

Persimmon Homes West Wales  
**Proposed residential development**  
**at land on the site of the**  
**former Afan Lido,**  
**Channel View and Princess Margaret Way,**  
**Port Talbot**

**TRANSPORT ASSESSMENT**

**February 2021**

**Applicant:** Persimmon Homes West Wales

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## **1.0 INTRODUCTION**

### **1.1 Background**

1.1.1 Asbri Transport has been appointed by Persimmon Homes West Wales to produce a Transport Assessment (TA) to accompany a full planning application proposing the construction of a residential development of up to 137 dwellings on brownfield land on the site of the former Afan Lido, Aberavon Sea-front, Port Talbot.

1.1.2 The proposed development will consist of 137 residential dwellings which are to be offered for sale on the open market. The proposed development consists of 113 houses and 24 apartments. Two blocks of apartments are proposed on either side of the southern end of Channel View.

1.1.3 The site is located on land adjacent to The Princess Margaret Way and both to the north-west and south-east of Channel View at Aberavon sea-front in Port Talbot. The site is allocated in the Local Planning Authority's Local Development Plan for the development of 150 residential dwellings. The development is proposed to be constructed across 2 parcels of land which are bisected by Channel View.

1.1.4 The parcel of land to the north-west of Channel View has been referenced as Site A and the land to the south east, site B. Site A formerly accommodated buildings and surface car parking associated with the Afan Lido sports complex.

1.1.5 The north-westerly corner of Site B is currently in use as a surface car park providing approximately 93 parking bays. This is currently accessed via a dropped kerb in the footway from Channel View.

1.1.6 Whilst the planning application proposes the development of 137 units this report has assessed the transport implications of 143 residential units.

### **1.2 Scope of the report**

1.2.1 There has been scoping discussion with officers of the Highway Authority prior to undertaking this Transport Assessment. This scoping dialogue that has been

undertaken in line with best practice as advocated in Technical Advice Note 18: Transport (TAN 18) is summarised here.

1.2.2 Scoping discussion focused on the study area to be adopted for the Transport Assessment and matters of trip generation. Both matters were informally agreed with officers of the Highway Authority before progressing the Transport Assessment in January 2020.

1.2.3 In order to progress the TA with an agreed baseline traffic demand scenario, a full set of traffic surveys was undertaken on 9<sup>th</sup> July 2018. Further traffic surveys were undertaken in March 2020, these 2020 surveys were used and adjusted to account for summer traffic conditions as evidenced by the July 2018 surveys.

### **1.3 Structure of the report**

1.3.1 Following this introductory chapter, the report is structured as follows:

- **Section 2** reviews the development proposals in relation to national and local planning policies;
- **Section 3** details the existing situation and reviews the recent accident history of the local highway network;
- **Section 4** outlines the development proposals;
- **Section 5** describes the likely demand generated by the development site;
- **Section 6** assesses the impact of the proposed development on the surrounding transport network; and,
- **Section 7** provides the conclusions of the report.

## **2.0 POLICY REVIEW**

### **2.1 Introduction**

2.1.1 This chapter reviews national and local transport related planning policy guidance that is relevant to the proposed development.

### **2.2 Wales Spatial Plan – People, Places, Futures**

2.2.1 The Wales Spatial Plan – People, Places Future (WSP) – was originally adopted by the National Assembly for Wales in November 2004, and updated in 2008 to bring the WSP into line with One Wales [see below] and to give status to the Area work which has developed over the previous two years.

2.2.2 In Wales, spatial planning is the consideration of what can and should happen where. It is a principle of the WSP that development should be **sustainable**. Sustainable development is about improving well-being and quality of life by integrating social, economic and environmental objectives in the context of more efficient use of natural resources.

2.2.3 The purpose of the WSP is to ensure that what is done in the public, private and third sectors in Wales is integrated and sustainable, and that actions within an area support each other and jointly move towards a shared vision for Wales and for the different parts of Wales.

#### **Achieving sustainable development**

2.2.4 The WSP states that:

*‘Citizens must be able to access job opportunities and public services – health, social services, education, etc. – if equality of opportunity is to be successfully promoted in Wales. This is particular concern for those who face barriers to accessibility, such as people on low incomes, young and old people, disabled people and those living in rural areas.’*

2.2.5 The WSP also states that:

*‘In the context of responding to and mitigating the effects of climate change, the Wales Spatial Plan supports the development of spatially targeted responses.*

These include reducing the need to travel by co-locating jobs, housing and services, for instance, and changing behaviour in favour of 'greener' modes of travel, such as car sharing, public transport, walking and cycling.'

## **2.3 Planning Policy Wales (edition 10, December 2018)**

2.3.1 Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Assembly Government (the Assembly Government). It is supplemented by a series of Technical Advice Notes (TANs). Procedural advice is given in circulars and policy clarification letters.

2.3.2 PPW states that:

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

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

2.3.3 The overarching goal of The Welsh Government is to reduce reliance on single occupancy vehicles and support a modal shift to walking, cycling and public transport.

2.3.4 The Assembly Government aims to extend choice in transport and secure accessibility in a way which supports sustainable development and helps to tackle

the causes of climate change by: enabling more sustainable travel choices, manage both the current and future transport network effectively and minimising the need to travel via single-occupancy private vehicles. This will be achieved through the integration:

- Within and between different types of transport;
- Between transport measures and land use planning;
- Between transport measures and policies to protect and improve the environment; and,
- Between transport measures and policies for education, health, social inclusion and wealth creation.

2.3.5 PPW states that:

‘The planning system has a key role to play in reducing the need to travel and supporting sustainable transport, by facilitating developments which:

Are sited in the right locations, where they can be easily accessed by sustainable modes of travel and without the need for a car;

Are designed in a way which integrates them with existing land uses and neighbourhoods: and;

Make it possible for all short journeys within and beyond the development to be easily made by walking and cycling.’

**Promoting cycling and walking**

2.3.6 PPW details the Welsh Government’s objective of promoting active travel and references the Active Travel (Wales) Act 2013. This Act is referenced below.

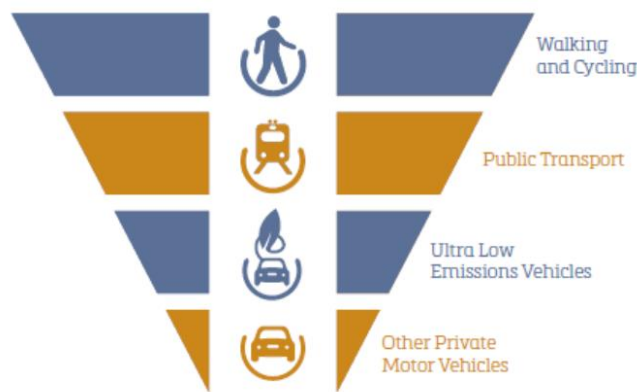
‘The Active Travel Act (Wales) 2013 makes walking and cycling the preferred option for shorter journeys, particularly everyday journeys, such as to and from a workplace or education establishment, or in order to access health, leisure or other services or facilities. The Active Travel Act requires local authorities to produce Integrated Network Maps, identifying the walking and cycling routes

required to create fully integrated networks for walking and cycling to access work, education, services and facilities.'

2.3.7 PPW also states that:

'The planning system has an important role to play in promoting and supporting the delivery of the Active Travel Act and creating the right environments and infrastructure to make it easier for people to walk and cycle, including new and improved routes and related facilities.'

2.3.8 PPW includes the following Hierarchy for Planning:



2.3.9 In relation to the sustainable transport hierarchy, PPW states that:

'The sustainable transport hierarchy should be used to reduce the need to travel, prevent car-dependent developments in unsustainable locations, and support the delivery of schemes located, designed and supported by infrastructure which prioritises access and movement by active and sustainable transport.'

The sustainable transport hierarchy must be a key principle in the preparation of development plans, including site allocations, and when considering and determining planning applications.'

## 2.4 Parking

2.4.1 In relation to parking, PPW details:

'Car parking provision is a major influence on how people choose to travel and the pattern of development...Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed.'

2.4.2 Additionally, PPW states:

‘Parking provision should be informed by the local context, including public transport accessibility, urban design principles and the objective of reducing reliance on the private car and supporting a modal shift to walking, cycling and public transport. Planning authorities must support schemes which keep parking levels down, especially off-street parking, when well designed. The needs of disabled people must be recognised and adequate parking provided for them.’

2.4.3 PPW notes that Local authorities are required to develop an integrated parking strategy which complies with the overall transport and locational policies of the development plan. Additionally, maximum levels of parking for broad classes of development should be established in conjunction with a threshold size of development above which such levels will apply.

2.4.4 Technical Advice Note 18 also details national planning policy on parking matters and this is described in sub-section 2.9.

2.4.5 Technical Advice Note 18 also details national planning policy on parking matters and this is described in sub-section 2.9.

## **2.5 One Wales: Connecting the Nation**

2.5.1 National transport policy for Wales is specified within the Wales Transport Strategy, One Wales: Connecting the Nation, which is supplemented by a series of Technical Advice Notes (TANs).

2.5.2 The goal of One Wales: Connecting the Nation is to:

*‘Promote sustainable transport networks that safeguard the environment while strengthening our country’s economic and social life. The transport strategy identifies a series of high-level outcomes and sets out the steps to their delivery. The One Wales programme is working to achieve a nation with access for all, where travelling between communities and accessing services, jobs and facilities in different parts of Wales is both easy and sustainable, and which support the growth of our economy.’*

## **2.6 Technical Advice Note 18: Transport (TAN18)**

2.6.1 TAN 18 identifies that Planning Policy Wales and the Wales Transport Strategy both aim to secure the provision of transport infrastructure and services, which improve accessibility, build a stronger economy, improve road safety and foster more sustainable communities. To achieve this and the core objectives, the following initiatives relevant to the proposed development are:

- Reducing the need to travel;
- Promoting walking and cycling;
- Managing parking provision; and,
- Encouraging the location of development near other related uses to encourage multi-purpose trips.

2.6.2 Section 3.4 to 3.6 of TAN 18 references '*Accessible Housing Development*', which in summary, seeks to ensure that housing development is sustainable in transport and movement terms including maximising the opportunity for residents to walk and cycle to local facilities and public transport stops.

2.6.3 TAN 18 notes that where larger housing development applications require a Transport Assessment information on measures to encourage sustainable travel, (as detailed in TAN 18) shall be incorporated in the TA.

### **Active Travel Act 2013 (Wales)**

2.6.4 The Active Travel Bill places a requirement on local authorities to continuously improve facilities for those who walk and cycle and to prepare information, such as maps, that identify current and potential future routes for their use.

2.6.5 The Bill also requires highway authorities to have regard in the construction and improvement of highways to enhance provision for cyclists and pedestrians. The Active Travel Bill makes provision for:

- Approved maps of existing active travel routes and related facilities in a local authority's area;

- Approved integrated network maps of the new and improved active travel routes and related facilities needed to create integrated networks of active travel routes and related facilities in a local authority's area;
- Requiring local authorities to have regard to integrated network maps in preparing transport policies and to make continuous improvements in the range and quality of active travel routes and related facilities; and,
- Requiring the Welsh Ministers and local authorities, in constructing and improving highways, to have regard to the desirability of enhancing the provision made for walking and cycling.

## **2.7 Transport Implementation Strategy and conclusion to Policy Review**

2.7.1 It is considered that the proposed development is fully in compliance with all relevant national and local planning and transport related planning policy guidance. The development is proposed in a sustainable location that is accessible to a several local services and amenities. The site is also well located in terms of access to the bus networks and movement by non-motorised modes of transport. Local bus services provide access to Port Talbot Parkway Railway Station and the bus facilities in the town centre.

2.7.2 A Travel Plan will be prepared for the development which will detail measures and objectives to encourage and facilitate sustainable travel to and from the proposed development both by residents and their visitors. The Travel Plan encompasses the principal objective and component of the Transport Implementation Strategy as required by guidance detailed in Planning Policy Wales Technical Advice Note Note 18: Transport.

2.7.3 Paragraph 9.7 of TAN 18 states:

‘TIS resulting from the TA process are intended to incorporate all components of a Travel Plan and ensure these are integrated with design elements of new development.’

2.7.4 In conclusion, it is considered that in transport and planning policy terms the planning application proposes ‘*accessible housing development*’ as defined in paragraphs 3.4 to 3.6 in Planning Policy Wales Technical Advice Note 18: Transport.

## **3.0 EXISTING SITUATION**

### **3.1 Introduction**

3.1.1 In order to assess the impact of the development site, it is necessary to establish the conditions that exist within the surrounding transport network. Therefore, this section of the report describes the current transport network.

### **3.2 Site location**

3.2.1 The proposed development is to be situated on a brownfield site that formerly accommodated the Afan Lido sports complex and associated buildings to the north east of Princess Margaret Way on Aberavon sea-front.

3.2.2 The sector of the application site to the north west of Channel View (Site A) is currently derelict (as the former buildings of the Afan Lido have been completely demolished) and the land to the south east of Channel View, (Site B) is, in part, used as a surface car park. To the north-east of the site are residential dwellings and immediately north-west of the site are two restaurants/food outlets.

3.2.3 Site A is bounded to the north by the Afan Lido Football Club and housing on Channel View, Site B is bounded (to the north) by housing on Channel View and Tywyn Primary School's playing fields. To the south of the site is Princess Margaret Way and immediately beyond that, Aberavon sea-front.

### **3.3 Highway network**

3.3.1 The site location and the highway network within the vicinity of the proposed development are shown in **Figure 3.1**.

3.3.2 The sea-front and land in between it and Port Talbot's peripheral distributor road is characterised by dense residential development that is interspersed with commercial and other land uses. The local area is traversed by a dense network of residential roads with Victoria Road and Dalton Road (described below) providing access to Port Talbot's Peripheral Distributor Road and the wider classified road network.

### **Princess Margaret Way**

- 3.3.3 Princess Margaret Way is a wide two-way single carriageway road of approximate width of 9.8 metres (including the central reservation). The opposing carriageways are separated by a raised concrete central reservation. It was formerly a dual 2 lane carriageway but the near-side lanes have some time ago been engineered to provide parking lay-bys, bus stops and to accommodate raised zebra crossings. As such there is now only one running lane in both directions.
- 3.3.4 The road operates as a local distributor road that follows a parallel alignment to Aberavon Beach. It is subject to a mandatory 20mph speed limit and incorporates a number of traffic calming features in its horizontal alignment, these include speed cushions and raised zebra crossings.
- 3.3.5 It connects via a roundabout junction with Victoria Road to the east and with Dalton Road via a large roundabout junction to the west. Parking is permitted along the length of the road in a series of demarcated lay-bys, with footways for pedestrian movement and street lighting present. Some of the parking bays along the road are restricted to a 2 hour maximum stay
- 3.3.6 The road provides access to a series of side roads which in turn provide access to various land uses located along Aberavon sea-front. There are two small roundabout junctions located on Princess Margaret Way and also simple priority junctions that provide access to the swimming pool, a multi-screen cinema complex, restaurants and the Aberavon Beach Hotel. The priority junctions are restricted to left turns only for entering and exiting traffic.
- 3.3.7 There are three zebra pedestrian crossings located on the road between its junctions with Dalton Road and Victoria Road respectively and one is located in the vicinity of the application site's north-western boundary and another adjacent to the frontage of site B.

### **Channel View**

- 3.3.8 Channel View is a single carriageway residential road that links Princess Margaret Way to Sunny Bank Road. It connects with Princess Margaret Way by way of a mini-

roundabout junction and Channel View Road by way of a priority junction. It is street lit and subject to double yellow line parking restrictions along its length. It is a bus route and there is a stop and shelter for south-bound services at its southern end.

- 3.3.9 It provides access to Twyn Primary School at its north-eastern end and historically provided access to the Afan Lido sports complex and associated parking at its south-eastern end. It also provides access to a surface car park on its eastern side in the vicinity of the mini-roundabout junction with Princess Margaret Way which is still operational.

### **Victoria Road**

- 3.3.10 Victoria Road is located to the south-east of the application site and is a local distributor road that provides access to the wider classified road network in Port Talbot and the Port Talbot Peripheral Distributor Road (PDR). It provides access to dense residential development served by minor junctions both to the west and east of the road.

- 3.3.11 The road is a wide single carriageway road that provides access to predominantly housing. It forms a signal-controlled junction with Hospital Road and Newbridge Road approximately 650m north-east of its roundabout junction with Princess Margaret Way. There are a number of small local shops located in the vicinity of the signal junction. Further to the north-east the road provides access, by way of another traffic signal-controlled junction to the PDR, classified as the A4241

- 3.3.12 The road is generally subject to a 30mph speed limit but this reduces to 20mph in the vicinity of its junction with Lake Road due to the vicinity of Twyn Primary School. Parking is permitted along the length of the road with footways for pedestrian on both sides and street lighting is present.

### **Dalton Road**

- 3.3.13 Dalton Road forms the northern arm of a large 5 -arm roundabout junction at the northern end of Princess Margaret Way. The road follows a north-easterly alignment from this junction linking with the PDR by way of another large

roundabout junction approximately 950m to the north-east. The side junctions of Dalton Road provide access to the Sandfields residential estate.

3.3.14 At its southern end, there is a parade of shops which include a convenience store and food take-aways. There is also a large Public House located adjacent to the roundabout junction.

3.3.15 The road has a 20-mph speed limit with footways for pedestrian usage and street lighting either side. The road is traffic calmed with speed cushions and carriageway throttling's. There are demarcated pedestrian crossing points along its length which have dropped kerbs and tactile paving present

3.3.16 There is a zebra pedestrian crossing with tactile paving located in the vicinity of the Seaside Social and Labour Club.

3.3.17 Dalton Road like Victoria Road provides access to the peripheral distributor road which traverses Port Talbot in a broadly parallel alignment to the M4 motorway.

### **3.4 Traffic surveys**

3.4.1 In order to obtain the most recent traffic flows within the study area examined in this TA, classified turning/link counts were undertaken at the following locations:

1. Roundabout junction of Dalton Road with Princess Margaret Way;
2. Roundabout junction that provides access to the Pool and Cinema complex;
3. Roundabout junction of Princess Margaret Way and Channel View;
4. Roundabout junction of Princess Margaret Way and Victoria Road;
5. Priority junction of Channel View and Sunnybank Road;
6. Traffic signal-controlled junction of Victoria Road/Hospital Road and Newbridge Road; and,
7. Traffic signal controlled junction of Victoria Road with the PDR.

3.4.2 As detailed traffic surveys for the above junctions were undertaken both in July 2018 and March 2020, prior to the start of the school's summer holidays on both survey occasions.

- 3.4.3 The junctions surveyed are shown on **Figure 3.2**.
- 3.4.4 The surveyed 2018 AM and PM baseline traffic flows are summarised in **Figure 3.3** and the data collected will be provided in full electronically to the Highway Authority and will be referenced as **Appendix A**. It should be noted that the traffic flows have been converted to Passenger Car Units (PCUs).

### **3.5 Public Transport**

#### **Bus Services**

- 3.5.1 The application site is well served by public transport, with the nearest bus stops located within the site's immediate vicinity on Channel View and approximately 110m north-west of the application site on Princess Margaret's Way.
- 3.5.2 The nearest stops to the application site (on Channel View) provide access to Service Number 9 which provides a connection to Port Talbot Bus Station and Service Number 82 which provides access to Golden Avenue to the west of the site. Further services may be accessed at Sandown Road, which is an approximate 580m walk distance from the access to site A and 630m walk distance from site B, if measured from the Channel View site frontages.
- 3.5.3 The bus station in the town centre and the public transport hub at Port Talbot Parkway Railway Station provides services to numerous local destinations within Neath Port Talbot and destinations further afield such as, Swansea, Maesteg, Cardiff and Bridgend.
- 3.5.4 **Table 3.1** shows the existing scheduled bus services at stops within the vicinity of the proposed development.

| Route | Destination                                                   | First/Last  | Frequency                     |
|-------|---------------------------------------------------------------|-------------|-------------------------------|
| 9     | Port Talbot                                                   | 09:00/17:00 | Mon – Fri, hourly             |
|       | Sandfields                                                    | 08:21/16:21 | Mon – Fri, hourly             |
| 82    | Port Talbot                                                   | 07:33/19:04 | Mon- Sat, half hourly         |
|       | Golden Avenue                                                 | 07:45/23:23 | Mon- Sat, half hourly         |
| 84    | Swansea                                                       | 06:38/18:53 | Mon-Sat, hourly               |
|       | Port Talbot                                                   | 09:11/18:34 | Mon-Sat, hourly               |
| 87    | Margam via Neath/Port Talbot Hospital                         | 06:53/22:45 | Mon-Fri, quarter hourly       |
|       | Neath via Neath & Port Talbot General Hospital - Briton Ferry | 06:19/22:19 | Mon-Fri, quarter hourly       |
| 442   | Baglan                                                        | 07:45       | Mon-Fri, one service per day  |
|       | Margam Ysgol Cwmbrombil                                       | 15:27       | Mon-Fri, one service per day  |
| 900   | Neath College                                                 | 07:55       | Mon- Fri, one service per day |
| 901   | Neath College via Port Talbot - Sandfields Est - Baglan Est   | 08:09/08:16 | Mon – Fri, twice daily        |
| 902   | Neath College via Sandfields Est - Baglan Est - Neath         | 07:49/07:56 | Mon – Fri, twice daily        |

**Table 3.1: Existing scheduled bus services in the local area**

3.5.5 A map of local bus services and the location of Port Talbot bus and rail stations is detailed in **Figure 3.4**.

## **Rail**

3.5.6 Port Talbot Parkway Railway station is located approximately 2km to the south – east of the application site, near the town centre. The station is located on the Swansea to London Paddington line providing frequent inter-city services to Swansea and Neath to the west and, Bridgend and Cardiff to the east and onwards to London Paddington.

3.5.7 Local services are also provided by Arriva Trains Wales and these provide access to inter-mediate railway stations that are not served by the inter-city service between Swansea and London Paddington.

3.5.8 A public transport hub has recently become operational in the immediate vicinity of the Railway Station providing inter-change with bus services and taxi services.

## **3.6 Pedestrian and cyclists**

### **Pedestrians**

3.6.1 Pedestrian infrastructure provision in the vicinity of the application site is of a good standard. There is footway provision on all roads nearby with demarcated

pedestrian crossing points present in the vicinity of junctions that include tactile paving.

3.6.2 The Chartered Institution of Highways and Transportation (CIHT) guidelines '*Providing for Journeys on Foot*' suggest that the desirable walking distance for 'commuting/school' walking trips is 500 metres, the acceptable distance is 1km, and 2km is the preferred maximum.

3.6.3 A plot of local facilities/amenities within the vicinity of the proposed development is shown in **Figure 3.5**.

3.6.4 There is continuous footway provision connecting the application site to nearby land uses such as the Dalton Road local shops, nearby schools and access points on the bus network. There are footways either side of the access roads and pedestrian crossing provision by way of dropped kerbs at tactile paving at junction crossings.

3.6.5 There are a number of local amenities including schools, leisure services and retail provision in the vicinity of the site as have been described above. These land uses are accessible by pedestrian movement.

3.6.6 There are three zebra pedestrian crossings on Princess Margaret Way providing safe access to the sea-front. There are also zebra crossings further afield on Dalton Road and Victoria Road.

### **Cyclists**

3.6.7 Cycling as a mode of travel is ever increasing given the growing trend of recreational cycling and is seen as a key travel mode for a shift away from the car. There are several formal cycle routes running within the vicinity of the site, shown in **Figure 3.6**.

3.6.8 NCN Route 887 of the National Cycle Network runs along the south-western boundary of the site. Route 887 provides a link between the towns of Port Talbot, Cwmafan, Pontrhydyfen, connecting local people to shops, schools and workplaces. The route then continues onto Afan Forest Park.

- 3.6.9 NCN Route 4 runs to the north of the application site and forms a long-distance route between London and Fishguard via Reading, Bath, Bristol, Newport, Swansea, Carmarthen, Tenby, Haverfordwest and St. Davids. Route 4 provides a link to Port Talbot Parkway Railway Station.
- 3.6.10 NCN Route 887 links to NCN Route 4 to the north. There are also several local cycle routes to the north and north east of the application site.
- 3.6.11 A shared pedestrian cycle route runs along the length of Aberavon Sea front, accessible immediately to the west of the application site.

### 3.7 Highway safety

- 3.7.1 This section of the report reviews collision data reports, provided by Neath Port Talbot County Borough Council (NPTCBC).
- 3.7.2 Personal injury collision (PIC) data was obtained for the most recent five-year period (2014-2018). The location and severity of the collisions (including reference numbers) within the study area is shown in **Figure 3.7**.
- 3.7.3 It is evident from Figure 3.7 that there have been no personal injury collisions recorded on Princess Margaret way or several of the residential roads in the vicinity of the application site.

| Year         | No. of casualties |         |        | Casualties | Vehicles involved | Number of collisions |
|--------------|-------------------|---------|--------|------------|-------------------|----------------------|
|              | Fatal             | Serious | Slight |            |                   |                      |
| 2014         | 0                 | 1       | 3      | 5          | 8                 | 4                    |
| 2015         | 0                 | 0       | 3      | 3          | 5                 | 3                    |
| 2016         | 0                 | 1       | 2      | 4          | 6                 | 3                    |
| 2017         | 0                 | 0       | 4      | 6          | 7                 | 4                    |
| 2018         | 0                 | 0       | 4      | 5          | 7                 | 4                    |
| <b>Total</b> | 0                 | 2       | 16     | 23         | 34                | 18                   |

**Table 3.2: Summary of PIC data**

- 3.7.4 It is evident from **Table 3.2** that there has been a total of 18 collisions, resulting in 23 casualties, within the geographic cordon assessed for the period 2014-2018.
- 3.7.5 Of the 18 collisions that have occurred within the study area, two collisions have resulted in a casualty sustaining serious injuries. It is important to note that there

have been no fatalities within the study area within the 5-year period and the majority of collisions have occurred at the signalised junction of Victoria Road/Afan Way and the roundabout junction of Dalton Road/Afan Way.

## **4.0 DEVELOPMENT PROPOSALS**

### **4.1 Introduction**

4.1.1 As outlined in Section 1, the outline planning application proposes the development of 137 residential dwellings, split between 113 houses and 24 apartments on the site of the former Afan Lido sports complex on Aberavon sea-front.

4.1.2 The proposed site layout is shown in **Appendix B**.

### **4.2 Access**

#### **Vehicular access**

4.2.1 As part of the development it is proposed to provide three points of vehicular access; one access from Channel View serving Site A and Site B is to be served via Channel View and from Princess Margaret Way.

4.2.2 All three accesses will be in the form of simple priority junctions and will allow all movements.

4.2.3 The required visibility splays at the site access points are based on Manual for Streets (MfS) sight stopping distance (SSD) of vehicles with a 30mph speed limit. It can be seen from **Appendix C** that the required visibility splays of 2.4m 'x' distance by 43m 'y' distance can be accommodated within land owned by the applicant or highway authority.

### **4.3 Service vehicle and bus access**

4.3.1 Swept-path analysis has been undertaken of a refuse collection vehicle to test the internal road alignment and the turning provision for a refuse collection vehicle.

4.3.2 These are detailed on the drawings included at **Appendix D**.

#### **4.4 Pedestrian and cyclist access**

4.4.1 As shown in Appendix B, the proposed three points of vehicular accesses will also provide the main point of access for pedestrians and cyclists with 2m wide footways along both sides of the access roads.

4.4.2 The development will provide the necessary pedestrian and cyclist infrastructure within the site to encourage residents to walk and cycle, with 2m wide footways included on both sides of the carriageway for its entire length and, where appropriate, shared use private drives also included, prioritising the needs of pedestrians and cyclists over that of vehicles.

#### **4.5 Parking provision**

##### **Car parking**

4.5.1 On-site parking provision for the development is proposed in the context of the adopted parking standards of the Highway Authority and Local Planning Authority, published in the Supplementary Planning Guidance dated October 2016.

4.5.2 It is proposed that all resident spaces will be provided within the curtilage of the site, either on plot, within garages or by way of parking court-yards located immediately adjacent to the proposed apartment blocks.

4.5.3 All visitor bays will also be provided within the curtilage of the development.

4.5.4 Based on the adopted standards, **Table 4.1** below outlines the maximum number of parking spaces that could be provided as per the Neath Port Talbot Parking Guidelines (2016).

| Dwelling type                   | Parking standard (max. 3 per dwelling) | No. of units | Maximum Parking Provision | Proposed Parking Provision |
|---------------------------------|----------------------------------------|--------------|---------------------------|----------------------------|
| <b>Residential - Apartments</b> |                                        |              |                           |                            |
| 2 bed                           | 1 space per bedroom                    | 24           | 48                        | 24                         |
| <b>Residential – Houses</b>     |                                        |              |                           |                            |
| 2 bed                           | 1 space per bedroom                    | 15           | 30                        | 15                         |
| 3 bed                           | 1 space per bedroom                    | 79           | 237                       | 169                        |
| 4 bed                           | 1 space per bedroom (max 3 spaces)     | 19           | 57                        | 46                         |
| <b>TOTAL</b>                    |                                        | <b>137</b>   | <b>372</b>                | <b>254</b>                 |
| <b>Visitor Parking</b>          |                                        |              |                           |                            |
| Houses                          | 1 space per 5 units                    | 113          | 23                        | 26                         |
| Apartments                      | 1 space per 5 units                    | 24           | 5                         |                            |
| <b>Sub- total</b>               |                                        | <b>137</b>   | <b>28</b>                 | <b>26</b>                  |
| <b>TOTAL</b>                    |                                        |              | <b>400</b>                | <b>280</b>                 |

**Table 4.1:** Car parking provision – residential and commercial development

4.5.5 Based on the application of the Council's Parking Standards as detailed in their Supplementary Planning Guidance dated October 2016, the maximum level of parking provision that could be provided is 372 residential car parking spaces with an additional 28 visitor spaces.

4.5.6 A reduced level of parking provision is to be proposed in the planning application which will be in accordance with Neath Port Talbot's parking standards as identified above and that this has been subject to pre-application discussion between the project architect and the Highway Authority. A sustainability assessment has been undertaken in accordance with Appendix F of the adopted parking standards and was submitted to the Authority during pre-application discussions.

### **Cycle parking**

4.5.7 Cycle parking at the proposed development will be provided in accordance with NPTCBC 'Parking Standards' contained within the Supplementary Planning Guidance (October 2016), within the Local Development Plan.

4.5.8 Note D.6 of the cycle parking standards states:

*'All residential developments must be accessible by cycles and cycle storage must be a factor of dwelling design. In appropriate circumstances, convenient communal facilities may be provided.'*

## **5.0 TRAVEL CHARACTERISTICS**

### **5.1 Introduction**

5.1.1 This section of the report outlines the likely volumes of traffic generated by the proposed (residential) use and identifies the likely impact of the proposals on the surrounding network.

5.1.2 As detailed in the preceding section of the report, the planning application seeks permission for the development of 137 residential dwellings, of which 24 are to be apartments. Whilst the planning application proposes the development of 137 units this report has assessed the transport implications of 143 residential units.

5.1.3 It should be noted that site B is currently in use as a surface car park, with approximately 93 parking bays, which could be considered an existing trip attractor.

### **5.2 Trip generation**

#### **Residential**

5.2.1 The vehicle trip generation rates have been obtained from the TRICS 7.6.4 trip generation database.

5.2.2 The use of these vehicle trip generation rates has been agreed with officers of the Highway Authority in pre-application scoping discussions.

5.2.3 Sites were selected on the basis of the following criteria:

#### **Houses**

- Land use: Residential – Mixed private/affordable housing;
- Survey days: Monday-Friday;
- Number of units: 135 to 185 units; and,
- Location of development: UK, excluding Greater London, Northern Ireland and Republic of Ireland.

5.2.4 The sample of sites derived from the TRICS database was submitted to the Highway Authority and their use agreed within this Transport Assessment in January 2020.

