable functional linkage can be demonstrated, as the preferred locations for new development.”

4.2.18 The site is accessible by public transport.

4.2.19 Paragraphs 4.1.50, 4.1.51, 4.1.53 and 4.1.54 outline the Welsh policy regarding car parking provision:

“4.1.50 Car parking provision is a major influence on how people choose to travel and the pattern of development.

4.1.51 A design-led approach to the provision of car parking should be taken, which ensures an appropriate level of car parking is integrated in a way which does not dominate the development. Parking provision should be informed by the local context, including public transport accessibility, urban design principles and the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed. The needs of disabled people must be recognised and adequate parking provided for them.

4.1.53 Local authorities should develop an integrated strategy on parking to support the overall transport and locational policies of the development plan. Local authorities should consider parking issues on a joint basis with neighbouring authorities. They should jointly establish maximum levels of parking for broad classes of development, together with a threshold size of development above which such levels will apply. These maximum standards should be set in collaboration with interested organisations. Local authorities will need to ensure that their parking standards reflect local transport provision, are adopted by individual authorities as supplementary planning guidance, and are kept under review. Parking standards should be applied flexibly and allow for the provision of lower levels of parking and the creation of high-quality places.

4.1.54 Private non-residential parking can be a significant component of parking provision in town centres. Authorities should, where appropriate, seek to encourage appropriate redevelopment or re-use of existing private parking sites to bring the provision down, and should refuse planning permission for public and private car parks which do not meet the strategic aims of the development plan and LTP.”

4.2.20 An appropriate level of parking will be provided to accommodate the expected level of demand by customers of the proposed restaurant.

4.2.21 PPW regarding Transport Assessments, sets out that:

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“4.1.56 Transport Assessments are an important mechanism for setting out the scale of anticipated impacts a proposed development, or redevelopment, is likely to have. They assist in helping to anticipate the impacts of development so that they can be understood and catered for appropriately.”

- 4.2.22 The proposals accord with the Welsh National Guidance.
- 4.3 **Neath Port Talbot County Borough Council Local Development Plan (2011-2026)**
 - 4.3.1 The Local Development Plan establishes a clear vision for development in Neath Port Talbot, providing developers and the public with a planning framework up to 2026. It provides the policy context for directing development to appropriate locations, conserving the natural, built and historic environment and providing a basis for rational and consistent decision-making on planning applications.
 - 4.3.2 This Plan complements the Wales Spatial Plan. It relies on national policy, set out in Planning Policy Wales, Minerals Planning Policy Wales 2000 together with the supporting suite of Technical Advice Notes and Circulars as the context for decision making on land use planning where there is no locally specific LDP policy. These and all adopted Supplementary Planning Guidance (SPG) which support this Plan are material when considering the development proposals.
 - 4.3.3 The development proposals accord with the local planning policy guidance.
 - 4.3.4 The Authority adopted its Local Development Plan in January 2016. As a significant amount of time has elapsed since the adoption of the plan, the authority is now working on a Replacement Local Development Plan for Neath Port Talbot and it is anticipated that this plan will be adopted in 2026 and will run until 2036.

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5. DEVELOPMENT PROPOSALS

5.1 Overview

- 5.1.1 The proposals seek to redevelop a section of the existing Tesco Superstore car park to provide 377 sqm of Class A3 Use to provide a McDonald's Restaurant with a side-by-side drive thru facility. The internal restaurant 'dining' area floor space is c.77 sqm.
- 5.1.2 The proposed year of opening is 2024. The restaurant will operate 24 hours Monday to Sunday and based on information from McDonald's existing facilities it is anticipated that a maximum of up to 20 staff would be on site at any one time.
- 5.1.3 The proposed site layout is shown at Appendix C.

5.2 Access Arrangements

Vehicular Access

- 5.2.1 Vehicular access to the site will be provided from the wider highway network via the existing established Tesco Superstore arm of the A4067 roundabout. Vehicles will route to the site via the Tesco access road and an additional roundabout junction with Tesco Fuel Station.
- 5.2.2 Vehicles will route into Tesco car park where access to the site can be gained on the site's western boundary. The proposed layout incorporates a one-way route as part of the drive-thru proposals and the site design allows for these routes to connect to form one single access/egress.
- 5.2.3 The car park is subject to a 10mph speed limit, enforced through signage. As a result, the site access is provided with visibility splays of 2.4m x 11m to the north and south, in line with Manual for Streets (MfS) based on a design speed of 10mph.
- 5.2.4 The proposed site access arrangement is provided at Appendix D.

Pedestrian Access

- 5.2.5 Pedestrian access to the restaurant will be taken from the Tesco access road or internal Tesco car park via footways and routes along the proposed access road and surrounding pedestrian infrastructure.
- 5.2.6 Cycle access to the site will be gained internally within the Tesco car park.

5.3 Site Layout

Internal Layout

- 5.3.1 The proposed internal site layout is provided with access from the Tesco car park internal access road and will operate in a clockwise gyratory giving access to the side-by-side drive thru lanes and internal car parking arrangements. Internal pedestrian crossings are provided within the car park offering a connection from Tesco car park to the restaurant frontage and additionally from the Tesco access road.

Drive-Thru Lane

- 5.3.2 The drive thru lane forms an integral part of the McDonald's operation and is to be provided adjacent to the north, eastern and southern edges of the building. The drive thru-lane has capacity for up to 26 vehicles.

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- 5.3.3 When a customer wishes to purchase a meal without leaving their vehicle, the following steps are taken:
 - Enter the drive thru lane;
 - Place an order at one of the Customer Order Display (COD) units;
 - Pay at the first booth; and
 - Collect meal from the second booth and continue out of the drive thru lane.
- 5.3.4 In the event that a customer places a larger order, which could take longer to prepare (and potentially delay other drivers using the drive thru lane), then a member of staff will divert them to one of two 'reserve bays' or the Fast Forward booth. The reserve bays are situated near the store entrance and once the order is ready, a member of staff will carry the meal from the restaurant, to the customer. If the driver is directed to the Fast Forward booth, then their order is handed to them through the window.
- 5.3.5 Side by side ordering facilities provide a more efficient drive thru process. The proposals would reduce the time taken to process customers through the drive thru facility and therefore assists in effectively managing the length of the drive thru queue. Drivers waiting for an order would use one of the two COD units within the drive thru lane depending upon how many vehicles are waiting. Both COD units would operate simultaneously at all times and in practice can be likened to a dual pay-barrier arrangement at multi-storey car parks across the country.
- 5.3.6 Swept path analysis has been undertaken, presented in Appendix E, which demonstrates a vehicle circulating the drive thru lane.

5.4 Car Parking

NPTC Standards

- 5.4.1 The Neath Port Talbot Council (NPTCC) Supplementary Planning Guidance (SPG) Parking Standards 2016 provides advice on Parking Standards for new developments. The NPTCC standards use designated zones with differing levels of parking for development management purposes. According to Appendix A of the Parking Standards document, the proposed development falls within Zone 4 ‘Suburban or Near Urban’.
- 5.4.2 The standards set out in this document indicate the maximum requirement in new developments. The maximum parking standards for Drive-thru restaurants is summarised in Table 5.1:

Table 5.1: NPTC SPG Parking Standards 2016 Zones 2 to 4

Use Class and Description	Operational	Non-Operational
Cafes % Drive-Thru restaurants	1 commercial vehicle space	1 space per 3 non-residential staff 1 space per 14sqm of dining space
- 5.4.3 The development standards are provided with the caveat of Note 5, which states that restaurants including drive through facilities must have an internal segregated access and be provided with a minimum of six ‘waiting spaces’.
- 5.4.4 In addition, 5% of provision is required as motorcycle parking, and a minimum of 6% of car parking provision is to be disabled parking with a minimum of 1 disabled space. Furthermore, there should be a minimum of one space for each employee who is a disabled motorist.

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- 5.4.5
- In addition, the parking strategy proposes to utilise existing Tesco car park parking spaces in the immediate vicinity of the site. Parking beat surveys will be commissioned to demonstrate that the Tesco car park has residual capacity to accommodate the loss in space and demand generated by the proposed site.
- 5.4.6
- Based on the NPTC car parking standard the proposed development would require the following level of car parking provision:

Table 5.2: Proposed Development Car Parking Requirements based on NPTC SPG Parking Standards 2016

Parking Space Type:	Policy Requirement:
Customer (14sqm of dining floorspace)	6
Staff (1 space per 3 non-resident staff)	7
Sub Total:	13
Parking Space Type:	Policy Requirement:
Commercial Space (Servicing)	1
Disabled (6% of total) included within customer	1
Motorcycle (5% of total)	1
Sub Total	3
Total Policy Provision:	16

Car Parking Provision

- 5.4.7
- The proposed development is to provide a total 31 car parking spaces within the site inclusive of two disabled bays and two reserved bays as summarised below at Table 5.3:

Table 5.3: Proposed Parking Provision

Parking Space Type:	Proposed Provision:
General	23
Disabled Bay	2
Reserve Bay (Operational Drive-Thru Bays)	2
Staff Bays	4
Motorcycle	0
Total:	31

- 5.4.8
- The development site also provides a ‘commercial’ space for servicing operations. This is provided by utilising proposed car parking within the site car park and will be managed operationally by McDonalds during servicing activities. This will take place outside of operational and road network peak hours.
- 5.4.9
- NPTC’s parking policy requires 6% of parking (customer and staff) for disabled use, equating to a total of one disabled space. The development proposes two disabled spaces; therefore, this is in excess of the policy requirement.
- 5.4.10
- Policy requires 5% of the total parking provision as motorcycle. This would equate to two spaces, which can be accommodated within the development site (1.8m x 2.7m bay). It is proposed this would be secured via a suitably worded planning condition for the details of this provision and location to be confirmed.

Tesco’s Car Parking

- 5.4.11
- The existing Tesco car park comprises of 410 spaces as summarised below:
- 379 standard spaces;
 - 14 disabled bays;

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- 15 parent and child spaces;
- 1 motorcycle space; and
- 1 collection bay.

- 5.4.12 As part of the proposals, the development will result in a reduction of 102 spaces in the existing Tesco car park.
- 5.4.13 Parking beat surveys as shown in Section 2.5 confirm that the maximum occupancy of the existing Tesco car park on Friday between 17:15 and 17:30 was 148 vehicles, which equates to a total of 36% occupancy. This indicates a spare capacity of 262 spaces available with existing parking levels. When considering the reduction in spaces as a result of the development proposals, there would be a spare capacity of 160 spaces.
- 5.4.14 Saturday beat surveys recorded a maximum of 113 vehicles between 12:30 and 12:45 occupied the existing car park, which equates to a 28% occupancy. This indicates a spare capacity of 297 spaces available with existing parking levels. When considering the reduction in spaces as a result of the development proposals, there would be a spare capacity of 195 spaces.
- 5.4.15 Therefore, it is concluded that with the reduction of 102 spaces in the existing Tesco car park, there would be sufficient capacity to accommodate the parking demands of Tesco, based on the parking beat surveys undertaken.

Car Parking Summary

- 5.4.16 An assessment has been undertaken of the maximum parking demand for the McDonald’s restaurant (including staff, reserved and accessible parking) and has been calculated based on the average of the three surveyed sites and results in the following maximum demands:
- Friday (17:00-18:00): 21 vehicles; and
 - Saturday (13:00-14:00): 26 vehicles.
- 5.4.17 When considering the Friday (17:00-18:00) McDonald’s maximum car parking demand analysis, the Tesco car park is at 36% occupancy, which equates to 148 vehicles. Therefore some 64% spare capacity is available, which equates to 262 spaces, which is adequate to accommodate any overspill vehicles associated with McDonald’s if required.
- 5.4.18 For Saturday (13:00-14:00) McDonald’s maximum car parking demand analysis, the Tesco car park is at 23% occupancy, which equates to 93 vehicles. Therefore some 77% spare capacity, which equates to 317 spaces available to be utilised for vehicles associated with McDonald’s overspill if required.
- 5.4.19 Therefore, the proposed provision of 29 spaces (not including reserve bays) is considered sufficient for the proposed McDonald’s to accommodate the expected demand and any fluctuations during peak periods.

5.5 Cycle Parking

PCC Standards

- 5.5.1 The minimum cycle parking standards are also provided in the NPTC Supplementary Planning Guidance (SPG) Parking Standards 2016. The standards require a minimum of 1 cycle stand per 10 staff.

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Cycle Parking Provision

- 5.5.2 It has been confirmed by McDonald's that typically up to 20 staff could be on site at any one time. Therefore, based on the Policy requirements of the SPG a minimum of two cycle parking spaces are required on site, which can be provided as a single sheffield stand.
- 5.5.3 The development proposals provide four sheffield stands accommodating 8 cycle spaces. Therefore, this level of provision is in excess of policy requirement.

5.6 Servicing Arrangements

- 5.6.1 McDonald's has been trading in the UK since 1974. The company operates over 1,300 fast service restaurants of which around 880 are restaurants with drive thru facilities.
- 5.6.2 Based on information provided by McDonald's drive thru facilities, each restaurant is typically serviced 3 times per week, this is equivalent to 2,640 deliveries per week or 377 per day (7-day week). Assuming restaurants received deliveries between:
- 07:00 and 12:00 (5 hours); and
 - 14:00 and 21:00 (7 hours).
- 5.6.3 This equates to 12 hours per day for deliveries. Therefore, each hour there are approximately 31 deliveries occurring at drive thru McDonald's Restaurants across the UK.
- 5.6.4 Martin Brower is McDonald's sole distributor for all its products and have a fleet of 150 vehicles. Martin Brower utilise multi-temperature vehicles which allows all of the restaurant's requirements for; frozen, chilled and ambient products to be delivered in one visit. This therefore reduces the number of deliveries each restaurant receives.
- 5.6.5 Restaurants typically receive three deliveries per week. Servicing McDonald's restaurants whilst they are open is a common practice and does not present any operational difficulties.
- 5.6.6 Operationally, Martin Brower use a computerised planning tool (Paragon), which enables requirements of delivery destinations to be set and ensures they are complied with on every occasion the delivery is planned. The restaurant is allocated a 2-hour delivery slot and the delivery will be planned within this. Notification of the planned delivery is emailed to the restaurant two days before delivery.
- 5.6.7 On the day of the delivery the GPS system linked to Paragon will automatically email the restaurant 30-minutes prior to the vehicles arrival. Staff can then prepare for the delivery arrival and cone off parking spaces to be used as a temporary delivery vehicle loading bay.
- 5.6.8 The goods are delivered by articulated lorry, typically 16.5m in length. This is typically parked for between 15 minutes – 1 hour. The duration of the stay depends upon the range and quantity of products to be delivered.
- 5.6.9 The deliveries would be scheduled to arrive during the quiet trading periods for the McDonald's.
- 5.6.10 A representative from Martin Brower will visit the site prior to any new restaurant opening and assess the designated delivery area. Any special requirements (although there are none anticipated in this instance) will be communicated to their transport and scheduling department.
- 5.6.11 It is proposed that servicing will be undertaken on site. The delivery vehicle would utilise proposed parking spaces within the McDonald's car park to unload its goods, which will be managed on-site.

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Swept path analysis is presented in Appendix E demonstrates that a delivery vehicle can enter, manoeuvre into the parking spaces, which are to be utilised as a temporary delivery bay and exit the site onto the internal Tesco car park road.

- 5.6.12 Refuse collection could be collected by a private contractor 3 times per week, using a 9.6m vehicle and would occur outside of road network and operational peak hours.
- 5.6.13 Waste minimisation has been achieved through the redesign of tray liners and specifying the use of light-weight bin liners. Food wastage is minimised through the use of a computer system which monitors the amount of food served at given times of the day, resulting in more accurate preparation and ordering of stock. This therefore, reduces the quantum of waste and frequency of collection required.
- 5.6.14 Service vehicles also collect empty delivery trays and crates which are returned to supplies for reuse.
- 5.6.15 Cooking oil from restaurants is collected by Martin Brower's delivery vehicles and is recycled into bio diesel. The bio diesel is used as fuel by all McDonald's delivery vehicles resulting in carbon saving of 8,200 tonnes per annum.
- 5.6.16 The arrangements described above follow a 'tried and tested' methodology used successfully across the UK and there is no reason to suggest why it could not be successfully undertaken at the proposed Pontardawe restaurant.

Superseded

6. TRAFFIC GENERATION

6.1 Overview

6.1.1 This section of the report considers the approach upon which traffic generation associated with the proposed McDonald’s restaurant will be forecast. This approach utilises McDonald’s survey data for existing restaurant and provides sensitivity test when considering a typical TRICS approach as well as a comparison between an existing historical planning consent on the development site.

6.2 Proposed Traffic Generation

Comparable McDonalds Restaurants

6.2.1 Hydrock has analysed data (provided by McDonald's) of existing McDonald's drive-thru sites in comparable locations (i.e adjacent food-retail) and have undertaken a comparison assessment based on the operational information for the proposed site. The data includes traffic counts and customer interviews at McDonald’s restaurants with drive-thru facilities. Three restaurants are considered to be comparable to the proposed restaurant due to the similar ‘edge of town location’ and close to food-retail stores as well as being within close proximity to residential areas.

6.2.2 Details of the surveyed restaurants are provided in Table 6.1 below:

Table 6.1: Existing McDonald’s Surveyed Restaurants

Name	Address	Proximity
Bradford	Bradford Road, BD10 8EG	Within Morrisons food store car park
Wolverton	Wolverton, Milton Keynes, MK12 5RJ	Within Tesco Superstore car park
Darlington	Yarm Road, DL1 4PJ	Within Morrisons food store car park

6.2.3 The average of the three survey results has been applied as the proposed traffic generation for Pontardawe with the Friday (17:00-18:00) and Saturday (13:00-14:00) operational peak hours assessed. The proposed trips are summarised in Appendix F with the operational peak hours summarised in Table 6.2:

Table 6.2: Proposed Traffic Generation based on Surveyed Existing Drive Thru Sites

Peak	Time Period	Proposed Traffic Generation (Vehicles)		
		Arrivals	Departures	Total
Friday	17:00 - 18:00	113	112	225
Saturday	13:00 - 14:00	117	128	245

6.2.4 McDonald's research has proven that there is no statistically significant relationship between McDonald's traffic to floor area, dining area, number of seats or parking provision. Therefore, the averaged surveyed traffic has not been adjusted for any variable.

6.3 TRICS Assessment (Sensitivity Test)

6.3.1 As a sensitivity test, Hydrock has reviewed the TRICS database for McDonald's sites surveyed within the last 8 years. The sites within the database used for both weekday and weekend are not considered particularly comparable to the proposed site due to population and location characteristics, but we have selected the closest match available within the TRICS database.

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6.3.2 Hydrock has undertaken a TRICS assessment of the weekday and Saturday traffic using an average of all weekday and Saturday sites as a comparison exercise to the assessment in Section 6.2. The TRICS data is included at Appendix G and the weekday and Saturday TRICS assessment is shown in Table 6.3:

Table 6.3: Traffic Generation Based on TRICS Assessment for McDonald’s Site

Peak(s):	Trip Rates / SQM	TRICS Traffic Generation		
		Arrivals	Departures	Two-way
Friday PM Peak (17:00 - 18:00)	Trip Rate	13.841	13.564	27.405
	Trip Generation 377sqm (Vehicles)	52	51	103
Saturday Peak (13:00 - 14:00)	Trip Rate	37.725	39.362	77.087
	Trip Generation 377sqm (Vehicles)	142	148	290

6.3.3 Table 6.3 demonstrates that based on sites within the TRICS database weekday (Friday) predicted two-way trips are significantly lower than the bespoke McDonald’s surveys, whilst TRICS Saturday figures are slightly higher than the bespoke McDonald’s surveys. This can likely be attributed to the fact that, as outlined, the TRICS sites are not particularly comparable.

6.4 Traffic Comparison and Net Change

6.4.1 Hydrock has undertaken a comparison between the TRICS sensitivity assessment and the proposed traffic generation of the site based on the McDonald’s survey data for comparable sites. The net difference in traffic forecast by the two datasets is set out below in Table 6.4:

Table 6.4: Net Change in Traffic Between TRICS Sensitivity Assessment and Proposed Development (Vehicles)

Peak(s):	TRICS Assessment			Proposed Restaurant			Net Change (+/-)		
	Arr.	Dep.	2-way	Arr.	Dep.	2-way	Arr.	Dep.	2-way
Friday (1700-1800)	52	51	103	113	112	225	+61	+61	+122
Saturday (1300-1400)	153	142	295	117	128	245	-25	-20	-45

6.4.2 The comparison above indicates that the proposed restaurant when utilising the bespoke McDonald’s survey information of existing comparable sites represents a higher level of forecast traffic in the Friday PM peak and a lower level of forecast traffic in the Saturday peak when compared to the data derived from TRICS.

6.4.3 It is considered that this assessment utilising operational data provided by McDonald’s represents the most robust and accurate position when forecasting the proposed sites traffic as this traffic generation is based on McDonald’s-only sites in comparable locations to the proposal.

Superseded

7. TRIP TYPES AND DISTRIBUTION

7.1 McDonald's Trips by Type

7.1.1 Interview survey data has been provided by McDonald's. The surveys were undertaken at the surveyed restaurants as set out at Table 6.1 on both Friday and Saturday during the survey period. The purpose of the customer interview surveys was to establish the type of trips visiting a McDonald's restaurant with drive thru facilities in edge of town locations close to a large foodstore.

7.1.2 Four primary trip types are referred to in this report as follows:

- **Additional Trips:**
 - » These are specific to car journeys to visit the McDonald's whereby customers return to their original location immediately after completing their visit. For example:
Home → McDonald's → Home
- **Diverted Trips:**
 - » These are trips which are already on the network and alters their route to visit the McDonald's. In the case of the proposed restaurant these are existing trips which divert into the site. For example:
Work → McDonald's → Home
- **Pass By Trips:**
 - » These are also trips which are already on the network in any event which as the driver passes the site, they decide to make a visit. In the case of the proposed restaurant these would be existing trips on the A474 or A4067 which turn into the site.
- **Shared Trips:**
 - » These are existing trips on the network which are shared with adjacent food stores or surrounding shops and facilities. In the case of the proposed restaurant these are existing trips to the Tesco and Petrol Station that would also visit the restaurant.

7.1.3 Additional trips may not necessarily be new trips as those customers may previously have undertaken trips to other hot food takeaways on their route. Collectively, pass by; diverted and shared trips can be referred to as "existing trips" as they represent all existing vehicles on the network.

7.1.4 The data from the customer interview surveys have been analysed and a summary of the analysis is included in Table 7.1:

Table 7.1: Customer Interview Average Survey Results McDonald's (Trip Type)

Trip Type	Definition	Friday	Saturday
Additional Trips	Same origin and destination – McDonald's sole purpose of trip	43%	26%
Existing Trips	Different origin and destination (diverted)	39%	52%
	Same origin and destination but McDonald's not sole purpose (pass by)		
	Visit adjacent food store / stores before or after McDonald's (shared)	18%	22%
Total Surveys		100%	100%

7.1.5 Table 7.1 demonstrates that on a Friday 43% of trips to McDonald's could be expected to be additional trips to the restaurant and 57% would be existing on the road network. On a Saturday 26% of trips would be additional trips and 74% would be existing on the road network.

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- 7.1.6 The results in Table 7.1 also demonstrate that 18% of trips on Friday and 22% of trips on a Saturday could be expected to be shared trips with the adjacent Tesco superstore.
- 7.1.7 The proportion of McDonald’s trips by type on a Friday and Saturday has been calculated in Table 7.1. As a result, the proposed peak hour traffic has been split between additional, pass by/diverted and shared trips in Table 7.2.

Table 7.2: Proposed Trips by Type

Trip Type	Friday Peak			Saturday Peak		
	%	Arrival	Departure	%	Arrival	Departure
Additional	43%	48	48	26%	31	33
Pass By/Diverted	39%	44	44	52%	60	67
Shared	18%	21	20	22%	26	28
Total	100%	113	112	100%	117	128

- 7.1.8 The approach set out above provides a robust assessment of the trip type associated with the proposed new restaurant at Pontardawe.

7.2 Trip Distribution

- 7.2.1 For the proposed development trips that are already on the network (described as ‘existing’), this traffic has been distributed inbound across the road network in proportion with the observed traffic movements. The outbound trips have been distributed according to their initially intended direction of travel, prior to the diversion (into McDonalds).
- 7.2.2 The proposed shared trips have been distributed in proportion with the existing movements in and out of the Tesco Access Road.
- 7.2.3 The proposed trip distribution is shown in Table 7.3 - Table 7.6:

Table 7.3: Proposed McDonald's Additional Trip Distribution

Period	Approach	2024 Base Flow		Additional Trips (inbound)	Additional Trips (outbound)
		Number	%		
Friday PM	A474 NW	588	19%	9	9
	Industrial Estate	273	9%	4	4
	A474 E	672	22%	11	11
	A4067 NE	505	17%	8	8
	A4067 SW	1016	33%	16	16
	Total	3054	100%	48	48
Saturday	A474 NW	674	25%	8	8
	Industrial Estate	278	10%	3	3
	A474 E	493	18%	6	6
	A4067 NE	487	18%	6	6
	A4067 SW	761	28%	9	9
	Total	2693	100%	31	33

- 7.2.4 The proposed approach distribution for the existing trips (inbound) has been based on the distribution set out in Table 7.4.

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Table 7.4: Proposed McDonald’s Existing Trip Distribution (inbound)

Period	Approach	Existing Trips (inbound)
Friday PM	A474 NW	9
	Industrial Estate	4
	A474 E	10
	Ynisderw Road	0
	A4067 NE	7
	A4067 SW	14
	Total	44
Saturday	A474 NW	16
	Industrial Estate	6
	A474 E	12
	Ynisderw Road	1
	A4067 NE	11
	A4067 SW	15
	Total	60

7.2.5 The proposed existing trips (outbound) has been distributed onto the road network in proportion with the existing flows and the original destination of these flows.

Table 7.5: Proposed McDonald’s Existing Trip Distribution (outbound)

Period	Approach	2024 Base Flow		Existing Trips (outbound)
		Number	%	
Friday PM	A474 NW	716	24%	11
	Industrial Estate	364	12%	5
	A474 E	575	19%	9
	Ynisderw Road	33	1%	0
	A4067 NE	553	24%	11
	A4067 SW	724	12%	5
	Total	2964	100%	44
Saturday	A474 NW	574	22%	15
	Industrial Estate	254	10%	7
	A474 E	531	21%	14
	Ynisderw Road	44	2%	1
	A4067 NE	434	17%	12
	A4067 SW	742	29%	19
	Total	2579	100%	67

Superseded

Table 7.6: McDonald's Shared Trip Distribution

Period	Approach	2024 Base Flow		Shared Trips
		Number	%	
Friday PM	A474 NW (inbound)	84	24%	5
	Industrial Estate (inbound)	31	9%	2
	A474 E (inbound)	70	20%	4
	Ynisderw Road (inbound)	1	0%	0
	A4067 NE (inbound)	46	13%	3
	A4067 SW (inbound)	121	34%	7
	Total	354	100%	21
	A474 NW (outbound)	117	30%	6
	Industrial Estate (outbound)	45	12%	2
	A474 E (outbound)	77	20%	4
	Ynisderw Road (outbound)	5	1%	0
	A4067 NE (outbound)	59	15%	3
	A4067 SW (outbound)	84	22%	4
	Total	387	100%	20
Saturday	A474 NW (inbound)	118	31%	8
	Industrial Estate (inbound)	41	11%	3
	A474 E (inbound)	66	17%	5
	Ynisderw Road (inbound)	2	0%	0
	A4067 NE (inbound)	30	8%	2
	A4067 SW (inbound)	120	32%	8
	Total	376	100%	26
	A474 NW (outbound)	108	30%	8
	Industrial Estate (outbound)	38	11%	3
	A474 E (outbound)	72	20%	6
	Ynisderw Road (outbound)	3	1%	0
	A4067 NE (outbound)	2	14%	4
	A4067 SW (outbound)	8	24%	7
	Total	359	100%	28

7.2.6 The McDonald’s trips by type and total McDonald’s traffic generation are shown on the traffic flow diagrams attached as Appendix I.

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8. ON-SITE OPERATIONAL TRAFFIC ASSESSMENT

8.1 McDonald’s Proposed Pedestrian Trip Assessment

- 8.1.1 The proposed pedestrian trips have been calculated based on the average of the three survey results discussed in Section 5. The data includes traffic counts and customer interviews at McDonald’s restaurants with drive thru facilities. The proposed McDonald's pedestrian trips are summarised in Table 8.1:

Table 8.1: Proposed Pedestrian Trips (Average Surveyed)

Peak	Time Period	Proposed Traffic Generation (Pedestrians)		
		Arrivals	Departures	Total
Friday	17:00-18:00	38	38	76
Saturday	13:00-14:00	42	38	80

- 8.1.2 Pedestrian can access the site from the Tesco access road or internal Tesco car park via footways and routes along the proposed access road and surrounding pedestrian infrastructure.

8.2 On-Site Parking Demand Assessment

- 8.2.1 The maximum parking demand for the McDonald’s (including staff, reserved and accessible parking) has been calculated based on the average of the three survey results and is expected to be as follows:
- Friday – 21 vehicles; and
 - Saturday – 26 vehicles.
- 8.2.2 Therefore, the prosed provision of 29 spaces (excluding reserved bays is considered sufficient for the proposed McDonald’s to accommodate the expected demand and any fluctuations during peak periods.

8.3 Drive Thru Queue Assessment

- 8.3.1 The proposed drive thru queues are based on the average of those surveyed at the three operational McDonald’s restaurants with the results summarised in Table 8.2. This includes all vehicles waiting in the drive thru lane back from the collection booth.

Table 8.2: Proposed Drive Thru (Average Surveyed)

Criteria	Friday (17:00-18:00)	Saturday (13:00-14:00)
Minimum Queue	0	0
Maximum Queue	16	15
Average Queue	8	8

- 8.3.2 The proposed drive thru lane has capacity to accommodate 26 vehicles and is therefore adequate to accommodate the proposed level of demand.
- 8.3.3 The average drive thru queue frequency from the surveyed stores is shown in Figure 8.1 and Figure 8.2 below and demonstrates the maximum queue is only expected to occur once during the Friday evening 3-hour evening period for 4 minutes. On a Saturday during the four-hour lunchtime period the maximum queue of 15 vehicles is only expected to occur for two-minute intervals.

Superseded

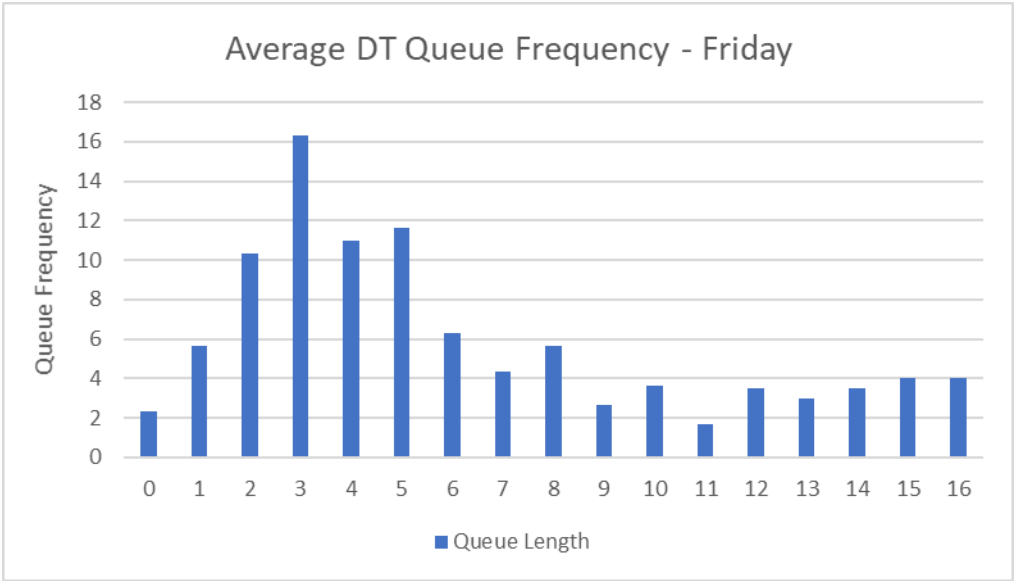


Figure 8.1: Average DT Queue Frequency - Friday

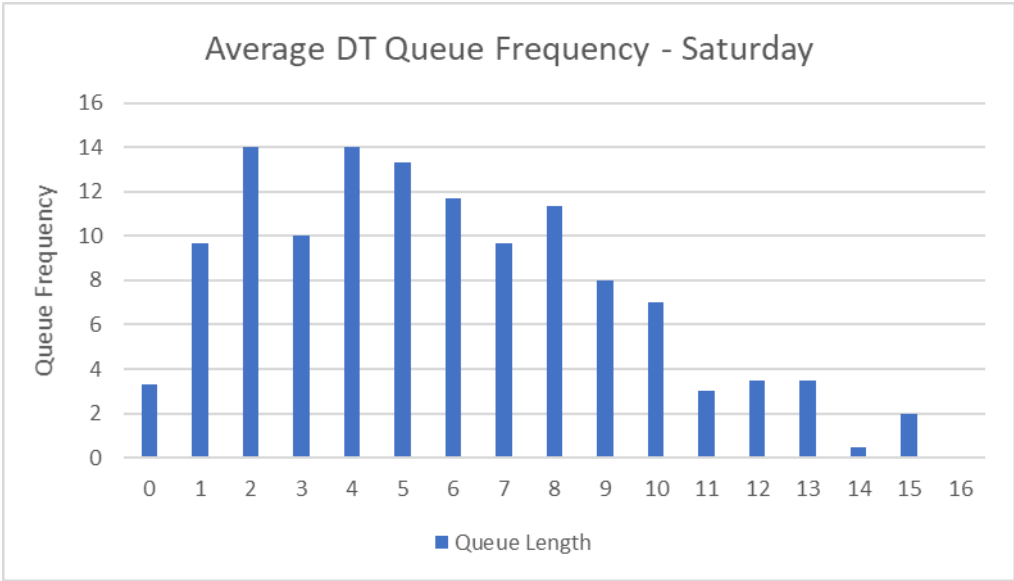


Figure 8.2: Average DT Queue Frequency - Saturday

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9. TRAFFIC IMPACT ASSESSMENT

9.1 Operational and Network Peak Hours

9.1.1 The network peak hours have been identified as:

- Friday PM 16:00 – 17:00 hours
- Saturday 12:00 – 13:00 hours

9.1.2 The McDonald's peak hours have been identified as:

- Friday PM 17:00 – 18:00 hours
- Saturday 13:00 – 14:00 hours

9.1.3 For the purpose of providing a robust assessment it has been assumed that the network and McDonald's peaks coincide, and so the operational peak site traffic has been assessed upon the network peak flows.

9.2 Growth Factor

9.2.1 The 2022 surveyed traffic flows have been growthed to 2024 (year of opening) using the following TEMPRO and NTM growth rates for Neath Port Talbot 004 which covers the area of Pontardawe:

- Friday PM Peak 1.0162
- Saturday Peak 1.0179

9.3 Operational Assessments

9.3.1 Detailed operational assessments have been carried out to determine the potential impact of the proposed development on the capacity of the following junctions:

- Site Access/Tesco Petrol Station 3 arm roundabout junction (ARCADY);
- Tesco Access Road/A4067/ Ffordd Cwm Tawe 4 arm roundabout junction (ARCADY); and
- A474/A4067 5 arm roundabout junction (ARCADY).

9.3.2 Assessment of the roundabout junctions has been undertaken using the ARCADY module within the TRL software Junctions 9. Modelling has been undertaken at these junctions using total traffic flows and HGV percentages.

9.3.3 The modelling has been based on geometric measurements using aerial photography supplemented with on-site measurements, where feasible. These measurements were undertaken using the junctions 9 Geometric Measurement Tool.

9.3.4 The key outputs of Junctions 9 which inform the operational assessment are as follows:

- 'Ratio of Flow to Capacity' (RFC);
- Maximum queue length in vehicles;
- Delay in second per vehicle; and
- Level of service indicated by a letter between A (well within capacity) and F (at or over capacity).

9.3.5 The main indication of the performance of a junction is given by the RFC for each lane. The peak capacity is realised when the demand flow at the entry is great enough to cause a continuous queue of vehicles to wait on approach to the stop line. This is reached when the RFC attains a value of 1.

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- 9.3.6 Queue lengths provide an indication of how the overall junction performance may affect adjacent junctions on the highway network. The queue lengths are presented as the maximum over an hourly period. Changes in queue lengths provide an indicator as to a development’s impact on the operation of a junction.
- 9.3.7 When considering the change in the operation of junctions across the network all of these factors will be considered to form a view as to whether the impact of the development generated traffic would be material and require mitigation.

9.4 Site Access / Tesco Petrol Station Roundabout

- 9.4.1 Hydrock has undertaken a Junctions 9 assessment of the Site Access/Tesco Petrol Station 3 arm roundabout junction for the 2022 Base, 2024 Base and 2024 + Development traffic scenarios. This compares the proposed development traffic flow against the 2024 baseline position.
- 9.4.2 A summary of the ARCADY capacity results for Site Access/Tesco Petrol Station 3 arm roundabout junction, for the 2022 Base, 2024 Base and 2024 + Development traffic scenarios, are set out in Table 9.1:

Table 9.1: ARCADY Site Access/Tesco Petrol Station roundabout junction modelling results

Year:	Period:	Scenario(s):	Max. RFC (all arms):	Max. End Queue (all arms):
2022	Friday	Base	0.34	1 vehicle
	Saturday	Base	0.36	1 vehicle
2024	Friday	Base	0.34	1 vehicle
	Saturday	Base	0.37	1 vehicle
	Friday	Base + Development	0.45	1 vehicle
	Saturday	Base + Development	0.48	1 vehicle

- 9.4.4 Table 9.1 demonstrates that during the 2024 base + development scenario the maximum RFC would be 0.45 with a queue of 1 vehicle on the main access road arm during the Friday peak. During the Saturday peak, the maximum RFC would be 0.48 on the main access road arm with a queue of 1 vehicle. The proposed traffic would therefore be accommodated at the Site Access/Tesco Petrol Station 3 arm roundabout junction. The modelling therefore demonstrates that the proposed development will not have a material impact on the operation of the local highway network.
- 9.4.5 The modelling outputs are attached as Appendix J.
- 9.4.6 Queue data recorded for the existing Site Access/Tesco Petrol Station Roundabout junction has been analysed for the peak hours to provide a layer of validation for the queues shown in the existing model. Table 9.2 provides a comparison between the modelled queue length outputs (shown in Appendix J) and the observed queue survey data (shown in Appendix B).

Table 9.2: Queue Length Comparison Site Access/Tesco Petrol Station roundabout junction

Arm	Friday Peak			Saturday Peak		
	2022 Observed (vehicles)	2022 Model (vehicles)	Net (+/-)	2022 Observed (vehicles)	2022 Model (vehicles)	Net (+/-)
Tesco Car Park	2	0	-2	1	0	-1
Main Access Road	1	1	0	1	1	0
Tesco Fuel Station	1	0	-1	2	0	-2

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9.4.7 Table 9.2 demonstrates that the modelled and observed queues are within typical daily variations in queue lengths for the three arms at this junction. The queue validation therefore demonstrates that the modelled junction as a whole reflects the observed operation when considering typical daily variations in queue lengths.

9.5 Tesco Access Road / A4067 / Ffordd Cwm Tawe Roundabout

9.5.1 Hydrock has undertaken a Junctions 9 assessment of the Tesco Access Road/A4067/ Ffordd Cwm Tawe 4-arm roundabout junction for the 2022 Base, 2024 Base and 2024 + Development traffic scenarios. This compares the proposed development traffic flow against the 2024 baseline position.

9.5.2 A summary of the ARCADY capacity results for Tesco Access Road/A4067/ Ffordd Cwm Tawe roundabout junction, for the 2022 Base, 2024 Base and 2024 + Development traffic scenarios, are set out in Table 9.3.

Table 9.3: ARCADY Tesco Access Road/A4067/ Ffordd Cwm Tawe roundabout junction modelling results

Year:	Period:	Scenario(s):	Max. RFC (all arms):	Max. End Queue (all arms):
2022	Friday	Base	0.90	7 vehicles
	Saturday	Base	0.89	7 vehicles
2024	Friday	Base	0.92	9 vehicles
	Saturday	Base	0.91	9 vehicles
	Friday	Base + Development	0.98	16 vehicles
	Saturday	Base + Development	0.97	16 vehicles

9.5.4 Table 9.3 demonstrates that the maximum RFC across all arms for the Friday base in 2022 is over the theoretical capacity of 0.85 RFC, showing a maximum RFC of 0.90. The 2022 base traffic has been growthed to 2024 which demonstrates that the arm with the maximum RFC (A4067 north) is over the theoretical capacity and is forecast to increase by 2.2% from the 2022 base. During the 2024 base + development scenario the maximum RFC would be 0.98 with a queue of 16 vehicles on the A4067 northern arm during the Friday peak; this demonstrates that the development will result in a 6.5% increase in RFC when compared to base 2024. The modelling outputs additionally demonstrate that three of the four arms of the roundabout junction are over the theoretical capacity for the Friday Base 2024 scenario. The arm with the biggest impact is the Tesco access Road arm which is to be expected as all development traffic will be distributed via this arm; the RFC in the 2024 base is 0.76 which increases to 0.96 with the additional development traffic and a forecasted queue of 11 vehicles.

9.5.5 The maximum RFC across all arms for the Saturday base in 2022 is over the theoretical capacity of 0.85 RFC, showing a maximum RFC of 0.89. The 2022 base traffic has been growthed to 2024 which demonstrate that the arm with the maximum RFC (A4067 north) is over the theoretical capacity and is forecast to increase by 2.3% from the 2022 base. During the 2024 base + development scenario the maximum RFC would be 0.97 with a queue of 16 vehicles on the A4067 northern arm during the Saturday peak; this demonstrates that the development will result in a 6.5% increase in RFC when compared to base 2024. The modelling outputs additionally demonstrate that the A4067 northern and eastern arms are over the theoretical capacity for the Saturday Base 2022 and 2024; the A4067 southern arm and the Tesco access road arm are under the theoretical capacity for all three scenarios.

9.5.6 It is therefore considered that the development will not have a material impact on the operation of the junction as it already operates over the theoretical capacity prior to the addition of the development traffic.

9.5.7 The modelling outputs are attached as Appendix J.

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- 9.5.8 Queue data recorded for the existing Tesco Access Road/A4067/Ffordd Cwm Tawe roundabout junction has been analysed for the peak hours to provide a layer of validation for the queues shown in the existing model. The initial junction model runs experienced poor validation, in both the core Junction 9 model and in Lane Simulation.
- 9.5.9 The model achieves a good level of calibration against the observed flows, with the following manual adjustments made:
- Arm C: -5% adjustment to the Intercept, to reflect driver hesitation to replicate the observed behaviour
- 9.5.10 The amendments carried out result in base that better reflects the observed behaviour.
- 9.5.11 It is considered likely that this was required due to the reasons outlined by TRL, which discusses the limitation of Junctions 9 software when considering junctions with large controlling flows, and how that can restrict the ability of the model; when there are controlling flows, drivers alter their behaviour accordingly. It is evident from the highway safety review undertaken in Section 2.3 that the existing behaviour has not resulted in a highway safety problem, and an increase in this behaviour could therefore not be described as unacceptable.
- 9.5.12 Table 9.4 provides a comparison between the modelled queue length outputs (shown in Appendix J) and the observed queue survey data (shown in Appendix B).

Table 9.4: Queue Length Comparison Tesco Access Road/A4067/Ffordd Cwm Tawe roundabout junction

Arm	Friday Peak			Saturday Peak		
	2022 Observed (vehicles)	2022 Model (vehicles)	Net (+/-)	2022 Observed (vehicles)	2022 Model (vehicles)	Net (+/-)
A4067 North	13	7	-6	12	7	-5
A4067 East	6	5	-1	5	5	0
A4067 South	15	7	-8	8	2	-6
Tesco Access Road	9	3	-6	5	1	-4

- 9.5.13 Table 9.4 demonstrates that the modelled and observed queues are within typical daily variations in queue lengths for the majority of arms at this junction. As TRL states, ‘during peak periods (when the flow/capacity ratios are high) there is a large daily variation in queue lengths’. It is therefore considered that the difference in queues shown in Table 9.4 is deemed acceptable.
- 9.6 A474 / A4067 Roundabout
- 9.6.1 Hydrock has undertaken a Junctions 9 assessment of the A474/A4067 5-arm roundabout junction for the 2022 Base, 2024 Base and 2024 + Development traffic scenarios. This compares the proposed development traffic flow against the 2024 baseline position.
- 9.6.2 A summary of the ARCADY capacity results for A474/A4067 roundabout junction, for the 2022 Base, 2024 Base and 2024 + Development traffic scenarios, are set out in Table 9.3.

