MVV Environment Services Ltd

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee

Transport Assessment

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1 Introduction

Ove Arup and Partners Scotland Ltd (Arup) has been commissioned by MVV Environment Services Ltd (MVV) to prepare a Transport Assessment (TA) in support of a planning application for an Energy from Waste (EfW) Combined Heat and Power (CHP) scheme, which is to be located to the east of Forties Road in the Baldovie Industrial Estate, Dundee. The site location is shown in Figure 1.

The proposed EfW CHP scheme was identified as a Schedule 2 development under the Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011. It includes the relocation of the existing waste reception and sorting operation associated with the Dundee Energy Recycling Ltd (DERL) site and the development of a new EfW CHP scheme. The development site is bounded to the west by Forties Road and to the east by the existing Michelin factory.

Following discussions with the transport officers of Dundee City Council (DCC), a scoping exercise was undertaken highlighting the key issues which need to be addressed within this TA. These preliminary discussions, which were held via telephone and email throughout the course of December 2015, January 2016, February 2016 and June 2016, along with the outcome of the formal scoping process, enabled agreement on a number of key issues to be achieved. These issues included, but were not necessarily limited to, the following:

- The junction locations to be included as part of the traffic surveys;
- What committed developments are to be included as part of the junction capacity modelling;
- Confirmation of the trip generation rates associated with the proposed EfW CHP scheme; and
- Background traffic growth rates.

The following assessment will summarise the existing transport facilities and consider how these will serve the proposed development. This TA will also highlight the key on and off-site transport facilities being proposed and how these will enhance the existing infrastructure that connects the site with the wider transport network. Finally, the TA will also consider the junction operation at key locations, as discussed and agreed with DCC officers as part of the scoping exercise.

Following this chapter, the report proceeds as follows:

- **Chapter 2:** Development proposals;
- **Chapter 3:** National and local transport planning policy;
- **Chapter 4:** Local transport network and accessibility of the site;
- **Chapter 5:** Travel plan framework;
- **Chapter 6:** Traffic impact assessment; and
- **Chapter 7:** Summary and conclusions.

2 Development Proposals

2.1 Introduction

The purpose of this chapter is to introduce and discuss the content of the proposed development, particularly within the context of DCC's Local Development Plan. While this chapter provides an overview of the development, a more detailed summary of the existing and proposed non-car based facilities relating to the development proposals are discussed in Chapters 4 and 5. Details of the vehicular access proposals and junction capacity assessment results are then presented in Chapter 4 and Chapter 6, respectively.

2.2 Development Summary

The development proposals relate to a site which is bounded by Drumgeith Road to the north, Forties Road to the west and the Michelin factory to the east. The site layout is shown in Figure 2 and consists of the following elements:

- A new EfW CHP facility;
- The footprint of the main building will be approximately 3,900m^{2}GFA and together with a number of small auxiliary buildings and equipment, will equate to a total area of approximately 4,400m^2, on a site of approximately 9,000m^2;
- The relocation of the existing DERL waste reception and sorting operation;
- The development will be accessed through the existing 3-arm priority junction which currently provides access to the DERL site off Forties Road; and
- Associated infrastructure.

It is proposed that the new facility will become operational in 2020.

The development proposals will be constructed while the neighbouring DERL site remains operational. Once construction is complete, the DERL facility will be decommissioned and the proposed EfW CHP scheme will come online. At no point will the two plants operate burning residual waste in parallel.

Construction vehicle access to the proposed EfW CHP scheme will be considered as part of a Construction Traffic Management Plan (CTMP). It is proposed that this document will be conditioned as part of any planning consent awarded in favour of the development proposals and will be prepared and submitted to DCC for approval prior to the start of any on-site construction works.

The development proposals will contribute to serving the long term waste management needs of DCC and Angus Council (AC). In particular, the proposals will assist DCC and AC to meet the requirements of the Waste (Scotland) Regulations 2012 which will place a ban on biodegradable municipal waste going to landfill from January 2021.

The development proposals will be integrated with the existing traffic and transport networks surrounding the Baldovie site. This will help to maximise accessibility and connectivity between the site and the surrounding areas.