5.2.5 The peak hour vehicle arrival/departure profiles are set out in **Appendix E** and summarised in **Table 5.1** below.

| Peak period | Trip rates |        |       | Vehicles |        |       |
|-------------|------------|--------|-------|----------|--------|-------|
|             | Arrive     | Depart | Total | Arrive   | Depart | Total |
| 0800-0900   | 0.141      | 0.389  | 0.530 | 20       | 56     | 76    |
| 1700-1800   | 0.361      | 0.226  | 0.587 | 52       | 32     | 84    |

**Table 5.1: Vehicle trip generation – 143 dwellings**

5.2.6 It is evident from Table 5.1 that, in total, based on 143 residential units, the development could generate up to 76 vehicle movements (two-way) in the AM peak period and 84 vehicle movements (two-way) in the PM peak period.

### **5.3 Distribution and assignment of development traffic**

5.3.1 The development traffic has been distributed and assigned to the local highway network on a pro-rata basis using the existing traffic flow movements at the surveyed junctions.

5.3.2 The distribution of development trips assigned to the study network for 143 dwellings is shown in **Figures 5.1**.

### **5.4 Future base traffic flows**

5.4.1 The impact of the development has been assessed for an opening year of 2023 and a future year of 2035 (planning application submission plus 15). In order to obtain the base traffic flows (i.e. with no development traffic) in 2023 and 2035, the baseline traffic flows (2018) have been factored using NTM growth factors. The growth factors were generated using Temprow 7. The middle layer super output area covering the site area and assessed junctions was used. This was Neath Port Talbot; 017.

5.4.2 The factors applied to the 2018 baseline surveyed flows are identified in **Table 5.2** below.

| <b>Period</b>    | <b>Level</b> | <b>Name</b>           | <b>AM</b> | <b>PM</b> |
|------------------|--------------|-----------------------|-----------|-----------|
| <b>2018-2020</b> | W02000215    | Neath Port Talbot 017 | 1.0283    | 1.027     |
| <b>2018-2023</b> | W02000215    | Neath Port Talbot 017 | 1.0587    | 1.0566    |
| <b>2018-2035</b> | W02000215    | Neath Port Talbot 017 | 1.1727    | 1.1708    |

**Table 5.2:** NTM growth factors

5.4.3 The 2020, 2023 and 2035 base traffic flows are set out in **Figures 5.2, 5.3 and 5.4** respectively.

#### **Final future traffic flows**

5.4.4 The final future traffic flows have been obtained by combining the development flows (see Figure 5.1) with both the 2023 and 2035 base traffic flows. The 2023 and 2035 'with development' traffic flows are set out in **Figures 5.5 and 5.6** respectively.

## **6.0 IMPACT OF THE DEVELOPMENT PROPOSALS**

### **6.1 Introduction**

6.1.1 This section of the report identifies the impact of the development proposals on the operational performance of the surrounding highway network, and identifies any mitigation measures to reduce the impact of development generated traffic, should these be required.

6.1.2 The following eight junctions have been assessed:

1. Staggered access junction with Princes Margaret Way and Jersey Quay;
2. Roundabout junction of Dalton Road with Princess Margaret Way;
3. Roundabout junction that provides access to the Pool and Cinema complex;
4. Roundabout junction of Princess Margaret Way and Channel View;
5. Roundabout junction of Princess Margaret Way and Victoria Road;
6. Priority junction of Channel View and Sunnybank Road;
7. Traffic signal-controlled junction of Victoria Road/Hospital Road and Newbridge Road; and
8. Traffic signal-controlled junction of Victoria Road with the PDR.

6.1.3 The junctions identified above been assessed for the AM peak period of 0800-0900 and the PM peak period 1700-1800.

### **6.2 Percentage Impact Assessment**

6.2.1 Percentage impact analysis has been undertaken to determine the impact of the proposed development traffic on all the junctions within the study area adopted for the TA as shown in **Table 6.1**.

| Junction                                                   | 2023 |     |      |      |     |      | 2035 |     |      |      |     |      |
|------------------------------------------------------------|------|-----|------|------|-----|------|------|-----|------|------|-----|------|
|                                                            | AM   |     |      | PM   |     |      | AM   |     |      | PM   |     |      |
|                                                            | Base | Dev | %age | Base | Dev | %age | Base | Dev | %age | Base | Dev | %age |
| Western Ave / Dalton Rd / Princess Margaret Way Roundabout | 574  | 15  | 3%   | 827  | 21  | 3%   | 636  | 15  | 2%   | 917  | 21  | 2%   |
| Burger King Roundabout                                     | 340  | 15  | 4%   | 560  | 21  | 4%   | 376  | 15  | 4%   | 621  | 21  | 3%   |
| Channel View / Princess Margaret Way Roundabout            | 376  | 30  | 8%   | 517  | 41  | 8%   | 416  | 30  | 7%   | 573  | 41  | 7%   |
| Sunnybank Rd / Channel View Priority Junction              | 211  | 44  | 21%  | 102  | 40  | 39%  | 233  | 44  | 19%  | 114  | 40  | 35%  |
| Victoria Rd / Princess Margaret Way Roundabout             | 369  | 17  | 5%   | 579  | 23  | 4%   | 409  | 17  | 4%   | 642  | 23  | 4%   |
| Hospital Rd / Victoria Rd / Newbridge Rd                   | 752  | 14  | 2%   | 886  | 19  | 2%   | 833  | 14  | 2%   | 982  | 19  | 2%   |
| Afan Way / Victoria Road                                   | 2659 | 13  | 0%   | 2775 | 18  | 1%   | 2946 | 13  | 0%   | 3075 | 18  | 1%   |

**Table 6.1: Percentage Impact Assessment of junctions within study area**

6.2.2 As shown within Table 6.1, the proportionate effect of the development traffic at the arms of the junctions closest to the site are the greatest.

6.2.3 Three of the junctions within the study area are forecast to experience increases in two-way traffic flow in excess of 5%. The junctions at each end of Channel View, i.e. its priority junction with Sunny Bank Road and its mini-roundabout junction with Princess Margaret Way are forecast to experience the greatest increase in traffic flows in percentage terms.

### 6.3 Junction capacity assessments

6.3.1 The following section of the report details the capacity assessments undertaken using the traffic flows and the predicted vehicle trip generation as derived in the previous section of the Transport Assessment.

- 6.3.2 Aa detailed above, all junctions where greater than a 5% increase in traffic flow on the approaches to the junctions have been subject to further assessment. These include 3 of the 7 junctions assessed above and these are detailed below.

#### **Staggered Access Junction with Princess Margaret Way and Jersey Quay**

- 6.3.3 The operation of the proposed staggered access junction between Princess Margaret Way and Jersey Quay has been assessed using the TRL programme Junctions 9. The results of the analysis are presented in **Appendix F** and summarised in **Table 6.2** below.

| Approach arm                  | With Development |      |             |      |
|-------------------------------|------------------|------|-------------|------|
|                               | 0800-0900        |      | 17:00-18:00 |      |
|                               | Max Q            | RFC  | Max Q       | RFC  |
| 2035 – Future year assessment |                  |      |             |      |
| Princess Margaret Way West    | 0                | 0.01 | 0           | 0.01 |
| Site Access                   | 0                | 0.01 | 0           | 0.00 |
| Princess Margaret Way East    | 0                | 0.00 | 0           | 0.00 |
| Jersey Quay                   | 0                | 0.04 | 0           | 0.00 |

**Table 6.2:** Junctions 9 (PICADY) – Summary of results

- 6.3.4 It can be seen from Table 6.2 that the staggered access junction operates with sufficient capacity in all assessment scenarios.

#### **Sunny Bank Road/Channel View priority junction**

- 6.3.5 The operation of the Sunny Bank Road/Channel View priority junction has been assessed using the TRL programme Junctions 9. The results of the analysis are presented in **Appendix G** and summarised in **Table 6.3** below.

| Approach arm                         | No Development |      |             |      | With Development |      |             |      |
|--------------------------------------|----------------|------|-------------|------|------------------|------|-------------|------|
|                                      | 0800-0900      |      | 17:00-18:00 |      | 0800-0900        |      | 17:00-18:00 |      |
|                                      | Max Q          | RFC  | Max Q       | RFC  | Max Q            | RFC  | Max Q       | RFC  |
| <b>2020 – baseline scenario</b>      |                |      |             |      |                  |      |             |      |
| Sunny Bank Road                      | 0.2            | 0.10 | 0           | 0.05 |                  |      |             |      |
| Channel View                         | 0              | 0.18 | 0.1         | 0.08 |                  |      |             |      |
| <b>2023 – Year of opening</b>        |                |      |             |      |                  |      |             |      |
| Sunny Bank Road                      | 0              | 0.1  | 0           | 0.09 | 0                | 0.11 | 0.1         | 0.09 |
| Channel View                         | 0              | 0.19 | 0           | 0.08 | 0                | 0.26 | 0.1         | 0.12 |
| <b>2035 – Future year assessment</b> |                |      |             |      |                  |      |             |      |
| Sunny Bank Road                      | 0              | 0.11 | 0           | 0.10 | 0                | 0.13 | 0           | 0.11 |
| Channel View                         | 0              | 0.21 | 0           | 0.06 | 0                | 0.28 | 0           | 0.13 |

**Table 6.3:** Junctions 9 (PICADY) – Summary of results

- 6.3.6 It can be seen from Table 6.3 that the Sunny Bank Road/Channel View junction operates with sufficient capacity in all assessment scenarios.

#### **Princess Margaret Way/Channel View Roundabout Junction**

- 6.3.7 The operation of the Princess Margaret Way/Channel View mini-roundabout junction has been assessed using the TRL programme Junctions 9. The junction has been modelled as a mini-roundabout junction in Junctions 9.
- 6.3.8 The results of the analysis are presented in **Appendix H** and summarised in **Table 6.4** below.

| Approach arm                         | No Development |      |             |      | With Development |      |             |      |
|--------------------------------------|----------------|------|-------------|------|------------------|------|-------------|------|
|                                      | 0800-0900      |      | 17:00-18:00 |      | 0800-0900        |      | 17:00-18:00 |      |
|                                      | Max Q          | RFC  | Max Q       | RFC  | Max Q            | RFC  | Max Q       | RFC  |
| <b>2020 – baseline scenario</b>      |                |      |             |      |                  |      |             |      |
| Channel View                         | 0              | 0.08 | 0           | 0.06 |                  |      |             |      |
| Princess Margaret Way (E)            | 0              | 0.17 | 0           | 0.25 |                  |      |             |      |
| Princess Margaret Way (W)            | 0              | 0.18 | 0           | 0.26 |                  |      |             |      |
| <b>2023 – Year of opening</b>        |                |      |             |      |                  |      |             |      |
| Channel View                         | 0              | 0.08 | 0.1         | 0.07 | 0.1              | 0.12 | 0.1         | 0.09 |
| Princess Margaret Way (E)            | 0              | 0.18 | 0.4         | 0.26 | 0.3              | 0.18 | 0.4         | 0.28 |
| Princess Margaret Way (W)            | 0              | 0.18 | 0.4         | 0.26 | 0.3              | 0.2  | 0.4         | 0.29 |
| <b>2035 – Future year assessment</b> |                |      |             |      |                  |      |             |      |
| Channel View                         | 0              | 0.09 | 0           | 0.08 | 0                | 0.1  | 0.1         | 0.10 |
| Princess Margaret Way (E)            | 0              | 0.20 | 0           | 0.29 | 0                | 0.3  | 0.5         | 0.3  |
| Princess Margaret Way (W)            | 0              | 0.20 | 0           | 0.29 | 0                | 0.31 | 0           | 0.31 |

**Table 6.4: Junctions 9 (ARCADY) – Summary of results**

6.3.9 It can be seen from Table 6.4 that the roundabout junction of Princess Margaret Way and Channel View operates with sufficient capacity in all assessment scenarios.

#### **Princess Margaret Way/Victoria Road Roundabout Junction**

6.3.10 Princess Margaret Way intersects with Victoria Road by way of a normal roundabout. The junction has a raised central island of approximately 4.25m and a further outer over-run island of approximately 12m in diameter.

6.3.11 The operation of the Princess Margaret Way/Victoria Road roundabout junction has been assessed using the TRL programme Junctions 9. The results of the analysis are presented in **Appendix I** and summarised in **Table 6.5** below.

| Approach arm                         | No Development |      |             |      | With Development |      |             |      |
|--------------------------------------|----------------|------|-------------|------|------------------|------|-------------|------|
|                                      | 0800-0900      |      | 17:00-18:00 |      | 0800-0900        |      | 17:00-18:00 |      |
|                                      | Max Q          | RFC  | Max Q       | RFC  | Max Q            | RFC  | Max Q       | RFC  |
| <b>2020 – baseline scenario</b>      |                |      |             |      |                  |      |             |      |
| Victoria Road (N)                    | 0              | 0.1  | 0           | 0.18 |                  |      |             |      |
| Victoria Road (S)                    | 0              | 0.06 | 0           | 0.07 |                  |      |             |      |
| Princess Margaret Way (W)            | 0              | 0.13 | 0           | 0.20 |                  |      |             |      |
| <b>2023 – Year of opening</b>        |                |      |             |      |                  |      |             |      |
| Victoria Road (N)                    | 0              | 0.10 | 0           | 0.19 | 0                | 0.1  | 0           | 0.20 |
| Victoria Road (S)                    | 0              | 0.07 | 0           | 0.07 | 0                | 0.07 | 0           | 0.08 |
| Princess Margaret Way (W)            | 0              | 0.13 | 0           | 0.20 | 0                | 0.14 | 0           | 0.21 |
| <b>2035 – Future year assessment</b> |                |      |             |      |                  |      |             |      |
| Victoria Road (N)                    | 0              | 0.11 | 0.3         | 0.21 | 0.1              | 0.12 | 0           | 0.22 |
| Victoria Road (S)                    | 0              | 0.07 | 0.1         | 0.08 | 0.1              | 0.07 | 0           | 0.09 |
| Princess Margaret Way (W)            | 0              | 0.14 | 0.3         | 0.22 | 0.2              | 0.16 | 0           | 0.23 |

**Table 6.5: Junctions 9 (ARCADY) – Summary of results**

6.3.12 It can be seen from Table 6.5 that the roundabout junction of Princess Margaret Way and Channel View operates with sufficient capacity in all assessment scenarios.

## **6.4 Conclusion to junction capacity modelling**

6.4.1 It is concluded that the traffic generation associated with the proposed development will have a marginal impact on the operational performance of the junctions that have been subject to Junctions 9 capacity modelling.

6.4.2 All three junctions modelled are predicted to operate comfortably within their theoretical capacity with low ratios of flow to capacity recorded by the models' output.

## **7.0 CONCLUSION**

### **7.1 Summary**

7.1.1 Asbri Transport Ltd has been appointed by Persimmon Homes to produce a Transport Assessment in support of a planning application to develop land at the site of the former Afan Lido Sports Complex for residential development of 137 residential dwellings consisting of 113 private houses and 24 apartments. All are to be offered for sale on the open market.

7.1.2 In order to ensure robust assessment, this report has assessed the transport and movement implications of 143 residential dwellings on the local highway network.

7.1.3 The site is allocated for residential development in the Authority's Local Development Plan. There was informal scoping discussion with officers of the Highway Authority specifically with reference to the study area for the TA and the vehicle trip generation rates for the residential element of the development. These were agreed with the Highway Authority in 2018 and subsequently in 2020 when preparing this TA.

7.1.4 An analysis of the local highway network, including provision for pedestrian, cyclist and public transport movement has been undertaken, and concluded that there are opportunities for residents of the proposed development to undertake trips by alternative modes of travel to the private car and that the site is closely situated within proximity to existing bus services and several local amenities. There are also retail and leisure opportunities located in proximity to the site.

7.1.5 Analysis of the safety record of the local highway network for the most recent 5-year period has detailed that the network benefits from a good safety record. No injury collisions are recorded as having occurred on Channel View and Princess Margaret Way during the study period.

7.1.6 As part of the development, it is proposed to construct three access points into the site by way of simple priority junctions, two with Channel View and one to Princess Margaret Way.

- 7.1.7 The development will provide the necessary pedestrian and cyclist infrastructure within the site to encourage residents to walk and cycle, with 2m wide footways included on both sides of the carriageway for both sites A and B and, where appropriate, shared use private drives also included, prioritising the needs of pedestrians and cyclists over that of vehicles.
- 7.1.8 Car parking and cycle parking will be provided for the development in accordance with Neath Port Talbot's adopted Parking Standards. The provision accounts for a sustainability reduction in accordance with Appendix F of NPTs Car Parking Standards.
- 7.1.9 It is estimated based on the TRICS analysis undertaken that the proposed development could generate up to 76 vehicle movements (two-way) in the AM peak period and 84 vehicle movements (two-way) in the PM peak period. The vehicle trip generation rates were agreed with officers of the Highway Authority during pre-application scoping discussions.
- 7.1.10 It is envisaged that the proposed development will have a marginal impact on the performance of the local highway network during the AM and PM peak hour periods, or throughout the course of the day.
- 7.1.11 Junction analysis has shown that the Channel View priority junction with Sunnybank Road will perform well within capacity in the future assessment years adopted for this Transport Assessment.
- 7.1.12 Junction analysis has also shown that the Channel View mini-roundabout junction will operate within capacity in both of the future year assessment scenarios. The operational performance of the roundabout junction of Princess Margaret Way and Victoria Road has also been assessed using Junctions 9 software and this junction is predicted to perform within capacity.
- 7.1.13 On all other junctions within the study area adopted for the Transport Assessment, the percentage change in traffic flows is predicted to be less than 5% and on many of the junctions further from the development site values of less than 2% are predicted.

## **7.2 Conclusion**

- 7.2.1 In conclusion, it is considered that this residential development, proposed on an allocated site, is appropriate and acceptable in sustainability, traffic and transport terms. It is considered that the traffic movements and movement by other modes associated with the development proposals could be accommodated on the highway network and local infrastructure and will not adversely affect the operational performance of the local highway network.

# Appendices

# Appendix A

## Appendix B



**SITE LEGEND**

- Site Boundary
- 1.8M High Brick Screen Wall With Fencing Panels (Cusworth Smooth With Rethesay / Hovingham Detail Brick)
- 1.8M High Timber Hill & Main Fence
- 1.1M Dwarf Wall With Railings (Cusworth Smooth With Rethesay / Hovingham Detail Brick)
- Bin Stores (Cusworth Smooth With Rethesay Detail Brick)
- Bin Location
- 3m x 1.5m Balcony
- Rotary Clothes Line
- Shared Private Drive
- Street Plant in Herringbone Pattern
- Highway Rumble Strip
- Indicative Landscaping (Please refer to landscape drawing for accurate positioning)
- Visitor Parking Space
- Bin Collection Point

**EXTERNAL MATERIALS SCHEDULE**

**A** Brick Type: Cusworth River Brick With Rethesay River Detail Brick  
Cladding Type: Light Grey Cladding (Upper Floors)  
Roof: TLE Anthracite Roof Tile  
Window And Door Frames: Dark Grey  
Doors: Black  
Rainwater Goods: Black  
Please Refer To Housetype Plans For Exact Location Of Materials

**B** Brick Type: Cusworth River Brick With Rethesay River Detail Brick  
Cladding Type: Light Blue Cladding (Upper Floors)  
Roof: TLE Anthracite Roof Tile  
Window And Door Frames: Dark Grey  
Doors: Black  
Rainwater Goods: Black  
Please Refer To Housetype Plans For Exact Location Of Materials

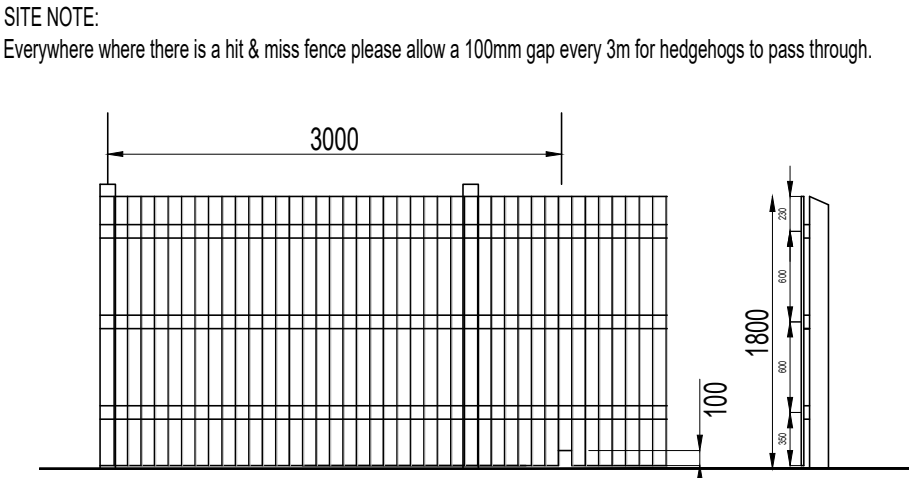
**C** Brick Type: Cusworth River Brick With Rethesay River Detail Brick  
Cladding Type: Light Grey Cladding (Upper Floors)  
Roof: TLE Anthracite Roof Tile  
Window And Door Frames: Dark Grey  
Doors: Black  
Rainwater Goods: Black  
Please Refer To Housetype Plans For Exact Location Of Materials

**D** Brick Type: Cusworth River Brick With Rethesay River Detail Brick  
Cladding Type: Light Grey Cladding (Upper Floors)  
Roof: TLE Anthracite Roof Tile  
Window And Door Frames: Dark Grey  
Doors: Black  
Rainwater Goods: Black  
Please Refer To Housetype Plans For Exact Location Of Materials

**E** Brick Type: Cusworth River Brick With Rethesay River Detail Brick  
Cladding Type: Light Grey Cladding (Upper Floors)  
Roof: TLE Anthracite Roof Tile  
Window And Door Frames: Dark Grey  
Doors: Black  
Rainwater Goods: Black  
Please Refer To Housetype Plans For Exact Location Of Materials

**SURFACE FINISHES**

Roads and footpaths and shared surfaces to be finished in tarmac unless stated otherwise. All drives to be finished in tarmac unless stated otherwise. Private Footpaths to be constructed in concrete paving slabs.



| Open Mix Housetype      | No's        | Sq.ft        | Total Sq.ft        | Beds        | Storeys        | Individual %        | Group %        |
|-------------------------|-------------|--------------|--------------------|-------------|----------------|---------------------|----------------|
| 638 - Alnwick           | 12          | 638          | 7656               | 2           | 2              | 11%                 | 44%            |
| 762 - Moseley           | 3           | 762          | 2286               | 2           | 2.5            | 3%                  |                |
| 761 - Barton            | 9           | 761          | 6849               | 3           | 2              | 8%                  |                |
| 761 - Barton Corner     | 0           | 761          | 0                  | 3           | 2              | 0%                  |                |
| 970 - Windermere        | 20          | 970          | 19400              | 3           | 2.5            | 18%                 |                |
| 980 - Carleton          | 6           | 980          | 5880               | 3           | 2.5            | 5%                  | 39%            |
| 921 - Grasmere          | 11          | 921          | 10131              | 3           | 2              | 10%                 |                |
| 969 - Derwent           | 4           | 969          | 3876               | 3           | 2              | 4%                  |                |
| 999 - Lockwood Corner   | 7           | 999          | 6993               | 3           | 2              | 6%                  |                |
| 1097 - Ullswater        | 22          | 1097         | 24134              | 3           | 3              | 19%                 |                |
| 1096 - Homsea           | 11          | 1096         | 12056              | 4           | 2              | 10%                 | 17%            |
| 1222 - Coniston         | 8           | 1222         | 9776               | 4           | 2              | 7%                  |                |
| <b>Apartments</b>       | <b>No's</b> | <b>Sq.ft</b> | <b>Total Sq.ft</b> | <b>Beds</b> | <b>Storeys</b> | <b>Individual %</b> | <b>Group %</b> |
| 570 - Corby             | 8           | 570          | 4560               | 2           | 4              | 6%                  | 18%            |
| 597 - Piel              | 16          | 597          | 9552               | 2           | 4              | 12%                 |                |
| <b>Total Open Units</b> | <b>113</b>  |              | <b>109037</b>      |             |                |                     |                |
| <b>Total Apartments</b> | <b>24</b>   |              | <b>14112</b>       |             |                |                     |                |
| <b>Total Units</b>      | <b>137</b>  |              | <b>123149</b>      |             |                |                     |                |

Visitor parking spaces numbered. Doors added to bin stores. Shared access serving plots 1016/102 and 1116/112 increased to 2.2m. Measurement added to the drives of plots 50 & 98. Footpath added to plot 124. Bin collection points added near plots 125/25 and 126/26. Plot 51/10 moved to avoid banking.

27/01/2021

AM JP JP

Drawn by: CG Checked by: JP Approved by: JP

Job Number: ### Drawing Number: PL01 Revision: A

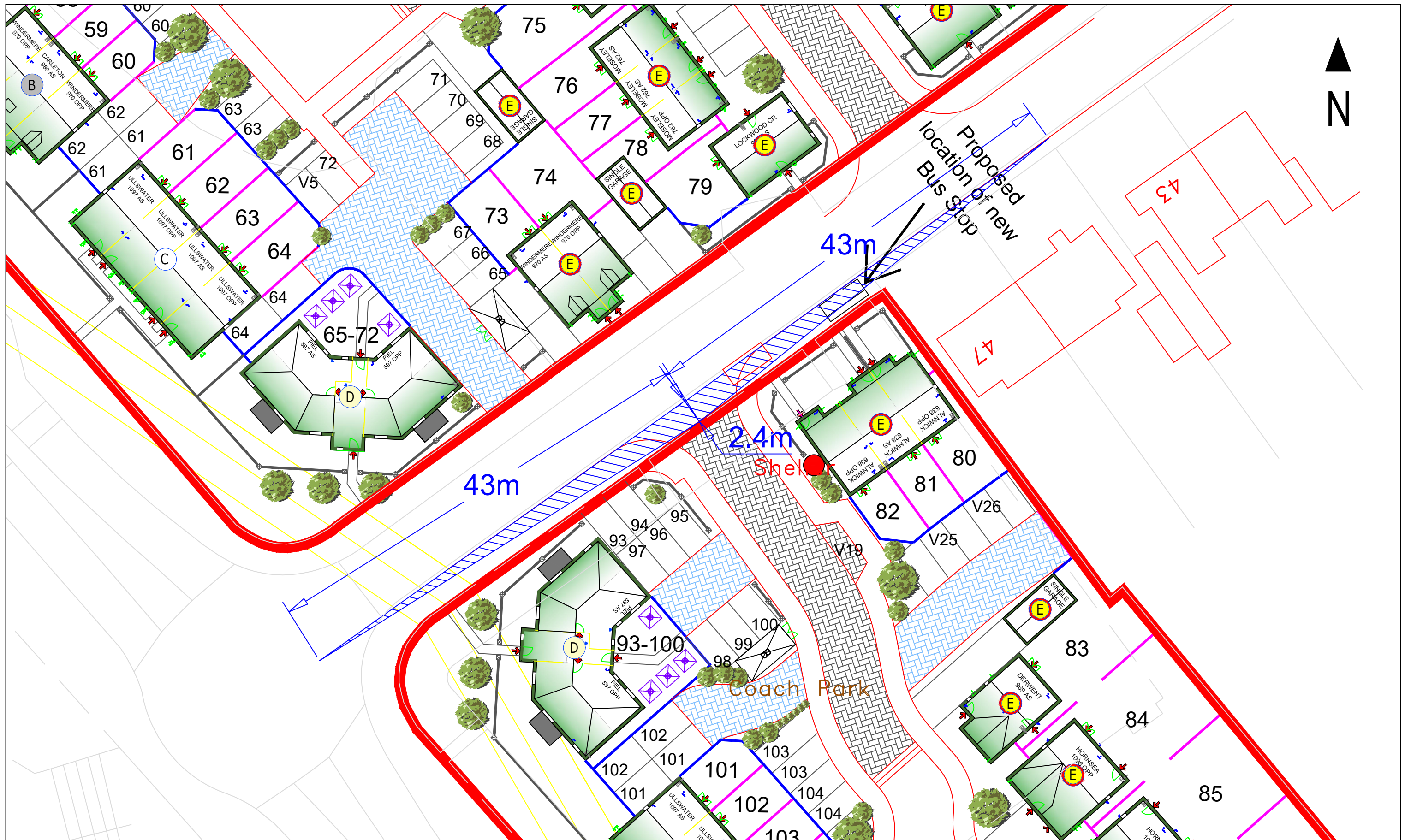
**PERSIMMON**  
Together, we make a home

Site Name: Afan Lido Date: 10/12/2020  
Location: Aberavon Scale: 1:500@A1 1:1000@A3  
Drawing Name/Title: Planning Layout

# Appendix C



|                                                     |           |                                                                                                                                                                                                                     |                 |              |          |                           |       |            |      |     |    |
|-----------------------------------------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|----------|---------------------------|-------|------------|------|-----|----|
| Drawing Title<br><br><br>2.4m x43m Visibility Splay | Client    | <br><br>Unit 9<br>Oak Tree Court<br>Mulberry Drive<br>Cardiff Gate Business Park<br>Cardiff<br>CF23 8RS<br><br>T 029 2073 2652 | Scale:          | 1:300@A3     |          |                           |       |            |      |     |    |
|                                                     | Job Title |                                                                                                                                                                                                                     | Persimmon homes | Designed by: |          |                           |       |            |      |     | KW |
|                                                     |           |                                                                                                                                                                                                                     | Afan Lido       | Drawn by:    |          |                           |       |            |      |     | KW |
|                                                     |           |                                                                                                                                                                                                                     |                 | Ckd/Appd:    | PO'C     | Rev.                      | Date. | Amendment. | Des. | Dm. |    |
|                                                     |           |                                                                                                                                                                                                                     |                 | 1st Issued:  | Feb 2021 | Drg No:<br><br>Appendix C |       |            |      | Rev |    |
|                                                     |           |                                                                                                                                                                                                                     |                 | Job No:      | T20.101  |                           |       |            |      |     |    |