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Table 9.5: ARCADY A474/A4067 roundabout junction modelling results

Year:	Period:	Scenario(s):	Max. RFC (all arms):	Max. End Queue (all arms):
2022	Friday	Base	0.90	8 vehicles
	Saturday	Base	0.91	8 vehicles
2024	Friday	Base	0.92	9 vehicles
	Saturday	Base	0.93	10 vehicles
	Friday	Base + Development	0.97	16 vehicles
	Saturday	Base + Development	0.97	15 vehicles

- 9.6.4 Table 9.5 demonstrates that the maximum RFC across all arms for the Friday base in 2022 is over the theoretical capacity of 0.85 RFC, showing a maximum RFC of 0.90. The 2022 base traffic has been growthed to 2024 which demonstrates that the arm with the maximum RFC (A467 south) is over the theoretical capacity and is forecast to increase by 2.2% from the 2022 base. During the 2024 base + development scenario the maximum RFC would be 0.97 with a queue of 16 vehicles on the A467 southern arm during the Friday peak; this demonstrates that the development will result in a 5.4% increase in RFC when compared to base 2024. The modelling outputs additionally demonstrate that the three arms (A474 northwest, A474 east and A4067 south) of the roundabout junction that are over the theoretical capacity for the Friday Base 2024 + Development scenario are already over the theoretical capacity in both 2022 and 2024 Base scenarios. The Industrial Estate and Ynisderw Road arms of the roundabout junction are under the theoretical capacity on all three scenarios for the Friday peak period.
- 9.6.5 The maximum RFC across all arms for the Saturday base in 2022 is over the theoretical capacity of 0.85 RFC, showing a maximum RFC of 0.91. The 2022 base traffic has been growthed to 2024 which demonstrate that the arm with the maximum RFC (A474 northwest) is over the theoretical capacity and is forecast to increase by 2.2% from the 2022 base. During the 2024 base + development scenario the maximum RFC would be 0.97 with a queue of 15 vehicles on the A4074 north-western arm during the Saturday peak; this demonstrates that the development will result in a 4.3% increase in RFC when compared to base 2024. The modelling outputs additionally demonstrate that the A474 north-western arm is over the theoretical capacity in all three scenarios; the remaining four arms are under the theoretical capacity of 0.85 for the 2022 and 2024 Base scenario and the 2024 Base + Development scenario. The modelling therefore demonstrates that the proposed development will not have a material impact on the operation of the junction as a whole as four out of the five arms operate within capacity for all three scenarios.
- 9.6.6 It is therefore considered that the development will not have a material impact on the operation of the junction as it already operates over the theoretical capacity prior to the addition of the development traffic.
- 9.6.7 The modelling outputs are attached as Appendix J.
- 9.6.8 Queue data recorded for the existing A474/A4067 roundabout junction has been analysed for the peak hours to provide a layer of validation for the queues shown in the existing model. The initial junction model runs experienced poor validation, in both the core Junction 9 model and in Lane Simulation.
- 9.6.9 The model achieves a good level of calibration against the observed flows, with the following manual adjustments made:
- Arm B: -10% adjustment to the intercept, to reflect driver hesitation to replicate the observed behaviour.

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- Arm C: -15% adjustment to the Intercept, for the same reason as above.
- Arm D: -6% adjustment to the Intercept, for the same reason as above.

- 9.6.10 The amendments carried out result in base that better reflects the observed behaviour.
- 9.6.11 It is considered likely that this was required due to the reasons outlined by TRL, which discusses the limitation of Junctions 9 software when considering junctions with large controlling flows, and how that can restrict the ability of the model; when there are controlling flows, drivers alter their behaviour accordingly. It is evident from the highway safety review undertaken in Section 2.3 that the existing behaviour has not resulted in a highway safety problem, and an increase in this behaviour could therefore not be described as unacceptable.
- 9.6.12 Table 9.4 provides a comparison between the modelled queue length outputs (shown in Appendix J) and the observed queue survey data (shown in Appendix B).

Table 9.6: Queue Length Comparison A474/A4067 roundabout junction

Arm	Friday Peak			Saturday Peak		
	2022 Observed (vehicles)	2022 Model (vehicles)	Net (+/-)	2022 Observed (vehicles)	2022 Model (vehicles)	Net (+/-)
A474 North West	14	7	-7	9	8	-1
Industrial Estate	5	2	-3	4	2	-2
A474 East	12	7	-5	5	2	-3
A4067	15	8	-7	6	2	-4
Ynisderw Road	1	0	-1	1	0	-1

- 9.6.13 Table 9.6 demonstrates that the modelled and observed queues are within typical daily variations in queue lengths for the majority of arms at this junction. Although Table 9.6 displays slightly greater differences in the Friday Peak, the difference between the queue outputs in the model for the Saturday Peak when compared to the observed queues is very minor; this queue validation therefore demonstrates that the modelled junction reflects the observed operation when considering typical daily variations in queue lengths.
- 9.6.14 As TRL states, ‘during peak periods (when the flow/capacity ratios are high) there is a large daily variation in queue lengths’. It is therefore considered that the difference in queues shown in Table 9.6 is deemed acceptable.

9.7 Development Impact Summary

- 9.7.1 Whilst the proposed development represents an increase in traffic when compared to the 2024 baseline, Hydrock have undertaken a robust assessment as the operational peak site has been assessed upon the network peak flows, coinciding the network and McDonald’s peaks.
- 9.7.2 The main indication of the performance of a junction is given by the RFC for each lane. The peak capacity is realised when the demand flow at the entry is great enough to cause a continuous queue of vehicles to wait on approach to the stop line. This is reached when the RFC attains a value of 1. Although the modelling demonstrates there are some arms that are over the theoretical capacity of 0.85 RFC, there are no arms that reach or exceed the value of 1; furthermore, the arms that exceed 0.85 did so prior to the addition of the development traffic in the base scenarios.
- 9.7.3 As a result, it is considered that the development will not have a material impact on the operation of the local highway network as the junctions already operate over the theoretical capacity prior to the

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addition of the development traffic. It should be noted however, that all three junctions operate below the value of 1.

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10. MITIGATION MEASURES AND SUSTAINABLE TRAVEL INITIATIVES

10.1 Mitigation Measures

- 10.1.1 It has been demonstrated that there are no existing highway safety issues in the vicinity of the site. The site is accessible by non-car modes and measures are proposed to improve pedestrian and vehicular access to the site. The proposal would have no material impact on the operation of the road network. Therefore, no mitigation measures are required.

10.2 Sustainable Travel Initiatives

- 10.2.1 This section sets out the sustainable travel initiatives which would be available for McDonald's staff.

Walking and Cycling

- 10.2.2 McDonald's restaurants offer a range of discount schemes to their staff for goods and services from other companies. In respect of cycling, staff can get discounts of up to 10% from the following cycle retailers:

- Wiggle;
- ProBikeKit;
- Evans Cycles; and
- Halfords.

- 10.2.3 In addition to this, and to help promote the health and wellbeing of staff, McDonald's offer membership to staff at the following gyms:

- Nuffield Health Clubs;
- Virgin Active; and
- Puregym.

- 10.2.4 A local cycle route plan would be provided for staff and displayed on a noticeboard in the crew room.

- 10.2.5 Changing facilities and lockers will be available for staff.

Public Transport

- 10.2.6 Staff would have access to the internet in the crew room to allow them to look up bus timetables and public transport information as required.

Lifts Home in Emergency Situations

- 10.2.7 Employees who walk, cycle or use public transport to travel to work will be provided with a free ride home in the event of an emergency at the discretion of the Restaurant Manager.

Car Sharing

- 10.2.8 The low number of staff at the restaurant will mean there may be little benefit in formally arranging a formal car-sharing scheme. Although, the TPC should encourage staff to car share where possible and for the scale of the restaurant and number of staff, an informal scheme would probably suffice. The TPC would facilitate lift share matches where possible.

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- 10.2.9 A printed statement will be mounted in staff rooms to increase staff awareness of the opportunity to save on fuel and congestion and where staff are willing to car share, their work contact details will be given out via the TPC.

Free Meals

- 10.2.10 Staff are offered free meals which reduces the need to undertake car trips during staff breaks to obtain food. Staff also benefit from a crew room to relax including breaks which also reduces the need to travel off site during rest periods.

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11. SUMMARY AND CONCLUSIONS

- 11.1.1 Hydrock have has been appointed by McDonald's Restaurants Ltd to prepare this Transport Assessment in support of the planning application for the proposed McDonald's Restaurant with a drive-thru facility on part of the existing Tesco car park in Pontardawe, to the north-east of Swansea.
- 11.1.2 The site comprises part of the car park for the existing Tesco foodstore which operates under A1 food retail Use Class.
- 11.1.3 It is concluded that the accident records do not demonstrate any particular pattern or clustering. There are therefore no apparent highway safety issues on the existing network which need to be addressed as part of this planning application.
- 11.1.4 The site is accessible via walking, cycling and public transport. Due to the site being centrally located within Pontardawe, it is considered that employees and customers will be able to benefit from the diverse range of sustainable travel options that are available when travelling to/from the site.
- 11.1.5 It is proposed to redevelop the site to provide a 377sqm (Gross External Area) McDonald's Restaurant with side-by-side drive thru facilities. Vehicular access to the site will be provided from the wider highway network via the Tesco Superstore arm of the A4067 roundabout. Vehicles will route to the site via the Tesco access road and an additional roundabout junction with Tesco Fuel Station. Vehicles will route into Tesco car park where access to the site can be gained on the site's western boundary. Appropriate arrangements are proposed for the servicing of the restaurant, three times per week.
- 11.1.6 The restaurant would generate the following traffic:
- Friday PM Peak: 113 arrivals and 112 departures
 - Saturday Peak: 117 arrivals and 128 departures
- 11.1.7 It has been demonstrated that on a Friday 43% of trips to McDonald's could be expected to be additional trips to the restaurant and 57% would be existing on the road network. On a Saturday 26% of trips would be additional trips and 74% would be existing on the road network.
- 11.1.8 The number of additional trips to the network would therefore be:
- Friday PM Peak: 48 arrivals and 48 departures
 - Saturday Peak: 31 arrivals and 33
- 11.1.9 Although the modelling demonstrates there are some junction arms that are over the theoretical capacity of 0.85 RFC, there are no junction arms that reach or exceed the value of 1; furthermore, the arms that exceed 0.85 did so prior to the addition of the development traffic in both the 2022 and 2024 Base scenarios. As a result, it is considered that the development will not have a material impact on the operation of the road network as the junctions already operate over the theoretical capacity prior to the addition of the development traffic.
- 11.1.10 The proposed development provides parking provision in line with car parking standards.
- 11.1.11 Swept path analysis of the proposed development site confirms that the site can be adequately serviced by vehicles associated with the ongoing operational required of the restaurant as well as its customers.
- 11.1.12 The proposal accords with the national planning policy guidance. It is therefore concluded that there are no justifiable, traffic, transportation or highways reasons for refusing this application.

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Hydrock Consultants Ltd

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Appendix A Pre-Application Comments (2020)

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Cyngor Castell-nedd Port Talbot
Neath Port Talbot Council

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Mr Ben Fox
Planware Ltd
37 Walnut Tree Lane
Sudbury
CO10 1BD

BY EMAIL ONLY

Dear Sir/Madam

Town and Country Planning Act 1990

Pre-App. Ref.: Q2020/0066
PROPOSAL: Proposed fast food restaurant and drive thru.
LOCATION: Tesco Supermarket A4067 From Glais To Pontardawe Alltwn
Pontardawe Swansea

I refer to your correspondence received on 2 April 2020, concerning the above and your request for pre-application advice. Having considered the nature of submission, I respond as follows.

Local Context and Constraints

Constraints not able to be run at this time, we will provide this information once available. However, we can find most information via other means. These details are included below.

- Part of the site lies within a Zone C2 Flood Zone.
- Part of the Site lies within a High Risk Coal Area.
- The site lies within an area of potential land contamination from former uses.

Amgylchedd ac Adfywio

Ceri Morris Pennaeth Cynllunio a Gwarchod y Cyhoedd

Y Ceiau, Ffordd Brunel, Parc Ynni Baglan, Castell-nedd SA11 2GG

Ffôn 01639 686868

Environment and Regeneration

Ceri Morris Head of Planning and Public Protection

The Quays, Brunel Way, Baglan Energy Park, Neath SA11 2GG

Tel 01639 686868

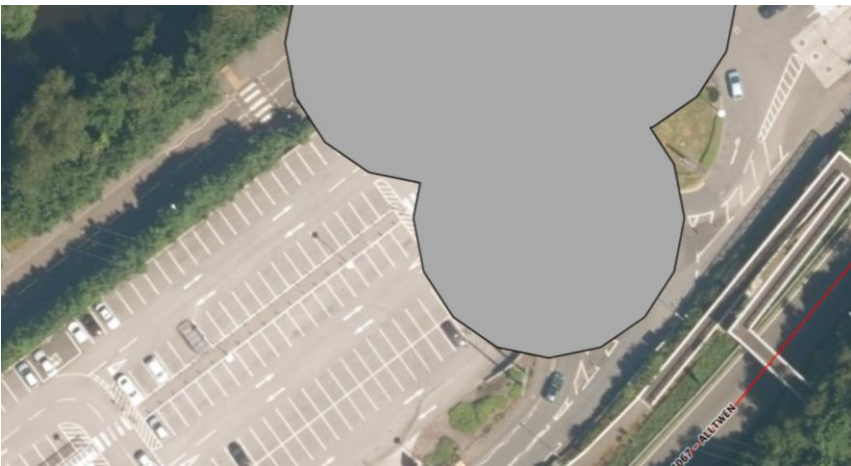
Croesewir gohebiaeth yn y Gymraeg a byddwn yn ymdrin â gohebiaeth Gymraeg a Saesneg i'r un safonau ac amserlenni.

We welcome correspondence in Welsh and will deal with Welsh and English correspondence to the same standards and timescales.

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Please note that this information is based on our current records and is, as far as possible, accurate. Nevertheless, we reserve the right to advise you of any additional constraints that may be identified at the time of your application.

The plan below shows the high risk coal area. Any application will require a Coal Mining Risk Assessment. Together this details of any mitigation necessary undertaken by a suitably qualified consultant. This is a National validation requirement, and without this your application will be invalid.



The plan below outlines the existing Zone C2 Flood zone. Any application in this area will require a FCA. This again will be a validation requirement, and any application without an FCA will be invalid.



Relevant Planning History

From an examination of our records, the application site/ property has the following relevant planning history:

Planning History cannot be run at this time, we will provide this information once available.

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Relevant Planning Policies

In addition to national guidance contained within Planning Policy Wales, any application would be considered against the Policies within the Adopted Neath Port Talbot Local Development Plan, details of which are available on the Council's web site by visiting www.npt.gov.uk/ldp. The relevant policies would include:

Strategic Policies

- **Policy SP2** Health
- **Policy SP3** Sustainable Communities
- **Policy SP6** Development in the valleys strategy area.
- **Policy SP10** Open Space
- **Policy SP11** Employment Growth
- **Policy SP12** Retail
- **Policy SP16** Environmental Protection
- **Policy SP18** Renewable and low carbon energy.
- **Policy SP19** Waste Management
- **Policy SP20** Transport Network
- **Policy SP22** Welsh Language

Topic based Policies

- **Policy SC1** Settlement limits
- **Policy I1** Infrastructure requirements
- **Policy OS1** Open Space Provision
- **Policy EC4** Protection of Existing Employment Uses
- **Policy EC5** Employment uses in the valleys
- **Policy R3** Out of centre retail proposals
- **Policy TO4** Walking and cycling routes
- **Policy EN8** Pollution and land stability
- **Policy RE2** Renewable energy and low carbon energy in new development.
- **Policy W3** Waste management in new development
- **Policy TR2** Design and Access of New Development
- **Policy BE1** Design
- **Policy WL1** Development in Language Sensitive Areas

Supplementary Planning Guidance:

The following SPG is of relevance to this application: -

- Planning Obligations (October 2016)
- Parking Standards (October 2016)
- Biodiversity and Geodiversity (May 2018)
- Pollution (October 2016)
- Open Space & Greenspace (July 2017)
- Renewable and Low Carbon Energy (July 2017)
- Design (July 2017)

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- Development and the Welsh Language (July 2017)

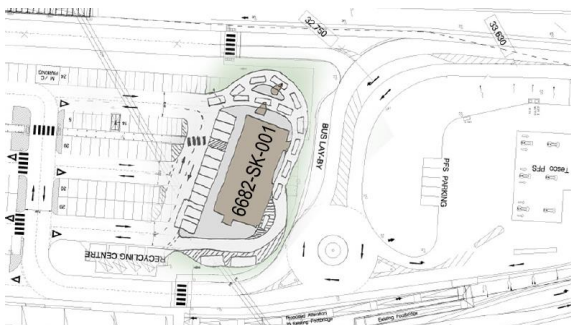
All of the above SPG can be viewed on the [Council's website](#).

- Neath Port Talbot County Borough Council Guide to the Layout of Development Roads.
- Neath Port Talbot County Borough Council Specification for the construction of roads for adoption.
- Sustainable Drainage (SuDS) Statutory Guidance [2019].
- CIRIA (C753) - The SuDS Manual.

Analysis of Proposal

The application seeks pre-application advice on the principle of a fast food restaurant/ drive thru restaurant for McDonalds on land within the existing Tesco car park, to the west of their Petrol Filling Station.

The only details provided are an indicative block plan showing the approximate location of a building, and a location plan. No detailed plans are provided indicating the size, design and exact layout of the site or proposed restaurant.



From the indicative plan provided an indication can be made of the routing of vehicles, and the orientation of the building in respect of the surrounding development, and existing car park provision.

The site is located within defined settlement limits as set out within the adopted Local Development Plan, which states that;

“Development within settlement limits that is proportionate in scale and form to the role and function of the settlement as set out in the Settlement Hierarchy will be acceptable in principle”.

The site however, does lie outside of the designated district retail centre of Pontardawe, and Policy R2/1 refers. Outside of retail centres Policy R3 is relevant;

Proposals for new retail development or additional retail floorspace within settlement limits but outside the defined retail centres or retail allocations will only be permitted where:

1. It is demonstrated that there is a need for the development; and
2. The development cannot be accommodated within a defined retail centre and is located in line with the sequential approach; and

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3. The vitality and viability of existing retail centres will not be undermined taking into account the cumulative effects of other approved retail developments, recently completed developments and plan commitments; and

4. The proposal would not undermine the Council's retail hierarchy or any regeneration schemes that the Council has formally approved;

Or:

5. The proposal is within the Coastal Corridor Strategy Area and is for a new retail unit, change of use or extension resulting in a premises of 100m² gross floor space or less and is demonstrated to serve local neighbourhood needs; or

6. The proposal is within the Valleys Strategy Area and is a new retail unit, change of use or extension resulting in a premises of 200m² gross floor space or less.

In this case the development lies within the “demise” of an existing out of centre or edge of centre retail store, and as such the use of the site, is already within a retail use, that at the time was justified under relevant planning Policy at that time as supporting the existing town centre of Pontardawe, and one that is linked to that centre for linked shopping trips by pedestrians.

A consideration of impacts upon the existing district centre of Pontardawe should be submitted in support of any application.

In addition your proposal is for a restaurant/ drive thru use, which is predicated on an out of centre use, and one that would appear on the basis of similar uses, to rely on vehicular bound customers, and potentially in this case some walk in customers, but generally these uses attract vehicular borne customers, and attract those from passing traffic and draw visitors from a wide area.

In this case there are no adjacent or nearby uses of a similar “national/international” branding, the nearest of which lie to the west in the Morriston area of Swansea. As such, the impacts of this use on traffic generation, from a wider area will need to be carefully considered. As it is clear that whilst there may be an argument that joint trips will occur, this will provide an attraction in its own right, and as such generate significant traffic movements.

The development proposes to be constructed over what is currently the car parking area used and allocated for Tesco shoppers. Therefore you will have to demonstrate that the loss of these spaces to accommodate the proposed restaurant/drive thru will not have adverse impact upon the existing use. A car parking survey of the existing car parking areas would be required during peak times and when schools are occupied full time, as this area of the Car park appears to be informally used for parents to pick up and drop off for the nearby school.

Assessment of transport impacts and parking need should be submitted in line with National Policy and Guidance, in order for the Authority to adequately assess any potential impacts, including on or off site mitigation that may be necessary.

The site is prominent, located on the site frontage, but it is expected that illuminated signage may be expected to facilitate the development, and potentially signpost this from the adjoining classified highway. No details are provided of any signage, and you should be aware that any

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excessive signage or advertisement clutter would be resisted, especially viewable from this strategic highway link to the valleys and areas beyond.

Comments have been received from our environmental health and Highways colleagues which refer to potential impacts of lighting of residential amenity, and highway and pedestrian safety.

In addition the Environmental Health Section raise issues of noise, from both plant, and from operation upon residential amenity, especially at anti-social hours, plus odour control on the cooking facilities. Information on how these matters are to be addressed should be submitted in support of the application.

Sustainability and ecological enhancements should be considered as part of any application. TH Authority would always encourage energy saving or low/zero carbon measures in any development, and enhancements such a green or brown roofs should be considered, Policy RE2 refers.

Secured by design and designing out crime.

The site is located between the existing petrol filling station, and the existing foodstore, however, both are located some distance from the site itself, and it is clear, as referred to above, that the site will result in a draw from the wider area and encourage use of not only the proposed parking area, but the wider parking area by visitors, and this has the potential for anti-social behaviour issues arising.

It is unclear if the existing car park is closed to access outside of the stores opening hours, or if there is need to consider restricting access to this large area, if this development were to proceed. In addition, the whole site, once accessed is relatively hidden from public view, and concerns are raised that this will result in vehicular and pedestrian congregation of youths to the detriment of public safety. No details have been provided on opening hours, and these uses can operate 24 hours. In this location, there are significant concerns that this could lead to anti-social behaviour, and any application would need to be carefully considered. As such supporting information on how this could be addressed or mitigated would appear essential.

I am awaiting a full reply from the Secured By Design representative, and I will forward this on as soon as this is received.

You are encouraged to contact Natural Resources Wales (NRW) to seek further pre-application advice – see note below for details of their pre-application services.

You are encouraged to contact Dŵr Cymru Welsh Water (DCWW) to seek further pre-application advice – see note below for details of their pre-application services.

Sustainable Drainage – Statutory Requirements w.e.f January 2019

Please note that from 7th January 2019, all new developments of more than 1 house, or where the construction area is of 100m² or more, plus if the SAB authority believe that any redevelopment of land has significant surface water drainage implications. This will require sustainable drainage - built in accordance with mandatory standards for sustainable drainage

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published by Welsh Ministers - to manage on-site surface water. More information is available in [Schedule 3 of the Flood & Water Management Act 2010](#).

These systems must be approved by the Council's Engineering Service acting in its SuDS Approving Body (SAB) role **before construction work begins**. In this respect it is essential that a developer of any such project gain SAB approval of its surface water drainage alongside any relevant planning permission. **You will not be allowed to start construction until both permissions have been approved.**

If you have not done so already, and your development would not fall into any of the relevant exceptions¹, you are therefore strongly encouraged to request further advice from the SAB. Involving the SAB Officers in pre-application discussions will allow for SuDS drainage matters (to ensure suitability of proposed SuDs design in line with national standards and adequate site layout) to be considered alongside the assessment of planning merits. **There is an additional charge of £250 for this service.** This can be as part of any agreed further pre-application submissions with the Planning Authority (recommended) or independently/ direct with the SAB. You are advised, however, that failing to engage in joint pre-application discussions has the potential to lead to delays and, most notably, the potential need to obtain further planning permission should any agreed SuDS design not be compliant with any relevant planning permission. Further details are available at www.npt.gov.uk/planning.

Major Developments

Please be aware that as a 'major' development there is now a statutory requirement (introduced by s17 of the Planning (Wales) Act 2015) for the applicant / developer to consult the community and relevant statutory consultees in advance of formal submission of an application.

Please note that a major application cannot be validated until such consultation is undertaken and a Pre-Application Consultation (PAC) Report submitted with the application.

Detailed advice on Pre-application Consultation can be found on the [Welsh Government website](#).

Section 106 Planning Obligations (if applicable)

The Council's approved [Planning Obligations Supplementary Planning Guidance](#) (SPG) provides the local policy basis for seeking planning obligations through Section 106 Agreements in Neath Port Talbot. The Council's approved SPG is also available to view/ download at www.npt.gov.uk/planning.

Following consideration of the proposed development and potential impacts and needs arising from the development, I would advise that the Council is likely to seek planning obligations covering the following: -

¹ Exceptions and exemptions, in summary, relate to:-

- Existing sites and developments with planning permission granted or deemed to be granted (whether or not subject to any conditions as to a reserved matter) or for which a valid application has been received but not determined by 7 January 2019. However, SAB approval will still be required if the planning permission was granted subject to a condition as to a reserved matter and an application for approval of the reserved matter is not made before 7 January 2020.

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- Welsh Language

Policy WL1: Development in Language Sensitive Areas

The following development proposals within the identified language sensitive areas will be required to submit a Language Action Plan, setting out the measures to be taken to protect, promote and enhance the Welsh Language:

- (a) Residential development of 10 or more dwellings;
- (b) Retail, commercial or industrial development with a total floorspace of 1,000sqm or more.

The plan provided does not have a scale, nor does the form indicate a floor space proposed.

Further discussion on such matters can, of course, be entered into at the time of an application, or as part of any agreed further pre-application submissions.

Required Supporting Documentation

We would encourage you to submit your application electronically via www.gov.wales/planningapplications.

Having regard to the nature of your proposal, it is considered at this stage that in addition to the submission of standard mandatory supporting documentation such as application forms, plans and fee, any application for the above development should also be accompanied by the following additional documentation: -

- Pre-Application Consultation (PAC) Report ('Major' development, so dependant on scale of final proposals)
- Design and Access Statement (see TAN 12 Design, Appendix 1, again dependant on scale of final proposals)

Only applies to: planning applications for “major” development (except for mining; waste; section ‘73’ and applications of a material change in use of land or buildings)

- Welsh Language Impact Assessment (if over 1000 sqm see our [Development and the Welsh Language SPG](#) for guidance)
- Statement of how development complies with TAN15 / Flood Consequences Assessment
- Contaminated Land Desk-top Assessment
- Coal Mining Risk Assessment
- Transport Impact Assessment complies with TAN 18 Transport
- Neath Port Talbot County Borough Council Guide to the Layout of Development Roads.
- Neath Port Talbot County Borough Council Specification for the construction of roads for adoption.
- Sustainable Drainage (SuDS) Statutory Guidance [2019].
- CIRIA (C753) - The SuDS Manual.

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If any subsequent application fails to include the information above, there is a chance it may not be registered and, in any event, it is likely that an application will either be refused or will not be able to be progressed until its satisfactory submission.

It is also this Authority's practice to recommend to applicants that detailed information is submitted at application stage to ensure that, in the event of planning permission being granted, that 'pre-commencement' conditions (which require approval of details prior to work starting on site) can be minimised. You are therefore encouraged to ensure that your initial submissions incorporate as much information as possible (for example materials, boundary treatment, ecology mitigation, Construction Management Plan, Travel Plan etc.), and address all matters raised in the advice given above.

Detailed guidance on the use of the national standard application form for planning permission and other associated consent regimes; and the information which must accompany a planning application so that the local planning authority can determine the validity of the application, can be found as follows: -

"Guidance on the use of the standard application form ('1app') and validation of applications":
<http://wales.gov.uk/topics/planning/policy/guidanceandleaflets/1appguidance>

The Town and Country Planning (Development Management Procedure)(Wales) Order 2012: http://www.legislation.gov.uk/wsi/2012/801/contents/made/original_order.
(Note subsequent Amendment Orders: [2014](#) ; [2015](#) ; [2016](#) ; and [2017](#)).

How we will deal with your planning application

As part of its emphasis on 'Delivering Quality Development Quickly', the Planning department prides itself on the service it offers our customers. Once your application has been received, this will include an allocated case officer making contact with you or your appointed agent within the first week and arranging a visit, following which we will contact you by phone or email to advise of any discrepancies with your application. We will also work with you to address any outstanding concerns, including any amendments required to make your proposal acceptable.

Once we are happy with the validity of your application, we will formally consult neighbours and relevant consultees. Provided there are no significant matters of concern resulting from such consultations, we will then seek to determine your application as swiftly as possible after the expiry of the statutory publicity period, and aim to do so within the 8 week statutory period.

While Officers will endeavour to ensure you are aware of the progress of your application, we would encourage you to contact the case officer should you wish to discuss any matter further.

Development Team Approach – Building Control

The Development Management and Building Control teams work closely to assist developers in improving the quality of their development and ensuring compliance with all appropriate conditions and Regulations. In particular, Building Control provide a competitive and highly professional service and seek to actively engage with developer's at the earliest stage of their project. You are therefore encouraged to contact the Building Control team on 01639 686820 or

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by emailing building.control@npt.gov.uk to enter into early negotiations and understand the benefits of the Council's Development Team approach.

Requests for Further Advice

Following receipt of this initial advice, should you wish to discuss your scheme prior to formal submission, please contact the case officer on the direct number or email address given above. Further charges may apply.

In this case it is strongly recommended that you provide more details with regard to the layout and design of the development, and the matters raised within this reply, and provide more details on how you propose to address these matters. As a number of these could result in a negative recommendation, unless robustly addressed in any submission.

Yours faithfully

Christopher Davies

If you require this information in larger print, or in an alternative format, please contact the above named officer.

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Seeking Pre-Application Advice from External Consultees

Natural Resources Wales (NRW)

Natural Resources Wales has a key role in the planning system and you may wish to hold pre-application consultation with them, utilising their pre-application service, so that environmental considerations are identified and addressed at the earliest opportunity. More information about Natural Resources Wales's pre-application service, including what advice can be sought for free, and what advice is subject to a fee can be found at:

<https://naturalresources.wales/guidance-and-advice/business-sectors/planning-and-development/advice-for-developers/our-service-to-developers/?lang=en>

Dŵr Cymru Welsh Water (DCWW)

Dŵr Cymru Welsh Water has a key role to play in the development and planning process as the services provided are at the forefront of public health and protection of the environment. Dŵr Cymru encourages all developers to engage with them as early as possible in order to address any issues that may arise during the planning/construction process.

To assist, Dŵr Cymru operates a pre-planning service in order to assess the impact of the proposed development. A written response will be provided advising whether the local network(s) can support the proposal, whether off-site water mains and/or sewers will need to be provided, and whether there are any apparatus located within the land you wish to develop and the requirements for these apparatus. This service is provided for a fee of £155+ VAT and can be submitted by post or by completing the online enquiry form at <http://www.dwrcymru.com/en/Developer-Services>. Further information can be obtained from the dedicated team of planning officers on 0800 917 2652.

Coal Authority

In line with many other statutory consultees, the Coal Authority no longer provides responses to pre-application enquiries without a charge. The Coal Authority therefore requests LPAs to direct applicants that are seeking pre-application advice regarding coal mining legacy issues because their site falls within the Development High Risk Area to them, so they may provide a quotation for providing advice.

Should only a small part of your site fall within the High Risk area, we would especially encourage you to engage with the Coal Authority, since they may advise in certain situations that a Coal Mining Risk Assessment is not required.

Further advice may be found at: <https://www.gov.uk/government/organisations/the-coal-authority>

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Appendix B Traffic Survey Data

[illegible]

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Pontardawe, Friday 29th April 2022



Junction: 1
Approach: Petrol Station

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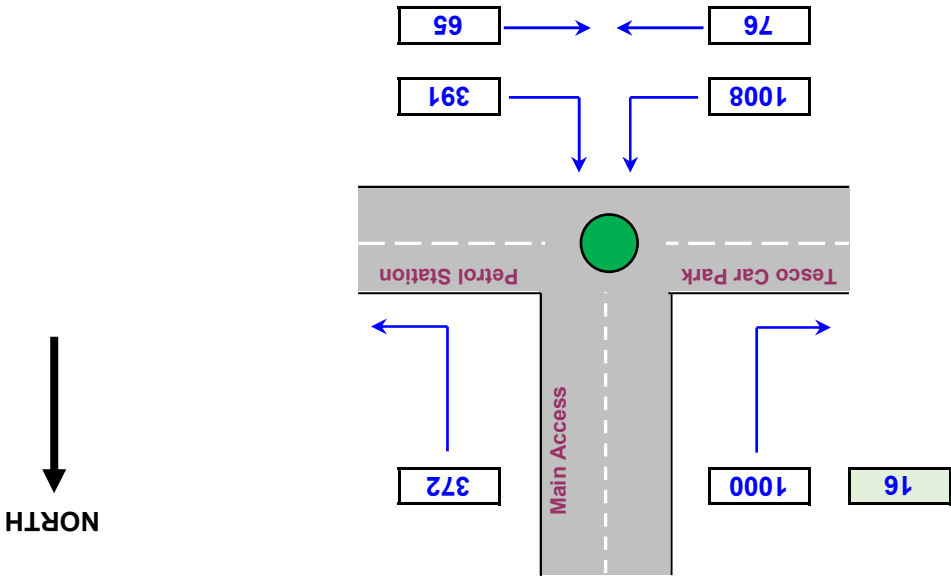
Superseded

Pontardawe, Friday 29th April 2022

Junction: 1
 Approach: Tesco Car Park

Left to Main Access										Ahead to Petrol Station						
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
15:00 - 15:15	0	0	47	9	0	0	0	56	0	0	9	0	0	0	0	9
15:15 - 15:30	0	0	58	5	0	0	0	63	0	0	1	0	0	0	0	1
15:30 - 15:45	0	0	38	3	0	0	0	41	0	0	2	2	0	0	0	4
15:45 - 16:00	0	1	54	4	0	0	0	59	0	0	5	0	0	0	0	5
Hourly Total	0	1	197	21	0	0	0	219	0	0	17	2	0	0	0	19
16:00 - 16:15	0	0	58	8	0	0	0	66	0	0	8	0	0	0	0	8
16:15 - 16:30	0	0	55	7	0	0	0	62	0	0	4	1	0	0	0	5
16:30 - 16:45	0	0	66	6	0	0	0	72	0	0	2	0	0	0	0	2
16:45 - 17:00	0	1	55	7	0	0	0	63	0	0	3	0	0	0	0	3
Hourly Total	0	1	234	28	0	0	0	263	0	0	17	1	0	0	0	18
17:00 - 17:15	0	0	50	7	0	0	0	57	0	0	3	1	0	0	0	4
17:15 - 17:30	0	0	54	1	0	0	0	55	0	0	5	1	0	0	0	6
17:30 - 17:45	0	0	70	10	0	0	0	80	0	0	4	0	0	0	0	4
17:45 - 18:00	0	0	57	10	0	0	0	67	0	1	7	1	0	0	0	9
Hourly Total	0	0	231	28	0	0	0	259	0	1	19	3	0	0	0	23
18:00 - 18:15	0	0	64	7	0	0	0	71	0	0	3	0	0	0	0	3
18:15 - 18:30	0	0	73	5	0	0	0	78	0	0	5	0	0	0	0	5
18:30 - 18:45	0	0	50	7	0	0	0	57	0	0	3	0	0	0	0	3
18:45 - 19:00	0	0	55	6	0	0	0	61	0	0	4	1	0	0	0	5
Hourly Total	0	0	242	25	0	0	0	267	0	0	15	1	0	0	0	16
TOTAL	0	2	904	102	0	0	0	1008	0	1	68	7	0	0	0	76

Superseded



Junction: 1

U-Turn

Vehicle Class: All Vehicles

Start Time: 1) 15:00

End Time: 1) 19:00

Show Peak Hour: ☐

Superseded

TIME		CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	Left to Petrol Station										Right to Tesco Car Park										U-Turn																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Junction: 1
Approach: Main Access

Superseded

Pontardawe, Saturday 30th April 2022

Junction: 1
 Approach: Petrol Station

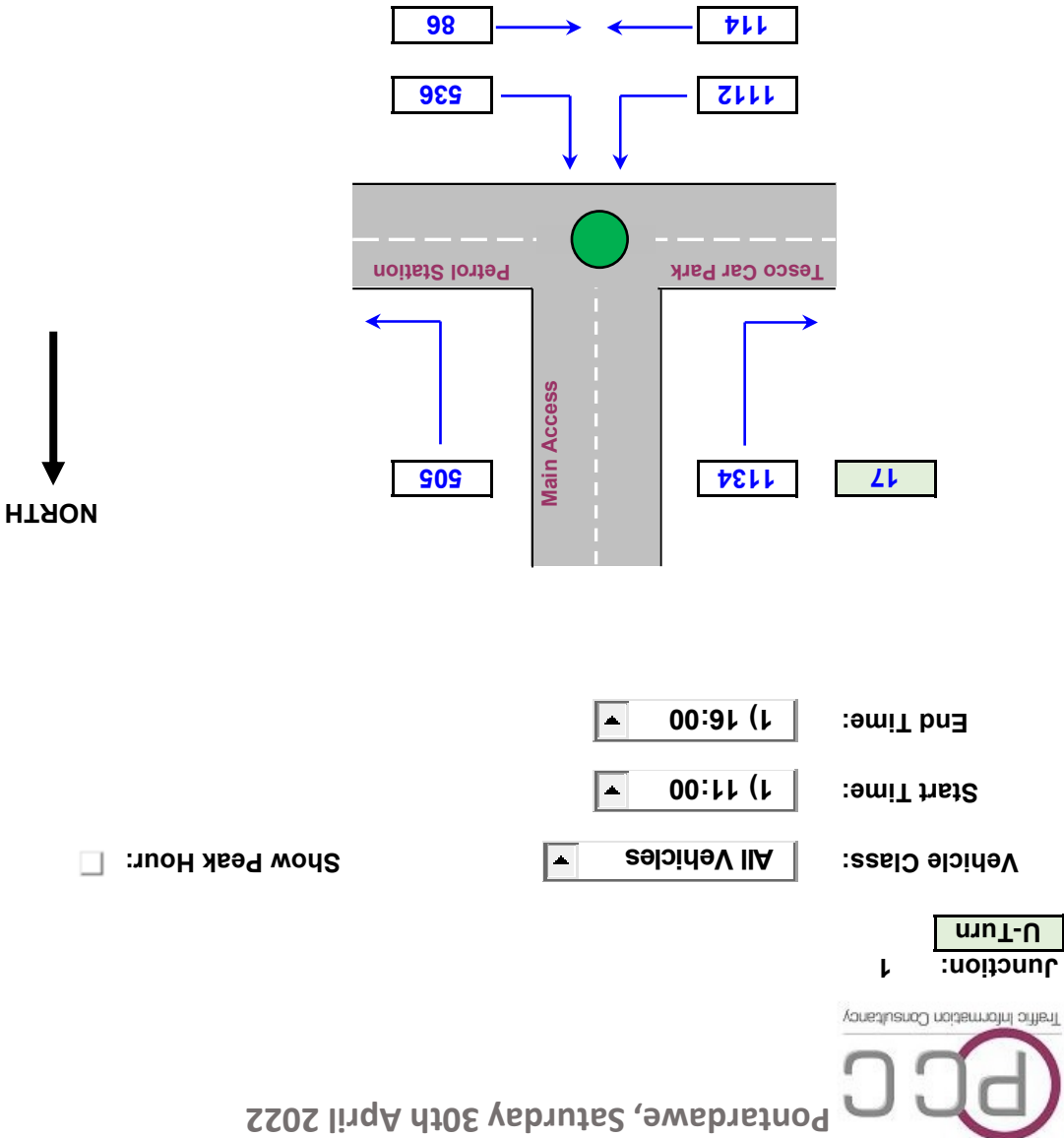
Ahead to Tesco Car Park												Right to Main Access				
TIME	CYCLE	M/CYCLE	CAR	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	OGV1	OGV2	BUS	TOTAL		
11:00 - 11:15	0	1	11	0	0	0	12	0	4	23	0	0	0	28		
11:15 - 11:30	0	0	3	0	0	0	3	0	4	16	2	0	0	22		
11:30 - 11:45	0	0	4	0	0	0	4	0	1	28	3	0	0	32		
11:45 - 12:00	0	0	2	0	0	0	2	0	3	23	2	0	0	28		
Hourly Total	0	1	20	0	0	0	21	0	12	90	8	0	0	110		
12:00 - 12:15	0	0	6	0	0	0	6	1	0	18	3	0	0	22		
12:15 - 12:30	0	0	4	1	0	0	5	0	1	26	2	0	0	29		
12:30 - 12:45	0	0	5	0	0	0	5	0	0	27	3	0	0	30		
12:45 - 13:00	0	0	2	1	0	0	3	0	2	21	1	0	0	24		
Hourly Total	0	0	17	2	0	0	19	1	3	92	9	0	0	105		
13:00 - 13:15	0	0	6	0	0	0	6	0	1	24	3	0	0	28		
13:15 - 13:30	0	0	6	0	0	0	6	0	0	28	5	0	0	33		
13:30 - 13:45	0	0	6	0	0	0	6	0	0	10	3	0	0	13		
13:45 - 14:00	0	0	3	1	0	0	4	0	0	24	3	0	0	27		
Hourly Total	0	0	21	1	0	0	22	0	1	86	14	0	0	101		
14:00 - 14:15	0	0	5	0	0	0	5	0	0	27	3	0	0	30		
14:15 - 14:30	0	0	1	0	0	0	1	0	0	26	0	0	0	26		
14:30 - 14:45	0	0	2	0	0	0	2	0	1	21	2	0	0	24		
14:45 - 15:00	0	0	1	0	0	0	1	0	0	20	2	0	0	22		
Hourly Total	0	0	9	0	0	0	9	0	1	94	7	0	0	102		
15:00 - 15:15	0	0	6	0	0	0	6	0	2	17	1	0	0	20		
15:15 - 15:30	0	2	1	0	0	0	3	0	0	33	3	0	0	36		
15:30 - 15:45	0	0	4	0	0	0	4	0	0	27	4	0	0	31		
15:45 - 16:00	0	0	2	0	0	0	2	0	1	28	2	0	0	31		
Hourly Total	0	2	13	0	0	0	15	0	3	105	10	0	0	118		
TOTAL	0	3	80	3	0	0	86	1	20	467	48	0	0	536		

Superseded

Left to Main Access																	Ahead to Petrol Station						
TIME		CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL						
11:00 - 11:15	0	0	0	57	2	0	0	0	59	0	0	7	0	0	0	0	7						
11:15 - 11:30	0	0	0	57	4	0	0	0	61	0	0	6	0	0	0	0	6						
11:30 - 11:45	0	5	0	56	1	0	0	0	62	0	0	7	1	0	0	0	8						
11:45 - 12:00	0	0	0	55	2	0	0	0	57	0	0	5	1	0	0	0	6						
Hourly Total	0	5	225	9	0	0	0	0	239	0	0	25	2	0	0	0	27						
12:00 - 12:15	0	0	55	4	0	0	0	0	59	0	0	2	0	0	0	0	2						
12:15 - 12:30	0	0	56	4	0	0	0	0	60	0	0	7	1	0	0	0	8						
12:30 - 12:45	0	1	48	5	0	0	0	0	54	0	0	2	0	0	0	0	2						
12:45 - 13:00	0	1	68	4	0	0	0	0	73	0	0	5	1	0	0	0	6						
Hourly Total	0	2	227	17	0	0	0	0	246	0	0	16	2	0	0	0	18						
13:00 - 13:15	0	0	67	8	0	0	0	0	75	0	0	8	0	0	0	0	8						
13:15 - 13:30	0	0	45	0	0	0	0	0	45	0	0	5	0	0	0	0	5						
13:30 - 13:45	0	0	50	5	0	0	0	0	55	0	0	2	0	0	0	0	2						
13:45 - 14:00	0	0	55	7	0	0	0	0	62	0	0	7	0	0	0	0	7						
Hourly Total	0	0	217	20	0	0	0	0	237	0	0	22	0	0	0	0	22						
14:00 - 14:15	0	0	59	4	0	0	0	0	63	0	0	5	0	0	0	0	5						
14:15 - 14:30	0	0	51	5	0	0	0	0	56	0	0	6	0	0	0	0	6						
14:30 - 14:45	0	0	35	0	0	0	0	0	35	0	0	6	1	0	0	0	7						
14:45 - 15:00	0	0	33	0	0	0	0	0	33	0	0	5	0	0	0	0	5						
Hourly Total	0	0	178	9	0	0	0	0	187	0	0	22	1	0	0	0	23						
15:00 - 15:15	0	0	53	2	0	0	0	0	55	0	0	2	0	0	0	0	2						
15:15 - 15:30	0	0	51	3	0	0	0	0	54	0	0	4	0	0	0	0	4						
15:30 - 15:45	0	0	36	4	0	0	0	0	42	0	0	8	2	0	0	0	10						
15:45 - 16:00	0	0	51	1	0	0	0	0	52	0	0	7	1	0	0	0	8						
Hourly Total	0	2	191	10	0	0	0	0	203	0	0	21	3	0	0	0	24						
TOTAL	0	9	1038	65	0	0	0	0	1112	0	0	106	8	0	0	0	114						

Junction: 1
Approach: Tesco Car Park

Superseded



PC C Pontardawe, Friday 29th April 2022
Traffic Information Consultancy

Junction: 2
Approach: A4067 North (Bridge)

Junction: 2
Approach: A4067 North (Bridge)