2.3 Access Strategy

An assessment of accessibility to and from the site by means other than the private car forms an integral element of the access strategy for the site. The proposals will maintain and, where possible, enhance pedestrian and cycle linkages within the local area. Furthermore, consideration will be given to the access / egress strategy for vehicles that will transfer waste to / from the site. These important elements are explored in greater detail in Chapter 4, with a summary of the key elements outlined below.

One of the key issues to understand is that the development site is located adjacent to the existing DERL waste processing facility, as well as forming part of the existing Baldovie Industrial Estate. This location allows the development proposals to take advantage of the existing pedestrian, cycle and public transport facilities within the surrounding area. The following sections provide a more detailed discussion on these non-car based networks and facilities.

2.3.1 Pedestrian and Cycle Facilities

Pedestrian access within the development will be provided by means of a network of well-signed and segregated footways between key elements of the site. This segregation will be achieved through a combination of white lined footways, and clearly defined pedestrian areas.

Figure 3 illustrates the footways that currently exist within the vicinity of the development site and, in particular, how the on-site facilities connect to the pedestrian networks that are beyond the site boundary. All footways which provide access to / from the site will be via the existing DERL site access / egress junction. Leading from this junction, well-lit and surfaced footways run along the eastern side of Forties Road. This provides a direct north-south pedestrian route to bus stops which are located on Drumgeith Road.

To the south lies a shared pedestrian / cycle route which forms part of the Dundee 'Green Circular' route. This provides a way-marked, traffic free route which connects the Baldovie Industrial Estate to Dundee City Centre, Broughty Ferry and Monifieth. A further pedestrian / cycle link connects the 'Green Circular' route to Balunie Drive via a footbridge, south across the Dighty Water.

2.3.2 Public Transport Facilities

Two bus stops are located north of the site on Drumgeith Road, both of which are within a 400m walking distance of the site access. A number of local bus services operate from these stops, providing access to / from Dundee City Centre.

A more detailed summary of the existing public transport facilities is provided in Chapter 4.

2.3.3 Vehicular Access

The development proposals will generate two main vehicle types. Firstly, car-based trips associated with staff and visitors and, secondly, Heavy Goods Vehicle (HGV) trips associated with the delivery of waste material to the site for processing.

The vehicular access to the site will be by way of the existing 3-arm priority junction which currently provides access / egress to the DERL site. No junction alternations are proposed at this location.

In developing the proposed EfW CHP scheme, cognisance has been given to the outline movement framework and principles of access being addressed as part of the longer term vision for the site. The proposed vehicular access arrangements will provide continuity with the existing road layout along the length of Forties Road, provide a smooth transition and ensure that the functionality of the road network throughout Baldovie Industrial Estate is maintained.

3 National and Local Transport Policy

3.1 Introduction

The purpose of this chapter is to discuss the development proposals in light of local and national transport planning policy.

When reviewing the development in terms of location, design and accessibility, consideration has been given to the transport and policy guidelines contained within both national and local policy documents.

As part of the development proposals, a range of measures are proposed to influence individual travel through the integration of new on-site infrastructure to existing surrounding transport networks to facilitate the commuting of employees and to encourage non-car based trips.

3.2 National Transport Policy

3.2.1 Scottish Planning Policy

Scottish Planning Policy (SPP) was published in February 2010 and subsequently updated in June 2014 by the Scottish Government. SPP states that the planning system should support patterns of development which:

- *"Reduce the need to travel;*
- *Provide safe and convenient opportunities for walking and cycling …… and facilitate travel by public transport; and*
- *Enable the integration of transport modes."*

SPP outlines how new development should be designed in order to meet national aims in various areas as transport. In particular,

"Proposals for business, industrial and service uses should…make a positive contribution towards placemaking."

This TA supports this key policy by ensuring that the development layout takes into consideration the following:

- Direct links to both existing walking and cycling networks;
- Access to public transport networks;
- Provision of satisfactory mechanisms for meeting sustainable transport requirements' and
- Ensuring that the development does not have a detrimental effect on the capacity of the strategic road network.

SPP states that in order to meet sustainable transport requirements, opportunities for personal travel to / from the development should be prioritised in the following order:

- Walking;
- Cycling;
- Public transport; and
- Car and other motorised vehicles.