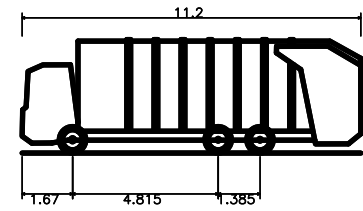
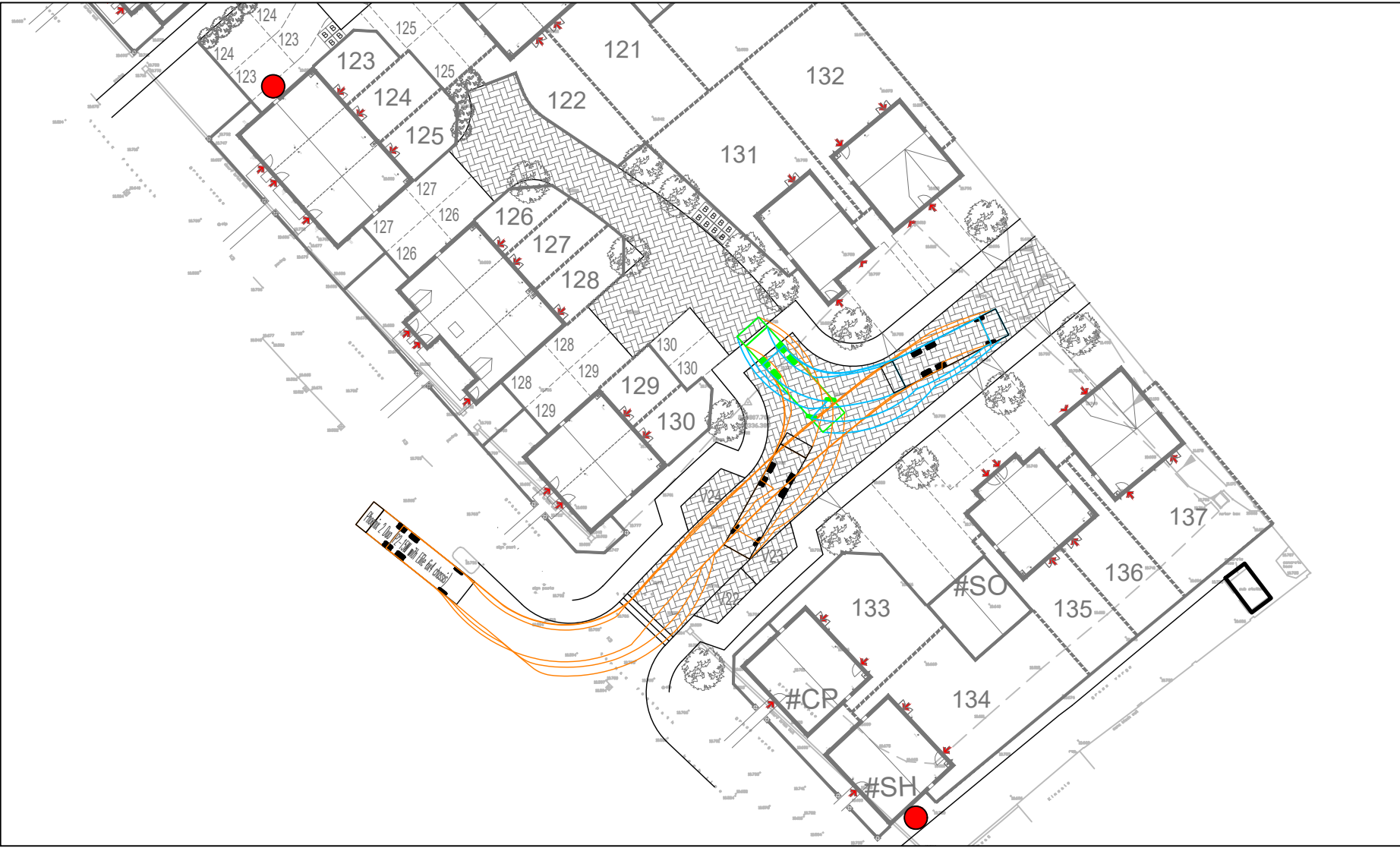
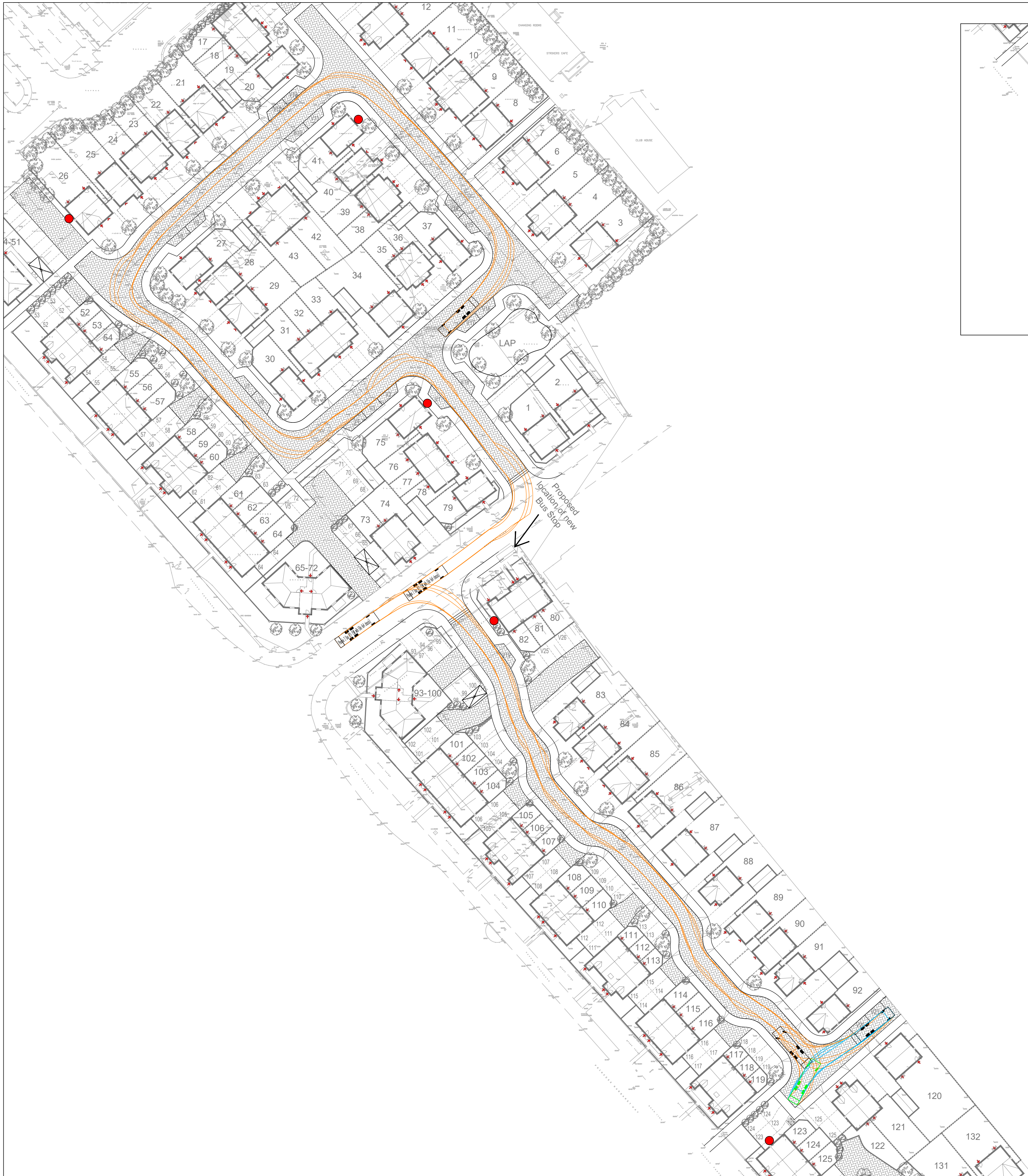


|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        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| Drawing Title<br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br><br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|-----------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|------------|-------|------------|--|--|------|-----|--|
| Drawing Title<br><br><br>2.4m x43m Visibility Splay | Client<br><br>Persimmon homes | <br><br>Unit 9<br>Oak Tree Court<br>Mulberry Drive<br>Cardiff Gate Business Park<br>Cardiff<br>CF23 8RS<br><br>T 029 2073 2652 | Scale:      | 1:300@A3 |            |       |            |  |  |      |     |  |
|                                                     | Designed by:                  |                                                                                                                                                                                                                     | KW          |          |            |       |            |  |  |      |     |  |
|                                                     | Drawn by:                     |                                                                                                                                                                                                                     | KW          |          |            |       |            |  |  |      |     |  |
|                                                     | Job Title<br><br>Afan Lido    |                                                                                                                                                                                                                     | Ckd/Appd:   | PO'C     | Rev.       | Date. | Amendment. |  |  | Des. | Dm. |  |
|                                                     |                               |                                                                                                                                                                                                                     | 1st Issued: | Feb 2021 | Drg No:    |       |            |  |  |      | Rev |  |
|                                                     |                               |                                                                                                                                                                                                                     | Job No:     | T20.101  | Appendix C |       |            |  |  |      |     |  |

# Appendix D



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)  
Overall Length 11.200m  
Overall Width 2.530m  
Overall Body Height 3.251m  
Min Body Ground Clearance 0.304m  
Track Width 2.300m  
Lock to lock time 4.00s  
Kerb to Kerb Turning Radius 9.500m

# GENERAL NOTES

1. DO NOT SCALE
2. THE CONTRACTOR IS TO CHECK AND VERIFY ALL BUILDINGS AND SITE DIMENSIONS AND LEVELS, INCLUDING SEWER INVERT LEVELS, BEFORE WORKS START ON SITE. THE CONTRACTOR IS TO COMPLY IN ALL ASPECTS WITH THE CURRENT BUILDING LEGISLATION, BRITISH STANDARDS, BUILDING REGULATIONS ETC.
3. POSITIONS OF EXISTING SERVICES/STATUTORY UNDERTAKERS APPARATUS ADJACENT TO OR CROSSING PROPOSED EXCAVATIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING WORK.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AND CHECKED AGAINST ALL OTHER DRAWINGS, ENGINEERING DETAILS, SPECIFICATION AND ANY STRUCTURAL, GEOTECHNICAL OR OTHER SPECIALIST DOCUMENT PROVIDED.
5. ANY ANOMALY OR CONTRADICTION BETWEEN ANY OF THE ABOVE IS TO BE REPORTED TO PHWW
6. THIS DRAWING IS SCHEMATIC FOR CLARITY ONLY. POSITIONS OF PIPE RUNS AND MANHOLES MAY VARY ON SITE DUE TO SITE CONDITIONS

Project: Afan Lido

Client:



Drawing: Refuse Vehicle Tracking

Scale: 1:500 @ A1

Date: Feb 2021

Drawn by: RB

Drawing No: 10267 - 1001

Rev: -

**PHOENIX DESIGN**  
Partnership Ltd.

Unit 9, Westway Garage, Marksbury, Bath, BA2 9HN  
tel: 01761 479950  
email: enquiries@phoenixdp.co.uk  
Salle 7, Unit Three, Main Corner, Business Parc, Upper Boat, Pontypridd, CF37 5BE  
tel: 029 2049 0771  
www.phoenixdp.co.uk

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Dwg Status: PRELIMINARY

# Appendix E

Calculation Reference: AUDIT-317901-180706-0749

# TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL  
Category : A - HOUSES PRIVATELY OWNED  
VEHICLES

## Selected regions and areas:

|    |                    |        |
|----|--------------------|--------|
| 02 | SOUTH EAST         |        |
|    | WS WEST SUSSEX     | 1 days |
| 05 | EAST MIDLANDS      |        |
|    | LN LINCOLNSHIRE    | 1 days |
|    | NT NOTTINGHAMSHIRE | 1 days |
| 08 | NORTH WEST         |        |
|    | CH CHESHIRE        | 1 days |
| 11 | SCOTLAND           |        |
|    | FI FIFE            | 1 days |

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

## Secondary 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:              | Number of dwellings  |
| Actual Range:           | 150 to 174 (units: ) |
| Range Selected by User: | 150 to 185 (units: ) |

## Public Transport Provision:

|               |                     |
|---------------|---------------------|
| Selection by: | Include all surveys |
|---------------|---------------------|

|             |                      |
|-------------|----------------------|
| Date Range: | 01/01/05 to 11/12/14 |
|-------------|----------------------|

*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   | 2 days |
| Wednesday | 1 days |
| Thursday  | 1 days |

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

## Selected survey types:

|                       |        |
|-----------------------|--------|
| Manual count          | 5 days |
| Directional ATC Count | 0 days |

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

## Selected Locations:

|              |   |
|--------------|---|
| Edge of Town | 5 |
|--------------|---|

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

## Selected Location Sub Categories:

|                  |   |
|------------------|---|
| Residential Zone | 5 |
|------------------|---|

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

## Secondary Filtering selection:

## Use Class:

|    |        |
|----|--------|
| C3 | 5 days |
|----|--------|

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

Secondary Filtering selection (Cont.):

Population within 1 mile:

|                  |        |
|------------------|--------|
| 5,001 to 10,000  | 1 days |
| 10,001 to 15,000 | 1 days |
| 15,001 to 20,000 | 3 days |

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

Population within 5 miles:

|                    |        |
|--------------------|--------|
| 75,001 to 100,000  | 2 days |
| 100,001 to 125,000 | 2 days |
| 125,001 to 250,000 | 1 days |

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

Car ownership within 5 miles:

|            |        |
|------------|--------|
| 0.6 to 1.0 | 2 days |
| 1.1 to 1.5 | 3 days |

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

Travel Plan:

|     |        |
|-----|--------|
| Yes | 1 days |
| No  | 4 days |

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

PTAL Rating:

|                 |        |
|-----------------|--------|
| No PTAL Present | 5 days |
|-----------------|--------|

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

LIST OF SITES relevant to selection parameters

|   |                                 |               |                     |                 |
|---|---------------------------------|---------------|---------------------|-----------------|
| 1 | CH-03-A-02<br>SYDNEY ROAD       | HOUSES/FLATS  |                     | CESHIRE         |
|   | CREWE                           |               |                     |                 |
|   | Edge of Town                    |               |                     |                 |
|   | Residential Zone                |               |                     |                 |
|   | Total Number of dwellings:      | 174           |                     |                 |
|   | Survey date: TUESDAY            | 14/10/08      | Survey Type: MANUAL |                 |
| 2 | FI-03-A-03<br>WOODMILL ROAD     | MIXED HOUSES  |                     | FIFE            |
|   | DUNFERMLINE                     |               |                     |                 |
|   | Edge of Town                    |               |                     |                 |
|   | Residential Zone                |               |                     |                 |
|   | Total Number of dwellings:      | 155           |                     |                 |
|   | Survey date: MONDAY             | 30/04/07      | Survey Type: MANUAL |                 |
| 3 | LN-03-A-01<br>BRANT ROAD        | MIXED HOUSES  |                     | LINCOLNSHIRE    |
|   | BRACEBRIDGE                     |               |                     |                 |
|   | LINCOLN                         |               |                     |                 |
|   | Edge of Town                    |               |                     |                 |
|   | Residential Zone                |               |                     |                 |
|   | Total Number of dwellings:      | 150           |                     |                 |
|   | Survey date: TUESDAY            | 15/05/07      | Survey Type: MANUAL |                 |
| 4 | NT-03-A-03<br>B6018 SUTTON ROAD | SEMI DETACHED |                     | NOTTINGHAMSHIRE |
|   | KIRKBY-IN-ASHFIELD              |               |                     |                 |
|   | Edge of Town                    |               |                     |                 |
|   | Residential Zone                |               |                     |                 |
|   | Total Number of dwellings:      | 166           |                     |                 |
|   | Survey date: WEDNESDAY          | 28/06/06      | Survey Type: MANUAL |                 |
| 5 | WS-03-A-04<br>HILLS FARM LANE   | MIXED HOUSES  |                     | WEST SUSSEX     |
|   | BROADBRIDGE HEATH               |               |                     |                 |
|   | HORSHAM                         |               |                     |                 |
|   | Edge of Town                    |               |                     |                 |
|   | Residential Zone                |               |                     |                 |
|   | Total Number of dwellings:      | 151           |                     |                 |
|   | Survey date: THURSDAY           | 11/12/14      | Survey Type: MANUAL |                 |

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED  
VEHICLES

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 138 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |             |           |                     | DEPARTURES |             |           |                     | TOTALS   |             |           |                     |
|---------------|----------|-------------|-----------|---------------------|------------|-------------|-----------|---------------------|----------|-------------|-----------|---------------------|
|               | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days   | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate |
| 00:00 - 01:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 01:00 - 02:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 02:00 - 03:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 03:00 - 04:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 04:00 - 05:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 05:00 - 06:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 06:00 - 07:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 07:00 - 08:00 | 5        | 159         | 0.068     | 9.362               | 5          | 159         | 0.313     | 43.168              | 5        | 159         | 0.381     | 52.530              |
| 08:00 - 09:00 | 5        | 159         | 0.141     | 19.417              | 5          | 159         | 0.389     | 53.744              | 5        | 159         | 0.530     | 73.161              |
| 09:00 - 10:00 | 5        | 159         | 0.132     | 18.204              | 5          | 159         | 0.195     | 26.872              | 5        | 159         | 0.327     | 45.076              |
| 10:00 - 11:00 | 5        | 159         | 0.156     | 21.497              | 5          | 159         | 0.197     | 27.219              | 5        | 159         | 0.353     | 48.716              |
| 11:00 - 12:00 | 5        | 159         | 0.167     | 23.058              | 5          | 159         | 0.168     | 23.231              | 5        | 159         | 0.335     | 46.289              |
| 12:00 - 13:00 | 5        | 159         | 0.175     | 24.098              | 5          | 159         | 0.176     | 24.271              | 5        | 159         | 0.351     | 48.369              |
| 13:00 - 14:00 | 5        | 159         | 0.180     | 24.791              | 5          | 159         | 0.141     | 19.417              | 5        | 159         | 0.321     | 44.208              |
| 14:00 - 15:00 | 5        | 159         | 0.185     | 25.485              | 5          | 159         | 0.183     | 25.312              | 5        | 159         | 0.368     | 50.797              |
| 15:00 - 16:00 | 5        | 159         | 0.279     | 38.487              | 5          | 159         | 0.186     | 25.658              | 5        | 159         | 0.465     | 64.145              |
| 16:00 - 17:00 | 5        | 159         | 0.293     | 40.394              | 5          | 159         | 0.195     | 26.872              | 5        | 159         | 0.488     | 67.266              |
| 17:00 - 18:00 | 5        | 159         | 0.361     | 49.756              | 5          | 159         | 0.226     | 31.206              | 5        | 159         | 0.587     | 80.962              |
| 18:00 - 19:00 | 5        | 159         | 0.237     | 32.766              | 5          | 159         | 0.212     | 29.299              | 5        | 159         | 0.449     | 62.065              |
| 19:00 - 20:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 20:00 - 21:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 21:00 - 22:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 22:00 - 23:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 23:00 - 24:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| Total Rates:  |          |             | 2.374     | 327.315             |            |             | 2.581     | 356.269             |          |             | 4.955     | 683.584             |

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

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

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 150 - 174 (units: ) |
| Survey date date range:                       | 01/01/05 - 11/12/14 |
| Number of weekdays (Monday-Friday):           | 5                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 0                   |
| Surveys manually removed from selection:      | 0                   |

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

TAXIS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 138 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |             |           |                     | DEPARTURES |             |           |                     | TOTALS   |             |           |                     |
|---------------|----------|-------------|-----------|---------------------|------------|-------------|-----------|---------------------|----------|-------------|-----------|---------------------|
|               | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days   | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate |
| 00:00 - 01:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 01:00 - 02:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 02:00 - 03:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 03:00 - 04:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 04:00 - 05:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 05:00 - 06:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 06:00 - 07:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 07:00 - 08:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 08:00 - 09:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.003     | 0.347               | 5        | 159         | 0.006     | 0.694               |
| 09:00 - 10:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 10:00 - 11:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 11:00 - 12:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 12:00 - 13:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 13:00 - 14:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 14:00 - 15:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.003     | 0.347               | 5        | 159         | 0.006     | 0.694               |
| 15:00 - 16:00 | 5        | 159         | 0.009     | 1.214               | 5          | 159         | 0.008     | 1.040               | 5        | 159         | 0.017     | 2.254               |
| 16:00 - 17:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.001     | 0.173               |
| 17:00 - 18:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.001     | 0.173               |
| 18:00 - 19:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.003     | 0.347               | 5        | 159         | 0.004     | 0.520               |
| 19:00 - 20:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 20:00 - 21:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 21:00 - 22:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 22:00 - 23:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 23:00 - 24:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| Total Rates:  |          |             | 0.020     | 2.773               |            |             | 0.021     | 2.773               |          |             | 0.041     | 5.546               |

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

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

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 150 - 174 (units: ) |
| Survey date date range:                       | 01/01/05 - 11/12/14 |
| Number of weekdays (Monday-Friday):           | 5                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 0                   |
| Surveys manually removed from selection:      | 0                   |

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

OGVS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 138 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |             |           |                     | DEPARTURES |             |           |                     | TOTALS   |             |           |                     |
|---------------|----------|-------------|-----------|---------------------|------------|-------------|-----------|---------------------|----------|-------------|-----------|---------------------|
|               | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days   | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate |
| 00:00 - 01:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 01:00 - 02:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 02:00 - 03:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 03:00 - 04:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 04:00 - 05:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 05:00 - 06:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 06:00 - 07:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 07:00 - 08:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.003     | 0.347               |
| 08:00 - 09:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.004     | 0.520               | 5        | 159         | 0.007     | 0.867               |
| 09:00 - 10:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.003     | 0.347               |
| 10:00 - 11:00 | 5        | 159         | 0.004     | 0.520               | 5          | 159         | 0.006     | 0.867               | 5        | 159         | 0.010     | 1.387               |
| 11:00 - 12:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.001     | 0.173               |
| 12:00 - 13:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.001     | 0.173               |
| 13:00 - 14:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.004     | 0.520               |
| 14:00 - 15:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.005     | 0.693               | 5        | 159         | 0.008     | 1.040               |
| 15:00 - 16:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.001     | 0.173               |
| 16:00 - 17:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 17:00 - 18:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.001     | 0.173               |
| 18:00 - 19:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 19:00 - 20:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 20:00 - 21:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 21:00 - 22:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 22:00 - 23:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 23:00 - 24:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| Total Rates:  |          |             | 0.021     | 2.601               |            |             | 0.018     | 2.599               |          |             | 0.039     | 5.200               |

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

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

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 150 - 174 (units: ) |
| Survey date date range:                       | 01/01/05 - 11/12/14 |
| Number of weekdays (Monday-Friday):           | 5                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 0                   |
| Surveys manually removed from selection:      | 0                   |

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

PSVS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 138 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |             |           |                     | DEPARTURES |             |           |                     | TOTALS   |             |           |                     |
|---------------|----------|-------------|-----------|---------------------|------------|-------------|-----------|---------------------|----------|-------------|-----------|---------------------|
|               | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days   | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate |
| 00:00 - 01:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 01:00 - 02:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 02:00 - 03:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 03:00 - 04:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 04:00 - 05:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 05:00 - 06:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 06:00 - 07:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 07:00 - 08:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 08:00 - 09:00 | 5        | 159         | 0.004     | 0.520               | 5          | 159         | 0.004     | 0.520               | 5        | 159         | 0.008     | 1.040               |
| 09:00 - 10:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 10:00 - 11:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 11:00 - 12:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 12:00 - 13:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 13:00 - 14:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 14:00 - 15:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.001     | 0.173               |
| 15:00 - 16:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.003     | 0.347               | 5        | 159         | 0.006     | 0.694               |
| 16:00 - 17:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 17:00 - 18:00 | 5        | 159         | 0.000     | 0.000               | 5          | 159         | 0.000     | 0.000               | 5        | 159         | 0.000     | 0.000               |
| 18:00 - 19:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.002     | 0.346               |
| 19:00 - 20:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 20:00 - 21:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 21:00 - 22:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 22:00 - 23:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 23:00 - 24:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| Total Rates:  |          |             | 0.012     | 1.732               |            |             | 0.011     | 1.559               |          |             | 0.023     | 3.291               |

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

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

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 150 - 174 (units: ) |
| Survey date range:                            | 01/01/05 - 11/12/14 |
| Number of weekdays (Monday-Friday):           | 5                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 0                   |
| Surveys manually removed from selection:      | 0                   |

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

TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED

CYCLISTS

Calculation factor: 1 DWELLS

Estimated TRIP rate value per 138 DWELLS shown in shaded columns

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |             |           |                     | DEPARTURES |             |           |                     | TOTALS   |             |           |                     |
|---------------|----------|-------------|-----------|---------------------|------------|-------------|-----------|---------------------|----------|-------------|-----------|---------------------|
|               | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days   | Ave. DWELLS | Trip Rate | Estimated Trip Rate | No. Days | Ave. DWELLS | Trip Rate | Estimated Trip Rate |
| 00:00 - 01:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 01:00 - 02:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 02:00 - 03:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 03:00 - 04:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 04:00 - 05:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 05:00 - 06:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 06:00 - 07:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 07:00 - 08:00 | 5        | 159         | 0.011     | 1.560               | 5          | 159         | 0.014     | 1.907               | 5        | 159         | 0.025     | 3.467               |
| 08:00 - 09:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.009     | 1.214               | 5        | 159         | 0.010     | 1.387               |
| 09:00 - 10:00 | 5        | 159         | 0.008     | 1.040               | 5          | 159         | 0.005     | 0.693               | 5        | 159         | 0.013     | 1.733               |
| 10:00 - 11:00 | 5        | 159         | 0.006     | 0.867               | 5          | 159         | 0.008     | 1.040               | 5        | 159         | 0.014     | 1.907               |
| 11:00 - 12:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.004     | 0.520               | 5        | 159         | 0.007     | 0.867               |
| 12:00 - 13:00 | 5        | 159         | 0.006     | 0.867               | 5          | 159         | 0.001     | 0.173               | 5        | 159         | 0.007     | 1.040               |
| 13:00 - 14:00 | 5        | 159         | 0.003     | 0.347               | 5          | 159         | 0.004     | 0.520               | 5        | 159         | 0.007     | 0.867               |
| 14:00 - 15:00 | 5        | 159         | 0.001     | 0.173               | 5          | 159         | 0.003     | 0.347               | 5        | 159         | 0.004     | 0.520               |
| 15:00 - 16:00 | 5        | 159         | 0.009     | 1.214               | 5          | 159         | 0.005     | 0.693               | 5        | 159         | 0.014     | 1.907               |
| 16:00 - 17:00 | 5        | 159         | 0.005     | 0.693               | 5          | 159         | 0.009     | 1.214               | 5        | 159         | 0.014     | 1.907               |
| 17:00 - 18:00 | 5        | 159         | 0.018     | 2.427               | 5          | 159         | 0.006     | 0.867               | 5        | 159         | 0.024     | 3.294               |
| 18:00 - 19:00 | 5        | 159         | 0.004     | 0.520               | 5          | 159         | 0.003     | 0.347               | 5        | 159         | 0.007     | 0.867               |
| 19:00 - 20:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 20:00 - 21:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 21:00 - 22:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 22:00 - 23:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| 23:00 - 24:00 |          |             |           |                     |            |             |           |                     |          |             |           |                     |
| Total Rates:  |          |             | 0.075     | 10.228              |            |             | 0.071     | 9.535               |          |             | 0.146     | 19.763              |

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

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

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#### Parameter summary

|                                               |                     |
|-----------------------------------------------|---------------------|
| Trip rate parameter range selected:           | 150 - 174 (units: ) |
| Survey date date range:                       | 01/01/05 - 11/12/14 |
| Number of weekdays (Monday-Friday):           | 5                   |
| Number of Saturdays:                          | 0                   |
| Number of Sundays:                            | 0                   |
| Surveys automatically removed from selection: | 0                   |
| Surveys manually removed from selection:      | 0                   |

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

# Appendix F

| Junctions 9                                                                                                                                                      |  |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|
| PICADY 9 - Priority Intersection Module                                                                                                                          |  |  |  |  |  |  |
| Version: 9.5.1.7462<br>© Copyright TRL Limited, 2019                                                                                                             |  |  |  |  |  |  |
| For sales and distribution information, program advice and maintenance, contact TRL:<br>+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk              |  |  |  |  |  |  |
| The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution |  |  |  |  |  |  |

Filename: staggered access junction.j9

Path: K:\T20\Jobs\T20.101 - Aberavon Seafront\Analysis

Report generation date: 13/10/2020 20:31:18

»2035 + Dev, AM

»2035 + Dev, PM

### Summary of junction performance

|              | AM     |             |           |      |     | PM     |             |           |      |     |
|--------------|--------|-------------|-----------|------|-----|--------|-------------|-----------|------|-----|
|              | Set ID | Queue (PCU) | Delay (s) | RFC  | LOS | Set ID | Queue (PCU) | Delay (s) | RFC  | LOS |
| 2035 + Dev   |        |             |           |      |     |        |             |           |      |     |
| Stream B-ACD | D1     | 0.0         | 6.45      | 0.01 | A   | D2     | 0.0         | 0.00      | 0.00 | A   |
| Stream AB-CD |        | 0.0         | 6.09      | 0.01 | A   |        | 0.0         | 6.35      | 0.01 | A   |
| Stream D-ABC |        | 0.1         | 8.31      | 0.04 | A   |        | 0.0         | 0.00      | 0.00 | A   |
| Stream CD-AB |        | 0.0         | 5.31      | 0.00 | A   |        | 0.0         | 5.56      | 0.00 | A   |

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

### File summary

#### File Description

|             |                       |
|-------------|-----------------------|
| Title       |                       |
| Location    |                       |
| Site number |                       |
| Date        | 13/10/2020            |
| Version     |                       |
| Status      | (new file)            |
| Identifier  |                       |
| Client      |                       |
| Jobnumber   |                       |
| Enumerator  | DESKTOP-9689HLT\cooke |
| Description |                       |

### Units

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

### Analysis Options

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

### Demand Set Summary

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1 | 2035 + Dev    | AM               | ONE HOUR             | 07:45              | 09:15               | 15                        | ✓                 |
| D2 | 2035 + 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                             |

# 2035 + 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 | Left-Right Stagger | Two-way              |                       | 0.36               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Arms

### Arms

| Arm | Name                       | Description | Arm type |
|-----|----------------------------|-------------|----------|
| A   | Princess Margaret Way West |             | Major    |
| B   | Site Access                |             | Minor    |
| C   | Princess Margaret Way East |             | Major    |
| D   | Jersey Quay                |             | Minor    |

### Major Arm Geometry

| Arm | Width of carriageway (m) | Has kerbed central reserve | Has right turn bay | Width for right turn (m) | Visibility for right turn (m) | Blocks? | Blocking queue (PCU) |
|-----|--------------------------|----------------------------|--------------------|--------------------------|-------------------------------|---------|----------------------|
| A   | 7.20                     |                            | ✓                  | 3.60                     | 67.0                          | ✓       | 4.00                 |
| C   | 7.20                     |                            | ✓                  | 3.60                     | 200.0                         | ✓       | 4.00                 |

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   | One lane       | 3.65           | 55                     | 200                     |
| D   | One lane       | 3.65           | 18                     | 20                      |

### Slope / Intercept / Capacity

#### Priority Intersection Slopes and Intercepts

| Stream | Intercept (PCU/hr) | Slope for A-B | Slope for A-C | Slope for A-D | Slope for B-C | Slope for B-D | Slope for C-A | Slope for C-B | Slope for C-D | Slope for D-A | Slope for D-B |
|--------|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| AB-D   | 706                | -             | -             | -             | -             | -             | 0.259         | 0.259         | 0.259         | -             | -             |
| B-A    | 634                | 0.109         | 0.277         | 0.277         | -             | -             | 0.174         | 0.395         | -             | 0.174         | 0.395         |
| B-CD   | 799                | 0.116         | 0.293         | 0.293         | -             | -             | -             | -             | -             | -             | -             |
| CD-B   | 795                | 0.292         | 0.292         | 0.292         | -             | -             | -             | -             | -             | -             | -             |
| D-AB   | 678                | -             | -             | -             | -             | -             | 0.249         | 0.249         | 0.098         | -             | -             |
| D-C    | 525                | -             | 0.144         | 0.327         | 0.144         | 0.327         | 0.229         | 0.229         | 0.091         | -             | -             |

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 | 2035 + 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 | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 149                     | 100.000            |
| B   |            | ONE HOUR     | ✓            | 5                       | 100.000            |
| C   |            | ONE HOUR     | ✓            | 172                     | 100.000            |
| D   |            | ONE HOUR     | ✓            | 20                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |   |     |   |
|------|----|-----|---|-----|---|
|      | A  | B   | C | D   |   |
| From | A  | 0   | 1 | 142 | 6 |
|      | B  | 3   | 0 | 2   | 0 |
|      | C  | 168 | 1 | 0   | 3 |
|      | D  | 6   | 0 | 14  | 0 |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |    |    |
|------|----|----|----|----|----|
|      | A  | B  | C  | D  |    |
| From | A  | 10 | 10 | 10 | 10 |
|      | B  | 10 | 10 | 10 | 10 |
|      | C  | 10 | 10 | 10 | 10 |
|      | D  | 10 | 10 | 10 | 10 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-ACD  | 0.01    | 6.45          | 0.0             | A       | 5                       | 7                             |
| A-B    |         |               |                 |         | 0.92                    | 1                             |
| A-C    |         |               |                 |         | 130                     | 195                           |
| A-D    |         |               |                 |         | 6                       | 8                             |
| AB-CD  | 0.01    | 6.09          | 0.0             | A       | 6                       | 8                             |
| AB-C   |         |               |                 |         | 132                     | 198                           |
| D-ABC  | 0.04    | 8.31          | 0.1             | A       | 18                      | 28                            |
| C-D    |         |               |                 |         | 3                       | 4                             |
| C-A    |         |               |                 |         | 154                     | 231                           |
| C-B    |         |               |                 |         | 0.92                    | 1                             |
| CD-AB  | 0.00    | 5.31          | 0.0             | A       | 0.92                    | 1                             |
| CD-A   |         |               |                 |         | 160                     | 239                           |