TOTAL		0	5	639	68	4	1	2	619	0	11	1259	191	6	6	5	1478	0	4	726	62	1	0	0	793	0	0	0	0	0	8	0	0	0	8														
Hourly Total		0	0	118	13	0	0	0	131	0	5	322	37	1	0	0	365	0	2	162	12	0	0	0	176	0	0	0	0	0	1	0	0	0	1														
18:00 - 19:00	18:45 - 19:00	0	0	31	4	0	0	0	35	2	1	85	9	1	0	0	96	0	0	42	4	0	0	0	46	0	0	0	0	0	0	0	0	0															
18:30 - 18:45	18:30 - 18:45	0	0	25	3	0	0	0	28	0	2	91	9	0	0	0	102	0	0	36	6	0	0	0	42	0	0	0	0	0	0	0	0	0															
18:15 - 18:30	18:00 - 18:15	0	0	27	4	0	0	0	31	1	1	86	8	0	0	0	95	0	2	41	1	0	0	0	44	0	0	0	0	0	0	0	0	0															
18:00 - 18:15	18:00 - 18:15	0	0	35	2	0	0	0	37	0	0	60	11	0	0	0	72	0	0	43	1	0	0	0	44	0	0	0	0	0	0	0	0	0															
Hourly Total	Hourly Total	0	0	146	13	0	0	0	159	2	2	306	37	1	0	2	348	0	1	206	14	1	0	0	222	0	0	0	0	0	1	0	0	0	1														
17:45 - 18:00	17:45 - 18:00	0	0	31	2	0	0	0	33	0	0	61	11	0	0	0	72	0	0	47	1	0	0	0	48	0	0	0	0	0	0	0	0	0															
17:30 - 17:45	17:30 - 17:45	0	0	35	5	0	0	0	40	0	0	76	10	1	0	0	87	0	0	55	4	0	0	0	59	0	0	0	0	0	0	0	0	0	1														
17:15 - 17:30	17:15 - 17:30	0	0	38	4	0	0	0	42	0	0	75	9	0	0	0	94	0	0	54	4	0	0	0	58	0	0	0	0	0	0	0	0	0	0														
17:00 - 17:15	17:00 - 17:15	0	0	42	2	0	0	0	44	0	2	84	7	0	2	2	95	0	1	50	5	1	0	0	57	0	0	0	0	0	0	0	0	0	0														
Hourly Total	Hourly Total	0	4	143	17	2	1	0	167	0	2	330	52	1	2	2	388	0	0	171	13	0	0	0	184	0	0	0	0	0	2	0	0	0	0														
16:45 - 17:00	16:45 - 17:00	0	2	39	5	1	1	0	48	0	0	60	6	0	0	0	74	0	0	50	2	0	0	0	52	0	0	0	0	0	0	0	0	0	0														
16:30 - 16:45	16:30 - 16:45	0	1	32	7	0	0	0	40	0	0	96	9	0	0	0	105	0	0	40	5	0	0	0	45	0	0	0	0	0	0	0	0	0	0														
16:15 - 16:30	16:15 - 16:30	0	1	34	3	0	0	0	38	1	1	79	15	2	2	0	97	0	0	46	4	0	0	0	50	0	0	0	0	0	0	0	0	0	2														
16:00 - 16:15	16:00 - 16:15	0	0	38	2	1	0	0	41	0	0	95	14	1	2	0	112	0	0	35	2	0	0	0	37	0	0	0	0	0	2	0	0	0	4														
Hourly Total	Hourly Total	0	1	132	25	2	1	0	162	0	3	301	66	3	4	1	377	0	0	187	23	0	0	0	211	0	0	0	0	0	4	0	0	0	4														
15:45 - 16:00	15:45 - 16:00	0	0	25	10	0	0	0	35	0	0	73	18	1	1	0	93	0	1	41	5	0	0	0	47	0	0	0	0	0	0	0	0	0	2														
15:30 - 15:45	15:30 - 15:45	0	0	26	3	2	1	0	32	1	0	88	18	0	1	0	105	0	0	52	6	0	0	0	58	0	0	0	0	0	0	0	0	0	0														
15:15 - 15:30	15:15 - 15:30	0	0	44	8	0	0	0	52	0	2	87	18	1	1	0	105	0	0	43	7	0	0	0	50	0	0	0	0	0	1	0	0	0	1														
15:00 - 15:15	15:00 - 15:15	0	1	37	4	0	0	0	42	0	0	57	11	2	2	0	72	0	0	51	5	0	0	0	56	0	0	0	0	0	1	0	0	0	1														
TIME		CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL	To A067 (E)										To A067 (S)										To Tesco Access										U-Turn										TOTAL	

PC C Pontardawe, Friday 29th April 2022
Traffic Information Consultancy

Junction: 2
Approach: A4067 East

TOTAL		0	31	1044	166	8	4	12	1265	0	5	127	21	0	0	0	0	153	0	0	9	438	54	1	0	2	504	0	0	0	2		
Hourly Total		0	4	214	20	0	1	2	241	0	1	29	7	0	0	0	0	37	0	0	2	86	10	0	0	0	98	0	0	0	0		
	18:45 - 19:00	0	1	45	2	0	0	0	48	0	0	10	1	0	0	0	0	11	0	0	1	17	1	0	0	0	18	0	0	0	0		
	18:30 - 18:45	0	1	57	4	0	0	0	62	0	0	6	3	0	0	0	0	9	0	0	2	26	2	0	0	0	23	0	0	0	0		
	18:15 - 18:30	0	2	54	6	0	0	2	64	0	1	8	0	0	0	0	0	9	0	0	2	26	4	0	0	0	32	0	0	0	0		
	18:00 - 18:15	0	0	58	8	0	1	0	67	0	0	5	3	0	0	0	0	8	0	0	0	22	3	0	0	0	25	0	0	0	0		
Hourly Total		0	16	286	50	0	6	6	358	0	1	36	3	0	0 <td>0</td> <td>0</td> <td>40</td> <td>0</td> <td>0</td> <td>3</td> <td>118</td> <td>11</td> <td>0</td> <td>0</td> <td>0</td> <td>132</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td>	0	0	40	0	0	3	118	11	0	0	0	132	0	0	0	1		
	17:45 - 18:00	0	1	52	16	0	0	1	70	0	0	11	0	0	0	0	0	11	0	0	1	32	6	0	0	0	39	0	0	0	0		
	17:30 - 17:45	0	0	72	10	0	2	0	97	0	1	6	1	0	0	0	0	8	0	0	3	30	3	0	0	0	34	0	0	0	1		
	17:15 - 17:30	0	0	75	9	0	0	0	85	0	0	10	0	0	0	0	0	10	0	0	1	23	1	0	0	0	24	0	0	0	0		
	17:00 - 17:15	0	2	87	15	0	2	0	106	0	2	9	2	0	0	0	0	11	0	0	1	33	1	0	0	0	35	0	0	0	0		
Hourly Total		0	9	274	46	2	1	3	335	0	0	38	7	0	0	0	45	0	0	1	104	18	1	0	0	125	0	0	0	0	0		
	16:45 - 17:00	0	3	90	17	0	1	1	112	0	2	10	2	0	0	0	0	12	0	0	5	27	5	0	0	0	32	0	0	0	0		
	16:30 - 16:45	0	0	62	7	0	0	0	70	0	0	11	1	0	0	0	0	12	0	0	4	28	4	1	0	0	33	0	0	0	0		
	16:15 - 16:30	0	2	71	10	0	0	0	83	0	0	10	1	0	0	0	0	11	0	0	0	26	4	0	0	0	31	0	0	0	0		
	16:00 - 16:15	0	3	51	12	1	2	2	70	0	0	3	3	0	0	0	0	10	0	0	5	23	3	0	0	0	29	0	0	0	0		
Hourly Total		0	2	270	50	6	1	1	331	0	3	24	4	0 <td>0</td> <td>0</td> <td>31</td> <td>0</td> <td>0</td> <td>1</td> <td>130</td> <td>15</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>149</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td>	0	0	31	0	0	1	130	15	0	0	0	0	149	0	0	0	1		
	15:45 - 16:00	0	0	72	15	0	0	0	87	0	0	7	3	0	0	0	10	0	0	1	35	2	0	0	0	38	0	0	0	0	0		
	15:30 - 15:45	0	0	87	12	0	0	0	102	0	1	8	1	0	0	0	10	0	0	0	32	6	0	0	0	39	0	0	0	0	0		
	15:15 - 15:30	0	1	61	14	2	2	2	81	0	2	3	0	0	0	0	8	0	0	1	32	2	2	0	0	35	0	0	0	0	0		
15:00 - 15:15		0	1	50	9	9	1	0	61	0	0	6	0	0 <td>0</td> <td>0</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>5</td> <td>31</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>37</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td>	0	0	3	0	0	0	5	31	3	0	0	0	37	0	0	0	1		
TIME		CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL		
		To A4067 (S)										To Tesco Access										To A4067 (N) Bridge										TOTAL	
		U-Turn										U-Turn										TOTAL											

PC C Pontardawe, Friday 29th April 2022
Traffic Information Consultancy

Junction: 2
Approach: A4067 South

Junction: 2
Approach: A4067 South

[illegible]

PC C Pontardawe, Friday 29th April 2022
Traffic Information Consultancy

Junction: 2
Approach: Tesco Access

[illegible]

Pontardawe, Friday 29th April 2022

Vehicle Class:

All Vehicles

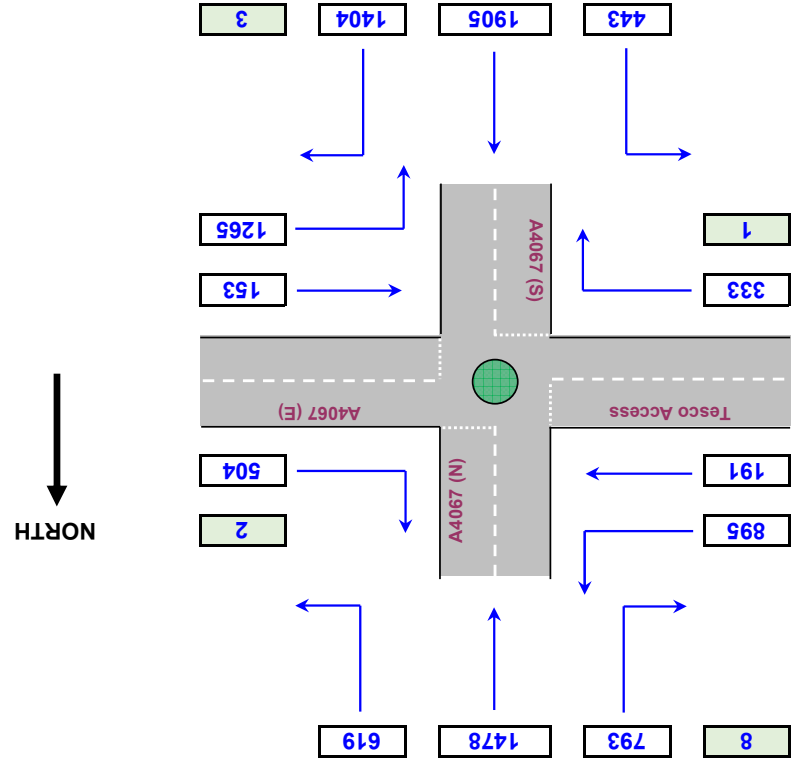
Start Time:

(1) 15:00

End Time:

(1) 19:00

☐ Show Peak Hour:



Superseded

[illegible]

Superseded

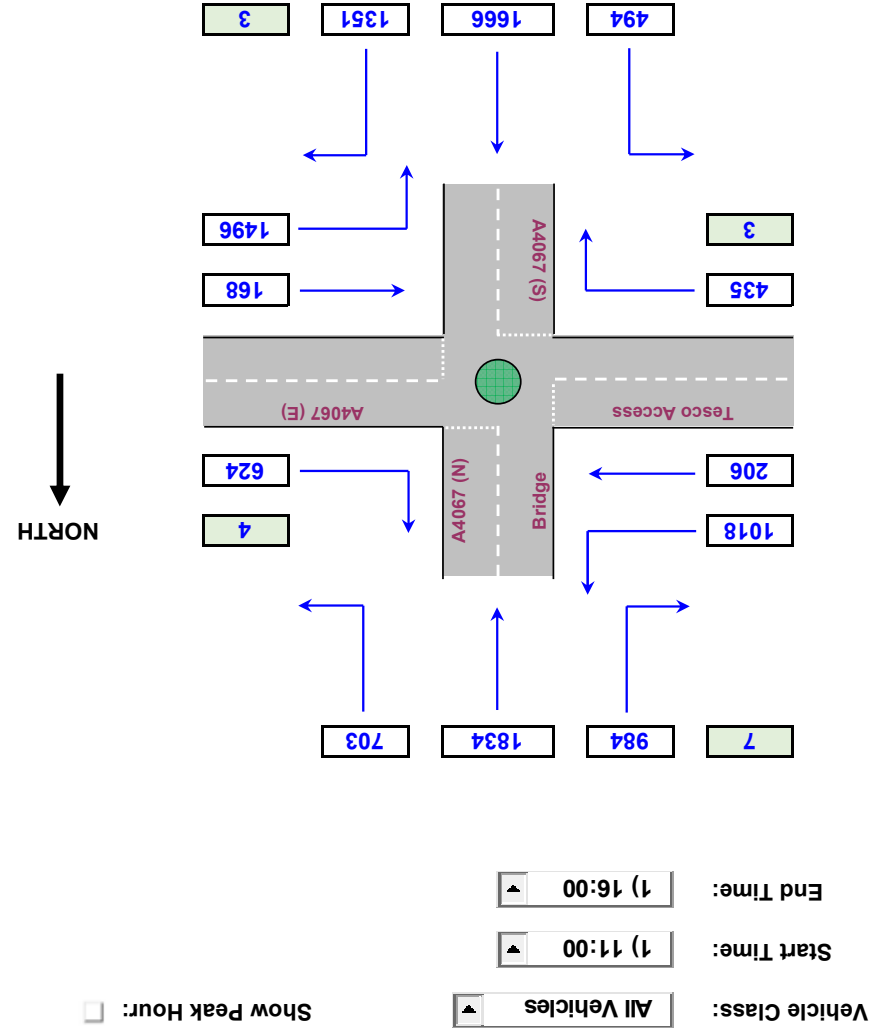
TIME		CYCLE		M/CYCLE		CAR		LGV		OV1		OV2		OV3		OV4		OV5		OV6		OV7		OV8		OV9		OV10		OV11		OV12		OV13		OV14		OV15		OV16		OV17		OV18		OV19		OV20		OV21		OV22		OV23		OV24		OV25		OV26		OV27		OV28		OV29		OV30		OV31		OV32		OV33		OV34		OV35		OV36		OV37		OV38		OV39		OV40		OV41		OV42		OV43		OV44		OV45		OV46		OV47		OV48		OV49		OV50		OV51		OV52		OV53		OV54		OV55		OV56		OV57		OV58		OV59		OV60		OV61		OV62		OV63		OV64		OV65		OV66		OV67		OV68		OV69		OV70		OV71		OV72		OV73		OV74		OV75		OV76		OV77		OV78		OV79		OV80		OV81		OV82		OV83		OV84		OV85		OV86		OV87		OV88		OV89		OV90		OV91		OV92		OV93		OV94		OV95		OV96		OV97		OV98		OV99		OV100		OV101		OV102		OV103		OV104		OV105		OV106		OV107		OV108		OV109		OV110		OV111		OV112		OV113		OV114		OV115		OV116		OV117		OV118		OV119		OV120		OV121		OV122		OV123		OV124		OV125		OV126		OV127		OV128		OV129		OV130		OV131		OV132		OV133		OV134		OV135		OV136		OV137		OV138		OV139		OV140		OV141		OV142		OV143		OV144		OV145		OV146		OV147		OV148		OV149		OV150		OV151		OV152		OV153		OV154		OV155		OV156		OV157		OV158		OV159		OV160		OV161		OV162		OV163		OV164		OV165		OV166		OV167		OV168		OV169		OV170		OV171		OV172		OV173		OV174		OV175		OV176		OV177		OV178		OV179		OV180		OV181		OV182		OV183		OV184		OV185		OV186		OV187		OV188		OV189		OV190		OV191		OV192		OV193		OV194		OV195		OV196		OV197		OV198		OV199		OV200		OV201		OV202		OV203		OV204		OV205		OV206		OV207		OV208		OV209		OV210		OV211		OV212		OV213		OV214		OV215		OV216		OV217		OV218		OV219		OV220		OV221		OV222		OV223		OV224		OV225		OV226		OV227		OV228		OV229		OV230		OV231		OV232		OV233		OV234		OV235		OV236		OV237		OV238		OV239		OV240		OV241		OV242		OV243		OV244		OV245		OV246		OV247		OV248		OV249		OV250		OV251		OV252		OV253		OV254		OV255		OV256		OV257		OV258		OV259		OV260		OV261		OV262		OV263		OV264		OV265		OV266		OV267		OV268		OV269		OV270		OV271		OV272		OV273		OV274		OV275		OV276		OV277		OV278		OV279		OV280		OV281		OV282		OV283		OV284		OV285		OV286		OV287		OV288		OV289		OV290		OV291		OV292		OV293		OV294		OV295		OV296		OV297		OV298		OV299		OV300		OV301		OV302		OV303		OV304		OV305		OV306		OV307		OV308		OV309		OV310		OV311		OV312		OV313		OV314		OV315		OV316		OV317		OV318		OV319		OV320		OV321		OV322		OV323		OV324		OV325		OV326		OV327		OV328		OV329		OV330		OV331		OV332		OV333		OV334		OV335		OV336		OV337		OV338		OV339		OV340		OV341		OV342		OV343		OV344		OV345		OV346		OV347		OV348		OV349		OV350		OV351		OV352		OV353		OV354		OV355		OV356		OV357		OV358		OV359		OV360		OV361		OV362		OV363		OV364		OV365		OV366		OV367		OV368		OV369		OV370		OV371		OV372		OV373		OV374		OV375		OV376		OV377		OV378		OV379		OV380		OV381		OV382		OV383		OV384		OV385		OV386		OV387		OV388		OV389		OV390		OV391		OV392		OV393		OV394		OV395		OV396		OV397		OV398		OV399		OV400		OV401		OV402		OV403		OV404		OV405		OV406		OV407		OV408		OV409		OV410		OV411		OV412		OV413		OV414		OV415		OV416		OV417		OV418		OV419		OV420		OV421		OV422		OV423		OV424		OV425		OV426		OV427		OV428		OV429		OV430		OV431		OV432		OV433		OV434		OV435		OV436		OV437		OV438		OV439		OV440		OV441		OV442		OV443		OV444		OV445		OV446		OV447		OV448		OV449		OV450		OV451		OV452		OV453		OV454		OV455		OV456		OV457		OV458		OV459		OV460		OV461		OV462		OV463		OV464		OV465		OV466		OV467		OV468		OV469		OV470		OV471		OV472		OV473		OV474		OV475		OV476		OV477		OV478		OV479		OV480		OV481		OV482		OV483		OV484		OV485		OV486		OV487		OV488		OV489		OV490		OV491		OV492		OV493		OV494		OV495		OV496		OV497		OV498		OV499		OV500		OV501		OV502		OV503		OV504		OV505		OV506		OV507		OV508		OV509		OV510		OV511		OV512		OV513		OV514		OV515		OV516		OV517		OV518		OV519		OV520		OV521		OV522		OV523		OV524		OV525		OV526		OV527		OV528		OV529		OV530		OV531		OV532		OV533		OV534		OV535		OV536		OV537		OV538		OV539		OV540		OV541		OV542		OV543		OV544		OV545		OV546		OV547		OV548		OV549		OV550		OV551		OV552		OV553		OV554		OV555		OV556		OV557		OV558		OV559		OV560		OV561		OV562		OV563		OV564		OV565		OV566		OV567		OV568		OV569		OV570		OV571		OV572		OV573		OV574		OV575		OV576		OV577		OV578		OV579		OV580		OV581		OV582		OV583		OV584		OV585		OV586		OV587		OV588		OV589		OV590		OV591		OV592		OV593		OV594		OV595		OV596		OV597		OV598		OV599		OV600		OV601		OV602		OV603		OV604		OV605		OV606		OV607		OV608		OV609		OV610		OV611		OV612		OV613		OV614		OV615		OV616		OV617		OV618		OV619		OV620		OV621		OV622		OV623		OV624		OV625		OV626		OV627		OV628		OV629		OV630		OV631		OV632		OV633		OV634		OV635		OV636		OV637		OV638		OV639		OV640		OV641		OV642		OV643		OV644		OV645		OV646		OV647		OV648		OV649		OV650		OV651		OV652		OV653		OV654		OV655		OV656		OV657		OV658		OV659		OV660		OV661		OV662		OV663		OV664		OV665		OV666		OV667		OV668		OV669		OV670		OV671		OV672		OV673		OV674		OV675		OV676		OV677		OV678		OV679		OV680		OV681		OV682		OV683		OV684		OV685		OV686		OV687		OV688		OV689		OV690		OV691		OV692		OV693		OV694		OV695		OV696		OV697		OV698		OV699		OV700		OV701		OV702		OV703		OV704		OV705		OV706		OV707		OV708		OV709		OV710		OV711		OV712		OV713		OV714		OV715		OV716		OV717		OV718		OV719		OV720		OV721		OV722		OV723		OV724		OV725		O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Junction: 2
Approach: A4067 East

Superseded

[illegible]

Junction: 2
Approach: A4067 South



Superseded

[illegible]

PC C Pontardawe, Friday 29th April 2022
Traffic Information Consultancy

TIME		A0607		A0608		A0609		A0610		A0611		A0612		A0613		A0614		A0615		A0616		A0617		A0618		A0619		A0620		A0621		A0622		A0623		A0624		A0625		A0626		A0627		A0628		A0629		A0630		A0631		A0632		A0633		A0634		A0635		A0636		A0637		A0638		A0639		A0640		A0641		A0642		A0643		A0644		A0645		A0646		A0647		A0648		A0649		A0650		A0651		A0652		A0653		A0654		A0655		A0656		A0657		A0658		A0659		A0660		A0661		A0662		A0663		A0664		A0665		A0666		A0667		A0668		A0669		A0670		A0671		A0672		A0673		A0674		A0675		A0676		A0677		A0678		A0679		A0680		A0681		A0682		A0683		A0684		A0685		A0686		A0687		A0688		A0689		A0690		A0691		A0692		A0693		A0694		A0695		A0696		A0697		A0698		A0699		A0700		A0701		A0702		A0703		A0704		A0705		A0706		A0707		A0708		A0709		A0710		A0711		A0712		A0713		A0714		A0715		A0716		A0717		A0718		A0719		A0720		A0721		A0722		A0723		A0724		A0725		A0726		A0727		A0728		A0729		A0730		A0731		A0732		A0733		A0734		A0735		A0736		A0737		A0738		A0739		A0740		A0741		A0742		A0743		A0744		A0745		A0746		A0747		A0748		A0749		A0750		A0751		A0752		A0753		A0754		A0755		A0756		A0757		A0758		A0759		A0760		A0761		A0762		A0763		A0764		A0765		A0766		A0767		A0768		A0769		A0770		A0771		A0772		A0773		A0774		A0775		A0776		A0777		A0778		A0779		A0780		A0781		A0782		A0783		A0784		A0785		A0786		A0787		A0788		A0789		A0790		A0791		A0792		A0793		A0794		A0795		A0796		A0797		A0798		A0799		A0800		A0801		A0802		A0803		A0804		A0805		A0806		A0807		A0808		A0809		A0810		A0811		A0812		A0813		A0814		A0815		A0816		A0817		A0818		A0819		A0820		A0821		A0822		A0823		A0824		A0825		A0826		A0827		A0828		A0829		A0830		A0831		A0832		A0833		A0834		A0835		A0836		A0837		A0838		A0839		A0840		A0841		A0842		A0843		A0844		A0845		A0846		A0847		A0848		A0849		A0850		A0851		A0852		A0853		A0854		A0855		A0856		A0857		A0858		A0859		A0860		A0861		A0862		A0863		A0864		A0865		A0866		A0867		A0868		A0869		A0870		A0871		A0872		A0873		A0874		A0875		A0876		A0877		A0878		A0879		A0880		A0881		A0882		A0883		A0884		A0885		A0886		A0887		A0888		A0889		A0890		A0891		A0892		A0893		A0894		A0895		A0896		A0897		A0898		A0899		A0900		A0901		A0902		A0903		A0904		A0905		A0906		A0907		A0908		A0909		A0910		A0911		A0912		A0913		A0914		A0915		A0916		A0917		A0918		A0919		A0920		A0921		A0922		A0923		A0924		A0925		A0926		A0927		A0928		A0929		A0930		A0931		A0932		A0933		A0934		A0935		A0936		A0937		A0938		A0939		A0940		A0941		A0942		A0943		A0944		A0945		A0946		A0947		A0948		A0949		A0950		A0951		A0952		A0953		A0954		A0955		A0956		A0957		A0958		A0959		A0960		A0961		A0962		A0963		A0964		A0965		A0966		A0967		A0968		A0969		A0970		A0971		A0972		A0973		A0974		A0975		A0976		A0977		A0978		A0979		A0980		A0981		A0982		A0983		A0984		A0985		A0986		A0987		A0988		A0989		A0990		A0991		A0992		A0993		A0994		A0995		A0996		A0997		A0998		A0999		A1000	
CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR	LOV	DOVY	DOVZ	CYCLE	M/CYCLE	CAR</																																																																																																																																																																																																																																																																																																																																											

TOTAL																				
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Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
18:00 - 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15:15 - 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
TIME	CYCLE	M/CYCLE	CAR	LGV	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL					
To Tynsderw Road																				
To A74(N)																				
CYCLE	M/CYCLE	CAR	LGV	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV2	BUS	TOTAL
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PC C Pontardawe, Friday 29th April 2022
Traffic Information Consultancy

Junction: 3
Approach: Vnyssderw Road

Junction: 3
Approach: Ynydderw Road

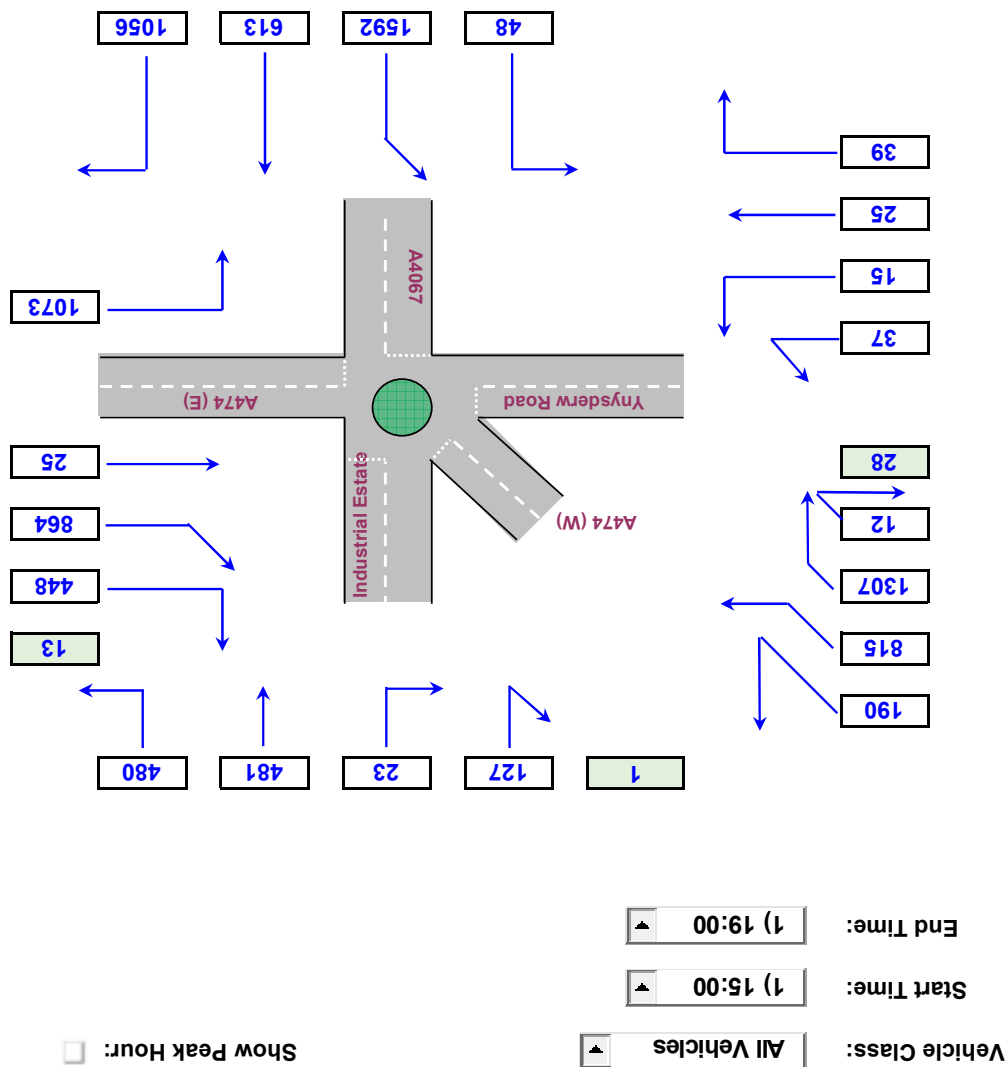
TIME		To A474 (M)					To Industrial Estate					To A474 (E)					To A4067					TOTAL												
		CYCLE	M/CYCLE	CAR	LGV	BUS	OGV2	OGV1	OGV2	CYCLE	M/CYCLE	CAR	LGV	BUS	OGV2	OGV1	OGV2	CYCLE	M/CYCLE	CAR	LGV	BUS	OGV2	OGV1	OGV2	CYCLE	M/CYCLE	CAR	LGV	BUS	OGV2	OGV1	OGV2	TOTAL
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00 - 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Junction: 3
Approach: A474 West

TIME	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL	CYCLE	M/CYCLE	CAR	LGV	OGV1	OGV2	BUS	TOTAL
15:00 - 15:15	0	1	11	4	0	0	16	47	0	0	0	0	0	0	0	47
15:15 - 15:30	0	0	10	4	1	0	15	25	0	0	0	0	0	0	0	25
15:30 - 15:45	0	0	15	0	0	0	15	30	0	0	0	0	0	0	0	30
15:45 - 16:00	0	0	12	2	0	0	14	28	0	0	0	0	0	0	0	28
16:00 - 16:15	0	0	12	0	0	0	12	24	0	0	0	0	0	0	0	24
16:15 - 16:30	0	0	16	1	0	0	17	33	0	0	0	0	0	0	0	33
16:30 - 16:45	0	0	11	0	0	0	11	22	0	0	0	0	0	0	0	22
16:45 - 17:00	0	0	12	0	0	0	12	24	0	0	0	0	0	0	0	24
Hourly Total	0	1	48	10	1	0	60	119	0	0	0	0	0	0	0	119
17:00 - 17:15	0	0	10	1	0	0	11	21	0	0	0	0	0	0	0	21
17:15 - 17:30	0	0	13	1	0	0	14	28	0	0	0	0	0	0	0	28
17:30 - 17:45	0	0	7	1	0	0	8	16	0	0	0	0	0	0	0	16
17:45 - 18:00	0	0	6	0	0	0	6	12	0	0	0	0	0	0	0	12
Hourly Total	0	0	36	3	0	0	39	78	0	0	0	0	0	0	0	78
18:00 - 18:15	0	0	8	0	0	0	8	16	0	0	0	0	0	0	0	16
18:15 - 18:30	0	0	7	0	0	0	7	14	0	0	0	0	0	0	0	14
18:30 - 18:45	0	0	15	0	0	0	15	30	0	0	0	0	0	0	0	30
18:45 - 19:00	0	0	7	0	0	0	7	14	0	0	0	0	0	0	0	14
Hourly Total	0	0	37	0	0	0	37	74	0	0	0	0	0	0	0	74
TOTAL	0	1	174	14	1	0	190	385	0	0	0	0	0	0	0	385

Superseded

Superseded



Superseded

TIME	To A4067				To Tyndew Road				To A474 (W)				To Industrial Estate				U-Turn			
	CAR	BUS	TOTAL		CAR	BUS	TOTAL		CAR	BUS	TOTAL		CAR	BUS	TOTAL		CAR	BUS	TOTAL	
11:00 - 11:15	0	0	0	76	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
11:15 - 11:30	0	0	0	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 - 11:45	0	0	0	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:45 - 12:00	0	0	0	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 - 12:15	0	0	0	52	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
12:15 - 12:30	0	1	54	4	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:30 - 12:45	0	1	57	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1
12:45 - 13:00	0	0	46	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	3	233	18	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	3
13:00 - 13:15	0	0	53	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
13:15 - 13:30	0	1	43	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:30 - 13:45	0	0	55	6	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
13:45 - 14:00	0	5	51	8	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	6	202	20	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	4
14:00 - 14:15	0	2	53	5	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
14:15 - 14:30	0	1	33	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:30 - 14:45	0	0	56	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14:45 - 15:00	0	2	50	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	5	192	16	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1
15:00 - 15:15	0	1	57	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	49	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15:30 - 15:45	0	0	52	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45 - 16:00	0	0	58	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	4	216	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
TOTAL	0	20	1048	92	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	16

Junction: 3
Approach: A474 East

Superseded

[illegible]

PC C Pontardawe, Saturday 30th April 2022
Traffic Information Consultancy

Approach: Vynsderw Road

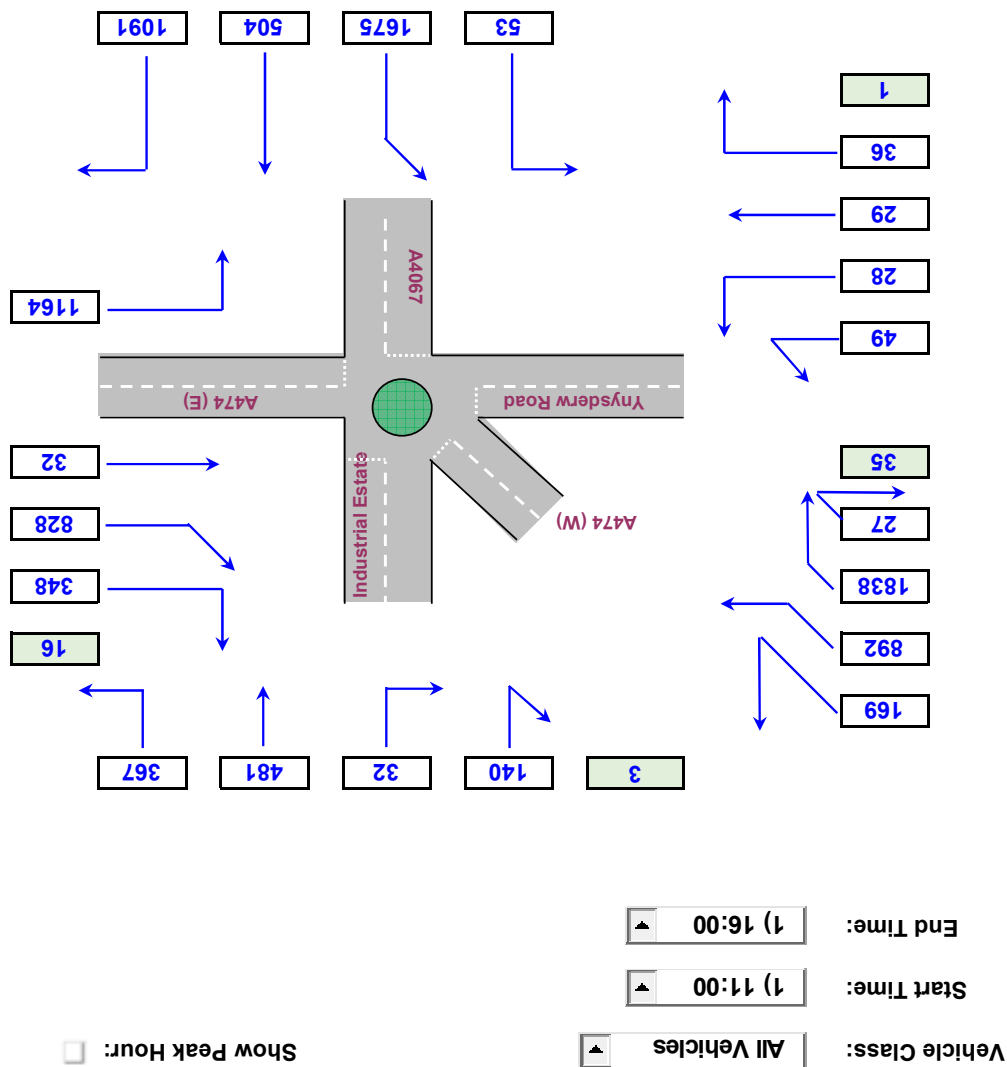
[illegible]

Superseded

TIME	To Industrial Estate				To A474 (E)				To A4067				To Tynsdalew Road				U-Turn			
CYCLE	M/CYCLE	CAR	LGV	BUS	CYCLE	M/CYCLE	CAR	LGV	BUS	CYCLE	M/CYCLE	CAR	LGV	BUS	CYCLE	M/CYCLE	CAR	LGV	BUS	TOTAL
11:00 - 11:15	0	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
11:15 - 11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11:30 - 11:45	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
11:45 - 12:00	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
12:00 - 12:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
12:15 - 12:30	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
12:30 - 12:45	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
12:45 - 13:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hourly Total	0	0	0	0	44	6	8	36	1	0	0	0	0	0	0	0	0	0	0	10
13:00 - 13:15	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
13:15 - 13:30	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
13:30 - 13:45	0	0	0	0	47	1	1	4	0	0	0	0	0	0	0	0	0	0	0	3
13:45 - 14:00	1	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
14:00 - 14:15	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
14:15 - 14:30	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
14:30 - 14:45	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
14:45 - 15:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Hourly Total	1	0	0	0	44	3	0	0	0	0	0	0	0	0	0	0	0	0	0	23
15:00 - 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:15 - 15:30	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
15:30 - 15:45	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
15:45 - 16:00	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Hourly Total	0	0	0	0	16	2	0	0	0	0	0	0	0	0	0	0	0	0	0	20
TOTAL	2	1	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35

Junction: 3
Approach: A474 West

Superseded



Superseded



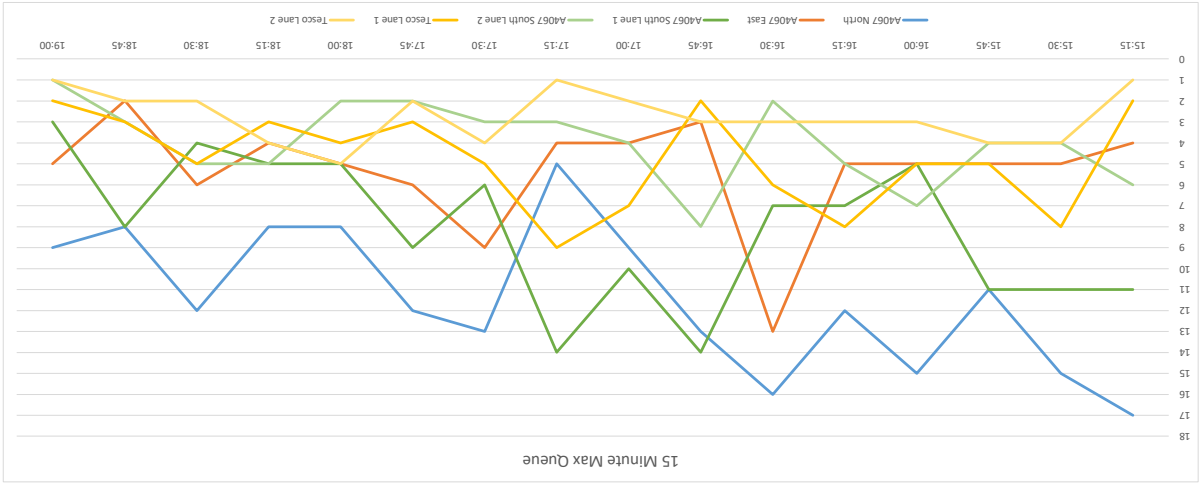
Time	Main Access	Petrol Station	Tesco Car Park
15:15	2	1	1
15:30	1	1	3
15:45	2	1	1
16:00	0	0	1
16:15	1	1	4
16:30	2	1	1
16:45	0	4	0
17:00	1	0	1
17:15	2	4	3
17:30	2	3	1
17:45	1	1	0
18:00	1	0	1
18:15	2	1	2
18:30	0	0	2
18:45	1	0	2
19:00	2	0	0

Superseded



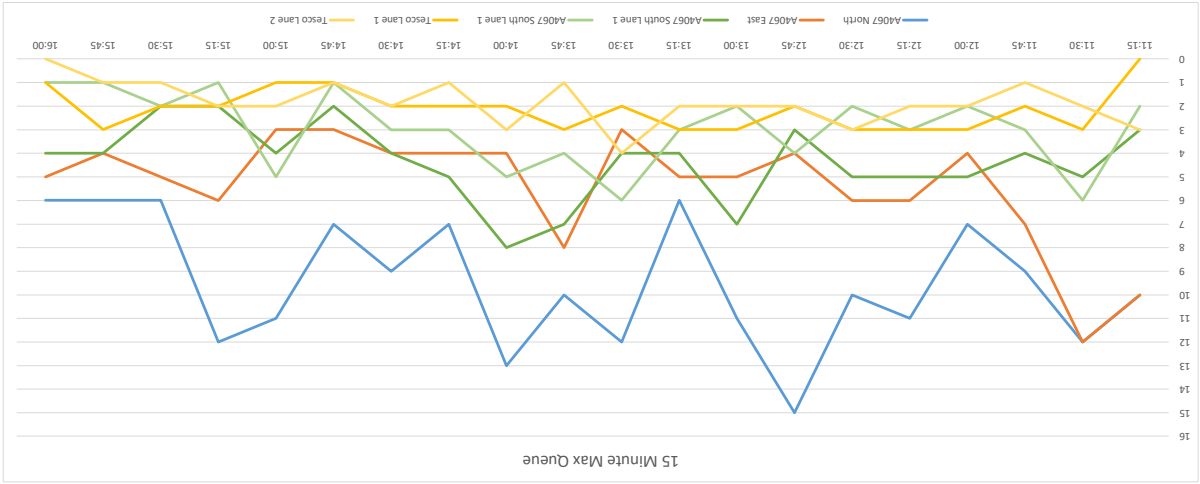
Time	Main Access	Petrol Station	Tesco Car Park
11:15	2	2	1
11:30	0	1	0
11:45	1	0	1
12:00	2	1	2
12:15	1	1	1
12:30	1	1	1
12:45	3	0	2
13:00	0	1	3
13:15	0	0	1
13:30	0	0	2
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14:15	0	0	0
14:30	0	2	0
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Superseded



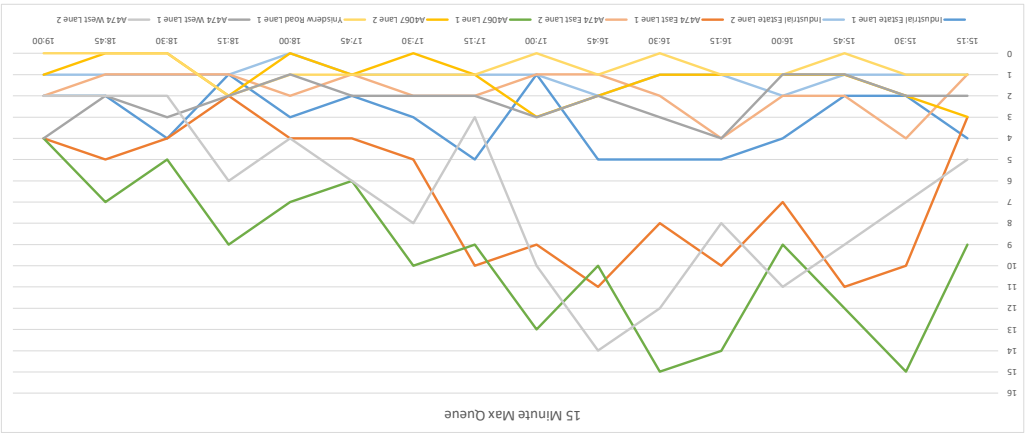
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18:15	8	4	5	5	3	4
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Superseded



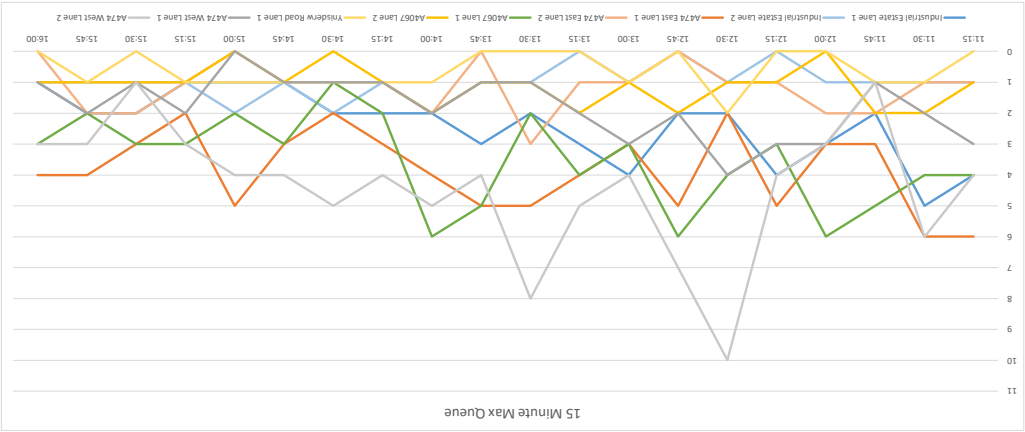
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11:45	9	7	4	3	2	1
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15:00	11	3	4	5	2	2
15:15	12	6	2	1	2	2
15:30	6	5	4	5	2	1
15:45	6	5	2	3	1	1
16:00	6	4	4	1	3	0

Superseded



Industrial Estate Lane 1	Industrial Estate Lane 2	Industrial Estate Lane 3	Industrial Estate Lane 4	Industrial Estate Lane 5	Industrial Estate Lane 6	Industrial Estate Lane 7	Industrial Estate Lane 8	Industrial Estate Lane 9	Industrial Estate Lane 10
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
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97	97	97	97	97	97	97	97	97	97
98	98	98	98	98	98	98	98	98	98
99	99	99	99	99	99	99	99	99	99
100	100	100	100	100	100	100	100	100	100

Superseded



Industrial Estate Lane 1	Industrial Estate Lane 2	A474 East Lane 1	A474 East Lane 2	A4067 Lane 1	A4067 Lane 2	Ynisderv Road Lane 1	A474 West Lane 1	A474 West Lane 2	Time
1	1	1	1	1	1	1	1	1	11:15
1	1	1	1	1	1	1	1	1	11:30
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1	1	1	1	1	1	1	1	1	12:15
1	1	1	1	1	1	1	1	1	12:30
1	1	1	1	1	1	1	1	1	12:45
1	1	1	1	1	1	1	1	1	13:00
1	1	1	1	1	1	1	1	1	13:15
1	1	1	1	1	1	1	1	1	13:30
1	1	1	1	1	1	1	1	1	13:45
1	1	1	1	1	1	1	1	1	14:00
1	1	1	1	1	1	1	1	1	14:15
1	1	1	1	1	1	1	1	1	14:30
1	1	1	1	1	1	1	1	1	14:45
1	1	1	1	1	1	1	1	1	15:00
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1	1	1	1	1	1	1	1	1	15:30
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Superseded

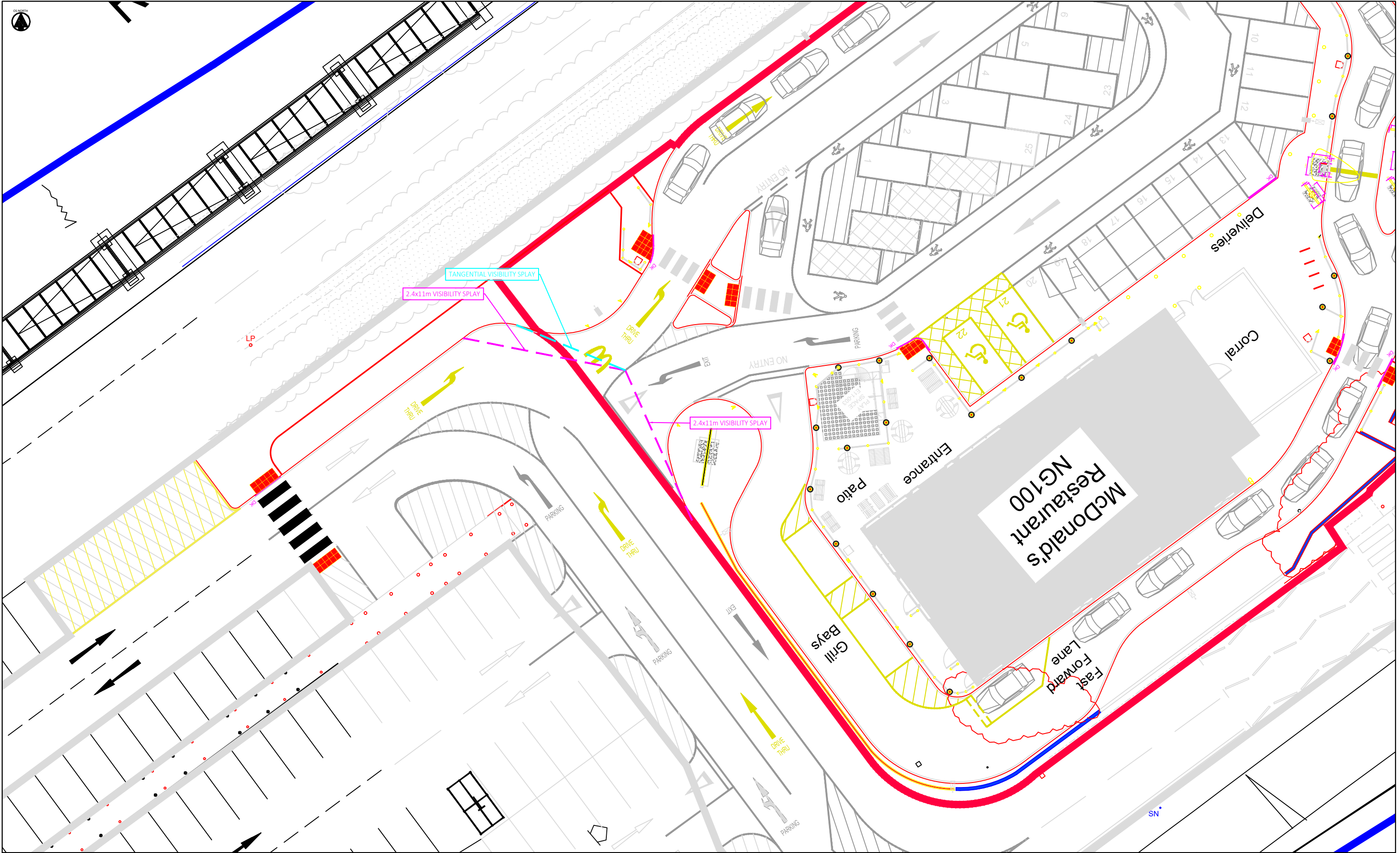
Appendix C Site Layout



Superseded

Appendix D Site Access Arrangement

Superseded

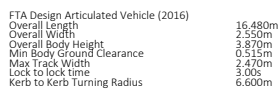


VEHICLE MODELS USED IN SWEEP PATH ANALYSIS	NOTES	NOTES (CONTINUED)	REVISIONS (CONTINUED)	REVISIONS	Hydrock MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4RW t: (0117) 9459 225 e: bristol@hydrock.com	VISIBILITY SPLAYS AT SITE ACCESS					
						CLIENT MCDONALDS RESTAURANTS					
						HYDROCK PROJECT NO. 15297		SCALE @ A3 1:250			
						PROJECT MCDONALDS PONTARDAWE		STATUS DESCRIPTION INFORMATION	STATUS S2		
						DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 15297-HYD-XX-XX-DR-TP-0001		REVISION P01			
PO1		FIRST ISSUE		PO1		ISSUED BY R.OSBORNE	12/07/22	DESIGNED BY A.CHAPLETON	12/07/22	REVISED BY R.MCHUGH	12/07/22

Superseded

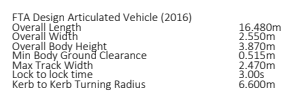
Appendix E Swept Path Analysis

This detailed site plan for McDonald's Restaurant NG100 illustrates the proposed layout and existing site conditions. The central feature is the restaurant building, labeled 'McDonald's Restaurant NG100', which includes an 'Entrance', 'Patio', 'Grill Bays', and a 'Food Forward Lane'. Surrounding the building are various parking areas, including a large 'PFS PARKING' lot to the north and a 'Corral' area to the east. The plan also shows a 'Delivery' area and a 'Pedestrian Access' point. Key infrastructure elements include a 'Railway' running along the western boundary, an 'Existing Footbridge' crossing a waterway to the east, and a 'Waterway' flowing through the site. The plan is color-coded to distinguish between existing features (black lines), proposed new construction (red lines), and other site elements (green and yellow lines). A north arrow is located in the top right corner, and the plan is identified by the number 'A4067' in the bottom right corner.