3.2.2 Planning Advice Note 75 (PAN75) – Planning for Transport

PAN75 provides good practice guidance that support the policies contained within SPP.

"The intention is for new development to be user focused and for the transport element to promote genuine choice, so that each mode contributes to its full potential and people can move easily between different modes."

PAN75 emphasises that careful planning with regards to the location of land uses is required, with consideration given to the needs of the users. PAN75 aims to encourage planning policies and proposals to locate development in areas suitable for their needs with good levels of accessibility,

"…w*here many people are linked to opportunities by networks of regular, reliable and affordable travel."*

The guidance contained within PAN75 has been taken into account during the development of the site layout and the preparation of this TA which considers the site accessibility through connections to existing and proposed transport networks.

3.2.3 Transport Assessment Guidance (TAG)

These Transport Scotland guidelines, similarly to SPP, focus on the overall accessibility of new development as a measure for the suitability of the development within its wider catchment.

TAG builds further on the PAN75 recommendations for pedestrian, cycle and public transport accessibility in relation to new development, defining mechanisms for identifying the locations and measure for new development that will reduce reliance on car travel.

The EfW CHP development site complies with national policies in that it is currently accessible by a range of transport modes, not solely the private car and that the development proposals include various new measures to further improve the accessibility of the site.

The location of the proposed development site also permits and actively encourages travel by means other than the private car. Through the provision of a direct connection to the surrounding existing pedestrian network, walking is being promoted as the preferred non-car based method for staff travelling to and from the site.

3.3 Local Policy

3.3.1 Dundee Local Development Plan 2014

The Dundee Local Development Plan (LDP) was adopted in December 2013. The LDP is consistent with the TAYplan Strategic Development Plan (TAYplan), the latter of which was approved in June 2012. The LDP contains the spatial strategy that guides future development up to 2024, although it is acknowledged that DCC are currently updating this document.

Core elements within the LDP are to promote sustainable economic growth and low carbon energy generation technologies, and to provide sustainable and accessible transport. Specifically, it aims to ensure, "*sustainable movement through the careful consideration of land use, planning and the promotion of active and sustainable travel*".

Table 3.1 outlines a number of LDP policies which are relevant to the development proposals and identifies how the development addresses each of the policy requirements.

Table 3.1 Dundee Local Development Plan (2014) Policies

Policy No.	The Dundee Local Development Plan Policy	How the development meets this requirement
54	New development should be designed in order; to minimise the need to travel by private car be designed in order to improve access to services to promote healthy lifestyles by encouraging active travel	The development will provide high quality pedestrian connections to the existing surrounding footpath network, thereby providing facilities to encourage employees to travel to / from the site by sustainable means of transport.
54	All developments which border an existing or proposed core path must ensure that it is immediately and easily accessible from that development by provision of appropriate facilities *appropriate –refers to the specification choice of footways, footpaths, cycleways or shared surface paths.	The development site is within approximately 140m of the 'Green Circular' route, providing an easy means of accessing the wider Dundee area via a well-signed network on traffic free routes. Furthermore, the site borders the existing footpath which runs the length of Forties Road. A direct pedestrian connection will be provided between this footpath and the on-site pedestrian facilities.
55	All development proposals that generate travel should be designed to be well served by all modes of transport. In particular the sustainable modes of walking, cycling and public transport should be afforded priority and allow walkable access to local amenities.	In locating the development proposals to form part of an existing industrial estate which is already well served by pedestrian networks and local bus services, it is considered that all members of staff will have the option of travelling to / from the site by means other than the private car. Furthermore, a staff Travel Plan (refer to Chapter 5) could be implemented to encourage employees to engage with active travel modes.