## 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-ACD  | 4                     | 0.94                    | 642               | 0.006 | 4                   | 0.0               | 0.0             | 6.201     | A                             |
| A-B    | 0.75                  | 0.19                    |                   |       | 0.75                |                   |                 |           |                               |
| A-C    | 107                   | 27                      |                   |       | 107                 |                   |                 |           |                               |
| A-D    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |
| AB-CD  | 5                     | 1                       | 673               | 0.007 | 4                   | 0.0               | 0.0             | 5.927     | A                             |
| AB-C   | 108                   | 27                      |                   |       | 108                 |                   |                 |           |                               |
| D-ABC  | 15                    | 4                       | 519               | 0.029 | 15                  | 0.0               | 0.0             | 7.851     | A                             |
| C-D    | 2                     | 0.56                    |                   |       | 2                   |                   |                 |           |                               |
| C-A    | 126                   | 32                      |                   |       | 126                 |                   |                 |           |                               |
| C-B    | 0.75                  | 0.19                    |                   |       | 0.75                |                   |                 |           |                               |
| CD-AB  | 0.75                  | 0.19                    | 762               | 0.001 | 0.75                | 0.0               | 0.0             | 5.200     | A                             |
| CD-A   | 131                   | 33                      |                   |       | 131                 |                   |                 |           |                               |

### 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-ACD  | 4                     | 1                       | 633               | 0.007 | 4                   | 0.0               | 0.0             | 6.302     | A                             |
| A-B    | 0.90                  | 0.22                    |                   |       | 0.90                |                   |                 |           |                               |
| A-C    | 128                   | 32                      |                   |       | 128                 |                   |                 |           |                               |
| A-D    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |
| AB-CD  | 5                     | 1                       | 666               | 0.008 | 5                   | 0.0               | 0.0             | 5.993     | A                             |
| AB-C   | 129                   | 32                      |                   |       | 129                 |                   |                 |           |                               |
| D-ABC  | 18                    | 4                       | 511               | 0.035 | 18                  | 0.0               | 0.0             | 8.039     | A                             |
| C-D    | 3                     | 0.67                    |                   |       | 3                   |                   |                 |           |                               |
| C-A    | 151                   | 38                      |                   |       | 151                 |                   |                 |           |                               |
| C-B    | 0.90                  | 0.22                    |                   |       | 0.90                |                   |                 |           |                               |
| CD-AB  | 0.90                  | 0.22                    | 756               | 0.001 | 0.90                | 0.0               | 0.0             | 5.245     | A                             |
| CD-A   | 156                   | 39                      |                   |       | 156                 |                   |                 |           |                               |

### 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-ACD  | 6                     | 1                       | 620               | 0.009 | 5                   | 0.0               | 0.0             | 6.448     | A                             |
| A-B    | 1                     | 0.28                    |                   |       | 1                   |                   |                 |           |                               |
| A-C    | 156                   | 39                      |                   |       | 156                 |                   |                 |           |                               |
| A-D    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| AB-CD  | 7                     | 2                       | 657               | 0.010 | 7                   | 0.0               | 0.0             | 6.087     | A                             |
| AB-C   | 159                   | 40                      |                   |       | 159                 |                   |                 |           |                               |
| D-ABC  | 22                    | 6                       | 499               | 0.044 | 22                  | 0.0               | 0.1             | 8.309     | A                             |
| C-D    | 3                     | 0.83                    |                   |       | 3                   |                   |                 |           |                               |
| C-A    | 185                   | 46                      |                   |       | 185                 |                   |                 |           |                               |
| C-B    | 1                     | 0.28                    |                   |       | 1                   |                   |                 |           |                               |
| CD-AB  | 1                     | 0.28                    | 747               | 0.001 | 1                   | 0.0               | 0.0             | 5.308     | A                             |
| CD-A   | 192                   | 48                      |                   |       | 192                 |                   |                 |           |                               |

**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-ACD  | 6                     | 1                       | 620               | 0.009 | 6                   | 0.0               | 0.0             | 6.448     | A                             |
| A-B    | 1                     | 0.28                    |                   |       | 1                   |                   |                 |           |                               |
| A-C    | 156                   | 39                      |                   |       | 156                 |                   |                 |           |                               |
| A-D    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| AB-CD  | 7                     | 2                       | 657               | 0.010 | 7                   | 0.0               | 0.0             | 6.087     | A                             |
| AB-C   | 159                   | 40                      |                   |       | 159                 |                   |                 |           |                               |
| D-ABC  | 22                    | 6                       | 499               | 0.044 | 22                  | 0.1               | 0.1             | 8.309     | A                             |
| C-D    | 3                     | 0.83                    |                   |       | 3                   |                   |                 |           |                               |
| C-A    | 185                   | 46                      |                   |       | 185                 |                   |                 |           |                               |
| C-B    | 1                     | 0.28                    |                   |       | 1                   |                   |                 |           |                               |
| CD-AB  | 1                     | 0.28                    | 747               | 0.001 | 1                   | 0.0               | 0.0             | 5.308     | A                             |
| CD-A   | 192                   | 48                      |                   |       | 192                 |                   |                 |           |                               |

**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-ACD  | 4                     | 1                       | 633               | 0.007 | 5                   | 0.0               | 0.0             | 6.305     | A                             |
| A-B    | 0.90                  | 0.22                    |                   |       | 0.90                |                   |                 |           |                               |
| A-C    | 128                   | 32                      |                   |       | 128                 |                   |                 |           |                               |
| A-D    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |
| AB-CD  | 5                     | 1                       | 666               | 0.008 | 5                   | 0.0               | 0.0             | 5.996     | A                             |
| AB-C   | 129                   | 32                      |                   |       | 129                 |                   |                 |           |                               |
| D-ABC  | 18                    | 4                       | 511               | 0.035 | 18                  | 0.1               | 0.0             | 8.040     | A                             |
| C-D    | 3                     | 0.67                    |                   |       | 3                   |                   |                 |           |                               |
| C-A    | 151                   | 38                      |                   |       | 151                 |                   |                 |           |                               |
| C-B    | 0.90                  | 0.22                    |                   |       | 0.90                |                   |                 |           |                               |
| CD-AB  | 0.90                  | 0.22                    | 756               | 0.001 | 0.90                | 0.0               | 0.0             | 5.245     | A                             |
| CD-A   | 156                   | 39                      |                   |       | 156                 |                   |                 |           |                               |

**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-ACD  | 4                     | 0.94                    | 642               | 0.006 | 4                   | 0.0               | 0.0             | 6.204     | A                             |
| A-B    | 0.75                  | 0.19                    |                   |       | 0.75                |                   |                 |           |                               |
| A-C    | 107                   | 27                      |                   |       | 107                 |                   |                 |           |                               |
| A-D    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |
| AB-CD  | 5                     | 1                       | 673               | 0.007 | 5                   | 0.0               | 0.0             | 5.927     | A                             |
| AB-C   | 108                   | 27                      |                   |       | 108                 |                   |                 |           |                               |
| D-ABC  | 15                    | 4                       | 519               | 0.029 | 15                  | 0.0               | 0.0             | 7.855     | A                             |
| C-D    | 2                     | 0.56                    |                   |       | 2                   |                   |                 |           |                               |
| C-A    | 126                   | 32                      |                   |       | 126                 |                   |                 |           |                               |
| C-B    | 0.75                  | 0.19                    |                   |       | 0.75                |                   |                 |           |                               |
| CD-AB  | 0.75                  | 0.19                    | 762               | 0.001 | 0.75                | 0.0               | 0.0             | 5.200     | A                             |
| CD-A   | 131                   | 33                      |                   |       | 131                 |                   |                 |           |                               |

# 2035 + 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 | Left-Right Stagger | Two-way              |                       | 0.05               | 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 | 2035 + 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 | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 247                     | 100.000            |
| B   |            | ONE HOUR     | ✓            | 3                       | 100.000            |
| C   |            | ONE HOUR     | ✓            | 270                     | 100.000            |
| D   |            | ONE HOUR     | ✓            | 4                       | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |   |     |    |
|------|----|-----|---|-----|----|
|      |    | A   | B | C   | D  |
| From | A  | 0   | 2 | 240 | 5  |
|      | B  | 1   | 0 | 2   | 0  |
|      | C  | 257 | 3 | 0   | 10 |
|      | D  | 2   | 0 | 2   | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |    |    |
|------|----|----|----|----|----|
|      |    | A  | B  | C  | D  |
| From | A  | 10 | 10 | 10 | 10 |
|      | B  | 10 | 10 | 10 | 10 |
|      | C  | 10 | 10 | 10 | 10 |
|      | D  | 10 | 10 | 10 | 10 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-ACD  | 0.00    | 0.00          | 0.0             | A       | 0                       | 0                             |
| A-B    |         |               |                 |         | 2                       | 3                             |
| A-C    |         |               |                 |         | 220                     | 330                           |
| A-D    |         |               |                 |         | 5                       | 7                             |
| AB-CD  | 0.01    | 6.35          | 0.0             | A       | 5                       | 7                             |
| AB-C   |         |               |                 |         | 220                     | 330                           |
| D-ABC  | 0.00    | 0.00          | 0.0             | A       | 0                       | 0                             |
| C-D    |         |               |                 |         | 9                       | 14                            |
| C-A    |         |               |                 |         | 236                     | 354                           |
| C-B    |         |               |                 |         | 3                       | 4                             |
| CD-AB  | 0.00    | 5.56          | 0.0             | A       | 3                       | 4                             |
| CD-A   |         |               |                 |         | 236                     | 354                           |

### 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-ACD  | 0                     | 0                       | 631               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| A-B    | 2                     | 0.38                    |                   |       | 2                   |                   |                 |           |                               |
| A-C    | 181                   | 45                      |                   |       | 181                 |                   |                 |           |                               |
| A-D    | 4                     | 0.94                    |                   |       | 4                   |                   |                 |           |                               |
| AB-CD  | 4                     | 0.94                    | 653               | 0.006 | 4                   | 0.0               | 0.0             | 6.094     | A                             |
| AB-C   | 181                   | 45                      |                   |       | 181                 |                   |                 |           |                               |
| D-ABC  | 0                     | 0                       | 526               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| C-D    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| C-A    | 193                   | 48                      |                   |       | 193                 |                   |                 |           |                               |
| C-B    | 2                     | 0.56                    |                   |       | 2                   |                   |                 |           |                               |
| CD-AB  | 2                     | 0.56                    | 741               | 0.003 | 2                   | 0.0               | 0.0             | 5.362     | A                             |
| CD-A   | 193                   | 48                      |                   |       | 193                 |                   |                 |           |                               |

#### 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-ACD  | 0                     | 0                       | 616               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| A-B    | 2                     | 0.45                    |                   |       | 2                   |                   |                 |           |                               |
| A-C    | 216                   | 54                      |                   |       | 216                 |                   |                 |           |                               |
| A-D    | 4                     | 1                       |                   |       | 4                   |                   |                 |           |                               |
| AB-CD  | 4                     | 1                       | 643               | 0.007 | 4                   | 0.0               | 0.0             | 6.199     | A                             |
| AB-C   | 216                   | 54                      |                   |       | 216                 |                   |                 |           |                               |
| D-ABC  | 0                     | 0                       | 513               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| C-D    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| C-A    | 231                   | 58                      |                   |       | 231                 |                   |                 |           |                               |
| C-B    | 3                     | 0.67                    |                   |       | 3                   |                   |                 |           |                               |
| CD-AB  | 3                     | 0.67                    | 730               | 0.004 | 3                   | 0.0               | 0.0             | 5.443     | A                             |
| CD-A   | 231                   | 58                      |                   |       | 231                 |                   |                 |           |                               |

**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-ACD  | 0                     | 0                       | 596               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| A-B    | 2                     | 0.55                    |                   |       | 2                   |                   |                 |           |                               |
| A-C    | 264                   | 66                      |                   |       | 264                 |                   |                 |           |                               |
| A-D    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |
| AB-CD  | 6                     | 1                       | 629               | 0.009 | 5                   | 0.0               | 0.0             | 6.350     | A                             |
| AB-C   | 264                   | 66                      |                   |       | 264                 |                   |                 |           |                               |
| D-ABC  | 0                     | 0                       | 495               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| C-D    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| C-A    | 283                   | 71                      |                   |       | 283                 |                   |                 |           |                               |
| C-B    | 3                     | 0.83                    |                   |       | 3                   |                   |                 |           |                               |
| CD-AB  | 3                     | 0.83                    | 716               | 0.005 | 3                   | 0.0               | 0.0             | 5.559     | A                             |
| CD-A   | 283                   | 71                      |                   |       | 283                 |                   |                 |           |                               |

**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-ACD  | 0                     | 0                       | 596               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| A-B    | 2                     | 0.55                    |                   |       | 2                   |                   |                 |           |                               |
| A-C    | 264                   | 66                      |                   |       | 264                 |                   |                 |           |                               |
| A-D    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |
| AB-CD  | 6                     | 1                       | 629               | 0.009 | 6                   | 0.0               | 0.0             | 6.350     | A                             |
| AB-C   | 264                   | 66                      |                   |       | 264                 |                   |                 |           |                               |
| D-ABC  | 0                     | 0                       | 495               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| C-D    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| C-A    | 283                   | 71                      |                   |       | 283                 |                   |                 |           |                               |
| C-B    | 3                     | 0.83                    |                   |       | 3                   |                   |                 |           |                               |
| CD-AB  | 3                     | 0.83                    | 716               | 0.005 | 3                   | 0.0               | 0.0             | 5.559     | A                             |
| CD-A   | 283                   | 71                      |                   |       | 283                 |                   |                 |           |                               |

**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-ACD  | 0                     | 0                       | 616               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| A-B    | 2                     | 0.45                    |                   |       | 2                   |                   |                 |           |                               |
| A-C    | 216                   | 54                      |                   |       | 216                 |                   |                 |           |                               |
| A-D    | 4                     | 1                       |                   |       | 4                   |                   |                 |           |                               |
| AB-CD  | 4                     | 1                       | 643               | 0.007 | 5                   | 0.0               | 0.0             | 6.199     | A                             |
| AB-C   | 216                   | 54                      |                   |       | 216                 |                   |                 |           |                               |
| D-ABC  | 0                     | 0                       | 513               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| C-D    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| C-A    | 231                   | 58                      |                   |       | 231                 |                   |                 |           |                               |
| C-B    | 3                     | 0.67                    |                   |       | 3                   |                   |                 |           |                               |
| CD-AB  | 3                     | 0.67                    | 730               | 0.004 | 3                   | 0.0               | 0.0             | 5.443     | A                             |
| CD-A   | 231                   | 58                      |                   |       | 231                 |                   |                 |           |                               |

**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-ACD  | 0                     | 0                       | 631               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| A-B    | 2                     | 0.38                    |                   |       | 2                   |                   |                 |           |                               |
| A-C    | 181                   | 45                      |                   |       | 181                 |                   |                 |           |                               |
| A-D    | 4                     | 0.94                    |                   |       | 4                   |                   |                 |           |                               |
| AB-CD  | 4                     | 0.94                    | 653               | 0.006 | 4                   | 0.0               | 0.0             | 6.094     | A                             |
| AB-C   | 181                   | 45                      |                   |       | 181                 |                   |                 |           |                               |
| D-ABC  | 0                     | 0                       | 526               | 0.000 | 0                   | 0.0               | 0.0             | 0.000     | A                             |
| C-D    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| C-A    | 193                   | 48                      |                   |       | 193                 |                   |                 |           |                               |
| C-B    | 2                     | 0.56                    |                   |       | 2                   |                   |                 |           |                               |
| CD-AB  | 2                     | 0.56                    | 741               | 0.003 | 2                   | 0.0               | 0.0             | 5.364     | A                             |
| CD-A   | 193                   | 48                      |                   |       | 193                 |                   |                 |           |                               |

# Appendix G

| Junctions 9                                                                                                                                                      |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| PICADY 9 - Priority Intersection Module                                                                                                                          |  |  |  |  |
| Version: 9.5.1.7462                                                                                                                                              |  |  |  |  |
| © Copyright TRL Limited, 2019                                                                                                                                    |  |  |  |  |
| For sales and distribution information, program advice and maintenance, contact TRL:<br>+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk              |  |  |  |  |
| The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution |  |  |  |  |

Filename: Sunny Bank Rd-Channel View.j9

Path: K:\T20\Jobs\T20.101 - Aberavon Seafront\Analysis

Report generation date: 14/10/2020 12:02:14

»2018 Base, AM  
 »2018 Base, PM  
 »2020 Base, AM  
 »2020 Base, PM  
 »2022 Base, AM  
 »2022 Base, PM  
 »2035 Base, AM  
 »2035 Base, PM  
 »2022 + Dev , AM  
 »2022 + Dev , PM  
 »2035 + Dev , AM  
 »2035 + Dev , PM

### Summary of junction performance

|             | AM         |             |           |      |     | PM     |             |           |      |     |
|-------------|------------|-------------|-----------|------|-----|--------|-------------|-----------|------|-----|
|             | Set ID     | Queue (PCU) | Delay (s) | RFC  | LOS | Set ID | Queue (PCU) | Delay (s) | RFC  | LOS |
|             | 2018 Base  |             |           |      |     |        |             |           |      |     |
| Stream B-AC | D1         | 0.2         | 9.00      | 0.18 | A   | D2     | 0.1         | 7.52      | 0.08 | A   |
| Stream C-AB |            | 0.1         | 7.57      | 0.10 | A   |        | 0.1         | 7.31      | 0.05 | A   |
|             | 2020 Base  |             |           |      |     |        |             |           |      |     |
| Stream B-AC | D3         | 0.2         | 9.07      | 0.18 | A   | D4     | 0.1         | 7.54      | 0.08 | A   |
| Stream C-AB |            | 0.1         | 7.59      | 0.10 | A   |        | 0.1         | 7.32      | 0.05 | A   |
|             | 2022 Base  |             |           |      |     |        |             |           |      |     |
| Stream B-AC | D5         | 0.2         | 9.14      | 0.19 | A   | D6     | 0.1         | 7.56      | 0.09 | A   |
| Stream C-AB |            | 0.1         | 7.61      | 0.10 | A   |        | 0.1         | 7.33      | 0.06 | A   |
|             | 2035 Base  |             |           |      |     |        |             |           |      |     |
| Stream B-AC | D7         | 0.3         | 9.41      | 0.21 | A   | D8     | 0.1         | 7.65      | 0.10 | A   |
| Stream C-AB |            | 0.1         | 7.69      | 0.11 | A   |        | 0.1         | 7.37      | 0.06 | A   |
|             | 2022 + Dev |             |           |      |     |        |             |           |      |     |
| Stream B-AC | D9         | 0.4         | 10.04     | 0.26 | B   | D10    | 0.1         | 7.86      | 0.12 | A   |
| Stream C-AB |            | 0.2         | 7.75      | 0.12 | A   |        | 0.1         | 7.62      | 0.09 | A   |
|             | 2035 + Dev |             |           |      |     |        |             |           |      |     |
| Stream B-AC | D11        | 0.4         | 10.38     | 0.28 | B   | D12    | 0.2         | 7.95      | 0.13 | A   |
| Stream C-AB |            | 0.2         | 7.84      | 0.13 | A   |        | 0.1         | 7.67      | 0.10 | A   |

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

## File summary

### File Description

|             |              |
|-------------|--------------|
| Title       |              |
| Location    |              |
| Site number |              |
| Date        | 26/07/2018   |
| Version     |              |
| Status      | (new file)   |
| Identifier  |              |
| Client      |              |
| Jobnumber   |              |
| Enumerator  | ATRANS\Katie |
| Description |              |

## Units

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

## Analysis Options

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

## Demand Set Summary

| ID  | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1  | 2018 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D2  | 2018 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D3  | 2020 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D4  | 2020 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D5  | 2022 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D6  | 2022 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D7  | 2035 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D8  | 2035 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D9  | 2022 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D10 | 2022 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D11 | 2035 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D12 | 2035 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

## Analysis Set Details

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

# 2018 Base, 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              |                       | 5.69               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Arms

### Arms

| Arm | Name                | Description | Arm type |
|-----|---------------------|-------------|----------|
| A   | Sunny Bank Road (E) |             | Major    |
| B   | Channel View        |             | Minor    |
| C   | Sunny Bank Road (W) |             | 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   | 6.00                     |                            |                    | 0.0                           | ✓       | 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   | One lane       | 2.20           | 0                      | 0                       |

## 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    | 440                | 0.080         | 0.202         | 0.127         | 0.289         |
| B-C    | 574                | 0.088         | 0.222         | -             | -             |
| C-B    | 574                | 0.222         | 0.222         | -             | -             |

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 | 2018 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 43                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 82                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 71                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | A  | B  | C  |
|  | A  | 0  | 27 | 16 |
|  | B  | 27 | 0  | 55 |
|  | C  | 23 | 48 | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |    |   |
|--|----|---|----|---|
|  |    | A | B  | C |
|  | A  | 0 | 0  | 0 |
|  | B  | 4 | 0  | 4 |
|  | C  | 0 | 11 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.18    | 9.00          | 0.2             | A       | 75                      | 113                           |
| C-AB   | 0.10    | 7.57          | 0.1             | A       | 46                      | 69                            |
| C-A    |         |               |                 |         | 19                      | 29                            |
| A-B    |         |               |                 |         | 25                      | 37                            |
| A-C    |         |               |                 |         | 15                      | 22                            |

### Main Results for each time segment

#### 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   | 62                    | 15                      | 511               | 0.121 | 61                  | 0.0               | 0.1             | 8.311     | A                             |
| C-AB   | 37                    | 9                       | 579               | 0.064 | 37                  | 0.0               | 0.1             | 7.350     | A                             |
| C-A    | 16                    | 4                       |                   |       | 16                  |                   |                 |           |                               |
| A-B    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-C    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |

**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   | 74                    | 18                      | 509               | 0.145 | 74                  | 0.1               | 0.2             | 8.594     | A                             |
| C-AB   | 45                    | 11                      | 580               | 0.077 | 45                  | 0.1               | 0.1             | 7.444     | A                             |
| C-A    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-B    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-C    | 14                    | 4                       |                   |       | 14                  |                   |                 |           |                               |

**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   | 90                    | 23                      | 506               | 0.178 | 90                  | 0.2               | 0.2             | 8.993     | A                             |
| C-AB   | 55                    | 14                      | 581               | 0.095 | 55                  | 0.1               | 0.1             | 7.568     | A                             |
| C-A    | 23                    | 6                       |                   |       | 23                  |                   |                 |           |                               |
| A-B    | 30                    | 7                       |                   |       | 30                  |                   |                 |           |                               |
| A-C    | 18                    | 4                       |                   |       | 18                  |                   |                 |           |                               |

**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   | 90                    | 23                      | 506               | 0.178 | 90                  | 0.2               | 0.2             | 9.001     | A                             |
| C-AB   | 55                    | 14                      | 581               | 0.095 | 55                  | 0.1               | 0.1             | 7.566     | A                             |
| C-A    | 23                    | 6                       |                   |       | 23                  |                   |                 |           |                               |
| A-B    | 30                    | 7                       |                   |       | 30                  |                   |                 |           |                               |
| A-C    | 18                    | 4                       |                   |       | 18                  |                   |                 |           |                               |

**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   | 74                    | 18                      | 509               | 0.145 | 74                  | 0.2               | 0.2             | 8.607     | A                             |
| C-AB   | 45                    | 11                      | 580               | 0.077 | 45                  | 0.1               | 0.1             | 7.443     | A                             |
| C-A    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-B    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-C    | 14                    | 4                       |                   |       | 14                  |                   |                 |           |                               |

**09:15 - 09:30**

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 62                    | 15                      | 511               | 0.121 | 62                  | 0.2               | 0.1             | 8.338     | A                             |
| C-AB   | 37                    | 9                       | 579               | 0.064 | 37                  | 0.1               | 0.1             | 7.355     | A                             |
| C-A    | 16                    | 4                       |                   |       | 16                  |                   |                 |           |                               |
| A-B    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-C    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |

# 2018 Base, 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              |                       | 5.30               | 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 | 2018 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 18                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 41                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 37                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
|      | A  | B  | C  |    |
| From | A  | 0  | 12 | 6  |
|      | B  | 5  | 0  | 36 |
|      | C  | 10 | 27 | 0  |
|      |    |    |    |    |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |   |
|------|----|----|----|---|
|      | A  | B  | C  |   |
| From | A  | 0  | 17 | 0 |
|      | B  | 0  | 0  | 6 |
|      | C  | 10 | 11 | 0 |
|      |    |    |    |   |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.08    | 7.52          | 0.1             | A       | 38                      | 56                            |
| C-AB   | 0.05    | 7.31          | 0.1             | A       | 25                      | 38                            |
| C-A    |         |               |                 |         | 9                       | 13                            |
| A-B    |         |               |                 |         | 11                      | 17                            |
| A-C    |         |               |                 |         | 6                       | 8                             |

### Main Results for each time segment

#### 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   | 31                    | 8                       | 550               | 0.056 | 31                  | 0.0               | 0.1             | 7.287     | A                             |
| C-AB   | 21                    | 5                       | 576               | 0.036 | 20                  | 0.0               | 0.0             | 7.189     | A                             |
| C-A    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| A-B    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 37                    | 9                       | 550               | 0.067 | 37                  | 0.1               | 0.1             | 7.387     | A                             |
| C-AB   | 25                    | 6                       | 577               | 0.043 | 25                  | 0.0               | 0.1             | 7.239     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 45                    | 11                      | 549               | 0.082 | 45                  | 0.1               | 0.1             | 7.521     | A                             |
| C-AB   | 30                    | 8                       | 577               | 0.053 | 30                  | 0.1               | 0.1             | 7.306     | A                             |
| C-A    | 10                    | 3                       |                   |       | 10                  |                   |                 |           |                               |
| A-B    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

#### 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   | 45                    | 11                      | 549               | 0.082 | 45                  | 0.1               | 0.1             | 7.521     | A                             |
| C-AB   | 30                    | 8                       | 577               | 0.053 | 30                  | 0.1               | 0.1             | 7.309     | A                             |
| C-A    | 10                    | 3                       |                   |       | 10                  |                   |                 |           |                               |
| A-B    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

**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   | 37                    | 9                       | 550               | 0.067 | 37                  | 0.1               | 0.1             | 7.389     | A                             |
| C-AB   | 25                    | 6                       | 577               | 0.043 | 25                  | 0.1               | 0.1             | 7.240     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

**18:15 - 18:30**

| 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   | 31                    | 8                       | 550               | 0.056 | 31                  | 0.1               | 0.1             | 7.297     | A                             |
| C-AB   | 21                    | 5                       | 576               | 0.036 | 21                  | 0.1               | 0.0             | 7.195     | A                             |
| C-A    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| A-B    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

# 2020 Base, 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              |                       | 5.73               | 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 | 2020 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 44                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 84                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 73                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
|      | A  | B  | C  |    |
| From | A  | 0  | 28 | 16 |
|      | B  | 28 | 0  | 57 |
|      | C  | 24 | 49 | 0  |
|      |    |    |    |    |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |   |
|------|----|---|----|---|
|      | A  | B | C  |   |
| From | A  | 0 | 0  | 0 |
|      | B  | 4 | 0  | 4 |
|      | C  | 0 | 11 | 0 |
|      |    |   |    |   |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.18    | 9.07          | 0.2             | A       | 77                      | 116                           |
| C-AB   | 0.10    | 7.59          | 0.1             | A       | 47                      | 71                            |
| C-A    |         |               |                 |         | 20                      | 30                            |
| A-B    |         |               |                 |         | 25                      | 38                            |
| A-C    |         |               |                 |         | 15                      | 23                            |

### Main Results for each time segment

#### 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   | 63                    | 16                      | 511               | 0.124 | 63                  | 0.0               | 0.1             | 8.347     | A                             |
| C-AB   | 38                    | 10                      | 579               | 0.066 | 38                  | 0.0               | 0.1             | 7.362     | A                             |
| C-A    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |
| A-B    | 21                    | 5                       |                   |       | 21                  |                   |                 |           |                               |
| A-C    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |

#### 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   | 76                    | 19                      | 509               | 0.149 | 76                  | 0.1               | 0.2             | 8.643     | A                             |
| C-AB   | 46                    | 12                      | 580               | 0.079 | 46                  | 0.1               | 0.1             | 7.459     | A                             |
| C-A    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-B    | 25                    | 6                       |                   |       | 25                  |                   |                 |           |                               |
| A-C    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |

#### 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   | 93                    | 23                      | 506               | 0.184 | 93                  | 0.2               | 0.2             | 9.057     | A                             |
| C-AB   | 57                    | 14                      | 581               | 0.098 | 57                  | 0.1               | 0.1             | 7.588     | A                             |
| C-A    | 23                    | 6                       |                   |       | 23                  |                   |                 |           |                               |
| A-B    | 31                    | 8                       |                   |       | 31                  |                   |                 |           |                               |
| A-C    | 18                    | 5                       |                   |       | 18                  |                   |                 |           |                               |

#### 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   | 93                    | 23                      | 506               | 0.184 | 93                  | 0.2               | 0.2             | 9.066     | A                             |
| C-AB   | 57                    | 14                      | 581               | 0.098 | 57                  | 0.1               | 0.1             | 7.588     | A                             |
| C-A    | 23                    | 6                       |                   |       | 23                  |                   |                 |           |                               |
| A-B    | 31                    | 8                       |                   |       | 31                  |                   |                 |           |                               |
| A-C    | 18                    | 5                       |                   |       | 18                  |                   |                 |           |                               |

**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   | 76                    | 19                      | 509               | 0.149 | 76                  | 0.2               | 0.2             | 8.656     | A                             |
| C-AB   | 46                    | 12                      | 580               | 0.079 | 46                  | 0.1               | 0.1             | 7.459     | A                             |
| C-A    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-B    | 25                    | 6                       |                   |       | 25                  |                   |                 |           |                               |
| A-C    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |

**09:15 - 09:30**

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 63                    | 16                      | 511               | 0.124 | 64                  | 0.2               | 0.1             | 8.375     | A                             |
| C-AB   | 38                    | 10                      | 579               | 0.066 | 38                  | 0.1               | 0.1             | 7.367     | A                             |
| C-A    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |
| A-B    | 21                    | 5                       |                   |       | 21                  |                   |                 |           |                               |
| A-C    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |

# 2020 Base, 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              |                       | 5.31               | 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 | 2020 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 18                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 42                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 38                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | A  | B  | C  |
|  | A  | 0  | 12 | 6  |
|  | B  | 5  | 0  | 37 |
|  | C  | 10 | 28 | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |   |
|--|----|----|----|---|
|  |    | A  | B  | C |
|  | A  | 0  | 17 | 0 |
|  | B  | 0  | 0  | 6 |
|  | C  | 10 | 11 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.08    | 7.54          | 0.1             | A       | 39                      | 58                            |
| C-AB   | 0.05    | 7.32          | 0.1             | A       | 26                      | 39                            |
| C-A    |         |               |                 |         | 9                       | 13                            |
| A-B    |         |               |                 |         | 11                      | 17                            |
| A-C    |         |               |                 |         | 6                       | 8                             |

### Main Results for each time segment

#### 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   | 32                    | 8                       | 550               | 0.058 | 31                  | 0.0               | 0.1             | 7.300     | A                             |
| C-AB   | 21                    | 5                       | 576               | 0.037 | 21                  | 0.0               | 0.0             | 7.195     | A                             |
| C-A    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| A-B    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 38                    | 9                       | 549               | 0.069 | 38                  | 0.1               | 0.1             | 7.403     | A                             |
| C-AB   | 25                    | 6                       | 577               | 0.044 | 25                  | 0.0               | 0.1             | 7.247     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |

