SGN PLACE

SEVENOAKS GASHOLDER STATION

CRAMPTONS ROAD, SEVENOAKS, KENT, TN14 5ES

PLANNING APPLICATION - MARCH 2021

vectos.

TRANSPORT ASSESSMENT

SGN

Sevenoaks Gasholders, Sevenoaks

March 2021

Transport Assessment

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Contents

Appendices

1 Introduction

1.1 Vectos has been appointed by SGN, to provide traffic and transport advice in relation to a planning application for a residential development on the site of the former Sevenoaks Gasholders (hereafter, referred to as 'the Site'), on Otford Road, Sevenoaks.

1.2 The Site is situated east of Otford Road and west of Crampton's Road, approximately 500m to the north of Bat & Ball Station and 2.3km north of Sevenoaks town centre. The Site is located in a suburban area which provides access to various services and amenities within walking distance of the Site.

1.3 The proposals are for the construction of a residential development consisting of 136no. dwellings, with new vehicular accesses from Otford Road and Crampton's Road, associated parking, landscaping, drainage, boundary treatments and earthworks.

1.4 This Transport Assessment (TA) will outline the existing transport conditions surrounding the Site, relevant policy guidance and the likely impact of the development proposals in traffic and transport terms.

1.5 As part of the design process Vectos engaged with KCC Highways to agree the scope of this report and the included assessments. It is noted that due to the ongoing COVID-19 pandemic it was not possible to undertake new traffic surveys and as such the assessments included within this report reflect the data which was available at the time of writing.

1.6 This Transport Assessment has been submitted alongside a Residents Travel Plan and a Delivery and Servicing Plan, which have been produced to support the sustainable operation of the development.

Report Structure

1.7 This Transport Assessment has been produced to investigate the transport issues that are relevant to the proposed development of the Site and is structured as follows:

- **Section 2**: provides a description of the existing situation and transport networks;
- **Section 3**: considers the proposals in the context of National, Regional and Local Policy;
- **Section 4**: sets out a description of the proposals, particularly as they relate to the different transport modes;
- **Section 5**: outlines the Trip Generation of the Site;
- **Section 6**: presents the transport impacts; and
- **Section 7**: provides a summary and conclusion to the report.

2 Existing Conditions

2.1 This section describes the existing conditions of the Site including a description of the Site's location, the existing highway network, accessibility in terms of public transport and details of the walking and cycling opportunities.

Site Location

2.2 The Site is a former gasholders site located approximately 2.3km north of Sevenoaks town centre. The Site is surrounded by residential and retail land uses and Sevenoaks Wildlife Reserve is also located in the vicinity of the Site. The Site is bounded by residential properties to the north, Crampton's Road to the east, Wickes retail store to the south and Otford Road (A225) to the west.

2.3 The strategic location of the Site is presented in **Figure 1.1** and the local site location in **Figure 1.2.**

Figure 1.1 – Strategic Site Location

Figure 1.2 – Local Site Location

Local Facilities

2.4 The Site benefits from being located within close proximity to a range of local facilities and services, which the future residents of the Site can travel to on foot. These amenities are outlined in **Table 2.1**.

Table 2.1 – Local Facilities

Facility Type	Facility Location	Distance from Site
Supermarket	ALDI, Otford Road	290m
	Sainsbury's, Otford Road	450m
Community Facility	Bat & Ball Community Centre, Crampton's Road	350m
Pharmacy	Lloyds Pharmacy, Otford Road	450m
Pub / Restaurant	Brisket & Barrel, St Johns Hill	700m
Post Office	St Johns Hill Sub Post Office, Seal Road	750m
Doctors	St John's Medical Practice, St Johns Hill	1000m

2.5 On this basis, it is considered that the Site is in a highly sustainable location, which is well located for residents to walk to nearby everyday facilities.

2.6 Further to the amenities outlined above it is noted that there are other services available in the surrounding area such as primary and secondary schools (both located within 2km of the Site), restaurants/takeaway, hairdressers, pet stores and home improvement stores within the surrounding area. Whilst these services may not be used on a daily basis, they would allow for residents to access further types of services without the need for a car.

Walking

2.7 Existing footways are provided along both sides of Crampton's Road, to the east of the Site, which are well lit and provide access to local facilities.

2.8 A Public Right of Way (PRoW) dissects the site and connects Crampton's Road to Otford Road. The existing route provides a direct route across the site from the south-east to north-west corners of the site.

2.9 Otford Road (A225) provides a footway along its eastern side (the side which the Site is located on), the footway at times follows the main carriageway and in other locations is set back from the main carriageway by wide grass verges or by being located in front of residential properties, which are set back from the main carriageway.

2.10 To the north of the Site footway provision is provided outside the residential properties located on the access road, to the east of the main carriageway of Otford Road. Footway provision is also provided on the west side of the carriageway in the vicinity of the Aldi store. An uncontrolled pedestrian crossing with refuge island, dropped kerbs and tactile paving is provided outside Aldi to allow safe pedestrian movements over the carriageway of Otford Road.

2.11 In the vicinity of the Site there are pedestrian crossing facilities provided along the desire lines, these take the form of uncontrolled crossing points with dropped kerbs. The crossing points located at busier junctions also include refuge islands and tactile paving.

Cycling

2.12 There are no dedicated cycling facilities present in the immediate area of the Site, however there is the opportunity for cyclists to use the road network to access local facilities.

2.13 The Sevenoaks District Cycling Strategy identifies a proposed leisure cycle route to the west of the Site, which would head north along Crampton's Road and Otford Road, providing access to Otford.

Public Transport

Bus services

2.14 There are bus stops located both north and south of the Site on Otford Road. The nearest bus stops are located to the north, approximately 450m (5-minute) walking distance, next to Sainsbury's. The bus stops to the south are approximately 500m (6-minute) walking distance. Both stops are served by the 790 service and two school services.

2.15 The bus stops at Sevenoaks Hospital on the A25 provide access to the 308 bus route, which offers more frequent services. They are located approximately 650m (9-minute) walking distance to the south east of the Site. It is noted some further school services are available from stops on Seal Road and Bradbourne Vale, however due to their low frequency and further distance from the Site they have not been considered further.

2.16 A summary of bus routes serving these stops is provided in **Table 2.2.**

Table 2.2 – Summary of Bus Services

Service Number	Route	Peak Weekday Frequency
790	Farningham - Otford - Sevenoaks - Chipstead - London	4 per day
403 (School Service)	Otford - Sevenoaks - Weald of Kent School	1 per day
S (School Service)	Sutton At Home - Wilmington - Swanley - Otford - Sevenoaks Schools	1 per day
308	Gravesend Railway Station - Bus Station	1 per hour

2.17 **Table 2.2** shows that while the Site is served by some bus routes, the provision is relatively poor for trips other than school-based trips.

Railway Services

2.18 Bat & Ball railway station is the nearest station to the Site and is located approximately 550m (7-minute) walking distance to the south of the Site.

2.19 The station is managed by Southeastern, but the services that operate at this station are operated by Thameslink. Regular services run from this station to London and Sevenoaks. A summary of the services is provided in **Table 2.3.**

Table 2.3 – Services from Bat & Ball Railway Station

Destination	Frequency
London Blackfriars	2 per hour
Sevenoaks	2 per hour

2.20 **Table 2.3** shows that the Site is relatively well served by rail services, within a short walking distance of the Site.

2.21 It is noted that it is possible for rail users to take the train from Bat and Ball Station to Sevenoaks Station (approximately 4 minute journey time), where they can then access further rail services to London Charing Cross, Hastings and Ramsgate at frequent intervals.

Local Highway Network

Crampton's Road

2.22 Crampton's Road runs to the east of the Site in a north south alignment, which will provide an access point to the Site on its eastern side. The road runs from a simple priority junction with A225 Otford Road to the north to another simple priority junction with A225 Otford Road to the south.

2.23 Crampton's Road is a single carriageway residential street subject to a 30mph speed limit. The street also provides access to a small business park located toward its southern end and a garden machinery showroom at its northern end. Streetlighting is present along the length of the road and has footways along both sides of the road.

2.24 Whilst there are bus flags visible on Google Streetview on Crampton's Road, online research suggests that no bus services currently use these stops.

A225 Otford Road

2.25 To the west of the Site, Otford Road (A225) runs from Otford, where it meets the A21, south to the south of Sevenoaks town centre. The road is a single carriageway in the vicinity of the Site, however there is a section which turns into a dual carriageway when the road crosses over the M26, before returning to a single carriageway arrangement.

2.26 The road is subject to the national speed limit to the north, after the roundabout with Sainsbury's, but is subject to a 30mph speed limit when within the vicinity of the Site, as it approaches Sevenoaks.

A25 Seal Road

2.27 The A25 meets the A225 to the south of the Site at a signalised junction, known as Bat & Ball junction. The road runs in an east west alignment, from Guildford in the west to Wrotham Heath in the east, providing connections to many important road networks. The A25 connects to the M25 in the west, which provides the main driving route to London.

Personal Injury Collision (PICs) Data

2.28 The latest three-year personal injury collision (PICs) data has been obtained from Kent County Council for the road network surrounding the Site. The full accident record and plan showing the locations of the accidents are provided in **Appendix A** of this report.

2.29 The data shows that in the study area, a total of 12 collisions occurred, five serious collisions and seven slight collisions. No collisions resulted in fatalities. Of these collisions, nine involved vulnerable road users (including four motorcyclists).

2.30 At the A225 / A25 junction there is a cluster of four collisions, based on the available information it appears that three of these four incidents were a result of pedestrians crossing without having a green light for them to proceed, resulting in collisions with moving vehicles. It is considered that these incidents are a result of road user behaviour, rather than an issue with the highway network.

2.31 Due to the limited number of accidents which occurred in the study area, each one has been summarised in turn:

- **Ref: 156638** – A slight collision occurred at the A225 / A25 junction involving a pedestrian and a car. The pedestrian saw a green light and started to cross the road in front of a row of traffic, the car then pulled away and struck the pedestrian.

- **Ref: 157456N** – A serious collision involving a pedestrian and a car at the junction of the A225 and Crampton's Road. The car was travelling north on the A225 and the pedestrian stepped off the traffic island into the side of the vehicle.

- **Ref: 156640N** – This slight collision involved two cars at the A225 / A25 junction. A car turned right on the A25, without giving way to the second vehicle, which collided into its side.

- **Ref: 156615N** – This serious collision involved a motorcycle and a car on St Johns Hill. The motorbike was overtaking the car after the traffic lights, but the car then began to turn right into Sainsbury's, causing the motorbike to collide with its side.

- **Ref: 156650N** – A serious collision involving a group of pedestrians and a car at the A225 / A25 junction. The group of pedestrians were crossing the A25 without looking, causing the car to hit one of them, resulting in serious injuries.

- **Ref: 156635N** – This collision accident occurred at the A225 / A25 junction involving a car and a pedestrian. The car was travelling north east on the A25 when a pedestrian stepped out into the road and was struck by the car, resulting in serious injuries.

- **Ref: 156670N** – This slight collision occurred on the A25 and involved two cars. The first car was parked at the traffic lights and the second car did not see the first when coming round the corner, causing a collision.

- **Ref: 156910N** – A slight collision involving two cars on the A225. The first car was travelling south east on the A225 and stopped for the traffic lights, when the second car collided with its rear. The driver admitted to not paying attention to the road.

- **Ref: 157714N** – A slight collision at the roundabout on the A225 involving a motorcycle and a car. The motorbike failed to give way to the car when it was travelling north through the roundabout, resulting in a slight collision.

- **Ref: 157037N** – This slight collision occurred on the A225 involving a goods vehicle and a motorbike. The goods vehicle was turning right onto the A225 out of the Wickes car park. A car was slowing to allow the good vehicle to complete the manoeuvre, which the motorbike tried to overtake, which led it to collide with the side of the goods vehicle.

- **Ref: 157171N** – This serious accident involved a motorbike on the A225. The rider hit the kerb when rounding a corner, causing them to fall and resulting in serious injuries.

— **Ref: 157541N** – This slight collision occurred on the A225 involving a car and a cyclist. The car was beeping at the cyclist and travelling towards them at speed, and clipped them on the arm when passing, knocking the cyclist into the hedgerow.

2.32 Limited information is provided in the accident reports on causation factors; however it is considered likely that the accidents described in the previous paragraphs were a result of road user behaviour, rather than issues with the local highway network, this is supported by the relatively low number of accidents which have occurred and the fact that they are relatively spread out, with limited clustering.

Summary

2.33 The Site benefits from good accessibility to sustainable modes of travel including bus stops located on the A25 and Bat & Ball Railway Station approximately a 7-minute walk from the Site. In addition, a pedestrian and cycle network provide access to a number of key facilities including food stores, GP surgeries and leisure facilities.

2.34 In addition, key destinations at a further distance, such as London can be accessed by rail connections and locations such as Maidstone and Crawley, can be accessed by the strategic road network.

3 Policy Context

3.1 This section provides a review of relevant transport-related planning policy in the context of the development proposals.

National Policy

National Planning Policy Framework (February 2019)

3.2 The National Planning Policy Framework (NPPF) is a central government planning document produced by the Department for Communities and Local Government. The revised NPPF was published in February 2019 and sets out the government's planning policies for England and how these are expected to be applied. This revised framework replaces the previous NPPF published in March 2012 and July 2018.

3.3 Section 9 of the NPPF deals with 'Promoting sustainable transport.'

3.4 Paragraph 103 states that:

"Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes."

3.5 Paragraph 108 sets out the transport issues which should be addressed within Development Plans and decisions. These are:

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

safe and suitable access to the site can be achieved for all users; and

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

3.6 Finally, the NPPF states that: "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."

Local Policy

The Sevenoaks District Strategy for Transport (2010-2026)

3.7 This document sets out the vision for Sevenoaks transport network until 2026 and is used to inform planning and transport investment decisions, to ensure that the network continues to be appropriate for its users. The document is reviewed annually.

3.8 The Strategy for Transport aims to improve key issues that the Sevenoaks transport network is facing, including public transport, active travel and road travel. More specifically, the document identifies the aim to improve peak train services for commuters, reduce the reliance on the private car, improve gaps in the bus network, alleviate congestion and air quality issues, improve provision for pedestrian and cyclists and resolve parking issues around commuter stations and town centres.

3.9 The document acknowledges that the Bat & Ball junction is a difficult intersection for pedestrians to navigate and seeks to improve the peak hour traffic issues by investing in alternative modes of transport, to encourage non-car modes as the primary means of travel.

Sevenoaks District Council – Core Strategy (February 2011)

3.10 The core strategy was adopted in 2011 and sets out the plan for development within the district up to 2026.

3.11 The strategy seeks to add 3,300 dwellings within Sevenoaks between 2006 and 2026, in a way which is sustainable. It is stated that most of this new development should fall within urban areas of Sevenoaks and Swanley.

3.12 The document makes reference to the Sevenoaks District Strategy for Transport, which has been discussed earlier within this policy review. The strategy outlines the transport objectives for the area as a whole and different transport priorities within local areas.

3.13 Policy LO1 relates to how new development should be distributed, it is identified that the Sevenoaks Urban area will be the principal focus for new development in the district.

3.14 Policy LO2 relates to new development within the Sevenoaks Urban area and outlines the aim to provide 1,330 dwellings by 2026.

3.15 Policy SP2 relates to sustainable development and outlines what the Transport Strategy will seek to ensure that new developments provide, including improved facilities for pedestrians and cyclists and preparation of Travel Plans.

Sevenoaks District Council – The Allocations and Development Management Plan (February 2015)

3.16 The Allocations and Development was adopted in 2015 and seeks to provide a strategy for sustainable development from 2006 – 2026.

3.17 Policy T1 relates to mitigating travel impact from new developments, which can include various impacts such as congestion, noise, environmental impacts, pollution and safety, along with impacts on amenity and health. This policy seeks to provide improved infrastructure in the area along with appropriate mitigation.

3.18 Policy T2 relates to vehicle parking, it is noted that the policy states that the latest Kent County Council standards should be referred to (in this case the Interim Guidance Note 3, to the Kent Design Guide). This guidance document is discussed later in this section.

3.19 It is noted that the SGN Gasholders site was allocated within this document for residential development.

Emerging Local Plan

3.20 At the time of writing the Sevenoaks Emerging Local Plan had recently been subject to a Judicial Review and Sevenoaks District Council are in the process of appealing the results. As such, while the new Local Plan has not been adopted at the time of writing, its content was considered during the production of this report and design of the scheme.

Northern Sevenoaks Masterplan – Sevenoaks Town Council, Final Report (November 2017)

3.21 This masterplan focuses on northern Sevenoaks and the area surrounding Bat & Ball station, with the aim to improve the environment and the station, encourage residential development in close proximity to transport links and local services, make the most of the area's natural assets and consider opportunities for sustainable expansion of Sevenoaks to the north.

3.22 A proposal of the masterplan is to enhance the environment around Bat & Ball station with the creation of a pedestrian link on Chatham Hill Road for a better walking experience and the proposed residential development on the Tarmac site and a new community centre.

3.23 Another proposal is to relocate the employment uses from around the station further north to allow for the development of residential and local facilities uses, whilst utilising the land to the east of the station to improve the arrival experience at Bat & Ball station.

Kent Design Guide Review: Interim Guidance Note 3 – Residential Parking

3.24 The local car parking standards are set out within the Kent Design Guide Review: Interim Guidance Note 3 – Residential Parking document. The Site is considered to be situated in an edge of centre area, which proposes a mixture of 103x studios, 1-bed and 2-bed flats, 23x 3-bed flats, 1x 2-bed house and 9x 3-bed houses. A summary of the guidance table for residential car parking is set out in **Table 3.1** below.

Table 3.1 – Kent Design Guidance for Residential Parking in Edge of Centre Location

Type of Dwelling	Parking Provision
1 & 2 Bed Flats	1 space per unit
1 & 2 Bed Houses	1 space per unit
3 Bed Houses	1 space per unit

3.25 It is noted that the guidance does not provide a standard for 3 bed flats, however applying the standard for 1 & 2 bed flats to these units would result in a maximum parking provision of 136 car parking spaces.

Supplementary Planning Guidance SPG 4 – Kent Vehicle Parking Standards

3.26 This document outlines minimum cycle parking standards for dwellings, in addition to guidance for parking layouts.

3.27 For individual residential dwellings, the minimum cycle parking requirement is 1 space per bedroom. For flats and maisonettes, it is 1 space per unit. Therefore, the Site would be required to provide a minimum of 155 cycle spaces.

3.28 In regard to parking layout, the document states:

"1. Cycle parking provision should normally be provided within the curtilage of the residential dwelling. Where a garage is provided it should be of a suitable size to accommodate the required cycle parking provision.

2. Parking provision should be provided as a secure communal facility where a suitable alternative is not available."

4 Development Proposals

4.1 This section sets out the development proposals for the Site, including the access, parking and delivery and servicing arrangements.

4.2 The proposals are for the construction of a residential development consisting of 136no. dwellings, with new vehicular accesses from Otford Road and Crampton's Road, associated parking, landscaping, drainage, boundary treatments and earthworks.

4.3 The proposed accommodation schedule is summarised in **Table 4.1**.

Table 4.1: Proposed Schedule of Accommodation

Unit Type	No. of Beds	Quantity
Rotunda	1-bed	19
	2-bed	30
	3-bed	18
North Block	Studio	1
	1-bed	17
	2-bed	22
	3-bed	1
South Block	1-bed	9
	2-bed	5
	3-bed	4
Townhouses	2-bed	1
	3-bed	9
Total		136

4.4 The townhouses are proposed along the eastern edge of the Site, while the flats are split across three buildings: the Rotunda, the North Block and the South Block.

4.5 The proposed site layout is provided in **Appendix B** of this report.

Vehicular Access

4.6 The proposed site access arrangements are shown in **Appendix B** of this report. A total of three vehicular access points are to be provided, they are discussed in the following paragraphs.

Residential

4.7 Two points of vehicular access are proposed, which will be used by residents. One access point will be located on Crampton's Road, towards the south-east corner of the Site. This access point will be for vehicle ingress movements only. It will be used by cars, delivery and servicing vehicles and emergency vehicles as a point of access to the Site.

4.8 After accessing the Site from this location, the vehicles will travel around the Site in a westbound direction, around the Rotunda building, where an area of parking is provided.

4.9 The other vehicular access will be provided on Otford Road, on the western side of the Site. The access point will allow for both vehicular access and egress and will take the form of a simple priority junction.

4.10 This point of access will provide access to the area of car parking located around the periphery of the Rotunda building and the podium car park located within the North Block. Furthermore, it will provide access to the restricted SGN maintenance area.

4.11 It should be noted that due to the proposed layout, it is not anticipated that rat-running will occur through the development. This is due to there being no desire line for vehicles, with vehicles having to travel a relatively convoluted route around the Rotunda building, with significant horizontal and vertical deflection.

4.12 The internal access route will be a low-speed environment, with limited vehicle movements.

4.13 A swept path analysis drawing showing a car navigating around the site are provided in **Appendix C** of this report.

4.14 The proposed access plan is provided in **Appendix C** of this report. It includes 2.4mx43m visibility splays from this access in either direction, in accordance with design standards. It is noted that the proposed access is suitably distanced from the servicing road located to the north of the site, this is shown, along with swept paths, on a drawing also provided in **Appendix C**.

SGN Access

4.15 SGN will require ongoing access to the northern part of the Site, where they have three existing structures containing an Active Pressure Reducing System (RPS) within a compound. This area is required to be secure and SGN have been involved throughout the design process to ensure that their operational needs are met. Additionally, it will be necessary for emergency vehicles to be able to access this aspect of the Site.

4.16 Vehicles accessing this controlled area to the north of the Site will access the Site from the east, using their existing access on Crampton's Road. A dedicated area in which a 10m rigid vehicle is

able to park will be provided within this secure area. Upon departure, the vehicle will proceed to egress the Site using the main site access on Otford Road. It should be noted that this area is accessed via gates, which are shown in the landscape plan provided in **Appendix A** of this report.

4.17 Swept path analysis drawings, which illustrate that this area is accessible to SGN maintenance vehicles are provided in **Appendix D** of this report.

Stage 1 Road Safety Audit and Designer's Response

4.18 A Stage 1 Road Safety Audit has been undertaken for the proposed access arrangements. The Road Safety Audit and Designer's Response is provided at **Appendix E** of this report, for reference.

4.19 Due to the COVID-19 pandemic the Road Safety Audit was undertaken online. This virtual audit was agreed with KCC Highways prior to being undertaken.

4.20 It should be noted that since the Road Safety Audit was undertaken, one internal gate has been moved. As such the plan provided in the Road Safety Audit is not the latest revision, however the movement of this internal gate has no impact on the outcome of the audit.

Pedestrian and Cyclist Access

4.21 A pedestrian access point is proposed adjacent to the Otford Road vehicular access, it provides a convenient route to the Rotunda building.

4.22 There is also an existing Public Right of Way (PRoW) which dissects the Site, running from the north-west to the south-east corners of the Site. The development proposals are for this route to be retained and improved, to provide an attractive and safe route for both members of the public and residents. Internal pedestrian walking routes will connect with the PRoW, to provide a network of paths around the site.

4.23 As per the existing situation, the PRoW will be for pedestrian use, while cycle gates will be provided to ensure that cyclists either dismount or travel at low speeds, should cyclists use it in practice.

4.24 It is proposed that cyclists either cycle into the site via one of the vehicular access points, or dismount and walk their bike into the site using the PRoW.

4.25 It is noted that the PRoW is required to cross the internal vehicular access route. This will be a low speed environment, with limited vehicular movements, as such it is not anticipated that there will be conflict between the different site users.

Vehicle Parking

4.26 The local vehicle parking standards are outlined in Section 2 of this report, the standards suggest that for a suburban area a maximum of 136 parking spaces should be provided on site.

4.27 A total of 97 parking spaces are proposed at the Site, these are provided across three areas:

— Off-street parking bays provided outside of the townhouses facing onto Crampton's Road (16 spaces).

— Parking located at surface level within the Site (48 spaces).

— In a podium car park beneath the North Block (33 spaces).

4.28 A total of nine accessible bays are included within the proposed car parking provision, three of these bays will be provided within the podium car park and the remaining six will be provided at surface level, around the podium and adjacent to the South Block.

4.29 It is anticipated that the two townhouses which face onto the internal landscaped area will each have two parking spaces dedicated to their use within the podium car park. This is due to these units not having parking within their boundary as per the other townhouse units.

4.30 Electric vehicle charging provision will be provided at the site. To be compliant with Sevenoaks District Council Allocations and Development Management Plan, each of the townhouses with parking provided within the property boundary will be provided with an electrical socket with suitable voltage. For the rest of the site a communal charging point will be provided to give other residents the opportunity to charge their vehicles.

4.31 Provision of a Car Club vehicle within the site is being considered. Car Club operators have been approached to determine whether provision at the site is viable.

Vehicle Parking Level Discussion

4.32 As previously detailed, a total of 97 car parking spaces are proposed within the Site, while this falls beneath the level of car parking outlined within the guidance (maximum of 136 spaces), this is considered to be an appropriate level, given the proximity of the Site to Bat and Ball Station, which provides frequent services towards London and opportunities to interchange at Sevenoaks.

4.33 The Nomis dataset for accommodation type by car or van availability (LC4415EW) has been analysed for the local area (E02005096: Sevenoaks 010). The review of this data determined that car ownership at houses within the area is around 1.27 cars/vans per dwelling, while for flats it is 0.70, this analysis has been provided in full within **Appendix F** of this report.

4.34 The eight townhouse units which front Crampton's Road will each be provided with two parking spaces within their boundary. The remaining two units which face onto the central landscaped area within the Site are anticipated to have two dedicated parking spaces each provided within the podium car park. This results in a total provision of 2.0 spaces per townhouse, which exceeds the aforementioned local ownership average of 1.27 vehicles per house and would sufficiently accommodate demand from these units.

4.35 For flats, a total of 77 parking spaces will be available for use, which results in a provision of 0.61 spaces per unit. This level of provision is close to the level of car ownership found amongst flats in the area (0.70 cars/vans per unit), as previously discussed. Applying the local ownership data of 0.70 cars/vans per unit to the proposed quantum of 126 flats would suggest a total ownership of 88 vehicles amongst the residents of the flats.

4.36 On the basis of the above, this level of ownership, should it occur at the proposed development would result in overspill of up to 11 vehicles unable to find parking within the Site and requiring

overspill parking on surrounding streets. This is considered to be a worst-case scenario, as the proposals include for a relatively high proportion of smaller flat units, which in turn are less likely to own a private car.

4.37 Additionally this level of overspill parking is based on historic 2011 Census data, it is anticipated that car ownership will have likely reduced since the undertaking of the Census. As such, this level of overspill is considered to be a worst-case scenario.

Cycle Parking

4.38 A total of 184 cycle parking spaces are provided at the Site, this exceeds the requirements of the Kent Vehicle Parking Standards – Supplementary Guidance 4 document, which when applied to the proposed development would require a minimum of 155 cycle parking spaces to be provided.

4.39 The cycle parking spaces are provided across the Site as follows:

- 12 two-tier cycle parking spaces within a cycle store in the podium car park beneath North Block;
- 20 cycle wall racks within the podium car park;
- 77 cycle parking spaces provided as a mix of 2-tier spaces and wall hooks, are proposed in a cycle store within the Rotunda building;
- 27 cycle parking spaces provided as a mix of 2-tier spaces and wall hooks, are proposed in a cycle store within the North Block;
- 18 cycle parking spaces provided as 16 2-tier spaces and 2 wall rack spaces, are proposed in a cycle store in South Block; and
- Each of the 10 townhouses will have a secure cycle storage unit outside their property which accommodates 3 cycles each (a total of 30 cycle parking spaces).

Deliveries and Servicing

4.40 Delivery and servicing vehicles will access the Site via the access on Crampton's Road and then follow the internal route around the Rotunda, following which they would egress the Site using the Otford Road vehicle access.

4.41 The delivery and servicing strategy for the Site is discussed in further detail in the Delivery and Servicing Plan which has been submitted alongside this Transport Assessment.

4.42 Swept path analysis drawings showing that servicing vehicles can successfully access and egress the Site are provided in **Appendix C** of this report.

Emergency Vehicles

4.43 Emergency vehicles requiring access to the North Block and SGN aspect of the Site will be able to access the Site using the existing SGN access on Crampton's Road and depart the site through the Otford Road access.

4.44 Emergency vehicles visiting the Rotunda building and South Block will access the Site using the Crampton's Road access, in the south-east corner of the Site and egress the Site using the Otford Road access.

4.45 Swept path analysis drawings showing emergency vehicle access to the Site are provided at **Appendix G** for reference.

5 Trip Generation

5.1 This section describes how the trip generation of the proposed development has been estimated.

Existing Use

5.2 The Site is a former SGN gasholders site, which was decommissioned in the late 1990's, following which the gasholders were demolished in 2019. SGN still require relatively infrequent access to the Site for ongoing maintenance purposes. This activity is not proposed to change as a result of the proposals.

Proposed Scheme

5.3 The proposed trip generation of the scheme has been agreed with KCC through the scoping process. The TRICS trip generation database has been interrogated from residential surveys, It was queried separately for surveys of private houses and private flats. The extracted total person trip rates have then been applied to travel to work data from the 2011 Census, to produce a multi-modal trip generation which is specific to the local area in which the Site is located.

5.4 To further tailor this trip generation exercise to the area in which the Site will be located, the anticipated car ownership levels were used in the TRICS site selection process. Nomis was interrogated to extract the 2011 Census data on car ownership I the area (data set LC4415EW, for area E01024465: Sevenoaks 010D). The resultant car ownership levels for houses is 1.19 cars/vans per house and 0.76 cars/vans per flat. This analysis is provided in full within **Appendix F** of this report for reference.

5.5 The criteria selected as part this trip generation exercise are detailed in the following paragraphs.

<u>TRICS Methodology</u>

5.6 The TRICS database was first interrogated from multi-modal surveys of privately owned flats, the following criteria were applied during this process:

- Locations in England (excluding Greater London);
- Locations in Suburban and Edge of Town areas;
- Surveys undertaken on weekdays were considered;
- Car ownership of 0.6-1.0 (which corresponds to the anticipated vehicle ownership of 0.76 cars/vans per flat as discussed above); and
- Sites where there was noted to be a mix of houses and flats were removed.

5.7 The above selection process resulted in a total of four surveys of flats being extracted for use in this trip generation exercise. The full TRICS outputs are provided in **Appendix H**.

5.8 The TRICS database was also interrogated from surveys of privately owned houses, the following criteria were applied during this process:

- Locations in England (excluding Greater London);
- Locations in Suburban and Edge of Town areas;
- Surveys undertaken on weekdays were considered;
- Car ownership of 1.1-1.5 (which corresponds to the anticipated vehicle ownership of 1.19 cars/vans per house as discussed above)
- Sites where there was noted to be a mix of houses and flats were removed.

5.9 The methodology outlined above resulted in a total of 30 surveys of houses being extracted. The full TRICS outputs are provided in **Appendix H** of this report.

5.10 The resultant total person trip rates produced by this exercise are provided for the peak hours in **Table 5.1**.

Table 5.1: Total Person Trip Rates

Category	Unit Type	AM Peak (8am-9am)		PM Peak (5pm-6pm)	
		Arrive	Depart	Arrive	Depart
Total Person Trip Rates	Flats	0.095	0.634	0.488	0.173
	Houses	0.225	0.829	0.607	0.281

5.11 The trip rates provided in **Table 5.1** have been applied to the proposed development quantum (126 flats and 10 houses) the resultant total person trips are provided in **Table 5.2**.

Table 5.2: Total Person Trips

Category	Unit Type	AM Peak (8am-9am)		PM Peak (5pm-6pm)	
		Arrive	Depart	Arrive	Depart
Total Person Trips	Flats	12	80	61	22
	Houses	2	8	6	3
	Total	14	88	68	25

5.12 **Table 5.2** shows that it is anticipated that a total of 102 and 93 two-way total person trips will be produced in the AM and PM peak periods respectively.

5.13 In order to estimate the multi-modal trip generation of the Site, the 2011 Census dataset for method of travel to work (dataset QS701EW) has been analysed for area E01024465: Sevenoaks 010D, within which the Site is located. **Appendix I** provides this analysis in full.

5.14 The total person trip generation in **Table 5.2** has been applied to 2011 Census data for method of travel to work (dataset QS701EW, for area E01024465: Sevenoaks 010D). The results of this analysis is provided in **Table 5.3**.

Table 5.3: Multi-Modal Trip Generation

Method of Travel	% Mode Share	AM Peak (0800-0900)		PM Peak (1700-1800)	
		Arr.	Dep.	Arr.	Dep.
Underground, metro, light rail, tram	0%	0	0	0	0
Train	18%	3	16	12	5
Bus, minibus or coach	1%	0	1	1	0
Taxi	0%	0	0	0	0
Motorcycle, scooter or moped	2%	0	2	1	0
Driving a car or van	54%	8	48	37	13
Passenger in a car or van	5%	1	4	3	1
Bicycle	1%	0	1	1	0
On foot	18%	3	16	12	4
Total	100%	14	88	68	25

5.15 **Table 5.3** shows that it is anticipated that 61% of residents will travel by vehicle modes in the peak periods (car/van drivers, passengers and motorcycle/scooter/moped drivers). This results in a total of 58 and 51 two-way vehicle trips in and out of the Site in the AM and PM peaks respectively (assuming car/van passengers are travelling with other residents of the Site).

5.16 Public transport modes are anticipated to account for 19% of trips to and from the Site and are anticipated to generate 20 and 18 two-way trips in the AM and PM peaks respectively. The majority of these trips will be undertaken using National Rail services, an increase of 19 and 17 trips by rail is anticipated to have a negligible impact on the local rail services, where there are four trains departing Bat & Ball Station per hour during the weekday peak periods (i.e. an increase of 4-5 passengers per train).

5.17 Active modes are anticipated to account for a further 19% of trips to and from the Site and will generate circa 20 and 17 two-way trips in the AM and PM peaks respectively.

5.18 It is considered that the above trip generation undertaken provides a robust assessment, as it makes use of 2011 Census mode share data, it is considered likely that there has been mode shift away from car use in the area since 2011. Furthermore, the TRICS trip surveys utilised were undertaken prior to the COVID-19 outbreak and as such represent normal conditions. It is considered likely that in post pandemic conditions that travel patterns will be somewhat different and that people are likely to make fewer trips outside their home, as working from home becomes more common on a long-term basis.

Delivery and Servicing Trip Generation

5.19 A trip generation exercise has been undertaken for delivery and servicing vehicles which will visit the Site following occupation. This exercise has been undertaken using the TRICS database and has considered surveys of sites which are within England (excluding Greater London) for sites which were privately owned houses and privately owned flats, in suburban and edge of town locations.

5.20 The full TRICS outputs are provided in **Appendix H**, with a table summarising the anticipated number of delivery and servicing vehicle trips, split into Light Goods Vehicles (LGVs) and Other Goods Vehicles (OGVs) in the peak periods provided below in **Table 5.4**.

Table 5.4: Anticipated Delivery and Servicing Vehicle Movements

	AM Peak Period			PM Peak Period		
	Arrive	Depart	Total	Arrive	Depart	Total
Flats						
LGVs	1	1	2	1	1	2
OGVs	0	0	0	0	0	0
Townhouses						
LGVs	0	0	0	0	0	0
OGVs	0	0	0	0	0	0
Total						
LGVs	1	1	2	1	1	2
OGVs	0	0	0	0	0	0

5.21 **Table 5.4** shows that during the peak hours a very low number of LGV movements are anticipated (equivalent to one vehicle arriving and departing in each peak hour), while no OGV movements are anticipated within these hours.

6 Impact Assessment

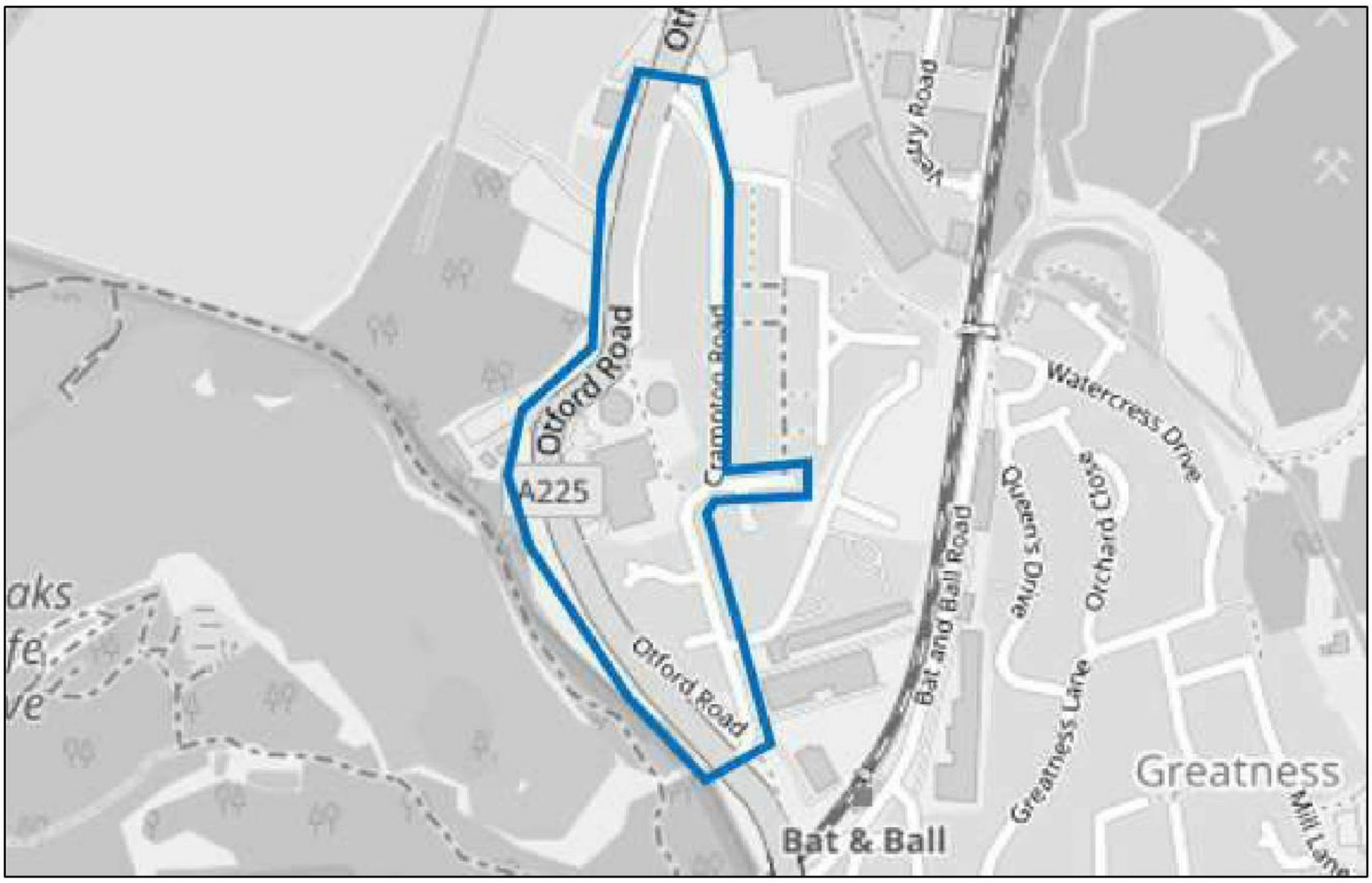
Introduction

6.1 This section considers the potential transport impacts of the development on the surrounding network. This includes a consideration of the impact on junction capacity and parking.