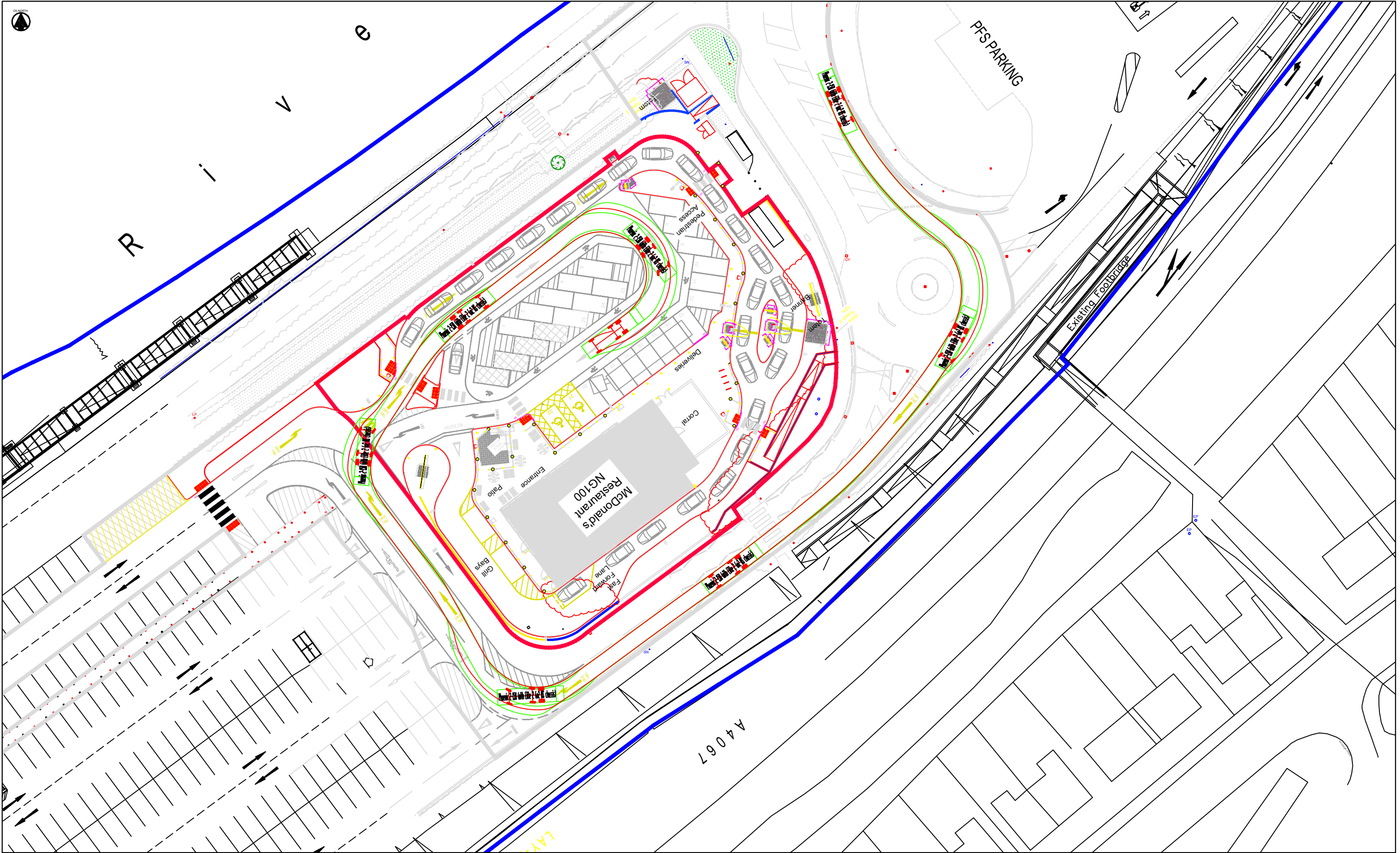
REVISIONS										Hydrock MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4BW t: [0117] 9459 225 e: bristol@hydrock.com										SWEEP PATH ANALYSIS OF FTA DESIGN ARTICULATED HGV - ENTRY MANOEUVRE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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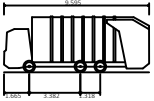
This is a detailed site plan for McDonald's Restaurant NC100. The plan shows the restaurant building with various internal zones labeled: 'Entrance', 'Patio', 'Grill Bays', 'Food Prep Lane', 'Central', 'Deliveries', 'Pedestrian Access', and 'Storage'. The building is surrounded by a parking lot with numerous parking spaces and vehicle icons. A large 'PFS PARKING' area is located to the right. The plan also shows a 'Railroad' track running along the top and right edges, with an 'Existing Footbridge' crossing over it. A 'Road' is shown at the bottom. The plan includes various colored lines (red, green, yellow, blue) indicating different types of boundaries or proposed changes. A north arrow is located in the top right corner. The text 'McDonald's Restaurant NC100' is prominently displayed in the center of the building footprint.



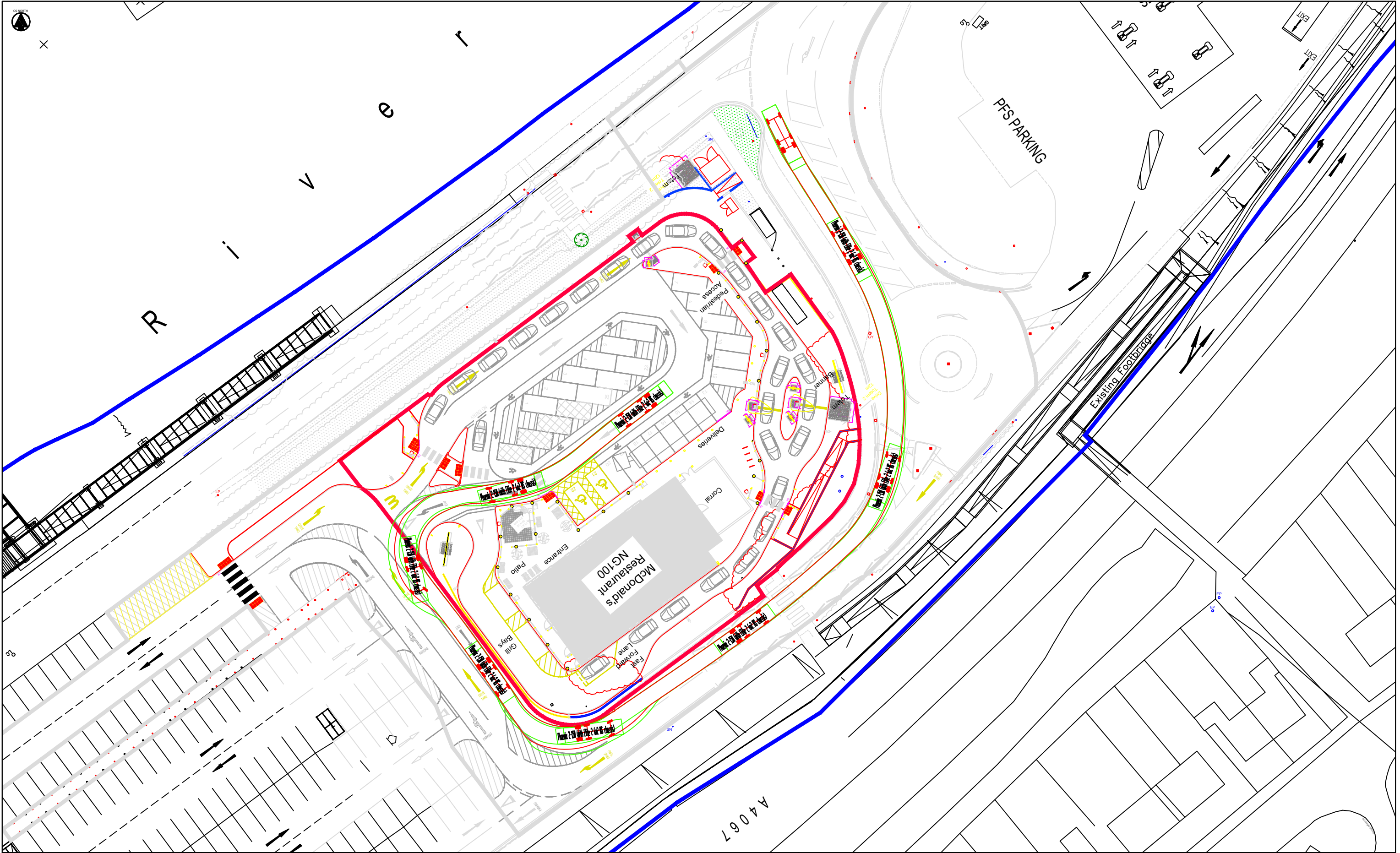
REVISIONS						 MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4BW t: 01177 9459 225 e: bristol@hydrock.com		SWEEP PATH ANALYSIS OF FTA DESIGN ARTICULATED HGV - EXIT MANOEUVRE			
CLIENT											
MCDONALDS RESTAURANTS											
P03						SITE LAYOUT UPDATED		HYDROCK PROJECT NO.		SCALE @ A3	
DRAWN BY		R.OSBORNE	12/07/22	CHECKED BY		A.CHAPLETON	12/07/22	PROJECTED BY		R.MCHUGH	12/07/22
P02						SECOND ISSUE		STATUS DESCRIPTION		STATUS	
DRAWN BY		T.LONGLEY	05/04/22	CHECKED BY		R.MCHUGH	05/04/22	PROJECTED BY		R.MCHUGH	05/04/22
P01						FIRST ISSUE		INFORMATION		S2	
DRAWN BY		R.OSBORNE	02/03/22	CHECKED BY		R.MCHUGH	02/03/22	PROJECTED BY		R.MCHUGH	02/03/22
						PROJECT		STATUS DESCRIPTION		STATUS	
						MCDONALDS PONTARDAWE		INFORMATION		S2	
								DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER)		REVISION	
								15297-HYD-XX-XX-DR-TP-0302		P03	

Superseded



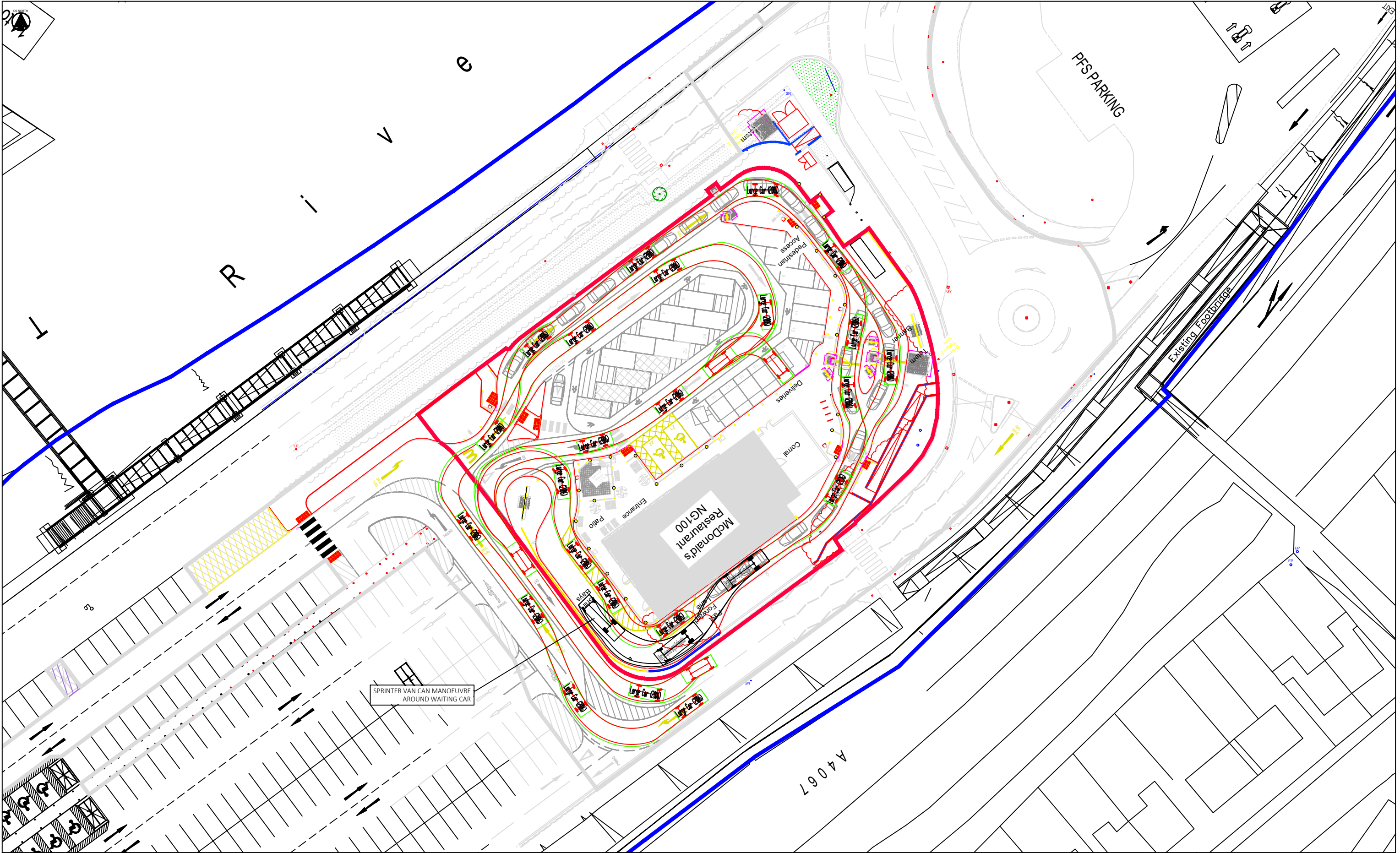
VEHICLE MODELS USED IN SWEEP PATH ANALYSIS  Phoenix 2-15N (with Elite 2 6x2 MS chassis) Overall Length 9.595m Overall Width 2.230m Overall Body Height 3.690m Min Body Ground Clearance 0.251m Track Width 2.200m Lock to lock time 4.00s Kerb to kerb Turning Radius 9.300m	NOTES	NOTES (CONTINUED)	REVISIONS (CONTINUED)	REVISIONS	Hydrock MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4RW t: (0117) 9459 225 e: bristol@hydrock.com CLIENT MCDONALDS RESTAURANTS	SWEEP PATH ANALYSIS OF REFUSE COLLECTION VEHICLE - ENTRY MANOEUVRE	
						HYDROCK PROJECT NO. 15297	SCALE @ A3 1:500
						PROJECT MCDONALDS PONTARDAWE	STATUS DESCRIPTION INFORMATION DRAWING NO.: (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 15297-HYD-XX-XX-DR-TP-0303 STATUS S2 REVISION P03

Superseded



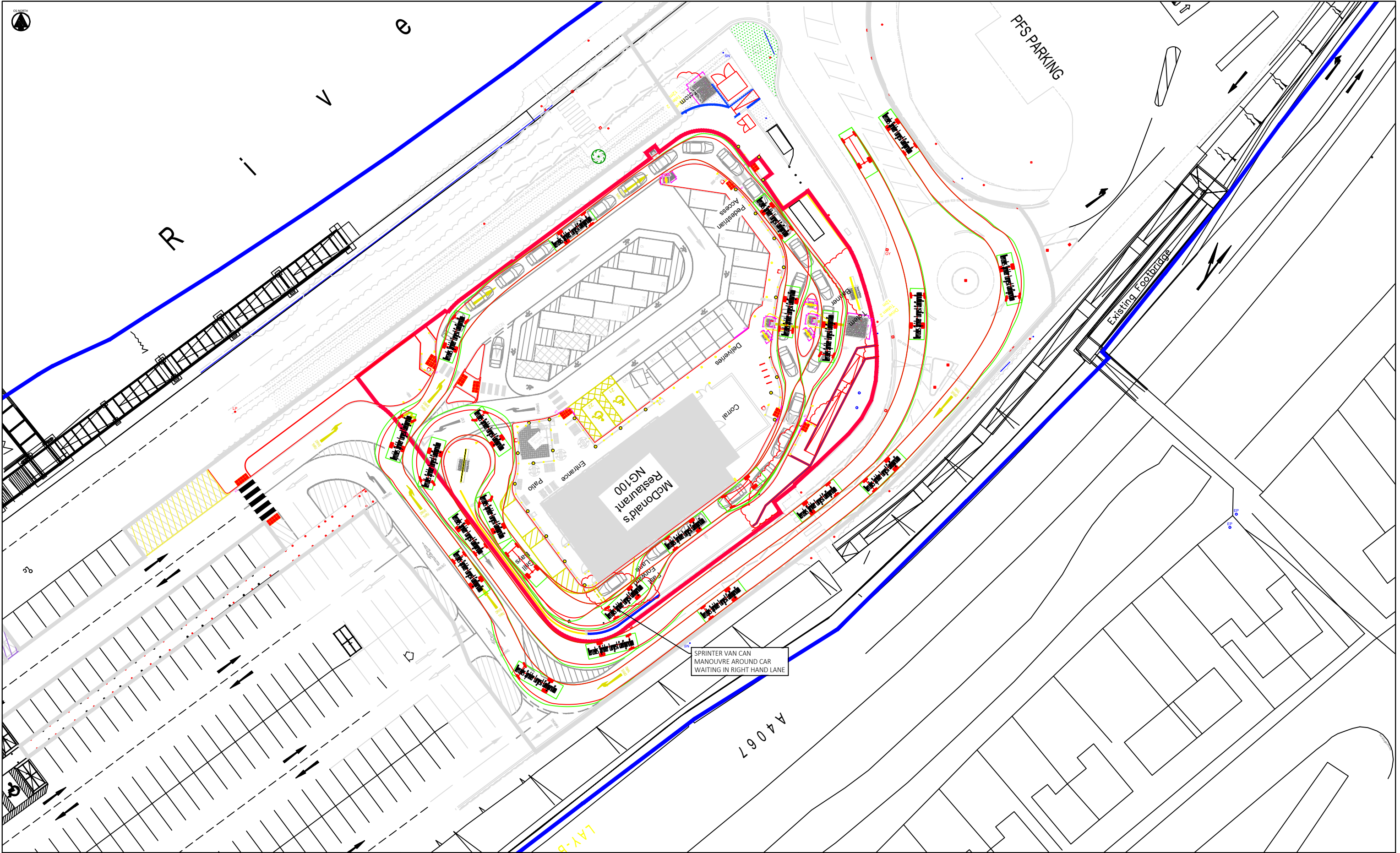
VEHICLE MODELS USED IN SWEEP PATH ANALYSIS		NOTES		NOTES (CONTINUED)		REVISIONS (CONTINUED)		REVISIONS		Hydrock MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4RW t: (0117) 9459 225 e: bristol@hydrock.com		SWEPT PATH ANALYSIS OF REFUSE COLLECTION VEHICLE - EXIT MANOEUVRE	
</													

Superseded



VEHICLE MODELS USED IN SWEEP PATH ANALYSIS		NOTES		NOTES (CONTINUED)		REVISIONS (CONTINUED)		REVISIONS		Hydrock MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4BW t: (0117) 9459 225 e: bristol@hydrock.com CLIENT MCDONALDS RESTAURANTS PROJECT MCDONALDS PONTARDAWE <td colspan="2">SWEEP PATH ANALYSIS OF LARGE CAR</td>		SWEEP PATH ANALYSIS OF LARGE CAR			
Large Car (2006) Overall Length 5.079m Overall Width 1.872m Overall Body Height 1.325m Min Body Ground Clearance 0.310m Max Track Width 1.831m Lock to lock time 4.00s Kerb to Kerb Turning Radius 5.900m								P03 SITE LAYOUT UPDATED DESIGNED BY R.OSBORNE 12/07/22 APPROVED BY A.CHAPLETON 12/07/22 REVIEWED BY R.MCHUGH 12/07/22 P02 SECOND ISSUE DESIGNED BY T.LONGLEY 05/04/22 APPROVED BY R.MCHUGH 05/04/22 REVIEWED BY R.MCHUGH 05/04/22 P01 FIRST ISSUE DESIGNED BY R.OSBORNE 02/03/22 APPROVED BY R.MCHUGH 02/03/22 REVIEWED BY R.MCHUGH 02/03/22				HYDROCK PROJECT NO. 15297		SCALE @ A3 1:500	
										STATUS DESCRIPTION INFORMATION		STATUS S2			
										DRAWING NO. (PROJECT CODE-ORIGINATOR-ZONE-LEVEL-TYPE-ROLE-NUMBER) 15297-HYD-XX-XX-DR-TP-0305		REVISION P03			

Superseded



VEHICLE MODELS USED IN SWEEP PATH ANALYSIS		NOTES		NOTES (CONTINUED)		REVISIONS (CONTINUED)		REVISIONS		Hydrock MERCHANTS' HOUSE NORTH WAPPING ROAD BRISTOL BS1 4RW t: (0117) 9459 225 e: bristol@hydrock.com		SWEEP PATH ANALYSIS OF SPRINTER VAN	
7.367m 2.175m 2.598m 0.371m 2.175m 4.00s 7.600m Mercedes Sprinter Largest Configuration Overall Length 7.367m Overall Width 2.175m Overall Body Height 2.598m Min Body Ground Clearance 0.371m Track Width 2.175m Lock to lock time 4.00s Wall to Wall Turning Radius 7.600m										CLIENT MCDONALDS RESTAURANTS		HYDROCK PROJECT NO. 15297	
										PROJECT MCDONALDS PONTARDAWE		SCALE @ A3 1:500	
												STATUS DESCRIPTION INFORMATION	
												STATUS S2	
												REVISION P04	

Superseded

Appendix F McDonald's Survey Data

Superseded

McDonald's Survey Data

Traffic Flows

Pedestrian

Parking Demand
(Spaces occupied
recorded by heat survey)

Friday	
Time	In / Out
18:00	95 / 99
17:00	92 / 92
16:00	86 / 86
15:00	92 / 92

Saturday	
Time	In / Out
14:00	78 / 75
13:00	104 / 115
12:00	92 / 87
11:00	97 / 89
10:00	84 / 70

Friday	
Time	In / Out
18:00	29 / 31
17:00	33 / 37
16:00	38 / 39
15:00	36 / 45
14:00	33 / 36

Saturday	
Time	In / Out
14:00	33 / 36
13:00	50 / 45
12:00	29 / 23
11:00	13 / 11
10:00	11 / 11

Friday	
Time	In / Out
18:00	112 / 119
17:00	155 / 159
16:00	130 / 130
15:00	134 / 130
14:00	112 / 115

Saturday	
Time	In / Out
14:00	112 / 115
13:00	123 / 142
12:00	144 / 129
11:00	84 / 70
10:00	70 / 70

Friday	
Time	In / Out
18:00	71 / 68
17:00	74 / 73
16:00	46 / 66
15:00	38 / 62
14:00	48 / 61

Saturday	
Time	In / Out
14:00	48 / 61
13:00	69 / 59
12:00	59 / 62
11:00	83 / 49
10:00	5 / 5

Darlington

Friday	
Time	In / Out
18:00	96 / 104
17:00	92 / 86
16:00	81 / 84
15:00	81 / 84
14:00	126 / 134

Saturday	
Time	In / Out
14:00	126 / 134
13:00	125 / 127
12:00	126 / 122
11:00	86 / 75
10:00	86 / 75

Friday	
Time	In / Out
18:00	16 / 18
17:00	8 / 5
16:00	4 / 3
15:00	10 / 10
14:00	29 / 7

Saturday	
Time	In / Out
14:00	29 / 7
13:00	10 / 6
12:00	59 / 62
11:00	5 / 5
10:00	5 / 5

Average

Friday	
Time	In / Out
18:00	101 / 107
17:00	113 / 112
16:00	102 / 101
15:00	113 / 112
14:00	105 / 108

Saturday	
Time	In / Out
14:00	105 / 108
13:00	117 / 128
12:00	121 / 113
11:00	89 / 78
10:00	89 / 78

Friday	
Time	In / Out
18:00	39 / 39
17:00	38 / 38
16:00	29 / 36
15:00	29 / 36
14:00	37 / 35

Saturday	
Time	In / Out
14:00	37 / 35
13:00	42 / 38
12:00	33 / 30
11:00	34 / 22
10:00	22 / 22

Customer Trips

Saturday	
Time	No Vehicles
11:00	12
11:15	12
11:30	14
11:45	18
12:00	17
12:15	16
12:30	20
12:45	16
13:00	22
13:15	19
13:30	16
13:45	15
14:00	16
14:15	15
14:30	15
14:45	12
15:00	-

Wolverton

Saturday	
Time	No Vehicles
11:00	10
11:15	13
11:30	16
11:45	18
12:00	23
12:15	20
12:30	20
12:45	22
13:00	31
13:15	29
13:30	23
13:45	24
14:00	30
14:15	19
14:30	20
14:45	18
15:00	18

Bradford

Saturday	
Time	No Vehicles
11:00	11
11:15	10
11:30	13
11:45	17
12:00	24
12:15	24
12:30	27
12:45	27
13:00	26
13:15	19
13:30	20
13:45	24
14:00	30
14:15	32
14:30	19
14:45	16
15:00	7

Trip Type	
No	%
Additional	26
Existing	15
Shared	7
Total	48
Foodstore	
Additional	2
Existing	44
Shared	9
Total	55
100%	

Darlington

Saturday	
Time	No Vehicles
11:00	11
11:15	10
11:30	13
11:45	17
12:00	24
12:15	24
12:30	27
12:45	27
13:00	26
13:15	19
13:30	20
13:45	24
14:00	30
14:15	32
14:30	19
14:45	16
15:00	7

Trip Type	
No	%
Additional	42
Existing	7
Shared	21
Total	70
100%	

Average

Friday	
No	%
Additional	28
Existing	26
Shared	12
Total	67
100%	

Superseded

Appendix G TRICS Outputs

Superseded

Calculation Reference: AUDIT-540501-220330-0343

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES

Selected regions and areas:

04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
11	SCOTLAND	
	AD ABERDEEN CITY	1 days
	FI FIFE	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: 275 to 435 (units: sqm)
Range Selected by User: 182 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 24/04/21

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:

Tuesday	2 days
Friday	2 days

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

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

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

Selected Locations:

Edge of Town Centre	1
Suburban Area (PPS6 Out of Centre)	1
Edge of Town	2

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:

Development Zone	1
Residential Zone	1
Built-Up Zone	1
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.

Superseded

Secondary Filtering selection:

Use Class:
Not Known 4 days

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

Population within 500m Range:
All Surveys Included
Population within 1 mile:
5,001 to 10,000 1 days
10,001 to 15,000 1 days
15,001 to 20,000 1 days
20,001 to 25,000 1 days

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

Population within 5 miles:
100,001 to 125,000 1 days
125,001 to 250,000 3 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 2 days
1.1 to 1.5 2 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 4 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 4 days

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

Superseded

LIST OF SITES relevant to selection parameters

1	AD-06-D-02	BURGER KING	ABERDEEN CITY
	WELLINGTON ROAD		
	ABERDEEN		
	ALTENS		
	Edge of Town		
	No Sub Category		
	Total Gross floor area:	300 sqm	
	Survey date: FRIDAY	22/11/19	Survey Type: MANUAL
2	CA-06-D-02	MCDONALD'S	CAMBRIDGESHIRE
	NEWMARKET ROAD		
	CAMBRIDGE		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Gross floor area:	435 sqm	
	Survey date: TUESDAY	19/09/17	Survey Type: MANUAL
3	FI-06-D-02	KFC	FIFE
	WHIMBREL PLACE		
	DUNFERMLINE		
	HALBEATH		
	Edge of Town		
	Development Zone		
	Total Gross floor area:	275 sqm	
	Survey date: TUESDAY	22/03/16	Survey Type: MANUAL
4	LN-06-D-01	MCDONALD'S	LINCOLNSHIRE
	RUSTON WAY		
	LINCOLN		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	435 sqm	
	Survey date: FRIDAY	28/06/19	Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
VG-06-D-01	covid
WO-06-D-01	covid

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
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									
07:00 - 08:00	2	368	1.905	2	368	1.497	2	368	3.402
08:00 - 09:00	2	368	2.857	2	368	2.993	2	368	5.850
09:00 - 10:00	2	368	4.490	2	368	3.673	2	368	8.163
10:00 - 11:00	4	361	8.374	4	361	7.889	4	361	16.263
11:00 - 12:00	4	361	13.218	4	361	12.526	4	361	25.744
12:00 - 13:00	4	361	21.038	4	361	19.170	4	361	40.208
13:00 - 14:00	4	361	16.401	4	361	19.308	4	361	35.709
14:00 - 15:00	4	361	12.388	4	361	12.180	4	361	24.568
15:00 - 16:00	4	361	10.311	4	361	11.211	4	361	21.522
16:00 - 17:00	4	361	13.910	4	361	13.426	4	361	27.336
17:00 - 18:00	4	361	13.841	4	361	13.564	4	361	27.405
18:00 - 19:00	4	361	17.163	4	361	16.332	4	361	33.495
19:00 - 20:00	4	361	15.502	4	361	15.986	4	361	31.488
20:00 - 21:00	4	361	10.242	4	361	13.149	4	361	23.391
21:00 - 22:00	4	361	10.035	4	361	9.343	4	361	19.378
22:00 - 23:00	3	337	8.614	3	337	8.812	3	337	17.426
23:00 - 24:00	1	435	10.345	1	435	12.874	1	435	23.219
Total Rates:			190.634			193.933			384.567

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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Parameter summary

Trip rate parameter range selected:275 - 435 (units: sqm)

Survey date date range:01/01/13 - 24/04/21

Number of weekdays (Monday-Friday):4

Number of Saturdays:0

Number of Sundays:0

Surveys automatically removed from selection:0

Surveys manually removed from selection:2

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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH TAXIS
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									
07:00 - 08:00	2	368	0.000	2	368	0.000	2	368	0.000
08:00 - 09:00	2	368	0.000	2	368	0.000	2	368	0.000
09:00 - 10:00	2	368	0.136	2	368	0.136	2	368	0.272
10:00 - 11:00	4	361	0.000	4	361	0.000	4	361	0.000
11:00 - 12:00	4	361	0.138	4	361	0.138	4	361	0.276
12:00 - 13:00	4	361	0.138	4	361	0.069	4	361	0.207
13:00 - 14:00	4	361	0.138	4	361	0.208	4	361	0.346
14:00 - 15:00	4	361	0.208	4	361	0.208	4	361	0.416
15:00 - 16:00	4	361	0.000	4	361	0.000	4	361	0.000
16:00 - 17:00	4	361	0.277	4	361	0.277	4	361	0.554
17:00 - 18:00	4	361	0.277	4	361	0.208	4	361	0.485
18:00 - 19:00	4	361	0.208	4	361	0.208	4	361	0.416
19:00 - 20:00	4	361	0.208	4	361	0.208	4	361	0.416
20:00 - 21:00	4	361	0.277	4	361	0.277	4	361	0.554
21:00 - 22:00	4	361	0.000	4	361	0.069	4	361	0.069
22:00 - 23:00	3	337	0.000	3	337	0.000	3	337	0.000
23:00 - 24:00	1	435	0.000	1	435	0.000	1	435	0.000
Total Rates:			2.005			2.006			4.011

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.

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
OGVS
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									
07:00 - 08:00	2	368	0.000	2	368	0.000	2	368	0.000
08:00 - 09:00	2	368	0.136	2	368	0.136	2	368	0.272
09:00 - 10:00	2	368	0.000	2	368	0.000	2	368	0.000
10:00 - 11:00	4	361	0.000	4	361	0.000	4	361	0.000
11:00 - 12:00	4	361	0.138	4	361	0.000	4	361	0.138
12:00 - 13:00	4	361	0.138	4	361	0.208	4	361	0.346
13:00 - 14:00	4	361	0.277	4	361	0.346	4	361	0.623
14:00 - 15:00	4	361	0.000	4	361	0.000	4	361	0.000
15:00 - 16:00	4	361	0.000	4	361	0.000	4	361	0.000
16:00 - 17:00	4	361	0.069	4	361	0.069	4	361	0.138
17:00 - 18:00	4	361	0.000	4	361	0.000	4	361	0.000
18:00 - 19:00	4	361	0.000	4	361	0.000	4	361	0.000
19:00 - 20:00	4	361	0.000	4	361	0.000	4	361	0.000
20:00 - 21:00	4	361	0.000	4	361	0.000	4	361	0.000
21:00 - 22:00	4	361	0.000	4	361	0.000	4	361	0.000
22:00 - 23:00	3	337	0.000	3	337	0.000	3	337	0.000
23:00 - 24:00	1	435	0.000	1	435	0.000	1	435	0.000
Total Rates:			0.758			0.759			1.517

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.

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
CYCLISTS
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									
07:00 - 08:00	2	368	0.136	2	368	0.136	2	368	0.272
08:00 - 09:00	2	368	0.000	2	368	0.000	2	368	0.000
09:00 - 10:00	2	368	0.136	2	368	0.136	2	368	0.272
10:00 - 11:00	4	361	0.069	4	361	0.069	4	361	0.138
11:00 - 12:00	4	361	0.000	4	361	0.000	4	361	0.000
12:00 - 13:00	4	361	0.069	4	361	0.069	4	361	0.138
13:00 - 14:00	4	361	0.000	4	361	0.000	4	361	0.000
14:00 - 15:00	4	361	0.069	4	361	0.069	4	361	0.138
15:00 - 16:00	4	361	0.138	4	361	0.138	4	361	0.276
16:00 - 17:00	4	361	0.000	4	361	0.000	4	361	0.000
17:00 - 18:00	4	361	0.346	4	361	0.069	4	361	0.415
18:00 - 19:00	4	361	0.138	4	361	0.346	4	361	0.484
19:00 - 20:00	4	361	0.069	4	361	0.069	4	361	0.138
20:00 - 21:00	4	361	0.208	4	361	0.069	4	361	0.277
21:00 - 22:00	4	361	0.000	4	361	0.208	4	361	0.208
22:00 - 23:00	3	337	0.000	3	337	0.000	3	337	0.000
23:00 - 24:00	1	435	0.000	1	435	0.000	1	435	0.000
Total Rates:			1.378			1.378			2.756

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.

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH CARS
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									
07:00 - 08:00	2	368	1.224	2	368	1.088	2	368	2.312
08:00 - 09:00	2	368	2.585	2	368	2.585	2	368	5.170
09:00 - 10:00	2	368	3.401	2	368	2.585	2	368	5.986
10:00 - 11:00	4	361	7.128	4	361	6.713	4	361	13.841
11:00 - 12:00	4	361	11.073	4	361	10.450	4	361	21.523
12:00 - 13:00	4	361	17.163	4	361	15.640	4	361	32.803
13:00 - 14:00	4	361	13.564	4	361	15.848	4	361	29.412
14:00 - 15:00	4	361	10.796	4	361	10.381	4	361	21.177
15:00 - 16:00	4	361	8.858	4	361	9.965	4	361	18.823
16:00 - 17:00	4	361	12.526	4	361	11.972	4	361	24.498
17:00 - 18:00	4	361	13.010	4	361	12.941	4	361	25.951
18:00 - 19:00	4	361	15.571	4	361	14.879	4	361	30.450
19:00 - 20:00	4	361	14.118	4	361	14.394	4	361	28.512
20:00 - 21:00	4	361	9.689	4	361	12.318	4	361	22.007
21:00 - 22:00	4	361	9.412	4	361	8.927	4	361	18.339
22:00 - 23:00	3	337	8.317	3	337	8.515	3	337	16.832
23:00 - 24:00	1	435	9.655	1	435	11.954	1	435	21.609
Total Rates:			168.090			171.155			339.245

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.

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH LGVS
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									
07:00 - 08:00	2	368	0.680	2	368	0.408	2	368	1.088
08:00 - 09:00	2	368	0.136	2	368	0.272	2	368	0.408
09:00 - 10:00	2	368	0.952	2	368	0.952	2	368	1.904
10:00 - 11:00	4	361	1.176	4	361	0.969	4	361	2.145
11:00 - 12:00	4	361	1.869	4	361	1.938	4	361	3.807
12:00 - 13:00	4	361	3.391	4	361	3.114	4	361	6.505
13:00 - 14:00	4	361	2.422	4	361	2.699	4	361	5.121
14:00 - 15:00	4	361	1.246	4	361	1.453	4	361	2.699
15:00 - 16:00	4	361	1.246	4	361	1.176	4	361	2.422
16:00 - 17:00	4	361	0.900	4	361	0.969	4	361	1.869
17:00 - 18:00	4	361	0.554	4	361	0.415	4	361	0.969
18:00 - 19:00	4	361	1.315	4	361	1.176	4	361	2.491
19:00 - 20:00	4	361	1.038	4	361	1.246	4	361	2.284
20:00 - 21:00	4	361	0.277	4	361	0.554	4	361	0.831
21:00 - 22:00	4	361	0.554	4	361	0.346	4	361	0.900
22:00 - 23:00	3	337	0.198	3	337	0.000	3	337	0.198
23:00 - 24:00	1	435	0.460	1	435	0.920	1	435	1.380
Total Rates:			18.414			18.607			37.021

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.

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
MOTOR CYCLES
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									
07:00 - 08:00	2	368	0.000	2	368	0.000	2	368	0.000
08:00 - 09:00	2	368	0.000	2	368	0.000	2	368	0.000
09:00 - 10:00	2	368	0.000	2	368	0.000	2	368	0.000
10:00 - 11:00	4	361	0.069	4	361	0.208	4	361	0.277
11:00 - 12:00	4	361	0.000	4	361	0.000	4	361	0.000
12:00 - 13:00	4	361	0.208	4	361	0.138	4	361	0.346
13:00 - 14:00	4	361	0.000	4	361	0.208	4	361	0.208
14:00 - 15:00	4	361	0.138	4	361	0.138	4	361	0.276
15:00 - 16:00	4	361	0.208	4	361	0.069	4	361	0.277
16:00 - 17:00	4	361	0.138	4	361	0.138	4	361	0.276
17:00 - 18:00	4	361	0.000	4	361	0.000	4	361	0.000
18:00 - 19:00	4	361	0.069	4	361	0.069	4	361	0.138
19:00 - 20:00	4	361	0.138	4	361	0.138	4	361	0.276
20:00 - 21:00	4	361	0.000	4	361	0.000	4	361	0.000
21:00 - 22:00	4	361	0.069	4	361	0.000	4	361	0.069
22:00 - 23:00	3	337	0.099	3	337	0.297	3	337	0.396
23:00 - 24:00	1	435	0.230	1	435	0.000	1	435	0.230
Total Rates:			1.366			1.403			2.769

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.

Superseded

Calculation Reference: AUDIT-540501-220330-0331

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK
Category : D - FAST FOOD - DRIVE THROUGH
TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
10	WALES	
	CE CEREDIGION	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: 350 to 447 (units: sqm)
Range Selected by User: 182 to 800 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 24/04/21

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 3 days

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

Selected survey types:

Manual count 3 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:

Suburban Area (PPS6 Out of Centre) 1
Edge of Town 1
Free Standing (PPS6 Out 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 2
Out of Town 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.