#### 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   | 46                    | 12                      | 549               | 0.085 | 46                  | 0.1               | 0.1             | 7.541     | A                             |
| C-AB   | 31                    | 8                       | 577               | 0.054 | 31                  | 0.1               | 0.1             | 7.316     | A                             |
| C-A    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-B    | 14                    | 3                       |                   |       | 14                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

#### 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   | 46                    | 12                      | 549               | 0.085 | 46                  | 0.1               | 0.1             | 7.541     | A                             |
| C-AB   | 31                    | 8                       | 577               | 0.054 | 31                  | 0.1               | 0.1             | 7.319     | A                             |
| C-A    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-B    | 14                    | 3                       |                   |       | 14                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

**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   | 38                    | 9                       | 549               | 0.069 | 38                  | 0.1               | 0.1             | 7.405     | A                             |
| C-AB   | 25                    | 6                       | 577               | 0.044 | 25                  | 0.1               | 0.1             | 7.248     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |

**18:15 - 18:30**

| 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   | 32                    | 8                       | 550               | 0.058 | 32                  | 0.1               | 0.1             | 7.310     | A                             |
| C-AB   | 21                    | 5                       | 576               | 0.037 | 21                  | 0.1               | 0.0             | 7.202     | A                             |
| C-A    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| A-B    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

# 2022 Base, 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              |                       | 5.76               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D5 | 2022 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 46                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 87                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 75                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
|      | A  | B  | C  |    |
| From | A  | 0  | 29 | 17 |
|      | B  | 29 | 0  | 58 |
|      | C  | 24 | 51 | 0  |
|      |    |    |    |    |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |   |
|------|----|---|----|---|
|      | A  | B | C  |   |
| From | A  | 0 | 0  | 0 |
|      | B  | 4 | 0  | 4 |
|      | C  | 0 | 11 | 0 |
|      |    |   |    |   |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.19    | 9.14          | 0.2             | A       | 80                      | 119                           |
| C-AB   | 0.10    | 7.61          | 0.1             | A       | 49                      | 73                            |
| C-A    |         |               |                 |         | 20                      | 31                            |
| A-B    |         |               |                 |         | 26                      | 39                            |
| A-C    |         |               |                 |         | 16                      | 23                            |

### Main Results for each time segment

#### 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   | 65                    | 16                      | 511               | 0.128 | 65                  | 0.0               | 0.2             | 8.388     | A                             |
| C-AB   | 40                    | 10                      | 579               | 0.068 | 39                  | 0.0               | 0.1             | 7.372     | A                             |
| C-A    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |
| A-B    | 22                    | 5                       |                   |       | 22                  |                   |                 |           |                               |
| A-C    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |

#### 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   | 78                    | 20                      | 508               | 0.154 | 78                  | 0.2               | 0.2             | 8.695     | A                             |
| C-AB   | 47                    | 12                      | 580               | 0.082 | 47                  | 0.1               | 0.1             | 7.475     | A                             |
| C-A    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-B    | 26                    | 6                       |                   |       | 26                  |                   |                 |           |                               |
| A-C    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |

#### 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   | 96                    | 24                      | 505               | 0.189 | 95                  | 0.2               | 0.2             | 9.128     | A                             |
| C-AB   | 59                    | 15                      | 581               | 0.101 | 59                  | 0.1               | 0.1             | 7.610     | A                             |
| C-A    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-B    | 31                    | 8                       |                   |       | 31                  |                   |                 |           |                               |
| A-C    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |

#### 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   | 96                    | 24                      | 505               | 0.189 | 96                  | 0.2               | 0.2             | 9.137     | A                             |
| C-AB   | 59                    | 15                      | 581               | 0.101 | 59                  | 0.1               | 0.1             | 7.610     | A                             |
| C-A    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-B    | 31                    | 8                       |                   |       | 31                  |                   |                 |           |                               |
| A-C    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |

**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   | 78                    | 20                      | 508               | 0.154 | 78                  | 0.2               | 0.2             | 8.709     | A                             |
| C-AB   | 47                    | 12                      | 580               | 0.082 | 48                  | 0.1               | 0.1             | 7.475     | A                             |
| C-A    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-B    | 26                    | 6                       |                   |       | 26                  |                   |                 |           |                               |
| A-C    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |

**09:15 - 09:30**

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 65                    | 16                      | 510               | 0.128 | 66                  | 0.2               | 0.2             | 8.418     | A                             |
| C-AB   | 40                    | 10                      | 579               | 0.068 | 40                  | 0.1               | 0.1             | 7.380     | A                             |
| C-A    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |
| A-B    | 22                    | 5                       |                   |       | 22                  |                   |                 |           |                               |
| A-C    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |

# 2022 Base, 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              |                       | 5.33               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2022 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 19                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 43                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 39                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      |   | To |    |    |
|------|---|----|----|----|
| From |   | A  | B  | C  |
|      | A | 0  | 13 | 6  |
|      | B | 5  | 0  | 38 |
|      | C | 11 | 29 | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|      |   | To |    |   |
|------|---|----|----|---|
| From |   | A  | B  | C |
|      | A | 0  | 17 | 0 |
|      | B | 0  | 0  | 6 |
|      | C | 10 | 11 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.09    | 7.56          | 0.1             | A       | 40                      | 60                            |
| C-AB   | 0.06    | 7.33          | 0.1             | A       | 27                      | 40                            |
| C-A    |         |               |                 |         | 9                       | 14                            |
| A-B    |         |               |                 |         | 12                      | 17                            |
| A-C    |         |               |                 |         | 6                       | 9                             |

### Main Results for each time segment

#### 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   | 33                    | 8                       | 550               | 0.059 | 32                  | 0.0               | 0.1             | 7.314     | A                             |
| C-AB   | 22                    | 5                       | 576               | 0.038 | 22                  | 0.0               | 0.0             | 7.202     | A                             |
| C-A    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| A-B    | 10                    | 2                       |                   |       | 10                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 39                    | 10                      | 549               | 0.071 | 39                  | 0.1               | 0.1             | 7.420     | A                             |
| C-AB   | 26                    | 7                       | 577               | 0.045 | 26                  | 0.0               | 0.1             | 7.255     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |

#### 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   | 48                    | 12                      | 548               | 0.087 | 48                  | 0.1               | 0.1             | 7.563     | A                             |
| C-AB   | 32                    | 8                       | 577               | 0.056 | 32                  | 0.1               | 0.1             | 7.327     | A                             |
| C-A    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-B    | 14                    | 3                       |                   |       | 14                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

#### 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   | 48                    | 12                      | 548               | 0.087 | 48                  | 0.1               | 0.1             | 7.563     | A                             |
| C-AB   | 32                    | 8                       | 577               | 0.056 | 32                  | 0.1               | 0.1             | 7.330     | A                             |
| C-A    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-B    | 14                    | 3                       |                   |       | 14                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

**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   | 39                    | 10                      | 549               | 0.071 | 39                  | 0.1               | 0.1             | 7.425     | A                             |
| C-AB   | 26                    | 7                       | 577               | 0.045 | 26                  | 0.1               | 0.1             | 7.257     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |

**18:15 - 18:30**

| 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   | 33                    | 8                       | 550               | 0.059 | 33                  | 0.1               | 0.1             | 7.322     | A                             |
| C-AB   | 22                    | 5                       | 576               | 0.038 | 22                  | 0.1               | 0.0             | 7.206     | A                             |
| C-A    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| A-B    | 10                    | 2                       |                   |       | 10                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

# 2035 Base, 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              |                       | 5.91               | 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 |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D7 | 2035 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 50                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 96                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 83                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
|      | A  | B  | C  |    |
| From | A  | 0  | 32 | 19 |
|      | B  | 32 | 0  | 64 |
|      | C  | 27 | 56 | 0  |
|      |    |    |    |    |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |   |
|------|----|---|----|---|
|      | A  | B | C  |   |
| From | A  | 0 | 0  | 0 |
|      | B  | 4 | 0  | 4 |
|      | C  | 0 | 11 | 0 |
|      |    |   |    |   |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.21    | 9.41          | 0.3             | A       | 88                      | 132                           |
| C-AB   | 0.11    | 7.69          | 0.1             | A       | 54                      | 81                            |
| C-A    |         |               |                 |         | 22                      | 34                            |
| A-B    |         |               |                 |         | 29                      | 44                            |
| A-C    |         |               |                 |         | 17                      | 26                            |

### Main Results for each time segment

#### 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   | 72                    | 18                      | 509               | 0.142 | 72                  | 0.0               | 0.2             | 8.543     | A                             |
| C-AB   | 44                    | 11                      | 579               | 0.076 | 44                  | 0.0               | 0.1             | 7.423     | A                             |
| C-A    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-B    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-C    | 14                    | 4                       |                   |       | 14                  |                   |                 |           |                               |

#### 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   | 86                    | 22                      | 507               | 0.171 | 86                  | 0.2               | 0.2             | 8.897     | A                             |
| C-AB   | 53                    | 13                      | 581               | 0.091 | 53                  | 0.1               | 0.1             | 7.539     | A                             |
| C-A    | 22                    | 6                       |                   |       | 22                  |                   |                 |           |                               |
| A-B    | 28                    | 7                       |                   |       | 28                  |                   |                 |           |                               |
| A-C    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |

#### 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   | 106                   | 26                      | 504               | 0.210 | 106                 | 0.2               | 0.3             | 9.403     | A                             |
| C-AB   | 65                    | 16                      | 582               | 0.112 | 65                  | 0.1               | 0.1             | 7.692     | A                             |
| C-A    | 26                    | 7                       |                   |       | 26                  |                   |                 |           |                               |
| A-B    | 35                    | 9                       |                   |       | 35                  |                   |                 |           |                               |
| A-C    | 21                    | 5                       |                   |       | 21                  |                   |                 |           |                               |

#### 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   | 106                   | 26                      | 504               | 0.210 | 106                 | 0.3               | 0.3             | 9.415     | A                             |
| C-AB   | 65                    | 16                      | 582               | 0.112 | 65                  | 0.1               | 0.1             | 7.691     | A                             |
| C-A    | 26                    | 7                       |                   |       | 26                  |                   |                 |           |                               |
| A-B    | 35                    | 9                       |                   |       | 35                  |                   |                 |           |                               |
| A-C    | 21                    | 5                       |                   |       | 21                  |                   |                 |           |                               |

**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   | 86                    | 22                      | 507               | 0.171 | 87                  | 0.3               | 0.2             | 8.915     | A                             |
| C-AB   | 53                    | 13                      | 581               | 0.091 | 53                  | 0.1               | 0.1             | 7.538     | A                             |
| C-A    | 22                    | 6                       |                   |       | 22                  |                   |                 |           |                               |
| A-B    | 28                    | 7                       |                   |       | 28                  |                   |                 |           |                               |
| A-C    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |

**09:15 - 09:30**

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 72                    | 18                      | 509               | 0.142 | 73                  | 0.2               | 0.2             | 8.578     | A                             |
| C-AB   | 44                    | 11                      | 579               | 0.076 | 44                  | 0.1               | 0.1             | 7.431     | A                             |
| C-A    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-B    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-C    | 14                    | 4                       |                   |       | 14                  |                   |                 |           |                               |

# 2035 Base, 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              |                       | 5.38               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D8 | 2035 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 21                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 48                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 43                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | A  | B  | C  |
|  | A  | 0  | 14 | 7  |
|  | B  | 6  | 0  | 42 |
|  | C  | 12 | 32 | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |   |
|--|----|----|----|---|
|  |    | A  | B  | C |
|  | A  | 0  | 17 | 0 |
|  | B  | 0  | 0  | 6 |
|  | C  | 10 | 11 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.10    | 7.65          | 0.1             | A       | 44                      | 66                            |
| C-AB   | 0.06    | 7.37          | 0.1             | A       | 30                      | 44                            |
| C-A    |         |               |                 |         | 10                      | 15                            |
| A-B    |         |               |                 |         | 13                      | 19                            |
| A-C    |         |               |                 |         | 6                       | 10                            |

### Main Results for each time segment

#### 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   | 36                    | 9                       | 550               | 0.066 | 36                  | 0.0               | 0.1             | 7.370     | A                             |
| C-AB   | 24                    | 6                       | 576               | 0.042 | 24                  | 0.0               | 0.0             | 7.230     | A                             |
| C-A    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 43                    | 11                      | 549               | 0.079 | 43                  | 0.1               | 0.1             | 7.488     | A                             |
| C-AB   | 29                    | 7                       | 577               | 0.050 | 29                  | 0.0               | 0.1             | 7.289     | A                             |
| C-A    | 10                    | 2                       |                   |       | 10                  |                   |                 |           |                               |
| A-B    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |
| A-C    | 6                     | 2                       |                   |       | 6                   |                   |                 |           |                               |

#### 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   | 53                    | 13                      | 548               | 0.096 | 53                  | 0.1               | 0.1             | 7.650     | A                             |
| C-AB   | 36                    | 9                       | 578               | 0.062 | 36                  | 0.1               | 0.1             | 7.370     | A                             |
| C-A    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |
| A-B    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |
| A-C    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |

#### 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   | 53                    | 13                      | 548               | 0.096 | 53                  | 0.1               | 0.1             | 7.650     | A                             |
| C-AB   | 36                    | 9                       | 578               | 0.062 | 36                  | 0.1               | 0.1             | 7.373     | A                             |
| C-A    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |
| A-B    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |
| A-C    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |

**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   | 43                    | 11                      | 549               | 0.079 | 43                  | 0.1               | 0.1             | 7.491     | A                             |
| C-AB   | 29                    | 7                       | 577               | 0.050 | 29                  | 0.1               | 0.1             | 7.294     | A                             |
| C-A    | 10                    | 2                       |                   |       | 10                  |                   |                 |           |                               |
| A-B    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |
| A-C    | 6                     | 2                       |                   |       | 6                   |                   |                 |           |                               |

**18:15 - 18:30**

| 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   | 36                    | 9                       | 550               | 0.066 | 36                  | 0.1               | 0.1             | 7.380     | A                             |
| C-AB   | 24                    | 6                       | 576               | 0.042 | 24                  | 0.1               | 0.1             | 7.237     | A                             |
| C-A    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| A-B    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

# 2022 + 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              |                       | 6.62               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D9 | 2022 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 50                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 119                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 83                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
| From |    | A  | B  | C  |
|      | A  | 0  | 33 | 17 |
|      | B  | 39 | 0  | 80 |
|      | C  | 24 | 59 | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |   |
|------|----|---|----|---|
| From |    | A | B  | C |
|      | A  | 0 | 0  | 0 |
|      | B  | 4 | 0  | 4 |
|      | C  | 0 | 11 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.26    | 10.04         | 0.4             | B       | 109                     | 164                           |
| C-AB   | 0.12    | 7.75          | 0.2             | A       | 56                      | 84                            |
| C-A    |         |               |                 |         | 20                      | 30                            |
| A-B    |         |               |                 |         | 30                      | 45                            |
| A-C    |         |               |                 |         | 16                      | 23                            |

### Main Results for each time segment

#### 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   | 90                    | 22                      | 509               | 0.176 | 89                  | 0.0               | 0.2             | 8.879     | A                             |
| C-AB   | 45                    | 11                      | 578               | 0.079 | 45                  | 0.0               | 0.1             | 7.465     | A                             |
| C-A    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |
| A-B    | 25                    | 6                       |                   |       | 25                  |                   |                 |           |                               |
| A-C    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |

#### 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   | 107                   | 27                      | 507               | 0.211 | 107                 | 0.2               | 0.3             | 9.348     | A                             |
| C-AB   | 55                    | 14                      | 579               | 0.094 | 55                  | 0.1               | 0.1             | 7.590     | A                             |
| C-A    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-B    | 30                    | 7                       |                   |       | 30                  |                   |                 |           |                               |
| A-C    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |

#### 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   | 131                   | 33                      | 504               | 0.260 | 131                 | 0.3               | 0.4             | 10.026    | B                             |
| C-AB   | 68                    | 17                      | 580               | 0.116 | 67                  | 0.1               | 0.2             | 7.754     | A                             |
| C-A    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-B    | 36                    | 9                       |                   |       | 36                  |                   |                 |           |                               |
| A-C    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |

#### 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   | 131                   | 33                      | 504               | 0.260 | 131                 | 0.4               | 0.4             | 10.044    | B                             |
| C-AB   | 68                    | 17                      | 580               | 0.116 | 68                  | 0.2               | 0.2             | 7.755     | A                             |
| C-A    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-B    | 36                    | 9                       |                   |       | 36                  |                   |                 |           |                               |
| A-C    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |

**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   | 107                   | 27                      | 507               | 0.211 | 107                 | 0.4               | 0.3             | 9.373     | A                             |
| C-AB   | 55                    | 14                      | 579               | 0.094 | 55                  | 0.2               | 0.1             | 7.590     | A                             |
| C-A    | 20                    | 5                       |                   |       | 20                  |                   |                 |           |                               |
| A-B    | 30                    | 7                       |                   |       | 30                  |                   |                 |           |                               |
| A-C    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |

**09:15 - 09:30**

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 90                    | 22                      | 509               | 0.176 | 90                  | 0.3               | 0.2             | 8.929     | A                             |
| C-AB   | 46                    | 11                      | 578               | 0.079 | 46                  | 0.1               | 0.1             | 7.474     | A                             |
| C-A    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |
| A-B    | 25                    | 6                       |                   |       | 25                  |                   |                 |           |                               |
| A-C    | 13                    | 3                       |                   |       | 13                  |                   |                 |           |                               |

# 2022 + 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              |                       | 5.76               | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D10 | 2022 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 27                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 59                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 56                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
|      | A  | B  | C  |    |
| From | A  | 0  | 20 | 6  |
|      | B  | 7  | 0  | 51 |
|      | C  | 11 | 46 | 0  |
|      |    |    |    |    |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |   |
|------|----|----|----|---|
|      | A  | B  | C  |   |
| From | A  | 0  | 17 | 0 |
|      | B  | 0  | 0  | 6 |
|      | C  | 10 | 11 | 0 |
|      |    |    |    |   |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.12    | 7.86          | 0.1             | A       | 54                      | 81                            |
| C-AB   | 0.09    | 7.62          | 0.1             | A       | 43                      | 64                            |
| C-A    |         |               |                 |         | 9                       | 13                            |
| A-B    |         |               |                 |         | 19                      | 28                            |
| A-C    |         |               |                 |         | 6                       | 9                             |

### Main Results for each time segment

#### 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   | 44                    | 11                      | 549               | 0.080 | 44                  | 0.0               | 0.1             | 7.496     | A                             |
| C-AB   | 35                    | 9                       | 575               | 0.060 | 34                  | 0.0               | 0.1             | 7.389     | A                             |
| C-A    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| A-B    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 53                    | 13                      | 548               | 0.096 | 53                  | 0.1               | 0.1             | 7.649     | A                             |
| C-AB   | 42                    | 10                      | 575               | 0.072 | 42                  | 0.1               | 0.1             | 7.487     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 18                    | 5                       |                   |       | 18                  |                   |                 |           |                               |
| A-C    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |

#### 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   | 65                    | 16                      | 547               | 0.118 | 64                  | 0.1               | 0.1             | 7.854     | A                             |
| C-AB   | 51                    | 13                      | 575               | 0.089 | 51                  | 0.1               | 0.1             | 7.619     | A                             |
| C-A    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-B    | 22                    | 6                       |                   |       | 22                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

#### 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   | 65                    | 16                      | 547               | 0.118 | 65                  | 0.1               | 0.1             | 7.857     | A                             |
| C-AB   | 51                    | 13                      | 575               | 0.089 | 51                  | 0.1               | 0.1             | 7.619     | A                             |
| C-A    | 11                    | 3                       |                   |       | 11                  |                   |                 |           |                               |
| A-B    | 22                    | 6                       |                   |       | 22                  |                   |                 |           |                               |
| A-C    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |

**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   | 53                    | 13                      | 548               | 0.096 | 53                  | 0.1               | 0.1             | 7.652     | A                             |
| C-AB   | 42                    | 10                      | 575               | 0.072 | 42                  | 0.1               | 0.1             | 7.489     | A                             |
| C-A    | 9                     | 2                       |                   |       | 9                   |                   |                 |           |                               |
| A-B    | 18                    | 5                       |                   |       | 18                  |                   |                 |           |                               |
| A-C    | 6                     | 1                       |                   |       | 6                   |                   |                 |           |                               |

**18:15 - 18:30**

| 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   | 44                    | 11                      | 549               | 0.080 | 44                  | 0.1               | 0.1             | 7.508     | A                             |
| C-AB   | 35                    | 9                       | 575               | 0.060 | 35                  | 0.1               | 0.1             | 7.397     | A                             |
| C-A    | 7                     | 2                       |                   |       | 7                   |                   |                 |           |                               |
| A-B    | 15                    | 4                       |                   |       | 15                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

# 2035 + 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              |                       | 6.78               | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D11 | 2035 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 55                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 128                     | 100.000            |
| C   |            | ONE HOUR     | ✓            | 91                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |    |    |
|------|----|----|----|----|
|      | A  | B  | C  |    |
| From | A  | 0  | 36 | 19 |
|      | B  | 42 | 0  | 86 |
|      | C  | 27 | 64 | 0  |
|      |    |    |    |    |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |   |
|------|----|---|----|---|
|      | A  | B | C  |   |
| From | A  | 0 | 0  | 0 |
|      | B  | 4 | 0  | 4 |
|      | C  | 0 | 11 | 0 |
|      |    |   |    |   |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.28    | 10.38         | 0.4             | B       | 118                     | 177                           |
| C-AB   | 0.13    | 7.84          | 0.2             | A       | 61                      | 92                            |
| C-A    |         |               |                 |         | 22                      | 33                            |
| A-B    |         |               |                 |         | 33                      | 50                            |
| A-C    |         |               |                 |         | 17                      | 26                            |

### Main Results for each time segment

#### 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   | 97                    | 24                      | 508               | 0.190 | 96                  | 0.0               | 0.2             | 9.053     | A                             |
| C-AB   | 50                    | 12                      | 579               | 0.086 | 49                  | 0.0               | 0.1             | 7.522     | A                             |
| C-A    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-B    | 27                    | 7                       |                   |       | 27                  |                   |                 |           |                               |
| A-C    | 14                    | 4                       |                   |       | 14                  |                   |                 |           |                               |

#### 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   | 115                   | 29                      | 506               | 0.228 | 115                 | 0.2               | 0.3             | 9.582     | A                             |
| C-AB   | 60                    | 15                      | 580               | 0.104 | 60                  | 0.1               | 0.1             | 7.656     | A                             |
| C-A    | 22                    | 5                       |                   |       | 22                  |                   |                 |           |                               |
| A-B    | 32                    | 8                       |                   |       | 32                  |                   |                 |           |                               |
| A-C    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |

#### 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   | 141                   | 35                      | 502               | 0.281 | 141                 | 0.3               | 0.4             | 10.358    | B                             |
| C-AB   | 74                    | 19                      | 581               | 0.128 | 74                  | 0.1               | 0.2             | 7.841     | A                             |
| C-A    | 26                    | 6                       |                   |       | 26                  |                   |                 |           |                               |
| A-B    | 40                    | 10                      |                   |       | 40                  |                   |                 |           |                               |
| A-C    | 21                    | 5                       |                   |       | 21                  |                   |                 |           |                               |

#### 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   | 141                   | 35                      | 502               | 0.281 | 141                 | 0.4               | 0.4             | 10.381    | B                             |
| C-AB   | 74                    | 19                      | 581               | 0.128 | 74                  | 0.2               | 0.2             | 7.843     | A                             |
| C-A    | 26                    | 6                       |                   |       | 26                  |                   |                 |           |                               |
| A-B    | 40                    | 10                      |                   |       | 40                  |                   |                 |           |                               |
| A-C    | 21                    | 5                       |                   |       | 21                  |                   |                 |           |                               |

**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   | 115                   | 29                      | 506               | 0.228 | 116                 | 0.4               | 0.3             | 9.614     | A                             |
| C-AB   | 60                    | 15                      | 580               | 0.104 | 60                  | 0.2               | 0.1             | 7.653     | A                             |
| C-A    | 22                    | 5                       |                   |       | 22                  |                   |                 |           |                               |
| A-B    | 32                    | 8                       |                   |       | 32                  |                   |                 |           |                               |
| A-C    | 17                    | 4                       |                   |       | 17                  |                   |                 |           |                               |

**09:15 - 09:30**

| Stream | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|--------|-----------------------|-------------------------|-------------------|-------|---------------------|-------------------|-----------------|-----------|-------------------------------|
| B-AC   | 97                    | 24                      | 508               | 0.190 | 97                  | 0.3               | 0.2             | 9.107     | A                             |
| C-AB   | 50                    | 12                      | 579               | 0.086 | 50                  | 0.1               | 0.1             | 7.526     | A                             |
| C-A    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-B    | 27                    | 7                       |                   |       | 27                  |                   |                 |           |                               |
| A-C    | 14                    | 4                       |                   |       | 14                  |                   |                 |           |                               |

# 2035 + 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              |                       | 5.80               | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D12 | 2035 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| A   |            | ONE HOUR     | ✓            | 29                      | 100.000            |
| B   |            | ONE HOUR     | ✓            | 63                      | 100.000            |
| C   |            | ONE HOUR     | ✓            | 60                      | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | A  | B  | C  |
|  | A  | 0  | 22 | 7  |
|  | B  | 8  | 0  | 56 |
|  | C  | 12 | 49 | 0  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |   |
|--|----|----|----|---|
|  |    | A  | B  | C |
|  | A  | 0  | 17 | 0 |
|  | B  | 0  | 0  | 6 |
|  | C  | 10 | 11 | 0 |

## Results

### Results Summary for whole modelled period

| Stream | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|--------|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| B-AC   | 0.13    | 7.95          | 0.2             | A       | 58                      | 87                            |
| C-AB   | 0.10    | 7.67          | 0.1             | A       | 45                      | 68                            |
| C-A    |         |               |                 |         | 10                      | 15                            |
| A-B    |         |               |                 |         | 20                      | 30                            |
| A-C    |         |               |                 |         | 6                       | 10                            |

### Main Results for each time segment

#### 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   | 48                    | 12                      | 548               | 0.087 | 47                  | 0.0               | 0.1             | 7.547     | A                             |
| C-AB   | 37                    | 9                       | 575               | 0.065 | 37                  | 0.0               | 0.1             | 7.419     | A                             |
| C-A    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| A-B    | 16                    | 4                       |                   |       | 16                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

#### 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   | 57                    | 14                      | 547               | 0.104 | 57                  | 0.1               | 0.1             | 7.720     | A                             |
| C-AB   | 45                    | 11                      | 575               | 0.077 | 44                  | 0.1               | 0.1             | 7.524     | A                             |
| C-A    | 10                    | 2                       |                   |       | 10                  |                   |                 |           |                               |
| A-B    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-C    | 6                     | 2                       |                   |       | 6                   |                   |                 |           |                               |

#### 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   | 70                    | 17                      | 546               | 0.128 | 70                  | 0.1               | 0.2             | 7.948     | A                             |
| C-AB   | 55                    | 14                      | 576               | 0.095 | 55                  | 0.1               | 0.1             | 7.666     | A                             |
| C-A    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |
| A-B    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-C    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |

#### 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   | 70                    | 17                      | 546               | 0.128 | 70                  | 0.2               | 0.2             | 7.951     | A                             |
| C-AB   | 55                    | 14                      | 576               | 0.095 | 55                  | 0.1               | 0.1             | 7.669     | A                             |
| C-A    | 12                    | 3                       |                   |       | 12                  |                   |                 |           |                               |
| A-B    | 24                    | 6                       |                   |       | 24                  |                   |                 |           |                               |
| A-C    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |

**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   | 57                    | 14                      | 547               | 0.104 | 57                  | 0.2               | 0.1             | 7.727     | A                             |
| C-AB   | 45                    | 11                      | 575               | 0.077 | 45                  | 0.1               | 0.1             | 7.529     | A                             |
| C-A    | 10                    | 2                       |                   |       | 10                  |                   |                 |           |                               |
| A-B    | 19                    | 5                       |                   |       | 19                  |                   |                 |           |                               |
| A-C    | 6                     | 2                       |                   |       | 6                   |                   |                 |           |                               |

**18:15 - 18:30**

| 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   | 48                    | 12                      | 548               | 0.087 | 48                  | 0.1               | 0.1             | 7.566     | A                             |
| C-AB   | 37                    | 9                       | 575               | 0.065 | 37                  | 0.1               | 0.1             | 7.429     | A                             |
| C-A    | 8                     | 2                       |                   |       | 8                   |                   |                 |           |                               |
| A-B    | 16                    | 4                       |                   |       | 16                  |                   |                 |           |                               |
| A-C    | 5                     | 1                       |                   |       | 5                   |                   |                 |           |                               |

# Appendix H

| <b>Junctions 9</b>                                                                                                                                                      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>ARCADY 9 - Roundabout Module</b>                                                                                                                                     |  |
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**Filename:** Channel View Mini Roundabout.j9  
**Path:** K:\T20\Jobs\T20.101 - Aberavon Seafront\Analysis  
**Report generation date:** 14/10/2020 12:04:15

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»2018 Base, AM  
 »2018 Base, PM  
 »2020 Base, AM  
 »2020 Base, PM  
 »2022 Base, AM  
 »2022 Base, PM  
 »2035 Base, AM  
 »2035 Base, PM  
 »2022 + Dev , AM  
 »2022 + Dev , PM  
 »2035 + Dev , AM  
 »2035 + Dev , PM

## Summary of junction performance

|       | AM         |             |           |      |     | PM     |             |           |      |     |
|-------|------------|-------------|-----------|------|-----|--------|-------------|-----------|------|-----|
|       | Set ID     | Queue (PCU) | Delay (s) | RFC  | LOS | Set ID | Queue (PCU) | Delay (s) | RFC  | LOS |
|       | 2018 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D1         | 0.1         | 5.75      | 0.08 | A   | D2     | 0.1         | 6.80      | 0.06 | A   |
| Arm 2 |            | 0.2         | 4.69      | 0.17 | A   |        | 0.4         | 5.10      | 0.25 | A   |
| Arm 3 |            | 0.2         | 4.76      | 0.17 | A   |        | 0.4         | 5.10      | 0.25 | A   |
|       | 2020 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D3         | 0.1         | 5.79      | 0.08 | A   | D4     | 0.1         | 6.86      | 0.06 | A   |
| Arm 2 |            | 0.2         | 4.72      | 0.17 | A   |        | 0.4         | 5.14      | 0.25 | A   |
| Arm 3 |            | 0.2         | 4.80      | 0.18 | A   |        | 0.4         | 5.15      | 0.26 | A   |
|       | 2022 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D5         | 0.1         | 5.82      | 0.08 | A   | D6     | 0.1         | 6.92      | 0.07 | A   |
| Arm 2 |            | 0.2         | 4.75      | 0.18 | A   |        | 0.4         | 5.20      | 0.26 | A   |
| Arm 3 |            | 0.2         | 4.83      | 0.18 | A   |        | 0.4         | 5.20      | 0.26 | A   |
|       | 2035 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D7         | 0.1         | 5.97      | 0.09 | A   | D8     | 0.1         | 7.19      | 0.08 | A   |
| Arm 2 |            | 0.3         | 4.88      | 0.20 | A   |        | 0.4         | 5.42      | 0.29 | A   |
| Arm 3 |            | 0.3         | 4.97      | 0.20 | A   |        | 0.4         | 5.43      | 0.29 | A   |
|       | 2022 + Dev |             |           |      |     |        |             |           |      |     |
| Arm 1 | D9         | 0.1         | 6.04      | 0.12 | A   | D10    | 0.1         | 7.14      | 0.09 | A   |
| Arm 2 |            | 0.2         | 4.81      | 0.18 | A   |        | 0.4         | 5.30      | 0.28 | A   |
| Arm 3 |            | 0.3         | 4.88      | 0.19 | A   |        | 0.4         | 5.39      | 0.28 | A   |
|       | 2035 + Dev |             |           |      |     |        |             |           |      |     |
| Arm 1 | D11        | 0.1         | 6.19      | 0.13 | A   | D12    | 0.1         | 7.43      | 0.10 | A   |
| Arm 2 |            | 0.3         | 4.94      | 0.20 | A   |        | 0.5         | 5.54      | 0.30 | A   |
| Arm 3 |            | 0.3         | 5.02      | 0.21 | A   |        | 0.5         | 5.63      | 0.31 | A   |