Parking Impact

6.2 As requested by KCC through the scoping process, a parking beat survey has been undertaken along the streets in the vicinity of the Site. The survey area is shown in **Figure 6.1**.

Figure 6.1: Parking Beat Survey Area



6.3 The survey was undertaken by K+M Traffic Surveys on Tuesday 22nd and Thursday 25th February, at 01:45 and 01:30 respectively.

6.4 It should be noted that the survey was undertaken in line with the Lambeth Methodology for parking surveys was used, with the exception that a bay length of 5.5m was used within the analysis, as requested by KCC through the pre-application process. The parking survey data is provided in **Appendix J** of this report.

6.5 **Table 6.1** presents the results of the parking surveys and indicate how heavily parked the survey area was during each survey, along with the number of available spaces.

Table 6.1: Parking Beat Survey Results

Day	Time	Unrestricted Capacity	Total Demand	% Occupied	Residual Capacity
Tuesday 23rd Feb 2021	01:45	217	174	80%	43
Thursday 25th Feb 2021	01:30		174	80%	43

6.6 **Table 6.1** shows that at overnight parking demand equates to around 80% of the available capacity, with the same level of overnight demand captured on both surveyed nights (174 vehicles). This results in residual capacity of circa 43 spaces overnight.

6.7 It is noted that as these surveys have been undertaken overnight this presents a worst-case scenario, as during the day local residents are anticipated to require their cars for commuting and other trips, leaving greater residual capacity in the area surrounding the Site. It is further noted that due to current COVID-19 restrictions local residents would not be away overnight on holiday or on work trips and as such the overnight demand for parking is likely greater than during pre-pandemic conditions.

6.8 As the existing parking demand is below 90% occupancy it is not considered that any parking stress is occurring in the area surrounding the Site.

6.9 Due to the proposed development providing townhouses along its eastern edge on Crampton's Road, there will be a loss of unrestricted parking bays on this street due to the introduction of vehicle crossovers to allow residents to park in their dedicated parking spaces provided outside each property. As such it is anticipated that a total of 9 parking bays will be lost on Crampton's Road as a result of this.

6.10 Additionally, due to the potential for up to 11 vehicles requiring overspill parking on-street, as discussed in **Section 4**, this potential additional overnight parking demand has also been included as a sensitivity test, to produce a worst-case scenario. **Table 6.2** provides the results of this analysis, where there is a reduction in on-street capacity and increase in parking demand, both associated with the development.

Table 6.2: Parking Beat Survey, With Development Results

Day	Time	Unrestricted Capacity	Total Demand	% Occupied	Residual Capacity
Tuesday 23rd Feb 2021	01:45	208	185	89%	23
Thursday 25th Feb 2021	01:30		185	89%	23

6.11 **Table 6.2** shows that with the reduction in on-street parking and potential additional demand for on-street parking as a result of the development there would still be residual parking capacity available overnight, of approximately 11 spaces.

6.12 The parking occupancy level would be anticipated to increase by 9%, to 89%. As previously discussed, it is considered that this level of demand produces a worst-case scenario due to people being unable to travel for overnight trips for leisure or for work, due to COVID-19.

6.13 The parking levels proposed on-site are considered appropriate the serve the site needs. The site is relatively accessible by rail modes and there are many amenities in the surrounding area which can be travelled to by non-car modes.

6.14 It is further noted that the 5.5m long parking bay calculation factor requested by KCC Highways is an extremely robust measurement. When combined with the current COVID-19 restrictions, resulting in higher levels of parking through the day and overnight at properties, this produces a potentially unrealistic scenario, with an underestimation of parking capacity.

6.15 It is noted that the parking demand in **Table 6.2** falls below the 90% parking stress threshold, which is often used as a means determine whether it would be difficult to find a parking space within an area.

Junction Capacity Impact

6.16 As part of this Transport Assessment a junction capacity assessment has been undertaken in order to understand the impact of the development on the surrounding road network.

6.17 Due to the COVID-19 pandemic it has not been possible to conduct new traffic surveys which are reliable and representative. As such this junction capacity exercise has modelled the Bat & Ball junction, to the south of the Site and the proposed Site access on Otford Road, for which suitable data could be located from surveys undertaken prior to the COVID-19 pandemic.

6.18 Traffic survey data provided within the David Tucker Associates Transport Assessment (October 2019) for the Northern Sevenoaks Local Plan promotion site. The survey data provided is as follows:

— MCC data for Bat & Ball junction (A225 Otford Road/ A25 Seal Road/ A225 St John's Hill/ A25 Bradbourne Vale Road), collected on Thursday 4th October 2018; and

— MCC data for Bat and Ball Road/ A225 Otford Road, collected on Thursday 4th October 2018.

6.19 The MCC data for Bat and Ball Road/ A225 Otford Road junction has been used to provide approximate northbound and southbound flows for Otford Road, for the Site access junction. This is due to a lack of other publicly available information. This dataset is the closest available to the Site and as such has been used to provide flows which are as accurate as possible, considering the limitations.

Future Traffic Growth and Assessment Scenarios

6.20 It is understood that the development may have an opening year of 2024, however under current COVID-19 pandemic conditions it is difficult to have certainty over this at this time.

6.21 This assessment has included the following scenarios:

— 2018 Surveyed Base (when survey data was captured);

— 2024 Base (when it is anticipated that the Site may open);

— 2024 Base + Proposed Development Flows

— 2029 Base (a further future year to consider the Site when matured and to allow for any delays to construction and full occupation, which may arise due to COVID-19); and

— 2029 Base + Proposed Development Flows.

6.22 The TEMPRO database has been used to extract traffic growth rates, to growth the 2018 baseline survey data to the two future years. The rates have been taken for Sevenoaks 010 area for urban, principal roads. **Table 6.3** provides the growth rates used.

Table 6.3: TEMPRO Traffic Growth Factors

Year	AM Peak	PM Peak
2018-2024	1.0712	1.0677
2018-2029	1.1250	1.1215

6.23 No significant committed developments were identified in the vicinity of the Site through a review of the planning portal. As such it is anticipated that the TEMPRO growth factors applied will provide a robust view as to future traffic increases in the area. This approach is considered robust in light of the COVID-19 pandemic likely having a long-lasting impact on travel behaviour and with evidence that a long-term shift towards working from home is now likely to occur.

Traffic Distribution

6.24 The proposed development traffic, as detailed in **Section 5**, has been distributed across the local road network for the two peak periods, in order to anticipate the impact of the development.

6.25 The movements in and out of the Site have been split in accordance with where parking is located around the Site and has taken into consideration that the Crampton's Road access will be for ingress movements only. The split of movements around the Site accesses is provided within **Appendix K**. A worst-case approach has been taken and it has been assumed that all vehicles parking within the podium car park and parking area around the Rotunda building will access and egress the site from Otford Road.

6.26 The proposed development traffic has then been distributed across the local road network using the existing split of traffic travelling northbound and southbound along Otford Road captured in the MCC survey of the Otford Road/ Bat and Ball Road junction. This northbound/southbound split has also been applied to vehicle traffic proposed to arrive and depart via Crampton's Road due to a lack of data available for this link.

6.27 The traffic anticipated to travel to and from the south via the Bat and Ball junction has been split in accordance with the distribution of traffic travelling to and from the northern arm of this junction in the peak hours.

6.28 The distribution described in this section is provided in **Appendix K** of this report for reference.

6.29 The proposed development trips have been applied to this distribution and are also provided in **Appendix K.**

Junction Capacity Results

6.30 The results of the junction capacity assessments of the Site access and Bat and Ball junction are summarised in the following sections. The traffic flow diagrams are provided in **Appendix K** of this report and the junction modelling outputs are provided in **Appendix L**.

Proposed Site Access Junction – Otford Road

6.31 The proposed Site access junction will take the form of a priority junction located on Otford Road, as previously discussed in **Section 4**. As such the junction has been modelled using the PICADY module of the Junctions 9 software.

6.32 As the proposed access is a new junction it is only relevant to model it for the 2024 Base + Dev and 2029 Base + Dev scenarios. **Table 6.4** summarises the results of this modelling.

6.33 The traffic flow diagrams and full PICADY modelling outputs are provided in **Appendix L** of this report.

6.34 The arms of the junction are identified as follows: Arm A is Otford Road (north), Arm B is the site access arm and Arm C is Otford Road (south).

Table 6.4: Proposed Site Access Junction – Otford Road – Modelling Results

	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
2024 Base + Dev						
Stream B-AC	0.3	21.21	0.20	0.1	19.62	0.06
Stream C-AB	0.0	4.57	0.02	0.2	4.27	0.09
2029 Base + Dev						
Stream B-AC	0.3	23.95	0.22	0.1	22.04	0.07
Stream C-AB	0.0	4.49	0.02	0.2	4.19	0.10

6.35 **Table 6.4** shows that in both future years the site access would work well within capacity, with a maximum anticipated ratio of flow to capacity of 0.22, which falls well beneath the 0.85 capacity threshold. Low levels of delay (worst case of 24 seconds delay to vehicle departing the site in 2029 future year AM peak period) are anticipated and low levels of queueing are also forecast (up to 1 vehicle).

6.36 On this basis the proposed site access is anticipated to operate within its capacity.

Bat & Ball Junction

6.37 The Bat & Ball junction is an existing signal-controlled junction which is formed where Otford Road (A225), Seal Road (A25), St John's Hill (A225) and Bradbourne Vale Road (A25) meet. The junction has been modelled using LINSIG software. The modelling is consistent with that used by David Tucker Associates for the Northern Sevenoaks Local Plan promotion and the work Vectos has been undertaking in Borough Green.

6.38 The junction has been modelled for the 2018 surveyed year, 2024 future year and 2029 future years, with and without the development flows. **Table 6.5** provides a summary as to the results of these modelling scenarios. The full set of modelling outputs are provided in **Appendix L** for reference.

Table 6.5: Bat and Ball Junction Modelling Results

Scenario	AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
	Cycle Time (s)	PRC (%)	Delay (pcuHr)	Cycle Time (s)	PRC (%)	Delay (pcuHr)
Base 2018	120	-7.3%	46.42	120	-3.2%	41.10
Base 2024	120	-17.3%	87.01	120	-12.1%	62.79
Base 2024 +Dev	120	-17.8%	96.34	120	-12.7%	67.43
Base 2029	120	-26.6%	141.70	120	-20.4%	106.03
Base 2029 + Dev	120	-26.9%	152.67	120	-21.4%	114.37

6.39 **Table 6.5** shows that in the 2018 Base scenario, the year in which the surveys were undertaken, the junction was found to be operating beyond its capacity in both peak periods. In the 2024 future year the operation of the junction is anticipated to worsen, due to the additional traffic which is anticipated to occur by this time.

6.40 The 2024 future year with development flows scenario shows that the operation of the junction would be anticipated to decrease by a very small amount, with reductions to the practical reserve capacity of -0.5% and -0.6% in the AM and PM peak periods respectively, compared to the 2024 Base scenario. Increases to delay during these periods would also be relatively limited.

6.41 The 2029 future year, when it is anticipated that the Site will have matured, shows that without the development, there would be further decreases to the operation of the junction, with anticipated practical reserve capacity of -26.6% and -20.4% in the AM and PM peaks respectively.

6.42 The 2029 future year with proposed development scenario shows that the operation of the junction would worsen minimally, with a reduction of -0.3% and -1.0% to the practical reserve capacity in the AM and PM peaks respectively. The delay experienced the junction, due to the addition of the proposed development, would increase by a relatively limited amount in both peak periods.

6.43 To further quantify how limited the impact of anticipated traffic associated with the proposed development will be, on the Bat and Ball junction, the increase in trips (an additional 33 and 28 trips through the junction in the AM and PM peaks respectively) can be expressed in the following ways:

— An increase of 1.9% and 1.6% of total traffic flows respectively;

— An additional 1.1 and 0.9 additional vehicles per traffic signal cycle in the AM and PM peaks respectively; and

— An additional 0.6 and 0.5 vehicles per minute through the junction in the respective peaks.

6.44 On this basis, it can be concluded that the development will have a very low impact on this junction during the peak periods.

6.45 As this assessment has been based upon historic traffic data which was collected prior to the COVID-19 pandemic it can be assumed to be robust and a worst-case scenario. Due to the ongoing impact of COVID-19 it is anticipated that travel patterns will not return to normal for some time.

6.46 Furthermore, due to the pandemic, the rise of working from home is likely to result in permanent changes to working patterns in the UK and will likely result in a long-term reduction in commuting within the peak periods. As such it is considered that there will likely be less car demand in the future.

6.47 It is understood that a junction improvement scheme has been considered for the Bat and Ball junction, as part of potential forthcoming developments in the area. This improvement scheme would see the junction changed from a signalised junction to a roundabout. It is anticipated that should this improvement scheme come forward then this development would also have a small impact on its operation.

6.48 Overall, it can be concluded that the proposed development will have a low impact on the surrounding road network, given that the anticipated development flows are relatively low.

7 Conclusion

7.1 Vectos have been appointed by SGN to provide traffic and transport advice in relation to a planning application for a residential development on the site of the former SGN Gasholders in Sevenoaks, Kent.

7.2 The Site is located on Otford Road, and is bound by residential properties to the north, Crampton's Road to the east, Otford Road to the west and Wickes retail store and residential properties to the south. The Site is approximately 500m north of Bat and Ball Station and 2.3km north of Sevenoaks Town Centre.

7.3 The proposals are for the construction of a residential development consisting of 136no. dwellings, with new vehicular accesses from Otford Road and Crampton's Road, associated parking, landscaping, drainage, boundary treatments and earthworks.

7.4 The existing Public Right of Way through the Site will be retained and enhanced as part of the proposals and will form part of a network of footways through the Site.

7.5 The Site benefits from being in close proximity to Bat and Ball Station, located a 7-minute walk away. The station provides frequent services towards London and Sevenoaks, which would provide an important commuting link. The Site is also in the vicinity of a range of amenities, including food stores, pharmacy, post office, takeaways, community centre and outdoor leisure space. This will allow future residents the opportunity to use sustainable transport as their primary mode of transport.

7.6 The development is likely to generate approximately 59 two-way vehicle trips during the AM peak hour and 53 two-way vehicle movements during the PM peak hour. This equates to approximately one additional two-way vehicle movement per minute during the AM and PM peak hours on the local road network.

7.7 The Site will provide two points of vehicular access for residents, one on Otford Road and another on Crampton's Road. The access on Crampton's Road will be for vehicle ingress movements only and will provide access to an internal spine road with areas of parking located off it. The Otford Road access point will be a point of vehicular access and egress. Due to the lack of vehicular desire lines and convoluted internal route, with significant horizontal and vertical deflection, it is not anticipated that rat-running will occur as a result of the development.

7.8 In addition to residents' cars, delivery and servicing vehicles and emergency vehicles, SGN will require access to the Site on occasion for maintenance purposes. The structures which they require access to are located towards the northern edge of the Site and will be located within a secure area. Access for SGN maintenance vehicles and emergency vehicles accessing the North Block will be via their existing access on Crampton's Road. The needs of SGN have been considered throughout the design process.

7.9 Analysis of parking beat survey data has determined that the area surrounding the Site is not currently subject to parking stress. The construction of the development would result in a small reduction in parking capacity. In the worst-case scenario a small amount of overspill parking may

result from new residents (up to 11 vehicles overnight), however the analysis has shown that this would not result in parking stress in the surrounding area.

7.10 The junction capacity assessment of Bat and Ball junction has determined that the Site will have a minimal impact on the operation of the junction, which is already understood to be operating beyond its capacity. The additional vehicles which will pass through this junction as a result of the development are very low and will have a negligible impact on its operation. It is understood that improvements to the junction may come forward as part of over proposed developments in the area, should this be the case the proposed development will have a negligible impact on any new layout as well.

7.11 It has been demonstrated through this Transport Assessment that the development will have a negligible impact on the operation of the local highway network.

vectos.

Appendix A

Personal Injury Accident Data

Location: A225 Otford Road, Sevenoaks

3 years personal injury crash data up to 30/06/2020

KCC Ref number: EXT/271/20

Crash Severity

- Slight
- Serious
- Fatal

N

Kent County Council
kent.gov.uk

Date: 26-November-2020
Time: 12:05:38

Title: **A225 Otford Road, Sevenoaks**

Requested output:**D - Print Crash Report**

Date: 26-November-2020

Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2020'

There were 12 reported crashes resulting in injury

D-PRINT CRASH REPORT

26-Nov-2020
12:05:38

A225 Otford Road, Sevenoaks
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2020'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	**Road No A25 Grid 553047E** **Section 092 Ref 156638N**	SLIGHT	12/07/2017	4	08:15	L	Dry	Fine	U	S.VEH	
	A25 BRADBOURNE VALE ROAD, J/W A225, SEVENOAKS								Sevenoaks		PED
	Pedestrian has crossed the road infront of a row of traffic. Saw a green light and started to cross the road. V1 has then pulled away and struck the pedestrian.						Veh1, car, SW -> NE				Casualties 1 Vehicles 1
2	**Road No A225 Grid 552861E** **Section 054 Ref 157456N**	SERIOUS	21/12/2017	5	10:30	L	Wet/Damp	Fine	W	S.VEH	
	A225, OTFORD RD J/W CRAMPTON'S RD, SEVENOAKS.								Sevenoaks		PED
	V1 WAS TRAVELLING NORTH ON OTFORD RD, JUST BEFORE THE JUNCTION AT CRAMPTON'S RD IS A TRAFFIC ISLAND FOR PEDESTRAINS. WHEN V1 WAS DRIVING PAST C1 STEPPED ONTO THE ROAD WALKING INTO THE SIDE OF V1.						Veh1, car, SW -> NE				Casualties 1 Vehicles 1
3	**Road No A25 Grid 553055E** **Section 092 Ref 156640N**	SLIGHT	13/04/2018	6	07:05	L	Dry	Fine		R.TURN	
	A25, BRADBOURNE VALE RD J/W A225 OTFORD RD, SEVENOAKS.								Sevenoaks		
	V1 has moved off from traffic lights. Location is a 4 way junction with trafffic giving way to oncoming vehicles. V2 has turned right across path of V1, colliding with its offside.						Veh1, car, E -> SW Veh2, car, SE -> NE				Casualties 1 Vehicles 2

Key

Involved
- *PED* Pedestrian
- *HGV* Heavy Goods Vehicle
- *GV* Goods Vehicle
- *M/C* Motor Cycle
- *P/C* Pedal Cycle
- *PSV* Bus/Coach

Street Lighting
- *L* Daylight
- *STL* Street Lights
- *USL* Street Lights Unlit
- *NSL* No Street Lights
- *STU* Street Lights Unknown

FACTORS
- *+VE* Positive Breath Test
- *R.TURN* Right Turn Manoeuvre
- *O/TAKE* Overtaking Manoeuvre
- *S.VEH* Single Vehicle

Special Conditions
- *ATS OUT* Traffic Lights Not Working
- *ATS DEF* Traffic Lights Defective
- *SIGNS* Road Signs Defective or Obscurred
- *RD WRKS* Road Works
- *Surface* Road Surface Defective

D-PRINT CRASH REPORT

26-Nov-2020
12:05:38

A225 Otford Road, Sevenoaks
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2020'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
4	**Road No A225 Grid 553088E** **Section 001 Ref 156615N**	SERIOUS	03/06/2018	1	17:00	L	Dry	Fine		O/TAKE R.TURN	M/C
	A225 ST JOHNS HILL J/W SAINSBURY'S LOCAL CAR PARK, SEVENOAKS (MAPPED TO DESC. ORIGINAL COORDS - 553115,156578)								Sevenoaks		
	R1 ACCELERATED FROM TRAFFIC LIGHTS BEHIND V2 AND ATTEMPTED TO OVERTAKE V2 ON ITS OFFSIDE. AS R1 WAS OVERTAKING V2, V2 HAS STARTED TO TURN INTO THE SAINSBURY'S LOCAL CAR PARK. V1 HAS COLLIDED WITH V2'S OFFSIDE.						Veh1, m/cycle > 500cc, NW -> SE Veh2, car, NW -> SW				Casualties 1 Vehicles 2
5	**Road No A25 Grid 553067E** **Section 092 Ref 156650N**	SERIOUS	05/02/2019	3	16:00	L	Dry	Fine	NW	S.VEH	
	A25 SEAL RD J/W A225 OTFORD RD, SEVENOAKS								Sevenoaks		PED
	V1 WAS TRAVELLING NORTHEAST ON BRADBOURNE VALE RD AND CROSSED OVER CROSSROADS ONTO SEAL RD, TRAVELLING APPROXIMATELY 15MPH. C1 WAS WITH A GROUP OF OTHER PEDESTRIANS WHICH CROSSED OVER SEAL RD IN A NORTHWESTERLY DIRECTION WITHOUT LOOKING. V1 WAS UNABLE TO AVOID THE GROUP AND COLLIDED WITH C1.						Veh1, car, SW -> NE				Casualties 1 Vehicles 1
6	**Road No A25 Grid 553045E** **Section 092 Ref 156635N**	SERIOUS	09/09/2019	2	07:55	L	Wet/Damp	Rain	S	S.VEH	
	A25 BRADBOURNE VALE RD J/W A225 OTFORD RD, SEVENOAKS								Sevenoaks		PED
	V1 WAS TRAVELLING NORTHEAST ON BRADBOURNE VALE RD AND WENT THROUGH A GREEN LIGHT WHEN C1 STEPPED OUT INTO THE ROAD AND WAS STRUCK BY V1.						Veh1, car, SW -> NE				Casualties 1 Vehicles 1

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street Lights Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

26-Nov-2020
12:05:38

A225 Otford Road, Sevenoaks
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2020'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
7	**Road No A25 Grid 553099E** **Section 093 Ref 156670N**	SLIGHT	24/09/2019	3	13:00	L	Wet/Damp	Fine			
	A25, SEAL RD, SEVENOAKS, (MAPPED TO COORDS)								Sevenoaks		
	V2 parked at traffic lights. V1 came around the corner and did not see V2 stopped in queue. Collision between V1 and V2.						Veh1, car, E -> SW Veh2, car, E -> SW				Casualties 1 Vehicles 2
8	**Road No A225 Grid 552880E** **Section 050 Ref 156910N**	SLIGHT	10/10/2019	5	08:20	L	Dry	Fine			
	A225 OTFORD RD, SEVENOAKS (MAPPED TO COORDS)								Sevenoaks		
	V2 was travelling southeast on Otford Rd and came to a stop in traffic when V1 collided with the rear of V2. D1 admitted to not paying attention to the road.						Veh1, car, NW -> SE Veh2, car, NW -> SE				Casualties 1 Vehicles 2
9	**Road No A225 Grid 552935E** **Section 056 Ref 157714N**	SLIGHT	20/03/2020	6	10:55	L	Dry	Fine		R.TURN	M/C
	A225 OTFORD RD J/W PRIVATE ROAD, SEVENOAKS								Sevenoaks		
	V2 ENTERED THE RNDBT TO CONTINUE ONTO THE A225 WHEN IT WAS STRUCK BY V1, WHICH FAILED TO GIVE WAY.						Veh1, m/cycle 50 - 125cc, E -> N Veh2, car, S -> N				Casualties 1 Vehicles 2
10	**Road No A225 Grid 552793E** **Section 050 Ref 157037N**	SLIGHT	21/03/2020	7	17:39	L	Wet/Damp	Fine		R.TURN	GV M/C
	A225 OTFORD RD J/W WICKES CAR PARK, SEVENOAKS								Sevenoaks		
	D1 was turning right out of Wickes Car Park on to Otford Rd, edging out slowly while looking left and right. Upon reaching the centre lane, D1 waited for a vehicle travelling north on Otford Rd to allow them to complete the turn. At this point, V2 was overtaking this vehicle on its nearside and collided with the nearside of V1 as it completed its manoeuvre.						Veh1, goods < 3.5t, NE -> NW Veh2, m/cycle > 500cc, SE -> NW				Casualties 1 Vehicles 2

Key

Involved

PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting

L	*Daylight*
STL	*Street Lights*
USL	*Street Lights Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS

+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions

ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

D-PRINT CRASH REPORT

26-Nov-2020
12:05:38

A225 Otford Road, Sevenoaks
Accident Date BETWEEN '01-Jul-2017' AND '30-Jun-2020'

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
11	**Road No A225 Grid 552780E** **Section 051 Ref 157171N**	SERIOUS	31/03/2020	3	16:22	L	Dry	Fine		S.VEH	M/C
	A225, OTFORD RD, SEVENOAKS, (MAPPED TO COORDS).								Sevenoaks		
	Light, middle of the day on a dry road. Motorbike (V1) came round the corner of Otford Road towards Otford. The rider states they hit the kerb at around 40 mph first before Baker's Yard and fell off breaking the mirror on their nearside. No damage to anything else or injury to any other person.						Veh1, m/cycle 50 - 125cc, SE -> N			Casualties 1 Vehicles 1	
12	**Road No A225 Grid 552889E** **Section 055 Ref 157541N**	SLIGHT	04/04/2020	7	13:30	L	Dry	Fine			P/C
	A225, OTFORD RD NEAR J/W CRAMPTONS RD, SEVENOAKS. (MAPPED TO NEW GRIDS ORIGINAL GRIDS 552870, 157479)								Sevenoaks		
	OLR: Whilst cycling along the road, a car beeped V2 from behind. R2 was probably a little further out from the edge of the lane as it's quite a pot holed road so they tucked over after the beep. V1 then pulled in front of them and slammed on its brakes before turning off. About a minute later the same car came past R2 at speed whilst beeping it's horn and clipped their arm (assume with the wing mirror), knocking R2 into the hedgerow. R2 got up and carried on cycling down the road, while the car had gone round the roundabout and back up the road towards them. D1 had the window down and shouted something at R2 whilst swerving towards them in the middle of the road.						Veh1, car, NE -> SW Veh2, pedal cycle, SW -> NE			Casualties 1 Vehicles 2	

Key

Involved	
PED	*Pedestrian*
HGV	*Heavy Goods Vehicle*
GV	*Goods Vehicle*
M/C	*Motor Cycle*
P/C	*Pedal Cycle*
PSV	*Bus/Coach*

Street Lighting	
L	*Daylight*
STL	*Street Lights*
USL	*Street Lights Unlit*
NSL	*No Street Lights*
STU	*Street Lights Unknown*

FACTORS	
+VE	*Positive Breath Test*
R.TURN	*Right Turn Manoeuvre*
O/TAKE	*Overtaking Manoeuvre*
S.VEH	*Single Vehicle*

Special Conditions	
ATS OUT	*Traffic Lights Not Working*
ATS DEF	*Traffic Lights Defective*
SIGNS	*Road Signs Defective or Obscurred*
RD WRKS	*Road Works*
Surface	*Road Surface Defective*

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Appendix B

Proposed Site Layout

Do not scale drawings. All dimensions to be checked on site.
Errors to be reported immediately to landscape architect.
To be read in conjunction with all relevant architects, Services and engineers drawings.

Revision Tracker
00 - Planning Submission

Status
S0 MARCH.2021

Churchman Thornhill Finch

London
3rd Floor, 14 Bowden Street,
Kennington, London SE11 4DS
+44(0)20 3727 6780

Bristol
1.14 Temple Studios,
Temple Gate, BS1 6QA
+44(0)20 3727 6788

mail@churchmanthornhillfinch.co.uk

Date 09.11.2020
Scale 1:250/A1
Drawn FP/AT

Location Sevenoaks
Client KIN Developments

Sevenoaks Gasholders Site
General Arrangement Landscape Plan

573-CTF-XX-00-DR-L-1000

Status **S0**
Revision **00**

ISSUE	REVISION NOTE	DATE
A	Issued for Information	06.08.2020
B	Revised parking layout	07.08.2020
C	Revised plant layout	13.08.2020
D	Stage 2 Report	02.09.2020
E	Issued for Information	25.09.2020
F	Issued for Information	02.10.2020
G	Issued for Information	25.11.2020
P01	Planning Submission	19.03.2021

GENERAL NOTES

1. DO NOT SCALE DRAWINGS
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK
4. REPORT ANY DISCREPANCIES WITH CONTRACT DOCUMENTATION AND / OR CONSULTANTS' DRAWINGS

0 2 5 10 15M

N

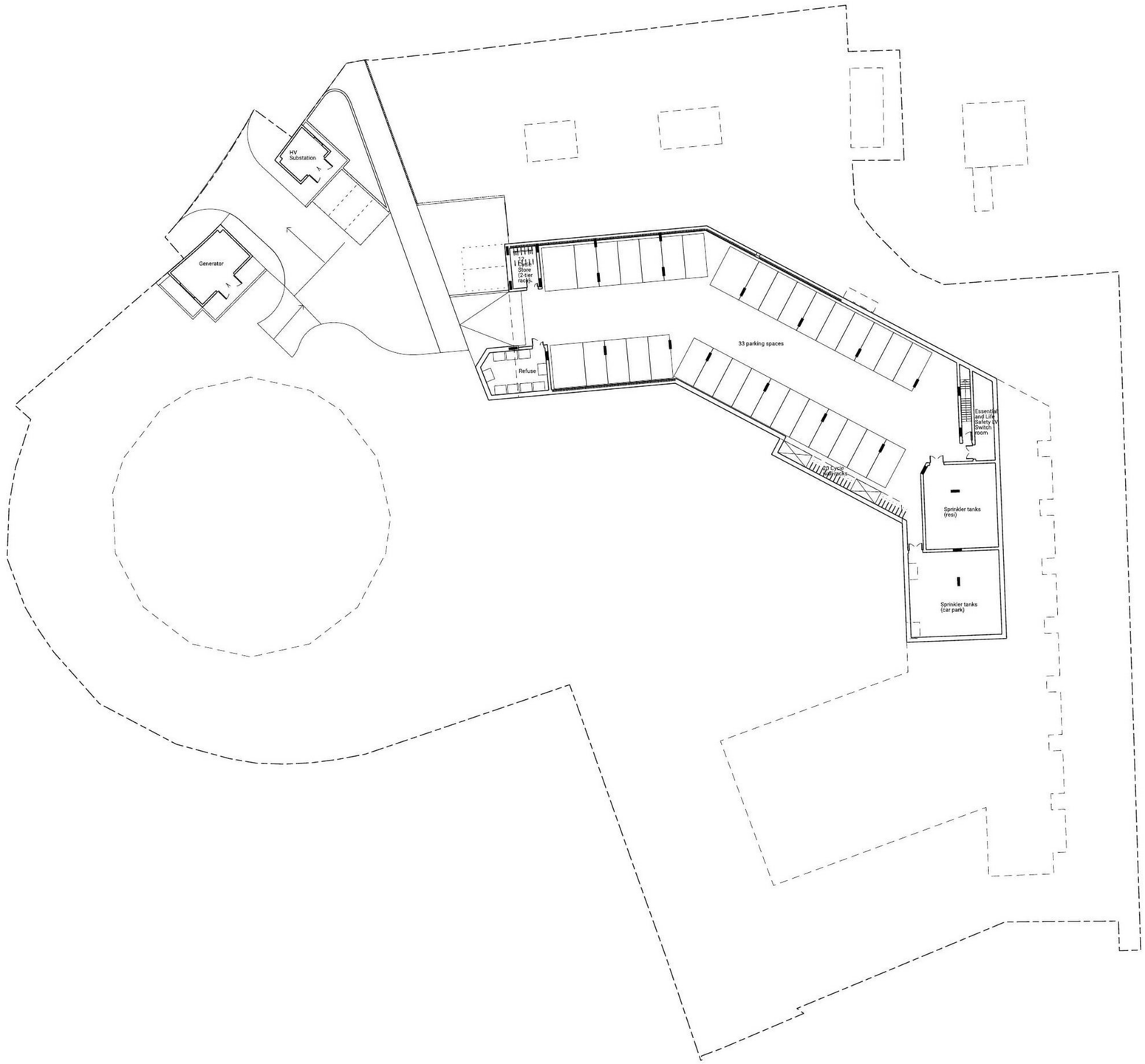
SGN Place

MAX architects
Chester House, Unit 1.09
Kennington Park, 1-3 Brixton Road
London SW9 6DE

SEVENOAKS GASHOLDER SITE

GROUND FLOOR PLAN

DIRECTOR	MT	CHECKED	MT
DRAWN	AG	APPROVED	MT
PROJECT NO.	0330	FIRST ISSUE	06.08.2020
SCALE	1:500 @ A3 1:250 @ A1	REVISION	G
DRAWING NO.			0330_1000



ISSUE	REVISION NOTE	DATE
A	Issued for Information	06.08.2020
B	Revised based on structural sketch	07.08.2020
C	Revised based on MEP sketch	11.08.2020
D	Revised plant areas	13.08.2020
E	Stage 2 Report	02.09.2020
F	Revised venting	30.09.2020
G	Revised rotunda, structure, grid	02.10.2020
H	Revised podium wall	05.10.2020
I	Issued for Information	25.11.2020
J	Issued for Information	15.02.2021
P01	Planning Submission	19.03.2021

GENERAL NOTES

1. DO NOT SCALE DRAWINGS
2. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE BEFORE PROCEEDING WITH THE WORK
4. REPORT ANY DISCREPANCIES WITH CONTRACT DOCUMENTATION AND / OR CONSULTANTS' DRAWINGS

0 2 5 10 15M

N

SGN Place

MAX architects
Chester House, Unit 1.09
Kennington Park, 1-3 Brixton Road
London SW9 6DE

SEVENOAKS GASHOLDER SITE

PODIUM PLAN

DIRECTOR	MT	CHECKED	MT
DRAWN	AG	APPROVED	MT
PROJECT NO.	0330	FIRST ISSUE	06.08.2020
SCALE	1:500 @ A3 1:250 @ A1	REVISION	J
DRAWING NO.			0330_0900

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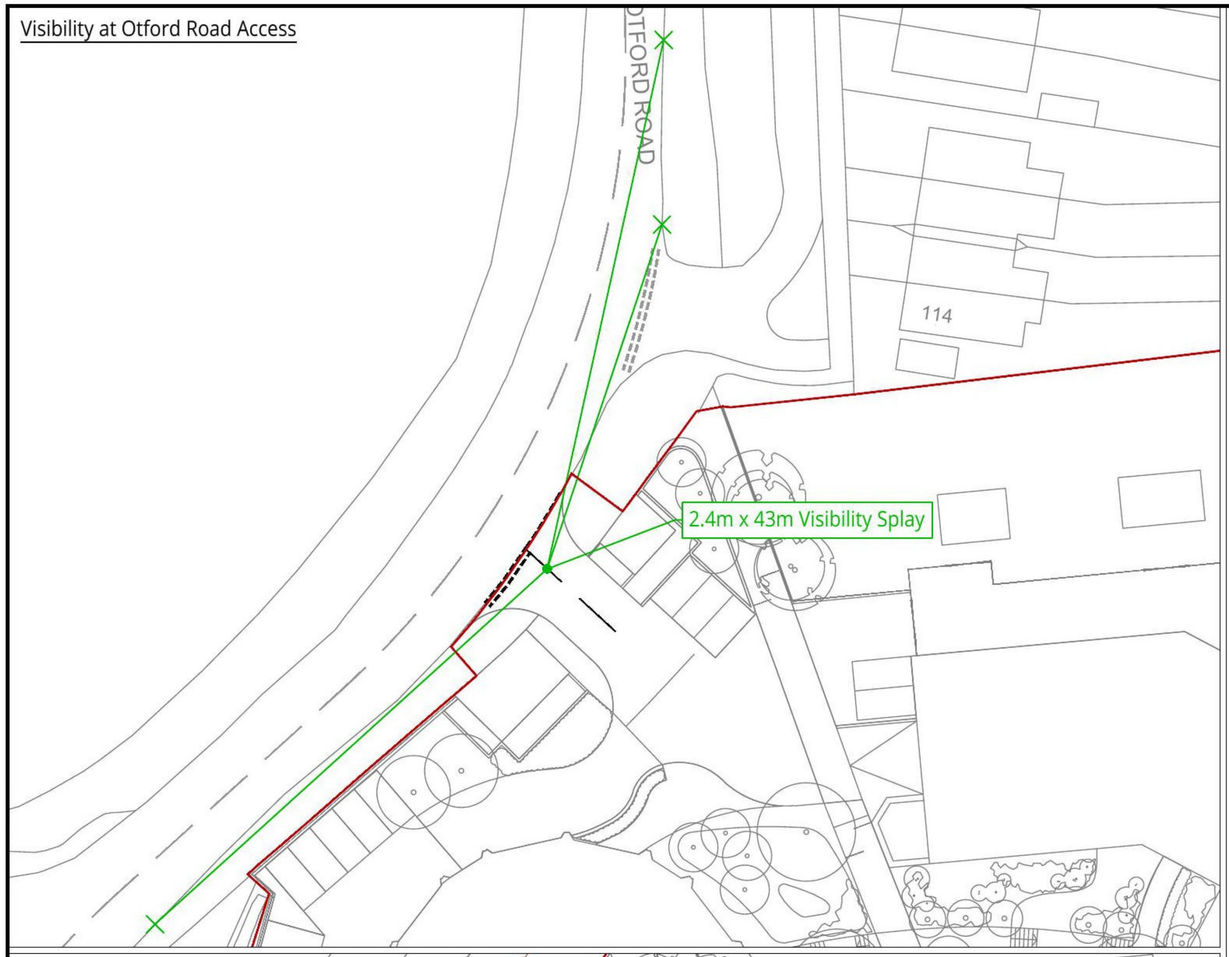
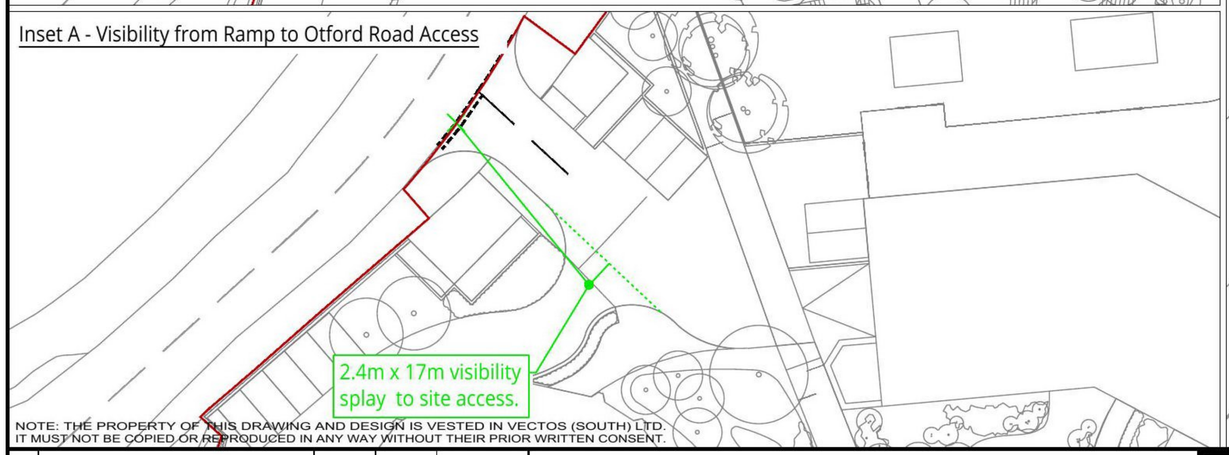
Appendix C