Superseded

Secondary Filtering selection:

Use Class:
Not Known 3 days

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

Population within 500m Range:
All Surveys Included
Population within 1 mile:
1,000 or Less 1 days
10,001 to 15,000 1 days
20,001 to 25,000 1 days

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

Population within 5 miles:
25,001 to 50,000 1 days
100,001 to 125,000 1 days
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 3 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 3 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 3 days

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

Superseded

LIST OF SITES relevant to selection parameters

1	CE-06-D-01	MCDONALD'S		CEREDIGION
	FFORDD PARC Y LLYN			
	ABERYSTWYTH			
	Edge of Town			
	Retail Zone			
	Total Gross floor area:	350 sqm		
	Survey date: SATURDAY	09/05/15		Survey Type: MANUAL
2	DV-06-D-01	MCDONALD'S		DEVON
	HELE ROAD			
	TORQUAY			
	Suburban Area (PPS6 Out of Centre)			
	Retail Zone			
	Total Gross floor area:	447 sqm		
	Survey date: SATURDAY	30/03/19		Survey Type: MANUAL
3	EX-06-D-01	MCDONALD'S		ESSEX
	LONDON ROAD			
	HARLOW			
	HASTINGWOOD			
	Free Standing (PPS6 Out of Town)			
	Out of Town			
	Total Gross floor area:	425 sqm		
	Survey date: SATURDAY	09/07/16		Survey Type: MANUAL

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

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
GS-06-D-01	covid

Superseded

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
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	350	1.429	1	350	0.857	1	350	2.286
06:00 - 07:00	2	388	10.581	2	388	8.387	2	388	18.968
07:00 - 08:00	3	407	18.412	3	407	17.103	3	407	35.515
08:00 - 09:00	3	407	23.159	3	407	22.259	3	407	45.418
09:00 - 10:00	3	407	29.951	3	407	27.660	3	407	57.611
10:00 - 11:00	3	407	26.350	3	407	27.660	3	407	54.010
11:00 - 12:00	3	407	29.542	3	407	26.923	3	407	56.465
12:00 - 13:00	3	407	40.671	3	407	37.643	3	407	78.314
13:00 - 14:00	3	407	37.725	3	407	39.362	3	407	77.087
14:00 - 15:00	3	407	34.943	3	407	34.861	3	407	69.804
15:00 - 16:00	3	407	29.296	3	407	31.506	3	407	60.802
16:00 - 17:00	3	407	28.151	3	407	29.051	3	407	57.202
17:00 - 18:00	3	407	28.151	3	407	28.232	3	407	56.383
18:00 - 19:00	3	407	31.915	3	407	30.606	3	407	62.521
19:00 - 20:00	3	407	27.578	3	407	29.624	3	407	57.202
20:00 - 21:00	3	407	20.131	3	407	22.340	3	407	42.471
21:00 - 22:00	3	407	18.085	3	407	17.594	3	407	35.679
22:00 - 23:00	2	399	12.296	2	399	14.178	2	399	26.474
23:00 - 24:00	2	399	12.171	2	399	12.296	2	399	24.467
Total Rates:			460.537			458.142			918.679

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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Parameter summary

Trip rate parameter range selected:

350 - 447 (units: sqm)

Survey date date range:

01/01/13 - 24/04/21

Number of weekdays (Monday-Friday):

0

Number of Saturdays:

3

Number of Sundays:

0

Surveys automatically removed from selection:

0

Surveys manually removed from selection:

1

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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Superseded

Appendix H TRICS Site Selection

Superseded

Site Reference:	AD-06-D-02	Multi-Modal Site
Created:	Version: 7.7.2	26/01/20
Latitude/Longitude:	57.10890,	-2.09313
Land Use Type:	06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH	
Region/Area	SCOTLAND/ABERDEEN CITY	
Description:	BURGER KING	
Street:	WELLINGTON ROAD	
District:	ALTENS	
Town:	ABERDEEN	
Post Code:	AB12 3JG	
Planning Authority:	ABERDEEN CITY COUNCIL	
Location:	Edge of Town	
Location Sub Category:	No Sub Category	
Use Class:	Not Known	
Population within 500m:	1250	
Population within 1 Mile:	10,001 to 15,000	
Population within 5 Miles:	125,001 to 250,000	
Car ownership within 5 Miles:	0.6 to 1.0	

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	215		215
Monday-Friday	0700-1000	55		55
Monday-Friday	1600-1900	50		50
Saturday	0700-1900	155		155
Sunday	0700-1900	50		50

Is site associated with a travel plan:	No
If not, are there any plans to implement a Travel Plan in the future?	No
Is survey data available before the implementation of the Travel Plan?	
Is the location of the site hilly or flat:	Flat
Urban Regeneration:	No

Covid-19 Restrictions:

Gross floor area	300 sqm
Total Employees	40

No. of developments for this Site:	1
No. of survey Days for this Site:	1

Comments

The site is in Altens, at the southern edge of Aberdeen. It is surrounded by a mix of retail, office and industrial development, plus some other food & drink units. To the south west is Balmoral Business Park, and to the east and south is a residential area.

The closest major road is the A956, which connects the local area to the centre of Aberdeen in the north and Sunnyside Steading in the south.

The site has a single vehicle access into its car park plus a front door access for customers.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes
5. If yes to question 3, are there at least 2 buses (or trams) per hour (per direction between 0700 and 1900) with routes serving significant areas of population within a 5 kilometre radius? (Mon-Sat): Yes
6. If yes to question 5, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Mastrick	4	45
Dyce	3	70

Superseded

Design features encouraging non-car modes

12. Pedestrians

There is a shared pedestrian and cycle path along Wellington Road in the vicinity of the site. The local area has footpaths and street lighting.

13. Pedal cycles

As above.

14. Public transport

The site is a short walk from Wellington Road, which is served by frequent buses to Aberdeen city centre. Bus shelters are provided with information present.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2019
Nearest Primary School	1.2 kilometres
Nearest Secondary School	0.5 kilometres
Nearest Local Shop/Corner Shop	0.1 kilometres
Nearest Main Supermarket	2.5 kilometres
Nearest Doctors Surgery	1.1 kilometres
Nearest Hospital with Minor Injuries/A & E	7.2 kilometres
Nearest Sports/Leisure Centre	0.5 kilometres

Census Data	
Year of Census	2011
Census Output Area/Data Zone	S01000012
Number of households within Census Output Area	1049
Number of people living within Census Output Area	1867

Superseded

Site reference:	AD-06-D-02	Multi-Modal survey site
Trade name:	BURGER KING	
Site area (h/a):	0.42	
Gross floor area (sqm)	300	
GFA not in use (sqm)	0	
Open since	1995	
Total Employees	40	
Full Time Employees	9 22%	
Part Time Employees	31 78%	
Approximate % of total employees working standard 9-5 hours or similar	0%	
GFA per employee	12.000	
Number of Seats	100	
Name of nearest site	BURGER KING	
Distance to nearest similar site	6.4 Km	

OPENING TIMES (24 Hour format)			
Mon to Thurs	08:00	to	22:00
Friday	08:00	to	23:00
Saturday	08:00	to	23:00
Sunday	08:00	to	22:00

Comments
The drive through is open until 2300 from Thursday to Saturday, and the restaurant closes at 2200 every day. Shiftwork takes place at this site, the different shifts are 0700-1600, 1000-1800, 1100-1900 and 1200-0200.

Superseded

Multi-Modal survey site

On-Site parking

Total no. of parking spaces 59
Parking Spaces Per 100m2 GFA 19.667

Number of spaces

Employee 0
Disabled 2
Visitor/Customer 57
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Parent & Toddler 0
Motorcycle spaces 0
Electronic Vehicle Charging Points 0

Parking charges No

Comments about the management of the site car park, along with enforcement measures
There are no parking controls at this site.

Site parking surface or non-surface (multi-storey/underground)
Surface

General Comments on Parking

The off-street off-site parking is located within the retail park adjacent to the site.

Types of servicing vehicle parking taking place

on-site (internal, within specified bays or otherwise) Yes
off-site (on-street, in designated loading/servicing bays) No
off-site (in restricted areas e.g. double yellow lines) No

Off-Site parking details

Is there off-site parking available Yes
Off-Site parking included in the counts Yes
Free On-Street parking available nearby No
If prepared to pay, easy to find somewhere to park off-site all day Yes

Parking restrictions

Area subject to parking restrictions (controlled parking zone - CPZ) Yes, Most of the Area
Permitted on-street parking for non-residents available within this CPZ No

Off-Street parking

Off-Street parking available Yes, Public Off-Street Parking is Available
Approx. available spaces 450
Parking located within a control parking zone (CPZ) No
Charges for this Off-Street parking No

Park & Ride

Park & Ride Type Facility providing relevant means of accessing the site No

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Total vehicles

Survey type: Manual Count

AM weather: Cold and Clear

PM weather: Cold and Cloudy

Initial car park occupancy: 1

Final car park occupancy: 1

Total People to Total Vehicles ratio (all time periods and directions): 1.64

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity 46% (59 On-Site Spaces)

Data proportions in %

Motor cars 86

Motor cycles 0

Public service 0

Light goods 12

OGV (1) 0

OGV (2) 0

Taxis 2

Servicing Vehicles count recorded Yes

Servicing/Standard Vehicle percentages			
	Vehicles	Servicing %	Standard %
OGV (1)	4	50	50
OGV (2)	2	0	100
Light Goods	152	4	96
Motor Car	1070	3	97
Motor Cycle			

Time	Arr 624	Dep 624	Totals 1248	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				
07:00-08:00	3	2	5	2
08:00-09:00	7	6	13	3
09:00-10:00	19	12	31	10
10:00-11:00	19	12	31	17
11:00-12:00	46	36	82	27
12:00-13:00	102	102	204	27
13:00-14:00	79	96	175	10
14:00-15:00	56	52	108	14
15:00-16:00	27	35	62	6
16:00-17:00	38	34	72	10
17:00-18:00	46	47	93	9
18:00-19:00	74	68	142	15
19:00-20:00	43	51	94	7
20:00-21:00	34	37	71	4
21:00-22:00	23	23	46	4
22:00-23:00	8	11	19	1
23:00-24:00				

Comments

No PSV's or motorcycles visited the site during this survey.

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: OGV

Data proportions in %

OGV (1) 67

OGV (2) 33

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 3	Dep 3	Totals 6	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	1	1	2	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	1	0	1	(1)
12:00-13:00	0	1	1	(0)
13:00-14:00	1	1	2	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Taxis

Time	Arr 10	Dep 10	Totals 20	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	1	1	2	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	1	1	2	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	1	1	2	(0)
17:00-18:00	2	2	4	(0)
18:00-19:00	2	1	3	(1)
19:00-20:00	1	2	3	(0)
20:00-21:00	2	2	4	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Cars

Time	Arr 535	Dep 535	Totals 1070	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	1	1	2	(0)
08:00-09:00	5	4	9	(1)
09:00-10:00	16	9	25	(8)
10:00-11:00	16	10	26	(14)
11:00-12:00	34	27	61	(21)
12:00-13:00	86	81	167	(26)
13:00-14:00	65	84	149	(7)
14:00-15:00	49	44	93	(12)
15:00-16:00	24	31	55	(5)
16:00-17:00	33	29	62	(9)
17:00-18:00	42	44	86	(7)
18:00-19:00	63	59	122	(11)
19:00-20:00	39	44	83	(6)
20:00-21:00	32	35	67	(3)
21:00-22:00	22	22	44	(3)
22:00-23:00	8	11	19	(0)
23:00-24:00				

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: LGV

Time	Arr 76	Dep 76	Totals 152	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	2	1	3	(1)
08:00-09:00	1	1	2	(1)
09:00-10:00	3	3	6	(1)
10:00-11:00	3	2	5	(2)
11:00-12:00	10	8	18	(4)
12:00-13:00	16	20	36	(0)
13:00-14:00	13	11	24	(2)
14:00-15:00	6	7	13	(1)
15:00-16:00	3	4	7	(0)
16:00-17:00	4	4	8	(0)
17:00-18:00	2	1	3	(1)
18:00-19:00	9	8	17	(2)
19:00-20:00	3	5	8	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	1	1	2	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Cycles

Time	Arr 4	Dep 4	Totals 8	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	1	1	2	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	3	1	4	(2)
21:00-22:00	0	2	2	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

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SURVEY DAY DETAILS FOR AD-06-D-02 / 06

Hydrock Consultants Ltd Tolvaddon Energy Park Camborne

Licence No: 540501

Thursday 28/04/22

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Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

People Surveyed: Car/LGV/Motorcycle occupants/OGV occupants

This count consists of car occupants, light goods vehicle occupants, motorcycle riders and OGV occupants

Taxi drivers and drivers of private vehicles picking up/dropping off passengers at the site are excluded from the count

[illegible]

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

People Surveyed: Pedestrians

Time	Arr 62	Dep 59	Totals 121	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	1	0	1	(1)
08:00-09:00	0	0	0	(1)
09:00-10:00	3	2	5	(2)
10:00-11:00	3	4	7	(1)
11:00-12:00	0	1	1	(0)
12:00-13:00	10	8	18	(2)
13:00-14:00	3	4	7	(1)
14:00-15:00	2	2	4	(1)
15:00-16:00	10	9	19	(2)
16:00-17:00	3	5	8	(0)
17:00-18:00	6	5	11	(1)
18:00-19:00	8	3	11	(6)
19:00-20:00	2	6	8	(2)
20:00-21:00	5	0	5	(7)
21:00-22:00	6	10	16	(3)
22:00-23:00	0	0	0	(3)
23:00-24:00				

Superseded

Site reference:AD-06-D-02Survey date: 22/11/19Day of week: Friday

Multi-Modal survey site

People Surveyed:Public transport Users

Time	Arr 5	Dep 0	Totals 5	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	1	0	1	(1)
09:00-10:00	0	0	0	(1)
10:00-11:00	3	0	3	(4)
11:00-12:00	0	0	0	(4)
12:00-13:00	0	0	0	(4)
13:00-14:00	0	0	0	(4)
14:00-15:00	0	0	0	(4)
15:00-16:00	1	0	1	(5)
16:00-17:00	0	0	0	(5)
17:00-18:00	0	0	0	(5)
18:00-19:00	0	0	0	(5)
19:00-20:00	0	0	0	(5)
20:00-21:00	0	0	0	(5)
21:00-22:00	0	0	0	(5)
22:00-23:00	0	0	0	(5)
23:00-24:00				

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

People Surveyed: Bus/Tram Passengers

Time	Arr 5	Dep 0	Totals 5	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	1	0	1	(1)
09:00-10:00	0	0	0	(1)
10:00-11:00	3	0	3	(4)
11:00-12:00	0	0	0	(4)
12:00-13:00	0	0	0	(4)
13:00-14:00	0	0	0	(4)
14:00-15:00	0	0	0	(4)
15:00-16:00	1	0	1	(5)
16:00-17:00	0	0	0	(5)
17:00-18:00	0	0	0	(5)
18:00-19:00	0	0	0	(5)
19:00-20:00	0	0	0	(5)
20:00-21:00	0	0	0	(5)
21:00-22:00	0	0	0	(5)
22:00-23:00	0	0	0	(5)
23:00-24:00				

Superseded

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

People Surveyed: Total people

Time	Arr 1028	Dep 1023	Totals 2051	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	4	2	6	(2)
08:00-09:00	9	6	15	(5)
09:00-10:00	33	22	55	(16)
10:00-11:00	33	19	52	(30)
11:00-12:00	70	55	125	(45)
12:00-13:00	182	166	348	(61)
13:00-14:00	113	151	264	(23)
14:00-15:00	88	88	176	(23)
15:00-16:00	57	65	122	(15)
16:00-17:00	64	59	123	(20)
17:00-18:00	77	79	156	(18)
18:00-19:00	117	103	220	(32)
19:00-20:00	65	80	145	(17)
20:00-21:00	61	60	121	(18)
21:00-22:00	43	50	93	(11)
22:00-23:00	12	18	30	(5)
23:00-24:00				

Superseded

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SURVEY DAY DETAILS FOR AD-06-D-02 / 11

Hydrock Consultants Ltd Tolvaddon Energy Park Camborne

Thursday 28/04/22

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Licence No: 540501

Site reference: AD-06-D-02

Survey date: 22/11/19

Day of week: Friday

Multi-Modal survey site

Vehicles surveyed: Servicing Vehicles

[illegible]

Superseded

Site Reference:	CA-06-D-02
Created:	Version: 7.5.1 16/11/17
Latitude/Longitude:	52.21268, 0.16347
Land Use Type:	06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
Region/Area	EAST ANGLIA/CAMBRIDGESHIRE
Description:	MCDONALD'S
Street:	NEWMARKET ROAD
District:	
Town:	CAMBRIDGE
Post Code:	CB5 8WL
Planning Authority:	CAMBRIDGE CITY COUNCIL
Location:	Suburban Area (PPS6 Out of Centre)
Location Sub Category:	Residential Zone
Use Class:	Not Known
Population within 500m:	3855
Population within 1 Mile:	15,001 to 20,000
Population within 5 Miles:	125,001 to 250,000
Car ownership within 5 Miles:	0.6 to 1.0

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	360		360
Monday-Friday	0700-1000	88		88
Monday-Friday	1600-1900	87		87
Saturday	0700-1900	342		342
Sunday	0700-1900	114		114

Is site associated with a travel plan:	No
If not, are there any plans to implement a Travel Plan in the future?	No
Is survey data available before the implementation of the Travel Plan?	
Is the location of the site hilly or flat:	Flat
Urban Regeneration:	No
Previous survey	CA-06-D-01
Gross floor area	435 sqm
Total Employees	
No. of developments for this Site:	1
No. of survey Days for this Site:	1

Comments

This site is located at the eastern edge of Cambridge, off the A1303 main route, which heads east towards the junction with the A14 and west (as the A1134) towards the centre of the city. The A1134 also heads south, with the nearby B1047 heading north.

The site is in an area of mainly residential development, with residential streets surrounding it. There is a commercial/industrial development at the site's eastern boundary.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes
5. If yes to question 3, are there at least 2 buses (or trams) per hour (per direction between 0700 and 1900) with routes serving significant areas of population within a 5 kilometre radius? (Mon-Sat): Yes
6. If yes to question 5, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Fulbourn	6	46
Newmarket Road	6	17

Superseded

Design features encouraging non-car modes

12. Pedestrians
The pavements are wide and well maintained. There are safe places to cross the road and the area is well lit.
13. Pedal cycles
There are cycle lanes on the nearby roads.
14. Public transport
Local bus routes stop nearby.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2017
Nearest Primary School	0.8 kilometres
Nearest Secondary School	2.5 kilometres
Nearest Local Shop/Corner Shop	0.1 kilometres
Nearest Main Supermarket	1.2 kilometres
Nearest Doctors Surgery	0.3 kilometres
Nearest Hospital with Minor Injuries/A & E	4.5 kilometres
Nearest Sports/Leisure Centre	0.8 kilometres

Census Data	
Year of Census	2011
Census Output Area/Data Zone	E00090527
Number of people employed within Census Output Area	111
Number of households within Census Output Area	127
Number of people living within Census Output Area	288
Area of Census Output Area (hectares)	4.05
Population density within Census Output Area (per hectare)	71.10

Superseded

Site reference:

CA-06-D-02

Trade name:

MCDONALD'S

Site area (h/a):

0.23

Gross floor area (sqm)

435

GFA not in use (sqm)

0

Open since

2002

Total Employees

Full Time Employees

Part Time Employees

Approximate % of total employees working

standard 9-5 hours or similar

%

Name of nearest site

MCDONALD'S

Distance to nearest similar site

14.0 Km

OPENING TIMES (24 Hour format)

Mon to Thurs

07:00 to 23:00

Friday

07:00 to 23:00

Saturday

07:00 to 23:00

Sunday

07:00 to 23:00

Comments

Information on employees at this site is not known.

Superseded

<u>On-Site parking</u>	
Total no. of parking spaces	38
Parking Spaces Per 100m2 GFA	8.736
<u>Number of spaces</u>	
Employee	0
Disabled	2
Visitor/Customer	36
OGV parking bays	0
Cycle racks	10
OGV loading bays	0
Parent & Toddler	0
Motorcycle spaces	0
Electronic Vehicle Charging Points	0
Parking charges	No
Site parking surface or non-surface (multi-storey/underground)	Surface

General Comments on Parking
The car park is well maintained with good signage.

Types of servicing vehicle parking taking place
on-site (internal, within specified bays or otherwise)
Yes
off-site (on-street, in designated loading/servicing bays)
No
off-site (in restricted areas e.g. double yellow lines)
No

Off-Site parking details
Is there off-site parking available
Yes
Off-Site parking included in the counts
No
Free On-Street parking available nearby
Yes
If yes, considered easy to find a space
Yes
If prepared to pay, easy to find somewhere to park off-site all day
Yes

Parking restrictions
Area subject to parking restrictions (controlled parking zone - CPZ)
No

Off-Street parking
Off-Street parking available NO

Park & Ride
Park & Ride Type Facility providing relevant means of accessing the site
Yes
Approximate journey time from the facility to the site
10

Superseded

Site reference:CA-06-D-02

Survey date: 19/09/17

Day of week: Tuesday

Survey type:Manual Count

AM weather:Mild and Windy

PM weather:Cold and Cloudy

Initial car park occupancy:14

Final car park occupancy:5

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity42% (38 On-Site Spaces)

Data proportions in %

Motor cars81

Motor cycles3

Public service0

Light goods11

OGV (1)0

OGV (2)0

Taxis5

Servicing Vehicles count recordedNo

Time	Arr 275	Dep 284	Totals 559	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				
07:00-08:00	11	9	20	16
08:00-09:00	14	16	30	14
09:00-10:00	14	15	29	13
10:00-11:00	13	10	23	16
11:00-12:00	31	31	62	16
12:00-13:00	26	33	59	9
13:00-14:00	18	27	45	0
14:00-15:00	17	15	32	2
15:00-16:00	16	17	33	1
16:00-17:00	17	12	29	6
17:00-18:00	19	22	41	3
18:00-19:00	22	22	44	3
19:00-20:00	20	21	41	2
20:00-21:00	22	22	44	2
21:00-22:00	15	12	27	5
22:00-23:00				
23:00-24:00				

Comments

No OGV's or PSV's visited the site during this survey.

Superseded

Site reference:CA-06-D-02

Survey date: 19/09/17

Day of week: Tuesday

Vehicles surveyed: Taxis

Time	Arr 13	Dep 13	Totals 26	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	1	1	2	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	1	1	2	(0)
12:00-13:00	2	1	3	(1)
13:00-14:00	0	1	1	(0)
14:00-15:00	2	2	4	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	2	2	4	(0)
17:00-18:00	1	0	1	(1)
18:00-19:00	1	2	3	(0)
19:00-20:00	1	1	2	(0)
20:00-21:00	2	1	3	(1)
21:00-22:00	0	1	1	(0)
22:00-23:00				
23:00-24:00				

Superseded

Site reference:CA-06-D-02

Survey date: 19/09/17

Day of week: Tuesday

Vehicles surveyed: Cars

Time	Arr 222	Dep 234	Totals 456	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	8	7	15	(1)
08:00-09:00	14	15	29	(0)
09:00-10:00	9	10	19	(-1)
10:00-11:00	12	9	21	(2)
11:00-12:00	29	29	58	(2)
12:00-13:00	19	29	48	(-8)
13:00-14:00	16	22	38	(-14)
14:00-15:00	10	9	19	(-13)
15:00-16:00	12	13	25	(-14)
16:00-17:00	13	9	22	(-10)
17:00-18:00	17	21	38	(-14)
18:00-19:00	16	16	32	(-14)
19:00-20:00	15	15	30	(-14)
20:00-21:00	19	19	38	(-14)
21:00-22:00	13	11	24	(-12)
22:00-23:00				
23:00-24:00				

Superseded

Site reference:CA-06-D-02

Survey date: 19/09/17

Day of week: Tuesday

Vehicles surveyed: LGV

Time	Arr 31	Dep 28	Totals 59	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	3	2	5	(1)
08:00-09:00	0	1	1	(0)
09:00-10:00	4	4	8	(0)
10:00-11:00	1	1	2	(0)
11:00-12:00	1	1	2	(0)
12:00-13:00	2	1	3	(1)
13:00-14:00	2	3	5	(0)
14:00-15:00	3	2	5	(1)
15:00-16:00	2	3	5	(0)
16:00-17:00	2	0	2	(2)
17:00-18:00	1	1	2	(2)
18:00-19:00	5	4	9	(3)
19:00-20:00	2	3	5	(2)
20:00-21:00	1	2	3	(1)
21:00-22:00	2	0	2	(3)
22:00-23:00				
23:00-24:00				

Superseded

Site reference:CA-06-D-02

Survey date: 19/09/17

Day of week: Tuesday

Vehicles surveyed: Motor Cycles

Time	Arr 9	Dep 9	Totals 18	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	3	2	5	(1)
13:00-14:00	0	1	1	(0)
14:00-15:00	2	2	4	(0)
15:00-16:00	2	1	3	(1)
16:00-17:00	0	1	1	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	2	2	4	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00				
23:00-24:00				

Superseded

Site reference:CA-06-D-02

Survey date: 19/09/17

Day of week: Tuesday

Vehicles surveyed: Cycles

Time	Arr 8	Dep 8	Totals 16	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	1	1	2	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	1	1	2	(0)
10:00-11:00	1	1	2	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	1	1	2	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	1	1	2	(0)
15:00-16:00	1	1	2	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	1	1	2	(0)
18:00-19:00	1	0	1	(1)
19:00-20:00	0	1	1	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00				
23:00-24:00				

Superseded

Site Reference:

FI-06-D-02

Created:

Version: 7.4.1 07/09/16

Latitude/Longitude:

56.07811, -3.39863

Land Use Type:

06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

Region/Area

SCOTLAND/FIFE

Description:

KFC

Street:

WHIMBREL PLACE

District:

HALBEATH

Town:

DUNFERMLINE

Post Code:

KY11 8EX

Planning Authority:

Location:

Edge of Town

Location Sub Category:

Development Zone

Use Class:

Not Known

Population within 500m:

500

Population within 1 Mile:

5,001 to 10,000

Population within 5 Miles:

100,001 to 125,000

Car ownership within 5 Miles:

1.1 to 1.5

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	112		112
Monday-Friday	0700-1000	20		20
Monday-Friday	1600-1900	34		34
Saturday	0700-1900	188		188
Sunday	0700-1900	68		68

Is site associated with a travel plan:

No

If not, are there any plans to implement a Travel Plan in the future?

No

Is survey data available before the implementation of the Travel Plan?

Is the location of the site hilly or flat:

Flat

Urban Regeneration:

No

Gross floor area

275 sqm

Total Employees

38

No. of developments for this Site:

1

No. of survey Days for this Site:

1

Comments

This site is located within Fife Leisure Park, at the eastern edge of town. It is next to the M90 motorway, which heads north and south and is accessed to the north. Other roads head towards various parts of the local area. The site is surrounded by other elements of the leisure park, including a health club, cinema, other fast food outlets, a Premier Inn, and adventure golf. There is a residential area to the north-west, across Sanderling Way.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes

11. Please enter general comments/views about the relevance, quality and importance of public transport services relating to this development.

There are hourly bus services available to Ferrytoll Park & Ride (25 minutes journey time), Townhill (45 minutes), Kirkcaldy (70 minutes) and Kelty (40 minutes).

Design features encouraging non-car modes

12. Pedestrians

There are footpaths and crossing facilities within the leisure park. However, the park is not in walking distance of residential areas.

Superseded

13. Pedal cycles
None

14. Public transport
There are frequent local bus routes available.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2016
Nearest Primary School	0.5 kilometres
Nearest Secondary School	1.5 kilometres
Nearest Local Shop/Corner Shop	0.8 kilometres
Nearest Main Supermarket	1.0 kilometres
Nearest Doctors Surgery	1.7 kilometres
Nearest Hospital with Minor Injuries/A & E	1.7 kilometres
Nearest Sports/Leisure Centre	0.3 kilometres

Census Data	
Year of Census	
Census Output Area/Data Zone	
Number of households within Census Output Area	
Number of people living within Census Output Area	

Superseded

Site reference:FI-06-D-02

Trade name:KFC

Site area (h/a):0.36

Gross floor area (sqm)275

GFA not in use (sqm)0

Open since2009

Total Employees38

Full Time Employees15 39%

Part Time Employees23 61%

Approximate % of total employees working standard 9-5 hours or similar0%

GFA per employee10.185

Name of nearest siteMCDONALD'S

Distance to nearest similar site0.0 Km

OPENING TIMES (24 Hour format)

Mon to Thurs11:00 to 22:30

Friday11:00 to 23:00

Saturday11:00 to 23:00

Sunday11:00 to 22:30

Comments

There are 106 seats within the restaurant.

The nearest similar site is within the same leisure park.

Superseded

<u>On-Site parking</u>	
Total no. of parking spaces	42
Parking Spaces Per 100m2 GFA	15.273
<u>Number of spaces</u>	
Employee	0
Disabled	3
Visitor/Customer	38
OGV parking bays	1
Cycle racks	6
OGV loading bays	0
Parent & Toddler	0
Motorcycle spaces	0
Electronic Vehicle Charging Points	0
Parking charges	No
Site parking surface or non-surface (multi-storey/underground)	Surface

<u>Types of servicing vehicle parking taking place</u>	
on-site (internal, within specified bays or otherwise)	Yes
off-site (on-street, in designated loading/servicing bays)	No
off-site (in restricted areas e.g. double yellow lines)	No

<u>Off-Site parking details</u>	
Is there off-site parking available	Yes
Off-Site parking included in the counts	Yes
Free On-Street parking available nearby	Yes
If yes, considered easy to find a space	Yes
If prepared to pay, easy to find somewhere to park off-site all day	Yes

<u>Parking restrictions</u>	
Area subject to parking restrictions (controlled parking zone - CPZ)	No

<u>Off-Street parking</u>	
Off-Street parking available	Yes, Public Off-Street Parking is Available
Approx. available spaces	1000
Parking located within a control parking zone (CPZ)	No
Charges for this Off-Street parking	No

<u>Park & Ride</u>	
Park & Ride Type Facility providing relevant means of accessing the site	Yes
Approximate journey time from the facility to the site	5

Superseded

Site reference:FI-06-D-02

Survey date: 22/03/16

Day of week: Tuesday

Survey type:Manual Count

AM weather:Cold and Cloudy

PM weather:Cold and Cloudy

Initial car park occupancy:2

Final car park occupancy:2

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity50% (42 On-Site Spaces)

Data proportions in %

Motor cars89

Motor cycles0

Public service0

Light goods9

OGV (1)1

OGV (2)0

Taxis1

Servicing Vehicles count recordedNo

Time	Arr 308	Dep 308	Totals 616	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				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	2	1	3	3
11:00-12:00	16	12	28	7
12:00-13:00	41	27	68	21
13:00-14:00	32	42	74	11
14:00-15:00	19	22	41	8
15:00-16:00	20	18	38	10
16:00-17:00	33	33	66	10
17:00-18:00	28	30	58	8
18:00-19:00	40	32	72	16
19:00-20:00	38	43	81	11
20:00-21:00	17	22	39	6
21:00-22:00	21	23	44	4
22:00-23:00	1	3	4	2
23:00-24:00				

Comments

No PSV's or pedal cycles visited the site during this survey.

Superseded

Site reference:FI-06-D-02

Survey date: 22/03/16

Day of week: Tuesday

Vehicles surveyed: OGV

Data proportions in %

OGV (1)75

OGV (2)25

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 4	Dep 4	Totals 8	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	1	0	1	(1)
12:00-13:00	2	2	4	(1)
13:00-14:00	1	2	3	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site reference:FI-06-D-02

Survey date: 22/03/16

Day of week: Tuesday

Vehicles surveyed: Taxis

Time	Arr 4	Dep 4	Totals 8	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	1	1	2	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	1	1	2	(0)
17:00-18:00	1	1	2	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	1	0	1	(1)
20:00-21:00	0	1	1	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site reference:FI-06-D-02

Survey date: 22/03/16

Day of week: Tuesday

Vehicles surveyed: Cars

Time	Arr 270	Dep 270	Totals 540	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	2	1	3	(1)
11:00-12:00	14	12	26	(3)
12:00-13:00	27	16	43	(14)
13:00-14:00	24	33	57	(5)
14:00-15:00	19	19	38	(5)
15:00-16:00	18	15	33	(8)
16:00-17:00	28	29	57	(7)
17:00-18:00	27	29	56	(5)
18:00-19:00	39	30	69	(14)
19:00-20:00	34	40	74	(8)
20:00-21:00	17	21	38	(4)
21:00-22:00	20	22	42	(2)
22:00-23:00	1	3	4	(0)
23:00-24:00				

Superseded

Site reference:FI-06-D-02

Survey date: 22/03/16

Day of week: Tuesday

Vehicles surveyed: LGV

Time	Arr 29	Dep 29	Totals 58	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	1	0	1	(1)
12:00-13:00	12	9	21	(4)
13:00-14:00	6	6	12	(4)
14:00-15:00	0	3	3	(1)
15:00-16:00	2	3	5	(0)
16:00-17:00	3	2	5	(1)
17:00-18:00	0	0	0	(1)
18:00-19:00	1	2	3	(0)
19:00-20:00	3	3	6	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	1	1	2	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site reference:FI-06-D-02

Survey date: 22/03/16

Day of week: Tuesday

Vehicles surveyed: Motor Cycles

Time	Arr 1	Dep 1	Totals 2	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	1	1	2	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00				

Superseded

Site Reference:

LN-06-D-01

Created:

Version: 7.6.4 02/08/19

Latitude/Longitude:

53.22725, -0.55105

Land Use Type:

06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

Region/Area

EAST MIDLANDS/LINCOLNSHIRE

Description:

MCDONALD'S

Street:

RUSTON WAY

District:

Town:

LINCOLN

Post Code:

LN6 7FS

Planning Authority:

CITY OF LINCOLN COUNCIL

Location:

Edge of Town Centre

Location Sub Category:

Built-Up Zone

Use Class:

Not Known

Population within 500m:

4501

Population within 1 Mile:

20,001 to 25,000

Population within 5 Miles:

125,001 to 250,000

Car ownership within 5 Miles:

1.1 to 1.5

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	161	66	227
Monday-Friday	0700-1000	39	14	53
Monday-Friday	1600-1900	45	13	58
Saturday	0700-1900	123	63	186
Sunday	0700-1900	16	48	64

Is site associated with a travel plan:

No

If not, are there any plans to implement a Travel Plan in the future?

No

Is survey data available before the implementation of the Travel Plan?

Is the location of the site hilly or flat:

Flat

Urban Regeneration:

No

Gross floor area

435 sqm

Total Employees

37

No. of developments for this Site:

1

No. of survey Days for this Site:

1

Comments

This site is in the New Boultham area of Lincoln, which is just to the west of the city centre. It is surrounded by a mix of retail, commercial and student accomodation land uses. It is on a major roundabout that connects north and south Lincoln via Brayford Way Bridge. There is one access point on Ruston Way for all modes.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes
5. If yes to question 3, are there at least 2 buses (or trams) per hour (per direction between 0700 and 1900) with routes serving significant areas of population within a 5 kilometre radius? (Mon-Sat): Yes
6. If yes to question 5, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Lincoln Bus Station	4	13
Lincoln Bus Station	2	16

Superseded

Rail accessibility

7. Is there at least one railway station within 1 kilometre radius of the site?: Yes
8. If yes to question 7, is pedestrian access to the station satisfactory?: Yes

11. Please enter general comments/views about the relevance, quality and importance of public transport services relating to this development.

In addition to the individual bus services shown there are two separate hourly services available to Lincoln Bus Station, the journey times being 15 minutes and 17 minutes respectively. The closest bus stop is on Rope Walk. Lincoln train station is 740 metres to the east of the site. There are hourly rail services available to Peterborough (76 minutes journey time) and Nottingham (53 minutes journey time).

Design features encouraging non-car modes

12. Pedestrians

There are local pavements and crossings present.

13. Pedal cycles

The site is close to designated cycle highways.

14. Public transport

There is local access to local bus and rail services.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2019
Nearest Primary School	1.3 kilometres
Nearest Secondary School	2.0 kilometres
Nearest Local Shop/Corner Shop	0.6 kilometres
Nearest Main Supermarket	0.9 kilometres
Nearest Doctors Surgery	1.0 kilometres
Nearest Hospital with Minor Injuries/A & E	3.6 kilometres
Nearest Sports/Leisure Centre	1.1 kilometres

Census Data	
Year of Census	2011
Census Output Area/Data Zone	E00173634
Number of people employed within Census Output Area	172
Number of households within Census Output Area	146
Number of people living within Census Output Area	1591
Area of Census Output Area (hectares)	34.72
Population density within Census Output Area (per hectare)	45.82

Superseded

Site reference:

LN-06-D-01

Trade name:

MCDONALD'S

Site area (h/a):

0.32

Gross floor area (sqm)

435

GFA not in use (sqm)

0

Open since

2012

Total Employees

37

Full Time Employees

12 32%

Part Time Employees

25 68%

Approximate % of total employees working

standard 9-5 hours or similar

0%

GFA per employee

17.400

Number of Seats

165

Name of nearest site

BURGER KING

Distance to nearest similar site

0.6 Km

OPENING TIMES (24 Hour format)

Mon to Thurs

00:00 to 24:00

Friday

00:00 to 24:00

Saturday

00:00 to 24:00

Sunday

00:00 to 24:00

Superseded

On-Site parking

Total no. of parking spaces 36
Parking Spaces Per 100m2 GFA 8.276

Number of spaces

Employee 0
Disabled 2
Visitor/Customer 34
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Parent & Toddler 0
Motorcycle spaces 0
Electronic Vehicle Charging Points 0

Parking charges No

Comments about the management of the site car park, along with enforcement measures

There is no obvious parking enforcement at the site, with access to the site car park being unrestricted.

Site parking surface or non-surface (multi-storey/underground)
Surface

Types of servicing vehicle parking taking place

on-site (internal, within specified bays or otherwise)
Yes
off-site (on-street, in designated loading/servicing bays)
No
off-site (in restricted areas e.g. double yellow lines)
No

Off-Site parking details

Is there off-site parking available
Yes
Off-Site parking included in the counts
Yes
Free On-Street parking available nearby
Yes
If yes, considered easy to find a space
No
If prepared to pay, easy to find somewhere to park off-site all day
Yes

Parking restrictions

Area subject to parking restrictions (controlled parking zone - CPZ)
No

Off-Street parking

Off-Street parking available Yes, Public Off-Street Parking is Available
Approx. available spaces 2000
Parking located within a control parking zone (CPZ)
No
Charges for this Off-Street parking
Yes, All Day
Charge amount 150
Charge period Hour

Park & Ride

Park & Ride Type Facility providing relevant means of accessing the site
No

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Survey type:Manual Count

AM weather:Mild and Cloudy

PM weather:Mild and Clear

Initial car park occupancy:25

Final car park occupancy:5

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity106% (36 On-Site Spaces)

Data proportions in %

Motor cars91

Motor cycles1

Public service0

Light goods8

OGV (1)0

OGV (2)0

Taxis0

Servicing Vehicles count recordedNo

Time	Arr 1340	Dep 1360	Totals 2700	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				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	87	91	178	21
11:00-12:00	98	102	200	17
12:00-13:00	135	115	250	37
13:00-14:00	108	114	222	31
14:00-15:00	87	87	174	31
15:00-16:00	86	92	178	25
16:00-17:00	113	115	228	23
17:00-18:00	107	97	204	33
18:00-19:00	112	114	226	31
19:00-20:00	123	116	239	38
20:00-21:00	75	109	184	4
21:00-22:00	86	77	163	13
22:00-23:00	78	75	153	16
23:00-24:00	45	56	101	5

Comments

No PSV's visited the site during this survey.
The maximum parking accumulation exceeding the number of parking spaces available can be explained by the fact that off-site parking was also included in the survey.

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Vehicles surveyed: OGV

Data proportions in %

OGV (1)67

OGV (2)33

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 3	Dep 3	Totals 6	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	2	2	4	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	1	1	2	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Vehicles surveyed: Taxis

Time	Arr 1	Dep 1	Totals 2	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	1	1	2	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Vehicles surveyed: Cars

Time	Arr 1217	Dep 1232	Totals 2449	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	73	77	150	(-4)
11:00-12:00	83	83	166	(-4)
12:00-13:00	116	100	216	(12)
13:00-14:00	91	90	181	(13)
14:00-15:00	78	78	156	(13)
15:00-16:00	74	85	159	(2)
16:00-17:00	107	106	213	(3)
17:00-18:00	102	93	195	(12)
18:00-19:00	107	110	217	(9)
19:00-20:00	116	109	225	(16)
20:00-21:00	72	103	175	(-15)
21:00-22:00	81	74	155	(-8)
22:00-23:00	75	72	147	(-5)
23:00-24:00	42	52	94	(-15)

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Vehicles surveyed: LGV

Time	Arr 112	Dep 115	Totals 227	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	13	11	24	(2)
11:00-12:00	15	19	34	(-2)
12:00-13:00	19	15	34	(2)
13:00-14:00	14	19	33	(-3)
14:00-15:00	9	9	18	(-3)
15:00-16:00	11	7	18	(1)
16:00-17:00	4	8	12	(-3)
17:00-18:00	5	4	9	(-2)
18:00-19:00	4	3	7	(-1)
19:00-20:00	7	7	14	(-1)
20:00-21:00	3	6	9	(-4)
21:00-22:00	4	3	7	(-3)
22:00-23:00	2	0	2	(-1)
23:00-24:00	2	4	6	(-3)

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Vehicles surveyed: Motor Cycles

Time	Arr 7	Dep 9	Totals 16	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	1	3	4	(-2)
11:00-12:00	0	0	0	(-2)
12:00-13:00	0	0	0	(-2)
13:00-14:00	0	2	2	(-4)
14:00-15:00	0	0	0	(-4)
15:00-16:00	1	0	1	(-3)
16:00-17:00	1	0	1	(-2)
17:00-18:00	0	0	0	(-2)
18:00-19:00	1	1	2	(-2)
19:00-20:00	0	0	0	(-2)
20:00-21:00	0	0	0	(-2)
21:00-22:00	1	0	1	(-1)
22:00-23:00	1	3	4	(-3)
23:00-24:00	1	0	1	(-2)

Superseded

Site reference:LN-06-D-01

Survey date: 28/06/19

Day of week: Friday

Vehicles surveyed: Cycles

Time	Arr 6	Dep 6	Totals 12	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00				
08:00-09:00				
09:00-10:00				
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	4	0	4	(4)
18:00-19:00	1	5	6	(0)
19:00-20:00	1	0	1	(1)
20:00-21:00	0	0	0	(1)
21:00-22:00	0	1	1	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site Reference:	CE-06-D-01
Created:	Version: 7.2.4 06/11/15
Latitude/Longitude:	52.40530, -4.06551
Land Use Type:	06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
Region/Area	WALES/CEREDIGION
Description:	MCDONALD'S
Street:	FFORDD PARC Y LLYN
District:	
Town:	ABERYSTWYTH
Post Code:	SY23 3TL
Planning Authority:	
Location:	Edge of Town
Location Sub Category:	Retail Zone
Use Class:	Not Known
Population within 500m:	1890
Population within 1 Mile:	10,001 to 15,000
Population within 5 Miles:	25,001 to 50,000
Car ownership within 5 Miles:	1.1 to 1.5

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	122		122
Monday-Friday	0700-1000	30		30
Monday-Friday	1600-1900	30		30
Saturday	0700-1900	92		92
Sunday	0700-1900	30		30

Is site associated with a travel plan:	No
If not, are there any plans to implement a Travel Plan in the future?	No
Is survey data available before the implementation of the Travel Plan?	
Is the location of the site hilly or flat:	Flat
Urban Regeneration:	No
Gross floor area	350 sqm
Total Employees	87
No. of developments for this Site:	1
No. of survey Days for this Site:	1

Comments

This site is located next to the the Parc-Y-Llyn Retail Park. It is situated at the south-eastern edge of Aberystwyth, with routes heading north-west towards the centre of town, north-east towards the A44, and south-west towards another main route.

The site has sports fields to the south and a park to the east. There is some light residential development at the northern boundary, with Ceredigion County Council offices just north-west of the site. The main retail park is across the road to the west.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes

11. Please enter general comments/views about the relevance, quality and importance of public transport services relating to this development.

There are numerous low-frequency bus services available locally, with the most frequent being a circular route around Aberystwyth averaging 1.17 buses per hour.

Design features encouraging non-car modes

Superseded

12. Pedestrians
Pavements and crossing points are available.

13. Pedal cycles
Cycles can be locked up at the site.

14. Public transport
The site is in proximity to a local bus stop.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2015
Nearest Primary School	1.0 kilometres
Nearest Secondary School	1.3 kilometres
Nearest Local Shop/Corner Shop	1.0 kilometres
Nearest Main Supermarket	0.3 kilometres
Nearest Doctors Surgery	0.5 kilometres
Nearest Hospital with Minor Injuries/A & E	2.9 kilometres
Nearest Sports/Leisure Centre	1.3 kilometres

Census Data	
Year of Census	2011
Census Output Area/Data Zone	W00010066
Number of people employed within Census Output Area	148
Number of households within Census Output Area	129
Number of people living within Census Output Area	292
Area of Census Output Area (hectares)	19.00
Population density within Census Output Area (per hectare)	15.36

Superseded

Site reference:CE-06-D-01

Trade name:MCDONALD'S

Site area (h/a):0.43

Gross floor area (sqm)350

GFA not in use (sqm)0

Open since1998

Total Employees87

Full Time Employees50 57%

Part Time Employees37 43%

Approximate % of total employees working standard 9-5 hours or similar0%

GFA per employee5.072

Name of nearest siteMCDONALD'S

Distance to nearest similar site68.0 Km

OPENING TIMES (24 Hour format)

Mon to Thurs06:00 to 23:00

Friday06:00 to 24:00

Saturday00:00 to 24:00

Sunday05:00 to 23:00

Comments

There are 110 seats within the restaurant.

Superseded

On-Site parking

Total no. of parking spaces 46
Parking Spaces Per 100m2 GFA 13.143

Number of spaces

Employee 0
Disabled 2
Visitor/Customer 44
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Parent & Toddler 0
Motorcycle spaces 0
Electronic Vehicle Charging Points 0

Parking charges No
Comments about the management of the site car park, along with enforcement measures
Security is present at the site at busy times.