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

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

## File summary

### File Description

|             |              |
|-------------|--------------|
| Title       |              |
| Location    |              |
| Site number |              |
| Date        | 31/07/2018   |
| Version     |              |
| Status      | (new file)   |
| Identifier  |              |
| Client      |              |
| Jobnumber   |              |
| Enumerator  | ATRANS\Katie |
| Description |              |

## Units

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

## Analysis Options

| Mini-roundabout model | Vehicle length (m) | Calculate Queue Percentiles | Calculate detailed queueing delay | Calculate residual capacity | RFC Threshold | Average Delay threshold (s) | Queue threshold (PCU) |
|-----------------------|--------------------|-----------------------------|-----------------------------------|-----------------------------|---------------|-----------------------------|-----------------------|
| JUNCTIONS 9           | 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  | 2018 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D2  | 2018 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D3  | 2020 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D4  | 2020 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D5  | 2022 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D6  | 2022 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D7  | 2035 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D8  | 2035 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D9  | 2022 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D10 | 2022 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D11 | 2035 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D12 | 2035 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

## Analysis Set Details

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

# 2018 Base, AM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 85% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 4.87               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | Normal/unknown |           |

## Arms

### Arms

| Arm | Name                      | Description |
|-----|---------------------------|-------------|
| 1   | Channel View              |             |
| 2   | Princess Margaret Way (E) |             |
| 3   | Princess Margaret Way (W) |             |

### Mini Roundabout Geometry

| Arm | Approach road half-width (m) | Minimum approach road half-width (m) | Entry width (m) | Effective flare length (m) | Distance to next arm (m) | Entry corner kerb line distance (m) | Gradient over 50m (%) | Kerbed central island |
|-----|------------------------------|--------------------------------------|-----------------|----------------------------|--------------------------|-------------------------------------|-----------------------|-----------------------|
| 1   | 3.33                         | 3.33                                 | 5.04            | 1.4                        | 14.00                    | 6.93                                | 0.0                   |                       |
| 2   | 4.66                         | 4.00                                 | 4.16            | 1.1                        | 19.22                    | 16.64                               | 0.0                   |                       |
| 3   | 4.36                         | 4.36                                 | 5.00            | 2.2                        | 12.63                    | 9.10                                | 0.0                   |                       |

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

| Arm | Final slope | Final intercept (PCU/hr) |
|-----|-------------|--------------------------|
| 1   | 0.616       | 771                      |
| 2   | 0.689       | 1020                     |
| 3   | 0.656       | 1025                     |

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

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1 | 2018 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

## Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 50                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 151                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 154                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 3  | 27  | 20  |
|      | 2  | 31 | 6   | 114 |
|      | 3  | 46 | 106 | 2   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |    |
|------|----|---|----|----|
|      | 1  | 2 | 3  |    |
| From | 1  | 0 | 4  | 0  |
|      | 2  | 0 | 0  | 12 |
|      | 3  | 7 | 10 | 33 |
|      |    |   |    |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.08    | 5.75          | 0.1             | A       | 46                      | 69                            |
| 2   | 0.17    | 4.69          | 0.2             | A       | 139                     | 208                           |
| 3   | 0.17    | 4.76          | 0.2             | A       | 141                     | 212                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 38                    | 9                       | 85                        | 719               | 0.052 | 37                  | 60                              | 0.0               | 0.1             | 5.394     | A                             |
| 2   | 114                   | 28                      | 19                        | 1007              | 0.113 | 113                 | 104                             | 0.0               | 0.1             | 4.377     | A                             |
| 3   | 116                   | 29                      | 30                        | 1005              | 0.115 | 115                 | 102                             | 0.0               | 0.1             | 4.422     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 45                    | 11                      | 102                       | 708               | 0.063 | 45                  | 72                              | 0.1               | 0.1             | 5.541     | A                             |
| 2   | 136                   | 34                      | 22                        | 1005              | 0.135 | 136                 | 125                             | 0.1               | 0.2             | 4.506     | A                             |
| 3   | 138                   | 35                      | 36                        | 1001              | 0.138 | 138                 | 122                             | 0.1               | 0.2             | 4.562     | A                             |

**08:30 - 08:45**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 55                    | 14                      | 125                       | 694               | 0.079 | 55                  | 88                              | 0.1               | 0.1             | 5.751     | A                             |
| 2   | 166                   | 42                      | 27                        | 1001              | 0.166 | 166                 | 153                             | 0.2               | 0.2             | 4.688     | A                             |
| 3   | 170                   | 42                      | 44                        | 996               | 0.170 | 169                 | 150                             | 0.2               | 0.2             | 4.761     | A                             |

**08:45 - 09:00**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 55                    | 14                      | 126                       | 694               | 0.079 | 55                  | 88                              | 0.1               | 0.1             | 5.752     | A                             |
| 2   | 166                   | 42                      | 28                        | 1001              | 0.166 | 166                 | 153                             | 0.2               | 0.2             | 4.690     | A                             |
| 3   | 170                   | 42                      | 44                        | 996               | 0.170 | 170                 | 150                             | 0.2               | 0.2             | 4.763     | A                             |

**09:00 - 09:15**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 45                    | 11                      | 103                       | 708               | 0.063 | 45                  | 72                              | 0.1               | 0.1             | 5.543     | A                             |
| 2   | 136                   | 34                      | 23                        | 1005              | 0.135 | 136                 | 125                             | 0.2               | 0.2             | 4.510     | A                             |
| 3   | 138                   | 35                      | 36                        | 1001              | 0.138 | 139                 | 122                             | 0.2               | 0.2             | 4.565     | A                             |

**09:15 - 09:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 38                    | 9                       | 86                        | 718               | 0.052 | 38                  | 60                              | 0.1               | 0.1             | 5.400     | A                             |
| 2   | 114                   | 28                      | 19                        | 1007              | 0.113 | 114                 | 105                             | 0.2               | 0.1             | 4.384     | A                             |
| 3   | 116                   | 29                      | 30                        | 1005              | 0.115 | 116                 | 103                             | 0.2               | 0.1             | 4.430     | A                             |

# 2018 Base, PM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 92% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.22               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 | 2018 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 35                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 226                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 228                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 0  | 22  | 13  |
|      | 2  | 16 | 9   | 201 |
|      | 3  | 20 | 201 | 7   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |   |
|------|----|----|----|---|
|      | 1  | 2  | 3  |   |
| From | 1  | 0  | 18 | 0 |
|      | 2  | 0  | 0  | 8 |
|      | 3  | 10 | 7  | 0 |
|      |    |    |    |   |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.06    | 6.80          | 0.1             | A       | 32                      | 48                            |
| 2   | 0.25    | 5.10          | 0.4             | A       | 207                     | 311                           |
| 3   | 0.25    | 5.10          | 0.4             | A       | 209                     | 314                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 26                    | 7                       | 163                       | 671               | 0.039 | 26                  | 27                              | 0.0               | 0.0             | 6.170     | A                             |
| 2   | 170                   | 43                      | 15                        | 1010              | 0.168 | 169                 | 174                             | 0.0               | 0.2             | 4.580     | A                             |
| 3   | 172                   | 43                      | 19                        | 1012              | 0.170 | 171                 | 166                             | 0.0               | 0.2             | 4.574     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 31                    | 8                       | 195                       | 651               | 0.048 | 31                  | 32                              | 0.0               | 0.1             | 6.422     | A                             |
| 2   | 203                   | 51                      | 18                        | 1008              | 0.202 | 203                 | 208                             | 0.2               | 0.3             | 4.787     | A                             |
| 3   | 205                   | 51                      | 22                        | 1010              | 0.203 | 205                 | 198                             | 0.2               | 0.3             | 4.784     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 39                    | 10                      | 239                       | 624               | 0.062 | 38                  | 40                              | 0.1               | 0.1             | 6.795     | A                             |
| 2   | 249                   | 62                      | 22                        | 1005              | 0.248 | 249                 | 255                             | 0.3               | 0.3             | 5.091     | A                             |
| 3   | 251                   | 63                      | 27                        | 1007              | 0.249 | 251                 | 243                             | 0.3               | 0.4             | 5.095     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 39                    | 10                      | 239                       | 624               | 0.062 | 39                  | 40                              | 0.1               | 0.1             | 6.797     | A                             |
| 2   | 249                   | 62                      | 22                        | 1005              | 0.248 | 249                 | 255                             | 0.3               | 0.4             | 5.095     | A                             |
| 3   | 251                   | 63                      | 28                        | 1006              | 0.249 | 251                 | 243                             | 0.4               | 0.4             | 5.099     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 31                    | 8                       | 195                       | 651               | 0.048 | 32                  | 32                              | 0.1               | 0.1             | 6.427     | A                             |
| 2   | 203                   | 51                      | 18                        | 1008              | 0.202 | 203                 | 209                             | 0.4               | 0.3             | 4.794     | A                             |
| 3   | 205                   | 51                      | 23                        | 1010              | 0.203 | 205                 | 199                             | 0.4               | 0.3             | 4.792     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 26                    | 7                       | 164                       | 671               | 0.039 | 26                  | 27                              | 0.1               | 0.0             | 6.180     | A                             |
| 2   | 170                   | 43                      | 15                        | 1010              | 0.168 | 170                 | 175                             | 0.3               | 0.2             | 4.593     | A                             |
| 3   | 172                   | 43                      | 19                        | 1012              | 0.170 | 172                 | 167                             | 0.3               | 0.2             | 4.585     | A                             |

# 2020 Base, AM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 85% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 4.90               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 | 2020 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 51                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 155                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 158                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |     |     |
|--|----|----|-----|-----|
|  |    | 1  | 2   | 3   |
|  | 1  | 3  | 28  | 21  |
|  | 2  | 32 | 6   | 117 |
|  | 3  | 47 | 109 | 2   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |    |    |
|--|----|---|----|----|
|  |    | 1 | 2  | 3  |
|  | 1  | 0 | 4  | 0  |
|  | 2  | 0 | 0  | 12 |
|  | 3  | 7 | 10 | 33 |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.08    | 5.79          | 0.1             | A       | 47                      | 71                            |
| 2   | 0.17    | 4.72          | 0.2             | A       | 142                     | 214                           |
| 3   | 0.18    | 4.80          | 0.2             | A       | 145                     | 218                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 39                    | 10                      | 88                        | 717               | 0.054 | 38                  | 62                              | 0.0               | 0.1             | 5.415     | A                             |
| 2   | 117                   | 29                      | 19                        | 1007              | 0.116 | 116                 | 107                             | 0.0               | 0.1             | 4.395     | A                             |
| 3   | 119                   | 30                      | 31                        | 1004              | 0.119 | 119                 | 105                             | 0.0               | 0.1             | 4.441     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 46                    | 12                      | 105                       | 707               | 0.065 | 46                  | 74                              | 0.1               | 0.1             | 5.567     | A                             |
| 2   | 140                   | 35                      | 23                        | 1004              | 0.139 | 139                 | 128                             | 0.1               | 0.2             | 4.529     | A                             |
| 3   | 142                   | 36                      | 37                        | 1000              | 0.142 | 142                 | 126                             | 0.1               | 0.2             | 4.587     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 57                    | 14                      | 129                       | 692               | 0.082 | 57                  | 90                              | 0.1               | 0.1             | 5.785     | A                             |
| 2   | 171                   | 43                      | 28                        | 1001              | 0.171 | 171                 | 157                             | 0.2               | 0.2             | 4.718     | A                             |
| 3   | 174                   | 44                      | 45                        | 995               | 0.175 | 174                 | 154                             | 0.2               | 0.2             | 4.794     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 57                    | 14                      | 129                       | 692               | 0.082 | 57                  | 91                              | 0.1               | 0.1             | 5.786     | A                             |
| 2   | 171                   | 43                      | 28                        | 1001              | 0.171 | 171                 | 157                             | 0.2               | 0.2             | 4.720     | A                             |
| 3   | 174                   | 44                      | 45                        | 995               | 0.175 | 174                 | 154                             | 0.2               | 0.2             | 4.796     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 46                    | 12                      | 106                       | 706               | 0.065 | 46                  | 74                              | 0.1               | 0.1             | 5.569     | A                             |
| 2   | 140                   | 35                      | 23                        | 1004              | 0.139 | 140                 | 129                             | 0.2               | 0.2             | 4.531     | A                             |
| 3   | 142                   | 36                      | 37                        | 1000              | 0.142 | 143                 | 126                             | 0.2               | 0.2             | 4.591     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 39                    | 10                      | 88                        | 717               | 0.054 | 39                  | 62                              | 0.1               | 0.1             | 5.420     | A                             |
| 2  | 117                   | 29                      | 19                        | 1007              | 0.116 | 117                 | 108                             | 0.2               | 0.1             | 4.403     | A                             |
| 3  | 119                   | 30                      | 31                        | 1004              | 0.119 | 119                 | 105                             | 0.2               | 0.1             | 4.450     | A                             |

# 2020 Base, PM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 92% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.27               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 | 2020 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 36                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 232                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 234                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |
|------|----|----|-----|
|      | 1  | 2  | 3   |
| From | 1  | 0  | 23  |
|      | 2  | 16 | 9   |
|      | 3  | 21 | 206 |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |
|------|----|----|----|
|      | 1  | 2  | 3  |
| From | 1  | 0  | 18 |
|      | 2  | 0  | 0  |
|      | 3  | 10 | 7  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.06    | 6.86          | 0.1             | A       | 33                      | 49                            |
| 2   | 0.25    | 5.14          | 0.4             | A       | 213                     | 319                           |
| 3   | 0.26    | 5.15          | 0.4             | A       | 215                     | 322                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 27                    | 7                       | 167                       | 669               | 0.040 | 27                  | 28                              | 0.0               | 0.0             | 6.203     | A                             |
| 2   | 175                   | 44                      | 15                        | 1010              | 0.173 | 174                 | 178                             | 0.0               | 0.2             | 4.606     | A                             |
| 3   | 176                   | 44                      | 19                        | 1012              | 0.174 | 175                 | 170                             | 0.0               | 0.2             | 4.601     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 32                    | 8                       | 200                       | 648               | 0.050 | 32                  | 33                              | 0.0               | 0.1             | 6.465     | A                             |
| 2   | 209                   | 52                      | 18                        | 1007              | 0.207 | 208                 | 214                             | 0.2               | 0.3             | 4.822     | A                             |
| 3   | 211                   | 53                      | 23                        | 1009              | 0.209 | 210                 | 204                             | 0.2               | 0.3             | 4.820     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 40                    | 10                      | 245                       | 620               | 0.064 | 40                  | 41                              | 0.1               | 0.1             | 6.853     | A                             |
| 2   | 256                   | 64                      | 23                        | 1005              | 0.254 | 255                 | 262                             | 0.3               | 0.4             | 5.140     | A                             |
| 3   | 258                   | 64                      | 28                        | 1006              | 0.256 | 257                 | 250                             | 0.3               | 0.4             | 5.145     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 40                    | 10                      | 245                       | 620               | 0.064 | 40                  | 41                              | 0.1               | 0.1             | 6.856     | A                             |
| 2   | 256                   | 64                      | 23                        | 1005              | 0.254 | 256                 | 262                             | 0.4               | 0.4             | 5.144     | A                             |
| 3   | 258                   | 64                      | 28                        | 1006              | 0.256 | 258                 | 250                             | 0.4               | 0.4             | 5.149     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 32                    | 8                       | 201                       | 648               | 0.050 | 32                  | 33                              | 0.1               | 0.1             | 6.470     | A                             |
| 2   | 209                   | 52                      | 18                        | 1007              | 0.207 | 209                 | 215                             | 0.4               | 0.3             | 4.828     | A                             |
| 3   | 211                   | 53                      | 23                        | 1009              | 0.209 | 211                 | 204                             | 0.4               | 0.3             | 4.826     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 27                    | 7                       | 168                       | 668               | 0.041 | 27                  | 28                              | 0.1               | 0.0             | 6.213     | A                             |
| 2   | 175                   | 44                      | 15                        | 1010              | 0.173 | 175                 | 180                             | 0.3               | 0.2             | 4.620     | A                             |
| 3   | 176                   | 44                      | 19                        | 1012              | 0.174 | 177                 | 171                             | 0.3               | 0.2             | 4.613     | A                             |

# 2022 Base, AM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 85% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 4.94               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | Normal/unknown |           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D5 | 2022 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 53                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 160                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 163                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |     |     |
|--|----|----|-----|-----|
|  |    | 1  | 2   | 3   |
|  | 1  | 3  | 29  | 21  |
|  | 2  | 33 | 6   | 121 |
|  | 3  | 49 | 112 | 2   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |    |    |
|--|----|---|----|----|
|  |    | 1 | 2  | 3  |
|  | 1  | 0 | 4  | 0  |
|  | 2  | 0 | 0  | 12 |
|  | 3  | 7 | 10 | 33 |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.08    | 5.82          | 0.1             | A       | 49                      | 73                            |
| 2   | 0.18    | 4.75          | 0.2             | A       | 147                     | 220                           |
| 3   | 0.18    | 4.83          | 0.2             | A       | 150                     | 224                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 40                    | 10                      | 90                        | 716               | 0.056 | 40                  | 63                              | 0.0               | 0.1             | 5.437     | A                             |
| 2   | 120                   | 30                      | 20                        | 1007              | 0.120 | 120                 | 110                             | 0.0               | 0.1             | 4.414     | A                             |
| 3   | 123                   | 31                      | 32                        | 1004              | 0.122 | 122                 | 108                             | 0.0               | 0.2             | 4.461     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 48                    | 12                      | 108                       | 705               | 0.068 | 48                  | 76                              | 0.1               | 0.1             | 5.594     | A                             |
| 2   | 144                   | 36                      | 24                        | 1004              | 0.143 | 144                 | 132                             | 0.1               | 0.2             | 4.553     | A                             |
| 3   | 147                   | 37                      | 38                        | 1000              | 0.147 | 146                 | 129                             | 0.2               | 0.2             | 4.613     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 58                    | 15                      | 133                       | 690               | 0.085 | 58                  | 93                              | 0.1               | 0.1             | 5.822     | A                             |
| 2   | 176                   | 44                      | 29                        | 1000              | 0.176 | 176                 | 162                             | 0.2               | 0.2             | 4.750     | A                             |
| 3   | 180                   | 45                      | 47                        | 994               | 0.181 | 179                 | 158                             | 0.2               | 0.2             | 4.830     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 58                    | 15                      | 133                       | 690               | 0.085 | 58                  | 93                              | 0.1               | 0.1             | 5.823     | A                             |
| 2   | 176                   | 44                      | 29                        | 1000              | 0.176 | 176                 | 162                             | 0.2               | 0.2             | 4.752     | A                             |
| 3   | 180                   | 45                      | 47                        | 994               | 0.181 | 180                 | 159                             | 0.2               | 0.2             | 4.832     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 48                    | 12                      | 109                       | 704               | 0.068 | 48                  | 76                              | 0.1               | 0.1             | 5.599     | A                             |
| 2   | 144                   | 36                      | 24                        | 1004              | 0.143 | 144                 | 132                             | 0.2               | 0.2             | 4.555     | A                             |
| 3   | 147                   | 37                      | 38                        | 1000              | 0.147 | 147                 | 130                             | 0.2               | 0.2             | 4.616     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 40                    | 10                      | 91                        | 715               | 0.056 | 40                  | 64                              | 0.1               | 0.1             | 5.442     | A                             |
| 2  | 120                   | 30                      | 20                        | 1006              | 0.120 | 120                 | 111                             | 0.2               | 0.1             | 4.421     | A                             |
| 3  | 123                   | 31                      | 32                        | 1004              | 0.122 | 123                 | 109                             | 0.2               | 0.2             | 4.469     | A                             |

# 2022 Base, PM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 92% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.32               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | Normal/unknown |           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2022 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 37                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 239                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 241                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 0  | 23  | 14  |
|      | 2  | 17 | 10  | 212 |
|      | 3  | 21 | 212 | 7   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |   |
|------|----|----|----|---|
|      | 1  | 2  | 3  |   |
| From | 1  | 0  | 18 | 0 |
|      | 2  | 0  | 0  | 8 |
|      | 3  | 10 | 7  | 0 |
|      |    |    |    |   |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.07    | 6.92          | 0.1             | A       | 34                      | 51                            |
| 2   | 0.26    | 5.20          | 0.4             | A       | 219                     | 329                           |
| 3   | 0.26    | 5.20          | 0.4             | A       | 221                     | 332                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 28                    | 7                       | 172                       | 666               | 0.042 | 28                  | 28                              | 0.0               | 0.0             | 6.240     | A                             |
| 2   | 180                   | 45                      | 16                        | 1009              | 0.178 | 179                 | 184                             | 0.0               | 0.2             | 4.636     | A                             |
| 3   | 181                   | 45                      | 20                        | 1012              | 0.179 | 180                 | 175                             | 0.0               | 0.2             | 4.631     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 33                    | 8                       | 206                       | 645               | 0.052 | 33                  | 34                              | 0.0               | 0.1             | 6.512     | A                             |
| 2   | 215                   | 54                      | 19                        | 1007              | 0.213 | 214                 | 220                             | 0.2               | 0.3             | 4.860     | A                             |
| 3   | 217                   | 54                      | 24                        | 1009              | 0.215 | 216                 | 210                             | 0.2               | 0.3             | 4.859     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 41                    | 10                      | 252                       | 616               | 0.066 | 41                  | 42                              | 0.1               | 0.1             | 6.919     | A                             |
| 2   | 263                   | 66                      | 23                        | 1004              | 0.262 | 263                 | 270                             | 0.3               | 0.4             | 5.194     | A                             |
| 3   | 265                   | 66                      | 29                        | 1005              | 0.264 | 265                 | 257                             | 0.3               | 0.4             | 5.200     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 41                    | 10                      | 252                       | 616               | 0.066 | 41                  | 42                              | 0.1               | 0.1             | 6.921     | A                             |
| 2   | 263                   | 66                      | 23                        | 1004              | 0.262 | 263                 | 270                             | 0.4               | 0.4             | 5.198     | A                             |
| 3   | 265                   | 66                      | 29                        | 1005              | 0.264 | 265                 | 257                             | 0.4               | 0.4             | 5.204     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 33                    | 8                       | 206                       | 644               | 0.052 | 33                  | 34                              | 0.1               | 0.1             | 6.520     | A                             |
| 2   | 215                   | 54                      | 19                        | 1007              | 0.213 | 215                 | 221                             | 0.4               | 0.3             | 4.869     | A                             |
| 3   | 217                   | 54                      | 24                        | 1009              | 0.215 | 217                 | 210                             | 0.4               | 0.3             | 4.866     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 28                    | 7                       | 173                       | 665               | 0.042 | 28                  | 29                              | 0.1               | 0.0             | 6.250     | A                             |
| 2   | 180                   | 45                      | 16                        | 1009              | 0.178 | 180                 | 185                             | 0.3               | 0.2             | 4.650     | A                             |
| 3   | 181                   | 45                      | 20                        | 1011              | 0.179 | 182                 | 176                             | 0.3               | 0.2             | 4.645     | A                             |

# 2035 Base, AM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 85% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.07               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D7 | 2035 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 59                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 177                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 181                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |     |     |
|--|----|----|-----|-----|
|  |    | 1  | 2   | 3   |
|  | 1  | 4  | 32  | 23  |
|  | 2  | 36 | 7   | 134 |
|  | 3  | 54 | 124 | 2   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |   |    |    |
|--|----|---|----|----|
|  |    | 1 | 2  | 3  |
|  | 1  | 0 | 4  | 0  |
|  | 2  | 0 | 0  | 12 |
|  | 3  | 7 | 10 | 33 |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.09    | 5.97          | 0.1             | A       | 54                      | 81                            |
| 2   | 0.20    | 4.88          | 0.3             | A       | 162                     | 244                           |
| 3   | 0.20    | 4.97          | 0.3             | A       | 166                     | 249                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 44                    | 11                      | 100                       | 710               | 0.062 | 44                  | 70                              | 0.0               | 0.1             | 5.518     | A                             |
| 2   | 133                   | 33                      | 22                        | 1005              | 0.133 | 133                 | 122                             | 0.0               | 0.2             | 4.487     | A                             |
| 3   | 136                   | 34                      | 35                        | 1001              | 0.136 | 135                 | 119                             | 0.0               | 0.2             | 4.537     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 53                    | 13                      | 120                       | 697               | 0.076 | 53                  | 84                              | 0.1               | 0.1             | 5.701     | A                             |
| 2   | 159                   | 40                      | 26                        | 1002              | 0.159 | 159                 | 146                             | 0.2               | 0.2             | 4.646     | A                             |
| 3   | 162                   | 41                      | 42                        | 997               | 0.163 | 162                 | 143                             | 0.2               | 0.2             | 4.713     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 65                    | 16                      | 147                       | 681               | 0.095 | 64                  | 103                             | 0.1               | 0.1             | 5.964     | A                             |
| 2   | 195                   | 49                      | 32                        | 998               | 0.195 | 195                 | 179                             | 0.2               | 0.3             | 4.875     | A                             |
| 3   | 199                   | 50                      | 52                        | 991               | 0.201 | 199                 | 175                             | 0.2               | 0.3             | 4.967     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 65                    | 16                      | 147                       | 681               | 0.095 | 65                  | 103                             | 0.1               | 0.1             | 5.965     | A                             |
| 2   | 195                   | 49                      | 32                        | 998               | 0.195 | 195                 | 179                             | 0.3               | 0.3             | 4.877     | A                             |
| 3   | 199                   | 50                      | 52                        | 991               | 0.201 | 199                 | 176                             | 0.3               | 0.3             | 4.970     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 53                    | 13                      | 120                       | 697               | 0.076 | 53                  | 84                              | 0.1               | 0.1             | 5.704     | A                             |
| 2   | 159                   | 40                      | 26                        | 1002              | 0.159 | 159                 | 147                             | 0.3               | 0.2             | 4.651     | A                             |
| 3   | 162                   | 41                      | 42                        | 997               | 0.163 | 163                 | 144                             | 0.3               | 0.2             | 4.718     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 44                    | 11                      | 101                       | 709               | 0.062 | 44                  | 71                              | 0.1               | 0.1             | 5.529     | A                             |
| 2  | 133                   | 33                      | 22                        | 1005              | 0.133 | 133                 | 123                             | 0.2               | 0.2             | 4.496     | A                             |
| 3  | 136                   | 34                      | 35                        | 1001              | 0.136 | 136                 | 120                             | 0.2               | 0.2             | 4.551     | A                             |

# 2035 Base, PM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 92% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.55               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | Normal/unknown |           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D8 | 2035 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 41                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 265                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 267                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 0  | 26  | 15  |
|      | 2  | 19 | 11  | 235 |
|      | 3  | 23 | 235 | 8   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |   |
|------|----|----|----|---|
|      | 1  | 2  | 3  |   |
| From | 1  | 0  | 18 | 0 |
|      | 2  | 0  | 0  | 8 |
|      | 3  | 10 | 7  | 0 |
|      |    |    |    |   |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.08    | 7.19          | 0.1             | A       | 38                      | 56                            |
| 2   | 0.29    | 5.42          | 0.4             | A       | 243                     | 364                           |
| 3   | 0.29    | 5.43          | 0.4             | A       | 245                     | 367                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 31                    | 8                       | 190                       | 654               | 0.047 | 31                  | 32                              | 0.0               | 0.1             | 6.384     | A                             |
| 2   | 199                   | 50                      | 18                        | 1008              | 0.198 | 198                 | 203                             | 0.0               | 0.3             | 4.752     | A                             |
| 3   | 201                   | 50                      | 22                        | 1010              | 0.199 | 200                 | 194                             | 0.0               | 0.3             | 4.749     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 37                    | 9                       | 228                       | 631               | 0.058 | 37                  | 38                              | 0.1               | 0.1             | 6.702     | A                             |
| 2   | 238                   | 59                      | 21                        | 1006              | 0.237 | 238                 | 244                             | 0.3               | 0.3             | 5.016     | A                             |
| 3   | 240                   | 60                      | 26                        | 1007              | 0.238 | 240                 | 232                             | 0.3               | 0.3             | 5.018     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 45                    | 11                      | 279                       | 599               | 0.075 | 45                  | 46                              | 0.1               | 0.1             | 7.183     | A                             |
| 2   | 291                   | 73                      | 26                        | 1002              | 0.291 | 291                 | 299                             | 0.3               | 0.4             | 5.412     | A                             |
| 3   | 294                   | 73                      | 32                        | 1003              | 0.293 | 293                 | 284                             | 0.3               | 0.4             | 5.423     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 45                    | 11                      | 280                       | 599               | 0.075 | 45                  | 46                              | 0.1               | 0.1             | 7.186     | A                             |
| 2   | 291                   | 73                      | 26                        | 1002              | 0.291 | 291                 | 299                             | 0.4               | 0.4             | 5.418     | A                             |
| 3   | 294                   | 73                      | 32                        | 1003              | 0.293 | 294                 | 285                             | 0.4               | 0.4             | 5.429     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 37                    | 9                       | 229                       | 630               | 0.058 | 37                  | 38                              | 0.1               | 0.1             | 6.711     | A                             |
| 2   | 238                   | 59                      | 21                        | 1006              | 0.237 | 238                 | 245                             | 0.4               | 0.3             | 5.026     | A                             |
| 3   | 240                   | 60                      | 26                        | 1007              | 0.238 | 240                 | 233                             | 0.4               | 0.3             | 5.026     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 31                    | 8                       | 192                       | 653               | 0.047 | 31                  | 32                              | 0.1               | 0.1             | 6.396     | A                             |
| 2   | 199                   | 50                      | 18                        | 1008              | 0.198 | 199                 | 205                             | 0.3               | 0.3             | 4.769     | A                             |
| 3   | 201                   | 50                      | 22                        | 1010              | 0.199 | 201                 | 195                             | 0.3               | 0.3             | 4.766     | A                             |