Swept Path Analysis - Residential

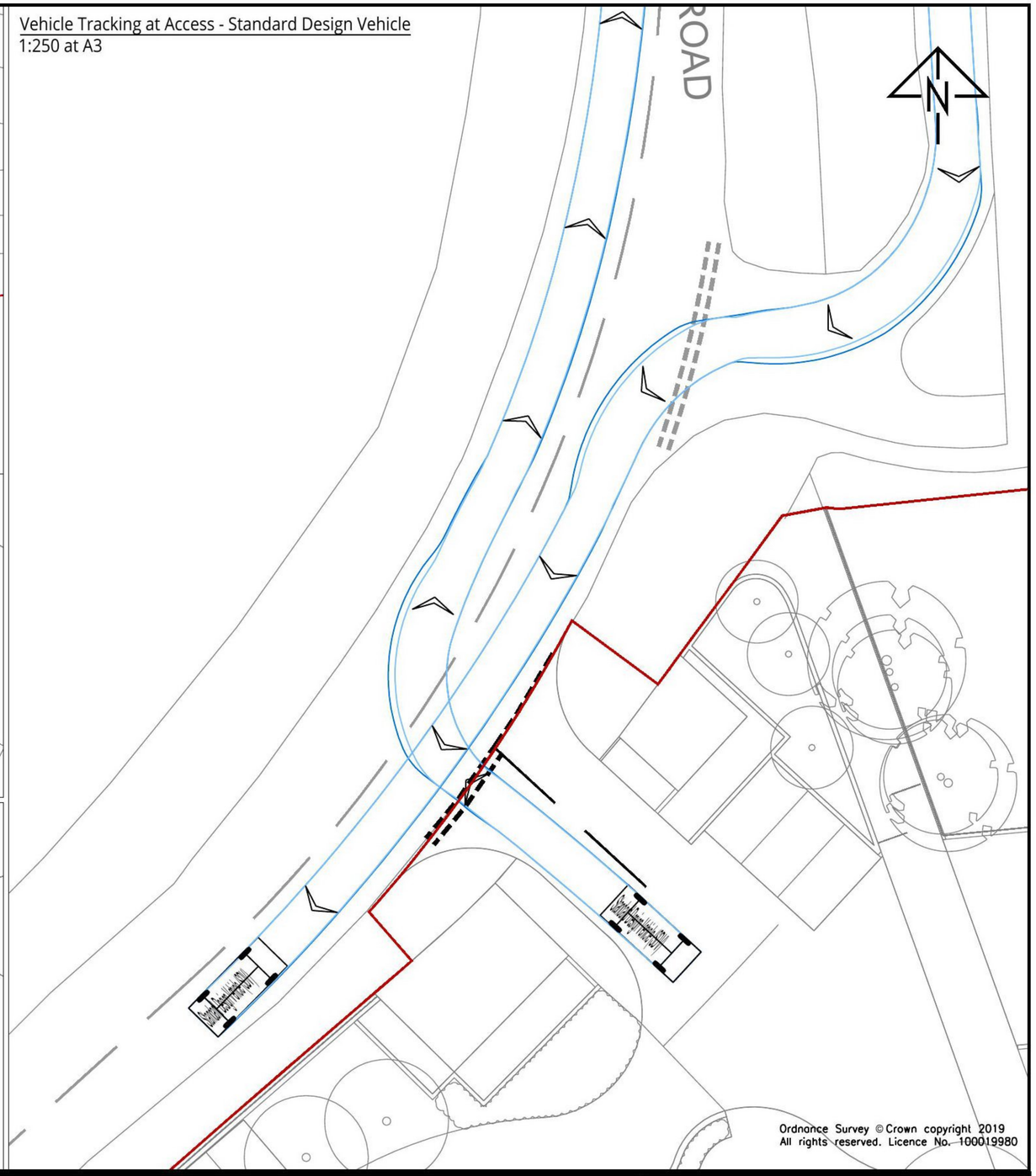
Visibility at Otford Road Access



Inset A - Visibility from Ramp to Otford Road Access



Vehicle Tracking at Access - Standard Design Vehicle
1:250 at A3



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Visibility to access added.	KB	AP	26.11.2020
B	New architect layout	PP	AM	10.03.2021
C	New architect layout	PP	AM	12.03.2021

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.
3. Based on Churchman Thornhill Finch Landscape Architects layout:
   573-CTF-XX-XX-M2-LB00_Landscape Plan 20210312

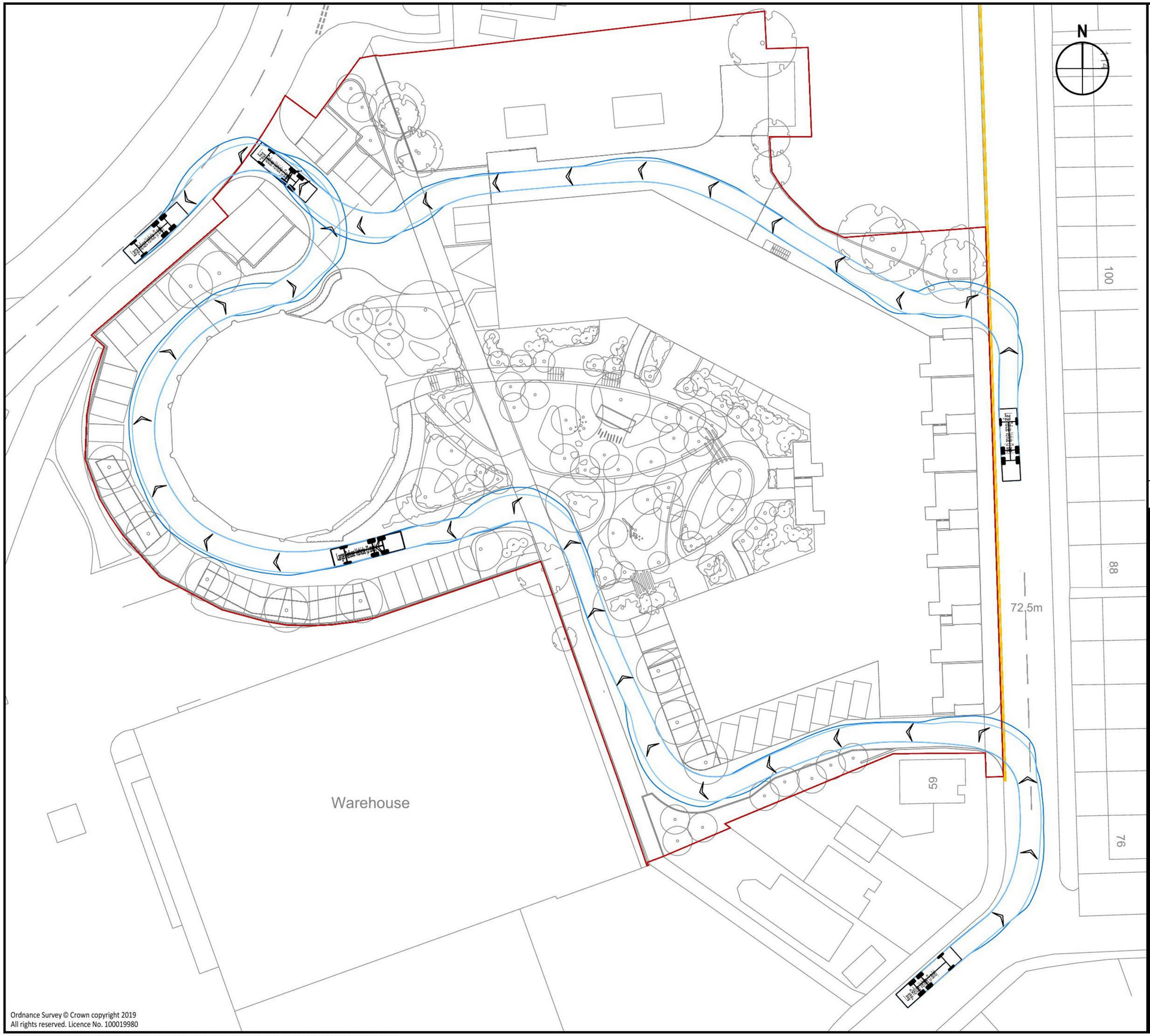
Sevenoaks Gasholders, Sevenoaks

SGN

Proposed Otford Road Access

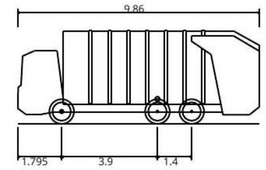
vectos.
Network Building, 97 Tottenham Court Road, London W1T 4TP
t: 020 7580 7373 e: enquiries@vectos.co.uk

DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
KB	AP	10.11.2020	1:500/1:250 at A3	205264/A/06	C



Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.
3. Based on Churchman Thornhill Finch Landscape Architects layout: 573-CTF-XX-XX-M2-LB00_Landscape Plan 20210312



Large Refuse Vehicle (3 axle)	
Overall Length	9.860m
Overall Width	2.450m
Overall Body Height	3.814m
Min Body Ground Clearance	0.366m
Track Width	2.450m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	9.500m

REV.	DETAILS	DRAWN	CHECKED	DATE
D	Updated architects layout	PP	AM	12.03.2021
C	Site layout, tracking and proposals updated.	PP	AM	10.03.2021
B	Tracking updated.	KB	AP	12.11.2020
A	Site layout, tracking and proposals updated.	KB	AP	11.11.2020

CLIENT:

SGN

PROJECT:

Sevenoaks Gasholders, Sevenoaks

DRAWING TITLE:

Swept Path Analysis
Refuse Route Through Site
Northbound Route

SCALES:

1:500 at A3

DRAWN:	CHECKED:	DATE:
KB	AP	25.09.2020

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Network Building, 97 Tottenham Court Road, London W1T 4TP
t: 020 7580 7373 e: enquiries@vectos.co.uk

DRAWING NUMBER:	REVISION:
2050264/AT/A04	D

N

72.5m

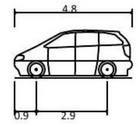
59

house

Inset A: Turning Area

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.
3. Based on Churchman Thornhill Finch Landscape Architects layout: 573-CTF-XX-XX-M2-LB00_Landscape Plan 20210312
4. The Standard Design Vehicle (SDV) is a composite of the smallest 95% of private vehicles registered to drive on UK Highways & has been devised by the I.C.E (Institute of Civil Engineers).



Standard Design Vehicle (SDV)	
Overall Length	4.800m
Overall Width	2.000m
Overall Body Height	1.950m
Min Body Ground Clearance	0.100m
Track Width	2.000m
Lock to lock time	4.00s
Wall to Wall Turning Radius	6.000m

REV.	DETAILS	DRAWN	CHECKED	DATE
A	Updated architects layout	PP	AM	12.03.2021

CLIENT:

SGN

PROJECT:

Sevenoaks Gasholders,
Sevenoaks

DRAWING TITLE:

Swept Path Analysis
Car Route Through Site

SCALES:

1:500 at A3

DRAWN:	CHECKED:	DATE:
PP	AM	04.03.2021

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Network Building, 97 Tottenham Court Road, London W1T 4TP
t: 020 7580 7373 e: enquiries@vectos.co.uk

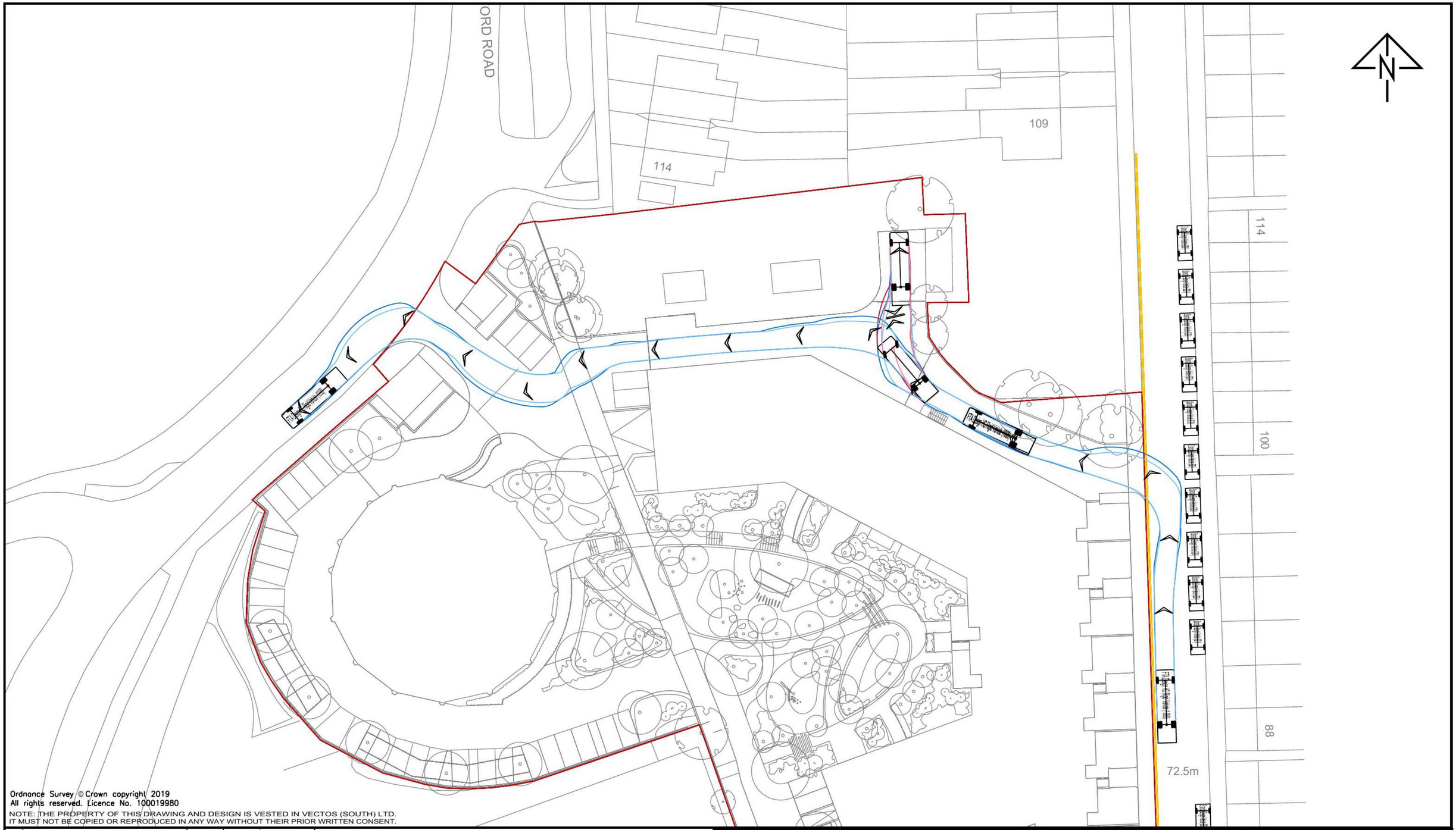
DRAWING NUMBER: 2050264/AT/E01

REVISION: A

vectos.

Appendix D

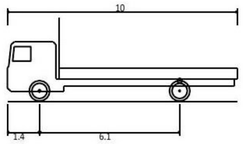
Swept Path Analysis - SGN



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site layout and tracking updated.	KB	AP	11.11.2020
B	Site layout updated.	PP	AM	10.03.2021
C	Site layout and tracking updated.	PP	AM	12.03.2021
D	Site layout updated.	PP	AM	12.03.2021

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.
3. Based on Churchman Thornhill Finch Landscape Architects layout:
   573-CTF-XX-XX-M2-LB00_Landscape Plan 20210312



FTA Design HG Rigid Vehicle (1998)

Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock-to-lock time	3.00s
Curb to Curb Turning Radius	11.000m

Sevenoaks Gasholders, Sevenoaks

SGN

Swept Path Analysis
UKPN Vehicle Access

vectos.
Network Building, 97 Tottenham Court Road, London W1T 4TP
t: 020 7580 7373 e: enquiries@vectos.co.uk

DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
KB	AP	25.09.2020	1:500 at A3	205264/AT/D01	D

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Appendix E

Road Safety Audit and Designer's Response

vectos.

STAGE 1 ROAD SAFETY AUDIT

Vectos South Ltd

Sevenoaks Gasholders, Sevenoaks
Stage 1 Road Safety Audit

March 2021

Kent County Council

Stage 1 Road Safety Audit

vectos.co.uk

Contents

Appendices

[redacted]

Introduction

1.1 This report results from a Stage 1 Road Safety Audit (RSA) carried out on Wednesday 10th of March 2021. The Audit was carried out on behalf of Vectos South Ltd, London office.

1.2 The Overseeing Organisation for this Stage 1 RSA is Kent County Council (KCC).

1.3 This Road Safety Audit team was as follows:

DAFYDD THOMAS, MRTPI, MTPS, MCIHT, MSoRSA
Audit Team Leader
Transport Planner
Vectos South Limited

ALASTAIR PIKE, MICE, MCIHT, MSoRSA, HE Approved Cert. Comp.
Audit Team Member
Head of Road Safety
Vectos South Limited

DUNCAN STUART, MCIHT
Audit Team Member
Principal Transport Planner
Vectos South Limited

1.4 Due to the current Government guidance with regards to site visits during Covid-19 the Audit Team have undertaken a virtual site assessment for the purpose of this Stage 1 RSA. This approach has been formally agreed with Kent County Council on the 2nd of March.

1.5 The Audit Team undertook the virtual site assessment on Friday the 5th of March 2021. Online digital Google street view mapping was dated from May 2019.

1.6 A site location plan can be found at **Appendix A** of this report.

1.7 The terms of reference of the Road Safety Audit are as described in the Design Manual for Roads and Bridges (DMRB) Standard, GG119 Road Safety Audit.

1.8 The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem the Audit Team may, on occasion, have referred to a design standard without touching on technical audit.

1.9 The scheme subject to the Stage 1 RSA comprises a redevelopment of a site to provide a residential development (126 x flats, 10x townhouses).

1.10 Design proposals include access from Crampton's Road with access and egress taken from Otford Road. The proposals also include an internal one-way system within the site for vehicles entering the site from Crampton's Road.

1.11 A list of the documents and drawings submitted for this Stage 1 RSA can be found at **Appendix B.**

1.12 A submitted design drawing has been annotated to show the locations of any problems identified during this Stage 1 RSA. This plan can be found at **Appendix C**.

1.13 Whilst recommendations have been made within this report, there may be equally satisfactory alternatives. The Audit Team will be pleased to consider alternatives if required.

Departures from Standards

1.14 The Audit Team were not informed of any Departures from Standards within the proposed design.

Matters arising at Stage 1.

Drawing No. 205264_A_06 Rev B – Proposed Otford Road Access

1.15 Problem.

Location A: Proposed site access junction from Otford Road.

Summary: Lack of tactile paving to warn pedestrians of the junction may lead to pedestrians entering the carriageway being struck by vehicles.

Design drawings indicate that a new priority controlled 'T' junction is created to provide access to the development site from Otford Road. Drawings show a new bell mouth arrangement bisecting the footway in this location without the required tactile paving arrangements. This may lead to injudicious crossing movements and potentially cause collisions between pedestrians and vehicles.

Recommendation

It is recommended that appropriate tactile paving be provided.

Drawing No. 0330_1000 – Ground Floor Plan

1.16 Problem.

Location B: Proposed site access only junction from Cramptons Road.

Summary: Lack of tactile paving to warn pedestrians of the junction may lead to pedestrians entering the carriageway being struck by vehicles.

Design drawings indicate that an existing private gated crossover leading into the development site from Cramptons Road will be opened up for use as an access only junction into the site. Drawings show a new bell mouth arrangement bisecting the footway in this location without the required tactile paving arrangements. This may lead to injudicious crossing movements and potentially cause collisions between pedestrians and vehicles.

Recommendation

It is recommended that appropriate tactile paving be provided.

[redacted]

1.17 Problem.

Location B: Proposed site access only junction from Cramptons Road.

Summary: Existing on street parking may obscure intervisibility between pedestrians and vehicles leading to collisions between these users at the site access.

Design drawings indicate that an existing private gated crossover leading into the development site from Cramptons Road will be opened up for use as an access only junction into the site. Observations indicate that there is a series of on street parking in the immediate vicinity of the proposed access. Parked cars in this location may obscure intervisibility between pedestrians on the western side of Cramptons Road and vehicles wishing to enter the site. This arrangement may lead to collisions between cyclists and vehicles.

Recommendation

It is recommended that the appropriate parking restrictions are implemented to ensure that the appropriate intervisibility is achieved at the junction.

Audit Team Statement

1.1 I certify that this Audit has been carried out in accordance with the requirements of GG119.

Road Safety Audit Team Leader

Name: Dafydd Rhys Thomas

Signed: [redacted]

Position: Transport Planner
Organisation: Vectos South Ltd
Date: 10th March 2021

Road Safety Audit Team Member

Name: Alastair Pike

Signed: [redacted]

Position: Head of Road Safety
Organisation: Vectos South Ltd
Date: 10th March 2021

Road Safety Audit Team Member

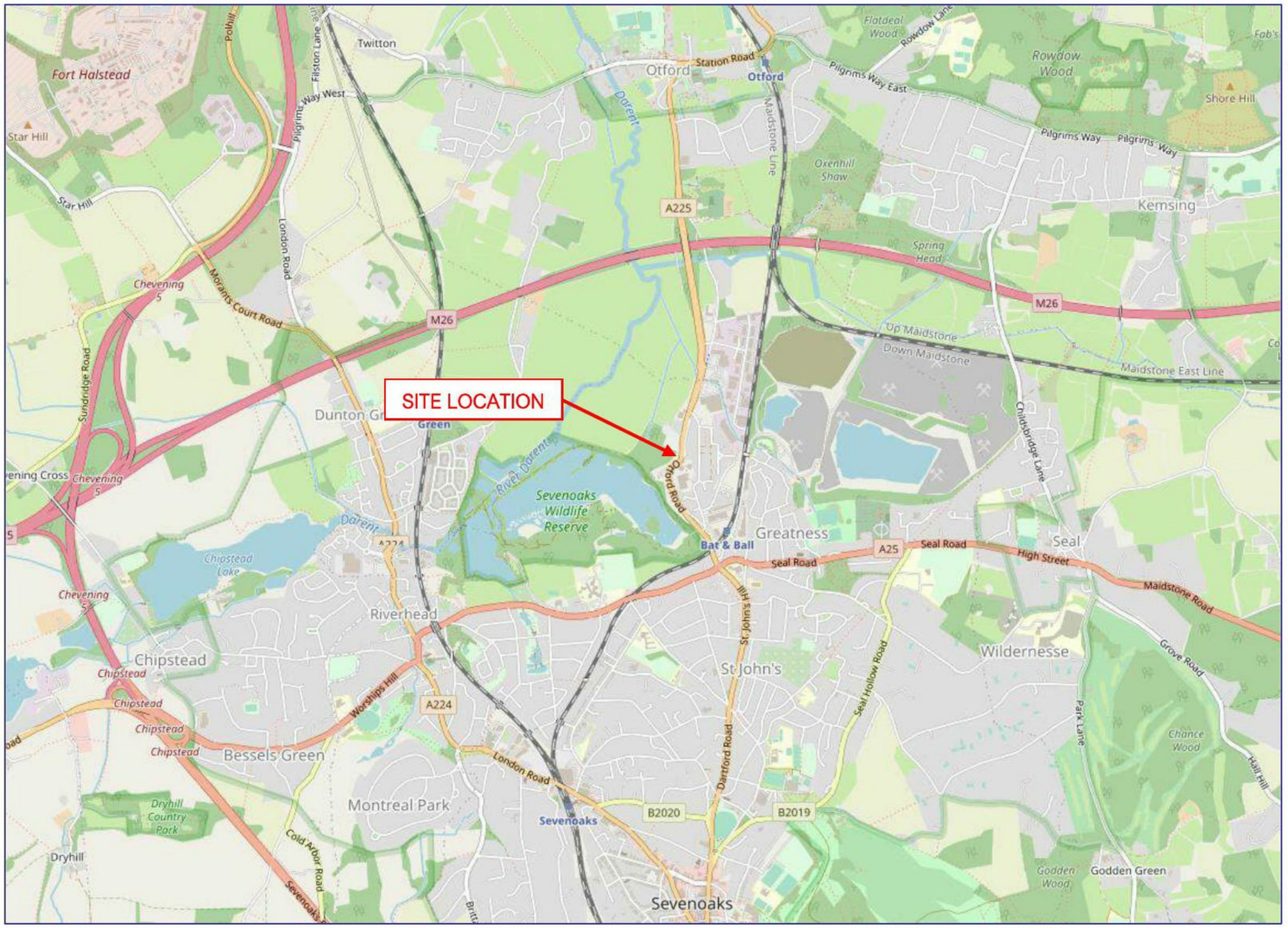
Name: Duncan Alexander Stuart

Signed: [redacted]

Position: Principal Transport Planner
Organisation: Vectos South Ltd
Date: 10th March 2021

[redacted]

Appendix A


SITE LOCATION
Fort Halstead
Star Hill
Twitton
Otford
Station Road
Pilgrims Way West
Pilgrims Way East
Rowdow Wood
Flotdeal Wood
Shore Hill
Kemsing
Oxenhill Shaw
Spring Head
A225
M26
Morants Court Road
London Road
Sundridge Road
Chevening
Dunton Green
Sevenoaks Wildlife Reserve
River Darent
Greatness
Bat & Ball
A25
Seal Road
High Street
Seal
Maidstone Road
Up Maidstone
Down Maidstone
Maidstone East Line
Childsbridge Lane
Orford Road
Chipstead Lake
Riverhead
Chipstead
Worships Hill
A224
Bessels Green
Montreal Park
Sevenoaks
B2020
B2019
Dartford Road
St John's Hill
St John's
Seal Hollow Road
Wildernesse
Grove Road
Park Lane
Chance Wood
Godden Wood
Godden Green
Dryhill
Dryhill Country Park
Cold Arbor Road

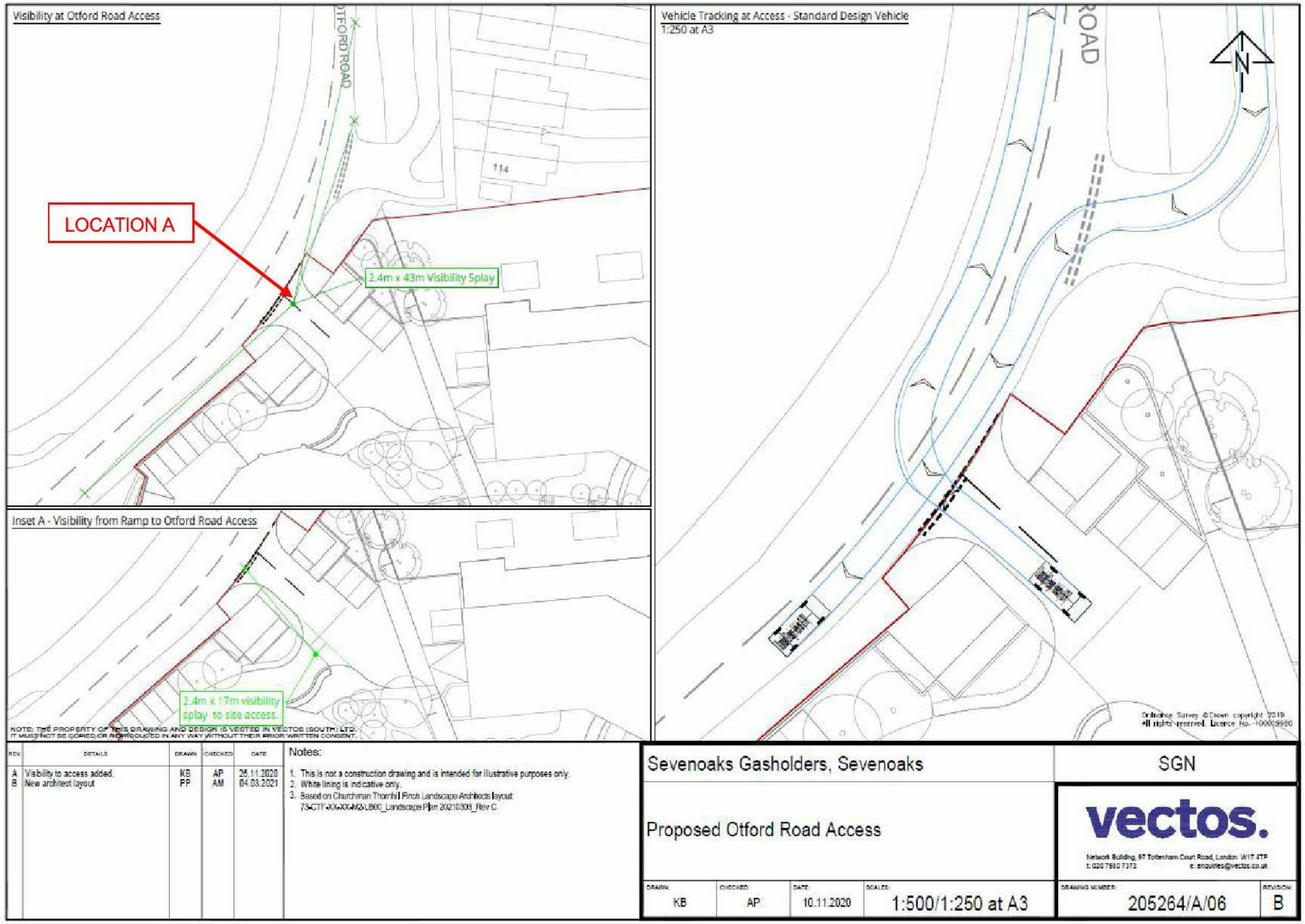
[redacted]

Appendix B

DOCUMENT	DOCUMENT TITLE
Audit Brief	RSA Brief v2
Document	Draft copy of Transport Assessment (R01-AM-Transport Assessment 210301)
Document	KCC PIA data
Document	Copy of proposed development flows
Design Drawing	Site Location Plan – 0330_0005
Design Drawing	205264_A_06 Rev B - Proposed Otford Road Access
Design Drawing	0330_0005 (location plan

[redacted]

Appendix C


Visibility at Otford Road Access
OTFORD ROAD
114
LOCATION A
2.4m x 43m Visibility Splay
Inset A - Visibility from Ramp to Otford Road Access
2.4m x 17m visibility splay to site access.
NOTE: THE PROPERTY OF THIS DRAWING AND DESIGN IS VESTED IN VECTOS (SOUTH) LTD. IT MUST NOT BE COPIED OR REPRODUCED IN ANY WAY WITHOUT THEIR PRIOR WRITTEN CONSENT.
Vehicle Tracking at Access - Standard Design Vehicle
1:250 at A3
ROAD
N
Ordnance Survey © Crown copyright 2019. All rights reserved. Licence No. 100039980
REV. DETAILS DRAWN CHECKED DATE
A Visibility to access added. KB AP 26.11.2020
B New architect layout PP AM 04.03.2021
Notes:
1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.
3. Based on Churchman Thornhill Finch Landscape Architects layout 75-CTF-XX-XX-M2-LB00_Landscape Plan 20210303_Rev C
Sevenoaks Gasholders, Sevenoaks
SGN
Proposed Otford Road Access
vectos.
Network Building, 97 Tottenham Court Road, London W1T 4TP
t: 020 7580 7373 e: enquiries@vectos.co.uk
DRAWN: KB
CHECKED: AP
DATE: 10.11.2020
SCALES: 1:500/1:250 at A3
DRAWING NUMBER: 205264/A/06
REVISION: B


DRAFT
LOCATION B
SGN Place
MAX architects
SEVENOAKS GASHOLDER SITE
GROUND FLOOR PLAN
0330_1000

vectos.

[redacted]

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VECTOS (SOUTH) LIMITED

Road Safety Audit Designers Response Report

1 Project Summary

Report Title	Sevenoaks Gasholders – Stage 1 RSA Designers Response Report
Date	10/03/2021
Document Reference and Revision:	R04-AM-RSA Designer's Response
Prepared by:	Alice Murray
On behalf of:	Vectos (South)
AUTHORISATION SHEET	
Project:	Sevenoaks Gasholders
Report Title	Stage 1 RSA Designer's Response Report
PREPARED BY	
Name:	Alice Murray
Signed:	Alice Murray
Organisation:	Vectos (South) Ltd
Date:	10th March 2021

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2 Introduction

GENERAL DETAILS:				
Highway scheme name and road number:	**Otford Road (A225) and Crampton's Road**			
Date:	10th March 2021			
Type of scheme:	Proposed residential scheme			
RSA Stage:	☒ Stage 1	☐ Stage 2	☐ Stage 3	☐ Stage 4
	Interim			
Road Safety Audit Reference:				
Designers Response prepared by:	Alice Murray			
Design organisation details:	Vectos (South) Ltd			

3 Key Personnel

Overseeing Organisation:	Kent County Council (KCC)
RSA Team:	Dafydd Thomas, Alastair Pike, Duncan Stuart of Vectos (South) Ltd
Design Organisation:	Vectos (South) Ltd

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4 Road Safety Audit Decision Log

RSA Problem	RSA Recommendation	Design Organisation Response	Overseeing Organisation Response	Agreed RSA Action
1.15	It is recommended that appropriate tactile paving be provided.	Accepted. It is agreed that tactile paving can be provided in accordance with design standards at the detailed design stage.		
1.16	It is recommended that appropriate tactile paving be provided.	Accepted. It is agreed that tactile paving can be provided in accordance with design standards at the detailed design stage.		
1.17	It is recommended that the appropriate parking restrictions are implemented to ensure that the appropriate intervisibility is achieved at the junction.	Accepted. It is considered that appropriate lining can be provided in accordance with design standards at the detailed design stage to ensure that pedestrian inter-visibility can be accommodated.		

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5 Design Organisation and Overseeing Organisation Statements

On behalf of the Design Organisation I certify that: **The RSA actions identified in response to the road safety audit problems in the road safety audit have been discussed and agreed with the Overseeing Organisation.**	
Name	Alice Murray
Signed	Alice Murray
Position	Senior Transport Planner
Organisation	Vectos (South) Ltd
Date	10th March 2021

On behalf of the Overseeing Organisation I certify that: **The RSA actions identified in response to the road safety audit problems in the road safety audit have been discussed and agreed with the design organisation; and** **The agreed RSA actions will be progressed.**	
Name	
Signed	
Position	
Organisation	
Date	

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Appendix F

Nomis – 2011 Census Car Ownership Data Analysis

LC4415EW - Accommodation type by car or van availability by number of usual residents aged 17 or over in household

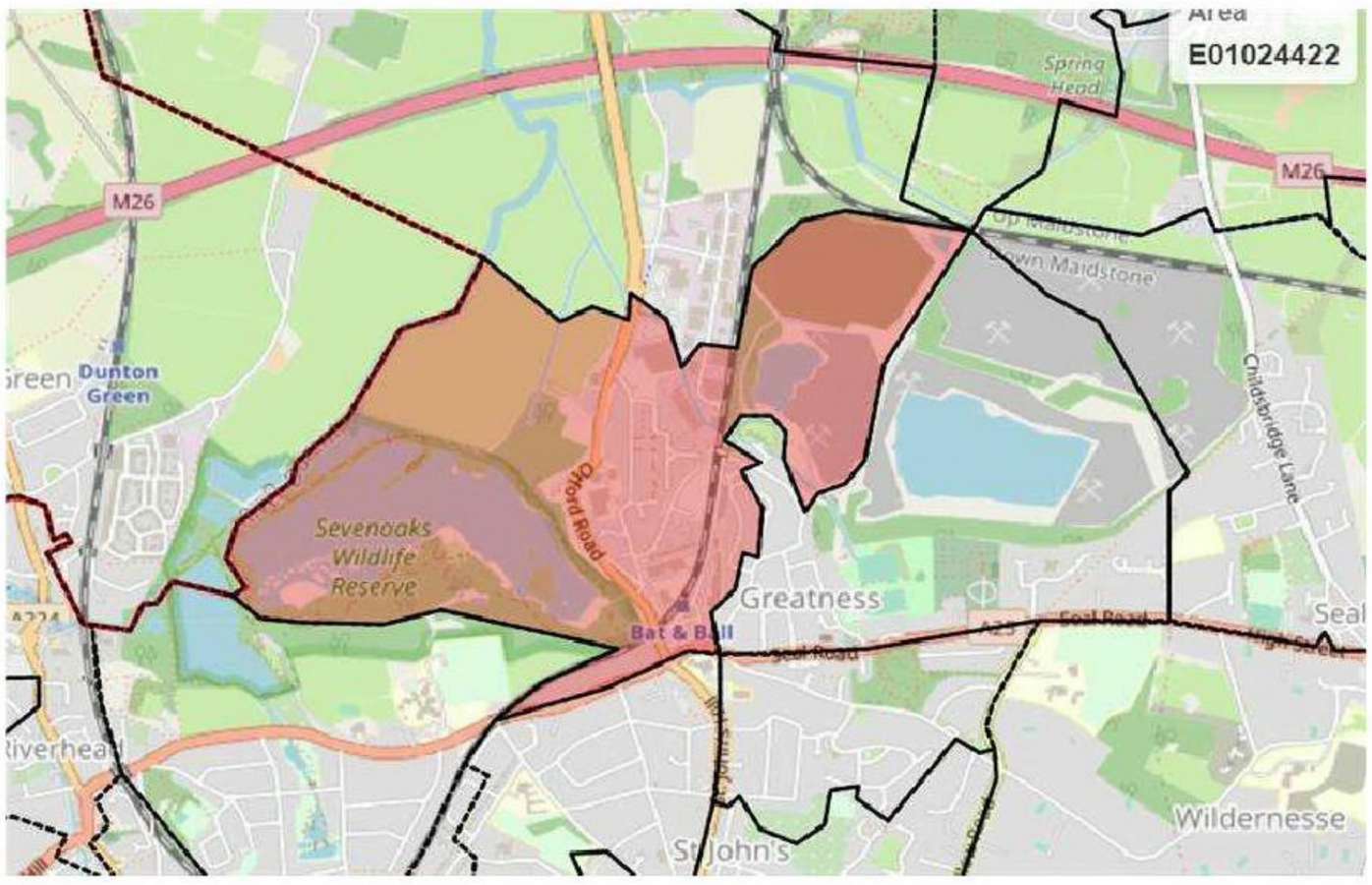
population	All households
units	Persons
date	2011
area type	2011 super output areas - lower layer
area name	E01024465 : Sevenoaks 010D
no of usual residents in housel	All categories: Number of usual residents aged 17 or over in household

Cars or Vans	All categories: Accommodation type	Whole house or bungalow	Flat, maisonette, apartment, caravan or other mobile or temporary structure
All categories: Car or van avail	617	500	117
No cars or vans in household	125	82	43
1 car or van in household	301	242	59
2 or more cars or vans in hous	191	176	15

	Houses	Flats
0	0	0
1	242	59
2	352	30
	594	89

Car Ownership	
Houses	**Flats**
1.19	**0.76**

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.