Site parking surface or non-surface (multi-storey/underground)
Surface

Types of servicing vehicle parking taking place

on-site (internal, within specified bays or otherwise)
Yes
off-site (on-street, in designated loading/servicing bays)
No
off-site (in restricted areas e.g. double yellow lines)
No

Off-Site parking details

Is there off-site parking available
Yes
Off-Site parking included in the counts
No
Free On-Street parking available nearby
Yes
If yes, considered easy to find a space
Yes
If prepared to pay, easy to find somewhere to park off-site all day
Yes

Parking restrictions

Area subject to parking restrictions (controlled parking zone - CPZ)
No

Off-Street parking

Off-Street parking available Yes, Public Off-Street Parking is Available
Approx. available spaces 1377
Parking located within a control parking zone (CPZ)
No
Charges for this Off-Street parking
Yes, All Day
Charge amount 100
Charge period Hour

Park & Ride

Park & Ride Type Facility providing relevant means of accessing the site
No

Superseded

Site reference:CE-06-D-01

Survey date: 09/05/15

Day of week: Saturday

Survey type:Manual Count

AM weather:Mild and Cloudy

PM weather:Mild and Cloudy

Initial car park occupancy:0

Final car park occupancy:15

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity126% (46 On-Site Spaces)

Data proportions in %

Motor cars91

Motor cycles1

Public service0

Light goods8

OGV (1)0

OGV (2)0

Taxis0

Servicing Vehicles count recordedNo

Time	Arr 1476	Dep 1461	Totals 2937	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	5	3	8	2
06:00-07:00	27	18	45	11
07:00-08:00	32	24	56	19
08:00-09:00	54	50	104	23
09:00-10:00	102	87	189	38
10:00-11:00	96	100	196	34
11:00-12:00	117	101	218	50
12:00-13:00	153	146	299	57
13:00-14:00	129	148	277	38
14:00-15:00	114	94	208	58
15:00-16:00	87	97	184	48
16:00-17:00	85	96	181	37
17:00-18:00	76	77	153	36
18:00-19:00	104	96	200	44
19:00-20:00	85	94	179	35
20:00-21:00	61	63	124	33
21:00-22:00	59	64	123	28
22:00-23:00	46	54	100	20
23:00-24:00	44	49	93	15

Comments

No PSV's or taxis visited the site during this survey.

The maximum parking accumulation exceeding the number of parking spaces available can be explained by the fact that vehicles often queue up within the drive-through.

OGV's visiting the site park in the general parking area, as there are no specific OGV parking spaces or loading bays.

Superseded

Site reference:CE-06-D-01

Survey date: 09/05/15

Day of week: Saturday

Vehicles surveyed: OGV

Data proportions in %

OGV (1)67

OGV (2)33

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 3	Dep 3	Totals 6	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00	0	0	0	(0)
06:00-07:00	0	0	0	(0)
07:00-08:00	0	0	0	(0)
08:00-09:00	1	0	1	(1)
09:00-10:00	0	1	1	(0)
10:00-11:00	2	2	4	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:CE-06-D-01

Survey date: 09/05/15

Day of week: Saturday

Vehicles surveyed: Cars

Time	Arr 1342	Dep 1327	Totals 2669	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00	3	2	5	(1)
06:00-07:00	21	14	35	(8)
07:00-08:00	27	19	46	(16)
08:00-09:00	37	35	72	(18)
09:00-10:00	88	70	158	(36)
10:00-11:00	82	84	166	(34)
11:00-12:00	106	94	200	(46)
12:00-13:00	140	133	273	(53)
13:00-14:00	119	137	256	(35)
14:00-15:00	112	89	201	(58)
15:00-16:00	79	91	170	(46)
16:00-17:00	82	89	171	(39)
17:00-18:00	65	74	139	(30)
18:00-19:00	96	88	184	(38)
19:00-20:00	83	88	171	(33)
20:00-21:00	58	60	118	(31)
21:00-22:00	56	62	118	(25)
22:00-23:00	45	50	95	(20)
23:00-24:00	43	48	91	(15)

Superseded

Site reference:CE-06-D-01

Survey date: 09/05/15

Day of week: Saturday

Vehicles surveyed: LGV

Time	Arr 116	Dep 115	Totals 231	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00	2	1	3	(1)
06:00-07:00	6	4	10	(3)
07:00-08:00	5	5	10	(3)
08:00-09:00	16	15	31	(4)
09:00-10:00	14	16	30	(2)
10:00-11:00	12	14	26	(0)
11:00-12:00	11	7	18	(4)
12:00-13:00	13	13	26	(4)
13:00-14:00	8	9	17	(3)
14:00-15:00	2	5	7	(0)
15:00-16:00	8	6	14	(2)
16:00-17:00	3	5	8	(0)
17:00-18:00	3	3	6	(0)
18:00-19:00	3	1	4	(2)
19:00-20:00	2	1	3	(3)
20:00-21:00	3	3	6	(3)
21:00-22:00	3	2	5	(4)
22:00-23:00	1	4	5	(1)
23:00-24:00	1	1	2	(1)

Superseded

Site reference:CE-06-D-01

Survey date: 09/05/15

Day of week: Saturday

Vehicles surveyed: Motor Cycles

Time	Arr 15	Dep 16	Totals 31	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00	0	0	0	(0)
06:00-07:00	0	0	0	(0)
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	2	2	4	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	2	2	(-2)
17:00-18:00	8	0	8	(6)
18:00-19:00	5	7	12	(4)
19:00-20:00	0	5	5	(-1)
20:00-21:00	0	0	0	(-1)
21:00-22:00	0	0	0	(-1)
22:00-23:00	0	0	0	(-1)
23:00-24:00	0	0	0	(-1)

Superseded

Site reference:CE-06-D-01

Survey date: 09/05/15

Day of week: Saturday

Vehicles surveyed: Cycles

Time	Arr 2	Dep 2	Totals 4	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00	0	0	0	(0)
06:00-07:00	0	0	0	(0)
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	2	2	4	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site Reference:
Created:
Latitude/Longitude:
Land Use Type:
Region/Area

DV-06-D-01
Version: 7.6.3 27/06/19
50.48279, -3.54916
06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH
SOUTH WEST/DEVON

Description:
Street:
District:
Town:
Post Code:
Planning Authority:

MCDONALD'S
HELE ROAD

TORQUAY
TQ2 7PY
TORBAY COUNCIL

Location:
Location Sub Category:
Use Class:

Suburban Area (PPS6 Out of Centre)
Retail Zone
Not Known

Population within 500m:
Population within 1 Mile:
Population within 5 Miles:
Car ownership within 5 Miles:

1091
20,001 to 25,000
125,001 to 250,000
1.1 to 1.5

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	175		175
Monday-Friday	0700-1000	42		42
Monday-Friday	1600-1900	44		44
Saturday	0700-1900	158		158
Sunday	0700-1900	90		90

Is site associated with a travel plan:
If not, are there any plans to implement a Travel Plan in the future?
Is survey data available before the implementation of the Travel Plan?
Is the location of the site hilly or flat:
Urban Regeneration:

No
No

Flat
No

Gross floor area
Total Employees

447 sqm
40

No. of developments for this Site:
No. of survey Days for this Site:

1
1

Comments

This site is located on the B3199, at its junction with the A3022 in north west Torquay. The A3022 leads south towards the centre of the town and also north to the A380.
The site has one vehicle access.
A retail park is adjacent to the site, and to the immediate south there is a DIY superstore, a few other retail units and several small industrial estates. To the north of the site are more retail units mixed in with several industrial units. To the west, across the A3022, is a large hospital.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
5. If yes to question 3, are there at least 2 buses (or trams) per hour (per direction between 0700 and 1900) with routes serving significant areas of population within a 5 kilometre radius? (Mon-Sat): Yes
6. If yes to question 5, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Brixham	6	58

Superseded

Design features encouraging non-car modes

12. Pedestrians
None

13. Pedal cycles
None

14. Public transport
There are several bus stops within close proximity to the site.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2019
Nearest Primary School	1.0 kilometres
Nearest Secondary School	1.6 kilometres
Nearest Local Shop/Corner Shop	0.5 kilometres
Nearest Main Supermarket	0.6 kilometres
Nearest Doctors Surgery	0.9 kilometres
Nearest Hospital with Minor Injuries/A & E	1.3 kilometres
Nearest Sports/Leisure Centre	0.7 kilometres

Census Data	
Year of Census	2011
Census Output Area/Data Zone	E00077095
Number of people employed within Census Output Area	201
Number of households within Census Output Area	150
Number of people living within Census Output Area	354
Area of Census Output Area (hectares)	30.75
Population density within Census Output Area (per hectare)	11.51

Superseded

Site reference:DV-06-D-01

Trade name:MCDONALD'S

Site area (h/a):0.22

Gross floor area (sqm)447

GFA not in use (sqm)0

Open since2001

Total Employees40

Full Time Employees7 17%

Part Time Employees33 83%

Approximate % of total employees working standard 9-5 hours or similar0%

GFA per employee18.625

Number of Seats90

Name of nearest siteMCDONALD'S

Distance to nearest similar site3.1 Km

OPENING TIMES (24 Hour format)

Mon to Thurs00:00 to 24:00

Friday00:00 to 24:00

Saturday00:00 to 24:00

Sunday00:00 to 24:00

Comments

The site is open 24 hours per day, seven days per week.

Superseded

On-Site parking
Total no. of parking spaces 28
Parking Spaces Per 100m2 GFA 6.264

Number of spaces
Employee 0
Disabled 2
Visitor/Customer 26
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Parent & Toddler 0
Motorcycle spaces 0
Electronic Vehicle Charging Points 0

Parking charges No
Comments about the management of the site car park, along with enforcement measures

The car park is managed by UKCPS. There are is a maximum stay of 3 hours, after which there is a £120 fine, or £60 if paid within 10 days.

Site parking surface or non-surface (multi-storey/underground)
Surface

General Comments on Parking
Of the 26 visitor/customer spaces, 3 are in a waiting area.
The actual drive through can hold around an extra 15 cars before the queue reaches beyond the site boundary onto the access road.

Types of servicing vehicle parking taking place
on-site (internal, within specified bays or otherwise) Yes
off-site (on-street, in designated loading/servicing bays) No
off-site (in restricted areas e.g. double yellow lines) No

Off-Site parking details
Is there off-site parking available Yes
Off-Site parking included in the counts Yes
Free On-Street parking available nearby Yes
If yes, considered easy to find a space Yes
If prepared to pay, easy to find somewhere to park off-site all day No

Parking restrictions
Area subject to parking restrictions (controlled parking zone - CPZ) No

Off-Street parking
Off-Street parking available Yes, Public Off-Street Parking is Available
Approx. available spaces 180
Parking located within a control parking zone (CPZ) No
Charges for this Off-Street parking No

Park & Ride
Park & Ride Type Facility providing relevant means of accessing the site No

Superseded

Site reference:DV-06-D-01

Survey date: 30/03/19

Day of week: Saturday

Survey type:Manual Count

AM weather:Mild and Cloudy

PM weather:Mild and Cloudy

Initial car park occupancy:8

Final car park occupancy:9

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity118% (28 On-Site Spaces)

Data proportions in %

Motor cars92

Motor cycles1

Public service0

Light goods6

OGV (1)0

OGV (2)0

Taxis1

Servicing Vehicles count recordedNo

Time	Arr 1887	Dep 1886	Totals 3773	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				
07:00-08:00	85	81	166	12
08:00-09:00	100	100	200	12
09:00-10:00	122	109	231	25
10:00-11:00	89	105	194	9
11:00-12:00	117	106	223	20
12:00-13:00	158	145	303	33
13:00-14:00	147	150	297	30
14:00-15:00	137	148	285	19
15:00-16:00	111	120	231	10
16:00-17:00	139	128	267	21
17:00-18:00	136	143	279	14
18:00-19:00	134	133	267	15
19:00-20:00	126	134	260	7
20:00-21:00	94	97	191	4
21:00-22:00	87	79	166	12
22:00-23:00	52	59	111	5
23:00-24:00	53	49	102	9

Comments

No PSVs either arrived at or departed from the site during this survey.

At least seven of the initial car park occupants were cars.

At least eight of the final car park occupants were cars.

Superseded

Site reference: DV-06-D-01 Survey date: 30/03/19 Day of week: Saturday

Vehicles surveyed: OGV

Data proportions in % OGV (1) 100 OGV (2) 0

1 occupant per OGV is assumed, and included in the vehicle occupants count

Time	Arr 5	Dep 5	Totals 10	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	1	1	2	(0)
08:00-09:00	2	2	4	(0)
09:00-10:00	1	1	2	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	1	1	2	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:DV-06-D-01

Survey date: 30/03/19

Day of week: Saturday

Vehicles surveyed: Taxis

Time	Arr 11	Dep 11	Totals 22	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	1	1	2	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	3	3	6	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	1	1	2	(0)
12:00-13:00	1	1	2	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	2	1	3	(1)
18:00-19:00	1	2	3	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	1	1	2	(0)
22:00-23:00	1	1	2	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:DV-06-D-01

Survey date: 30/03/19

Day of week: Saturday

Vehicles surveyed: Cars

Time	Arr 1734	Dep 1733	Totals 3467	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	71	68	139	(3)
08:00-09:00	81	85	166	(-1)
09:00-10:00	110	95	205	(14)
10:00-11:00	82	97	179	(-1)
11:00-12:00	106	98	204	(7)
12:00-13:00	148	132	280	(23)
13:00-14:00	138	146	284	(15)
14:00-15:00	128	134	262	(9)
15:00-16:00	105	116	221	(-2)
16:00-17:00	132	119	251	(11)
17:00-18:00	120	131	251	(0)
18:00-19:00	127	126	253	(1)
19:00-20:00	113	121	234	(-7)
20:00-21:00	92	91	183	(-6)
21:00-22:00	84	76	160	(2)
22:00-23:00	47	53	100	(-4)
23:00-24:00	50	45	95	(1)

Superseded

Site reference:DV-06-D-01

Survey date: 30/03/19

Day of week: Saturday

Vehicles surveyed: LGV

Time	Arr 113	Dep 113	Totals 226	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	12	11	23	(1)
08:00-09:00	15	12	27	(4)
09:00-10:00	7	8	15	(3)
10:00-11:00	5	7	12	(1)
11:00-12:00	9	6	15	(4)
12:00-13:00	8	10	18	(2)
13:00-14:00	6	3	9	(5)
14:00-15:00	8	12	20	(1)
15:00-16:00	5	3	8	(3)
16:00-17:00	5	6	11	(2)
17:00-18:00	12	9	21	(5)
18:00-19:00	5	4	9	(6)
19:00-20:00	7	11	18	(2)
20:00-21:00	2	2	4	(2)
21:00-22:00	2	2	4	(2)
22:00-23:00	4	5	9	(1)
23:00-24:00	1	2	3	(0)

Superseded

Site reference:DV-06-D-01

Survey date: 30/03/19

Day of week: Saturday

Vehicles surveyed: Motor Cycles

Time	Arr 24	Dep 24	Totals 48	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	2	1	3	(1)
09:00-10:00	1	2	3	(0)
10:00-11:00	2	1	3	(1)
11:00-12:00	1	1	2	(1)
12:00-13:00	1	2	3	(0)
13:00-14:00	2	0	2	(2)
14:00-15:00	1	2	3	(1)
15:00-16:00	1	1	2	(1)
16:00-17:00	2	3	5	(0)
17:00-18:00	2	2	4	(0)
18:00-19:00	1	1	2	(0)
19:00-20:00	6	2	8	(4)
20:00-21:00	0	4	4	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	2	2	4	(0)

Superseded

Site reference:DV-06-D-01

Survey date: 30/03/19

Day of week: Saturday

Vehicles surveyed: Cycles

Time	Arr 11	Dep 11	Totals 22	Accumulation
00:00-01:00				
01:00-02:00				
02:00-03:00				
03:00-04:00				
04:00-05:00				
05:00-06:00				
06:00-07:00				
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	6	4	10	(2)
16:00-17:00	1	1	2	(2)
17:00-18:00	3	3	6	(2)
18:00-19:00	0	2	2	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	1	0	1	(1)
21:00-22:00	0	1	1	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site Reference:GS-06-D-01

Created:Version: 7.8.4 22/07/21

Latitude/Longitude:51.80501, -2.28978

Land Use Type:06 - HOTEL, FOOD & DRINK/D - FAST FOOD - DRIVE THROUGH

Region/Area:SOUTH WEST/GLOUCESTERSHIRE

Description:MCDONALD'S

Street:BRISTOL ROAD

District:HARDWICKE

Town:GLOUCESTER

Post Code:GL2 2RQ

Planning Authority:STROUD DISTRICT C.

Location:Edge of Town

Location Sub Category:Out of Town

Use Class:Not Known

Population within 500m:100

Population within 1 Mile:1,001 to 5,000

Population within 5 Miles:125,001 to 250,000

Car ownership within 5 Miles:1.1 to 1.5

Public Transport Provision Summary

Day	Period	Total buses/trams within 400m	Total Trains within 1000m	Total Services
Monday-Friday	0700-1900	52		52
Monday-Friday	0700-1000	10		10
Monday-Friday	1600-1900	12		12
Saturday	0700-1900	52		52
Sunday	0700-1900	28		28

Is site associated with a travel plan:No

If not, are there any plans to implement a Travel Plan in the future?No

Is survey data available before the implementation of the Travel Plan?

Is the location of the site hilly or flat:Flat

Urban Regeneration:No

Covid-19 Restrictions:YesSurvey was undertaken at a time of Covid-19 restrictions

Gross floor area225 sqm

Total Employees100

No. of developments for this Site:1

No. of survey Days for this Site:1

Comments

This site is located at the south-western edge of Gloucester on Bristol Road, off the A38. Bristol Road heads north towards Gloucester town centre and south-west towards the B4008 and the M5. Local developments include a Costa drive through, various industrial units, a business park, a petrol filling station and an equestrian centre.

Bus (or tram) site accessibility

3. Is there at least 1 bus (or tram) stop within the site frontage or within 400m of the site frontage? : Yes
4. If yes to question 3, where it is necessary to cross a road between the development and the stop, is there a conveniently placed crossing facility? : Yes
5. If yes to question 3, are there at least 2 buses (or trams) per hour (per direction between 0700 and 1900) with routes serving significant areas of population within a 5 kilometre radius? (Mon-Sat): Yes
6. If yes to question 5, what are the service characteristics? (please complete the outline information below)

Destination (town/area)	Number per hour	Approx. journey time
Gloucester City Centre	2	30

Superseded

Design features encouraging non-car modes

12. Pedestrians
There is a new shared cycle and pedestrian route within close proximity to the site.
13. Pedal cycles
As above.
14. Public transport
There are a couple of bus stops within 400 metres of the site.

Design features encouraging non-car modes

Road Network Distance to Local Developments	
Year of Analysis	2021
Nearest Primary School	2.8 kilometres
Nearest Secondary School	3.1 kilometres
Nearest Local Shop/Corner Shop	0.2 kilometres
Nearest Main Supermarket	2.7 kilometres
Nearest Doctors Surgery	2.3 kilometres
Nearest Hospital with Minor Injuries/A & E	9.9 kilometres
Nearest Sports/Leisure Centre	6.7 kilometres

Census Data	
Year of Census	2011
Census Output Area/Data Zone	E00113765
Number of people employed within Census Output Area	202
Number of households within Census Output Area	165
Number of people living within Census Output Area	410
Area of Census Output Area (hectares)	218.70
Population density within Census Output Area (per hectare)	1.90

Superseded

Site reference:

Trade name:

GS-06-D-01
MCDONALD'S

Site area (h/a):

Gross floor area (sqm)

GFA not in use (sqm)

0.26
225
0

Open since

Total Employees

Full Time Employees

Part Time Employees

2002
100
40 40%
60 60%

Approximate % of total employees working
standard 9-5 hours or similar

GFA per employee

Number of Seats

Name of nearest site

Distance to nearest similar site

0%
3.214
60
MCDONALD'S
4.4 Km

OPENING TIMES (24 Hour format)

Mon to Thurs

Friday

Saturday

Sunday

00:00 to 24:00

00:00 to 24:00

00:00 to 24:00

00:00 to 24:00

Comments

The site is open 24 hours per day, seven days per week.

Superseded

On-Site parking
Total no. of parking spaces 26
Parking Spaces Per 100m2 GFA 11.556

Number of spaces
Employee 0
Disabled 2
Visitor/Customer 24
OGV parking bays 0
Cycle racks 0
OGV loading bays 0
Parent & Toddler 0
Motorcycle spaces 0
Electronic Vehicle Charging Points 0

Parking charges No
Comments about the management of the site car park, along with enforcement measures
There is no parking enforcement at this site.

Site parking surface or non-surface (multi-storey/underground)
Surface

General Comments on Parking
Four of the visitor/customer spaces are for Click & Serve and two of the spaces are for order collection.
The site was very busy on the day of the survey with the car park often full plus vehicles queueing internally and back to the site access.
The off-site off-street parking is limited to 30 minutes with a £100 penalty.

Types of servicing vehicle parking taking place
on-site (internal, within specified bays or otherwise) Yes
off-site (on-street, in designated loading/servicing bays) Yes
off-site (in restricted areas e.g. double yellow lines) No

Off-Site parking details
Is there off-site parking available Yes
Off-Site parking included in the counts No
Free On-Street parking available nearby No
If prepared to pay, easy to find somewhere to park off-site all day No

Parking restrictions
Area subject to parking restrictions (controlled parking zone - CPZ) No

Off-Street parking
Off-Street parking available Yes, Public Off-Street Parking is Available
Approx. available spaces 20
Parking located within a control parking zone (CPZ) No
Charges for this Off-Street parking No

Park & Ride
Park & Ride Type Facility providing relevant means of accessing the site No

Superseded

Site reference:GS-06-D-01

Survey date: 24/04/21

Day of week: Saturday

Survey type:Manual Count

AM weather:Mild and Clear

PM weather:Mild and Clear

Initial car park occupancy:11

Final car park occupancy:18

BRACKETED ACCUMULATION FIGURES ARE NOT ABSOLUTE

Parking Capacity138% (26 On-Site Spaces)

Data proportions in %

Motor cars90

Motor cycles0

Public service0

Light goods10

OGV (1)0

OGV (2)0

Taxis0

Covid-19 RestrictionsYes

Survey was undertaken at a time of Covid-19 restrictions

Servicing Vehicles count recordedNo

Time	Arr 1284	Dep 1277	Totals 2561	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	43	40	83	14
07:00-08:00	62	62	124	14
08:00-09:00	68	57	125	25
09:00-10:00	95	93	188	27
10:00-11:00	93	93	186	27
11:00-12:00	66	57	123	36
12:00-13:00	97	103	200	30
13:00-14:00	88	86	174	32
14:00-15:00	80	85	165	27
15:00-16:00	80	81	161	26
16:00-17:00	64	66	130	24
17:00-18:00	83	79	162	28
18:00-19:00	90	93	183	25
19:00-20:00	64	80	144	9
20:00-21:00	68	60	128	17
21:00-22:00	49	57	106	9
22:00-23:00	56	44	100	21
23:00-24:00	38	41	79	18

Comments

No OGV's or PSV's visited the site during this survey.

The maximum parking accumulation exceeding the number of on-site parking spaces is due to the site being very busy on the day of the survey with queues of vehicles to the site access.

At least two of the initial car park occupants were cars and at least one was an LGV.

At least nine of the final car park occupants were cars and at least one was an LGV.

Superseded

Site reference:GS-06-D-01

Survey date: 24/04/21

Day of week: Saturday

Vehicles surveyed: Taxis

Time	Arr 3	Dep 3	Totals 6	Accumulation
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	0	0	0	(0)
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	1	1	2	(0)
12:00-13:00	1	1	2	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	0	0	0	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	1	1	2	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:GS-06-D-01

Survey date: 24/04/21

Day of week: Saturday

Vehicles surveyed: Cars

Time	Arr 1149	Dep 1142	Totals 2291	Accumulation
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	31	29	60	(2)
07:00-08:00	52	50	102	(4)
08:00-09:00	56	47	103	(13)
09:00-10:00	81	80	161	(14)
10:00-11:00	78	76	154	(16)
11:00-12:00	59	50	109	(25)
12:00-13:00	90	97	187	(18)
13:00-14:00	78	77	155	(19)
14:00-15:00	74	78	152	(15)
15:00-16:00	75	77	152	(13)
16:00-17:00	57	61	118	(9)
17:00-18:00	78	71	149	(16)
18:00-19:00	80	86	166	(10)
19:00-20:00	60	72	132	(-2)
20:00-21:00	66	58	124	(6)
21:00-22:00	45	52	97	(-1)
22:00-23:00	53	41	94	(11)
23:00-24:00	36	40	76	(7)

Superseded

Site reference:GS-06-D-01

Survey date: 24/04/21

Day of week: Saturday

Vehicles surveyed: LGV

Time	Arr 128	Dep 128	Totals 256	Accumulation
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	12	11	23	(1)
07:00-08:00	9	11	20	(-1)
08:00-09:00	10	10	20	(-1)
09:00-10:00	14	11	25	(2)
10:00-11:00	15	17	32	(0)
11:00-12:00	6	6	12	(0)
12:00-13:00	6	5	11	(1)
13:00-14:00	10	9	19	(2)
14:00-15:00	6	7	13	(1)
15:00-16:00	5	4	9	(2)
16:00-17:00	7	5	12	(4)
17:00-18:00	5	8	13	(1)
18:00-19:00	9	6	15	(4)
19:00-20:00	4	8	12	(0)
20:00-21:00	1	1	2	(0)
21:00-22:00	4	5	9	(-1)
22:00-23:00	3	3	6	(-1)
23:00-24:00	2	1	3	(0)

Superseded

Site reference:GS-06-D-01

Survey date: 24/04/21

Day of week: Saturday

Vehicles surveyed: Motor Cycles

Time	Arr 4	Dep 4	Totals 8	Accumulation
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	0	0	0	(0)
07:00-08:00	1	1	2	(0)
08:00-09:00	2	0	2	(2)
09:00-10:00	0	2	2	(0)
10:00-11:00	0	0	0	(0)
11:00-12:00	0	0	0	(0)
12:00-13:00	0	0	0	(0)
13:00-14:00	0	0	0	(0)
14:00-15:00	0	0	0	(0)
15:00-16:00	0	0	0	(0)
16:00-17:00	0	0	0	(0)
17:00-18:00	0	0	0	(0)
18:00-19:00	1	1	2	(0)
19:00-20:00	0	0	0	(0)
20:00-21:00	0	0	0	(0)
21:00-22:00	0	0	0	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

Superseded

Site reference:GS-06-D-01

Survey date: 24/04/21

Day of week: Saturday

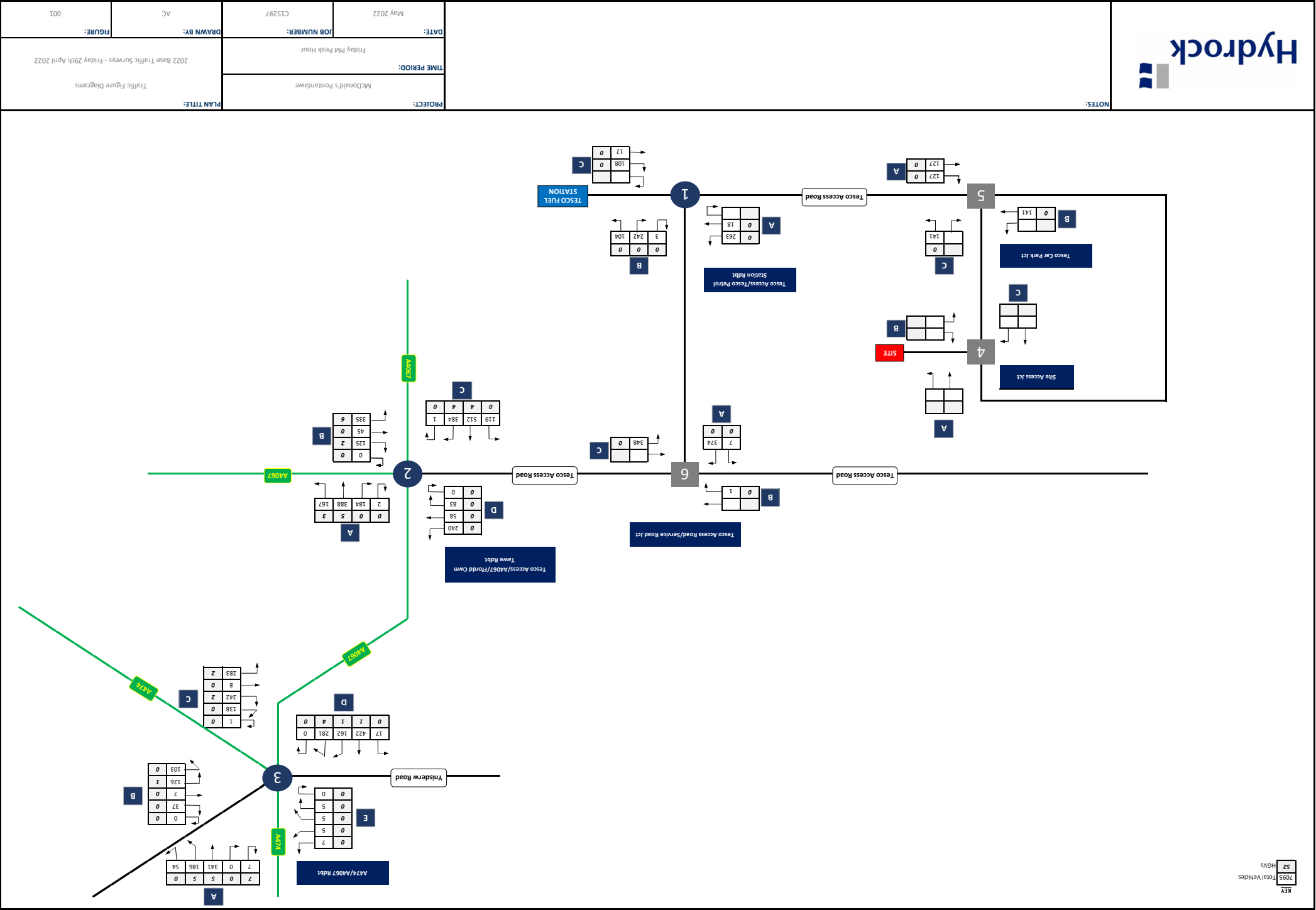
Vehicles surveyed: Cycles

Time	Arr 11	Dep 11	Totals 22	Accumulation
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	0	0	0	(0)
07:00-08:00	0	0	0	(0)
08:00-09:00	0	0	0	(0)
09:00-10:00	0	0	0	(0)
10:00-11:00	1	0	1	(1)
11:00-12:00	0	0	0	(1)
12:00-13:00	0	0	0	(1)
13:00-14:00	0	0	0	(1)
14:00-15:00	0	0	0	(1)
15:00-16:00	0	0	0	(1)
16:00-17:00	0	0	0	(1)
17:00-18:00	3	0	3	(4)
18:00-19:00	2	5	7	(1)
19:00-20:00	2	3	5	(0)
20:00-21:00	1	1	2	(0)
21:00-22:00	2	2	4	(0)
22:00-23:00	0	0	0	(0)
23:00-24:00	0	0	0	(0)

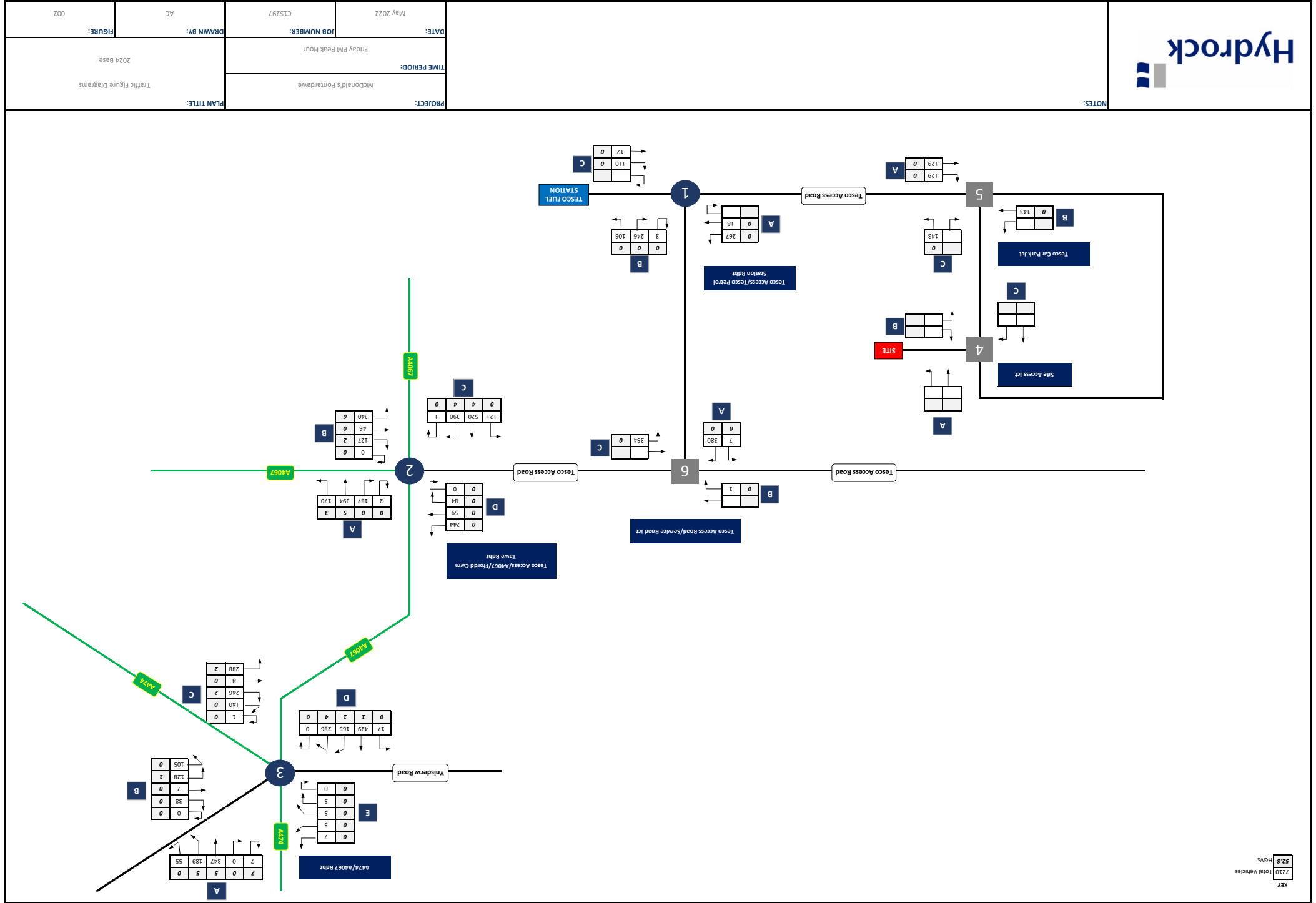
Superseded

Appendix I Traffic Flow Diagrams

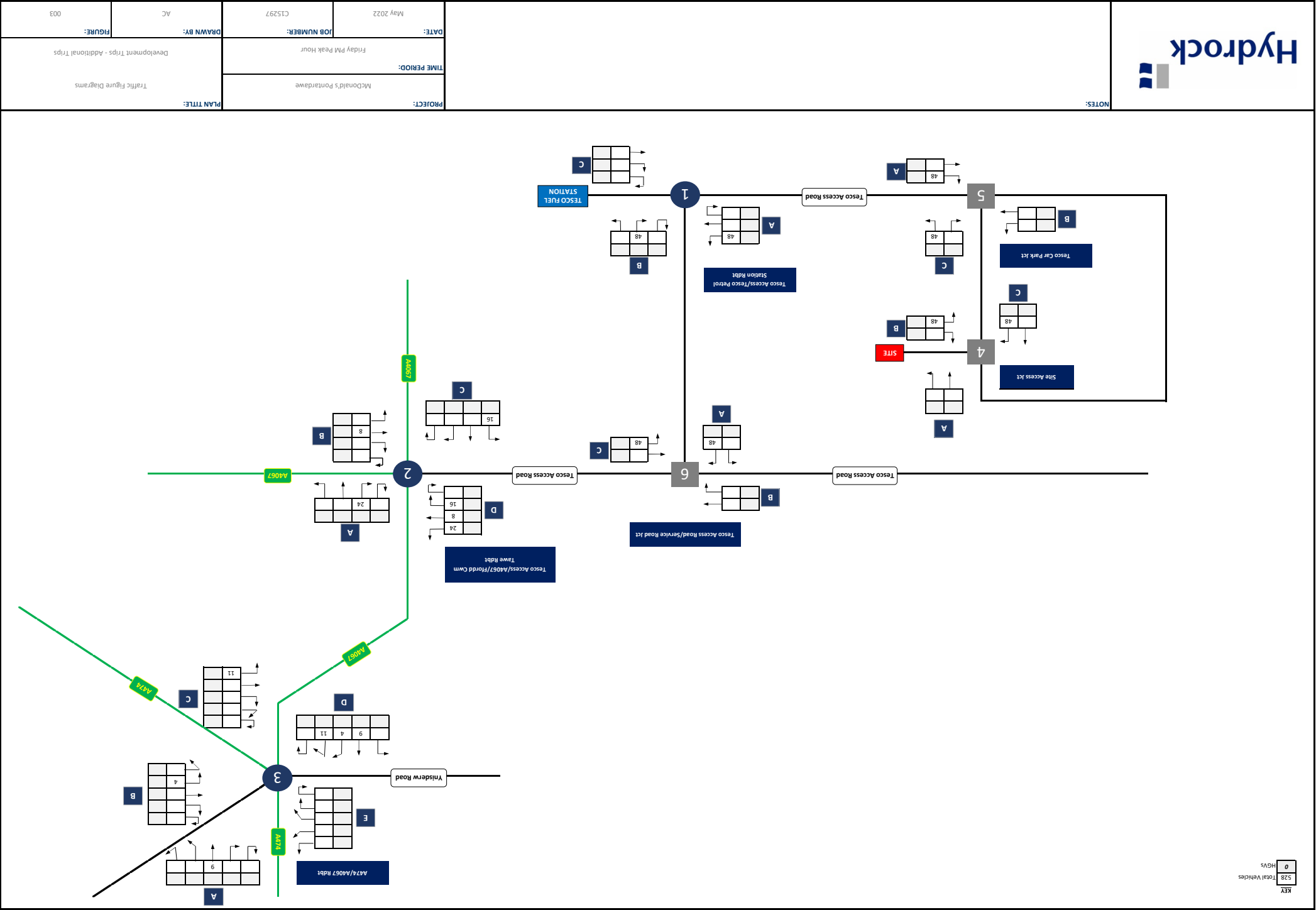
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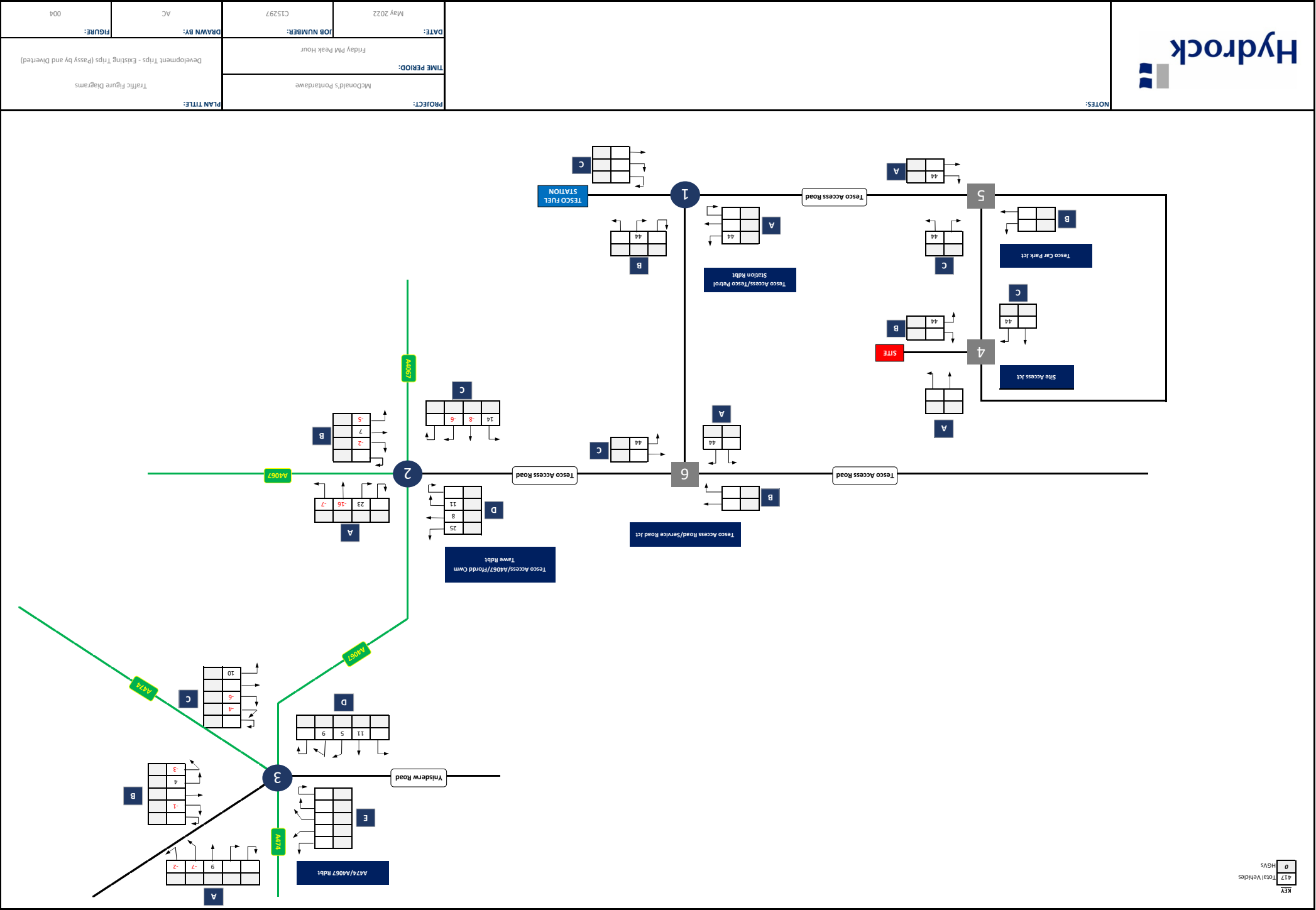
Superseded