# 2022 + Dev , AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.06               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | Normal/unknown |           |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D9 | 2022 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 72                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 165                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 168                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 3  | 40  | 29  |
|      | 2  | 36 | 6   | 122 |
|      | 3  | 53 | 113 | 2   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |    |
|------|----|---|----|----|
|      | 1  | 2 | 3  |    |
| From | 1  | 0 | 4  | 0  |
|      | 2  | 0 | 0  | 12 |
|      | 3  | 7 | 10 | 33 |
|      |    |   |    |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.12    | 6.04          | 0.1             | A       | 67                      | 100                           |
| 2   | 0.18    | 4.81          | 0.2             | A       | 151                     | 227                           |
| 3   | 0.19    | 4.88          | 0.3             | A       | 154                     | 231                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 55                    | 14                      | 91                        | 715               | 0.076 | 54                  | 69                              | 0.0               | 0.1             | 5.561     | A                             |
| 2   | 124                   | 31                      | 26                        | 1002              | 0.124 | 123                 | 119                             | 0.0               | 0.2             | 4.447     | A                             |
| 3   | 127                   | 32                      | 34                        | 1002              | 0.126 | 126                 | 115                             | 0.0               | 0.2             | 4.487     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 65                    | 16                      | 109                       | 704               | 0.093 | 65                  | 83                              | 0.1               | 0.1             | 5.755     | A                             |
| 2   | 148                   | 37                      | 31                        | 999               | 0.148 | 148                 | 143                             | 0.2               | 0.2             | 4.597     | A                             |
| 3   | 151                   | 38                      | 41                        | 998               | 0.152 | 151                 | 138                             | 0.2               | 0.2             | 4.647     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 80                    | 20                      | 134                       | 689               | 0.116 | 80                  | 102                             | 0.1               | 0.1             | 6.033     | A                             |
| 2   | 182                   | 45                      | 38                        | 994               | 0.183 | 181                 | 175                             | 0.2               | 0.2             | 4.811     | A                             |
| 3   | 185                   | 46                      | 50                        | 992               | 0.187 | 185                 | 169                             | 0.2               | 0.2             | 4.875     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 80                    | 20                      | 134                       | 689               | 0.116 | 80                  | 102                             | 0.1               | 0.1             | 6.036     | A                             |
| 2   | 182                   | 45                      | 38                        | 994               | 0.183 | 181                 | 175                             | 0.2               | 0.2             | 4.813     | A                             |
| 3   | 185                   | 46                      | 50                        | 992               | 0.187 | 185                 | 169                             | 0.2               | 0.3             | 4.877     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 65                    | 16                      | 109                       | 704               | 0.093 | 65                  | 83                              | 0.1               | 0.1             | 5.758     | A                             |
| 2   | 148                   | 37                      | 31                        | 999               | 0.148 | 148                 | 143                             | 0.2               | 0.2             | 4.602     | A                             |
| 3   | 151                   | 38                      | 41                        | 998               | 0.152 | 151                 | 139                             | 0.3               | 0.2             | 4.651     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 55                    | 14                      | 92                        | 715               | 0.076 | 55                  | 70                              | 0.1               | 0.1             | 5.572     | A                             |
| 2  | 124                   | 31                      | 26                        | 1002              | 0.124 | 124                 | 120                             | 0.2               | 0.2             | 4.456     | A                             |
| 3  | 127                   | 32                      | 34                        | 1002              | 0.126 | 127                 | 116                             | 0.2               | 0.2             | 4.495     | A                             |

# 2022 + Dev , PM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 90% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.51               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D10 | 2022 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 52                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 250                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 256                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 0  | 33  | 19  |
|      | 2  | 27 | 10  | 213 |
|      | 3  | 34 | 214 | 7   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |   |
|------|----|----|----|---|
|      | 1  | 2  | 3  |   |
| From | 1  | 0  | 18 | 0 |
|      | 2  | 0  | 0  | 8 |
|      | 3  | 10 | 7  | 0 |
|      |    |    |    |   |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.09    | 7.14          | 0.1             | A       | 48                      | 72                            |
| 2   | 0.28    | 5.30          | 0.4             | A       | 230                     | 345                           |
| 3   | 0.28    | 5.39          | 0.4             | A       | 235                     | 352                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 39                    | 10                      | 173                       | 665               | 0.059 | 39                  | 46                              | 0.0               | 0.1             | 6.359     | A                             |
| 2   | 188                   | 47                      | 20                        | 1006              | 0.187 | 187                 | 192                             | 0.0               | 0.2             | 4.685     | A                             |
| 3   | 193                   | 48                      | 28                        | 1006              | 0.191 | 192                 | 180                             | 0.0               | 0.3             | 4.729     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 47                    | 12                      | 207                       | 644               | 0.073 | 47                  | 55                              | 0.1               | 0.1             | 6.671     | A                             |
| 2   | 225                   | 56                      | 24                        | 1004              | 0.224 | 225                 | 230                             | 0.2               | 0.3             | 4.932     | A                             |
| 3   | 230                   | 57                      | 33                        | 1003              | 0.229 | 230                 | 215                             | 0.3               | 0.3             | 4.990     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 57                    | 14                      | 254                       | 615               | 0.093 | 57                  | 68                              | 0.1               | 0.1             | 7.140     | A                             |
| 2   | 276                   | 69                      | 29                        | 1000              | 0.276 | 275                 | 282                             | 0.3               | 0.4             | 5.299     | A                             |
| 3   | 282                   | 70                      | 41                        | 998               | 0.282 | 281                 | 264                             | 0.3               | 0.4             | 5.382     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 57                    | 14                      | 254                       | 615               | 0.093 | 57                  | 68                              | 0.1               | 0.1             | 7.143     | A                             |
| 2   | 276                   | 69                      | 29                        | 1000              | 0.276 | 276                 | 282                             | 0.4               | 0.4             | 5.303     | A                             |
| 3   | 282                   | 70                      | 41                        | 998               | 0.282 | 282                 | 264                             | 0.4               | 0.4             | 5.387     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 47                    | 12                      | 208                       | 643               | 0.073 | 47                  | 56                              | 0.1               | 0.1             | 6.678     | A                             |
| 2   | 225                   | 56                      | 24                        | 1004              | 0.224 | 225                 | 231                             | 0.4               | 0.3             | 4.941     | A                             |
| 3   | 230                   | 57                      | 33                        | 1003              | 0.229 | 230                 | 216                             | 0.4               | 0.3             | 4.997     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 39                    | 10                      | 174                       | 664               | 0.059 | 39                  | 47                              | 0.1               | 0.1             | 6.373     | A                             |
| 2   | 188                   | 47                      | 20                        | 1006              | 0.187 | 189                 | 193                             | 0.3               | 0.2             | 4.702     | A                             |
| 3   | 193                   | 48                      | 28                        | 1006              | 0.191 | 193                 | 181                             | 0.3               | 0.3             | 4.746     | A                             |

# 2035 + Dev , AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.19               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D11 | 2035 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 78                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 182                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 186                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |    |     |     |
|------|----|----|-----|-----|
|      | 1  | 2  | 3   |     |
| From | 1  | 4  | 43  | 32  |
|      | 2  | 40 | 7   | 135 |
|      | 3  | 58 | 125 | 2   |
|      |    |    |     |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |   |    |    |
|------|----|---|----|----|
|      | 1  | 2 | 3  |    |
| From | 1  | 0 | 4  | 0  |
|      | 2  | 0 | 0  | 12 |
|      | 3  | 7 | 10 | 33 |
|      |    |   |    |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.13    | 6.19          | 0.1             | A       | 72                      | 108                           |
| 2   | 0.20    | 4.94          | 0.3             | A       | 167                     | 251                           |
| 3   | 0.21    | 5.02          | 0.3             | A       | 170                     | 256                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 59                    | 15                      | 101                       | 709               | 0.083 | 58                  | 76                              | 0.0               | 0.1             | 5.649     | A                             |
| 2   | 137                   | 34                      | 28                        | 1001              | 0.137 | 136                 | 131                             | 0.0               | 0.2             | 4.518     | A                             |
| 3   | 140                   | 35                      | 38                        | 1000              | 0.140 | 139                 | 127                             | 0.0               | 0.2             | 4.566     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 70                    | 18                      | 121                       | 697               | 0.101 | 70                  | 91                              | 0.1               | 0.1             | 5.867     | A                             |
| 2   | 164                   | 41                      | 34                        | 997               | 0.164 | 164                 | 157                             | 0.2               | 0.2             | 4.691     | A                             |
| 3   | 167                   | 42                      | 45                        | 995               | 0.168 | 167                 | 152                             | 0.2               | 0.2             | 4.749     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 86                    | 22                      | 148                       | 680               | 0.127 | 86                  | 112                             | 0.1               | 0.1             | 6.186     | A                             |
| 2   | 200                   | 50                      | 41                        | 992               | 0.202 | 200                 | 193                             | 0.2               | 0.3             | 4.940     | A                             |
| 3   | 204                   | 51                      | 55                        | 988               | 0.207 | 204                 | 186                             | 0.2               | 0.3             | 5.016     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 86                    | 22                      | 148                       | 680               | 0.127 | 86                  | 112                             | 0.1               | 0.1             | 6.189     | A                             |
| 2   | 200                   | 50                      | 41                        | 992               | 0.202 | 200                 | 193                             | 0.3               | 0.3             | 4.942     | A                             |
| 3   | 204                   | 51                      | 55                        | 988               | 0.207 | 204                 | 186                             | 0.3               | 0.3             | 5.018     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 70                    | 18                      | 121                       | 697               | 0.101 | 70                  | 91                              | 0.1               | 0.1             | 5.872     | A                             |
| 2   | 164                   | 41                      | 34                        | 997               | 0.164 | 164                 | 158                             | 0.3               | 0.2             | 4.698     | A                             |
| 3   | 167                   | 42                      | 45                        | 995               | 0.168 | 167                 | 152                             | 0.3               | 0.2             | 4.756     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 59                    | 15                      | 101                       | 709               | 0.083 | 59                  | 76                              | 0.1               | 0.1             | 5.660     | A                             |
| 2  | 137                   | 34                      | 28                        | 1001              | 0.137 | 137                 | 132                             | 0.2               | 0.2             | 4.532     | A                             |
| 3  | 140                   | 35                      | 38                        | 1000              | 0.140 | 140                 | 128                             | 0.2               | 0.2             | 4.576     | A                             |

# 2035 + Dev , PM

## Data Errors and Warnings

| Severity | Area            | Item | Description                                                                                                                                                                                                                                 |
|----------|-----------------|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Warning  | Mini-roundabout |      | Mini-roundabout appears to have unbalanced flows and may behave like a priority junction; treat results with caution. See User Guide for details.[Arms 2 and 3 have 90% of the total flow for the roundabout for one or more time segments] |

## Junction Network

### Junctions

| Junction | Name     | Junction type   | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|-----------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Mini-roundabout |                       | 1, 2, 3   | 5.75               | A            |

### Junction Network Options

| Driving side | Lighting       | Road surface   | In London |
|--------------|----------------|----------------|-----------|
| Left         | Normal/unknown | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D12 | 2035 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 56                      | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 276                     | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 282                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |    |     |     |
|--|----|----|-----|-----|
|  |    | 1  | 2   | 3   |
|  | 1  | 0  | 35  | 21  |
|  | 2  | 29 | 11  | 236 |
|  | 3  | 37 | 237 | 8   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |   |
|--|----|----|----|---|
|  |    | 1  | 2  | 3 |
|  | 1  | 0  | 18 | 0 |
|  | 2  | 0  | 0  | 8 |
|  | 3  | 10 | 7  | 0 |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.10    | 7.43          | 0.1             | A       | 51                      | 77                            |
| 2   | 0.30    | 5.54          | 0.5             | A       | 253                     | 380                           |
| 3   | 0.31    | 5.63          | 0.5             | A       | 259                     | 388                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 42                    | 11                      | 192                       | 653               | 0.064 | 42                  | 49                              | 0.0               | 0.1             | 6.509     | A                             |
| 2   | 208                   | 52                      | 22                        | 1005              | 0.207 | 207                 | 212                             | 0.0               | 0.3             | 4.806     | A                             |
| 3   | 212                   | 53                      | 30                        | 1005              | 0.211 | 211                 | 199                             | 0.0               | 0.3             | 4.852     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 50                    | 13                      | 230                       | 630               | 0.080 | 50                  | 59                              | 0.1               | 0.1             | 6.870     | A                             |
| 2   | 248                   | 62                      | 26                        | 1002              | 0.248 | 248                 | 254                             | 0.3               | 0.3             | 5.091     | A                             |
| 3   | 253                   | 63                      | 36                        | 1001              | 0.253 | 253                 | 238                             | 0.3               | 0.4             | 5.155     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 62                    | 15                      | 281                       | 598               | 0.103 | 61                  | 72                              | 0.1               | 0.1             | 7.419     | A                             |
| 2   | 304                   | 76                      | 32                        | 998               | 0.305 | 304                 | 311                             | 0.3               | 0.5             | 5.528     | A                             |
| 3   | 310                   | 78                      | 44                        | 996               | 0.312 | 310                 | 291                             | 0.4               | 0.5             | 5.620     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 62                    | 15                      | 282                       | 598               | 0.103 | 62                  | 73                              | 0.1               | 0.1             | 7.425     | A                             |
| 2   | 304                   | 76                      | 32                        | 998               | 0.305 | 304                 | 311                             | 0.5               | 0.5             | 5.535     | A                             |
| 3   | 310                   | 78                      | 44                        | 996               | 0.312 | 310                 | 292                             | 0.5               | 0.5             | 5.627     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 50                    | 13                      | 230                       | 629               | 0.080 | 50                  | 59                              | 0.1               | 0.1             | 6.878     | A                             |
| 2   | 248                   | 62                      | 26                        | 1002              | 0.248 | 249                 | 255                             | 0.5               | 0.4             | 5.104     | A                             |
| 3   | 253                   | 63                      | 36                        | 1001              | 0.253 | 254                 | 239                             | 0.5               | 0.4             | 5.166     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 42                    | 11                      | 193                       | 653               | 0.065 | 42                  | 50                              | 0.1               | 0.1             | 6.525     | A                             |
| 2   | 208                   | 52                      | 22                        | 1005              | 0.207 | 208                 | 213                             | 0.4               | 0.3             | 4.823     | A                             |
| 3   | 212                   | 53                      | 30                        | 1005              | 0.211 | 213                 | 200                             | 0.4               | 0.3             | 4.872     | A                             |

# Appendix I

| <b>Junctions 9</b>                                                                                                                                                      |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>ARCADY 9 - Roundabout Module</b>                                                                                                                                     |  |
| Version: 9.5.1.7462<br>© Copyright TRL Limited, 2019                                                                                                                    |  |
| For sales and distribution information, program advice and maintenance, contact TRL:<br>+44 (0)1344 379777 software@trl.co.uk www.trlsoftware.co.uk                     |  |
| <b>The users of this computer program for the solution of an engineering problem are in no way relieved of their responsibility for the correctness of the solution</b> |  |

**Filename:** Victoria Rd Roundabout.j9

**Path:** K:\T20\Jobs\T20.101 - Aberavon Seafront\Analysis

**Report generation date:** 14/10/2020 12:06:06

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»2018 Base, AM  
 »2018 Base, PM  
 »2020 Base, AM  
 »2020 Base, PM  
 »2022 Base , AM  
 »2022 Base, PM  
 »2035 Base, AM  
 »2035 Base , PM  
 »2022 + Dev , AM  
 »2022 + Dev , PM  
 »2035 + Dev , AM  
 »2035 + Dev , PM

## Summary of junction performance

|       | AM         |             |           |      |     | PM     |             |           |      |     |
|-------|------------|-------------|-----------|------|-----|--------|-------------|-----------|------|-----|
|       | Set ID     | Queue (PCU) | Delay (s) | RFC  | LOS | Set ID | Queue (PCU) | Delay (s) | RFC  | LOS |
|       | 2018 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D1         | 0.1         | 2.86      | 0.10 | A   | D2     | 0.2         | 3.01      | 0.18 | A   |
| Arm 2 |            | 0.1         | 3.52      | 0.06 | A   |        | 0.1         | 3.93      | 0.07 | A   |
| Arm 3 |            | 0.2         | 3.44      | 0.13 | A   |        | 0.3         | 3.73      | 0.19 | A   |
|       | 2020 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D3         | 0.1         | 2.87      | 0.11 | A   | D4     | 0.2         | 3.03      | 0.18 | A   |
| Arm 2 |            | 0.1         | 3.53      | 0.07 | A   |        | 0.1         | 3.95      | 0.07 | A   |
| Arm 3 |            | 0.2         | 3.46      | 0.13 | A   |        | 0.3         | 3.76      | 0.20 | A   |
|       | 2022 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D5         | 0.1         | 2.88      | 0.11 | A   | D6     | 0.2         | 3.05      | 0.19 | A   |
| Arm 2 |            | 0.1         | 3.54      | 0.07 | A   |        | 0.1         | 3.97      | 0.07 | A   |
| Arm 3 |            | 0.2         | 3.47      | 0.14 | A   |        | 0.3         | 3.78      | 0.20 | A   |
|       | 2035 Base  |             |           |      |     |        |             |           |      |     |
| Arm 1 | D7         | 0.2         | 2.92      | 0.12 | A   | D8     | 0.3         | 3.14      | 0.21 | A   |
| Arm 2 |            | 0.1         | 3.60      | 0.08 | A   |        | 0.1         | 4.06      | 0.08 | A   |
| Arm 3 |            | 0.2         | 3.54      | 0.15 | A   |        | 0.3         | 3.90      | 0.22 | A   |
|       | 2022 + Dev |             |           |      |     |        |             |           |      |     |
| Arm 1 | D9         | 0.1         | 2.89      | 0.11 | A   | D10    | 0.3         | 3.09      | 0.20 | A   |
| Arm 2 |            | 0.1         | 3.55      | 0.07 | A   |        | 0.1         | 4.01      | 0.08 | A   |
| Arm 3 |            | 0.2         | 3.52      | 0.15 | A   |        | 0.3         | 3.83      | 0.21 | A   |
|       | 2035 + Dev |             |           |      |     |        |             |           |      |     |
| Arm 1 | D11        | 0.2         | 2.94      | 0.13 | A   | D12    | 0.3         | 3.19      | 0.22 | A   |
| Arm 2 |            | 0.1         | 3.62      | 0.08 | A   |        | 0.1         | 4.11      | 0.09 | A   |
| Arm 3 |            | 0.2         | 3.60      | 0.17 | A   |        | 0.3         | 3.95      | 0.23 | A   |

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

## File summary

### File Description

|             |             |
|-------------|-------------|
| Title       |             |
| Location    |             |
| Site number |             |
| Date        | 31/07/2018  |
| Version     |             |
| Status      | (new file)  |
| Identifier  |             |
| Client      |             |
| Jobnumber   |             |
| Enumerator  | ATRANSKatie |
| Description |             |

## Units

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

## Analysis Options

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

### Demand Set Summary

| ID  | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1  | 2018 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D2  | 2018 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D3  | 2020 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D4  | 2020 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D5  | 2022 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D6  | 2022 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D7  | 2035 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D8  | 2035 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D9  | 2022 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D10 | 2022 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |
| D11 | 2035 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |
| D12 | 2035 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

### Analysis Set Details

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

# 2018 Base, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.22               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Arms

### Arms

| Arm | Name                  | Description |
|-----|-----------------------|-------------|
| 1   | Victoria Road (N)     |             |
| 2   | Victoria Road (S)     |             |
| 3   | Princess Margaret Way |             |

### Roundabout Geometry

| Arm | V - Approach road half-width (m) | E - Entry width (m) | I' - Effective flare length (m) | R - Entry radius (m) | D - Inscribed circle diameter (m) | PHI - Conflict (entry) angle (deg) | Exit only |
|-----|----------------------------------|---------------------|---------------------------------|----------------------|-----------------------------------|------------------------------------|-----------|
| 1   | 3.75                             | 5.90                | 10.4                            | 117.9                | 128.0                             | 33.2                               |           |
| 2   | 3.10                             | 5.00                | 4.0                             | 32.6                 | 28.0                              | 7.7                                |           |
| 3   | 3.70                             | 5.90                | 2.9                             | 8.4                  | 128.0                             | 12.1                               |           |

### Slope / Intercept / Capacity

#### Roundabout Slope and Intercept used in model

| Arm | Final slope | Final intercept (PCU/hr) |
|-----|-------------|--------------------------|
| 1   | 0.435       | 1573                     |
| 2   | 0.604       | 1280                     |
| 3   | 0.390       | 1308                     |

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

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D1 | 2018 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

## Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 146                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 69                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 152                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |    |     |
|------|----|-----|----|-----|
|      | 1  | 2   | 3  |     |
| From | 1  | 7   | 29 | 110 |
|      | 2  | 28  | 0  | 41  |
|      | 3  | 123 | 24 | 5   |
|      |    |     |    |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |    |
|------|----|----|----|----|
|      | 1  | 2  | 3  |    |
| From | 1  | 0  | 14 | 11 |
|      | 2  | 14 | 0  | 7  |
|      | 3  | 8  | 8  | 0  |
|      |    |    |    |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.10    | 2.86          | 0.1             | A       | 134                     | 201                           |
| 2   | 0.06    | 3.52          | 0.1             | A       | 63                      | 95                            |
| 3   | 0.13    | 3.44          | 0.2             | A       | 139                     | 209                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 110                   | 27                      | 22                        | 1564              | 0.070 | 110                 | 119                             | 0.0               | 0.1             | 2.747     | A                             |
| 2   | 52                    | 13                      | 92                        | 1225              | 0.042 | 52                  | 40                              | 0.0               | 0.0             | 3.367     | A                             |
| 3   | 114                   | 29                      | 26                        | 1298              | 0.088 | 114                 | 117                             | 0.0               | 0.1             | 3.275     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 131                   | 33                      | 26                        | 1562              | 0.084 | 131                 | 142                             | 0.1               | 0.1             | 2.792     | A                             |
| 2   | 62                    | 16                      | 110                       | 1214              | 0.051 | 62                  | 48                              | 0.0               | 0.1             | 3.428     | A                             |
| 3   | 137                   | 34                      | 31                        | 1296              | 0.105 | 137                 | 140                             | 0.1               | 0.1             | 3.343     | A                             |

### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 161                   | 40                      | 32                        | 1560              | 0.103 | 161                 | 174                             | 0.1               | 0.1             | 2.855     | A                             |
| 2   | 76                    | 19                      | 134                       | 1199              | 0.063 | 76                  | 58                              | 0.1               | 0.1             | 3.516     | A                             |
| 3   | 167                   | 42                      | 39                        | 1293              | 0.129 | 167                 | 172                             | 0.1               | 0.2             | 3.442     | A                             |

### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 161                   | 40                      | 32                        | 1560              | 0.103 | 161                 | 174                             | 0.1               | 0.1             | 2.856     | A                             |
| 2   | 76                    | 19                      | 134                       | 1199              | 0.063 | 76                  | 58                              | 0.1               | 0.1             | 3.516     | A                             |
| 3   | 167                   | 42                      | 39                        | 1293              | 0.129 | 167                 | 172                             | 0.2               | 0.2             | 3.442     | A                             |

### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 131                   | 33                      | 26                        | 1562              | 0.084 | 131                 | 142                             | 0.1               | 0.1             | 2.792     | A                             |
| 2   | 62                    | 16                      | 110                       | 1214              | 0.051 | 62                  | 48                              | 0.1               | 0.1             | 3.431     | A                             |
| 3   | 137                   | 34                      | 31                        | 1296              | 0.105 | 137                 | 140                             | 0.2               | 0.1             | 3.344     | A                             |

### 09:15 - 09:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 110                   | 27                      | 22                        | 1564              | 0.070 | 110                 | 119                             | 0.1               | 0.1             | 2.750     | A                             |
| 2   | 52                    | 13                      | 92                        | 1225              | 0.042 | 52                  | 40                              | 0.1               | 0.0             | 3.370     | A                             |
| 3   | 114                   | 29                      | 26                        | 1298              | 0.088 | 115                 | 118                             | 0.1               | 0.1             | 3.275     | A                             |

# 2018 Base, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.43               | 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 | 2018 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 251                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 73                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 224                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |     |    |     |
|--|----|-----|----|-----|
|  |    | 1   | 2  | 3   |
|  | 1  | 2   | 68 | 181 |
|  | 2  | 42  | 0  | 31  |
|  | 3  | 165 | 45 | 14  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |   |    |
|--|----|----|---|----|
|  |    | 1  | 2 | 3  |
|  | 1  | 0  | 7 | 6  |
|  | 2  | 17 | 0 | 16 |
|  | 3  | 8  | 9 | 7  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.18    | 3.01          | 0.2             | A       | 230                     | 345                           |
| 2   | 0.07    | 3.93          | 0.1             | A       | 67                      | 100                           |
| 3   | 0.19    | 3.73          | 0.3             | A       | 206                     | 308                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 189                   | 47                      | 44                        | 1554              | 0.122 | 188                 | 157                             | 0.0               | 0.1             | 2.798     | A                             |
| 2   | 55                    | 14                      | 148                       | 1191              | 0.046 | 55                  | 85                              | 0.0               | 0.1             | 3.693     | A                             |
| 3   | 169                   | 42                      | 33                        | 1296              | 0.130 | 168                 | 170                             | 0.0               | 0.2             | 3.450     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 226                   | 56                      | 53                        | 1550              | 0.146 | 226                 | 188                             | 0.1               | 0.2             | 2.885     | A                             |
| 2   | 66                    | 16                      | 177                       | 1173              | 0.056 | 66                  | 102                             | 0.1               | 0.1             | 3.787     | A                             |
| 3   | 201                   | 50                      | 40                        | 1293              | 0.156 | 201                 | 203                             | 0.2               | 0.2             | 3.565     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 276                   | 69                      | 65                        | 1545              | 0.179 | 276                 | 230                             | 0.2               | 0.2             | 3.012     | A                             |
| 2   | 80                    | 20                      | 217                       | 1149              | 0.070 | 80                  | 124                             | 0.1               | 0.1             | 3.925     | A                             |
| 3   | 247                   | 62                      | 48                        | 1290              | 0.191 | 246                 | 249                             | 0.2               | 0.3             | 3.731     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 276                   | 69                      | 65                        | 1545              | 0.179 | 276                 | 230                             | 0.2               | 0.2             | 3.013     | A                             |
| 2   | 80                    | 20                      | 217                       | 1149              | 0.070 | 80                  | 124                             | 0.1               | 0.1             | 3.925     | A                             |
| 3   | 247                   | 62                      | 48                        | 1290              | 0.191 | 247                 | 249                             | 0.3               | 0.3             | 3.731     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 226                   | 56                      | 53                        | 1550              | 0.146 | 226                 | 188                             | 0.2               | 0.2             | 2.886     | A                             |
| 2   | 66                    | 16                      | 177                       | 1173              | 0.056 | 66                  | 102                             | 0.1               | 0.1             | 3.788     | A                             |
| 3   | 201                   | 50                      | 40                        | 1293              | 0.156 | 202                 | 203                             | 0.3               | 0.2             | 3.569     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 189                   | 47                      | 44                        | 1554              | 0.122 | 189                 | 157                             | 0.2               | 0.1             | 2.803     | A                             |
| 2   | 55                    | 14                      | 148                       | 1191              | 0.046 | 55                  | 85                              | 0.1               | 0.1             | 3.694     | A                             |
| 3   | 169                   | 42                      | 33                        | 1296              | 0.130 | 169                 | 170                             | 0.2               | 0.2             | 3.457     | A                             |

# 2020 Base, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.24               | 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 | 2020 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 151                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 71                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 157                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |    |     |
|------|----|-----|----|-----|
|      |    | 1   | 2  | 3   |
| From | 1  | 7   | 30 | 114 |
|      | 2  | 29  | 0  | 42  |
|      | 3  | 127 | 25 | 5   |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |    |
|------|----|----|----|----|
|      |    | 1  | 2  | 3  |
| From | 1  | 0  | 14 | 11 |
|      | 2  | 14 | 0  | 7  |
|      | 3  | 8  | 8  | 0  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.11    | 2.87          | 0.1             | A       | 139                     | 208                           |
| 2   | 0.07    | 3.53          | 0.1             | A       | 65                      | 98                            |
| 3   | 0.13    | 3.46          | 0.2             | A       | 144                     | 216                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 114                   | 28                      | 23                        | 1564              | 0.073 | 113                 | 122                             | 0.0               | 0.1             | 2.755     | A                             |
| 2   | 53                    | 13                      | 95                        | 1223              | 0.044 | 53                  | 41                              | 0.0               | 0.0             | 3.377     | A                             |
| 3   | 118                   | 30                      | 27                        | 1298              | 0.091 | 118                 | 121                             | 0.0               | 0.1             | 3.286     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 136                   | 34                      | 27                        | 1562              | 0.087 | 136                 | 146                             | 0.1               | 0.1             | 2.802     | A                             |
| 2   | 64                    | 16                      | 113                       | 1212              | 0.053 | 64                  | 49                              | 0.0               | 0.1             | 3.440     | A                             |
| 3   | 141                   | 35                      | 32                        | 1296              | 0.109 | 141                 | 145                             | 0.1               | 0.1             | 3.357     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 166                   | 42                      | 33                        | 1559              | 0.107 | 166                 | 179                             | 0.1               | 0.1             | 2.868     | A                             |
| 2   | 78                    | 20                      | 139                       | 1197              | 0.065 | 78                  | 61                              | 0.1               | 0.1             | 3.532     | A                             |
| 3   | 173                   | 43                      | 40                        | 1293              | 0.134 | 173                 | 177                             | 0.1               | 0.2             | 3.461     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 166                   | 42                      | 33                        | 1559              | 0.107 | 166                 | 179                             | 0.1               | 0.1             | 2.868     | A                             |
| 2   | 78                    | 20                      | 139                       | 1196              | 0.065 | 78                  | 61                              | 0.1               | 0.1             | 3.532     | A                             |
| 3   | 173                   | 43                      | 40                        | 1293              | 0.134 | 173                 | 177                             | 0.2               | 0.2             | 3.461     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 136                   | 34                      | 27                        | 1562              | 0.087 | 136                 | 147                             | 0.1               | 0.1             | 2.802     | A                             |
| 2   | 64                    | 16                      | 113                       | 1212              | 0.053 | 64                  | 49                              | 0.1               | 0.1             | 3.441     | A                             |
| 3   | 141                   | 35                      | 32                        | 1296              | 0.109 | 141                 | 145                             | 0.2               | 0.1             | 3.358     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 114                   | 28                      | 23                        | 1564              | 0.073 | 114                 | 123                             | 0.1               | 0.1             | 2.756     | A                             |
| 2  | 53                    | 13                      | 95                        | 1223              | 0.044 | 53                  | 41                              | 0.1               | 0.1             | 3.378     | A                             |
| 3  | 118                   | 30                      | 27                        | 1298              | 0.091 | 118                 | 121                             | 0.1               | 0.1             | 3.287     | A                             |

# 2020 Base, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.45               | 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 | 2020 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 259                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 75                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 230                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |    |     |
|------|----|-----|----|-----|
|      | 1  | 2   | 3  |     |
| From | 1  | 2   | 70 | 187 |
|      | 2  | 43  | 0  | 32  |
|      | 3  | 170 | 46 | 14  |
|      |    |     |    |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |   |    |
|------|----|----|---|----|
|      | 1  | 2  | 3 |    |
| From | 1  | 0  | 7 | 6  |
|      | 2  | 17 | 0 | 16 |
|      | 3  | 8  | 9 | 7  |
|      |    |    |   |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.18    | 3.03          | 0.2             | A       | 238                     | 356                           |
| 2   | 0.07    | 3.95          | 0.1             | A       | 69                      | 103                           |
| 3   | 0.20    | 3.76          | 0.3             | A       | 211                     | 317                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 195                   | 49                      | 45                        | 1554              | 0.125 | 194                 | 161                             | 0.0               | 0.2             | 2.811     | A                             |
| 2   | 56                    | 14                      | 152                       | 1188              | 0.048 | 56                  | 87                              | 0.0               | 0.1             | 3.706     | A                             |
| 3   | 173                   | 43                      | 34                        | 1295              | 0.134 | 172                 | 175                             | 0.0               | 0.2             | 3.465     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 233                   | 58                      | 54                        | 1550              | 0.150 | 233                 | 193                             | 0.2               | 0.2             | 2.902     | A                             |
| 2   | 67                    | 17                      | 182                       | 1170              | 0.058 | 67                  | 104                             | 0.1               | 0.1             | 3.804     | A                             |
| 3   | 207                   | 52                      | 40                        | 1293              | 0.160 | 207                 | 209                             | 0.2               | 0.2             | 3.584     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 285                   | 71                      | 66                        | 1545              | 0.185 | 285                 | 237                             | 0.2               | 0.2             | 3.035     | A                             |
| 2   | 83                    | 21                      | 223                       | 1145              | 0.072 | 82                  | 128                             | 0.1               | 0.1             | 3.948     | A                             |
| 3   | 253                   | 63                      | 50                        | 1289              | 0.196 | 253                 | 256                             | 0.2               | 0.3             | 3.757     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 285                   | 71                      | 66                        | 1545              | 0.185 | 285                 | 237                             | 0.2               | 0.2             | 3.035     | A                             |
| 2   | 83                    | 21                      | 224                       | 1145              | 0.072 | 83                  | 128                             | 0.1               | 0.1             | 3.948     | A                             |
| 3   | 253                   | 63                      | 50                        | 1289              | 0.196 | 253                 | 257                             | 0.3               | 0.3             | 3.757     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 233                   | 58                      | 54                        | 1550              | 0.150 | 233                 | 193                             | 0.2               | 0.2             | 2.905     | A                             |
| 2   | 67                    | 17                      | 183                       | 1170              | 0.058 | 67                  | 104                             | 0.1               | 0.1             | 3.808     | A                             |
| 3   | 207                   | 52                      | 40                        | 1293              | 0.160 | 207                 | 210                             | 0.3               | 0.2             | 3.585     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 195                   | 49                      | 45                        | 1554              | 0.125 | 195                 | 162                             | 0.2               | 0.2             | 2.816     | A                             |
| 2   | 56                    | 14                      | 153                       | 1188              | 0.048 | 57                  | 87                              | 0.1               | 0.1             | 3.711     | A                             |
| 3   | 173                   | 43                      | 34                        | 1295              | 0.134 | 173                 | 176                             | 0.2               | 0.2             | 3.469     | A                             |