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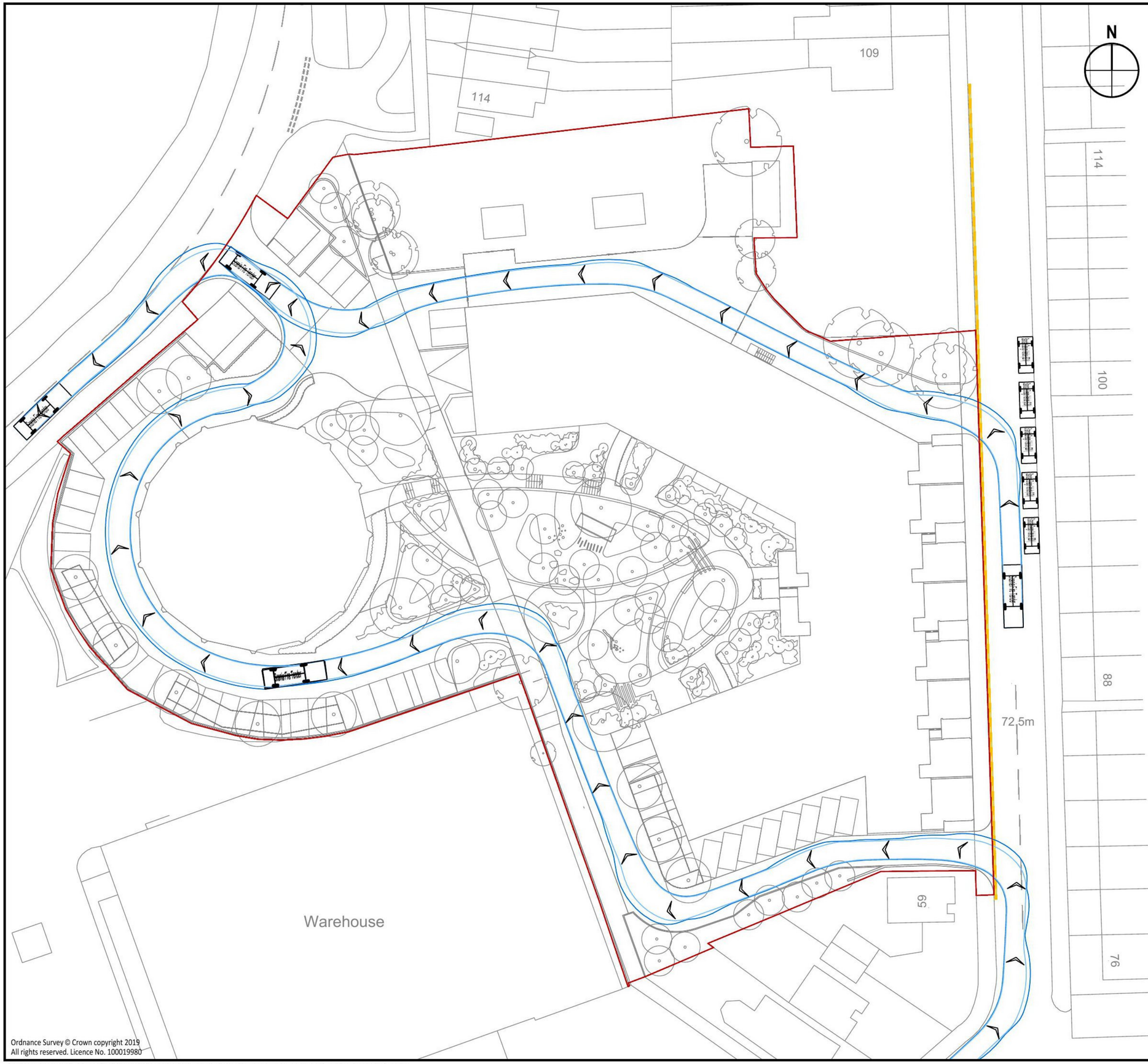
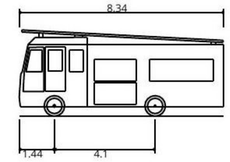
Appendix G

Swept Path Analysis – Emergency Vehicle



Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.
2. White lining is indicative only.
3. Based on Churchman Thornhill Finch Landscape Architects layout: 573-CTF-XX-XX-M2-LB00_Landscape Plan 20210312



Scania Fire Tender	
Overall Length	8.340m
Overall Width	2.550m
Overall Body Height	3.515m
Min Body Ground Clearance	0.400m
Track Width	2.400m
Lock to lock time	5.00s
Kerb to Kerb Turning Radius	8.600m

REV.	DETAILS	DRAWN	CHECKED	DATE
C	Site layout updated.	PP	AM	12.03.2021
B	Site layout updated.	PP	AP	10.03.2021
A	Site layout, tracking and proposals updated.	KB	AP	11.11.2020

CLIENT:

SGN

PROJECT:

Sevenoaks Gasholders,
Sevenoaks

DRAWING TITLE:

Swept Path Analysis
Fire Tender
Northbound Route

SCALES:

1:500 at A3

DRAWN:	CHECKED:	DATE:
KB	AP	25.09.2020

vectos.

Network Building, 97 Tottenham Court Road, London W1T 4TP
t: 020 7580 7373 e: enquiries@vectos.co.uk

DRAWING NUMBER:	REVISION:
2050264/AT/A06	C

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Appendix H

TRICS Outputs

TRICS 7.7.3
Trip Rate P No of Dwellings

Filtering Summary
Land Use 03/C RESIDENTIAL/FLATS PRIVATELY OWNED

Selected Tr 6-184 DWELLS

Actual Trip 9-184 DWELLS

Date Range Minimum: Maximum: 18/11/19

Parking Spa All Surveys Included

Parking Spa All Surveys Included

Bedrooms All Surveys Included

Percentage All Surveys Included

Days of the Monday	1	
Tuesday	3	
Main Locat Suburban A	3	
Edge of Tov	1	

Population All Surveys Included

Population	10 001 to 15	0	1
	20 001 to 25	0	2
	25 001 to 50	0	1
Population	50 001 to 75	0	1
	125 001 to 250	0	1
	500 001 or Mor	2	

Car Owner: 0.6 to 1.0	4	
PTAL Ratin No PTAL Pr	4	

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category C - FLATS PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:
4 EAST ANGLIA
CA CAMBRIDG 1 days
7 YORKSHIRE & NORTH LINCOLNSHIRE
RI EAST RIDIN 1 days
8 NORTH WEST
MS MERSEYSID 2 days
This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.
Parameter: No of Dwellings
Actual Ran 9 to 184 (units:)
Range Sele 6 to 184 (units:)

Public Transport Provision:
Selection b Include all surveys

Date Range 01/01/12 to 18/11/19

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:
Monday 1 days
Tuesday 3 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 4 days
Directional 0 days
This data d the total a whilst ATC surveys are undertaking using machines.

Selected Locations:

Town Cent	0
Edge of Tov	0
Suburban A	3
Edge of Tov	1
Neighbourh	0
Free Standi	0
Not Known	0

This data d Edge of To Suburban A Neighbour Edge of To Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Z	0
Commercia	0
Developme	2
Residential	1
Retail Zone	0
Built-Up Zo	0
Village	0
Out of Tow	0
High Street	0
No Sub Cat	1

This data d Industrial Z Developm Residentia Retail Zone Built-Up Z Village Out of Tow High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3 4 days

This data d which can be found within the Library module of TRICS®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

10,001 to 1 1 days

20,001 to 2 2 days

25,001 to 5 1 days

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

Population within 5 miles:

50,001 to 1 days

125,001 to 1 days

500,001 or 2 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 4 days

This data d within a radius of 5-miles of selected survey sites.

Travel Plan:

No 4 days

This data d and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Pr 4 days

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

LIST OF SITES relevant to selection parameters

Site(1):	CA-03-C-03	Site area:	1.20 hect
Developme	BLOCKS OF	No of Dwel	82
Location:	CAMBRIDG	Housing de	137
Postcode:	CB1 3UR	Total Bedrc	152
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	No Sub Cat	Survey Day	Monday
PTAL:	n/a	Parking Spa	93
Site(2):	MS-03-C-02	Site area:	1.54 hect
Developme	BLOCKS OF	No of Dwel	184
Location:	LIVERPOOL	Housing de	420
Postcode:	L3 4ES	Total Bedrc	368
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Developme	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	267
Site(3):	MS-03-C-03	Site area:	0.12 hect
Developme	BLOCK OF F	No of Dwel	9
Location:	LIVERPOOL	Housing de	75
Postcode:	L3 4DR	Total Bedrc	21
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Developme	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	12
Site(4):	RI-03-C-01	Site area:	0.72 hect
Developme	FLATS	No of Dwel	20
Location:	HULL	Housing de	167
Postcode:	HU5 5SB	Total Bedrc	44
Main Locat	Edge of To	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	22

This sectior it displays the selecte the day of and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: TOTAL VEHICLES

	ARRIVALS			DEPARTURES			TOTALS	
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0	4	74	0.027	4	74	0.183	4	74	0.21
08:00-09:0	4	74	0.051	4	74	0.244	4	74	0.295
09:00-10:0	4	74	0.102	4	74	0.119	4	74	0.221
10:00-11:0	4	74	0.071	4	74	0.088	4	74	0.159
11:00-12:0	4	74	0.044	4	74	0.071	4	74	0.115
12:00-13:0	4	74	0.064	4	74	0.095	4	74	0.159
13:00-14:0	4	74	0.047	4	74	0.098	4	74	0.145
14:00-15:0	4	74	0.068	4	74	0.078	4	74	0.146
15:00-16:0	4	74	0.142	4	74	0.061	4	74	0.203
16:00-17:0	4	74	0.156	4	74	0.088	4	74	0.244
17:00-18:0	4	74	0.227	4	74	0.088	4	74	0.315
18:00-19:0	4	74	0.159	4	74	0.088	4	74	0.247
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			1.158			1.301			2.459

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: TOTAL PEOPLE

	ARRIVALS			DEPARTURES			TOTALS	
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0	4	74	0.047	4	74	0.39	4	74	0.437
08:00-09:0	4	74	0.095	4	74	0.634	4	74	0.729
09:00-10:0	4	74	0.231	4	74	0.285	4	74	0.516
10:00-11:0	4	74	0.149	4	74	0.2	4	74	0.349
11:00-12:0	4	74	0.122	4	74	0.234	4	74	0.356
12:00-13:0	4	74	0.183	4	74	0.21	4	74	0.393
13:00-14:0	4	74	0.119	4	74	0.2	4	74	0.319
14:00-15:0	4	74	0.149	4	74	0.203	4	74	0.352
15:00-16:0	4	74	0.363	4	74	0.139	4	74	0.502
16:00-17:0	4	74	0.329	4	74	0.166	4	74	0.495
17:00-18:0	4	74	0.488	4	74	0.173	4	74	0.661
18:00-19:0	4	74	0.386	4	74	0.183	4	74	0.569
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			2.661			3.017			5.678

Parameter summary

Trip rate pa 9 - 184 (units:)
Survey date 01/01/12 - 18/11/19
Number of 4
Number of 0
Number of 0
Surveys au 0
Surveys ma 1
This sectior followed b the total n the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Number of 0
Number of 0
Surveys au 0
Surveys ma 0
This sectior followed b the total n the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRICS 7.7.3
Trip Rate P: No of Dwellings

Filtering Summary
Land Use 03/A RESIDENTIAL/HOUSES PRIVATELY OWNED

Selected Tr 6-1817 DWELLS

Actual Trip 11-918 DWELLS

Date Range Minimum: I Maximum: 19/11/19

Parking Spa All Surveys Included

Parking Spa All Surveys Included

Bedrooms All Surveys Included

Percentage All Surveys Included

Days of the	Monday	5
	Tuesday	4
	Wednesday	8
	Thursday	10
	Friday	3
Main Locat	Suburban A	10
	Edge of To	20

Population All Surveys Included

Population	1	001 to 5	0	3
	5	001 to 10	0	8
	10	001 to 15	0	9
	15	001 to 20	0	4
	20	001 to 25	0	2
	25	001 to 50	0	4
Population	5	001 to 25	0	4
	25	001 to 50	0	2
	50	001 to 75	0	4
	75	001 to 100	0	7
	100	001 to 125	0	2
	125	001 to 250	0	8
	250	001 to 500	0	3

Car Owner:	1.1 to 1.5	30
PTAL Ratin	No PTAL Pr	30

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category A - HOUSES PRIVATELY OWNED
MULTI-MODAL TOTAL VEHICLES

Selected regions and areas:

2	SOUTH EAST		
	HC	HAMPSHIR	2 days
	KC	KENT	1 days
	SC	SURREY	1 days
	WS	WEST SUSS	4 days
3	SOUTH WEST		
	DC	DORSET	1 days
	DV	DEVON	3 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
4	EAST ANGLIA		
	CA	CAMBRIDG	1 days
	NF	NORFOLK	2 days
	SF	SUFFOLK	1 days
6	WEST MIDLANDS		
	SH	SHROPSHIF	2 days
	ST	STAFFORDS	1 days
	WK	WARWICKS	1 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	NY	NORTH YOI	2 days
	SY	SOUTH YOI	1 days
8	NORTH WEST		
	CH	CHESHIRE	4 days
9	NORTH		
	DH	DURHAM	1 days

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

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.
Parameter: No of Dwellings
Actual Ran 11 to 918 (units:)
Range Sele 6 to 1817 (units:)

Public Transport Provision:
Selection b Include all surveys

Date Range 01/01/12 to 19/11/19

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:
Monday 5 days
Tuesday 4 days
Wednesda 8 days
Thursday 10 days
Friday 3 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 30 days
Directional 0 days
This data d the total a whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Centı 0
Edge of Tov 0
Suburban A 10
Edge of Tov 20
Neighbourl 0
Free Standi 0
Not Known 0
This data d Edge of To Suburban / Neighbour Edge of To Town Centre and Not Known.

Selected Location Sub Categories:
Industrial Z 0
Commercia 0
Developme 0
Residential 30
Retail Zone 0
Built-Up Zo 0
Village 0
Out of Tow 0
High Street 0
No Sub Cat 0
This data d Industrial Z Developm Residentia Retail Zone Built-Up Zc Village Out of Tow High Street and No Sub Category.

Secondary Filtering selection:

Use Class:
C3 30 days
This data d which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Population within 1 mile:
1,001 to 5, 3 days
5,001 to 1(8 days
10,001 to 1 9 days
15,001 to 2 4 days
20,001 to 2 2 days
25,001 to 5 4 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
5,001 to 2 4 days
25,001 to 5 2 days
50,001 to 7 4 days
75,001 to 1 7 days
100,001 to 2 days
125,001 to 8 days
250,001 to 3 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 30 days
This data d within a radius of 5-miles of selected survey sites.

Travel Plan:
Yes 11 days
No 19 days
This data d and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
No PTAL Pr 30 days
This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

Site(1):	CA-03-A-05	Site area:	1.71 hect
Developme	DETACHED	No of Dwel	28
Location:	PETERBOR(	Housing de	19
Postcode:	PE1 4AW	Total Bedrc	94
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	98
Site(2):	CH-03-A-08	Site area:	0.48 hect
Developme	DETACHED	No of Dwel	11
Location:	CHESTER	Housing de	37
Postcode:	CH3 5JZ	Total Bedrc	44
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	52
Site(3):	CH-03-A-09	Site area:	0.73 hect
Developme	TERRACED	No of Dwel	24
Location:	MACCLESFI	Housing de	39
Postcode:	SK10 2NS	Total Bedrc	72
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	32
Site(4):	CH-03-A-10	Site area:	0.91 hect
Developme	SEMI-DETA	No of Dwel	40
Location:	NORTHWIC	Housing de	50
Postcode:	CW8 4WA	Total Bedrc	102
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	74
Site(5):	CH-03-A-11	Site area:	0.50 hect
Developme	TOWN HOU	No of Dwel	24
Location:	NORTHWIC	Housing de	55
Postcode:	CW9 8RZ	Total Bedrc	92
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	47
Site(6):	DC-03-A-08	Site area:	1.85 hect
Developme	BUNGALOV	No of Dwel	28
Location:	BOURNEM(	Housing de	17
Postcode:	BH8 0AL	Total Bedrc	64
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	131
Site(7):	DH-03-A-03	Site area:	5.60 hect
Developme	SEMI-DETA	No of Dwel	57
Location:	DURHAM	Housing de	11
Postcode:	DH1 1HD	Total Bedrc	169
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	190
Site(8):	DV-03-A-01	Site area:	1.25 hect
Developme	TERRACED	No of Dwel	37
Location:	TORQUAY	Housing de	53
Postcode:	TQ1 3HR	Total Bedrc	111
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	103
Site(9):	DV-03-A-02	Site area:	4.04 hect
Developme	HOUSES &	No of Dwel	116
Location:	HONITON	Housing de	44
Postcode:	EX14 1JB	Total Bedrc	306
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	261
Site(10):	DV-03-A-03	Site area:	2.02 hect
Developme	TERRACED	No of Dwel	70
Location:	HONITON	Housing de	50
Postcode:	EX14 2DF	Total Bedrc	208
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	116
Site(11):	HC-03-A-21	Site area:	1.20 hect
Developme	TERRACED	No of Dwel	39
Location:	BASINGSTC	Housing de	57
Postcode:	RG24 9AF	Total Bedrc	134
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday

PTAL:	n/a	Parking Spa	98
Site(12):	HC-03-A-22	Site area:	1.69 hect
Developme	MIXED HOU	No of Dwel	40
Location:	NEAR EAST	Housing de	32
Postcode:	SO50 6JL	Total Bedrc	114
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	101
Site(13):	KC-03-A-07	Site area:	9.46 hect
Developme	MIXED HOU	No of Dwel	288
Location:	HERNE BAY	Housing de	40
Postcode:	CT6 6HZ	Total Bedrc	934
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	891
Site(14):	NF-03-A-04	Site area:	1.98 hect
Developme	MIXED HOU	No of Dwel	70
Location:	NORTH WA	Housing de	40
Postcode:	NR28 0FW	Total Bedrc	223
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	165
Site(15):	NF-03-A-05	Site area:	1.57 hect
Developme	MIXED HOU	No of Dwel	40
Location:	HOLT	Housing de	26
Postcode:	NR25 6GA	Total Bedrc	116
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	100
Site(16):	NY-03-A-05	Site area:	3.30 hect
Developme	MIXED HOU	No of Dwel	52
Location:	NORTHALL	Housing de	18
Postcode:	DL6 1BQ	Total Bedrc	152
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	135
Site(17):	NY-03-A-11	Site area:	1.79 hect
Developme	PRIVATE HO	No of Dwel	23
Location:	BOROUGHI	Housing de	15
Postcode:	YO51 9LQ	Total Bedrc	101
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	144
Site(18):	SC-03-A-04	Site area:	3.20 hect
Developme	DETACHED	No of Dwel	71
Location:	BYFLEET	Housing de	25
Postcode:	KT14 7BY	Total Bedrc	202
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	177
Site(19):	SF-03-A-07	Site area:	3.70 hect
Developme	MIXED HOU	No of Dwel	73
Location:	IPSWICH	Housing de	33
Postcode:	IP3 8XL	Total Bedrc	215
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	169
Site(20):	SH-03-A-05	Site area:	1.32 hect
Developme	SEMI-DETA	No of Dwel	54
Location:	TELFORD	Housing de	56
Postcode:	TF7 4JE	Total Bedrc	162
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	63
Site(21):	SH-03-A-06	Site area:	0.80 hect
Developme	BUNGALOV	No of Dwel	16
Location:	SHREWSBU	Housing de	24
Postcode:	SY1 2RB	Total Bedrc	34
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	32
Site(22):	SM-03-A-0	Site area:	1.40 hect
Developme	DETACHED	No of Dwel	33
Location:	BRIDGWAT	Housing de	28
Postcode:	TA6 7PL	Total Bedrc	107
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	131
Site(23):	ST-03-A-07	Site area:	9.00 hect
Developme	DETACHED	No of Dwel	248
Location:	STAFFORD	Housing de	173
Postcode:	ST16 1GZ	Total Bedrc	821
Main Locat	Edge of Tov	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	881
Site(24):	SY-03-A-01	Site area:	1.73 hect

Developme	SEMI DETA	No of Dwel	54
Location:	DONCASTE	Housing de	34
Postcode:	DN5 9TD	Total Bedrc	162
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	61
Site(25):	WK-03-A-0	Site area:	2.42 hect
Developme	DETACHED	No of Dwel	49
Location:	KENILWOR	Housing de	23
Postcode:	CV8 2TN	Total Bedrc	195
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	137
Site(26):	WL-03-A-0	Site area:	1.16 hect
Developme	SEMI DETA	No of Dwel	27
Location:	SWINDON	Housing de	25
Postcode:	SN2 7HT	Total Bedrc	91
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	122
Site(27):	WS-03-A-0	Site area:	5.45 hect
Developme	MIXED HO	No of Dwel	151
Location:	HORSHAM	Housing de	46
Postcode:	RH12 1EP	Total Bedrc	465
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	345
Site(28):	WS-03-A-0	Site area:	8.86 hect
Developme	MIXED HO	No of Dwel	180
Location:	ANGMERIN	Housing de	41
Postcode:	BN16 4PQ	Total Bedrc	586
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	527
Site(29):	WS-03-A-1	Site area:	2.27 hect
Developme	MIXED HO	No of Dwel	79
Location:	LITTLEHAM	Housing de	51
Postcode:	BN17 7PL	Total Bedrc	249
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	190
Site(30):	WS-03-A-1	Site area:	50.00 hect
Developme	MIXED HO	No of Dwel	918
Location:	WEST HOR	Housing de	50
Postcode:	RH12 3LN	Total Bedrc	2865
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	1894

This sectior it displays : the selecte the day of and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: TOTAL VEHICLES

	ARRIVALS			DEPARTURES			TOTALS		
	No.	Ave.	Trip	No.	Ave.	Trip	No.	Ave.	Trip
Time Rangı	Days	DWELLS	Rate	Days	DWELLS	Rate	Days	DWELLS	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									
07:00-08:0(	30	98	0.084	30	98	0.305	30	98	0.389
08:00-09:0(	30	98	0.146	30	98	0.386	30	98	0.532
09:00-10:0(	30	98	0.154	30	98	0.17	30	98	0.324
10:00-11:0(	30	98	0.132	30	98	0.158	30	98	0.29
11:00-12:0(	30	98	0.137	30	98	0.157	30	98	0.294
12:00-13:0(	30	98	0.159	30	98	0.148	30	98	0.307
13:00-14:0(	30	98	0.163	30	98	0.16	30	98	0.323
14:00-15:0(	30	98	0.167	30	98	0.189	30	98	0.356
15:00-16:0(	30	98	0.275	30	98	0.18	30	98	0.455
16:00-17:0(	30	98	0.277	30	98	0.17	30	98	0.447
17:00-18:0(	30	98	0.357	30	98	0.167	30	98	0.524
18:00-19:0(	30	98	0.284	30	98	0.169	30	98	0.453
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			2.335			2.359			4.694

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: TOTAL PEOPLE

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0(	30	98	0.124	30	98	0.516	30	98	0.64
08:00-09:0(	30	98	0.225	30	98	0.829	30	98	1.054
09:00-10:0(	30	98	0.23	30	98	0.269	30	98	0.499
10:00-11:0(	30	98	0.207	30	98	0.253	30	98	0.46
11:00-12:0(	30	98	0.208	30	98	0.233	30	98	0.441
12:00-13:0(	30	98	0.244	30	98	0.22	30	98	0.464
13:00-14:0(	30	98	0.256	30	98	0.241	30	98	0.497
14:00-15:0(	30	98	0.264	30	98	0.279	30	98	0.543
15:00-16:0(	30	98	0.598	30	98	0.292	30	98	0.89
16:00-17:0(	30	98	0.523	30	98	0.283	30	98	0.806
17:00-18:0(	30	98	0.607	30	98	0.281	30	98	0.888
18:00-19:0(	30	98	0.501	30	98	0.319	30	98	0.82
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			3.987			4.015			8.002

Parameter summary

Trip rate pa 11 - 918 (units:)
Survey dat(01/01/12 - 19/11/19
Number of 30
Number of 0
Number of 0
Surveys aut 6
Surveys ma 9
This sectior followed b the total n the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRICS 7.7.4
Trip Rate P No of Dwellings

Filtering Summary
Land Use 03/C RESIDENTIAL/FLATS PRIVATELY OWNED

Selected Tr 6-215 DWELLS

Actual Trip 9-184 DWELLS

Date Range Minimum: Maximum: 08/09/20

Parking Sp: All Surveys Included

Parking Sp: All Surveys Included

Bedrooms All Surveys Included

Percentage All Surveys Included

Days of the	Monday	2
	Tuesday	5
	Wednesda	4
	Friday	1

Main Locat	Suburban A	10
	Edge of To	2

Population All Surveys Included

Population	1	001 to 5	0	2
	10	001 to 15	0	4
	20	001 to 25	0	4
	25	001 to 50	0	1
	50	001 to 100	0	1

Population	5	001 to 25	0	1
	25	001 to 50	0	1
	50	001 to 75	0	3
	125	001 to 250	0	1
	250	001 to 500	0	4
	500	001 or Mor	2	

Car Owner	0.6 to 1.0	4
	1.1 to 1.5	8

PTAL Ratin	No PTAL Pr	12

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category C - FLATS PRIVATELY OWNED
LGVS

Selected regions and areas:

2	SOUTH EAST		
	ES	EAST SUSSI	1 days
3	SOUTH WEST		
	DC	DORSET	1 days
4	EAST ANGLIA		
	CA	CAMBRIDG	1 days
	SF	SUFFOLK	1 days
5	EAST MIDLANDS		
	DS	DERBYSHIR	1 days
	NT	NOTTINGH	2 days
7	YORKSHIRE & NORTH LINCOLNSHIRE		
	RI	EAST RIDIN	1 days
8	NORTH WEST		
	MS	MERSEYSIL	2 days
9	NORTH		
	CB	CUMBRIA	2 days

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

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.
Parameter: No of Dwellings
Actual Ran 9 to 184 (units:)
Range Sele 6 to 215 (units:)

Public Transport Provision:
Selection b Include all surveys

Date Range 01/01/12 to 08/09/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.
Selected survey days:
Monday 2 days
Tuesday 5 days
Wednesda 4 days
Friday 1 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual cou 12 days
Directional 0 days
This data d the total a whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Cent 0
Edge of To 0
Suburban A 10
Edge of To 2
Neighbourl 0
Free Stand 0
Not Known 0
This data d Edge of To Suburban , Neighbour Edge of To Town Centre and Not Known.

Selected Location Sub Categories:
Industrial Z 0
Commercia 0
Developme 2
Residential 6
Retail Zone 0
Built-Up Zo 0
Village 0
Out of Tow 0
High Street 0
No Sub Cat 4
This data d Industrial : Developm Residentia Retail Zon Built-Up Z Village Out of Tov High Street and No Sub Category.

Secondary Filtering selection:

Use Class:
C3 12 days
This data d which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Population within 1 mile:
1,001 to 5,2 days
10,001 to 14 days
20,001 to 24 days
25,001 to 5 1 days
50,001 to 11 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
5,001 to 2 1 days
25,001 to ! 1 days
50,001 to ' 3 days
125,001 to 1 days
250,001 to 4 days
500,001 or 2 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 4 days
1.1 to 1.5 8 days
This data d within a radius of 5-miles of selected survey sites.

Travel Plan:
No 12 days
This data d and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
No PTAL Pr 12 days
This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

Site(1):	CA-03-C-03	Site area:	1.20 hect
Developme	BLOCKS OF	No of Dwel	82
Location:	CAMBRIDG	Housing de	137
Postcode:	CB1 3UR	Total Bedrc	152
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	No Sub Cat	Survey Day	Monday
PTAL:	n/a	Parking Spa	93
Site(2):	CB-03-C-02	Site area:	0.56 hect
Developme	BLOCK OF I	No of Dwel	35
Location:	PENRITH	Housing de	109
Postcode:	CA11 8RH	Total Bedrc	70
Main Locat	Edge of To	Survey Dat	########
Sub-Locatic	No Sub Cat	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	38
Site(3):	CB-03-C-03	Site area:	0.45 hect
Developme	FLATS & BL	No of Dwel	33
Location:	KENDAL	Housing de	220
Postcode:	LA9 7FE	Total Bedrc	33
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	17
Site(4):	DC-03-C-02	Site area:	0.14 hect
Developme	FLATS IN BI	No of Dwel	14
Location:	WEYMOUT	Housing de	467
Postcode:	DT3 5DA	Total Bedrc	28
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	20
Site(5):	DS-03-C-03	Site area:	0.17 hect
Developme	BLOCKS OF	No of Dwel	30
Location:	DERBY	Housing de	600
Postcode:	DE1 3RG	Total Bedrc	62
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	16
Site(6):	ES-03-C-01	Site area:	0.31 hect
Developme	BLOCK OF I	No of Dwel	71
Location:	BRIGHTON	Housing de	444
Postcode:	BN3 6AL	Total Bedrc	141
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	81
Site(7):	MS-03-C-0	Site area:	1.54 hect
Developme	BLOCKS OF	No of Dwel	184
Location:	LIVERPOOL	Housing de	420

Postcode:	L3 4ES	Total Bedrc	368
Main Locat	Suburban /	Survey Dat	########
Sub-Locatic	Developme	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	267
Site(8):	MS-03-C-0	Site area:	0.12 hect
Developme	BLOCK OF I	No of Dwel	9
Location:	LIVERPOOL	Housing de	75
Postcode:	L3 4DR	Total Bedrc	21
Main Locat	Suburban /	Survey Dat	########
Sub-Locatic	Developme	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	12
Site(9):	NT-03-C-01	Site area:	0.80 hect
Developme	HOUSES (S	No of Dwel	56
Location:	NOTTINGH	Housing de	70
Postcode:	NG7 1GE	Total Bedrc	76
Main Locat	Suburban /	Survey Dat	########
Sub-Locatic	No Sub Cat	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	103
Site(10):	NT-03-C-02	Site area:	1.50 hect
Developme	HOUSES (S	No of Dwel	135
Location:	NOTTINGH	Housing de	90
Postcode:	NG7 1GW	Total Bedrc	219
Main Locat	Suburban /	Survey Dat	########
Sub-Locatic	No Sub Cat	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	98
Site(11):	RI-03-C-01	Site area:	0.72 hect
Developme	FLATS	No of Dwel	20
Location:	HULL	Housing de	167
Postcode:	HU5 5SB	Total Bedrc	44
Main Locat	Edge of To	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	22
Site(12):	SF-03-C-03	Site area:	0.60 hect
Developme	BLOCKS OF	No of Dwel	30
Location:	BURY ST ED	Housing de	300
Postcode:	IP32 6BT	Total Bedrc	42
Main Locat	Suburban /	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	40

This sectior it displays the selecte the day of and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: OGVS

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0	12	58	0.001	12	58	0.003	12	58	0.004
08:00-09:0	12	58	0.001	12	58	0.001	12	58	0.002
09:00-10:0	12	58	0.001	12	58	0.001	12	58	0.002
10:00-11:0	12	58	0	12	58	0	12	58	0
11:00-12:0	12	58	0	12	58	0	12	58	0
12:00-13:0	12	58	0.003	12	58	0.003	12	58	0.006
13:00-14:0	12	58	0	12	58	0	12	58	0
14:00-15:0	12	58	0.001	12	58	0.001	12	58	0.002
15:00-16:0	12	58	0	12	58	0	12	58	0
16:00-17:0	12	58	0	12	58	0	12	58	0
17:00-18:0	12	58	0	12	58	0	12	58	0
18:00-19:0	12	58	0	12	58	0	12	58	0
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.007			0.009			0.016

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: LGVS

	ARRIVALS			DEPARTURES			TOTALS		
Time Rang	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0	12	58	0.004	12	58	0.006	12	58	0.01
08:00-09:0	12	58	0.006	12	58	0.009	12	58	0.015
09:00-10:0	12	58	0.014	12	58	0.009	12	58	0.023
10:00-11:0	12	58	0.011	12	58	0.013	12	58	0.024
11:00-12:0	12	58	0.009	12	58	0.009	12	58	0.018
12:00-13:0	12	58	0.009	12	58	0.003	12	58	0.012
13:00-14:0	12	58	0.003	12	58	0.011	12	58	0.014
14:00-15:0	12	58	0.003	12	58	0.003	12	58	0.006
15:00-16:0	12	58	0.01	12	58	0.006	12	58	0.016
16:00-17:0	12	58	0.004	12	58	0.009	12	58	0.013
17:00-18:0	12	58	0.006	12	58	0.006	12	58	0.012
18:00-19:0	12	58	0.007	12	58	0.004	12	58	0.011
19:00-20:00									
20:00-21:00									
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.086			0.088			0.174

TRICS 7.7.4
Trip Rate P: No of Dwellings

Filtering Summary
Land Use 03/A RESIDENTIAL/HOUSES PRIVATELY OWNED

Selected Tr 6-4334 DWELLS

Actual Trip 10-918 DWELLS

Date Range Minimum: I Maximum: 08/10/20

Parking Spa All Surveys Included

Parking Spa All Surveys Included

Bedrooms All Surveys Included

Percentage All Surveys Included

Days of the	Monday	12
	Tuesday	5
	Wednesday	13
	Thursday	10
	Friday	6
Main Locat	Suburban A	15
	Edge of To	31

Population All Surveys Included

Population	1	001 to 5	0	3
	5	001 to 10	0	15
	10	001 to 15	0	15
	15	001 to 20	0	5
	20	001 to 25	0	3
	25	001 to 50	0	5
Population	5	001 to 25	0	5
	25	001 to 50	0	3
	50	001 to 75	0	7
	75	001 to 100	0	9
	100	001 to 125	0	1
	125	001 to 250	0	13
	250	001 to 500	0	8

Car Owner:	0.6 to 1.0	15
	1.1 to 1.5	29
	1.6 to 2.0	2
PTAL Ratin	No PTAL Pr	45
	2 Poor	1

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use 03 - RESIDENTIAL
Category A - HOUSES PRIVATELY OWNED
LGVS

Selected regions and areas:

2	SOUTH EAST		
	EX	ESSEX	1 days
	HC	HAMPSHIR	2 days
	HF	HERTFORD:	1 days
	KC	KENT	2 days
	SC	SURREY	2 days
	WS	WEST SUSS	4 days
3	SOUTH WEST		
	DC	DORSET	1 days
	DV	DEVON	3 days
	SM	SOMERSET	1 days
	WL	WILTSHIRE	1 days
4	EAST ANGLIA		
	CA	CAMBRIDG	1 days
	NF	NORFOLK	4 days
	SF	SUFFOLK	2 days

5 EAST MIDLANDS
DS DERBYSHIR 1 days
6 WEST MIDLANDS
SH SHROPSHIF 1 days
ST STAFFORDS 2 days
WK WARWICKS 3 days
7 YORKSHIRE & NORTH LINCOLNSHIRE
NE NORTH EAS 1 days
NY NORTH YOI 4 days
SY SOUTH YOI 1 days
8 NORTH WEST
CH CHESHIRE 3 days
LC LANCASHIR 1 days
MS MERSEYSID 1 days
9 NORTH
DH DURHAM 2 days
TW TYNE & WE 1 days
This section displays the number of survey days per TRICS® sub-region in the selected set

Primary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.
Parameter: No of Dwellings
Actual Ran 10 to 918 (units:)
Range Sele 6 to 4334 (units:)

Public Transport Provision:
Selection b Include all surveys

Date Range 01/01/12 to 08/10/20

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.
Selected survey days:
Monday 12 days
Tuesday 5 days
Wednesda 13 days
Thursday 10 days
Friday 6 days
This data displays the number of selected surveys by day of the week.

Selected survey types:
Manual co 46 days
Directional 0 days
This data d the total a whilst ATC surveys are undertaking using machines.

Selected Locations:
Town Centi 0
Edge of Tov 0
Suburban A 15
Edge of Tov 31
Neighbourl 0
Free Standi 0
Not Known 0
This data d Edge of To Suburban / Neighbour Edge of To Town Centre and Not Known.

Selected Location Sub Categories:
Industrial Z 0
Commercia 0
Developme 0
Residential 45
Retail Zone 0
Built-Up Zo 0
Village 0
Out of Tow 0
High Street 0
No Sub Cat 1
This data d Industrial Z Developm Residentia Retail Zone Built-Up Zc Village Out of Tow High Street and No Sub Category.

Secondary Filtering selection:

Use Class:
C3 46 days
This data d which can be found within the Library module of TRICS®.