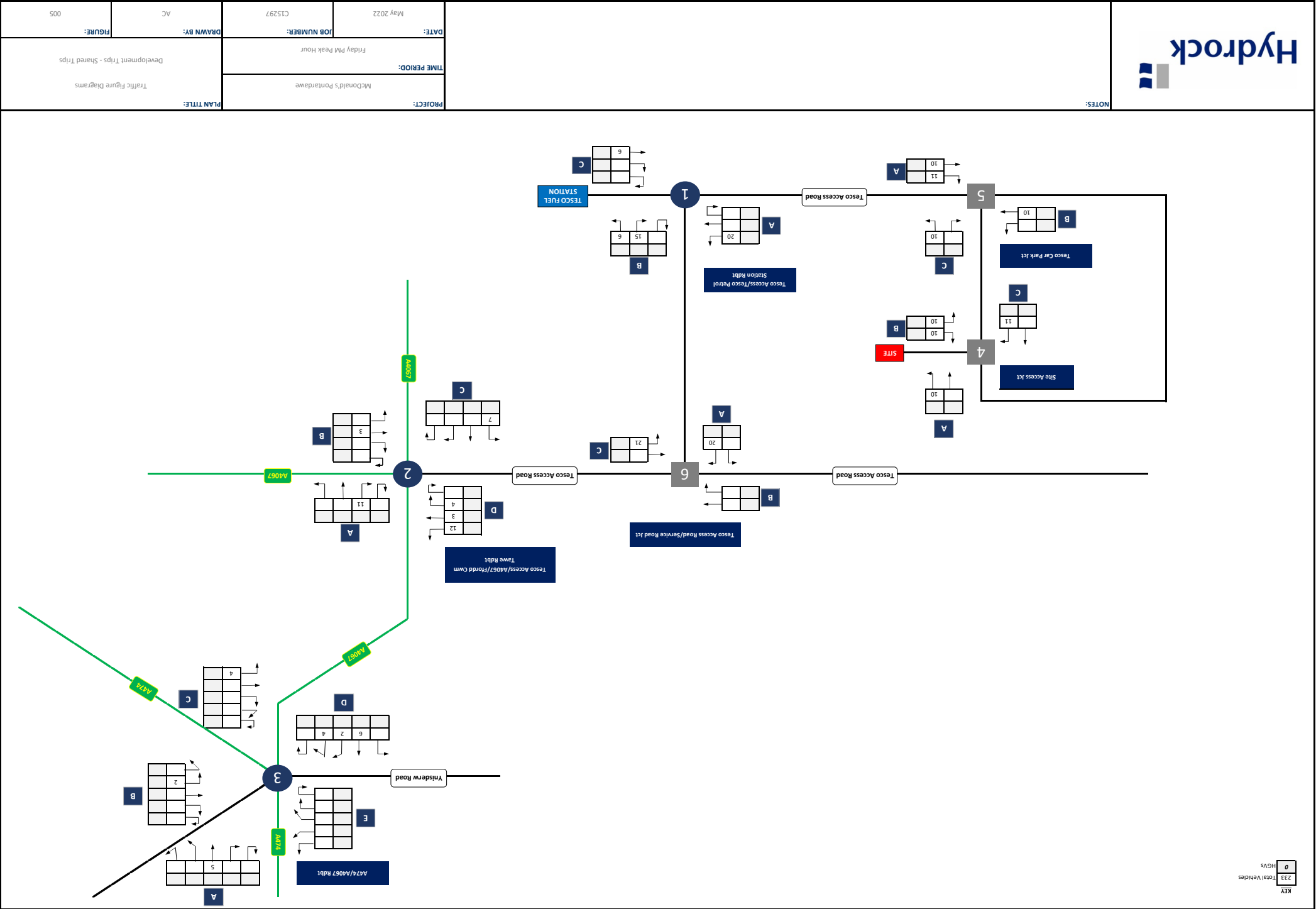
Superseded



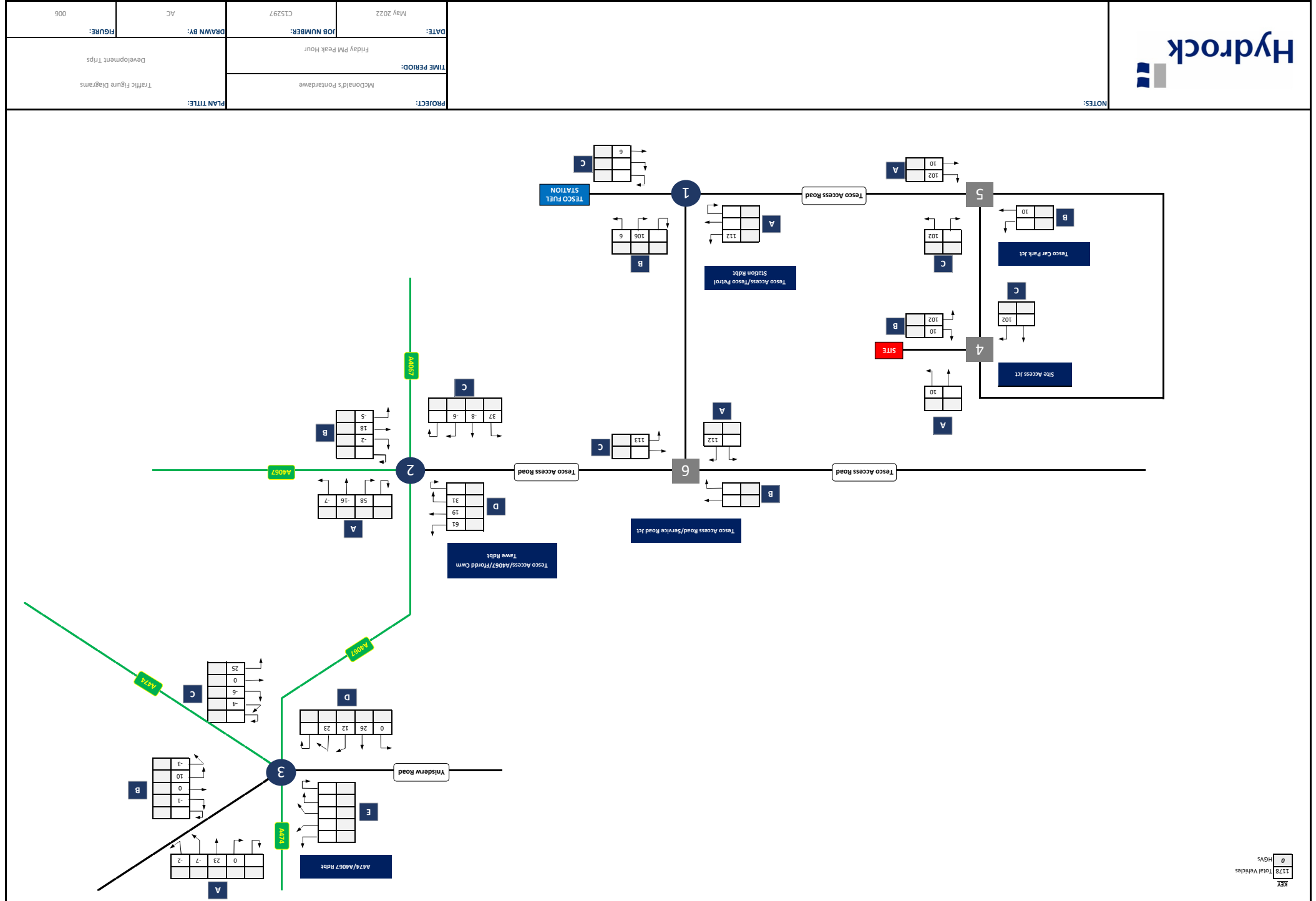
Superseded



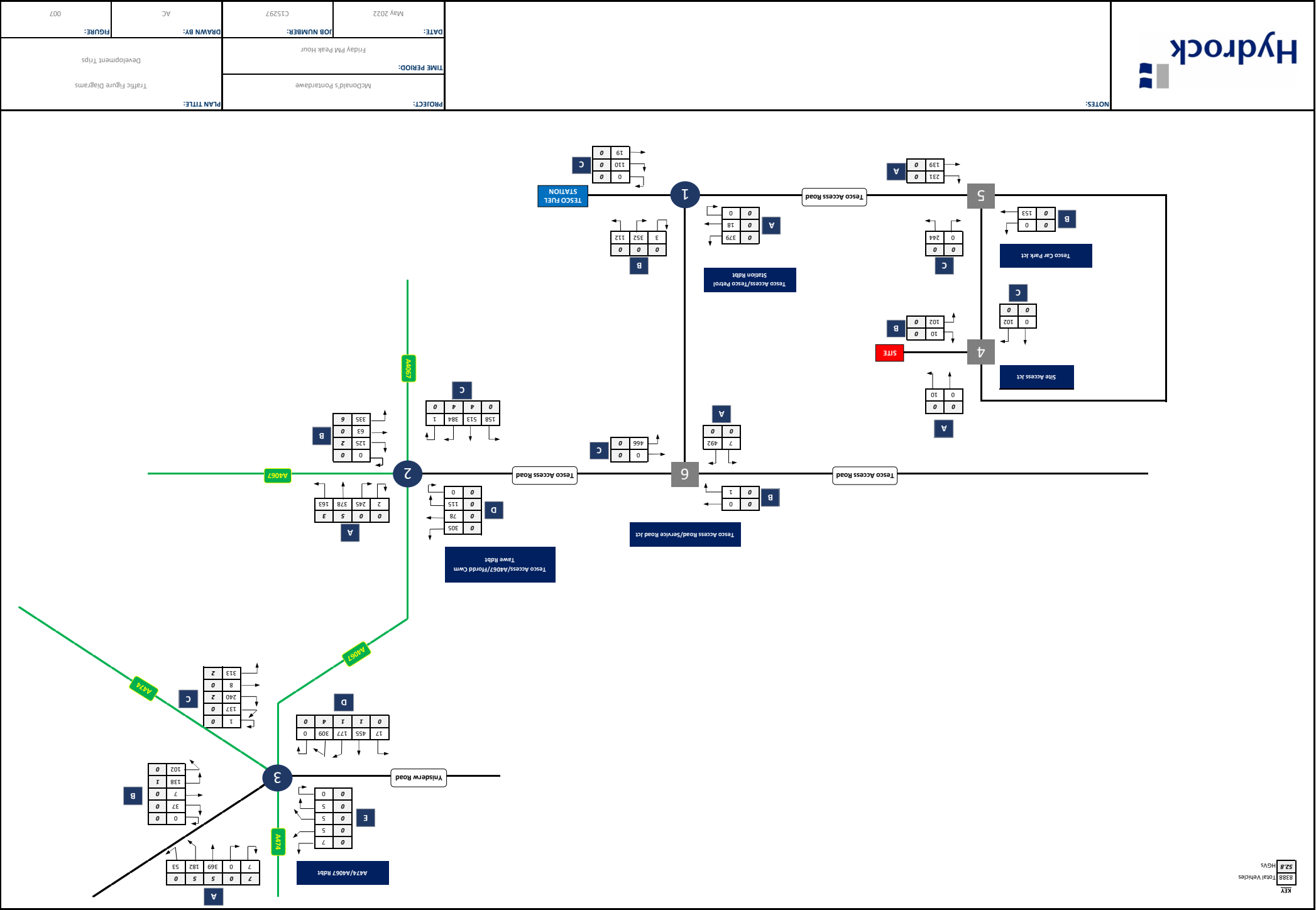
Superseded



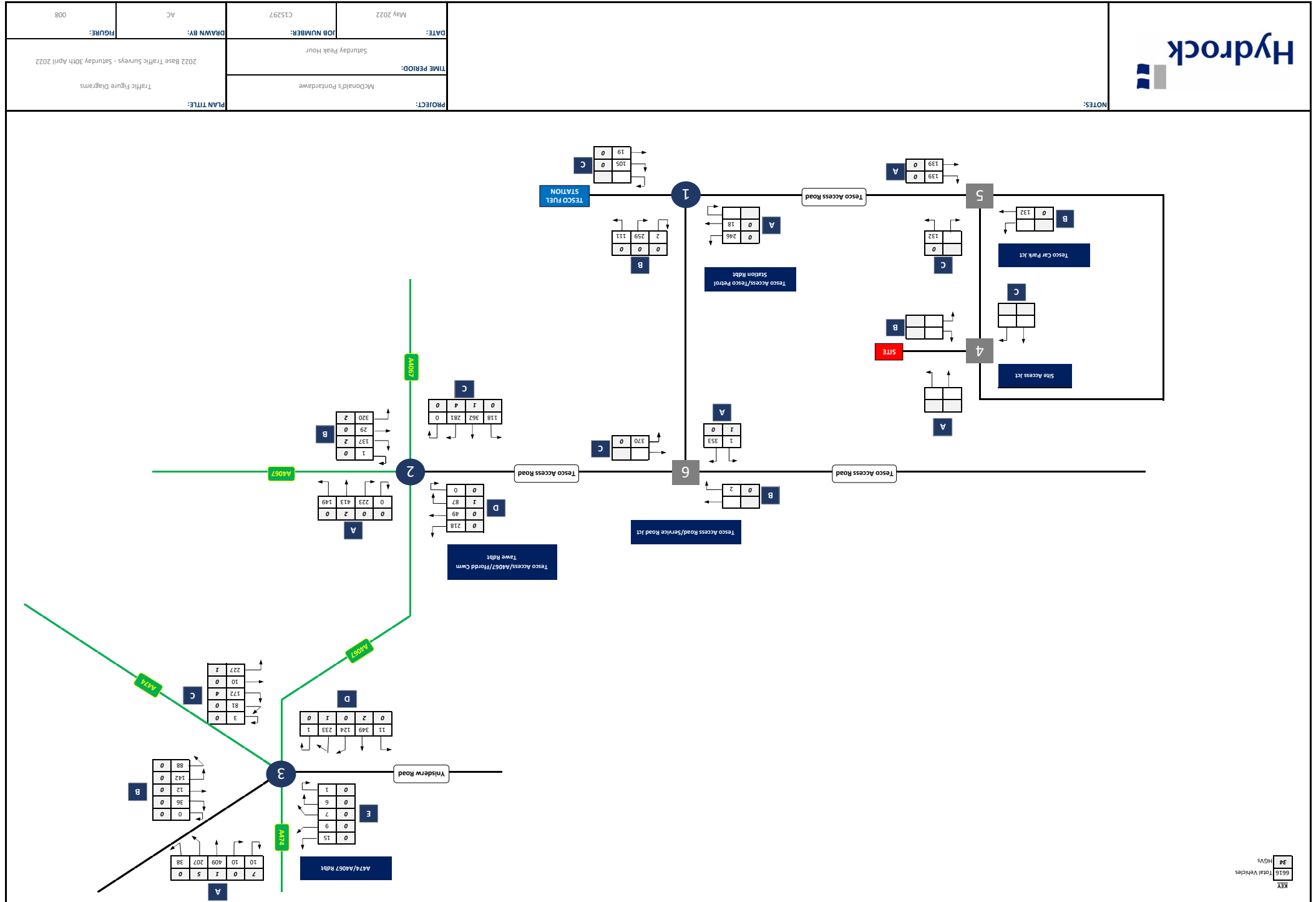
Superseded



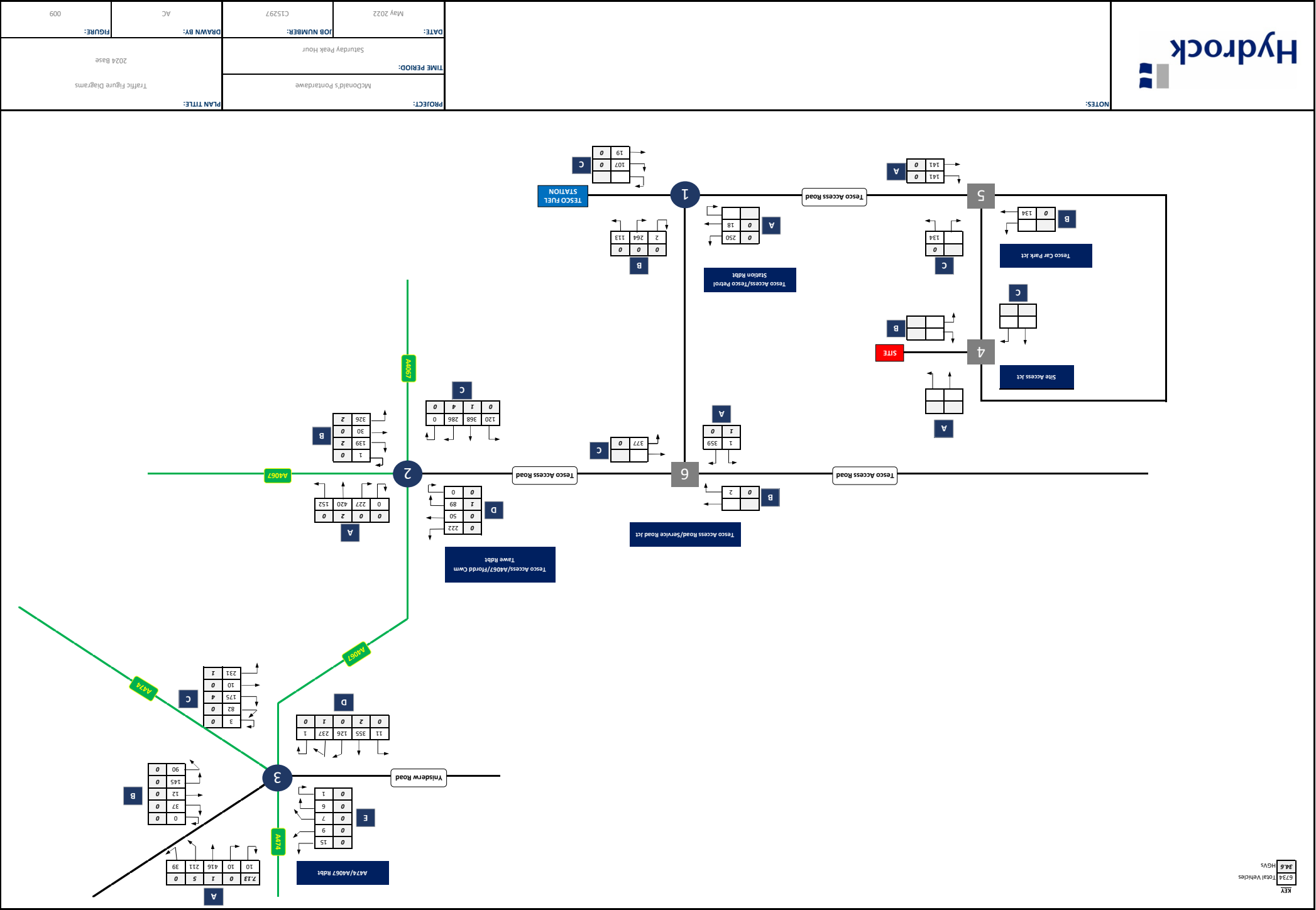
Superseded



Superseded



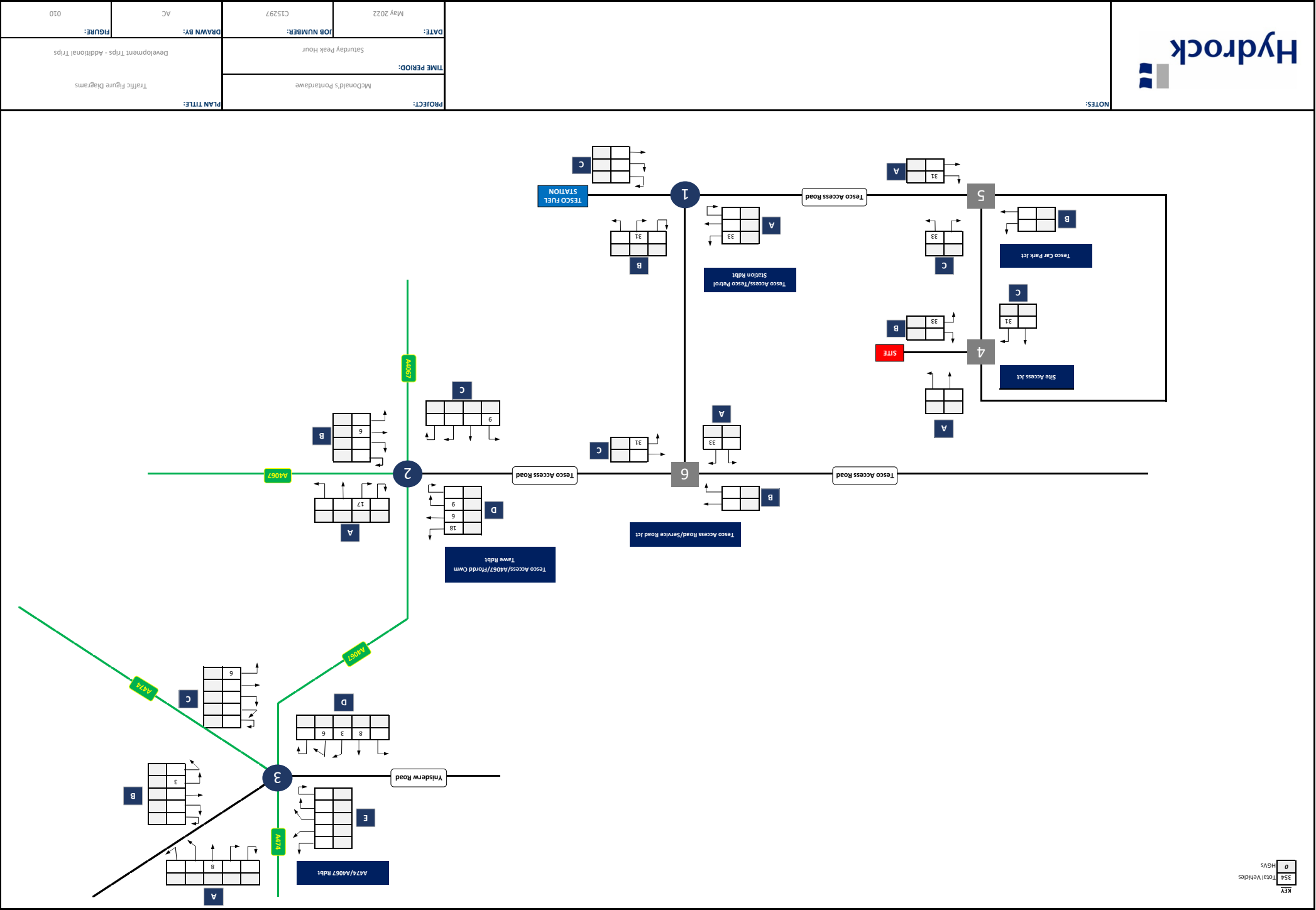
Superseded



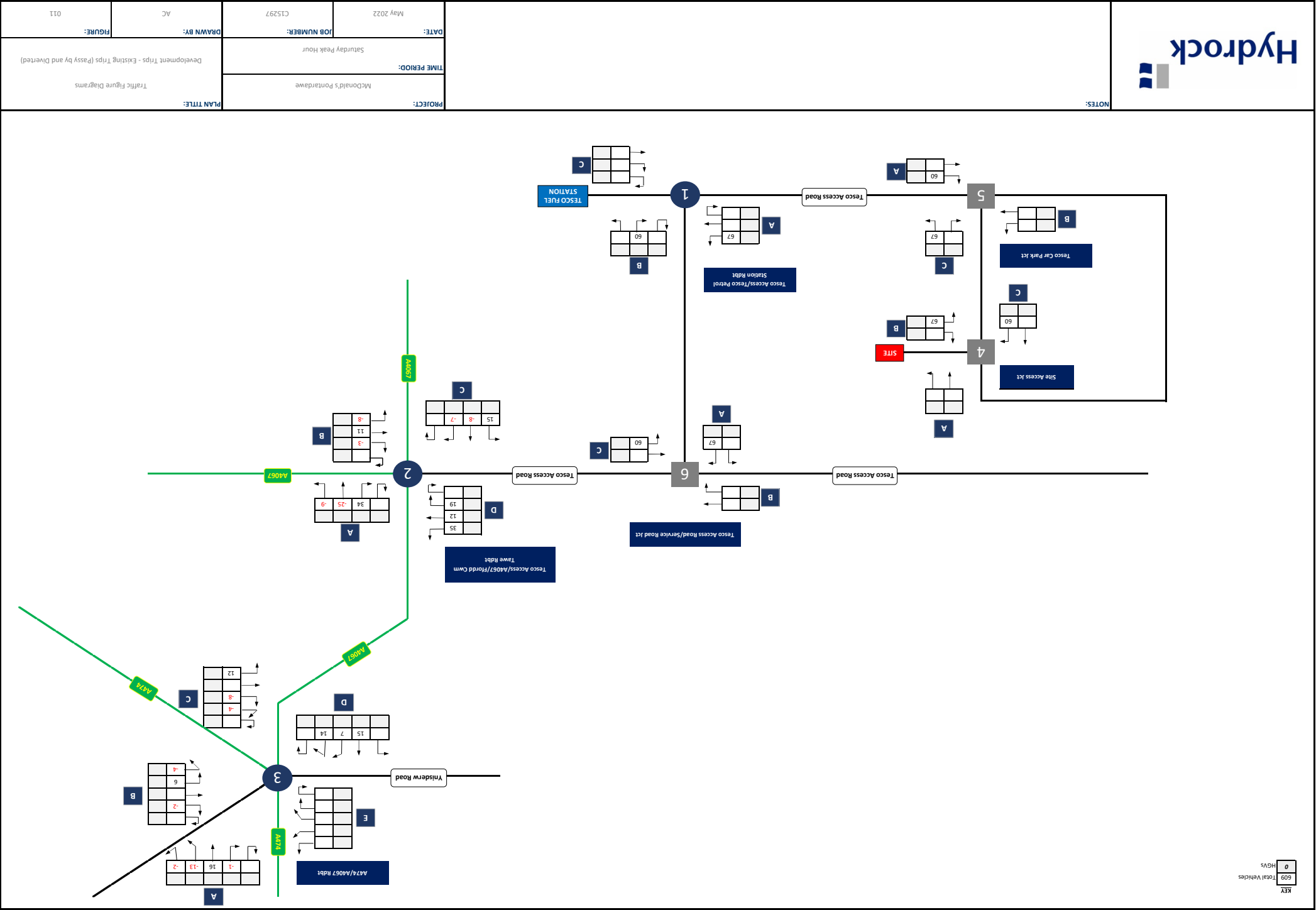
6734 Total Vehicles

346 HGVs

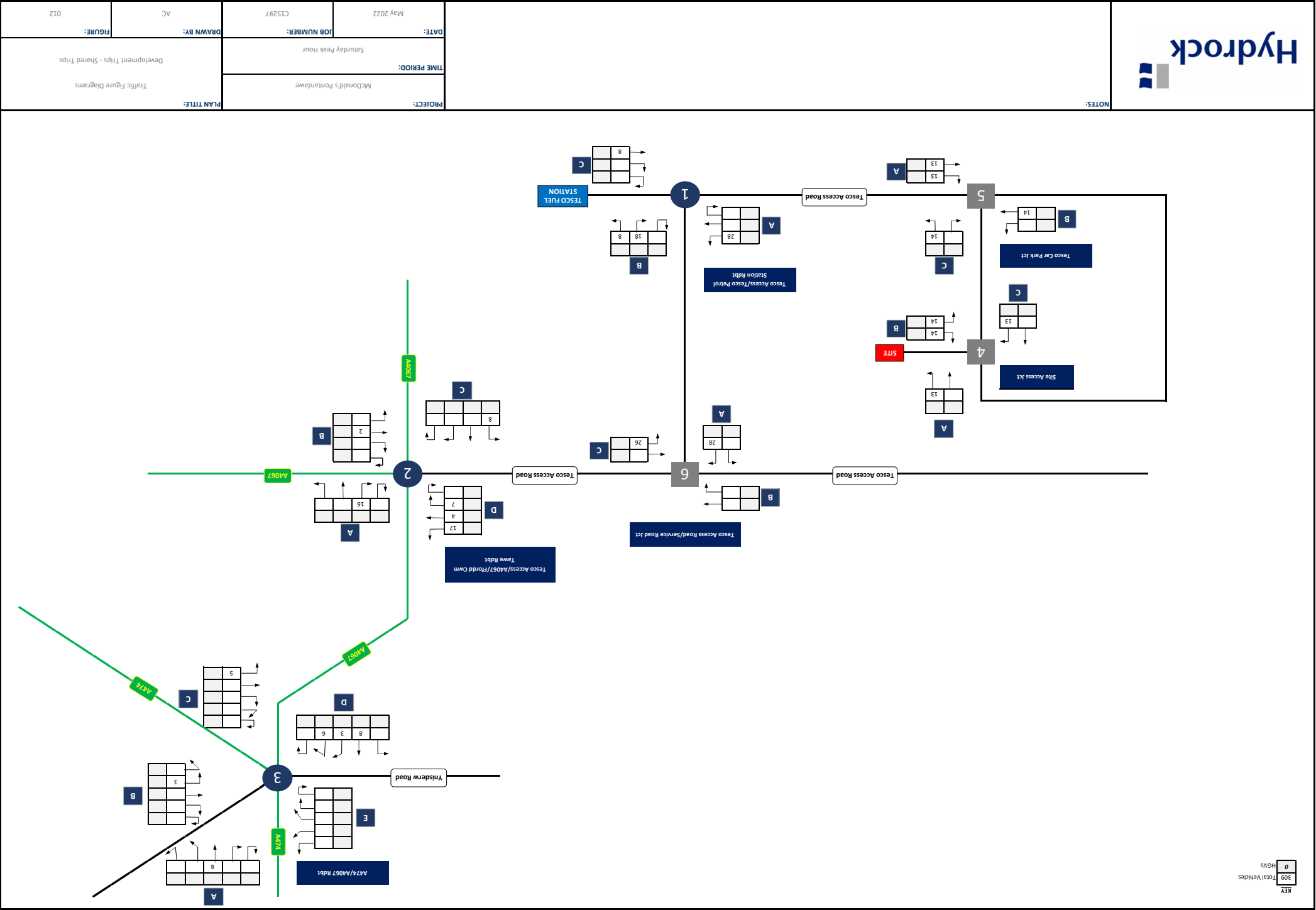
Superseded



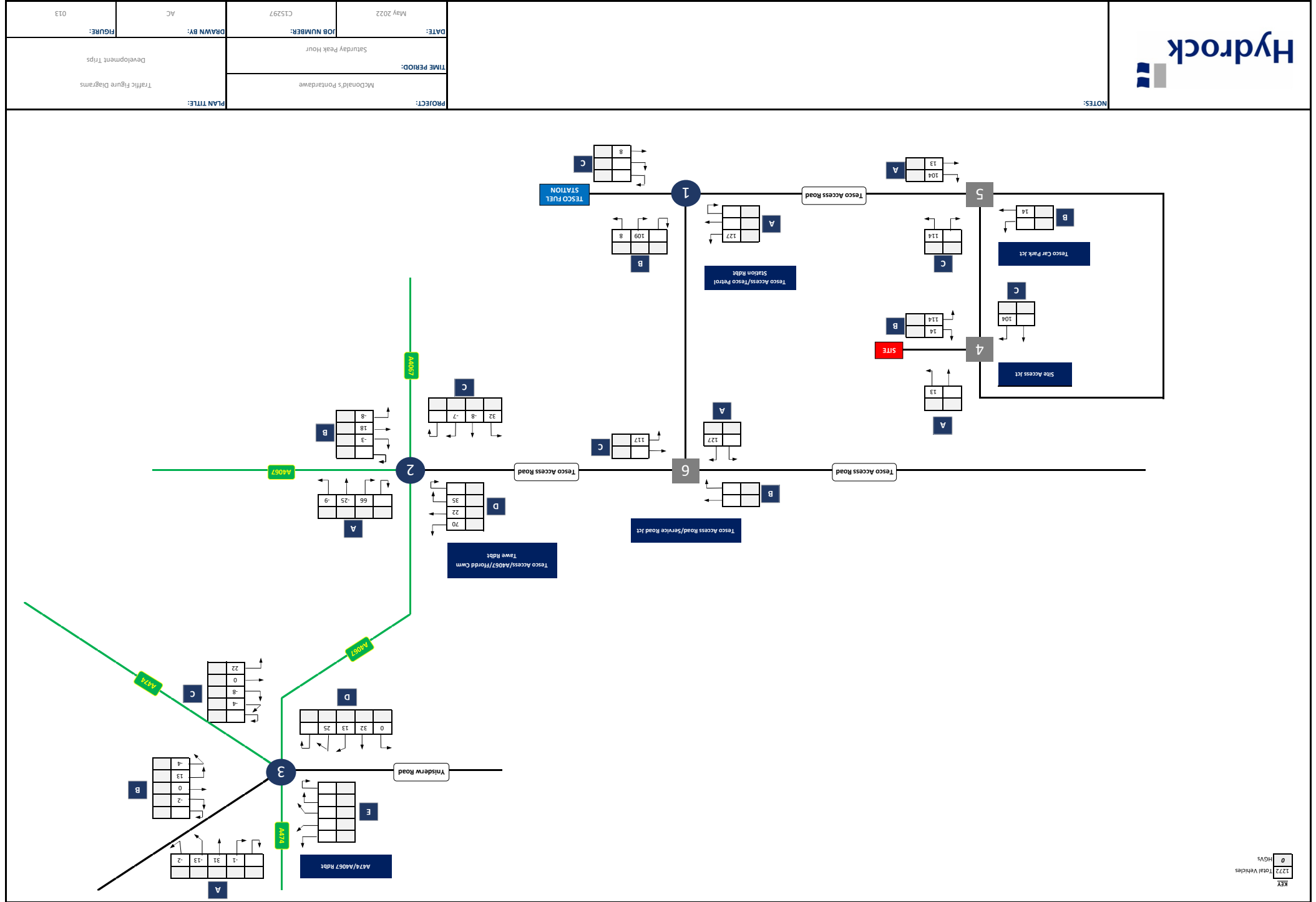
Superseded



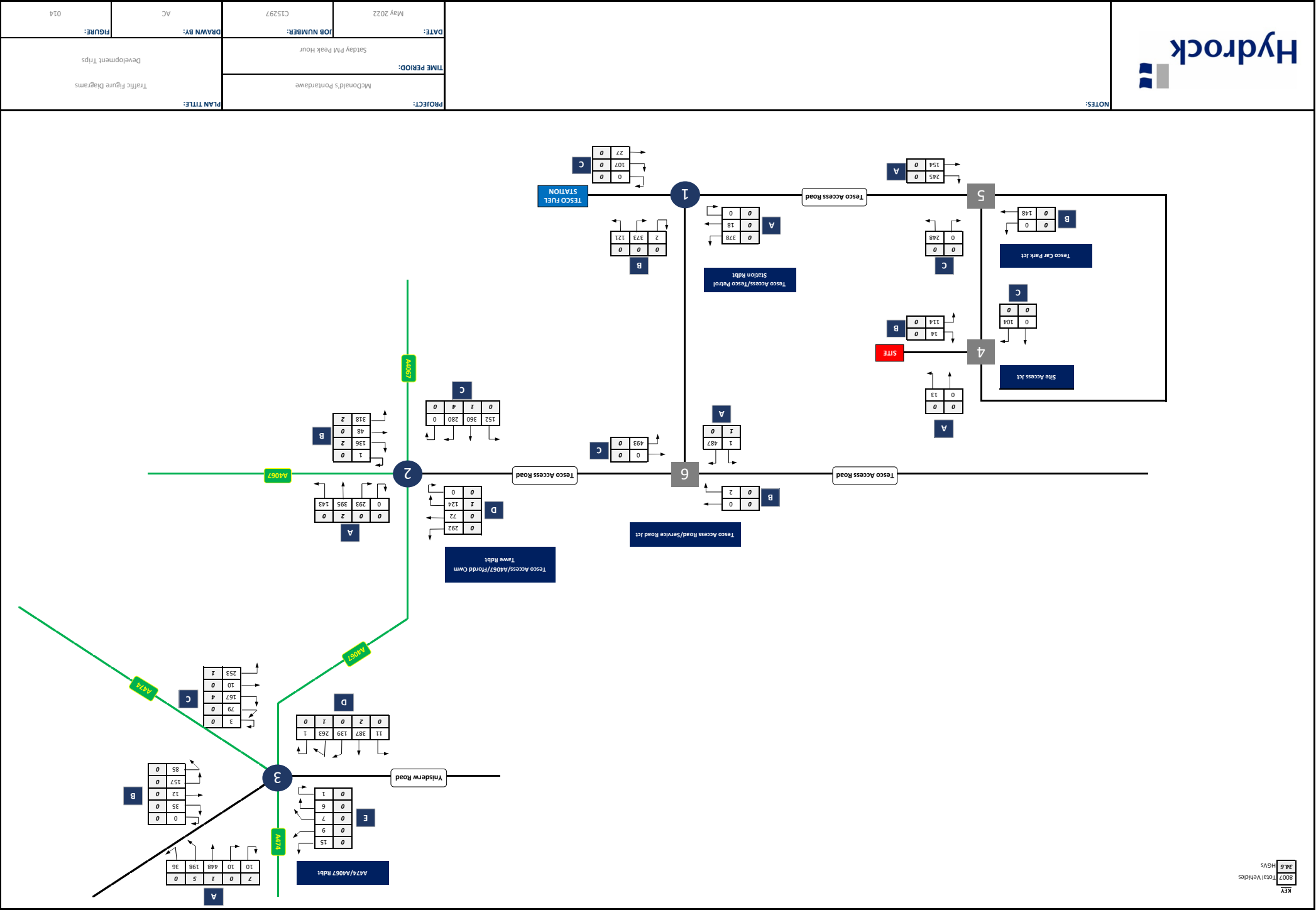
Superseded



Superseded



Superseded



Superseded

Appendix J ARCADY Outputs

Superseded



Generated on 11/07/2022 12:34:09 using Junctions 9 (9.5.0.6896)

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
For sales and distribution information, program advice and maintenance, contact TRL: +44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk
The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution

Filename: Junction 1 - Tesco Access_Tesco Petrol Station Rdbt.j9
Path: P:\15000-15999\C-15297 - McDonalds Pontardawe\01_WIP\CA_Calculation\TP\modelling
Report generation date: 11/07/2022 12:33:53

- »2022 Base, Friday
- »2022 Base, Saturday
- »2024 Base, Friday
- »2024 Base, Saturday
- »2024 Base + Development, Friday
- »2024 Base + Development, Saturday

Summary of junction performance

	Friday				Saturday			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base							
Arm A	0.4	4.67	0.29	A	0.4	4.54	0.27	A
Arm B	0.5	4.79	0.34	A	0.6	4.96	0.36	A
Arm C	0.2	5.60	0.17	A	0.2	5.72	0.18	A
	2024 Base							
Arm A	0.4	4.71	0.29	A	0.4	4.58	0.27	A
Arm B	0.5	4.83	0.34	A	0.6	5.01	0.37	A
Arm C	0.2	5.64	0.17	A	0.2	5.77	0.18	A
	2024 Base + Development							
Arm A	0.7	5.61	0.41	A	0.7	5.58	0.40	A
Arm B	0.8	5.80	0.45	A	0.9	6.10	0.48	A
Arm C	0.2	6.32	0.20	A	0.3	6.52	0.21	A

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

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

Superseded



Generated on 11/07/2022 12:34:09 using Junctions 9 (9.5.0.6896)

File summary

File Description

Title	
Location	
Site number	
Date	19/05/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HYDROCKlanniechapelton
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	Friday	ONE HOUR	16:00	17:30	15	✓
D2	2022 Base	Saturday	ONE HOUR	12:00	13:30	15	✓
D3	2024 Base	Friday	ONE HOUR	16:00	17:30	15	✓
D4	2024 Base	Saturday	ONE HOUR	12:00	13:30	15	✓
D5	2024 Base + Development	Friday	ONE HOUR	16:00	17:30	15	✓
D6	2024 Base + Development	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
AL	✓	100.000	100.000

Superseded

2022 Base, Friday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	4.88	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	untitled	
B	untitled	
C	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	3.00	4.50	3.8	28.4	33.5	24.0	
B	3.00	4.50	4.3	22.2	28.0	25.6	
C	2.50	3.00	2.0	104.9	26.6	15.4	

Slope / Intercept / Capacity

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.552	1148
B	0.552	1146
C	0.528	917

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

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	Friday	ONE HOUR	16:00	17:30	15	✓

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

Superseded

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	281	100.000
B		ONE HOUR	✓	349	100.000
C		ONE HOUR	✓	120	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To			
		A	B	C
	A	0	263	18
	B	242	3	104
	C	12	108	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.29	4.67	0.4	A	258	387
B	0.34	4.79	0.5	A	320	480
C	0.17	5.60	0.2	A	110	165

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	212	53	83	1102	0.192	211	190	0.0	0.2	4.035	A
B	263	66	13	1139	0.231	262	280	0.0	0.3	4.099	A
C	90	23	184	820	0.110	90	91	0.0	0.1	4.926	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	253	63	100	1093	0.231	252	228	0.2	0.3	4.283	A
B	314	78	16	1137	0.276	313	336	0.3	0.4	4.366	A
C	108	27	220	801	0.135	108	110	0.1	0.2	5.194	A

Superseded

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	309	77	122	1080	0.286	309	279	0.3	0.4	4.665	A
B	384	96	20	1135	0.338	384	411	0.4	0.5	4.787	A
C	132	33	269	775	0.171	132	134	0.2	0.2	5.598	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	309	77	122	1080	0.286	309	280	0.4	0.4	4.670	A
B	384	96	20	1135	0.338	384	412	0.5	0.5	4.792	A
C	132	33	270	775	0.171	132	134	0.2	0.2	5.602	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	253	63	100	1092	0.231	253	229	0.4	0.3	4.290	A
B	314	78	16	1137	0.276	314	337	0.5	0.4	4.376	A
C	108	27	221	801	0.135	108	110	0.2	0.2	5.199	A

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	212	53	84	1101	0.192	212	191	0.3	0.2	4.047	A
B	263	66	14	1139	0.231	263	282	0.4	0.3	4.113	A
C	90	23	185	820	0.110	90	92	0.2	0.1	4.940	A

Superseded

2022 Base, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	4.94	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	264	100.000
B		ONE HOUR	✓	372	100.000
C		ONE HOUR	✓	124	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	246	18
	B	259	2	111
	C	19	105	0

Vehicle Mix

Heavy Vehicle Percentages

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

Superseded

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.27	4.54	0.4	A	242	363
B	0.36	4.96	0.6	A	341	512
C	0.18	5.72	0.2	A	114	171

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	199	50	80	1103	0.180	198	208	0.0	0.2	3.972	A
B	280	70	13	1139	0.246	279	264	0.0	0.3	4.180	A
C	93	23	196	814	0.115	93	97	0.0	0.1	4.990	A

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	237	59	96	1095	0.217	237	250	0.2	0.3	4.197	A
B	334	84	16	1137	0.294	334	317	0.3	0.4	4.479	A
C	111	28	234	793	0.141	111	116	0.1	0.2	5.277	A

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	291	73	118	1083	0.268	290	306	0.3	0.4	4.541	A
B	410	102	20	1135	0.361	409	388	0.4	0.6	4.952	A
C	137	34	287	766	0.178	136	142	0.2	0.2	5.720	A

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	291	73	118	1083	0.268	291	306	0.4	0.4	4.545	A
B	410	102	20	1135	0.361	410	389	0.6	0.6	4.960	A
C	137	34	287	765	0.178	137	142	0.2	0.2	5.724	A

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	237	59	96	1094	0.217	238	250	0.4	0.3	4.203	A
B	334	84	16	1137	0.294	335	318	0.6	0.4	4.491	A
C	111	28	235	793	0.141	112	116	0.2	0.2	5.285	A

Superseded



Generated on 11/07/2022 12:34:09 using Junctions 9 (9.5.0.6896)

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	199	50	81	1103	0.180	199	210	0.3	0.2	3.982	A
B	280	70	14	1139	0.246	280	266	0.4	0.3	4.195	A
C	93	23	197	813	0.115	93	97	0.2	0.1	5.004	A

Superseded

2024 Base, Friday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	4.92	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	286	100.000
B		ONE HOUR	✓	355	100.000
C		ONE HOUR	✓	122	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	267	18
	B	246	3	106
	C	12	110	0

Vehicle Mix

Heavy Vehicle Percentages

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

Superseded

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.29	4.71	0.4	A	262	393
B	0.34	4.83	0.5	A	325	488
C	0.17	5.64	0.2	A	112	168

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	215	54	84	1101	0.195	214	193	0.0	0.2	4.054	A
B	267	67	14	1139	0.234	266	285	0.0	0.3	4.118	A
C	92	23	187	819	0.112	91	93	0.0	0.1	4.947	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	257	64	101	1092	0.235	256	232	0.2	0.3	4.309	A
B	319	80	16	1137	0.280	318	341	0.3	0.4	4.395	A
C	110	27	224	799	0.137	109	111	0.1	0.2	5.221	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	314	79	124	1079	0.291	314	284	0.3	0.4	4.703	A
B	390	98	20	1135	0.344	390	418	0.4	0.5	4.828	A
C	134	34	274	773	0.174	134	136	0.2	0.2	5.637	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	314	79	124	1079	0.291	314	284	0.4	0.4	4.707	A
B	390	98	20	1135	0.344	390	418	0.5	0.5	4.833	A
C	134	34	274	772	0.174	134	136	0.2	0.2	5.641	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	257	64	102	1092	0.235	257	232	0.4	0.3	4.317	A
B	319	80	16	1137	0.280	319	342	0.5	0.4	4.406	A
C	110	27	224	799	0.137	110	112	0.2	0.2	5.229	A

Superseded

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	215	54	85	1101	0.195	215	195	0.3	0.2	4.066	A
B	267	67	14	1139	0.234	267	286	0.4	0.3	4.133	A
C	92	23	188	818	0.112	92	93	0.2	0.1	4.960	A

Superseded

2024 Base, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	4.99	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 Base	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	269	100.000
B		ONE HOUR	✓	379	100.000
C		ONE HOUR	✓	126	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	250	18
	B	264	2	113
	C	19	107	0

Vehicle Mix

Heavy Vehicle Percentages

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

Superseded

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.27	4.58	0.4	A	247	370
B	0.37	5.01	0.6	A	347	521
C	0.18	5.77	0.2	A	116	174

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	202	51	82	1103	0.183	201	212	0.0	0.2	3.990	A
B	285	71	14	1139	0.250	284	269	0.0	0.3	4.205	A
C	95	24	199	812	0.117	94	98	0.0	0.1	5.015	A

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	242	60	98	1094	0.221	241	254	0.2	0.3	4.222	A
B	340	85	16	1137	0.299	340	323	0.3	0.4	4.514	A
C	113	28	239	791	0.143	113	118	0.1	0.2	5.310	A

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	296	74	120	1082	0.274	296	311	0.3	0.4	4.578	A
B	417	104	20	1135	0.367	416	395	0.4	0.6	5.004	A
C	139	35	292	763	0.182	139	144	0.2	0.2	5.767	A

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	296	74	120	1081	0.274	296	312	0.4	0.4	4.582	A
B	417	104	20	1135	0.367	417	396	0.6	0.6	5.011	A
C	139	35	293	763	0.182	139	145	0.2	0.2	5.771	A

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	242	60	98	1093	0.221	242	255	0.4	0.3	4.230	A
B	340	85	16	1137	0.299	341	324	0.6	0.4	4.524	A
C	113	28	239	791	0.144	114	118	0.2	0.2	5.320	A

Superseded

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	202	51	82	1102	0.184	203	213	0.3	0.2	4.003	A
B	285	71	14	1139	0.250	285	271	0.4	0.3	4.221	A
C	95	24	200	811	0.117	95	99	0.2	0.1	5.027	A

Superseded

2024 Base + Development, Friday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	5.79	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base + Development	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	397	100.000
B		ONE HOUR	✓	467	100.000
C		ONE HOUR	✓	128	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	379	18
	B	352	3	112
	C	19	110	0

Vehicle Mix

Heavy Vehicle Percentages

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

Superseded

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.41	5.61	0.7	A	364	547
B	0.45	5.80	0.8	A	429	643
C	0.20	6.32	0.2	A	118	177

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	299	75	84	1101	0.272	297	278	0.0	0.4	4.472	A
B	352	88	14	1139	0.309	350	368	0.0	0.4	4.554	A
C	97	24	266	777	0.124	96	98	0.0	0.1	5.285	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	357	89	101	1092	0.327	357	333	0.4	0.5	4.893	A
B	420	105	16	1137	0.369	419	441	0.4	0.6	5.016	A
C	115	29	319	749	0.154	115	117	0.1	0.2	5.681	A

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	437	109	124	1079	0.405	436	407	0.5	0.7	5.593	A
B	514	129	20	1135	0.453	513	540	0.6	0.8	5.791	A
C	141	35	390	711	0.199	141	143	0.2	0.2	6.313	A

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	437	109	124	1079	0.405	437	408	0.7	0.7	5.607	A
B	514	129	20	1135	0.453	514	541	0.8	0.8	5.799	A
C	141	35	391	711	0.199	141	143	0.2	0.2	6.322	A

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	357	89	102	1092	0.327	358	334	0.7	0.5	4.910	A
B	420	105	16	1137	0.369	421	443	0.8	0.6	5.032	A
C	115	29	320	748	0.154	116	117	0.2	0.2	5.695	A