# 2022 Base , AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.25               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D5 | 2022 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 154                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 72                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 160                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |     |    |     |
|--|----|-----|----|-----|
|  |    | 1   | 2  | 3   |
|  | 1  | 7   | 31 | 116 |
|  | 2  | 29  | 0  | 43  |
|  | 3  | 130 | 25 | 5   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | 1  | 2  | 3  |
|  | 1  | 0  | 14 | 11 |
|  | 2  | 14 | 0  | 7  |
|  | 3  | 8  | 8  | 0  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.11    | 2.88          | 0.1             | A       | 141                     | 212                           |
| 2   | 0.07    | 3.54          | 0.1             | A       | 66                      | 99                            |
| 3   | 0.14    | 3.47          | 0.2             | A       | 147                     | 220                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 116                   | 29                      | 23                        | 1564              | 0.074 | 116                 | 125                             | 0.0               | 0.1             | 2.760     | A                             |
| 2   | 54                    | 14                      | 96                        | 1222              | 0.044 | 54                  | 42                              | 0.0               | 0.1             | 3.380     | A                             |
| 3   | 120                   | 30                      | 27                        | 1298              | 0.093 | 120                 | 123                             | 0.0               | 0.1             | 3.293     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 138                   | 35                      | 27                        | 1562              | 0.089 | 138                 | 149                             | 0.1               | 0.1             | 2.807     | A                             |
| 2   | 65                    | 16                      | 115                       | 1211              | 0.053 | 65                  | 50                              | 0.1               | 0.1             | 3.445     | A                             |
| 3   | 144                   | 36                      | 32                        | 1296              | 0.111 | 144                 | 147                             | 0.1               | 0.1             | 3.365     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 170                   | 42                      | 33                        | 1559              | 0.109 | 169                 | 183                             | 0.1               | 0.1             | 2.876     | A                             |
| 2   | 79                    | 20                      | 141                       | 1195              | 0.066 | 79                  | 62                              | 0.1               | 0.1             | 3.538     | A                             |
| 3   | 176                   | 44                      | 40                        | 1293              | 0.136 | 176                 | 180                             | 0.1               | 0.2             | 3.471     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 170                   | 42                      | 33                        | 1559              | 0.109 | 170                 | 183                             | 0.1               | 0.1             | 2.876     | A                             |
| 2   | 79                    | 20                      | 141                       | 1195              | 0.066 | 79                  | 62                              | 0.1               | 0.1             | 3.538     | A                             |
| 3   | 176                   | 44                      | 40                        | 1293              | 0.136 | 176                 | 181                             | 0.2               | 0.2             | 3.471     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 138                   | 35                      | 27                        | 1562              | 0.089 | 139                 | 149                             | 0.1               | 0.1             | 2.810     | A                             |
| 2   | 65                    | 16                      | 115                       | 1211              | 0.053 | 65                  | 50                              | 0.1               | 0.1             | 3.446     | A                             |
| 3   | 144                   | 36                      | 32                        | 1296              | 0.111 | 144                 | 148                             | 0.2               | 0.1             | 3.366     | A                             |

## 09:15 - 09:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 116                   | 29                      | 23                        | 1564              | 0.074 | 116                 | 125                             | 0.1               | 0.1             | 2.763     | A                             |
| 2   | 54                    | 14                      | 96                        | 1222              | 0.044 | 54                  | 42                              | 0.1               | 0.1             | 3.381     | A                             |
| 3   | 120                   | 30                      | 27                        | 1298              | 0.093 | 121                 | 124                             | 0.1               | 0.1             | 3.293     | A                             |

# 2022 Base, PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.47               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D6 | 2022 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 263                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 77                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 235                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |     |    |     |
|--|----|-----|----|-----|
|  |    | 1   | 2  | 3   |
|  | 1  | 2   | 71 | 190 |
|  | 2  | 44  | 0  | 33  |
|  | 3  | 173 | 47 | 15  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |   |    |
|--|----|----|---|----|
|  |    | 1  | 2 | 3  |
|  | 1  | 0  | 7 | 6  |
|  | 2  | 17 | 0 | 16 |
|  | 3  | 8  | 9 | 7  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.19    | 3.05          | 0.2             | A       | 241                     | 362                           |
| 2   | 0.07    | 3.97          | 0.1             | A       | 71                      | 106                           |
| 3   | 0.20    | 3.78          | 0.3             | A       | 216                     | 323                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 198                   | 50                      | 46                        | 1553              | 0.127 | 197                 | 164                             | 0.0               | 0.2             | 2.818     | A                             |
| 2   | 58                    | 14                      | 155                       | 1186              | 0.049 | 58                  | 89                              | 0.0               | 0.1             | 3.717     | A                             |
| 3   | 177                   | 44                      | 34                        | 1295              | 0.137 | 176                 | 179                             | 0.0               | 0.2             | 3.478     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 236                   | 59                      | 56                        | 1549              | 0.153 | 236                 | 197                             | 0.2               | 0.2             | 2.912     | A                             |
| 2   | 69                    | 17                      | 186                       | 1168              | 0.059 | 69                  | 106                             | 0.1               | 0.1             | 3.818     | A                             |
| 3   | 211                   | 53                      | 41                        | 1292              | 0.163 | 211                 | 214                             | 0.2               | 0.2             | 3.600     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 290                   | 72                      | 68                        | 1544              | 0.188 | 289                 | 241                             | 0.2               | 0.2             | 3.048     | A                             |
| 2   | 85                    | 21                      | 228                       | 1143              | 0.074 | 85                  | 130                             | 0.1               | 0.1             | 3.966     | A                             |
| 3   | 259                   | 65                      | 51                        | 1289              | 0.201 | 259                 | 262                             | 0.2               | 0.3             | 3.778     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 290                   | 72                      | 68                        | 1544              | 0.188 | 290                 | 241                             | 0.2               | 0.2             | 3.048     | A                             |
| 2   | 85                    | 21                      | 228                       | 1143              | 0.074 | 85                  | 130                             | 0.1               | 0.1             | 3.966     | A                             |
| 3   | 259                   | 65                      | 51                        | 1289              | 0.201 | 259                 | 262                             | 0.3               | 0.3             | 3.778     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 236                   | 59                      | 56                        | 1549              | 0.153 | 237                 | 197                             | 0.2               | 0.2             | 2.915     | A                             |
| 2   | 69                    | 17                      | 186                       | 1168              | 0.059 | 69                  | 106                             | 0.1               | 0.1             | 3.822     | A                             |
| 3   | 211                   | 53                      | 41                        | 1292              | 0.163 | 211                 | 214                             | 0.3               | 0.2             | 3.604     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 198                   | 50                      | 47                        | 1553              | 0.127 | 198                 | 165                             | 0.2               | 0.2             | 2.824     | A                             |
| 2   | 58                    | 14                      | 156                       | 1186              | 0.049 | 58                  | 89                              | 0.1               | 0.1             | 3.719     | A                             |
| 3   | 177                   | 44                      | 35                        | 1295              | 0.137 | 177                 | 179                             | 0.2               | 0.2             | 3.482     | A                             |

# 2035 Base, AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.30               | 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 |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D7 | 2035 Base     | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 171                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 81                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 178                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |    |     |
|------|----|-----|----|-----|
|      | 1  | 2   | 3  |     |
| From | 1  | 8   | 34 | 129 |
|      | 2  | 33  | 0  | 48  |
|      | 3  | 144 | 28 | 6   |
|      |    |     |    |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |    |    |
|------|----|----|----|----|
|      | 1  | 2  | 3  |    |
| From | 1  | 0  | 14 | 11 |
|      | 2  | 14 | 0  | 7  |
|      | 3  | 8  | 8  | 0  |
|      |    |    |    |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.12    | 2.92          | 0.2             | A       | 157                     | 235                           |
| 2   | 0.08    | 3.60          | 0.1             | A       | 74                      | 111                           |
| 3   | 0.15    | 3.54          | 0.2             | A       | 163                     | 245                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 129                   | 32                      | 26                        | 1562              | 0.082 | 128                 | 139                             | 0.0               | 0.1             | 2.787     | A                             |
| 2   | 61                    | 15                      | 107                       | 1215              | 0.050 | 61                  | 47                              | 0.0               | 0.1             | 3.421     | A                             |
| 3   | 134                   | 34                      | 31                        | 1296              | 0.103 | 134                 | 137                             | 0.0               | 0.1             | 3.332     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 154                   | 38                      | 31                        | 1560              | 0.099 | 154                 | 166                             | 0.1               | 0.1             | 2.840     | A                             |
| 2   | 73                    | 18                      | 128                       | 1203              | 0.061 | 73                  | 56                              | 0.1               | 0.1             | 3.495     | A                             |
| 3   | 160                   | 40                      | 37                        | 1294              | 0.124 | 160                 | 164                             | 0.1               | 0.2             | 3.418     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 188                   | 47                      | 37                        | 1557              | 0.121 | 188                 | 204                             | 0.1               | 0.2             | 2.918     | A                             |
| 2   | 89                    | 22                      | 157                       | 1185              | 0.075 | 89                  | 68                              | 0.1               | 0.1             | 3.603     | A                             |
| 3   | 196                   | 49                      | 45                        | 1291              | 0.152 | 196                 | 201                             | 0.2               | 0.2             | 3.540     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 188                   | 47                      | 37                        | 1557              | 0.121 | 188                 | 204                             | 0.2               | 0.2             | 2.918     | A                             |
| 2   | 89                    | 22                      | 157                       | 1185              | 0.075 | 89                  | 68                              | 0.1               | 0.1             | 3.603     | A                             |
| 3   | 196                   | 49                      | 45                        | 1291              | 0.152 | 196                 | 201                             | 0.2               | 0.2             | 3.540     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 154                   | 38                      | 31                        | 1560              | 0.099 | 154                 | 166                             | 0.2               | 0.1             | 2.843     | A                             |
| 2   | 73                    | 18                      | 129                       | 1203              | 0.061 | 73                  | 56                              | 0.1               | 0.1             | 3.496     | A                             |
| 3   | 160                   | 40                      | 37                        | 1294              | 0.124 | 160                 | 165                             | 0.2               | 0.2             | 3.419     | A                             |

## 09:15 - 09:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 129                   | 32                      | 26                        | 1562              | 0.082 | 129                 | 139                             | 0.1               | 0.1             | 2.787     | A                             |
| 2   | 61                    | 15                      | 108                       | 1215              | 0.050 | 61                  | 47                              | 0.1               | 0.1             | 3.422     | A                             |
| 3   | 134                   | 34                      | 31                        | 1296              | 0.103 | 134                 | 138                             | 0.2               | 0.1             | 3.338     | A                             |

# 2035 Base , PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.57               | A            |

### Junction Network Options

| Driving side | Lighting       |
|--------------|----------------|
| Left         | Normal/unknown |

## Traffic Demand

### Demand Set Details

| ID | Scenario name | Time Period name | Traffic profile type | Start time (HH:mm) | Finish time (HH:mm) | Time segment length (min) | Run automatically |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D8 | 2035 Base     | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 294                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 85                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 262                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |     |    |     |
|--|----|-----|----|-----|
|  |    | 1   | 2  | 3   |
|  | 1  | 2   | 80 | 212 |
|  | 2  | 49  | 0  | 36  |
|  | 3  | 193 | 53 | 16  |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |   |    |
|--|----|----|---|----|
|  |    | 1  | 2 | 3  |
|  | 1  | 0  | 7 | 6  |
|  | 2  | 17 | 0 | 16 |
|  | 3  | 8  | 9 | 7  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.21    | 3.14          | 0.3             | A       | 270                     | 405                           |
| 2   | 0.08    | 4.06          | 0.1             | A       | 78                      | 117                           |
| 3   | 0.22    | 3.90          | 0.3             | A       | 240                     | 361                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 221                   | 55                      | 52                        | 1551              | 0.143 | 221                 | 183                             | 0.0               | 0.2             | 2.873     | A                             |
| 2   | 64                    | 16                      | 173                       | 1176              | 0.054 | 64                  | 100                             | 0.0               | 0.1             | 3.772     | A                             |
| 3   | 197                   | 49                      | 38                        | 1294              | 0.152 | 196                 | 198                             | 0.0               | 0.2             | 3.547     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 264                   | 66                      | 62                        | 1546              | 0.171 | 264                 | 219                             | 0.2               | 0.2             | 2.981     | A                             |
| 2   | 76                    | 19                      | 207                       | 1155              | 0.066 | 76                  | 119                             | 0.1               | 0.1             | 3.888     | A                             |
| 3   | 236                   | 59                      | 46                        | 1291              | 0.183 | 235                 | 237                             | 0.2               | 0.2             | 3.688     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 324                   | 81                      | 76                        | 1540              | 0.210 | 323                 | 268                             | 0.2               | 0.3             | 3.142     | A                             |
| 2   | 94                    | 23                      | 253                       | 1127              | 0.083 | 93                  | 146                             | 0.1               | 0.1             | 4.058     | A                             |
| 3   | 288                   | 72                      | 56                        | 1287              | 0.224 | 288                 | 290                             | 0.2               | 0.3             | 3.898     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 324                   | 81                      | 76                        | 1540              | 0.210 | 324                 | 269                             | 0.3               | 0.3             | 3.142     | A                             |
| 2   | 94                    | 23                      | 253                       | 1127              | 0.083 | 94                  | 146                             | 0.1               | 0.1             | 4.059     | A                             |
| 3   | 288                   | 72                      | 56                        | 1287              | 0.224 | 288                 | 291                             | 0.3               | 0.3             | 3.900     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 264                   | 66                      | 62                        | 1546              | 0.171 | 265                 | 220                             | 0.3               | 0.2             | 2.983     | A                             |
| 2   | 76                    | 19                      | 207                       | 1155              | 0.066 | 77                  | 120                             | 0.1               | 0.1             | 3.891     | A                             |
| 3   | 236                   | 59                      | 46                        | 1291              | 0.183 | 236                 | 238                             | 0.3               | 0.2             | 3.693     | A                             |

**18:15 - 18:30**

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 221                   | 55                      | 52                        | 1551              | 0.143 | 222                 | 184                             | 0.2               | 0.2             | 2.878     | A                             |
| 2  | 64                    | 16                      | 173                       | 1176              | 0.054 | 64                  | 100                             | 0.1               | 0.1             | 3.774     | A                             |
| 3  | 197                   | 49                      | 38                        | 1293              | 0.153 | 197                 | 199                             | 0.2               | 0.2             | 3.551     | A                             |

# 2022 + Dev , AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.28               | 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 |
|----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D9 | 2022 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 159                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 74                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 175                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |     |    |     |
|--|----|-----|----|-----|
|  |    | 1   | 2  | 3   |
|  | 1  | 7   | 31 | 121 |
|  | 2  | 29  | 0  | 45  |
|  | 3  | 142 | 28 | 5   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | 1  | 2  | 3  |
|  | 1  | 0  | 14 | 11 |
|  | 2  | 14 | 0  | 7  |
|  | 3  | 8  | 8  | 0  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.11    | 2.89          | 0.1             | A       | 146                     | 219                           |
| 2   | 0.07    | 3.55          | 0.1             | A       | 68                      | 102                           |
| 3   | 0.15    | 3.52          | 0.2             | A       | 161                     | 241                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 120                   | 30                      | 25                        | 1563              | 0.077 | 119                 | 134                             | 0.0               | 0.1             | 2.769     | A                             |
| 2   | 56                    | 14                      | 100                       | 1220              | 0.046 | 56                  | 44                              | 0.0               | 0.1             | 3.389     | A                             |
| 3   | 132                   | 33                      | 27                        | 1298              | 0.102 | 131                 | 128                             | 0.0               | 0.1             | 3.323     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 143                   | 36                      | 30                        | 1561              | 0.092 | 143                 | 160                             | 0.1               | 0.1             | 2.819     | A                             |
| 2   | 67                    | 17                      | 119                       | 1208              | 0.055 | 66                  | 53                              | 0.1               | 0.1             | 3.456     | A                             |
| 3   | 157                   | 39                      | 32                        | 1296              | 0.121 | 157                 | 154                             | 0.1               | 0.1             | 3.406     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 175                   | 44                      | 36                        | 1558              | 0.112 | 175                 | 196                             | 0.1               | 0.1             | 2.890     | A                             |
| 2   | 81                    | 20                      | 146                       | 1192              | 0.068 | 81                  | 65                              | 0.1               | 0.1             | 3.553     | A                             |
| 3   | 193                   | 48                      | 40                        | 1293              | 0.149 | 193                 | 188                             | 0.1               | 0.2             | 3.524     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 175                   | 44                      | 36                        | 1558              | 0.112 | 175                 | 196                             | 0.1               | 0.1             | 2.890     | A                             |
| 2   | 81                    | 20                      | 146                       | 1192              | 0.068 | 81                  | 65                              | 0.1               | 0.1             | 3.553     | A                             |
| 3   | 193                   | 48                      | 40                        | 1293              | 0.149 | 193                 | 188                             | 0.2               | 0.2             | 3.524     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 143                   | 36                      | 30                        | 1561              | 0.092 | 143                 | 160                             | 0.1               | 0.1             | 2.819     | A                             |
| 2   | 67                    | 17                      | 120                       | 1208              | 0.055 | 67                  | 53                              | 0.1               | 0.1             | 3.457     | A                             |
| 3   | 157                   | 39                      | 32                        | 1296              | 0.121 | 157                 | 154                             | 0.2               | 0.1             | 3.407     | A                             |

## 09:15 - 09:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 120                   | 30                      | 25                        | 1563              | 0.077 | 120                 | 134                             | 0.1               | 0.1             | 2.772     | A                             |
| 2   | 56                    | 14                      | 100                       | 1220              | 0.046 | 56                  | 44                              | 0.1               | 0.1             | 3.390     | A                             |
| 3   | 132                   | 33                      | 27                        | 1298              | 0.102 | 132                 | 129                             | 0.1               | 0.1             | 3.328     | A                             |

# 2022 + Dev , PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.51               | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D10 | 2022 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 279                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 79                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 247                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |    |     |
|------|----|-----|----|-----|
|      | 1  | 2   | 3  |     |
| From | 1  | 2   | 71 | 206 |
|      | 2  | 44  | 0  | 35  |
|      | 3  | 182 | 50 | 15  |
|      |    |     |    |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |   |    |
|------|----|----|---|----|
|      | 1  | 2  | 3 |    |
| From | 1  | 0  | 7 | 6  |
|      | 2  | 17 | 0 | 16 |
|      | 3  | 8  | 9 | 7  |
|      |    |    |   |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.20    | 3.09          | 0.3             | A       | 256                     | 384                           |
| 2   | 0.08    | 4.01          | 0.1             | A       | 72                      | 109                           |
| 3   | 0.21    | 3.83          | 0.3             | A       | 227                     | 340                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 210                   | 53                      | 49                        | 1552              | 0.135 | 209                 | 171                             | 0.0               | 0.2             | 2.845     | A                             |
| 2   | 59                    | 15                      | 167                       | 1179              | 0.050 | 59                  | 91                              | 0.0               | 0.1             | 3.746     | A                             |
| 3   | 186                   | 46                      | 34                        | 1295              | 0.144 | 185                 | 192                             | 0.0               | 0.2             | 3.506     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 251                   | 63                      | 58                        | 1548              | 0.162 | 251                 | 205                             | 0.2               | 0.2             | 2.946     | A                             |
| 2   | 71                    | 18                      | 200                       | 1159              | 0.061 | 71                  | 109                             | 0.1               | 0.1             | 3.855     | A                             |
| 3   | 222                   | 56                      | 41                        | 1292              | 0.172 | 222                 | 230                             | 0.2               | 0.2             | 3.636     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 307                   | 77                      | 71                        | 1542              | 0.199 | 307                 | 251                             | 0.2               | 0.3             | 3.094     | A                             |
| 2   | 87                    | 22                      | 245                       | 1132              | 0.077 | 87                  | 133                             | 0.1               | 0.1             | 4.014     | A                             |
| 3   | 272                   | 68                      | 51                        | 1289              | 0.211 | 272                 | 282                             | 0.2               | 0.3             | 3.827     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 307                   | 77                      | 72                        | 1542              | 0.199 | 307                 | 251                             | 0.3               | 0.3             | 3.094     | A                             |
| 2   | 87                    | 22                      | 246                       | 1132              | 0.077 | 87                  | 133                             | 0.1               | 0.1             | 4.014     | A                             |
| 3   | 272                   | 68                      | 51                        | 1289              | 0.211 | 272                 | 282                             | 0.3               | 0.3             | 3.827     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 251                   | 63                      | 59                        | 1548              | 0.162 | 251                 | 205                             | 0.3               | 0.2             | 2.950     | A                             |
| 2   | 71                    | 18                      | 201                       | 1159              | 0.061 | 71                  | 109                             | 0.1               | 0.1             | 3.858     | A                             |
| 3   | 222                   | 56                      | 41                        | 1292              | 0.172 | 222                 | 230                             | 0.3               | 0.2             | 3.641     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 210                   | 53                      | 49                        | 1552              | 0.135 | 210                 | 172                             | 0.2               | 0.2             | 2.848     | A                             |
| 2   | 59                    | 15                      | 168                       | 1179              | 0.050 | 60                  | 91                              | 0.1               | 0.1             | 3.751     | A                             |
| 3   | 186                   | 46                      | 35                        | 1295              | 0.144 | 186                 | 193                             | 0.2               | 0.2             | 3.510     | A                             |

# 2035 + Dev , AM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.34               | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D11 | 2035 + Dev    | AM               | ONE HOUR             | 08:00              | 09:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 177                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 83                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 194                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|  | To |     |    |     |
|--|----|-----|----|-----|
|  |    | 1   | 2  | 3   |
|  | 1  | 8   | 34 | 135 |
|  | 2  | 33  | 0  | 50  |
|  | 3  | 157 | 31 | 6   |

## Vehicle Mix

### Heavy Vehicle Percentages

|  | To |    |    |    |
|--|----|----|----|----|
|  |    | 1  | 2  | 3  |
|  | 1  | 0  | 14 | 11 |
|  | 2  | 14 | 0  | 7  |
|  | 3  | 8  | 8  | 0  |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.13    | 2.94          | 0.2             | A       | 162                     | 244                           |
| 2   | 0.08    | 3.62          | 0.1             | A       | 76                      | 114                           |
| 3   | 0.17    | 3.60          | 0.2             | A       | 178                     | 267                           |

### Main Results for each time segment

#### 08:00 - 08:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 133                   | 33                      | 28                        | 1561              | 0.085 | 133                 | 149                             | 0.0               | 0.1             | 2.797     | A                             |
| 2   | 62                    | 16                      | 112                       | 1213              | 0.052 | 62                  | 49                              | 0.0               | 0.1             | 3.431     | A                             |
| 3   | 146                   | 37                      | 31                        | 1296              | 0.113 | 146                 | 143                             | 0.0               | 0.1             | 3.367     | A                             |

#### 08:15 - 08:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 159                   | 40                      | 33                        | 1559              | 0.102 | 159                 | 178                             | 0.1               | 0.1             | 2.854     | A                             |
| 2   | 75                    | 19                      | 134                       | 1199              | 0.062 | 75                  | 58                              | 0.1               | 0.1             | 3.509     | A                             |
| 3   | 174                   | 44                      | 37                        | 1294              | 0.135 | 174                 | 172                             | 0.1               | 0.2             | 3.463     | A                             |

#### 08:30 - 08:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 195                   | 49                      | 41                        | 1556              | 0.125 | 195                 | 218                             | 0.1               | 0.2             | 2.936     | A                             |
| 2   | 91                    | 23                      | 164                       | 1181              | 0.077 | 91                  | 72                              | 0.1               | 0.1             | 3.621     | A                             |
| 3   | 214                   | 53                      | 45                        | 1291              | 0.165 | 213                 | 210                             | 0.2               | 0.2             | 3.599     | A                             |

#### 08:45 - 09:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 195                   | 49                      | 41                        | 1556              | 0.125 | 195                 | 218                             | 0.2               | 0.2             | 2.936     | A                             |
| 2   | 91                    | 23                      | 164                       | 1181              | 0.077 | 91                  | 72                              | 0.1               | 0.1             | 3.622     | A                             |
| 3   | 214                   | 53                      | 45                        | 1291              | 0.165 | 214                 | 210                             | 0.2               | 0.2             | 3.599     | A                             |

#### 09:00 - 09:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 159                   | 40                      | 33                        | 1559              | 0.102 | 159                 | 178                             | 0.2               | 0.1             | 2.854     | A                             |
| 2   | 75                    | 19                      | 134                       | 1199              | 0.062 | 75                  | 58                              | 0.1               | 0.1             | 3.513     | A                             |
| 3   | 174                   | 44                      | 37                        | 1294              | 0.135 | 175                 | 172                             | 0.2               | 0.2             | 3.464     | A                             |

## 09:15 - 09:30

| Am | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1  | 133                   | 33                      | 28                        | 1561              | 0.085 | 133                 | 149                             | 0.1               | 0.1             | 2.798     | A                             |
| 2  | 62                    | 16                      | 112                       | 1212              | 0.052 | 63                  | 49                              | 0.1               | 0.1             | 3.433     | A                             |
| 3  | 146                   | 37                      | 31                        | 1296              | 0.113 | 146                 | 144                             | 0.2               | 0.1             | 3.374     | A                             |

# 2035 + Dev , PM

## Data Errors and Warnings

No errors or warnings

## Junction Network

### Junctions

| Junction | Name     | Junction type       | Use circulating lanes | Arm order | Junction Delay (s) | Junction LOS |
|----------|----------|---------------------|-----------------------|-----------|--------------------|--------------|
| 1        | untitled | Standard Roundabout |                       | 1, 2, 3   | 3.62               | 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 |
|-----|---------------|------------------|----------------------|--------------------|---------------------|---------------------------|-------------------|
| D12 | 2035 + Dev    | PM               | ONE HOUR             | 17:00              | 18:30               | 15                        | ✓                 |

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

### Demand overview (Traffic)

| Arm | Linked arm | Profile type | Use O-D data | Average Demand (PCU/hr) | Scaling Factor (%) |
|-----|------------|--------------|--------------|-------------------------|--------------------|
| 1   |            | ONE HOUR     | ✓            | 310                     | 100.000            |
| 2   |            | ONE HOUR     | ✓            | 88                      | 100.000            |
| 3   |            | ONE HOUR     | ✓            | 273                     | 100.000            |

## Origin-Destination Data

### Demand (PCU/hr)

|      | To |     |    |     |
|------|----|-----|----|-----|
|      | 1  | 2   | 3  |     |
| From | 1  | 2   | 80 | 228 |
|      | 2  | 49  | 0  | 39  |
|      | 3  | 202 | 55 | 16  |
|      |    |     |    |     |

## Vehicle Mix

### Heavy Vehicle Percentages

|      | To |    |   |    |
|------|----|----|---|----|
|      | 1  | 2  | 3 |    |
| From | 1  | 0  | 7 | 6  |
|      | 2  | 17 | 0 | 16 |
|      | 3  | 8  | 9 | 7  |
|      |    |    |   |    |

## Results

### Results Summary for whole modelled period

| Arm | Max RFC | Max Delay (s) | Max Queue (PCU) | Max LOS | Average Demand (PCU/hr) | Total Junction Arrivals (PCU) |
|-----|---------|---------------|-----------------|---------|-------------------------|-------------------------------|
| 1   | 0.22    | 3.19          | 0.3             | A       | 284                     | 427                           |
| 2   | 0.09    | 4.11          | 0.1             | A       | 81                      | 121                           |
| 3   | 0.23    | 3.95          | 0.3             | A       | 251                     | 376                           |

### Main Results for each time segment

#### 17:00 - 17:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 233                   | 58                      | 53                        | 1550              | 0.151 | 233                 | 190                             | 0.0               | 0.2             | 2.900     | A                             |
| 2   | 66                    | 17                      | 185                       | 1169              | 0.057 | 66                  | 101                             | 0.0               | 0.1             | 3.804     | A                             |
| 3   | 206                   | 51                      | 38                        | 1294              | 0.159 | 205                 | 212                             | 0.0               | 0.2             | 3.574     | A                             |

#### 17:15 - 17:30

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 279                   | 70                      | 64                        | 1546              | 0.180 | 279                 | 227                             | 0.2               | 0.2             | 3.017     | A                             |
| 2   | 79                    | 20                      | 221                       | 1147              | 0.069 | 79                  | 121                             | 0.1               | 0.1             | 3.929     | A                             |
| 3   | 245                   | 61                      | 46                        | 1291              | 0.190 | 245                 | 254                             | 0.2               | 0.3             | 3.723     | A                             |

#### 17:30 - 17:45

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 341                   | 85                      | 78                        | 1539              | 0.222 | 341                 | 278                             | 0.2               | 0.3             | 3.190     | A                             |
| 2   | 97                    | 24                      | 271                       | 1117              | 0.087 | 97                  | 149                             | 0.1               | 0.1             | 4.113     | A                             |
| 3   | 301                   | 75                      | 56                        | 1287              | 0.234 | 300                 | 311                             | 0.3               | 0.3             | 3.946     | A                             |

#### 17:45 - 18:00

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 341                   | 85                      | 78                        | 1539              | 0.222 | 341                 | 279                             | 0.3               | 0.3             | 3.190     | A                             |
| 2   | 97                    | 24                      | 271                       | 1117              | 0.087 | 97                  | 149                             | 0.1               | 0.1             | 4.114     | A                             |
| 3   | 301                   | 75                      | 56                        | 1287              | 0.234 | 301                 | 312                             | 0.3               | 0.3             | 3.948     | A                             |

#### 18:00 - 18:15

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 279                   | 70                      | 64                        | 1546              | 0.180 | 279                 | 228                             | 0.3               | 0.2             | 3.018     | A                             |
| 2   | 79                    | 20                      | 221                       | 1147              | 0.069 | 79                  | 121                             | 0.1               | 0.1             | 3.932     | A                             |
| 3   | 245                   | 61                      | 46                        | 1291              | 0.190 | 246                 | 255                             | 0.3               | 0.3             | 3.729     | A                             |

**18:15 - 18:30**

| Arm | Total Demand (PCU/hr) | Junction Arrivals (PCU) | Circulating flow (PCU/hr) | Capacity (PCU/hr) | RFC   | Throughput (PCU/hr) | Throughput (exit side) (PCU/hr) | Start queue (PCU) | End queue (PCU) | Delay (s) | Unsignalised level of service |
|-----|-----------------------|-------------------------|---------------------------|-------------------|-------|---------------------|---------------------------------|-------------------|-----------------|-----------|-------------------------------|
| 1   | 233                   | 58                      | 54                        | 1550              | 0.151 | 234                 | 191                             | 0.2               | 0.2             | 2.904     | A                             |
| 2   | 66                    | 17                      | 185                       | 1168              | 0.057 | 66                  | 102                             | 0.1               | 0.1             | 3.809     | A                             |
| 3   | 206                   | 51                      | 38                        | 1293              | 0.159 | 206                 | 213                             | 0.3               | 0.2             | 3.581     | A                             |