Population within 500m Range:
All Surveys Included

Population within 1 mile:
1,001 to 5, 3 days
5,001 to 1(15 days
10,001 to 1 15 days
15,001 to 2 5 days
20,001 to 2 3 days
25,001 to 5 5 days
This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:
5,001 to 2 5 days
25,001 to 5 3 days
50,001 to 7 7 days
75,001 to 9 days
100,001 to 1 days
125,001 to 13 days
250,001 to 8 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 15 days
1.1 to 1.5 29 days
1.6 to 2.0 2 days
This data d within a radius of 5-miles of selected survey sites.

Travel Plan:
Yes 14 days
No 32 days
This data d and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:
No PTAL Pr 45 days
2 Poor 1 days
This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

Site(1):	CA-03-A-05	Site area:	1.71 hect
Developme	DETACHED	No of Dwel	28
Location:	PETERBOR(	Housing de	19
Postcode:	PE1 4AW	Total Bedrc	94
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	98
Site(2):	CH-03-A-0!	Site area:	0.73 hect
Developme	TERRACED	No of Dwel	24
Location:	MACCLESFI	Housing de	39
Postcode:	SK10 2NS	Total Bedrc	72
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	32
Site(3):	CH-03-A-1(	Site area:	0.91 hect
Developme	SEMI-DETA	No of Dwel	40
Location:	NORTHWIC	Housing de	50
Postcode:	CW8 4WA	Total Bedrc	102
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	74
Site(4):	CH-03-A-11	Site area:	0.50 hect
Developme	TOWN HOU	No of Dwel	24
Location:	NORTHWIC	Housing de	55
Postcode:	CW9 8RZ	Total Bedrc	92
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	47
Site(5):	DC-03-A-0!	Site area:	1.85 hect
Developme	BUNGALOV	No of Dwel	28
Location:	BOURNEMI	Housing de	17
Postcode:	BH8 0AL	Total Bedrc	64
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	131
Site(6):	DH-03-A-0!	Site area:	0.90 hect
Developme	SEMI DETA	No of Dwel	50
Location:	BISHOP AU	Housing de	94
Postcode:	DL14 6RH	Total Bedrc	150
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	87
Site(7):	DH-03-A-0!	Site area:	5.60 hect
Developme	SEMI-DETA	No of Dwel	57
Location:	DURHAM	Housing de	11
Postcode:	DH1 1HD	Total Bedrc	169
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	190
Site(8):	DS-03-A-02	Site area:	16.45 hect
Developme	MIXED HOU	No of Dwel	371
Location:	DERBY	Housing de	36
Postcode:	DE22 4HH	Total Bedrc	1402
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	1083

Site(9):	DV-03-A-01	Site area:	1.25 hect
Developme	TERRACED	No of Dwel	37
Location:	TORQUAY	Housing de	53
Postcode:	TQ1 3HR	Total Bedrc	111
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	103
Site(10):	DV-03-A-02	Site area:	4.04 hect
Developme	HOUSES &	No of Dwel	116
Location:	HONITON	Housing de	44
Postcode:	EX14 1JB	Total Bedrc	306
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	261
Site(11):	DV-03-A-03	Site area:	2.02 hect
Developme	TERRACED	No of Dwel	70
Location:	HONITON	Housing de	50
Postcode:	EX14 2DF	Total Bedrc	208
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	116
Site(12):	EX-03-A-02	Site area:	6.12 hect
Developme	DETACHED	No of Dwel	97
Location:	CHIGWELL	Housing de	20
Postcode:	IG7 5JB	Total Bedrc	385
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	2 Poor	Parking Spa	84
Site(13):	HC-03-A-21	Site area:	1.20 hect
Developme	TERRACED	No of Dwel	39
Location:	BASINGSTC	Housing de	57
Postcode:	RG24 9AF	Total Bedrc	134
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	98
Site(14):	HC-03-A-22	Site area:	1.69 hect
Developme	MIXED HOI	No of Dwel	40
Location:	NEAR EAST	Housing de	32
Postcode:	SO50 6JL	Total Bedrc	114
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	101
Site(15):	HF-03-A-03	Site area:	5.67 hect
Developme	MIXED HOI	No of Dwel	160
Location:	BUNTINGFI	Housing de	32
Postcode:	SG9 9FX	Total Bedrc	510
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	632
Site(16):	KC-03-A-04	Site area:	4.31 hect
Developme	SEMI-DETA	No of Dwel	110
Location:	AYLESFORD	Housing de	32
Postcode:	ME20 6FN	Total Bedrc	330
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	195
Site(17):	KC-03-A-07	Site area:	9.46 hect
Developme	MIXED HOI	No of Dwel	288
Location:	HERNE BAY	Housing de	40
Postcode:	CT6 6HZ	Total Bedrc	934
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	891
Site(18):	LC-03-A-31	Site area:	1.32 hect
Developme	DETACHED	No of Dwel	32
Location:	PRESTON	Housing de	30
Postcode:	PR4 0NL	Total Bedrc	113
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	77
Site(19):	MS-03-A-01	Site area:	0.50 hect
Developme	DETACHED	No of Dwel	15
Location:	LIVERPOOL	Housing de	38
Postcode:	L17 5BT	Total Bedrc	60
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	45
Site(20):	NE-03-A-02	Site area:	12.00 hect
Developme	SEMI DETA	No of Dwel	432
Location:	SCUNTHOF	Housing de	133
Postcode:	DN15 8GS	Total Bedrc	1174
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	No Sub Cat	Survey Day	Monday
PTAL:	n/a	Parking Spa	432

Site(21):	NF-03-A-03	Site area:	0.63 hect
Developme	DETACHED	No of Dwel	10
Location:	THETFORD	Housing de	20
Postcode:	IP24 1EY	Total Bedrc	40
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	37
Site(22):	NF-03-A-04	Site area:	1.98 hect
Developme	MIXED HOI	No of Dwel	70
Location:	NORTH WA	Housing de	40
Postcode:	NR28 0FW	Total Bedrc	223
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	165
Site(23):	NF-03-A-05	Site area:	1.57 hect
Developme	MIXED HOI	No of Dwel	40
Location:	HOLT	Housing de	26
Postcode:	NR25 6GA	Total Bedrc	116
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	100
Site(24):	NF-03-A-06	Site area:	9.27 hect
Developme	MIXED HOI	No of Dwel	275
Location:	GREAT YAR	Housing de	32
Postcode:	NR31 9FT	Total Bedrc	767
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	586
Site(25):	NY-03-A-08	Site area:	0.15 hect
Developme	TERRACED	No of Dwel	21
Location:	YORK	Housing de	175
Postcode:	YO10 3EJ	Total Bedrc	54
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	24
Site(26):	NY-03-A-09	Site area:	3.30 hect
Developme	MIXED HOI	No of Dwel	52
Location:	NORTHALL	Housing de	18
Postcode:	DL6 1BQ	Total Bedrc	152
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	135
Site(27):	NY-03-A-11	Site area:	1.79 hect
Developme	PRIVATE HO	No of Dwel	23
Location:	BOROUGHI	Housing de	15
Postcode:	YO51 9LQ	Total Bedrc	101
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	144
Site(28):	NY-03-A-13	Site area:	0.30 hect
Developme	TERRACED	No of Dwel	10
Location:	CATTERICK	Housing de	33
Postcode:	DL9 4SB	Total Bedrc	32
Main Locat	Suburban A	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	19
Site(29):	SC-03-A-04	Site area:	3.20 hect
Developme	DETACHED	No of Dwel	71
Location:	BYFLEET	Housing de	25
Postcode:	KT14 7BY	Total Bedrc	202
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	177
Site(30):	SC-03-A-05	Site area:	7.20 hect
Developme	MIXED HOI	No of Dwel	207
Location:	HORLEY	Housing de	38
Postcode:	RH6 8NT	Total Bedrc	592
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	649
Site(31):	SF-03-A-05	Site area:	1.15 hect
Developme	DETACHED	No of Dwel	18
Location:	BURY ST ED	Housing de	19
Postcode:	IP33 2SN	Total Bedrc	78
Main Locat	Edge of To	Survey Dati	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	75
Site(32):	SF-03-A-07	Site area:	3.70 hect
Developme	MIXED HOI	No of Dwel	73
Location:	IPSWICH	Housing de	33
Postcode:	IP3 8XL	Total Bedrc	215

Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	169
Site(33):	SH-03-A-05	Site area:	1.32 hect
Developme	SEMI-DETA	No of Dwel	54
Location:	TELFORD	Housing de	56
Postcode:	TF7 4JE	Total Bedrc	162
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	63
Site(34):	SM-03-A-0	Site area:	1.40 hect
Developme	DETACHED	No of Dwel	33
Location:	BRIDGWAT	Housing de	28
Postcode:	TA6 7PL	Total Bedrc	107
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	131
Site(35):	ST-03-A-07	Site area:	9.00 hect
Developme	DETACHED	No of Dwel	248
Location:	STAFFORD	Housing de	173
Postcode:	ST16 1GZ	Total Bedrc	821
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	881
Site(36):	ST-03-A-08	Site area:	0.80 hect
Developme	DETACHED	No of Dwel	26
Location:	STAFFORD	Housing de	37
Postcode:	ST17 4JS	Total Bedrc	90
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	89
Site(37):	SY-03-A-01	Site area:	1.73 hect
Developme	SEMI DETA	No of Dwel	54
Location:	DONCASTE	Housing de	34
Postcode:	DN5 9TD	Total Bedrc	162
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	61
Site(38):	TW-03-A-0	Site area:	0.55 hect
Developme	SEMI-DETA	No of Dwel	16
Location:	GATESHEAI	Housing de	34
Postcode:	NE8 4SQ	Total Bedrc	52
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Monday
PTAL:	n/a	Parking Spa	38
Site(39):	WK-03-A-0	Site area:	0.47 hect
Developme	BUNGALOV	No of Dwel	17
Location:	COVENTRY	Housing de	50
Postcode:	CV2 2NT	Total Bedrc	29
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	35
Site(40):	WK-03-A-0	Site area:	0.85 hect
Developme	DETACHED	No of Dwel	23
Location:	WARWICK	Housing de	32
Postcode:	CV34 5TT	Total Bedrc	77
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	63
Site(41):	WK-03-A-0	Site area:	2.42 hect
Developme	DETACHED	No of Dwel	49
Location:	KENILWOR	Housing de	23
Postcode:	CV8 2TN	Total Bedrc	195
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Friday
PTAL:	n/a	Parking Spa	137
Site(42):	WL-03-A-0	Site area:	1.16 hect
Developme	SEMI DETA	No of Dwel	27
Location:	SWINDON	Housing de	25
Postcode:	SN2 7HT	Total Bedrc	91
Main Locat	Suburban A	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	122
Site(43):	WS-03-A-0	Site area:	5.45 hect
Developme	MIXED HOI	No of Dwel	151
Location:	HORSHAM	Housing de	46
Postcode:	RH12 1EP	Total Bedrc	465
Main Locat	Edge of Tov	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	345

Site(44):	WS-03-A-0	Site area:	8.86 hect
Developme	MIXED HOI	No of Dwel	180
Location:	ANGMERIN	Housing de	41
Postcode:	BN16 4PQ	Total Bedrc	586
Main Locat	Edge of To\	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Thursday
PTAL:	n/a	Parking Spa	527
Site(45):	WS-03-A-1	Site area:	2.27 hect
Developme	MIXED HOI	No of Dwel	79
Location:	LITTLEHAM	Housing de	51
Postcode:	BN17 7PL	Total Bedrc	249
Main Locat	Edge of To\	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Wednesday
PTAL:	n/a	Parking Spa	190
Site(46):	WS-03-A-1	Site area:	50.00 hect
Developme	MIXED HOI	No of Dwel	918
Location:	WEST HOR	Housing de	50
Postcode:	RH12 3LN	Total Bedrc	2865
Main Locat	Edge of To\	Survey Dat	########
Sub-Locatic	Residential	Survey Day	Tuesday
PTAL:	n/a	Parking Spa	1894

This sectior it displays the selecte the day of and whether the survey was a manual classified count or an ATC count.

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: OGVS

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0	46	104	0.001	46	104	0.001	46	104	0.002
08:00-09:0	46	104	0.002	46	104	0.002	46	104	0.004
09:00-10:0	46	104	0.003	46	104	0.002	46	104	0.005
10:00-11:0	46	104	0.002	46	104	0.002	46	104	0.004
11:00-12:0	46	104	0.001	46	104	0.002	46	104	0.003
12:00-13:0	46	104	0.001	46	104	0.002	46	104	0.003
13:00-14:0	46	104	0.002	46	104	0.001	46	104	0.003
14:00-15:0	46	104	0.001	46	104	0.002	46	104	0.003
15:00-16:0	46	104	0.002	46	104	0.002	46	104	0.004
16:00-17:0	46	104	0.001	46	104	0.001	46	104	0.002
17:00-18:0	46	104	0.001	46	104	0.001	46	104	0.002
18:00-19:0	46	104	0.001	46	104	0.001	46	104	0.002
19:00-20:0	1	97	0	1	97	0	1	97	0
20:00-21:0	1	97	0	1	97	0	1	97	0
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.018			0.019			0.037

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
Calculation Factor: 1 DWELLS
Count Type: LGVS

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	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									
07:00-08:0	46	104	0.012	46	104	0.025	46	104	0.037
08:00-09:0	46	104	0.016	46	104	0.022	46	104	0.038
09:00-10:0	46	104	0.021	46	104	0.02	46	104	0.041
10:00-11:0	46	104	0.021	46	104	0.02	46	104	0.041
11:00-12:0	46	104	0.016	46	104	0.02	46	104	0.036
12:00-13:0	46	104	0.019	46	104	0.016	46	104	0.035
13:00-14:0	46	104	0.023	46	104	0.021	46	104	0.044
14:00-15:0	46	104	0.019	46	104	0.019	46	104	0.038
15:00-16:0	46	104	0.021	46	104	0.021	46	104	0.042
16:00-17:0	46	104	0.02	46	104	0.018	46	104	0.038
17:00-18:0	46	104	0.027	46	104	0.013	46	104	0.04
18:00-19:0	46	104	0.015	46	104	0.009	46	104	0.024
19:00-20:0	1	97	0	1	97	0	1	97	0
20:00-21:0	1	97	0	1	97	0	1	97	0
21:00-22:00									
22:00-23:00									
23:00-24:00									
Daily Trip Rates:			0.23			0.224			0.454

vectos.

Appendix I

Nomis – 2011 Census Method of Travel to Work Data

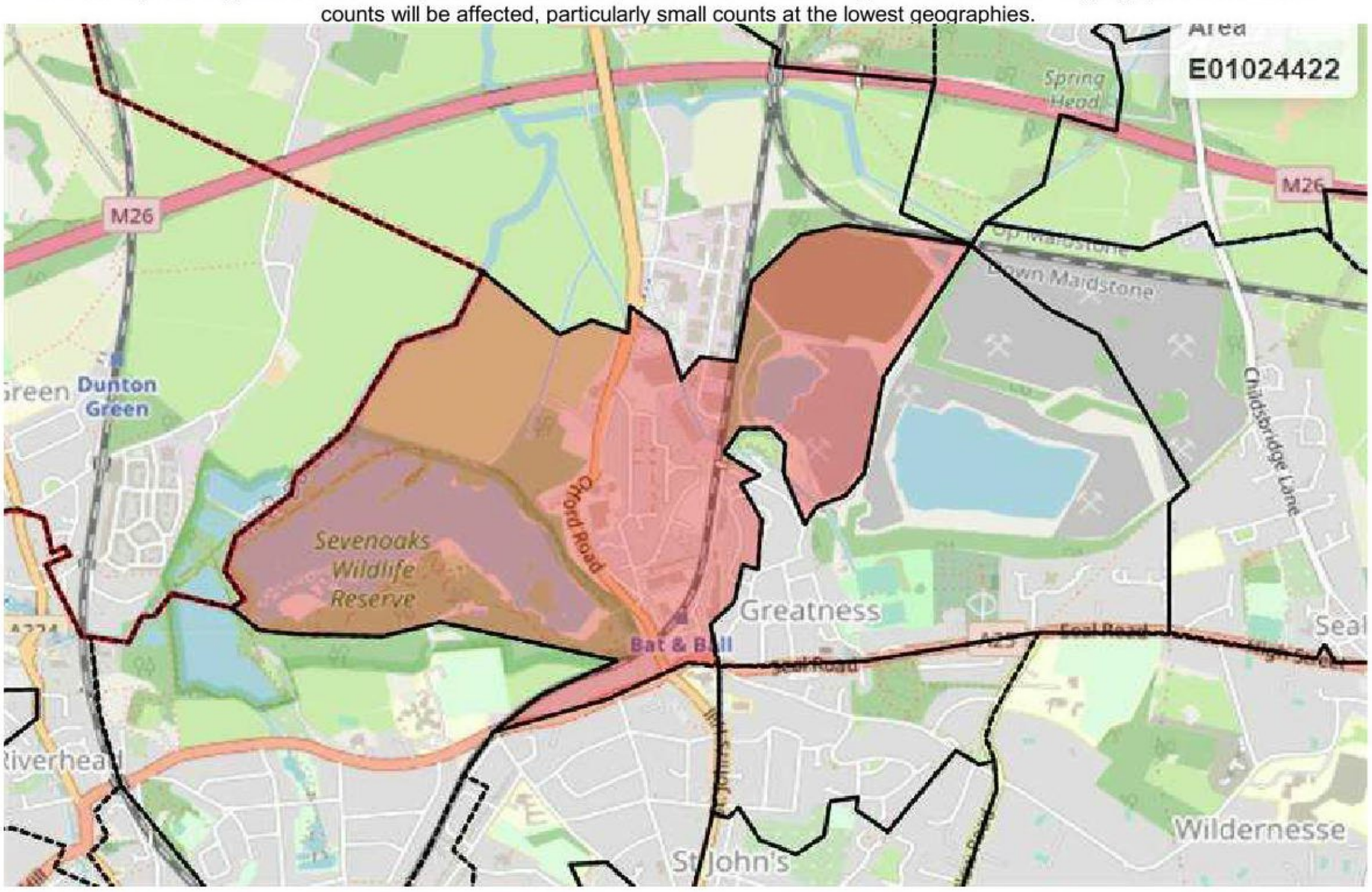
QS701EW - Method of travel to work

population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - lower layer
area name	E01024465 : Sevenoaks 010D
rural urban	Total

Method of Travel to Work	2011		
All categories: Method of tra	1,063	790	100%
Work mainly at or from hom	31	31	4%
Underground, metro, light ra	3	3	0%
Train	140	140	18%
Bus, minibus or coach	6	6	1%
Taxi	1	1	0%
Motorcycle, scooter or mop	13	13	2%
Driving a car or van	413	413	52%
Passenger in a car or van	38	38	5%
Bicycle	9	9	1%
On foot	136	136	17%
~~Other method of travel to w~~	~~8~~		
~~Not in employment~~	~~265~~		

Method of Travel	% Mode Share
Work mainly at or from home	4%
Underground, metro, light rail, tram	0%
Train	18%
Bus, minibus or coach	1%
Taxi	0%
Motorcycle, scooter or moped	2%
Driving a car or van	52%
Passenger in a car or van	5%
Bicycle	1%
On foot	17%
Total	100%

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.



QS701EW - Method of travel to work

population	All usual residents aged 16 to 74
units	Persons
area type	2011 super output areas - lower layer
area name	E01024465 : Sevenoaks 010D
rural urban	Total

Method of Travel to Work	2011		
All categories: Method of tra	1,063	759	100%
~~Work mainly at or from hom~~	~~31~~		
Underground, metro, light ra	3	3	0%
Train	140	140	18%
Bus, minibus or coach	6	6	1%
Taxi	1	1	0%
Motorcycle, scooter or mopt	13	13	2%
Driving a car or van	413	413	54%
Passenger in a car or van	38	38	5%
Bicycle	9	9	1%
On foot	136	136	18%
~~Other method of travel to w~~	~~8~~		
~~Not in employment~~	~~265~~		

Method of Travel	% Mode Share
Underground, metro, light rail, tram	0%
Train	18%
Bus, minibus or coach	1%
Taxi	0%
Motorcycle, scooter or moped	2%
Driving a car or van	54%
Passenger in a car or van	5%
Bicycle	1%
On foot	18%
Total	100%

In order to protect against disclosure of personal information, records have been swapped between different geographic areas. Some counts will be affected, particularly small counts at the lowest geographies.

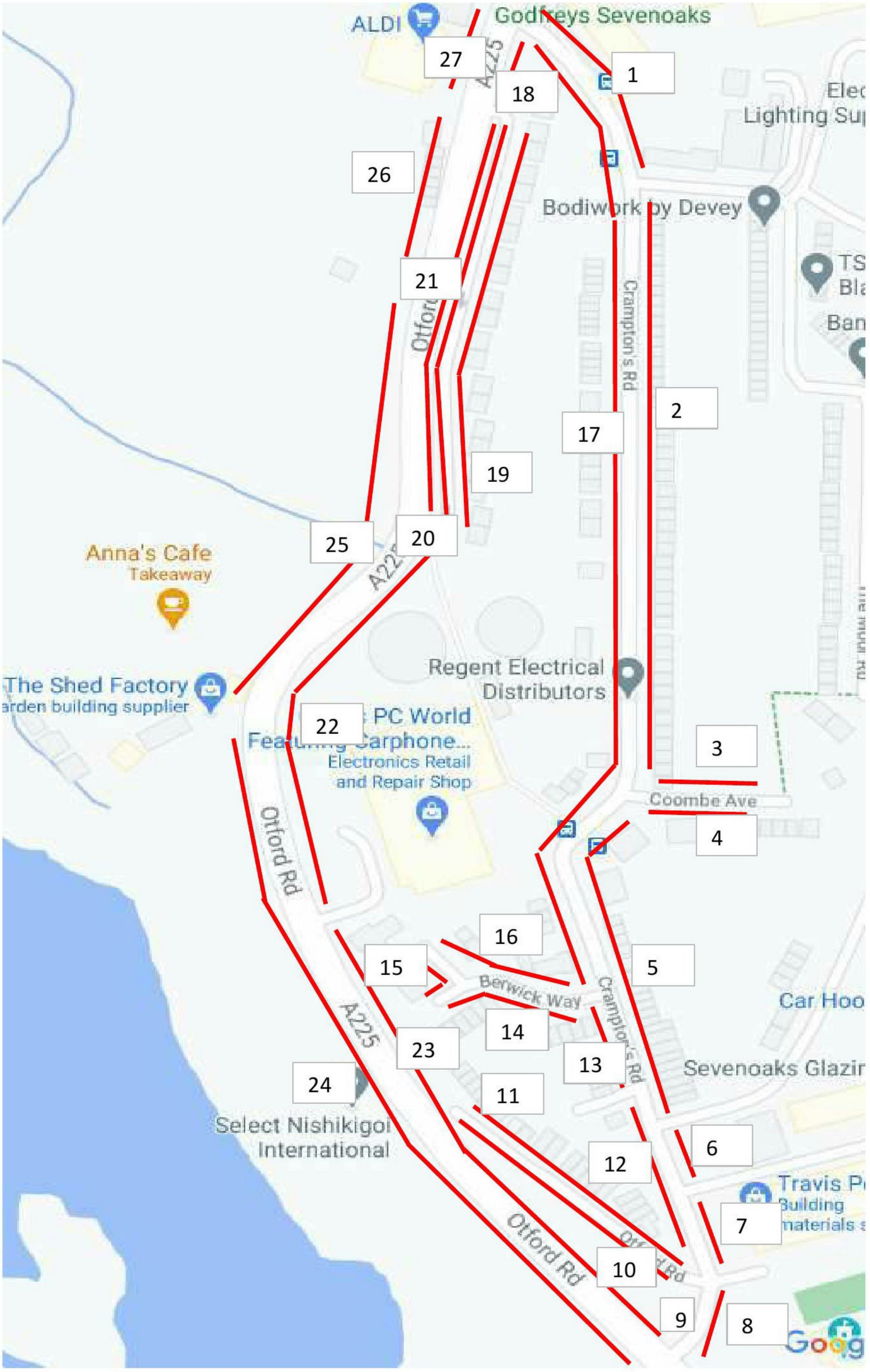
vectos.

Appendix J

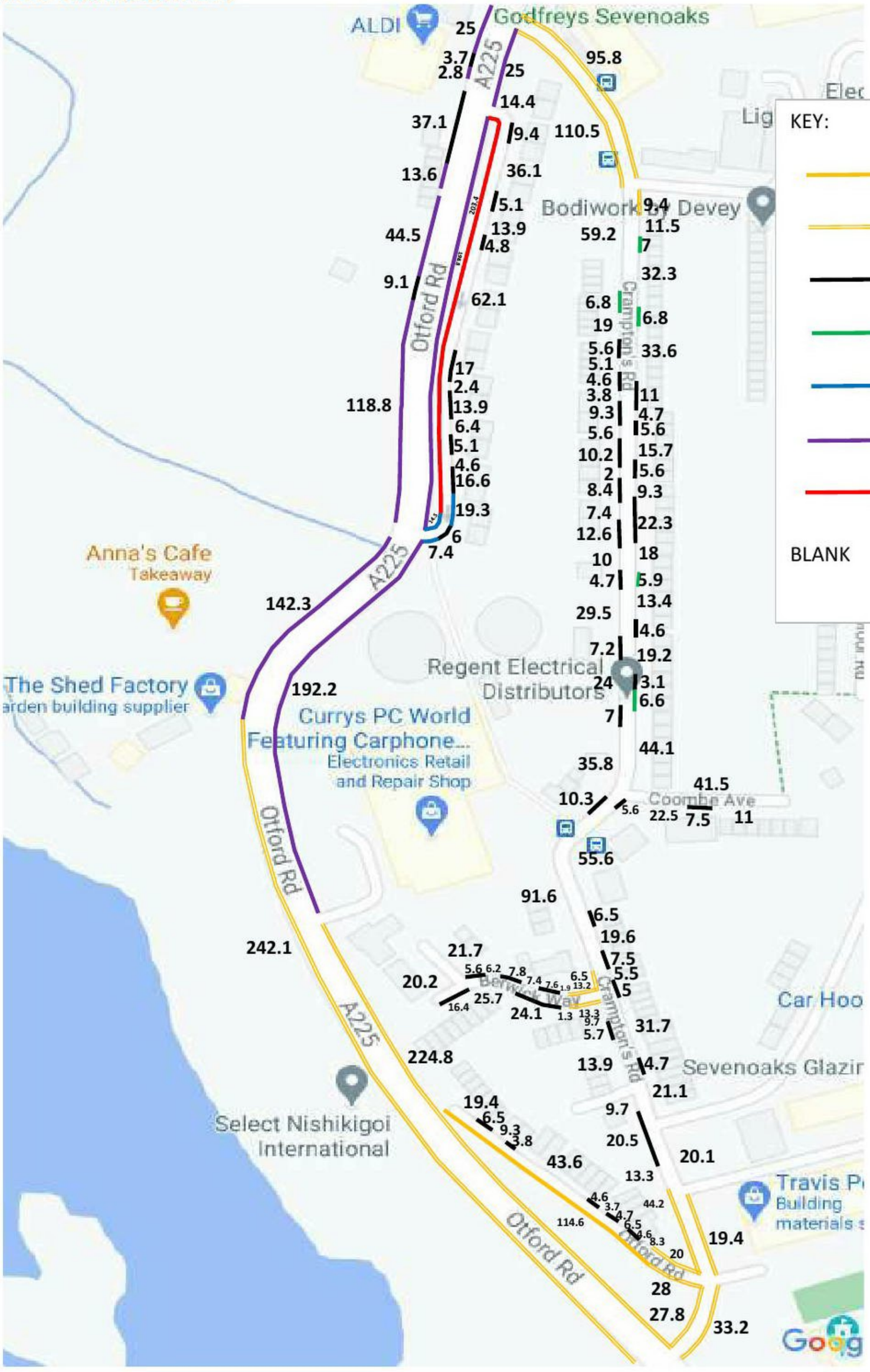
Parking Beat Survey Analysis

K&M TRAFFIC SURVEYS

DATE : TUESDAY 22ND & THURSDAY 25TH FEB 2021 LOCATION : OTFORD RD, SEVENOAKS



K&M TRAFFIC SURVEYS



KEY:

= SINGLE YELLOW LINE MON-SAT 0830-1830

= DOUBLE YELLOW LINE

= DROPPED KERB

= DISABLED BAY

= TOO NARROW UNRESTRICTED

= WOULD NOT PARK UNRESTRICTED

= NOSE IN PARKING BAYS UNRESTRICTED

BLANK = UNRESTRICTED

Note:

	metres	
spaces lost	24	5
	22	4
		9

K&M TRAFFIC SURVEYS

DATE : TUESDAY 23RD & THURSDAY 25TH FEBRUARY 2021

LOCATION : CRAMPTONS ROAD, SEVENOAKS, KENT

						TUESDAY 23RD FEBRUARY 2021 TIME : 01:45		THURSDAY 25TH FEBRUARY 2021 TIME : 01:30	
ROAD NAME	ZONE	RESTRICTION	METRES	5 METRES = 1 SPACE	5.5 METRES = 1 SPACE	PARKED	%RESTRICTION STRESS	PARKED	%RESTRICTION STRESS
CRAMPTONS RD	1	DOUBLE YELLOW LINE	95.8						
	2	DOUBLE YELLOW LINE	9.4						
		UNRESTRICTED	201.8	34	31	32	94.12%	33	97.06%
		DISABLED BAY	26.3	4	4	4	100.00%	4	100.00%
		DROPPED KERB	52.2						
COOMBE AVE	3	UNRESTRICTED	41.5	8	7	2	28.57%	2	28.57%
	4	UNRESTRICTED	33.5	6	6	0	0.00%	0	0.00%
		DROPPED KERB	7.5						
CRAMPTONS RD	5	DROPPED KERB	29.3						
		UNRESTRICTED	133.5	25	22	16	61.54%	16	61.54%
	6	UNRESTRICTED	20.1	4	3	3	75.00%	1	25.00%
	7	DOUBLE YELLOW LINE	19.4						
	8	DOUBLE YELLOW LINE	33.2						
	9	DOUBLE YELLOW LINE	27.8						
OTFORD RD	10	DOUBLE YELLOW LINE	28						
		SINGLE YELLOW LINE MON-SAT 0830-1830	114.6	20					
	11	UNRESTRICTED	90.8	14	13	14	100.00%	14	100.00%
		DROPPED KERB	24.2			1		1	
		DOUBLE YELLOW LINE	20						
CRAMPTONS RD	12	DOUBLE YELLOW LINE	44.2						
		UNRESTRICTED	23	3	3	3	100.00%	3	75.00%
		DROPPED KERB	20.5			1		2	
	13	UNRESTRICTED	23.6	3	3	4	100.00%	3	100.00%
		DROPPED KERB	5.7					1	
BERWICK WAY	14	DOUBLE YELLOW LINE	13.3						
		UNRESTRICTED	27	5	4	0	0.00%	1	20.00%
		DROPPED KERB	40.5						
	15	UNRESTRICTED	20.2	4	3	0	0.00%	0	0.00%
	16	UNRESTRICTED	37.2	6	5	2	33.33%	3	50.00%
		DROPPED KERB	21						
		DOUBLE YELLOW LINE	13.2						
CRAMPTONS RD	17	DOUBLE YELLOW LINE	117						
		UNRESTRICTED	293	53	47	36	66.67%	36	66.67%
		DROPPED KERB	79.9			4		2	
		DISABLED BAY	6.8	1	1	1	100.00%	1	100.00%
A225	18	WOULD NOT PARK UNRESTRICTED	25						
OTFORD RD	19	UNRESTRICTED	139.9	24	22	6	26.09%	8	33.33%
		DROPPED KERB	77.9			3		1	
		TOO NARROW UNRESTRICTED	26.7						
	20	TOO NARROW UNRESTRICTED	14.5						
		NOSE IN PARKING BAYS X 48	203.4	48	48	47	97.92%	47	97.92%
A225	21	WOULD NOT PARK UNRESTRICTED	198.8						
	22	WOULD NOT PARK UNRESTRICTED	192.2						
	23	DOUBLE YELLOW LINE	224.8						
	24	DOUBLE YELLOW LINE	242.1						
		WOULD NOT PARK UNRESTRICTED	142.3						
	25	WOULD NOT PARK UNRESTRICTED	163.3						
		DROPPED KERB	9.1						
	26	WOULD NOT PARK UNRESTRICTED	13.6						
		DROPPED KERB	37.1						
	27	WOULD NOT PARK UNRESTRICTED	27.8						
		DROPPED KERB	3.7						
				262	222	179	80.63%	179	80.63%

							Residual	
							Tue	Thur
Existing Situation (Excluding disabled bays)	217	174	80%	174	80%		43	43
Reduced capacity due to loss of space on Crampton's Rd	208	174	84%	174	84%		34	34
worst case scenario (+11 vehicles requiring overnight parking on street)	208	185	89%	185	89%		23	23

K&M TRAFFIC SURVEYS

TUESDAY 23RD FEBRUARY 2021
01:30 HOURS

KEY:

= SINGLE YELLOW LINE MON-SAT 0830-1830

= DOUBLE YELLOW LINE

= DROPPED KERB

= DISABLED BAY

= TOO NARROW UNRESTRICTED

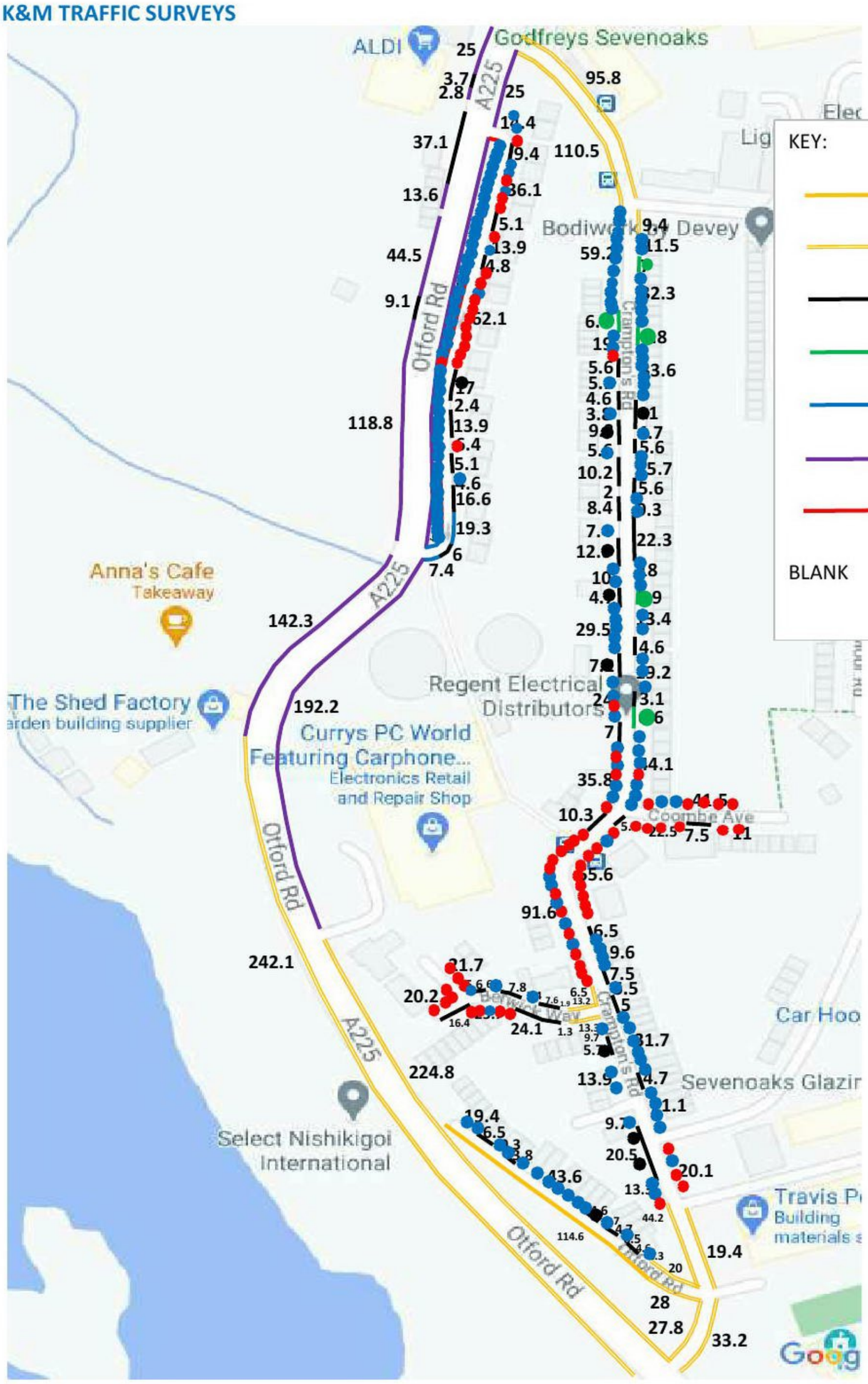
= WOULD NOT PARK UNRESTRICTED

= NOSE IN PARKING BAYS UNRESTRICTED

BLANK = UNRESTRICTED

- PARKED VEHICLE
- AVAILABLE SPACE
- PARKED ON DROP KERB
- PARKED IN DISABLED BAY
- PARKED ON SINGLE YELLOW

K&M TRAFFIC SURVEYS



THURSDAY 25TH FEBRUARY 2021
01:30 HOURS

KEY:

= SINGLE YELLOW LINE MON-SAT 0830-1830

= DOUBLE YELLOW LINE

= DROPPED KERB

= DISABLED BAY

= TOO NARROW UNRESTRICTED

= WOULD NOT PARK UNRESTRICTED

= NOSE IN PARKING BAYS UNRESTRICTED

BLANK = UNRESTRICTED

- PARKED VEHICLE
- AVAILABLE SPACE
- PARKED ON DROP KERB
- PARKED IN DISABLED BAY
- PARKED ON SINGLE YELLOW

vectos.