Superseded

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	299	75	85	1101	0.272	299	280	0.5	0.4	4.496	A
B	352	88	14	1139	0.309	352	371	0.6	0.5	4.581	A
C	97	24	268	776	0.124	97	98	0.2	0.1	5.303	A

Superseded

2024 Base + Development, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Vehicle Mix		HV% is zero for all movements / time segments. Vehicle Mix matrix should be completed whether working in PCUs or Vehs. If HV% at the junction is genuinely zero, please ignore this warning.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C	5.96	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Base + Development	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	396	100.000
B		ONE HOUR	✓	495	100.000
C		ONE HOUR	✓	134	100.000

Origin-Destination Data

Demand (Veh/hr)

	To			
		A	B	C
	A	0	378	18
	B	373	2	121
	C	27	107	0

Vehicle Mix

Heavy Vehicle Percentages

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

Superseded

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.40	5.58	0.7	A	363	545
B	0.48	6.10	0.9	A	455	682
C	0.21	6.52	0.3	A	123	184

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	298	75	82	1103	0.270	297	299	0.0	0.4	4.458	A
B	373	93	14	1139	0.328	371	364	0.0	0.5	4.678	A
C	101	25	281	769	0.131	100	104	0.0	0.1	5.379	A

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	356	89	98	1094	0.326	356	359	0.4	0.5	4.874	A
B	445	111	16	1137	0.392	445	437	0.5	0.6	5.194	A
C	120	30	336	739	0.163	120	125	0.1	0.2	5.812	A

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	436	109	120	1082	0.403	435	439	0.5	0.7	5.563	A
B	545	136	20	1135	0.480	544	535	0.6	0.9	6.082	A
C	148	37	412	700	0.211	147	153	0.2	0.3	6.513	A

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	436	109	120	1081	0.403	436	440	0.7	0.7	5.577	A
B	545	136	20	1135	0.481	545	536	0.9	0.9	6.104	A
C	148	37	412	699	0.211	147	153	0.3	0.3	6.523	A

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	356	89	98	1093	0.326	357	360	0.7	0.5	4.893	A
B	445	111	17	1137	0.392	446	438	0.9	0.6	5.219	A
C	120	30	338	739	0.163	121	125	0.3	0.2	5.826	A

Superseded

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	298	75	82	1102	0.271	299	301	0.5	0.4	4.481	A
B	373	93	14	1139	0.328	374	367	0.6	0.5	4.710	A
C	101	25	283	768	0.131	101	105	0.2	0.2	5.401	A

Superseded



Generated on 11/07/2022 14:09:39 using Junctions 9 (9.5.0.6896)

Junctions 9
ARCADY 9 - Roundabout Module
Version: 9.5.0.6896 © Copyright TRL Limited, 2018
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Filename: Junction 2 - A4067 Rdbt.j9
Path: P:\15000-15999\C-15297 - McDonalds Pontardawe\01_WIP\CA_Calculation\TP\modelling
Report generation date: 11/07/2022 14:09:25

- »2022 Base, Friday
- »2022 Base , Saturday
- »2024 Base, Friday
- »2024 Base, Saturday
- »2024 Base + Development, Friday
- »2024 Base + Development, Saturday

Summary of junction performance

	Friday				Saturday			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
2022 Base								
Arm A	7.3	34.64	0.90	D	7.2	31.81	0.89	D
Arm B	4.8	32.83	0.84	D	5.0	36.06	0.85	E
Arm C	7.4	25.23	0.89	D	2.1	9.13	0.68	A
Arm D	2.7	23.78	0.74	C	1.3	12.13	0.57	B
2024 Base								
Arm A	8.6	39.96	0.92	E	8.5	37.03	0.91	E
Arm B	5.5	37.10	0.86	E	5.9	41.88	0.88	E
Arm C	8.6	29.01	0.91	D	2.2	9.59	0.69	A
Arm D	3.0	26.17	0.76	D	1.4	12.72	0.58	B
2024 Base + Development								
Arm A	15.8	67.89	0.98	F	15.7	64.21	0.97	F
Arm B	8.9	59.13	0.93	F	10.1	69.34	0.95	F
Arm C	15.4	50.04	0.97	F	2.8	11.74	0.74	B
Arm D	10.9	75.17	0.96	F	3.3	23.23	0.78	C

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

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

Superseded



Generated on 11/07/2022 14:09:39 using Junctions 9 (9.5.0.6896)

File summary

File Description

Title	
Location	
Site number	
Date	19/05/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HYDROCKlanniechapelton
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	Friday	ONE HOUR	16:00	17:30	15	✓
D2	2022 Base	Saturday	ONE HOUR	12:00	13:30	15	✓
D3	2024 Base	Friday	ONE HOUR	16:00	17:30	15	✓
D4	2024 Base	Saturday	ONE HOUR	12:00	13:30	15	✓
D5	2024 Base + Development	Friday	ONE HOUR	16:00	17:30	15	✓
D6	2024 Base + Development	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
AL	✓	100.000	100.000

Superseded

2022 Base, Friday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	29.13	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
A	untitled	
B	untitled	
C	untitled	
D	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
A	3.05	4.84	5.8	13.6	64.2	28.0	
B	3.38	3.57	1.2	7.0	35.8	9.3	
C	3.02	5.85	62.5	10.1	38.0	30.7	
D	2.78	6.13	4.6	13.0	57.0	40.9	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
A	None		
B	None		
C	Percentage		95.00
D	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
A	0.443	1177
B	0.511	1042
C	0.607	1501
D	0.444	1073

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

Superseded

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	741	100.000
B		ONE HOUR	✓	505	100.000
C		ONE HOUR	✓	1016	100.000
D		ONE HOUR	✓	381	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A	B	C	D
From	A	2	167	388	184
	B	125	0	335	45
	C	512	384	1	119
	D	240	58	83	0

Vehicle Mix

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.90	34.64	7.3	D	680	1020
B	0.84	32.83	4.8	D	463	695
C	0.89	25.23	7.4	D	932	1398
D	0.74	23.78	2.7	C	350	524

Superseded

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	558	139	393	991	0.563	553	657	0.0	1.3	8.120	A
B	380	95	491	777	0.489	376	455	0.0	0.9	8.912	A
C	765	191	265	1328	0.576	760	602	0.0	1.3	6.275	A
D	287	72	765	730	0.393	284	260	0.0	0.6	8.035	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	666	167	471	957	0.696	662	787	1.3	2.2	12.067	B
B	454	113	588	727	0.624	451	545	0.9	1.6	12.914	B
C	913	228	318	1296	0.705	909	721	1.3	2.3	9.213	A
D	343	86	916	662	0.517	341	311	0.6	1.0	11.153	B

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	816	204	570	913	0.894	799	953	2.2	6.5	28.038	D
B	556	139	710	666	0.835	545	659	1.6	4.3	27.717	D
C	1119	280	384	1256	0.890	1101	871	2.3	6.7	21.133	C
D	419	105	1109	575	0.729	414	376	1.0	2.5	21.542	C

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	816	204	578	910	0.897	812	965	6.5	7.3	34.639	D
B	556	139	722	660	0.843	554	669	4.3	4.8	32.835	D
C	1119	280	390	1253	0.893	1116	885	6.7	7.4	25.229	D
D	419	105	1124	569	0.738	419	382	2.5	2.7	23.781	C

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	666	167	482	952	0.700	686	807	7.3	2.4	14.437	B
B	454	113	608	717	0.633	466	560	4.8	1.8	14.940	B
C	913	228	329	1290	0.708	933	745	7.4	2.5	10.599	B
D	343	86	941	651	0.526	349	321	2.7	1.1	12.129	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	558	139	398	989	0.564	562	666	2.4	1.3	8.526	A
B	380	95	499	773	0.492	383	461	1.8	1.0	9.326	A
C	765	191	270	1325	0.577	769	612	2.5	1.4	6.528	A
D	287	72	776	725	0.396	289	264	1.1	0.7	8.284	A

Superseded

2022 Base , Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	22.52	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	785	100.000
B		ONE HOUR	✓	487	100.000
C		ONE HOUR	✓	761	100.000
D		ONE HOUR	✓	354	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A	B	C	D
	A	0	149	413	223
	B	137	1	320	29
	C	362	281	0	118
	D	218	49	87	0

Vehicle Mix

Superseded



Generated on 11/07/2022 14:09:39 using Junctions 9 (9.5.0.6896)

Heavy Vehicle Percentages

From	To				
		A	B	C	D
	A	0	0	0	0
	B	1	0	1	0
	C	0	1	0	0
	D	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.89	31.81	7.2	D	720	1080
B	0.85	36.06	5.0	E	447	670
C	0.68	9.13	2.1	A	698	1047
D	0.57	12.13	1.3	B	325	487

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	591	148	313	1035	0.571	586	536	0.0	1.3	7.933	A
B	367	92	540	759	0.483	363	359	0.0	0.9	9.017	A
C	573	143	291	1315	0.436	570	612	0.0	0.8	4.815	A
D	267	67	584	809	0.329	265	276	0.0	0.5	6.588	A

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	706	176	375	1007	0.701	702	643	1.3	2.3	11.661	B
B	438	109	647	704	0.622	435	430	0.9	1.6	13.247	B
C	684	171	349	1280	0.535	683	733	0.8	1.1	6.016	A
D	318	80	700	757	0.420	317	331	0.5	0.7	8.167	A

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	864	216	458	970	0.891	847	783	2.3	6.5	26.422	D
B	536	134	782	635	0.844	525	524	1.6	4.5	29.846	D
C	838	209	421	1236	0.678	834	886	1.1	2.0	8.879	A
D	390	97	854	689	0.566	388	401	0.7	1.3	11.870	B

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	864	216	460	969	0.892	861	789	6.5	7.2	31.808	D
B	536	134	794	629	0.852	534	528	4.5	5.0	36.060	E
C	838	209	428	1232	0.680	838	900	2.0	2.1	9.127	A
D	390	97	859	686	0.568	390	406	1.3	1.3	12.133	B

Superseded

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	706	176	378	1005	0.702	725	651	7.2	2.5	13.599	B
B	438	109	666	694	0.630	451	437	5.0	1.8	15.497	C
C	684	171	360	1272	0.538	688	756	2.1	1.2	6.193	A
D	318	80	709	753	0.422	320	339	1.3	0.7	8.360	A

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	591	148	316	1033	0.572	595	542	2.5	1.4	8.302	A
B	367	92	548	754	0.486	370	363	1.8	1.0	9.439	A
C	573	143	296	1312	0.437	575	622	1.2	0.8	4.894	A
D	267	67	590	806	0.331	267	280	0.7	0.5	6.692	A

Superseded

2024 Base, Friday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	33.24	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	753	100.000
B		ONE HOUR	✓	513	100.000
C		ONE HOUR	✓	1032	100.000
D		ONE HOUR	✓	387	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A	B	C	D
	A	2	170	394	187
	B	127	0	340	46
	C	520	390	1	121
	D	244	59	84	0

Vehicle Mix

Superseded

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.92	39.96	8.6	E	691	1036
B	0.86	37.10	5.5	E	471	706
C	0.91	29.01	8.6	D	947	1421
D	0.76	26.17	3.0	D	355	533

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	567	142	399	988	0.574	562	667	0.0	1.3	8.335	A
B	386	97	499	773	0.500	382	462	0.0	1.0	9.135	A
C	777	194	270	1326	0.586	772	611	0.0	1.4	6.436	A
D	291	73	778	724	0.402	289	264	0.0	0.7	8.217	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	677	169	478	954	0.710	673	799	1.3	2.3	12.633	B
B	461	115	598	723	0.638	458	554	1.0	1.7	13.476	B
C	928	232	323	1293	0.718	924	733	1.4	2.5	9.634	A
D	348	87	931	655	0.531	346	316	0.7	1.1	11.578	B

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	829	207	578	909	0.912	809	966	2.3	7.4	30.968	D
B	565	141	719	661	0.855	553	668	1.7	4.8	30.280	D
C	1137	284	389	1253	0.907	1116	883	2.5	7.6	23.365	C
D	426	107	1124	569	0.750	420	381	1.1	2.7	23.241	C

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	829	207	587	906	0.915	824	980	7.4	8.6	39.961	E
B	565	141	732	654	0.863	562	679	4.8	5.5	37.097	E
C	1137	284	396	1249	0.910	1133	898	7.6	8.6	29.010	D
D	426	107	1142	561	0.760	425	387	2.7	3.0	26.171	D

Superseded

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	677	169	492	948	0.714	701	823	8.6	2.6	15.842	C
B	461	115	621	711	0.649	475	572	5.5	1.9	16.125	C
C	928	232	336	1286	0.722	952	761	8.6	2.7	11.483	B
D	348	87	960	643	0.542	355	328	3.0	1.2	12.809	B

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	567	142	405	986	0.575	572	677	2.6	1.4	8.797	A
B	386	97	508	768	0.503	390	469	1.9	1.0	9.606	A
C	777	194	275	1323	0.588	782	623	2.7	1.5	6.725	A
D	291	73	789	719	0.405	294	268	1.2	0.7	8.498	A

Superseded

2024 Base, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	25.67	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 Base	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	799	100.000
B		ONE HOUR	✓	496	100.000
C		ONE HOUR	✓	775	100.000
D		ONE HOUR	✓	360	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	152	420	227
	B	139	1	326	30
	C	368	286	0	120
	D	222	50	89	0

Vehicle Mix

Superseded

Heavy Vehicle Percentages

From	To				
		A	B	C	D
	A	0	0	0	0
	B	1	0	1	0
	C	0	1	0	0
	D	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.91	37.03	8.5	E	733	1100
B	0.88	41.88	5.9	E	455	682
C	0.69	9.59	2.2	A	711	1066
D	0.58	12.72	1.4	B	331	496

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	602	150	318	1032	0.583	596	546	0.0	1.4	8.159	A
B	373	93	549	754	0.495	369	365	0.0	1.0	9.274	A
C	583	146	296	1312	0.445	580	622	0.0	0.8	4.901	A
D	271	68	595	804	0.337	269	281	0.0	0.5	6.705	A

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	718	180	382	1004	0.716	714	654	1.4	2.4	12.249	B
B	446	111	658	698	0.638	443	438	1.0	1.7	13.915	B
C	696	174	355	1276	0.546	695	746	0.8	1.2	6.178	A
D	324	81	713	752	0.431	323	337	0.5	0.7	8.379	A

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	880	220	466	966	0.911	860	796	2.4	7.4	29.452	D
B	546	136	793	629	0.867	532	532	1.7	5.1	33.171	D
C	853	213	427	1232	0.692	849	899	1.2	2.2	9.292	A
D	397	99	868	682	0.582	394	408	0.7	1.3	12.406	B

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	880	220	468	965	0.912	876	802	7.4	8.5	37.032	E
B	546	136	807	623	0.877	542	537	5.1	5.9	41.885	E
C	853	213	435	1227	0.695	853	915	2.2	2.2	9.591	A
D	397	99	874	679	0.584	397	413	1.3	1.4	12.720	B

Superseded

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	718	180	385	1002	0.717	742	664	8.5	2.7	14.905	B
B	446	111	681	687	0.649	462	445	5.9	1.9	17.010	C
C	696	174	369	1267	0.549	700	774	2.2	1.2	6.392	A
D	324	81	723	747	0.434	326	347	1.4	0.8	8.602	A

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	602	150	321	1031	0.584	606	552	2.7	1.4	8.581	A
B	373	93	558	749	0.498	377	370	1.9	1.0	9.762	A
C	583	146	302	1308	0.446	585	634	1.2	0.8	4.990	A
D	271	68	601	802	0.338	272	285	0.8	0.5	6.815	A

Superseded

2024 Base + Development, Friday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	60.96	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base + Development	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	788	100.000
B		ONE HOUR	✓	524	100.000
C		ONE HOUR	✓	1056	100.000
D		ONE HOUR	✓	498	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
		A	B	C	D
From	A	2	163	378	245
	B	125	0	335	63
	C	513	384	1	158
	D	305	78	115	0

Vehicle Mix

Superseded

Heavy Vehicle Percentages

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

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.98	67.89	15.8	F	723	1085
B	0.93	59.13	8.9	F	481	721
C	0.97	50.04	15.4	F	969	1453
D	0.96	75.17	10.9	F	457	686

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	593	148	432	975	0.609	587	705	0.0	1.5	9.156	A
B	394	99	553	746	0.529	390	467	0.0	1.1	9.999	A
C	795	199	325	1293	0.615	788	618	0.0	1.6	7.053	A
D	375	94	765	730	0.514	371	348	0.0	1.0	9.929	A

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	709	177	517	937	0.756	703	843	1.5	2.9	15.016	C
B	471	118	662	691	0.682	467	558	1.1	2.0	15.836	C
C	949	237	389	1254	0.757	943	740	1.6	3.0	11.378	B
D	448	112	916	662	0.677	444	416	1.0	2.0	16.239	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	868	217	615	894	0.971	833	1003	2.9	11.7	43.888	E
B	577	144	783	629	0.917	557	664	2.0	7.0	41.702	E
C	1162	291	462	1210	0.961	1126	879	3.0	11.9	33.724	D
D	549	137	1093	583	0.942	525	495	2.0	8.0	49.064	E

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	868	217	628	888	0.977	851	1024	11.7	15.8	67.891	F
B	577	144	801	620	0.930	569	678	7.0	8.9	59.126	F
C	1162	291	472	1204	0.966	1148	898	11.9	15.4	50.035	F
D	549	137	1115	573	0.958	537	505	8.0	10.9	75.167	F

Superseded

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	709	177	551	922	0.768	757	899	15.8	3.6	26.823	D
B	471	118	713	664	0.709	496	595	8.9	2.6	23.996	C
C	949	237	416	1238	0.767	997	793	15.4	3.5	17.507	C
D	448	112	968	639	0.702	482	444	10.9	2.5	26.971	D

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	593	148	441	971	0.611	601	720	3.6	1.6	9.946	A
B	394	99	566	739	0.534	400	476	2.6	1.2	10.794	B
C	795	199	333	1288	0.617	802	634	3.5	1.6	7.517	A
D	375	94	779	723	0.519	381	355	2.5	1.1	10.678	B

Superseded

2024 Base + Development, Saturday

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Geometry	Arm C - Roundabout Geometry	Effective flare length is over 30m, which is outside the normal range. Treat capacities with increasing caution.

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		A, B, C, D	41.65	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Base + Development	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		ONE HOUR	✓	831	100.000
B		ONE HOUR	✓	503	100.000
C		ONE HOUR	✓	792	100.000
D		ONE HOUR	✓	488	100.000

Origin-Destination Data

Demand (Veh/hr)

	To				
	A	B	C	D	
From	A	0	143	395	293
	B	136	1	318	48
	C	360	280	0	152
	D	292	72	124	0

Vehicle Mix

Superseded

Heavy Vehicle Percentages

From	To				
		A	B	C	D
	A	0	0	1	0
	B	1	0	1	0
	C	0	1	0	0
	D	0	0	1	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
A	0.97	64.21	15.7	F	763	1144
B	0.95	69.34	10.1	F	462	693
C	0.74	11.74	2.8	B	727	1090
D	0.78	23.23	3.3	C	447	671

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	626	156	356	1016	0.616	620	589	0.0	1.6	8.956	A
B	379	95	606	725	0.523	375	370	0.0	1.1	10.152	B
C	596	149	356	1275	0.468	593	624	0.0	0.9	5.249	A
D	367	92	581	811	0.453	364	368	0.0	0.8	7.998	A

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	747	187	427	984	0.759	742	706	1.6	3.0	14.519	B
B	453	113	725	664	0.681	449	443	1.1	2.0	16.400	C
C	712	178	427	1233	0.578	710	747	0.9	1.3	6.865	A
D	438	110	696	759	0.577	436	441	0.8	1.3	11.070	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	915	229	520	942	0.971	879	856	3.0	12.0	42.531	E
B	554	139	863	594	0.933	532	536	2.0	7.6	46.534	E
C	872	218	506	1185	0.736	867	889	1.3	2.7	11.136	B
D	537	134	845	693	0.775	530	527	1.3	3.1	21.210	C

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	915	229	524	941	0.973	900	865	12.0	15.7	64.212	F
B	554	139	882	584	0.948	544	542	7.6	10.1	69.344	F
C	872	218	518	1178	0.741	872	909	2.7	2.8	11.735	B
D	537	134	853	689	0.779	536	537	3.1	3.3	23.227	C

Superseded

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	747	187	433	981	0.762	796	724	15.7	3.4	23.665	C
B	453	113	773	640	0.707	483	456	10.1	2.6	26.401	D
C	712	178	458	1214	0.587	717	797	2.8	1.4	7.330	A
D	438	110	711	753	0.582	446	465	3.3	1.4	12.009	B

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
A	626	156	360	1014	0.617	633	598	3.4	1.7	9.628	A
B	379	95	618	719	0.527	385	375	2.6	1.1	10.956	B
C	596	149	365	1270	0.470	599	638	1.4	0.9	5.379	A
D	367	92	589	808	0.455	369	375	1.4	0.8	8.261	A

Superseded



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Junctions 9
ARCADY 9 - Roundabout Module
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Filename: Junction 3 - A474 Rdbt.j9
Path: P:\15000-15999\C-15297 - McDonalds Pontardawe\01_WIP\CA_Calculation\TP\modelling
Report generation date: 11/07/2022 14:12:00

- »2022 Base, Friday
- »2022 Base, Saturday
- »2024 Base , Friday
- »2024 Base, Saturday
- »2024 Base + Development, Friday
- »2024 Base + Development, Saturday

Summary of junction performance

	Friday				Saturday			
	Queue (Veh)	Delay (s)	RFC	LOS	Queue (Veh)	Delay (s)	RFC	LOS
	2022 Base							
Arm 1	6.1	36.18	0.88	E	8.1	41.97	0.91	E
Arm 2	1.5	18.88	0.61	C	1.9	22.84	0.66	C
Arm 3	6.4	33.46	0.88	D	2.3	15.51	0.70	C
Arm 4	7.7	30.62	0.90	D	2.2	10.23	0.69	B
Arm 5	0.2	37.45	0.20	E	0.2	18.24	0.17	C
	2024 Base							
Arm 1	7.1	41.37	0.90	E	9.7	49.69	0.93	E
Arm 2	1.7	20.09	0.63	C	2.1	24.91	0.69	C
Arm 3	7.5	38.56	0.90	E	2.5	16.64	0.72	C
Arm 4	9.1	35.48	0.92	E	2.4	10.77	0.71	B
Arm 5	0.3	41.10	0.22	E	0.2	19.07	0.18	C
	2024 Base + Development							
Arm 1	9.6	54.59	0.93	F	14.8	71.80	0.97	F
Arm 2	1.9	23.28	0.67	C	2.6	30.51	0.73	D
Arm 3	10.8	53.68	0.94	F	3.0	19.69	0.76	C
Arm 4	16.4	58.23	0.97	F	3.2	13.48	0.77	B
Arm 5	0.3	50.33	0.26	F	0.3	21.85	0.21	C

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

Superseded



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File summary

File Description

Title	
Location	
Site number	
Date	19/05/2022
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	HYDROCKlanniechapelton
Description	

Units

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

Analysis Options

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

Demand Set Summary

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	Friday	ONE HOUR	16:00	17:30	15	✓
D2	2022 Base	Saturday	ONE HOUR	12:00	13:30	15	✓
D3	2024 Base	Friday	ONE HOUR	16:00	17:30	15	✓
D4	2024 Base	Saturday	ONE HOUR	12:00	13:30	15	✓
D5	2024 Base + Development	Friday	ONE HOUR	16:00	17:30	15	✓
D6	2024 Base + Development	Saturday	ONE HOUR	12:00	13:30	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
AL	✓	100.000	100.000

Superseded

2022 Base, Friday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	31.52	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description
1	untitled	
2	untitled	
3	untitled	
4	untitled	
5	untitled	

Roundabout Geometry

Arm	V - Approach road half-width (m)	E - Entry width (m)	I' - Effective flare length (m)	R - Entry radius (m)	D - Inscribed circle diameter (m)	PHI - Conflict (entry) angle (deg)	Exit only
1	2.45	5.30	8.0	8.5	46.2	27.2	
2	2.75	5.00	5.0	11.0	39.0	30.0	
3	5.50	5.50	0.0	10.0	48.0	31.1	
4	4.53	6.45	6.0	6.0	42.0	35.2	
5	2.30	3.00	2.0	6.0	42.0	40.4	

Slope / Intercept / Capacity

Arm Intercept Adjustments

Arm	Type	Reason	Percentage intercept adjustment (%)
1	None		
2	Percentage		90.00
3	Percentage		75.00
4	Percentage		94.00
5	None		

Roundabout Slope and Intercept used in model

Arm	Final slope	Final intercept (PCU/hr)
1	0.487	1081
2	0.506	962
3	0.578	1184
4	0.546	1354
5	0.389	677

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

Superseded

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2022 Base	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	588	100.000
2		ONE HOUR	✓	273	100.000
3		ONE HOUR	✓	672	100.000
4		ONE HOUR	✓	882	100.000
5		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

	To					
		1	2	3	4	5
From	1	7	54	186	341	0
	2	37	0	103	126	7
	3	242	138	1	283	8
	4	422	162	281	0	17
	5	7	5	5	5	0

Vehicle Mix

Heavy Vehicle Percentages

	To					
		1	2	3	4	5
From	1	100	0	3	1	0
	2	0	0	0	1	0
	3	1	0	0	1	0
	4	0	1	1	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.88	36.18	6.1	E	540	809
2	0.61	18.88	1.5	C	251	376
3	0.88	33.46	6.4	D	617	925
4	0.90	30.62	7.7	D	809	1214
5	0.20	37.45	0.2	E	20	30

Superseded



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Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	443	111	446	838	0.528	438	534	0.0	1.1	8.906	A
2	206	51	616	640	0.321	204	268	0.0	0.5	8.217	A
3	506	126	390	947	0.534	501	430	0.0	1.1	7.999	A
4	664	166	328	1164	0.571	659	563	0.0	1.3	7.061	A
5	17	4	963	298	0.056	16	24	0.0	0.1	12.769	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	529	132	534	796	0.664	525	639	1.1	1.9	13.134	B
2	245	61	738	577	0.426	244	321	0.5	0.7	10.795	B
3	604	151	468	901	0.670	601	515	1.1	2.0	11.841	B
4	793	198	393	1128	0.703	789	675	1.3	2.3	10.509	B
5	20	5	1154	223	0.089	20	29	0.1	0.1	17.688	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	647	162	645	743	0.871	633	772	1.9	5.4	29.577	D
2	301	75	891	498	0.603	298	387	0.7	1.5	17.708	C
3	740	185	566	844	0.877	725	623	2.0	5.7	27.385	D
4	971	243	475	1082	0.897	953	815	2.3	6.9	24.856	C
5	24	6	1393	129	0.188	24	35	0.1	0.2	34.123	D

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	647	162	655	739	0.877	645	784	5.4	6.1	36.180	E
2	301	75	906	490	0.613	300	394	1.5	1.5	18.875	C
3	740	185	574	839	0.882	737	632	5.7	6.4	33.462	D
4	971	243	483	1078	0.901	968	828	6.9	7.7	30.618	D
5	24	6	1415	120	0.202	24	35	0.2	0.2	37.452	E

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	529	132	551	788	0.671	544	660	6.1	2.1	15.644	C
2	245	61	764	564	0.435	248	332	1.5	0.8	11.527	B
3	604	151	482	893	0.676	621	531	6.4	2.2	13.995	B
4	793	198	406	1121	0.708	814	697	7.7	2.5	12.466	B
5	20	5	1190	209	0.095	20	29	0.2	0.1	19.179	C

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	443	111	453	835	0.530	447	542	2.1	1.2	9.361	A
2	206	51	627	634	0.324	207	272	0.8	0.5	8.443	A
3	506	126	397	943	0.536	510	437	2.2	1.2	8.387	A
4	664	166	334	1161	0.572	669	573	2.5	1.4	7.384	A
5	17	4	978	292	0.057	17	24	0.1	0.1	13.083	B

Superseded



Generated on 11/07/2022 14:12:13 using Junctions 9 (9.5.0.6896)

Superseded



Generated on 11/07/2022 14:12:13 using Junctions 9 (9.5.0.6896)

2022 Base, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	22.94	C

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D2	2022 Base	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	674	100.000
2		ONE HOUR	✓	278	100.000
3		ONE HOUR	✓	493	100.000
4		ONE HOUR	✓	718	100.000
5		ONE HOUR	✓	38	100.000

Origin-Destination Data

Demand (Veh/hr)

		To					
From		1	2	3	4	5	
	1	10	38	207	409	10	
	2	36	0	88	142	12	
	3	172	81	3	227	10	
	4	349	124	233	1	11	
	5	15	9	7	6	1	

Vehicle Mix

Superseded

Heavy Vehicle Percentages

	To					
		1	2	3	4	5
From	1	70	0	2	0	0
	2	0	0	0	0	0
	3	2	0	0	0	0
	4	1	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.91	41.97	8.1	E	618	928
2	0.66	22.84	1.9	C	255	383
3	0.70	15.51	2.3	C	452	679
4	0.69	10.23	2.2	B	659	988
5	0.17	18.24	0.2	C	35	52

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	507	127	348	894	0.567	502	435	0.0	1.3	9.067	A
2	209	52	662	622	0.337	207	188	0.0	0.5	8.644	A
3	371	93	467	901	0.412	368	402	0.0	0.7	6.724	A
4	541	135	250	1208	0.447	537	586	0.0	0.8	5.340	A
5	29	7	755	379	0.075	28	33	0.0	0.1	10.242	B

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	606	151	417	861	0.703	602	522	1.3	2.3	13.670	B
2	250	62	793	554	0.451	249	226	0.5	0.8	11.731	B
3	443	111	560	847	0.523	442	482	0.7	1.1	8.843	A
4	645	161	300	1180	0.547	644	702	0.8	1.2	6.692	A
5	34	9	905	320	0.107	34	39	0.1	0.1	12.566	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	742	186	509	817	0.908	723	636	2.3	7.0	33.018	D
2	306	77	957	470	0.651	302	275	0.8	1.8	21.054	C
3	543	136	676	780	0.696	538	584	1.1	2.2	14.615	B
4	791	198	365	1144	0.691	787	849	1.2	2.2	9.970	A
5	42	10	1104	242	0.173	41	48	0.1	0.2	17.952	C

Superseded

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	742	186	512	816	0.909	738	640	7.0	8.1	41.972	E
2	306	77	973	462	0.662	306	277	1.8	1.9	22.845	C
3	543	136	687	774	0.702	542	591	2.2	2.3	15.514	C
4	791	198	368	1142	0.692	790	861	2.2	2.2	10.225	B
5	42	10	1110	239	0.175	42	48	0.2	0.2	18.244	C

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	606	151	421	859	0.705	628	528	8.1	2.5	16.888	C
2	250	62	820	541	0.462	254	229	1.9	0.9	12.720	B
3	443	111	581	835	0.531	448	493	2.3	1.2	9.388	A
4	645	161	305	1177	0.548	649	723	2.2	1.2	6.865	A
5	34	9	914	316	0.108	35	40	0.2	0.1	12.781	B

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	507	127	351	893	0.568	512	440	2.5	1.3	9.571	A
2	209	52	673	616	0.340	211	191	0.9	0.5	8.910	A
3	371	93	476	896	0.414	373	407	1.2	0.7	6.906	A
4	541	135	254	1206	0.448	542	595	1.2	0.8	5.434	A
5	29	7	762	376	0.076	29	33	0.1	0.1	10.362	B

Superseded



Generated on 11/07/2022 14:12:13 using Junctions 9 (9.5.0.6896)

2024 Base , Friday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	36.11	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D3	2024 Base	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	598	100.000
2		ONE HOUR	✓	277	100.000
3		ONE HOUR	✓	683	100.000
4		ONE HOUR	✓	896	100.000
5		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

		To				
From		1	2	3	4	5
	1	7	55	189	347	0
	2	38	0	105	128	7
	3	246	140	1	288	8
	4	429	165	286	0	17
	5	7	5	5	5	0

Vehicle Mix

Superseded

Heavy Vehicle Percentages

From	To					
		1	2	3	4	5
	1	100	0	3	1	0
	2	0	0	0	1	0
	3	1	0	0	1	0
	4	0	1	1	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.90	41.37	7.1	E	548	822
2	0.63	20.09	1.7	C	255	382
3	0.90	38.56	7.5	E	627	940
4	0.92	35.48	9.1	E	822	1234
5	0.22	41.10	0.3	E	21	31

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	450	112	453	835	0.539	445	542	0.0	1.1	9.136	A
2	209	52	626	635	0.329	207	272	0.0	0.5	8.376	A
3	514	129	396	943	0.545	509	437	0.0	1.2	8.208	A
4	675	169	334	1161	0.581	669	572	0.0	1.4	7.248	A
5	17	4	979	292	0.058	17	24	0.0	0.1	13.063	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	537	134	542	792	0.678	534	650	1.1	2.0	13.736	B
2	249	62	750	571	0.437	248	326	0.5	0.8	11.124	B
3	614	153	475	897	0.684	610	523	1.2	2.1	12.395	B
4	806	201	400	1124	0.717	801	686	1.4	2.4	11.009	B
5	20	5	1172	216	0.093	20	29	0.1	0.1	18.364	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	658	164	653	739	0.890	642	782	2.0	6.1	32.492	D
2	305	76	902	492	0.621	302	392	0.8	1.6	18.655	C
3	752	188	573	839	0.896	734	631	2.1	6.5	30.257	D
4	987	247	481	1079	0.915	965	826	2.4	7.8	27.543	D
5	25	6	1412	122	0.203	24	35	0.1	0.2	36.716	E

Superseded

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	658	164	664	734	0.896	654	796	6.1	7.1	41.371	E
2	305	76	919	484	0.632	305	400	1.6	1.7	20.089	C
3	752	188	583	834	0.902	748	641	6.5	7.5	38.561	E
4	987	247	490	1074	0.919	982	841	7.8	9.1	35.480	E
5	25	6	1436	112	0.220	25	36	0.2	0.3	41.096	E

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	537	134	563	782	0.687	556	674	7.1	2.3	17.096	C
2	249	62	780	555	0.449	253	339	1.7	0.8	12.026	B
3	614	153	491	887	0.692	635	542	7.5	2.3	15.283	C
4	806	201	415	1116	0.722	831	711	9.1	2.7	13.676	B
5	20	5	1216	199	0.101	21	30	0.3	0.1	20.312	C

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	450	112	460	831	0.541	454	551	2.3	1.2	9.653	A
2	209	52	638	629	0.332	210	277	0.8	0.5	8.628	A
3	514	129	404	939	0.547	519	444	2.3	1.2	8.648	A
4	675	169	339	1157	0.583	680	583	2.7	1.4	7.620	A
5	17	4	995	286	0.059	17	25	0.1	0.1	13.413	B

Superseded

2024 Base, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	26.03	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D4	2024 Base	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	686	100.000
2		ONE HOUR	✓	283	100.000
3		ONE HOUR	✓	502	100.000
4		ONE HOUR	✓	731	100.000
5		ONE HOUR	✓	39	100.000

Origin-Destination Data

Demand (Veh/hr)

		To					
From		1	2	3	4	5	
	1	10	39	211	416	10	
	2	37	0	90	145	12	
	3	175	82	3	231	10	
	4	355	126	237	1	11	
	5	15	9	7	6	1	

Vehicle Mix

Superseded

Heavy Vehicle Percentages

From	To					
		1	2	3	4	5
	1	70	0	2	0	0
	2	0	0	0	0	0
	3	2	0	0	0	0
	4	1	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.93	49.69	9.7	E	630	944
2	0.69	24.91	2.1	C	260	389
3	0.72	16.64	2.5	C	460	691
4	0.71	10.77	2.4	B	671	1006
5	0.18	19.07	0.2	C	35	53

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	517	129	354	891	0.579	511	443	0.0	1.3	9.339	A
2	213	53	673	616	0.346	211	192	0.0	0.5	8.848	A
3	378	94	476	896	0.422	375	409	0.0	0.7	6.869	A
4	550	138	255	1206	0.456	547	596	0.0	0.8	5.437	A
5	29	7	768	374	0.078	29	33	0.0	0.1	10.414	B

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	617	154	424	858	0.719	612	531	1.3	2.4	14.414	B
2	254	64	807	547	0.465	253	230	0.5	0.8	12.183	B
3	451	113	570	842	0.536	449	490	0.7	1.1	9.143	A
4	657	164	305	1177	0.558	655	714	0.8	1.2	6.874	A
5	35	9	921	314	0.111	35	40	0.1	0.1	12.879	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	755	189	518	813	0.929	732	647	2.4	8.2	37.053	E
2	312	78	971	463	0.673	307	280	0.8	1.9	22.506	C
3	553	138	685	775	0.713	548	593	1.1	2.3	15.516	C
4	805	201	371	1140	0.706	800	861	1.2	2.3	10.458	B
5	43	11	1123	234	0.182	42	49	0.1	0.2	18.720	C

Superseded

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	755	189	521	812	0.931	749	652	8.2	9.7	49.694	E
2	312	78	988	454	0.686	311	282	1.9	2.1	24.908	C
3	553	138	698	767	0.720	552	601	2.3	2.5	16.645	C
4	805	201	375	1138	0.707	804	875	2.3	2.4	10.766	B
5	43	11	1130	231	0.184	43	49	0.2	0.2	19.067	C

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	617	154	429	856	0.721	645	538	9.7	2.7	19.028	C
2	254	64	840	530	0.480	259	234	2.1	0.9	13.468	B
3	451	113	595	827	0.545	456	504	2.5	1.2	9.827	A
4	657	164	311	1174	0.560	661	740	2.4	1.3	7.078	A
5	35	9	931	310	0.112	35	41	0.2	0.1	13.129	B

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	517	129	358	890	0.581	522	448	2.7	1.4	9.921	A
2	213	53	685	610	0.349	215	194	0.9	0.5	9.150	A
3	378	94	485	891	0.424	380	415	1.2	0.7	7.068	A
4	550	138	258	1204	0.457	552	607	1.3	0.9	5.539	A
5	29	7	776	371	0.079	29	34	0.1	0.1	10.544	B

Superseded

2024 Base + Development, Friday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	52.23	F

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D5	2024 Base + Development	Friday	ONE HOUR	16:00	17:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	611	100.000
2		ONE HOUR	✓	284	100.000
3		ONE HOUR	✓	698	100.000
4		ONE HOUR	✓	957	100.000
5		ONE HOUR	✓	22	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To					
		1	2	3	4	5
	1	7	53	182	369	0
	2	37	0	102	138	7
	3	240	137	1	313	8
	4	455	177	309	0	17
	5	7	5	5	5	0

Vehicle Mix

Superseded

Heavy Vehicle Percentages

From	To					
		1	2	3	4	5
	1	100	0	3	1	0
	2	0	0	0	1	0
	3	1	0	0	1	0
	4	0	1	1	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.93	54.59	9.6	F	561	842
2	0.67	23.28	1.9	C	260	391
3	0.94	53.68	10.8	F	640	961
4	0.97	58.23	16.4	F	878	1318
5	0.26	50.33	0.3	F	21	31

Main Results for each time segment

16:00 - 16:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	460	115	476	824	0.558	455	556	0.0	1.2	9.631	A
2	214	53	655	620	0.344	212	277	0.0	0.5	8.763	A
3	525	131	420	930	0.565	520	446	0.0	1.3	8.686	A
4	721	180	325	1166	0.618	714	615	0.0	1.6	7.870	A
5	17	4	1015	278	0.061	17	24	0.0	0.1	13.774	B

16:15 - 16:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	550	137	570	780	0.705	546	665	1.2	2.3	15.104	C
2	255	64	784	554	0.461	254	331	0.5	0.8	11.955	B
3	627	157	503	881	0.712	623	535	1.3	2.4	13.727	B
4	861	215	389	1130	0.761	855	737	1.6	3.0	12.807	B
5	20	5	1215	199	0.101	20	29	0.1	0.1	20.078	C

16:30 - 16:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	673	168	678	728	0.925	652	793	2.3	7.7	39.142	E
2	312	78	935	476	0.657	309	395	0.8	1.8	21.064	C
3	768	192	605	821	0.936	743	639	2.4	8.6	37.830	E
4	1054	264	466	1088	0.969	1016	883	3.0	12.4	38.202	E
5	25	6	1447	108	0.229	24	35	0.1	0.3	42.653	E

Superseded

16:45 - 17:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	673	168	693	721	0.934	666	810	7.7	9.6	54.590	F
2	312	78	955	465	0.671	312	403	1.8	1.9	23.276	C
3	768	192	616	815	0.943	760	651	8.6	10.8	53.680	F
4	1054	264	475	1083	0.974	1038	900	12.4	16.4	58.230	F
5	25	6	1478	96	0.257	24	35	0.3	0.3	50.334	F

17:00 - 17:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	550	137	606	762	0.721	577	706	9.6	2.8	21.811	C
2	255	64	831	529	0.482	259	352	1.9	1.0	13.510	B
3	627	157	526	867	0.723	659	564	10.8	2.8	19.598	C
4	861	215	411	1118	0.769	912	775	16.4	3.6	21.045	C
5	20	5	1292	169	0.119	21	31	0.3	0.1	24.432	C

17:15 - 17:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	460	115	486	820	0.561	466	567	2.8	1.3	10.337	B
2	214	53	669	613	0.349	215	282	1.0	0.5	9.091	A
3	525	131	429	925	0.568	531	455	2.8	1.3	9.277	A
4	721	180	332	1162	0.620	728	628	3.6	1.7	8.441	A
5	17	4	1035	270	0.062	17	25	0.1	0.1	14.263	B

Superseded

2024 Base + Development, Saturday

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Use circulating lanes	Arm order	Junction Delay (s)	Junction LOS
1	untitled	Standard Roundabout		1, 2, 3, 4, 5	34.70	D

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D6	2024 Base + Development	Saturday	ONE HOUR	12:00	13:30	15	✓

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

Demand overview (Traffic)

Arm	Linked arm	Profile type	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
1		ONE HOUR	✓	702	100.000
2		ONE HOUR	✓	290	100.000
3		ONE HOUR	✓	512	100.000
4		ONE HOUR	✓	801	100.000
5		ONE HOUR	✓	39	100.000

Origin-Destination Data

Demand (Veh/hr)

From	To					
		1	2	3	4	5
	1	10	36	198	448	10
	2	35	0	85	157	12
	3	167	79	3	253	10
	4	387	139	263	1	11
	5	15	9	7	6	1

Vehicle Mix

Superseded

Heavy Vehicle Percentages

From	To					
		1	2	3	4	5
	1	70	0	3	0	0
	2	0	0	0	0	0
	3	2	0	0	0	0
	4	1	0	0	0	0
	5	0	0	0	0	0

Results

Results Summary for whole modelled period

Arm	Max RFC	Max Delay (s)	Max Queue (Veh)	Max LOS	Average Demand (Veh/hr)	Total Junction Arrivals (Veh)
1	0.97	71.80	14.8	F	644	966
2	0.73	30.51	2.6	D	266	399
3	0.76	19.69	3.0	C	470	705
4	0.77	13.48	3.2	B	735	1102
5	0.21	21.85	0.3	C	35	53

Main Results for each time segment

12:00 - 12:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	529	132	380	880	0.601	523	459	0.0	1.5	9.933	A
2	218	55	706	600	0.364	216	197	0.0	0.6	9.329	A
3	386	96	506	879	0.439	383	415	0.0	0.8	7.211	A
4	603	151	244	1212	0.498	599	645	0.0	1.0	5.836	A
5	29	7	810	358	0.081	29	33	0.0	0.1	10.931	B

12:15 - 12:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	631	158	455	843	0.748	626	550	1.5	2.8	16.152	C
2	260	65	845	528	0.493	259	236	0.6	0.9	13.301	B
3	461	115	606	821	0.561	459	498	0.8	1.2	9.890	A
4	720	180	293	1185	0.608	718	773	1.0	1.5	7.675	A
5	35	9	971	294	0.118	35	39	0.1	0.1	13.846	B

12:30 - 12:45

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	773	193	555	796	0.971	739	670	2.8	11.2	47.288	E
2	319	80	1008	444	0.717	313	286	0.9	2.3	26.444	D
3	564	141	722	754	0.748	558	599	1.2	2.8	17.860	C
4	882	220	355	1150	0.767	875	925	1.5	3.1	12.835	B
5	43	11	1183	211	0.202	42	48	0.1	0.2	21.270	C

Superseded

12:45 - 13:00

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	773	193	559	794	0.974	759	676	11.2	14.8	71.804	F
2	319	80	1029	434	0.735	318	289	2.3	2.6	30.507	D
3	564	141	738	745	0.758	563	608	2.8	3.0	19.694	C
4	882	220	359	1147	0.769	881	942	3.1	3.2	13.482	B
5	43	11	1192	207	0.206	43	48	0.2	0.3	21.854	C

13:00 - 13:15

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	631	158	461	841	0.751	677	559	14.8	3.3	26.994	D
2	260	65	897	501	0.519	266	241	2.6	1.1	15.672	C
3	461	115	646	798	0.577	467	517	3.0	1.4	11.076	B
4	720	180	299	1181	0.610	726	814	3.2	1.6	8.034	A
5	35	9	985	289	0.120	35	41	0.3	0.1	14.229	B

13:15 - 13:30

Arm	Total Demand (Veh/hr)	Junction Arrivals (Veh)	Circulating flow (Veh/hr)	Capacity (Veh/hr)	RFC	Throughput (Veh/hr)	Throughput (exit side) (Veh/hr)	Start queue (Veh)	End queue (Veh)	Delay (s)	Unsignalised level of service
1	529	132	384	877	0.602	535	465	3.3	1.6	10.723	B
2	218	55	720	592	0.368	220	199	1.1	0.6	9.731	A
3	386	96	518	872	0.442	388	422	1.4	0.8	7.477	A
4	603	151	248	1210	0.498	605	658	1.6	1.0	5.980	A
5	29	7	820	354	0.082	29	34	0.1	0.1	11.096	B