55	Development proposals will be required to incorporate measures to permit access to public transport networks within a walking distance of no more than 400 metres from the centre of the development	The development site is within 400m of bus stops located to the north of the site on Drumgeith Road.
55	Development proposals will be required to have no detrimental effect on the capacity or functioning of the existing road or rail networks	Refer to Chapter 6 of this TA for full details on the negligible impact the development proposals are predicted to have on the operation of the surrounding road network.
55	Development proposals will be required to ensure that safe and adequate provision is made for road freight and waste access, loading and unloading.	The development site already forms part of an industrial site which provides high quality access / egress vehicular access, particularly within the context of HGV movements. Appendix A provides a series of drawings outlining the results of a tracking assessment. This assessment demonstrates the means by which HGV movements can be accommodated safely within the site boundary, but also as they approach the site along Forties Road.
55	Development proposals will be required to comply with Dundee City Council's roads design standards *'Streets Ahead'*.	All relevant roads which are proposed to form part of the adopted public road network will be constructed to DCC road standards.

3.3.2 Dundee City Local Transport Strategy

The Dundee Local Transport Strategy (LTS) (2000) sets out a framework for taking forward transport policy and infrastructure across the city. The five key objectives of this strategy are as follows:

- To promote the integration of all forms of transport and land use planning, leading to a better, more efficient transport system;
- To promote accessibility to everyday facilities for all, especially those without a car;
- To contribute to an efficient economy, and to support sustainable economic growth in appropriate locations;
- To promote and enhance the built and natural environment; and
- To improve safety for all travellers.

While the LTS is over 15 years old, its key objectives remain relevant to the development proposals as a means of encouraging travel by non-car based means. The principles of the above objectives have therefore been integrated into the design process when planning connections between the site and the surrounding existing transport networks.

4 Site Accessibility and Local Transport Network

4.1 Introduction

This chapter summarises the existing access arrangements of the site by all modes of transport and then details the improvements that are proposed to enhance accessibility of the site.

4.2 Pedestrian and Cycle Network

4.2.1 Existing Facilities

Walking and cycling are considered to be the most effective modes of transport for short trips which are less than 20 minutes in length. Dundee already boasts an excellent range of pedestrian and cycle facilities which include footways, footpaths, shared routes and on / off-road cycle routes. Many of these facilities are located within close proximity of the proposed EfW CHP scheme and offer excellent opportunities for the development proposals to be accessed by non-car based modes of transport.

The existing site is currently accessed via the north-south running Forties Road which is located off the B961 Drumgeith Road via a 3-arm priority junction. There are well-lit footways to / from the site which run alongside the eastern side of Forties Road. Furthermore, the site is located within approximately 140m of the 'Green Circular' DCC Core Path route, a shared footway / cycleway which is adjacent to the Dighty Water (see Figure 3).

The 'Green Circular' route also provides onward access across the Dighty Water towards the residential areas adjacent to Balunie Drive. The 'Green Circular' route provides excellent opportunities for making trips by bicycle, particularly for less confident cyclists who may prefer to be segregated from general traffic. For the more experienced cyclists, the local road network provides extensive linkages to the surrounding area with the majority of the road network being of sufficient width to facilitate both cyclists and general traffic.

4.2.2 Proposed Improvements

The development will connect directly to high quality pedestrian routes between the site and the existing surrounding pedestrian and cycle networks via the footway which runs along the eastern side of Forties Road. These connections form part of the existing DERL site access junction, which is also proposed to act as the main vehicular site access to the proposed EfW CHP scheme.

As recommended in the Scottish Government's *'Transport Assessment Guidance'*, walk distance isochrones, as illustrated in Figure 4 , show the extent of reach for pedestrians from the development to the wider area. These isochrones are classed as short (400m), medium (800m) and long (1,600m) walk distances.

These walk distance isochrones, which have been measured from the site entrance and are based on an estimate of the actual travel distances rather than 'crow fly' distances, demonstrate that the development is located within a short to medium walk of the existing Dundee public transport network.

In a similar fashion to the pedestrian isochrones, Figure 5 indicates the cycle isochrones for short (1km), medium (2km) and long (5km) journeys. Again, the proposed EfW CHP scheme demonstrates excellent connectivity for pedestrians and cyclists.

As shown in Figure 5, the Dundee inner city boundary and Broughty Ferry area are both located within the 5km cycle isochrone, offering a reliable alternative mode of transport to the private car for making trips between the site and the wider Dundee area.

4.3 Public Transport Network

4.3.1 Existing Bus Faculties

The closest bus halts are found on Balunie Drive to the south and Drumgeith Road to the north. The former serves the bus routes 14, 28, 29, whereas the latter serves routes 15, 17, 17S. Both halts are linked to the site by well-defined existing footways. To the east, on Baldovie Road, the site is also served by service 78A.