Appendix K

Traffic Flow Diagrams

Trip Generation and Distribution Assumptions

Access Split of surface level parking within site

	spaces	Access via cramptons	otford
spaces around rotunda	34	0%	100%
spaces only accessible by cramptons rd	14	100%	0%
Overall access split	48	14	34
%		29%	71%

Distribution of vehicles across Accesses

Parking Space Location	Number of spaces	Point of Access	Point of Egress	%	assumed access split Crampton's	Otford Rd
townhouses	16	cramptons rd - edge of site	cramptons rd - edge of site	16%	16%	0%
around rotunda/ internal route	48	crampton's rd/otford road	otford road	49%	14%	35%
podium car park	33	crampton's rd/otford road	otford road	34%	0%	34%
total	97					

Overall Access/Egress Split

	Access	Egress
cramptons rd	31%	16%
oftford rd	69%	84%

assume that all vehicles that park in podium car park enter at Otford Road (worst case)

100%	Otford
0%	Cramptons

Table below taken from S05-AJP-Trip Generation 210210

use total person trips from version 3 (flats new and houses new tabs)

Method of Travel	% Mode Share	AM Peak (0800-0900) Arr.	AM Peak (0800-0900) Dep.	PM Peak (1700-1800) Arr.	PM Peak (1700-1800) Dep.
Underground, metro, light rail, tram	0%	0	0	0	0
Train	18%	3	16	12	5
Bus, minibus or coach	1%	0	1	1	0
Taxi	0%	0	0	0	0
Motorcycle, scooter or moped	2%	0	2	1	0
Driving a car or van	54%	8	48	37	13
Passenger in a car or van	5%	1	4	3	1
Bicycle	1%	0	1	1	0
On foot	18%	3	16	12	4
Total	100%	14	88	68	25

	AM Arrive	AM Depart	PM Arrive	PM Depart
Cramptons Rd	2	8	12	2
Otford Rd	6	41	26	12
total veh mvmts	8	50	38	14

total movements taken to be car driver, taxi and mc/scooter

	AM Peak (0800-0900) Arr.	AM Peak (0800-0900) Dep.	PM Peak (1700-1800) Arr.	PM Peak (1700-1800) Dep.
Taxi	0	0	0	0
Motorcycle, scooter or moped	0	2	1	0
Driving a car or van	8	48	37	13
Total	8	50	38	14
PCU	8	49	37	14

	AM Peak (0800-0900) Arr.	AM Peak (0800-0900) Dep.	PM Peak (1700-1800) Arr.	PM Peak (1700-1800) Dep.
LGVS*	1	1	1	1
OGVs*	0	0	0	0
Convert OGV to PCU**	0	0	0	0

*taken from spreadsheet S05-AJP-Trip Gen 210210

**take average of OGV PCU values (1.5+2.3/2=1.9)

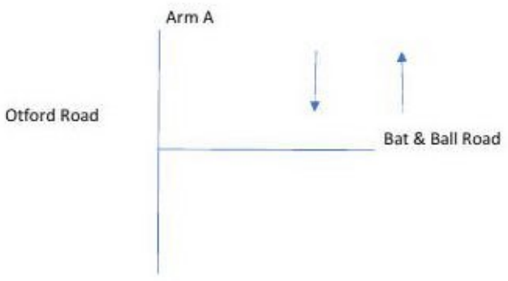
Total Development Flow PCU

	AM Peak (0800-0900) Arr.	AM Peak (0800-0900) Dep.	PM Peak (1700-1800) Arr.	PM Peak (1700-1800) Dep.
Total PCU	9	50	38	14

Distribution Calculations Based on Existing Flow Data

14

Data from David Tucker Associates
Northern Seneoaks Transport Assessment - Final
Oct-19



	From A (sbd)						
	Cars	LGVS	OGV1	OGV2	Bus	PCU	Total
8-9am	800	115	21	10	4	978	950
5-6pm	809	72	7	2	3	903	893

	To A (nbd)						
	Cars	LGVS	OGV1	OGV2	Bus	PCU	Total
8-9am	595	75	19	2	7	718	698
5-6pm	772	57	3	0	10	854	842

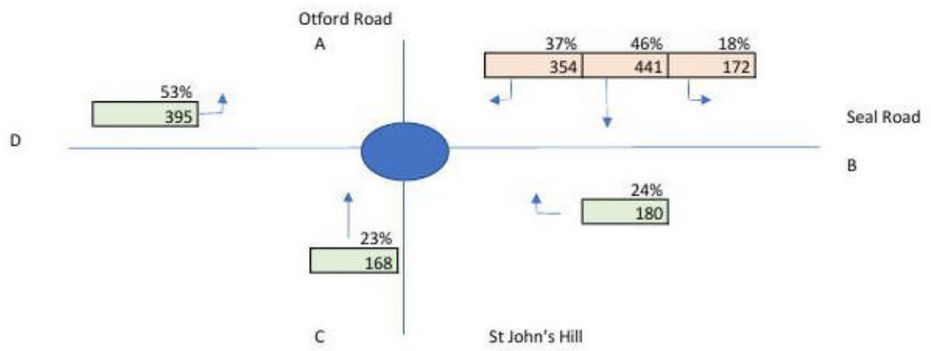
	AM	
nb	698	42%
sb	950	58%

	PM	
Nb	842	49%
Sb	893	51%

Data from David Tucker Associates
Northern Seneoaks Transport Assessment - Final
Oct-19
dist based on total veh flows

AM Peak 8am-9am

split based on traffic to/from Arm A

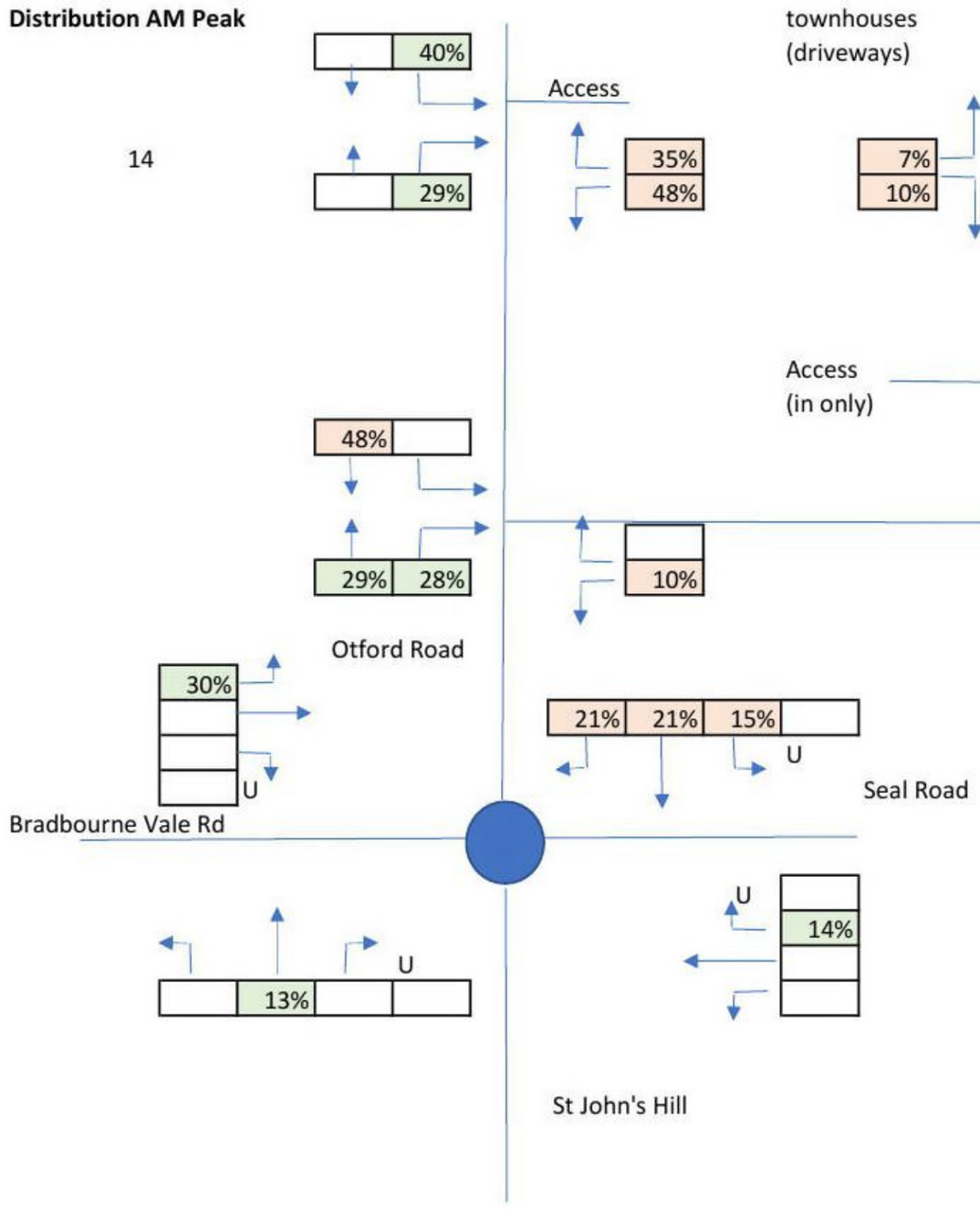


PM Peak 5pm-6pm

split based on traffic to/from Arm A

Distribution AM Peak

14



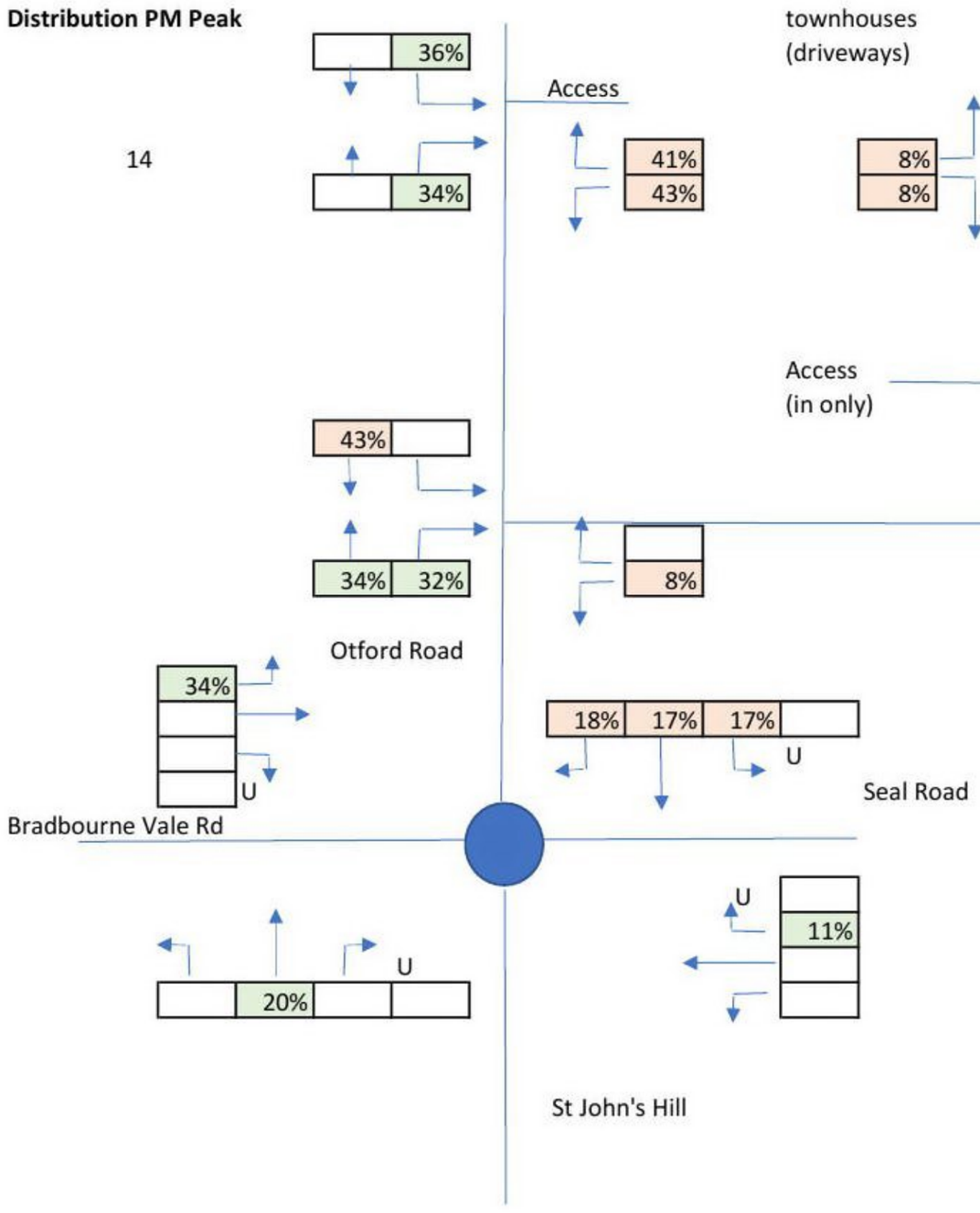
Otford Cramp Townhouses

Access	69%	49%	16%
Egress	84%	-	16%

taken from S06-AM-Trip Distribution

Distribution PM Peak

14



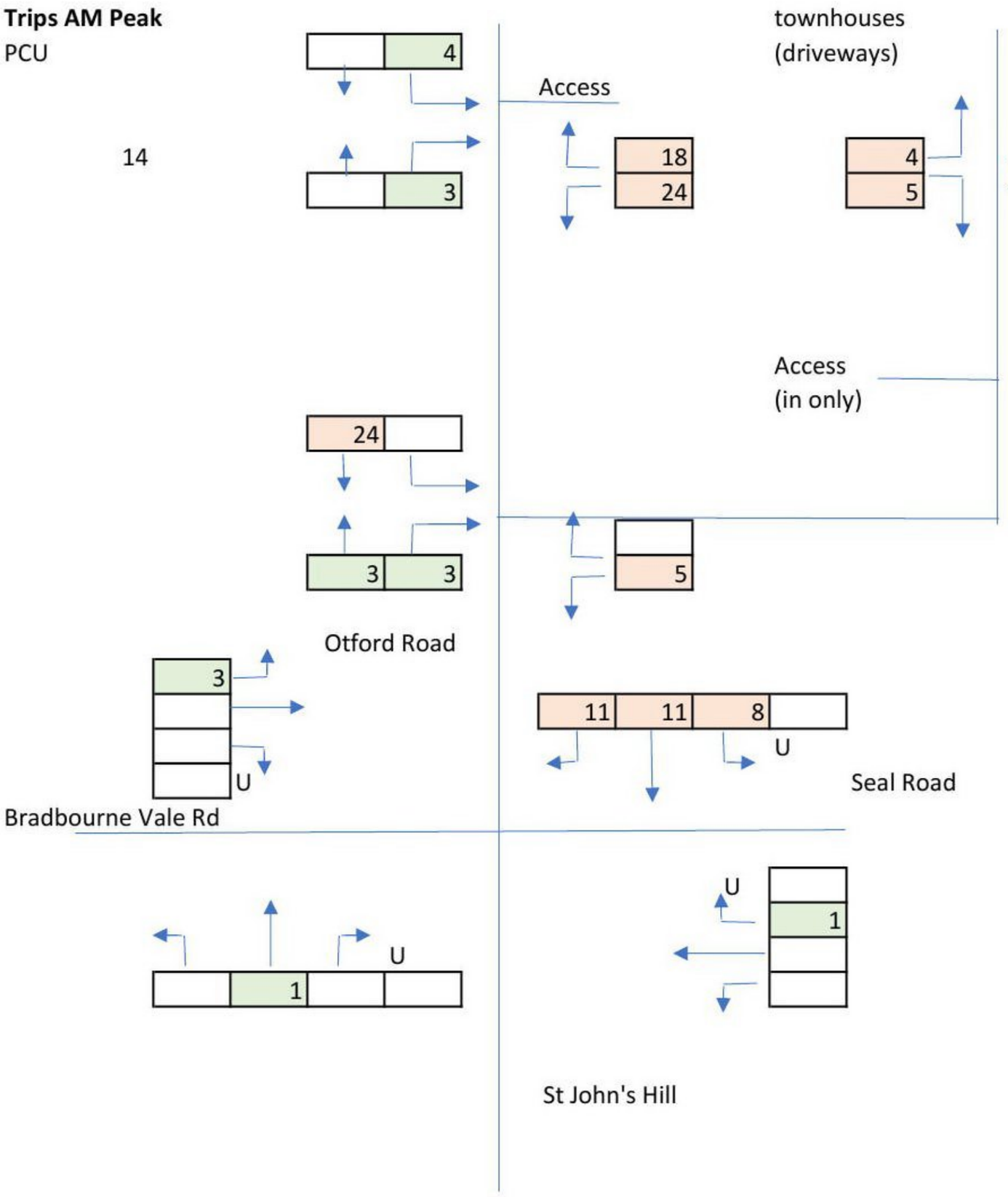
Otford Cramp Townhouses

Access	69%	49%	16%
Egress	84%	-	16%

taken from S06-AM-Trip Distribution

Trips AM Peak
PCU

14

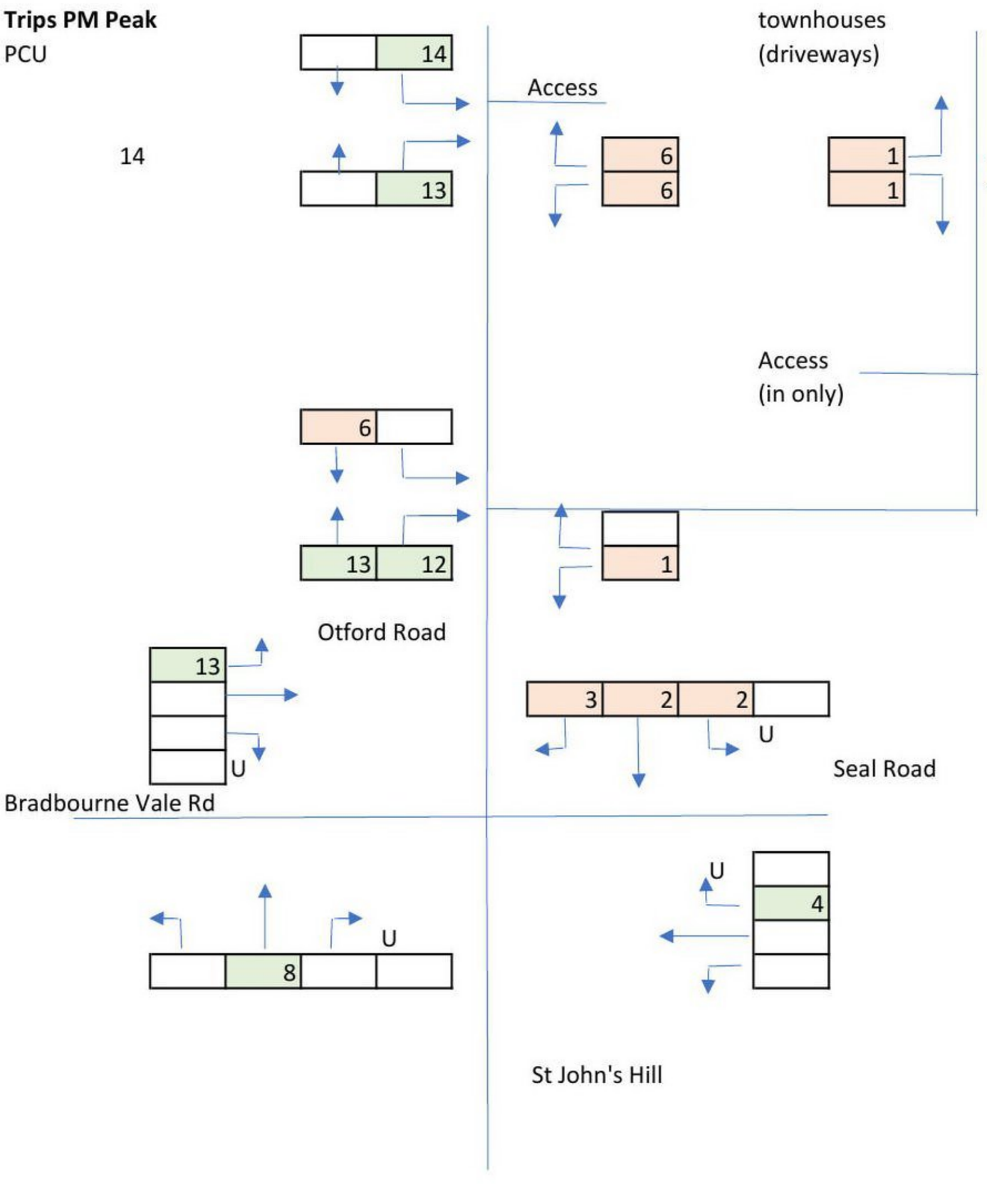


AM Peak

	A	B	C	D
A		8	11	11
B	1			
C	1			
D	3			

Trips PM Peak
PCU

14



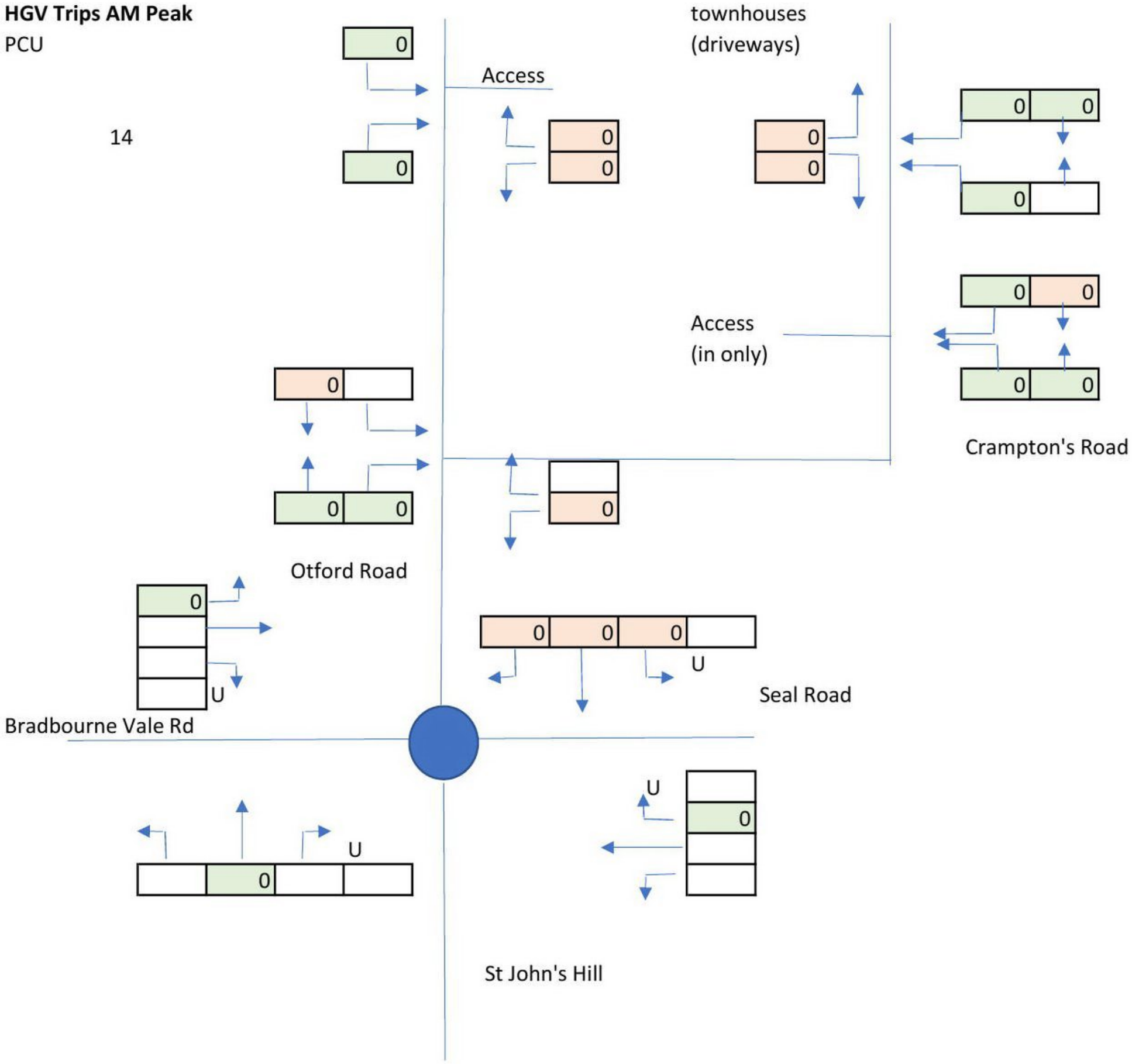
PM Peak

	A	B	C	D
A		2	2	3
B	4			
C	8			
D	13			

HGV Trips AM Peak

PCU

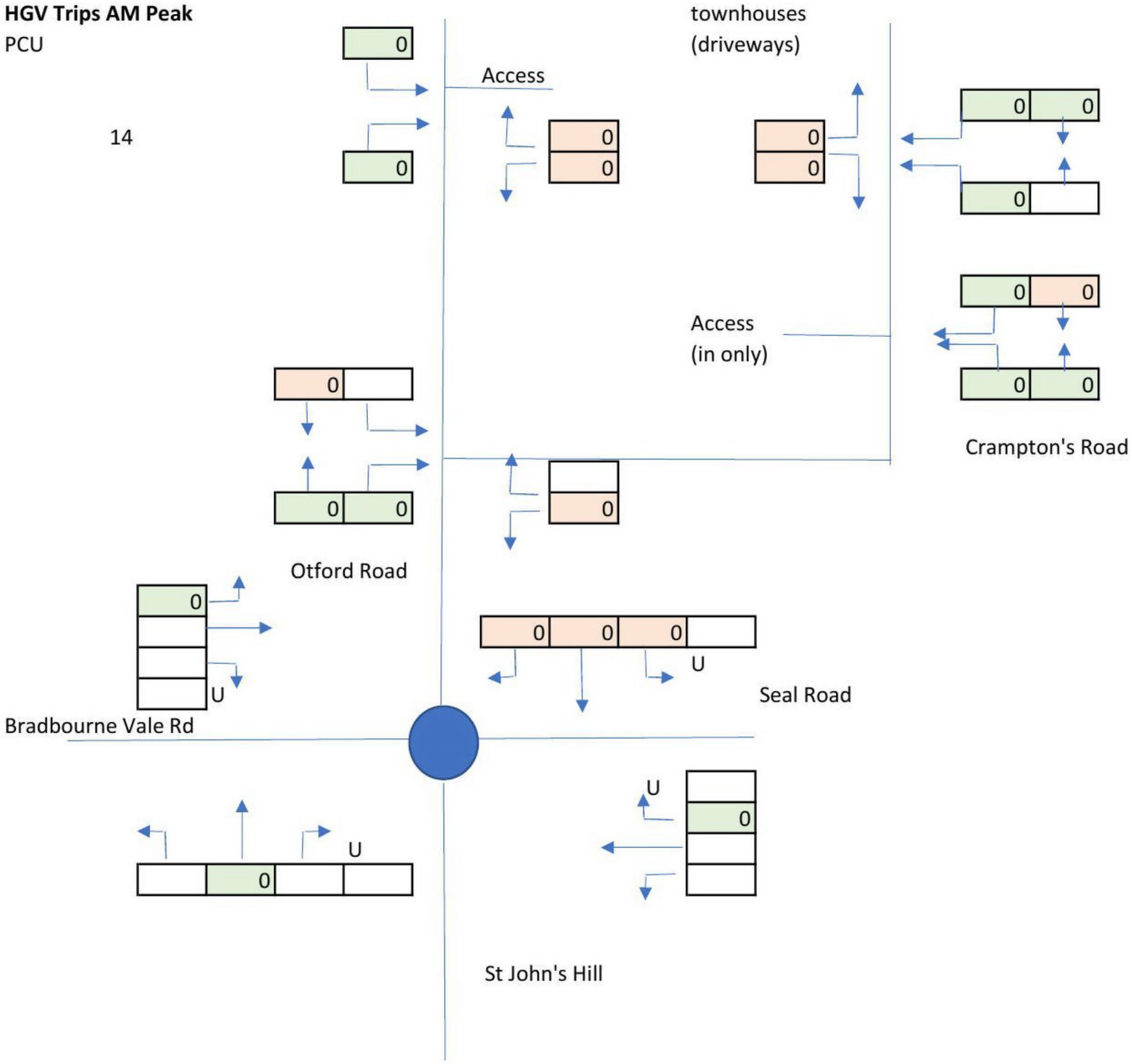
14



HGV Trips AM Peak

PCU

14

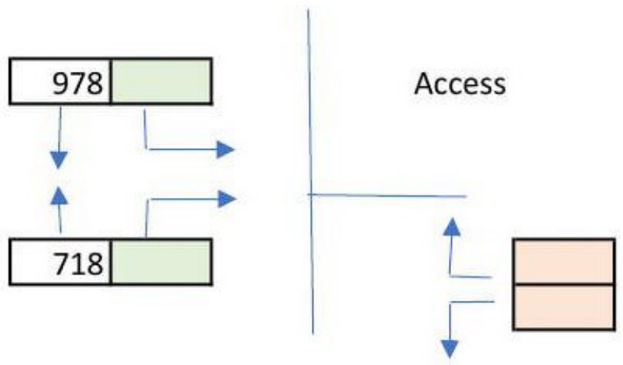


Data Taken from David Tucker Associates Transport Assessment
Survey Thursday 4th October 2018
Data based on Otford Rd/ Bat and Ball Road junction, flows to/from Arm A (northern Arm)

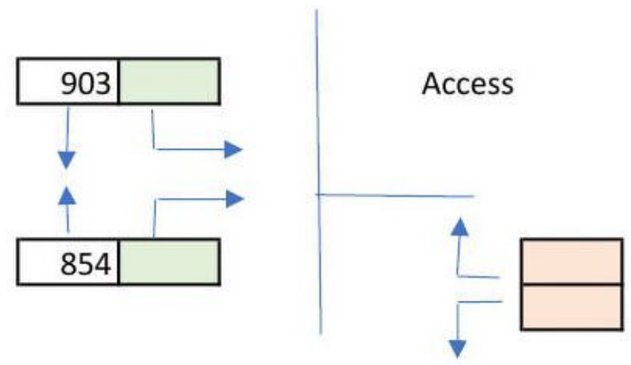
		AM Pe	PM Peak
Tempro	2018-2024	1.071	1.068
	2018-2029	1.125	1.122

14

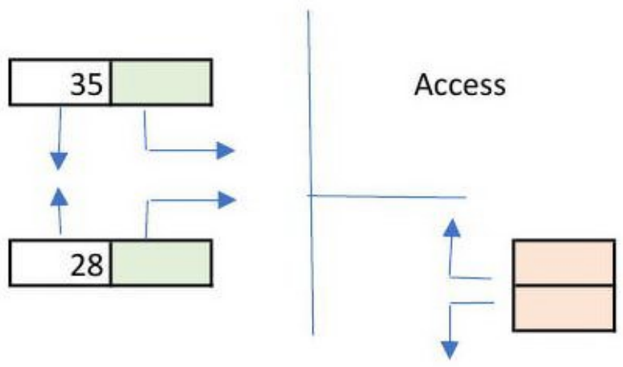
2018
AM Peak
PCUs



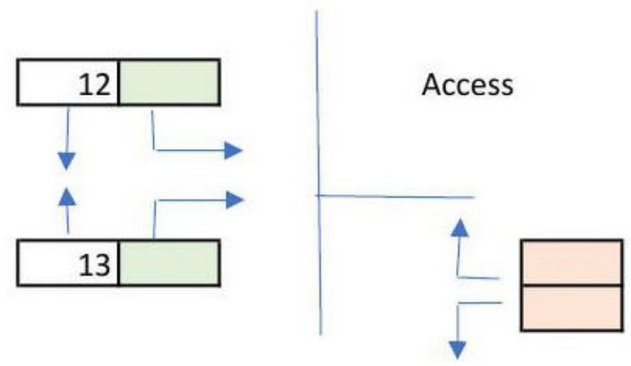
2018
PM Peak
PCUs



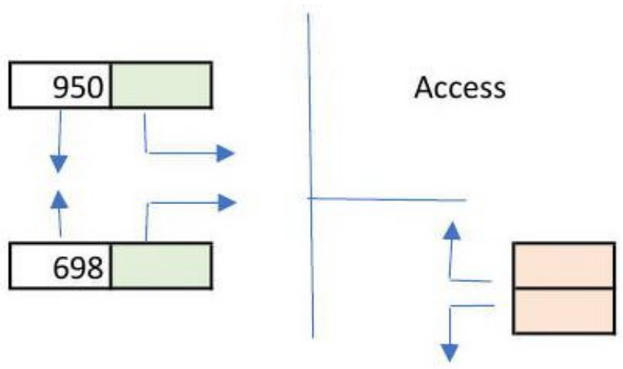
2018
AM Peak
HGVs



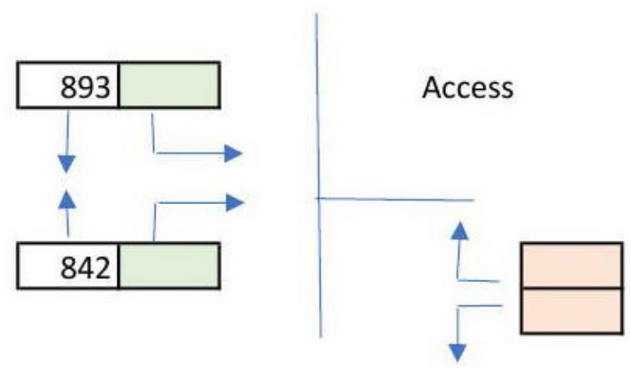
2018
PM Peak
HGVs



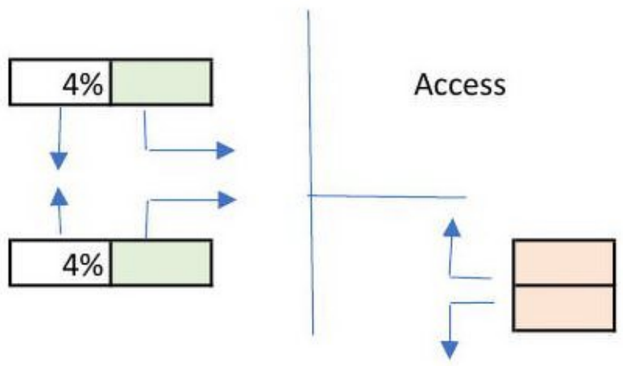
2018
AM Peak
Total Vehs



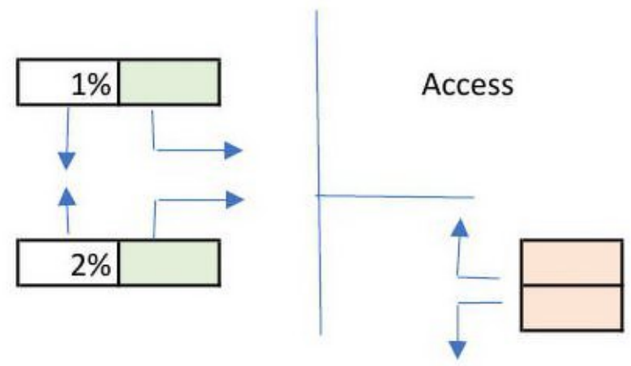
2018
PM Peak
Total Vehs



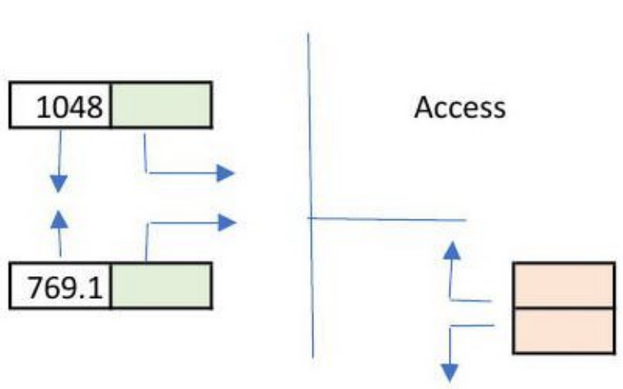
2018
AM Peak
HGV%



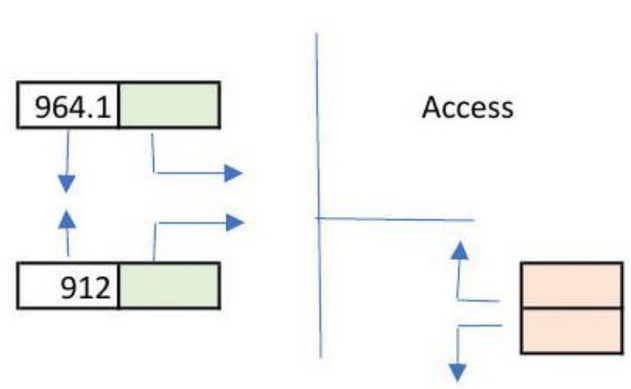
2018
PM Peak
HGV%



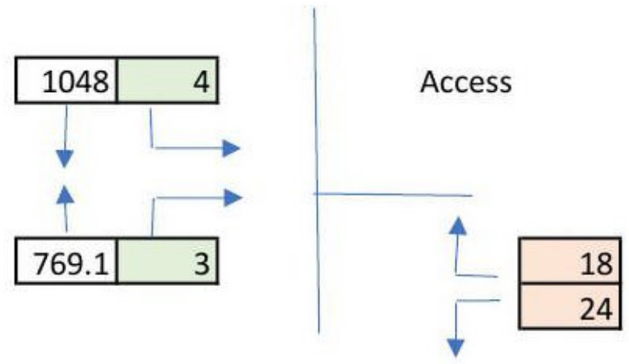
2024
AM Peak
PCU



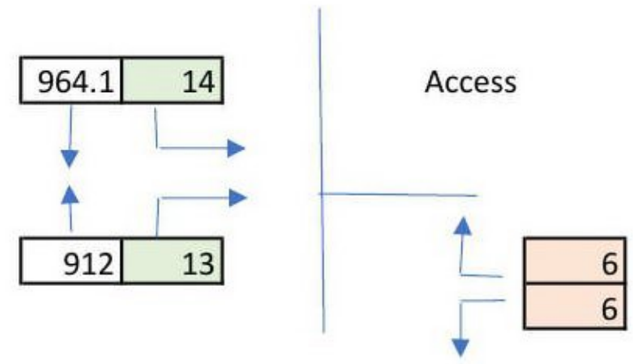
2024
PM Peak
PCU



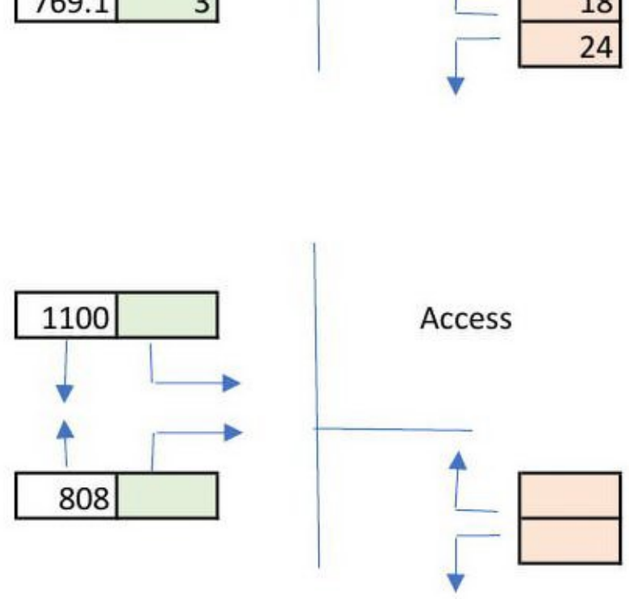
2024+ Dev
AM Peak
PCU



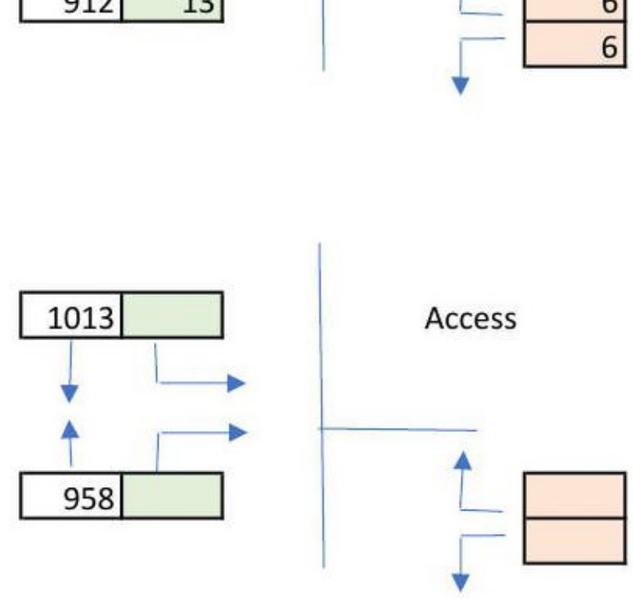
2024+ Dev
PM Peak
PCU



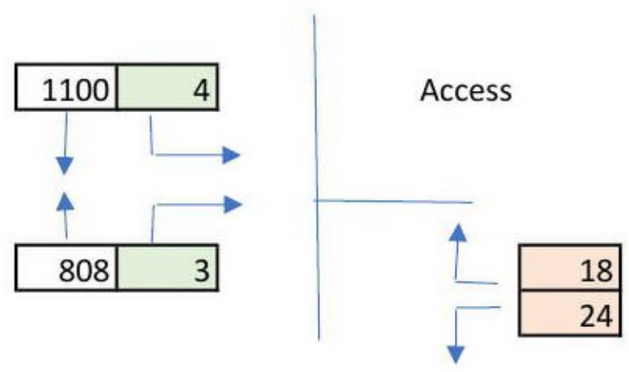
2029
AM Peak
PCU



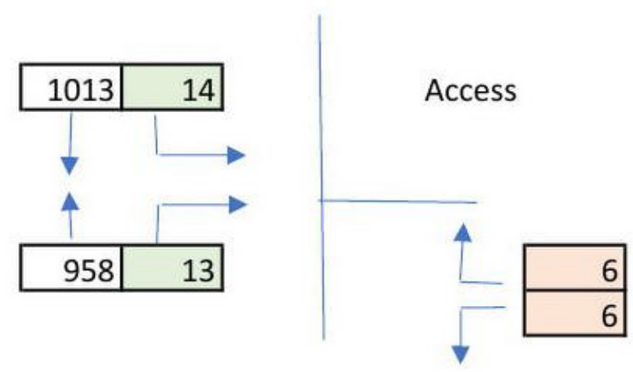
2029
PM Peak
PCU



2029+ Dev
AM Peak
PCU



2029+ Dev
PM Peak
PCU

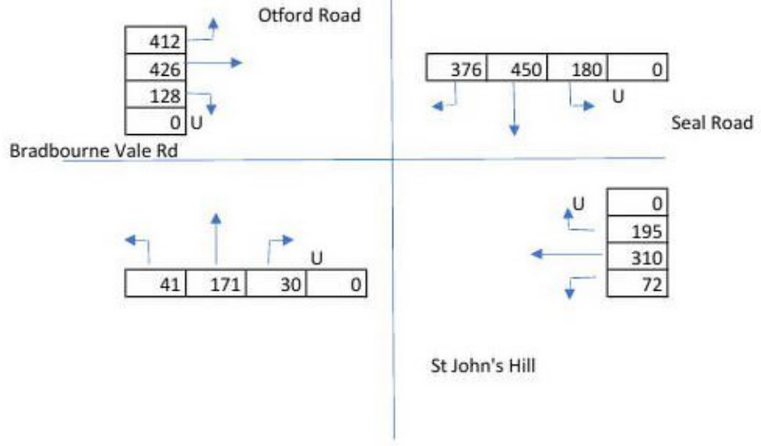


Data Taken from David Tucker Associates Transport Assessment
Survey Thursday 4th October 2018

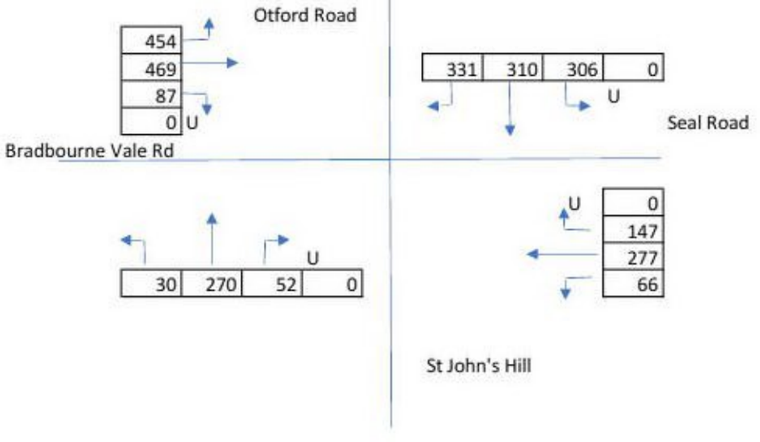
Tempro

	AM Pe	PM Peak
2018-2024	1.071	1.068
2018-2029	1.125	1.122

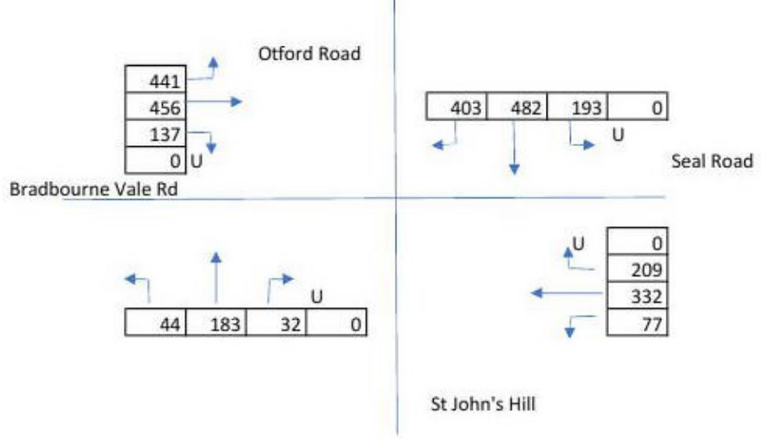
2018 14
AM Peak
PCUs



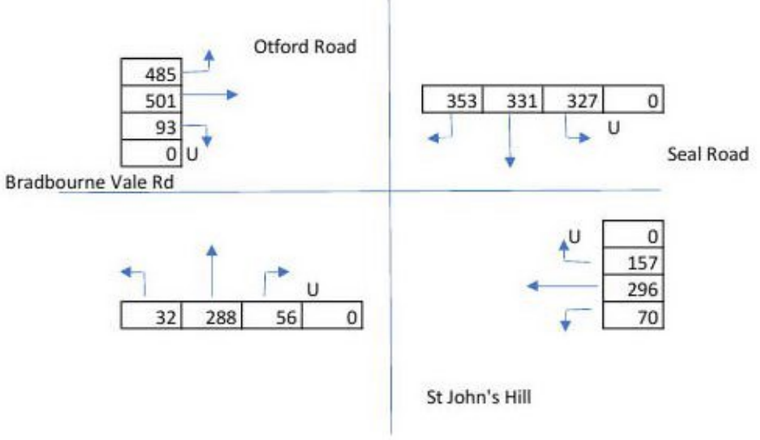
2018
PM Peak
PCUs



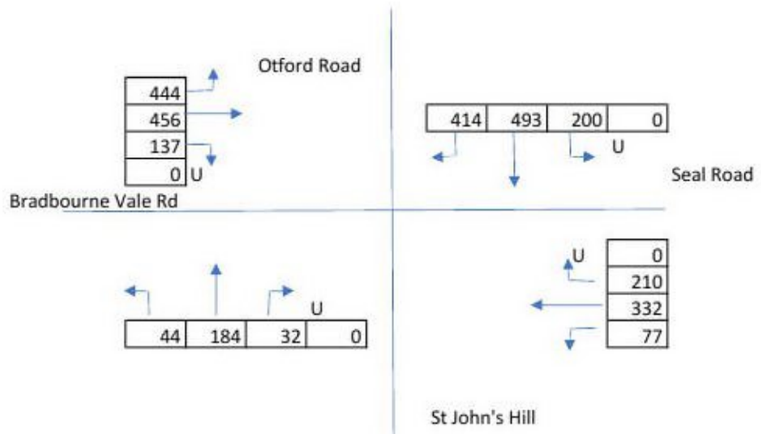
2024
AM Peak
PCUs



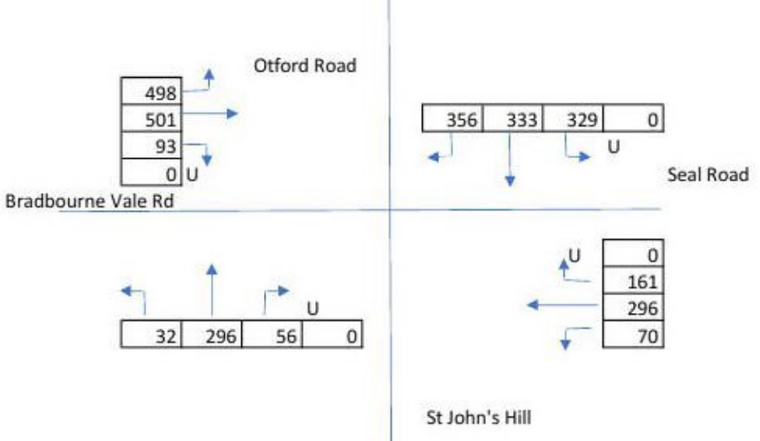
2024
PM Peak
PCUs



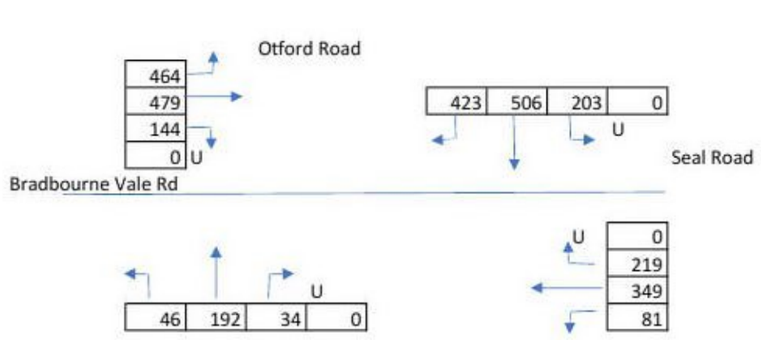
2024 + Dev
AM Peak
PCUs



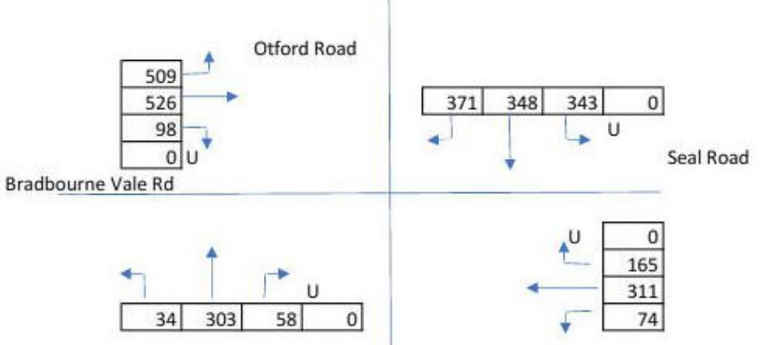
2024 + Dev
PM Peak
PCUs



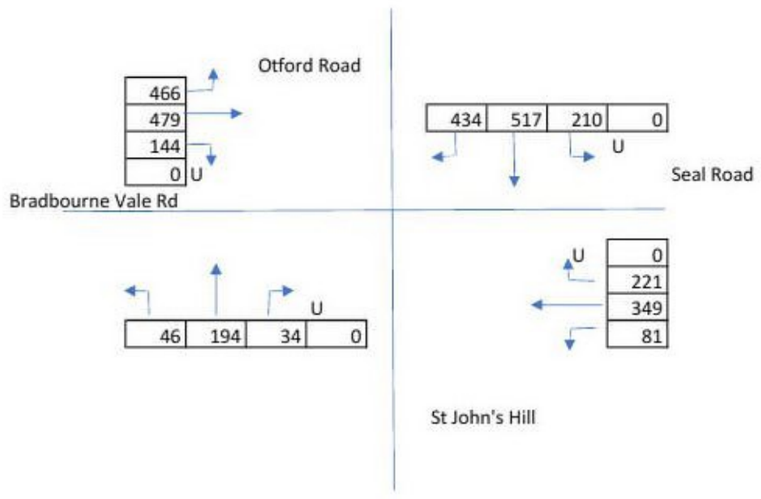
2029
AM Peak
PCUs



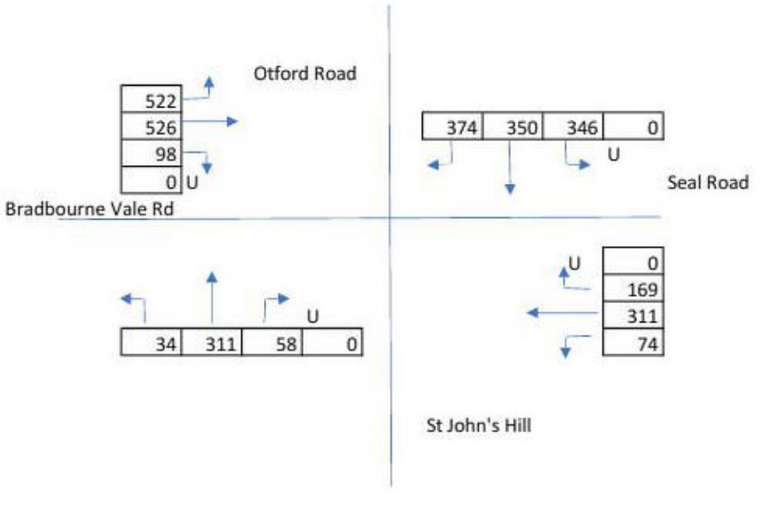
2029
PM Peak
PCUs



2029 + Dev
AM Peak
PCUs



2029 + Dev
PM Peak
PCUs



vectos.

Appendix L

Junction Capacity Modelling Outputs

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: 205264 - Site Access - V1.j9
Path: C:\Users\ellen.axon\Documents\Ben Stone Modelling\205264 - Sevenoaks
Report generation date: 05/03/2021 10:15:19

Summary of junction performance

	AM			PM		
	Q (PCU)	Delay (s)	RFC	Q (PCU)	Delay (s)	RFC
	2024 + Dev					
Stream B-AC	0.3	21.21	0.20	0.1	19.62	0.06
Stream C-AB	0.0	4.57	0.02	0.2	4.27	0.09
	2029 + Dev					
Stream B-AC	0.3	23.95	0.22	0.1	22.04	0.07
Stream C-AB	0.0	4.49	0.02	0.2	4.19	0.10

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

File summary

File Description

Title	
Location	
Site number	
Date	26/02/2021
Version	
Status	(new file)
Identifier	
Client	
Jobnumber	
Enumerator	VECTOS\ellen.hill
Description	

Units

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

Analysis Options

Vehicle length (m)	Calculate Q Percentiles	Calculate detailed queueing delay	Calculate residual capacity	RFC Threshold	Av. Delay threshold (s)	Q 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	2024 + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D2	2024 + Dev	PM	ONE HOUR	16:45	18:15	15	✓
D3	2029 + Dev	AM	ONE HOUR	07:45	09:15	15	✓
D4	2029 + Dev	PM	ONE HOUR	16:45	18:15	15	✓

Analysis Set Details

ID	Include in report	Network flow scaling factor (%)	Network capacity scaling factor (%)
A1	✓	100.000	100.000

2024 + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Otford Road (N)		Major
B	Site Access		Minor
C	Otford Road (S)		Major

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C - Otford Road (S)	8.20			45.0	✓	0.00

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

Minor Arm Geometry

Arm	Minor arm type	Lane width (m)	Visibility to left (m)	Visibility to right (m)
B - Site Access	One lane	3.40	20	16

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
B-A	512	0.084	0.213	0.134	0.304
B-C	659	0.091	0.231	-	-
C-B	600	0.210	0.210	-	-

The slopes and intercepts shown above do NOT include any corrections or adjustments.
Streams may be combined, in which case capacity will be adjusted.
Values are shown for the first time segment only; they may differ for subsequent time segments.

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Start time (HH:mm)	Finish time (HH:mm)	Time segment length (min)	Run automatically
D1	2024 + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Otford Road (N)		ONE HOUR	✓	1052	100.000
B - Site Access		ONE HOUR	✓	42	100.000
C - Otford Road (S)		ONE HOUR	✓	772	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Otford Road (N)	**B - Site Access**	**C - Otford Road (S)**
From	**A - Otford Road (N)**	0	4	1048
	B - Site Access	18	0	24
	C - Otford Road (S)	769	3	0

Vehicle Mix

HV %s

		To		
		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
From	A - Otford Road (N)	10	10	10
	B - Site Access	10	10	10
	C - Otford Road (S)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.20	21.21	0.3	C	39	58
C-AB	0.02	4.57	0.0	A	12	18
C-A					697	1045
A-B					4	6
A-C					962	1442

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	355	0.089	31	0.0	0.1	12.205	B
C-AB	7	2	873	0.008	7	0.0	0.0	4.570	A
C-A	574	144			574				
A-B	3	0.75			3				
A-C	789	197			789				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	9	306	0.123	38	0.1	0.2	14.739	B
C-AB	10	3	938	0.011	10	0.0	0.0	4.266	A
C-A	684	171			684				
A-B	4	0.90			4				
A-C	942	236			942				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	12	233	0.199	46	0.2	0.3	21.113	C
C-AB	18	5	1036	0.018	18	0.0	0.0	3.892	A
C-A	832	208			832				
A-B	4	1			4				
A-C	1154	288			1154				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	12	233	0.199	46	0.3	0.3	21.209	C
C-AB	18	5	1036	0.018	18	0.0	0.0	3.893	A
C-A	832	208			832				
A-B	4	1			4				
A-C	1154	288			1154				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	9	306	0.123	38	0.3	0.2	14.811	B
C-AB	10	3	938	0.011	10	0.0	0.0	4.266	A
C-A	684	171			684				
A-B	4	0.90			4				
A-C	942	236			942				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	355	0.089	32	0.2	0.1	12.251	B
C-AB	7	2	873	0.008	7	0.0	0.0	4.570	A
C-A	574	144			574				
A-B	3	0.75			3				
A-C	789	197			789				

2024 + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.28	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	2024 + Dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Otford Road (N)		ONE HOUR	✓	977	100.000
B - Site Access		ONE HOUR	✓	12	100.000
C - Otford Road (S)		ONE HOUR	✓	925	100.000

Origin-Destination Data

Demand (PCU/hr)

	To			
From		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
	A - Otford Road (N)	0	13	964
	B - Site Access	6	0	6
	C - Otford Road (S)	912	13	0

Vehicle Mix

HV %s

	To			
From		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
	A - Otford Road (N)	10	10	10
	B - Site Access	10	10	10
	C - Otford Road (S)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.06	19.62	0.1	C	11	17
C-AB	0.09	4.27	0.2	A	63	95
C-A					785	1178
A-B					12	18
A-C					885	1327

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	341	0.026	9	0.0	0.0	11.920	B

C-AB	34	9	962	0.036	34	0.0	0.1	4.267	A
C-A	662	166			662				
A-B	10	2			10				
A-C	726	181			726				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	290	0.037	11	0.0	0.0	14.156	B
C-AB	54	14	1046	0.052	54	0.1	0.1	3.992	A
C-A	777	194			777				
A-B	12	3			12				
A-C	867	217			867				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	215	0.061	13	0.0	0.1	19.597	C
C-AB	102	25	1170	0.087	101	0.1	0.2	3.707	A
C-A	917	229			917				
A-B	14	4			14				
A-C	1061	265			1061				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	215	0.061	13	0.1	0.1	19.624	C
C-AB	102	25	1170	0.087	102	0.2	0.2	3.709	A
C-A	916	229			916				
A-B	14	4			14				
A-C	1061	265			1061				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	290	0.037	11	0.1	0.0	14.174	B
C-AB	54	14	1047	0.052	55	0.2	0.1	3.996	A
C-A	777	194			777				
A-B	12	3			12				
A-C	867	217			867				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	341	0.027	9	0.0	0.0	11.935	B
C-AB	34	9	962	0.036	35	0.1	0.1	4.268	A
C-A	662	166			662				
A-B	10	2			10				
A-C	726	181			726				

2029 + Dev, AM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.55	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	2029 + Dev	AM	ONE HOUR	07:45	09:15	15	✓

Default vehicle mix	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Otford Road (N)		ONE HOUR	✓	1104	100.000
B - Site Access		ONE HOUR	✓	42	100.000
C - Otford Road (S)		ONE HOUR	✓	811	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
From	A - Otford Road (N)	0	4	1100
	B - Site Access	18	0	24
	C - Otford Road (S)	808	3	0

Vehicle Mix

HV %s

		To		
		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
From	A - Otford Road (N)	10	10	10
	B - Site Access	10	10	10
	C - Otford Road (S)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.22	23.95	0.3	C	39	58
C-AB	0.02	4.49	0.0	A	13	19
C-A					731	1097
A-B					4	6
A-C					1009	1514

Main Results for each time segment

07:45 - 08:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	343	0.092	31	0.0	0.1	12.688	B
C-AB	7	2	890	0.008	7	0.0	0.0	4.485	A
C-A	603	151			603				
A-B	3	0.75			3				
A-C	828	207			828				

08:00 - 08:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	9	290	0.130	38	0.1	0.2	15.646	C
C-AB	11	3	960	0.012	11	0.0	0.0	4.173	A
C-A	718	179			718				
A-B	4	0.90			4				
A-C	989	247			989				

08:15 - 08:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	12	212	0.219	46	0.2	0.3	23.800	C
C-AB	20	5	1064	0.019	20	0.0	0.0	3.793	A
C-A	873	218			873				
A-B	4	1			4				
A-C	1211	303			1211				

08:30 - 08:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	46	12	212	0.219	46	0.3	0.3	23.948	C
C-AB	20	5	1064	0.019	20	0.0	0.0	3.796	A
C-A	873	218			873				
A-B	4	1			4				
A-C	1211	303			1211				

08:45 - 09:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	38	9	290	0.130	38	0.3	0.2	15.737	C
C-AB	11	3	960	0.012	11	0.0	0.0	4.175	A
C-A	718	179			718				
A-B	4	0.90			4				
A-C	989	247			989				

09:00 - 09:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	32	8	343	0.092	32	0.2	0.1	12.743	B
C-AB	7	2	890	0.008	7	0.0	0.0	4.487	A
C-A	603	151			603				
A-B	3	0.75			3				
A-C	828	207			828				

2029 + Dev, PM

Data Errors and Warnings

No errors or warnings

Junction Network

Junctions

Junction	Name	Junction type	Major road direction	Use circulating lanes	Junction Delay (s)	Junction LOS
1	untitled	T-Junction	Two-way		0.29	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	2029 + Dev	PM	ONE HOUR	16:45	18:15	15	✓

Default vehicle mix	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	Av. Demand (PCU/hr)	Scaling Factor (%)
A - Otford Road (N)		ONE HOUR	✓	1026	100.000
B - Site Access		ONE HOUR	✓	12	100.000
C - Otford Road (S)		ONE HOUR	✓	971	100.000

Origin-Destination Data

Demand (PCU/hr)

		To		
		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
From	A - Otford Road (N)	0	13	1013
	B - Site Access	6	0	6
	C - Otford Road (S)	958	13	0

Vehicle Mix

HV %s

		To		
		A - Otford Road (N)	B - Site Access	C - Otford Road (S)
From	A - Otford Road (N)	10	10	10
	B - Site Access	10	10	10
	C - Otford Road (S)	10	10	10

Results

Results Summary for whole modelled period

Stream	Max RFC	Max Delay (s)	Max Q (PCU)	Max LOS	Av. Demand (PCU/hr)	Total Junction Arrivals (PCU)
B-AC	0.07	22.04	0.1	C	11	17
C-AB	0.10	4.19	0.2	A	71	106
C-A					820	1231
A-B					12	18
A-C					930	1394

Main Results for each time segment

16:45 - 17:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	328	0.028	9	0.0	0.0	12.398	B

C-AB	37	9	984	0.037	36	0.0	0.1	4.182	A
C-A	694	174			694				
A-B	10	2			10				
A-C	763	191			763				

17:00 - 17:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	274	0.039	11	0.0	0.0	15.019	C
C-AB	59	15	1073	0.055	59	0.1	0.1	3.906	A
C-A	813	203			813				
A-B	12	3			12				
A-C	911	228			911				

17:15 - 17:30

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	193	0.068	13	0.0	0.1	22.013	C
C-AB	115	29	1205	0.096	115	0.1	0.2	3.633	A
C-A	954	238			954				
A-B	14	4			14				
A-C	1115	279			1115				

17:30 - 17:45

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	13	3	193	0.069	13	0.1	0.1	22.038	C
C-AB	116	29	1205	0.096	116	0.2	0.2	3.638	A
C-A	953	238			953				
A-B	14	4			14				
A-C	1115	279			1115				

17:45 - 18:00

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	11	3	274	0.039	11	0.1	0.0	15.049	C
C-AB	60	15	1074	0.056	60	0.2	0.1	3.909	A
C-A	813	203			813				
A-B	12	3			12				
A-C	911	228			911				

18:00 - 18:15

Stream	Total Demand (PCU/hr)	Junction Arrivals (PCU)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	Start queue (PCU)	End queue (PCU)	Delay (s)	Unsignalised level of service
B-AC	9	2	328	0.028	9	0.0	0.0	12.414	B
C-AB	37	9	984	0.038	37	0.1	0.1	4.185	A
C-A	694	174			694				
A-B	10	2			10				
A-C	763	191			763				

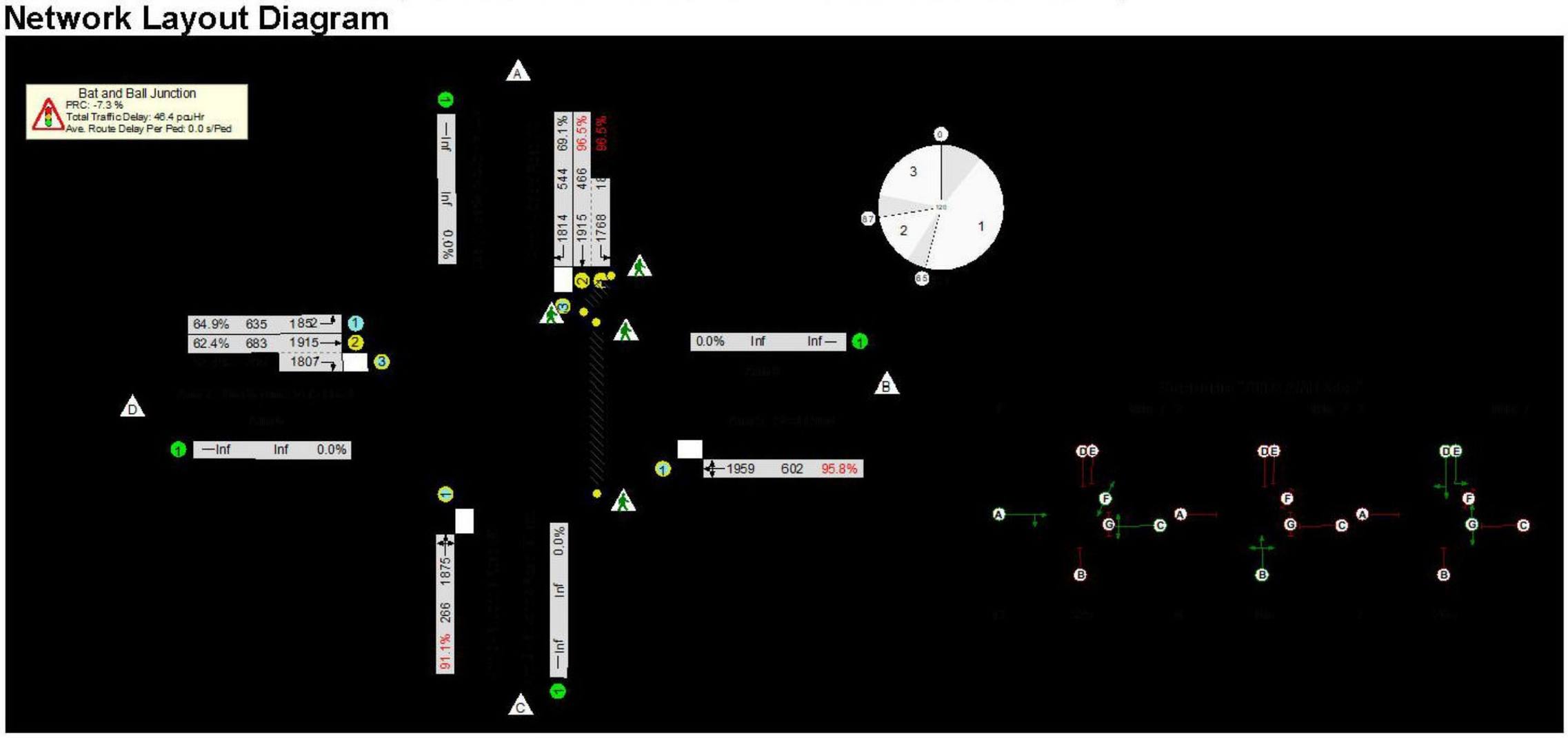
Basic Results Summary

User and Project Details

Project:	**Sevonoaks Gasholders**
Title:	**Bat and Ball Junction (Existing)**
Location:	
Date Completed:	24/2/21
Model Purpose:	Capacity assessment for planning application
Model Assumptions:	Based on accepted Connect model used for Aldi scheme
Additional detail:	
File name:	BatnBall (as per Connect).lsg3x
Author:	Mark Anderson
Company:	Vectos (South) Ltd
Address:	

Scenario 1: '2018 AM Base' (FG1: '2018 AM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

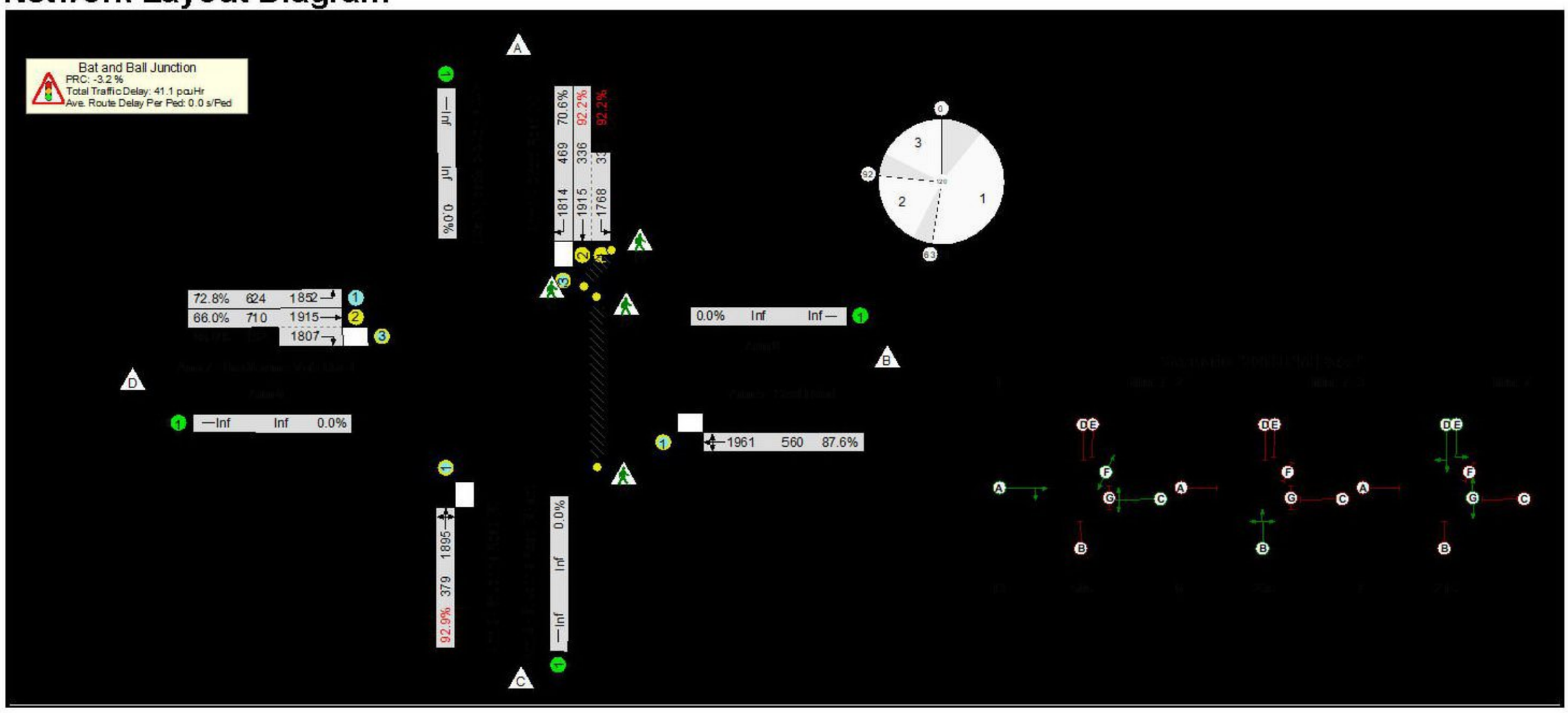
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**96.5%**	**559**	**570**	**11**	**46.4**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**96.5%**	**559**	**570**	**11**	**46.4**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	35:34	-	630	1915:1768	466+186	96.5 : 96.5%	-	-	-	15.0	85.9	25.8
1/3	Otford Road (N) Right	O	D		1	35	-	376	1814	544	69.1%	0	370	6	5.0	47.7	12.1
3/1	St John's Road (S) Ahead Left Right	O	B		1	16	-	242	1875	266	91.1%	0	29	1	7.3	108.2	11.8
5/1	Seal Road Left Right Ahead	O	C		1	52	-	577	1959	602	95.8%	195	0	0	13.4	83.7	26.0
7/1	Bradbourne Vale Road Left	O	-		-	-	-	412	1852	635	64.9%	240	172	0	0.9	8.0	0.9
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	52	-	554	1915:1807	683+205	62.4 : 62.4%	124	0	4	4.8	31.2	13.2
Ped Link: P1	Unnamed Ped Link	-	G		1	26	-	0	-	15600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	52	-	0	-	31200	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -7.3 Total Delay for Signalled Lanes (pcuHr): 45.50 Cycle Time (s): 120
PRC Over All Lanes (%): -7.3 Total Delay Over All Lanes(pcuHr): 46.42

Basic Results Summary

Scenario 2: '2018 PM Base' (FG2: '2018 PM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

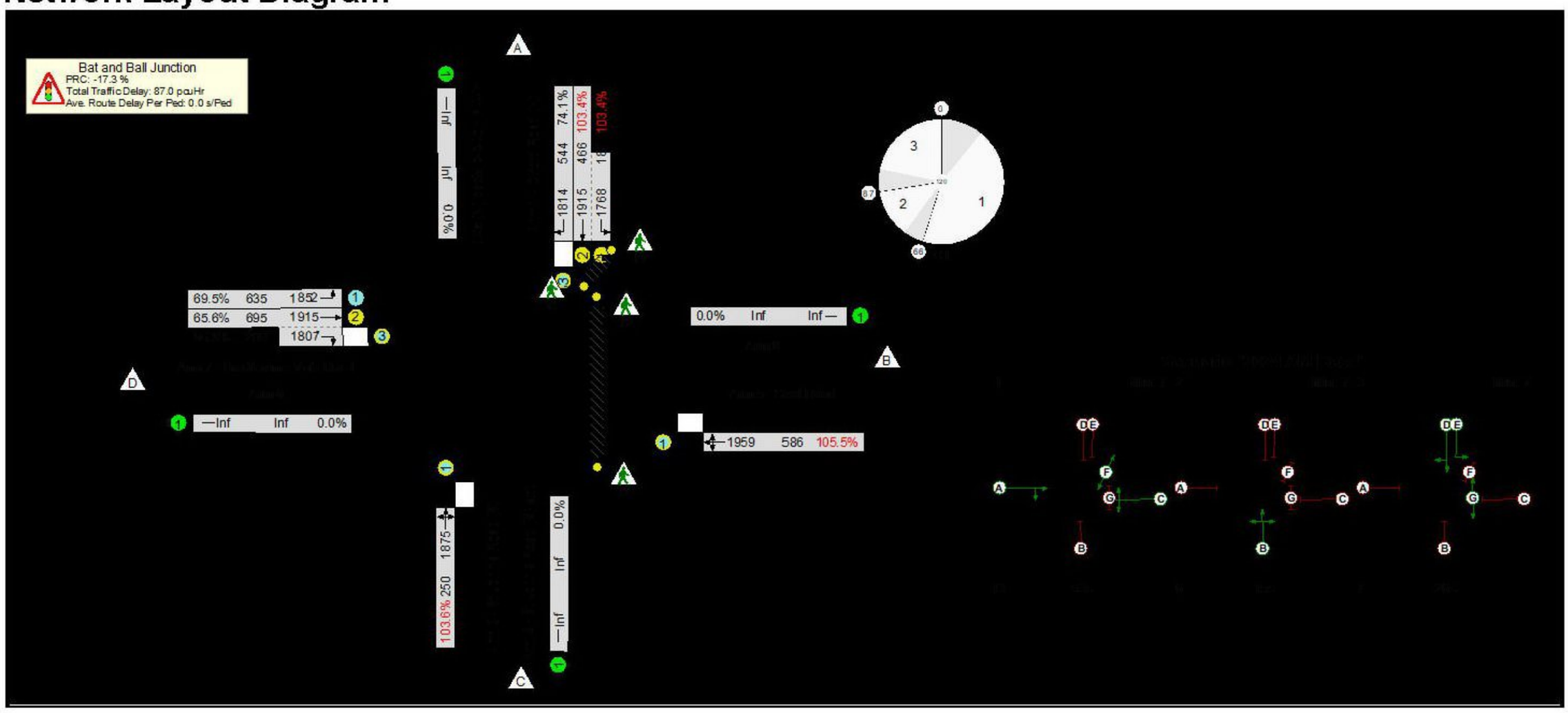
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**92.9%**	**511**	**554**	**6**	**41.1**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**92.9%**	**511**	**554**	**6**	**41.1**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	30:29	-	616	1915:1768	336+332	92.2 : 92.2%	-	-	-	11.9	69.8	17.4
1/3	Otford Road (N) Right	O	D		1	30	-	331	1814	469	70.6%	0	325	6	4.9	53.2	11.1
3/1	St John's Road (S) Ahead Left Right	O	B		1	23	-	352	1895	379	92.9%	0	51	1	9.4	96.3	16.2
5/1	Seal Road Left Right Ahead	O	C		1	50	-	490	1961	560	87.6%	147	0	0	8.3	60.8	18.7
7/1	Bradbourne Vale Road Left	O	-		-	-	-	454	1852	624	72.8%	277	177	0	1.4	10.8	4.7
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	50	-	556	1915:1807	710+132	66.0 : 66.0%	87	0	0	5.2	33.7	14.6
Ped Link: P1	Unnamed Ped Link	-	G		1	21	-	0	-	12600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	50	-	0	-	30000	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -3.2 Total Delay for Signalled Lanes (pcuHr): 39.74 Cycle Time (s): 120
PRC Over All Lanes (%): -3.2 Total Delay Over All Lanes(pcuHr): 41.10

Basic Results Summary

Scenario 3: '2024 AM Base' (FG3: '2024 AM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

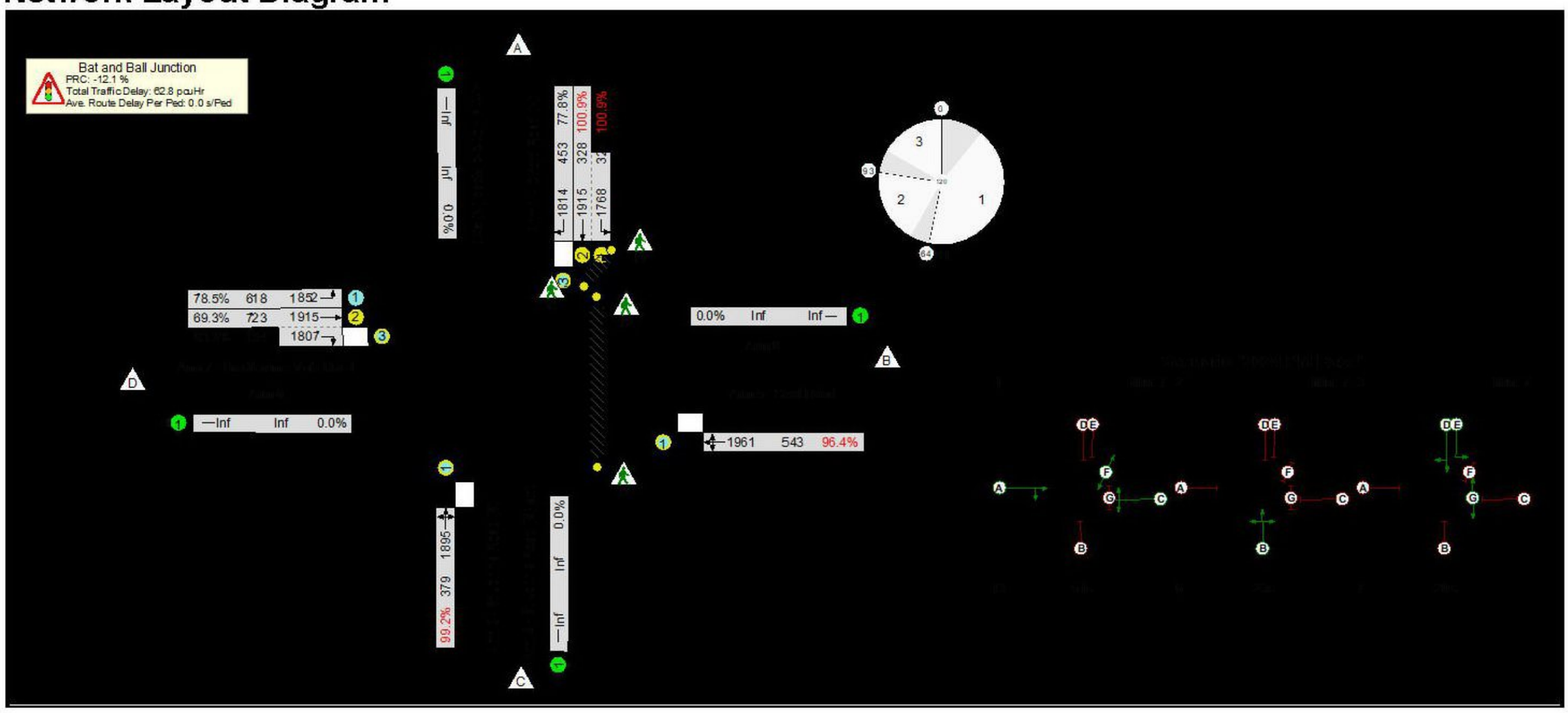
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**105.5%**	**567**	**609**	**34**	**87.0**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**105.5%**	**567**	**609**	**34**	**87.0**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	35:34	-	675	1915:1768	466+187	103.4 : 103.4%	-	-	-	28.9	154.1	40.9
1/3	Otford Road (N) Right	O	D		1	35	-	403	1814	544	74.1%	0	396	7	5.6	50.3	13.4
3/1	St John's Road (S) Ahead Left Right	O	B		1	15	-	259	1875	250	103.6%	0	27	4	14.7	204.9	19.5
5/1	Seal Road Left Right Ahead	O	C		1	53	-	618	1959	586	105.5%	198	0	0	31.4	183.1	44.6
7/1	Bradbourne Vale Road Left	O	-		-	-	-	441	1852	635	69.5%	255	186	0	1.1	9.2	3.2
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	53	-	593	1915:1807	695+209	65.6 : 65.6%	114	0	23	5.2	31.5	14.4
Ped Link: P1	Unnamed Ped Link	-	G		1	26	-	0	-	15600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	53	-	0	-	31800	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -17.3 Total Delay for Signalled Lanes (pcuHr): 85.88 Cycle Time (s): 120
PRC Over All Lanes (%): -17.3 Total Delay Over All Lanes(pcuHr): 87.01

Basic Results Summary

Scenario 4: '2024 PM Base' (FG4: '2024 PM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**100.9%**	**538**	**594**	**12**	**62.8**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**100.9%**	**538**	**594**	**12**	**62.8**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	29:28	-	658	1915:1768	328+324	100.9 : 100.9%	-	-	-	22.3	122.1	29.5
1/3	Otford Road (N) Right	O	D		1	29	-	353	1814	453	77.8%	0	347	6	5.8	59.2	12.6
3/1	St John's Road (S) Ahead Left Right	O	B		1	23	-	376	1895	379	99.2%	0	52	4	14.0	133.8	21.4
5/1	Seal Road Left Right Ahead	O	C		1	51	-	523	1961	543	96.4%	157	0	0	13.2	90.8	24.7
7/1	Bradbourne Vale Road Left	O	-		-	-	-	485	1852	618	78.5%	290	195	0	1.9	13.8	6.2
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	51	-	594	1915:1807	723+134	69.3 : 69.3%	91	0	2	5.6	34.2	15.9
Ped Link: P1	Unnamed Ped Link	-	G		1	20	-	0	-	12000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	51	-	0	-	30600	0.0%	-	-	-	0.0	0.0	0.0

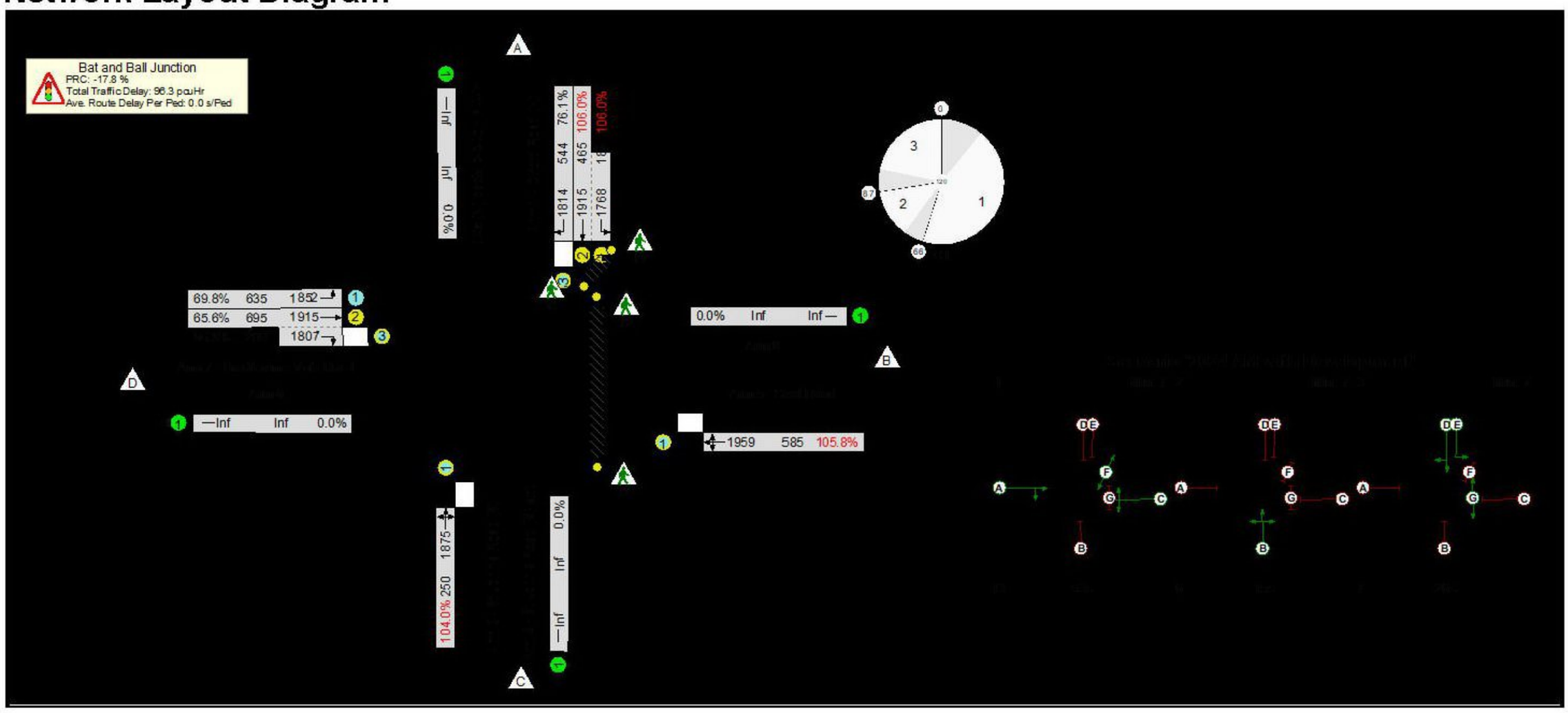
C1 PRC for Signalled Lanes (%): -12.1 Total Delay for Signalled Lanes (pcuHr): 60.93 Cycle Time (s): 120

PRC Over All Lanes (%): -12.1 Total Delay Over All Lanes(pcuHr): 62.79

Basic Results Summary

Scenario 5: '2024 AM with Development' (FG5: '2024 AM with Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**106.0%**	**569**	**621**	**33**	**96.3**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**106.0%**	**569**	**621**	**33**	**96.3**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	35:34	-	693	1915:1768	465+189	106.0 : 106.0%	-	-	-	36.8	191.2	49.0
1/3	Otford Road (N) Right	O	D		1	35	-	414	1814	544	76.1%	0	407	7	5.9	51.6	14.0
3/1	St John's Road (S) Ahead Left Right	O	B		1	15	-	260	1875	250	104.0%	0	27	4	15.1	209.6	19.9
5/1	Seal Road Left Right Ahead	O	C		1	53	-	619	1959	585	105.8%	198	0	0	32.1	186.9	45.3
7/1	Bradbourne Vale Road Left	O	-		-	-	-	443	1852	635	69.8%	256	187	0	1.1	9.3	3.2
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	53	-	593	1915:1807	695+209	65.6 : 65.6%	114	0	23	5.2	31.4	14.4
Ped Link: P1	Unnamed Ped Link	-	G		1	26	-	0	-	15600	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	53	-	0	-	31800	0.0%	-	-	-	0.0	0.0	0.0

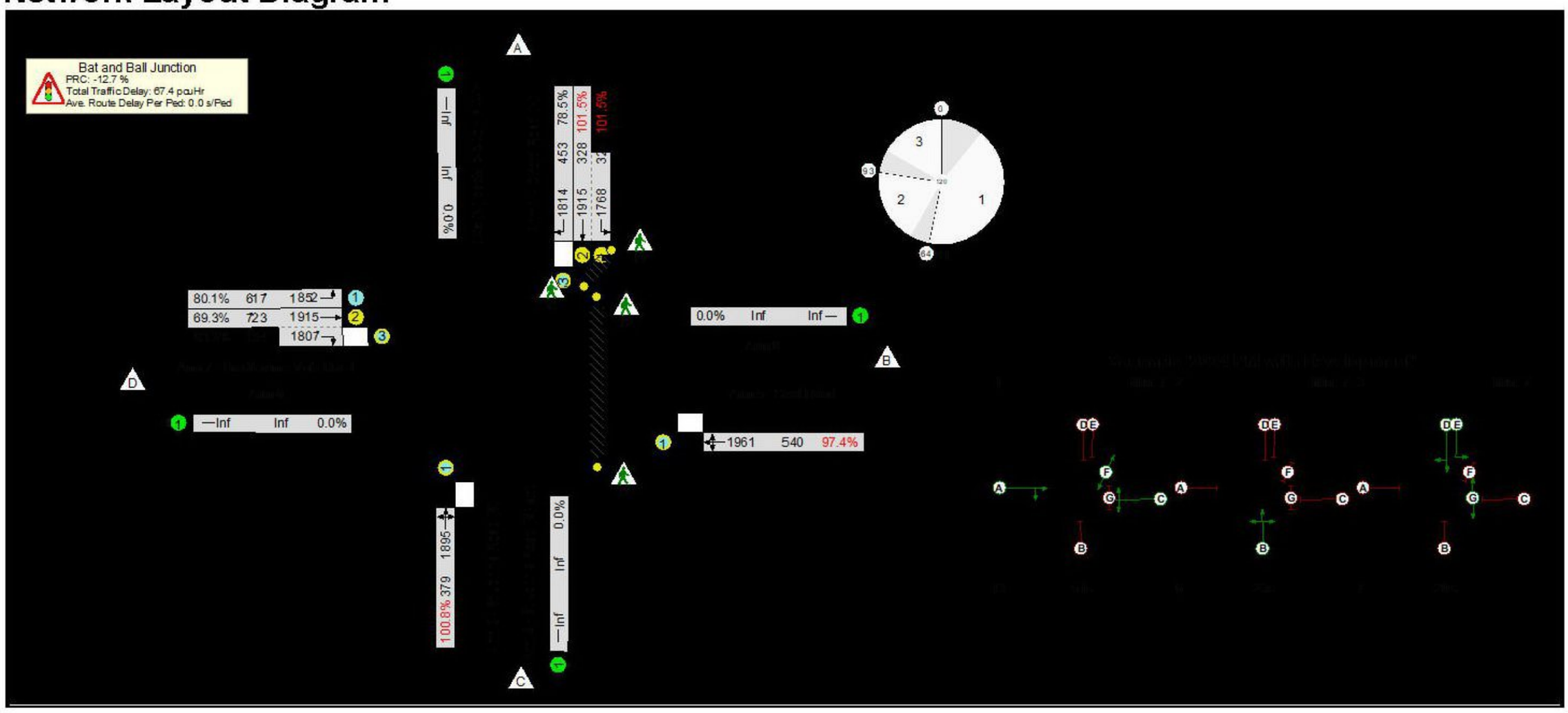
C1 PRC for Signalled Lanes (%): -17.8 Total Delay for Signalled Lanes (pcuHr): 95.20 Cycle Time (s): 120

PRC Over All Lanes (%): -17.8 Total Delay Over All Lanes(pcuHr): 96.34

Basic Results Summary

Scenario 6: '2024 PM with Development' (FG6: '2024 PM with Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**101.5%**	**539**	**602**	**17**	**67.4**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**101.5%**	**539**	**602**	**17**	**67.4**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	29:28	-	662	1915:1768	328+324	101.5 : 101.5%	-	-	-	23.8	129.6	31.0
1/3	Otford Road (N) Right	O	D		1	29	-	356	1814	453	78.5%	0	350	6	5.9	59.8	12.7
3/1	St John's Road (S) Ahead Left Right	O	B		1	23	-	382	1895	379	100.8%	0	51	5	15.8	148.7	23.4
5/1	Seal Road Left Right Ahead	O	C		1	51	-	526	1961	540	97.4%	160	0	0	14.2	97.3	25.7
7/1	Bradbourne Vale Road Left	O	-		-	-	-	494	1852	617	80.1%	293	201	0	2.0	14.9	6.6
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	51	-	594	1915:1807	723+134	69.3 : 69.3%	87	0	6	5.6	34.2	15.9
Ped Link: P1	Unnamed Ped Link	-	G		1	20	-	0	-	12000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	51	-	0	-	30600	0.0%	-	-	-	0.0	0.0	0.0

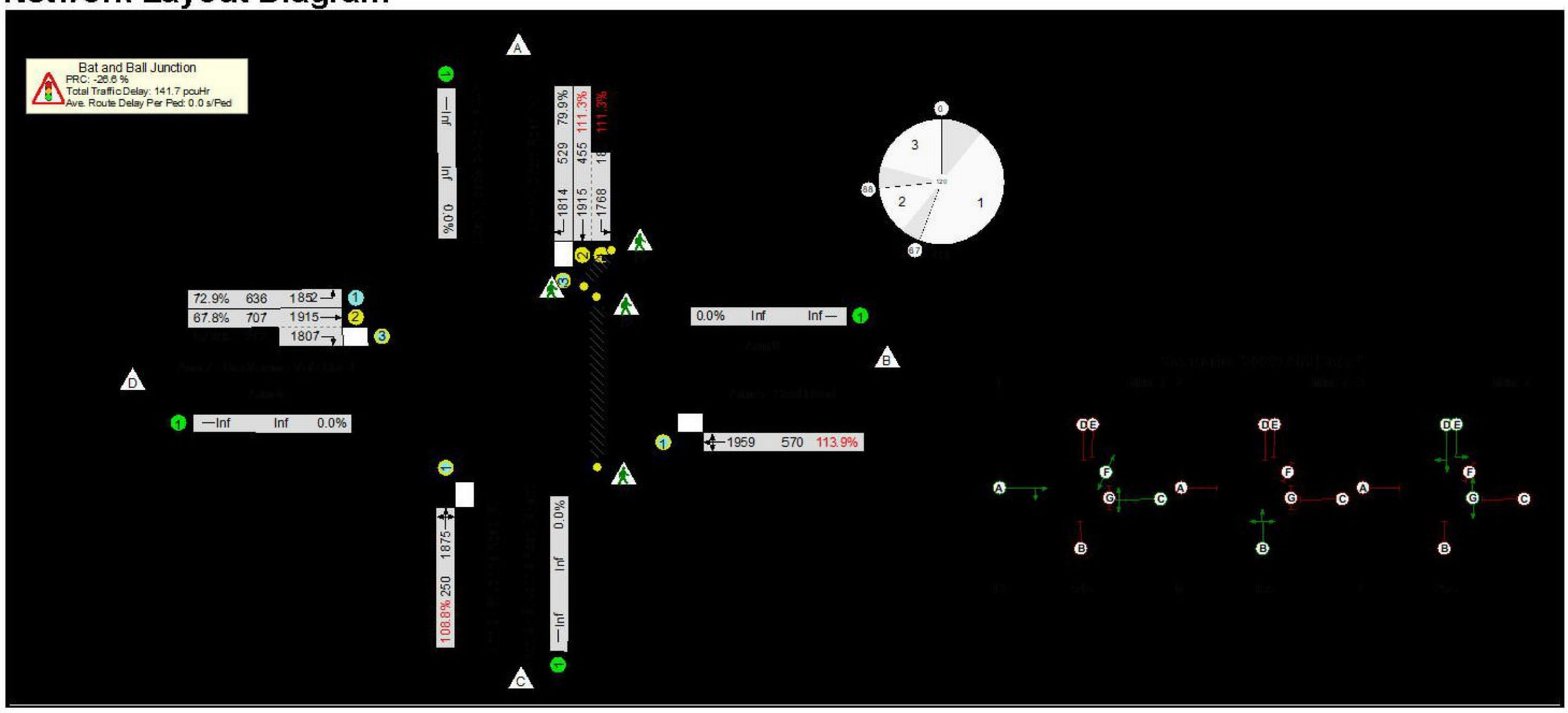
C1 PRC for Signalled Lanes (%): -12.7 Total Delay for Signalled Lanes (pcuHr): 65.38 Cycle Time (s): 120

PRC Over All Lanes (%): -12.7 Total Delay Over All Lanes(pcuHr): 67.43

Basic Results Summary

Scenario 7: '2029 AM Base' (FG7: '2029 AM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

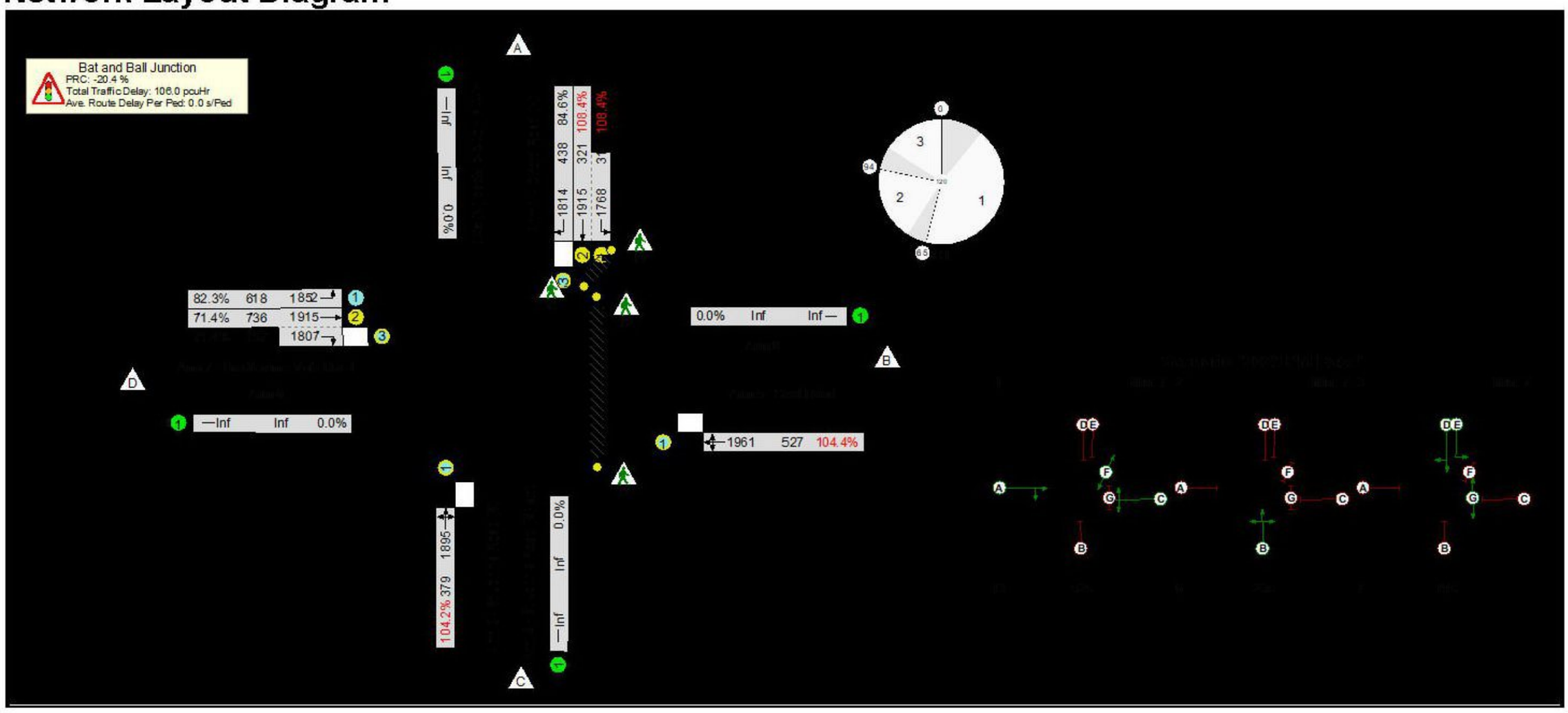
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**113.9%**	**581**	**638**	**35**	**141.7**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**113.9%**	**581**	**638**	**35**	**141.7**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	34:33	-	709	1915:1768	455+182	111.3 : 111.3%	-	-	-	53.4	270.9	64.7
1/3	Otford Road (N) Right	O	D		1	34	-	423	1814	529	79.9%	0	416	7	6.5	55.6	14.8
3/1	St John's Road (S) Ahead Left Right	O	B		1	15	-	272	1875	250	108.8%	0	27	4	20.3	268.7	25.2
5/1	Seal Road Left Right Ahead	O	C		1	54	-	649	1959	570	113.9%	192	0	0	54.7	303.5	67.7
7/1	Bradbourne Vale Road Left	O	-		-	-	-	464	1852	636	72.9%	269	195	0	1.3	10.4	3.6
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	54	-	623	1915:1807	707+212	67.8 : 67.8%	120	0	24	5.4	31.4	15.3
Ped Link: P1	Unnamed Ped Link	-	G		1	25	-	0	-	15000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	54	-	0	-	32400	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -26.6 Total Delay for Signalled Lanes (pcuHr): 140.36 Cycle Time (s): 120
PRC Over All Lanes (%): -26.6 Total Delay Over All Lanes(pcuHr): 141.70

Basic Results Summary

Scenario 8: '2029 PM Base' (FG8: '2029 PM Base', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**108.4%**	**544**	**621**	**27**	**106.0**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**108.4%**	**544**	**621**	**27**	**106.0**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	28:27	-	691	1915:1768	321+317	108.4 : 108.4%	-	-	-	43.9	228.6	51.1
1/3	Otford Road (N) Right	O	D		1	28	-	371	1814	438	84.6%	0	365	6	7.0	68.2	14.3
3/1	St John's Road (S) Ahead Left Right	O	B		1	23	-	395	1895	379	104.2%	0	51	5	20.7	188.4	28.4
5/1	Seal Road Left Right Ahead	O	C		1	52	-	550	1961	527	104.4%	158	0	0	26.2	171.2	38.0
7/1	Bradbourne Vale Road Left	O	-		-	-	-	509	1852	618	82.3%	304	205	0	2.4	16.6	7.5
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	52	-	624	1915:1807	736+137	71.4 : 71.4%	82	0	16	6.0	34.3	16.9
Ped Link: P1	Unnamed Ped Link	-	G		1	19	-	0	-	11400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	52	-	0	-	31200	0.0%	-	-	-	0.0	0.0	0.0

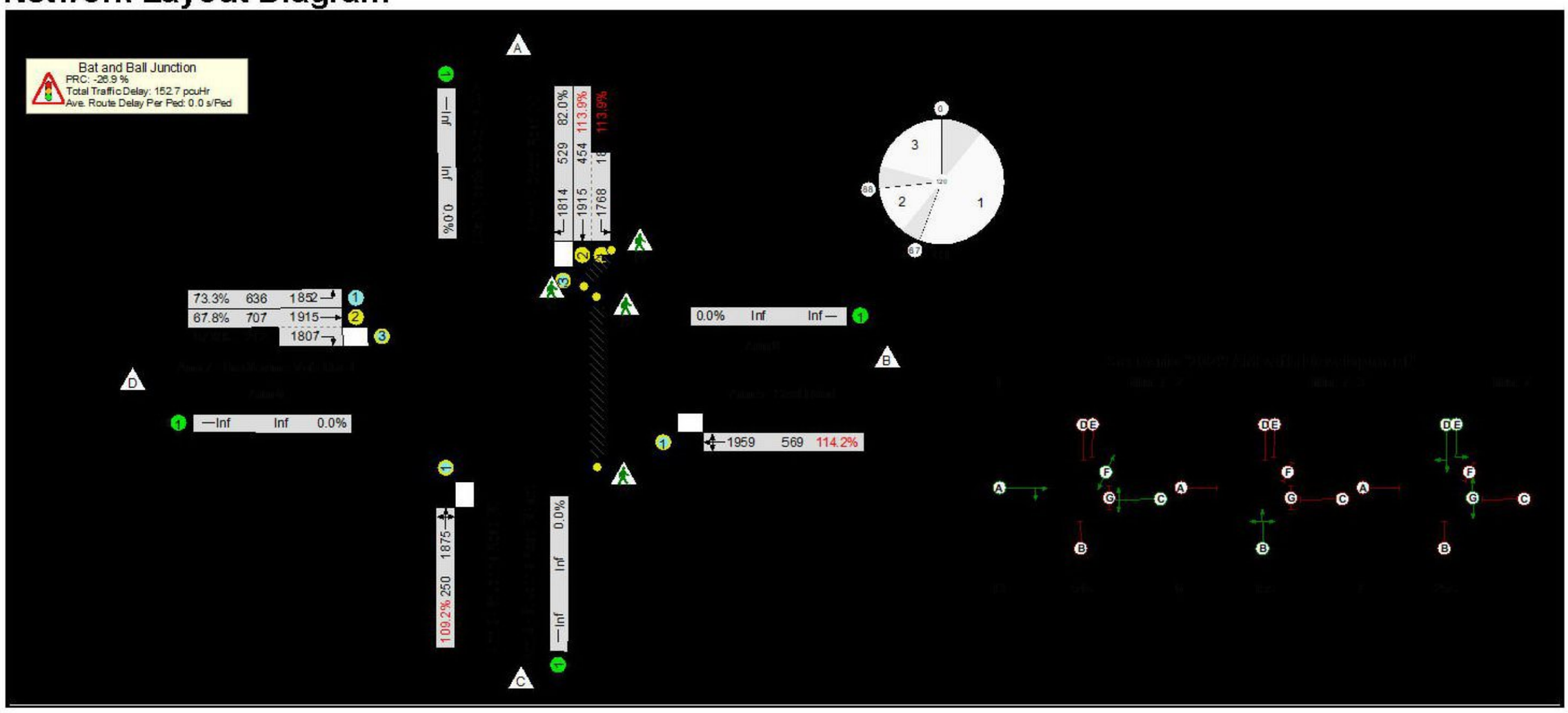
C1 PRC for Signalled Lanes (%): -20.4 Total Delay for Signalled Lanes (pcuHr): 103.68 Cycle Time (s): 120

PRC Over All Lanes (%): -20.4 Total Delay Over All Lanes(pcuHr): 106.03

Basic Results Summary

Scenario 9: '2029 AM with Development' (FG9: '2029 AM with Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

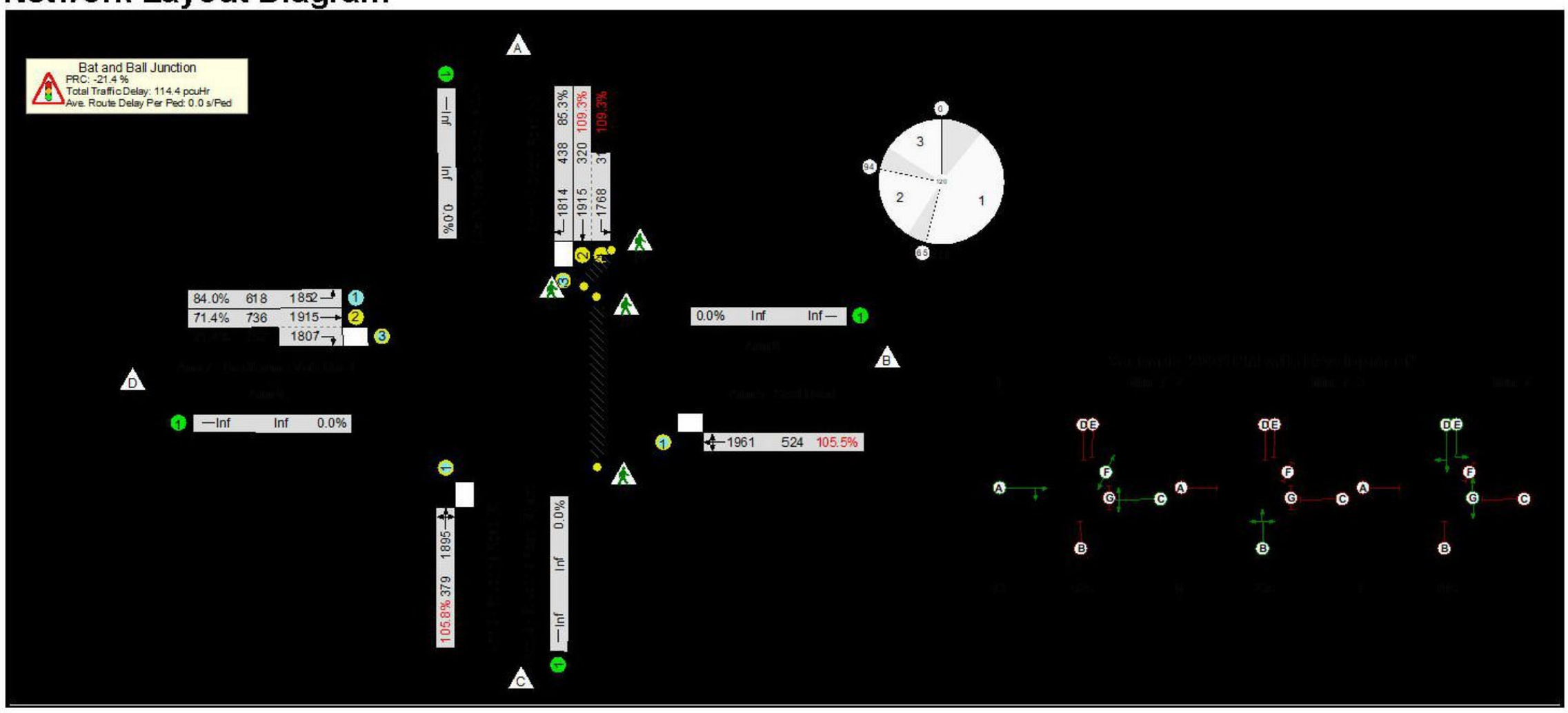
Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**114.2%**	**583**	**650**	**35**	**152.7**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**114.2%**	**583**	**650**	**35**	**152.7**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	34:33	-	727	1915:1768	454+184	113.9 : 113.9%	-	-	-	62.6	310.1	73.8
1/3	Otford Road (N) Right	O	D		1	34	-	434	1814	529	82.0%	0	427	7	7.0	57.7	15.6
3/1	St John's Road (S) Ahead Left Right	O	B		1	15	-	273	1875	250	109.2%	0	27	4	20.8	273.8	25.7
5/1	Seal Road Left Right Ahead	O	C		1	54	-	650	1959	569	114.2%	193	0	0	55.5	307.6	68.5
7/1	Bradbourne Vale Road Left	O	-		-	-	-	466	1852	636	73.3%	270	196	0	1.4	10.5	3.7
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	54	-	623	1915:1807	707+212	67.8 : 67.8%	120	0	24	5.4	31.4	15.3
Ped Link: P1	Unnamed Ped Link	-	G		1	25	-	0	-	15000	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	54	-	0	-	32400	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -26.9 Total Delay for Signalled Lanes (pcuHr): 151.31 Cycle Time (s): 120
PRC Over All Lanes (%): -26.9 Total Delay Over All Lanes(pcuHr): 152.67

Basic Results Summary

Scenario 10: '2029 PM with Development' (FG10: '2029 PM with Development', Plan 1: 'Network Control Plan 1')

Network Layout Diagram



Basic Results Summary

Network Results

Item	Lane Description	Lane Type	Full Phase	Arrow Phase	Num Greens	Total Green (s)	Arrow Green (s)	Demand Flow (pcu)	Sat Flow (pcu/Hr)	Capacity (pcu)	Deg Sat (%)	Turners In Gaps (pcu)	Turners When Unopposed (pcu)	Turners In Intergreen (pcu)	Total Delay (pcuHr)	Av. Delay Per PCU (s/pcu)	Mean Max Queue (pcu)
Network: Bat and Ball Junction (Existing)	-	-	-		-	-	-	-	-	-	**109.3%**	**549**	**629**	**27**	**114.4**	-	-
Bat and Ball Junction	-	-	-		-	-	-	-	-	-	**109.3%**	**549**	**629**	**27**	**114.4**	-	-
1/2+1/1	Otford Road (N) Ahead Left	U	D E		1	28:27	-	696	1915:1768	320+317	109.3 : 109.3%	-	-	-	46.8	242.1	54.0
1/3	Otford Road (N) Right	O	D		1	28	-	374	1814	438	85.3%	0	368	6	7.2	69.3	14.5
3/1	St John's Road (S) Ahead Left Right	O	B		1	23	-	401	1895	379	105.8%	0	50	5	23.2	208.5	31.0
5/1	Seal Road Left Right Ahead	O	C		1	52	-	553	1961	524	105.5%	159	0	0	28.6	185.9	40.3
7/1	Bradbourne Vale Road Left	O	-		-	-	-	519	1852	618	84.0%	308	211	0	2.6	18.3	8.1
7/2+7/3	Bradbourne Vale Road Right Ahead	U+O	A		1	52	-	624	1915:1807	736+137	71.4 : 71.4%	82	0	16	5.9	34.3	16.9
Ped Link: P1	Unnamed Ped Link	-	G		1	19	-	0	-	11400	0.0%	-	-	-	0.0	0.0	0.0
Ped Link: P2	Unnamed Ped Link	-	F		1	52	-	0	-	31200	0.0%	-	-	-	0.0	0.0	0.0

C1 PRC for Signalled Lanes (%): -21.4 Total Delay for Signalled Lanes (pcuHr): 111.73 Cycle Time (s): 120

PRC Over All Lanes (%): -21.4 Total Delay Over All Lanes(pcuHr): 114.37

vectos.

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