These bus services are summarised in Table 4.1.

Table 4.1: Bus Service Frequency

Bus Stop Location	Service no.	Operator	Weekday Frequency	Saturday Frequency	Sunday Frequency
Drumgeith Road	15	Xplore Dundee	7(4+3) / hr	6(3+3) / hr	4 / hr
	17 / 17S	Xplore Dundee	Single Service	No service	No service
Baldovie Road	78A	Teejay travel	2 services/day	2 services/day	No service
Balunie Drive	14	Xplore Dundee	2 / hr	No service	No service
	28	Xplore Dundee	8 / hr	8 / hr	4 / hr
	29	Xplore Dundee	8 / hr	8 / hr	4 / hr

4.4 Local Road Network

4.4.1 Existing Facilities

The existing DERL site is accessed via a 3-arm priority junction from the north-south running Forties Road (as shown in Figure 2). Forties Road then joins the surrounding local road network via a 3-arm priority junction with the east-west running Drumgeith Road. The remainder of the Baldovie Industrial Estate includes the east-west running Piper Street and an unclassified road which provides access to the scrap yard, located south of Forties Road.

4.4.2 Proposed Road Layout

The proposed EfW CHP scheme will retain the existing 3-arm priority junction to the DERL site, located off Forties Road, and will provide access for both car and HGV based movements. Importantly, all HGV trips will use the existing weighbridge as they enter and leave the site. This weighbridge is segregated from the main internal road network, thereby helping to minimise any interaction between any staff or visitors who arrive by car and HGV movements that the site will generate.

The proposed internal road network will be wide enough to accommodate all refuge and service vehicles which are likely to be making deliveries to / from the site, as illustrated in both Figure 2 and the tracking assessment drawings which are presented as part of Appendix A.

The internal road network will be designed in accordance with the operational requirements of the facility and to accommodate the types and frequencies of the waste material delivery vehicles expected to be servicing the facility. No new access junctions are being proposed. A new gated access junction located south of the existing site access on Forties Road will be provided for the purposes of emergency vehicle access.

Waste will be delivered to the proposed EfW CHP scheme in enclosed refuse collection vehicles, Roll-on / Roll-off vehicles with enclosed containers, and sheeted or enclosed bulk transfer vehicles and unloaded within an enclosed tipping hall.

The proposed vehicular access arrangement onto Forties Road will provide continuity with the existing road network to the north of the site, and ensure that the functionality of the existing road network within this area of Dundee is maintained.

4.4.3 Road Safety and Emergency Vehicle Access

Accident data between 2011 and 2015 for the area surrounding the development site was extracted from the STATS19 database. Following analysis of the data, it has been shown that there have been a small number of slight and / or serious accidents, but no fatal accidents within the study area. Table 4.2 provides a

summary of these accidents along with an indication of accident severity. Figure 6 illustrates the spatial distribution of these accidents.

Table 4.2: Traffic Accident Data (2011 – 2015), STATS19

	Accident no. and Severity		
	Slight	**Serious**	**Fatal**
No. of Accidents	10	6	0

Although there have been 6 serious road traffic accidents within the surrounding area between 2011 and 2015, there is no statistically significant trend that identifies an accident problem in these specific locations.

Other important safety issues which should be considered as part of the development proposals are as follows:

- **Road safety:** increased risk to child pedestrians and other road users from additional development related trips; and
- **Emergency vehicle access:** ensuring that the development site can be serviced safely by emergency vehicles.

Both these issues are discussed in more detail in the following sections.

4.4.4 Road Safety

As with any new development, the generation of additional vehicle trips may increase the risk to pedestrians, particular those who may be using Forties Road as a means of accessing the existing footpaths which run adjacent to the Dighty Water. The surrounding road network is made up roads with either a 30mph or 40mph speed limit, with Forties Road identified as having a 30mph speed limit. However, such is the function of Forties Road, the average speed of vehicles travelling along this section of the surrounding road network has been recorded as approximately 17mph. This data was obtained as part of a 7-day Automatic Traffic Count (ATC) survey. It is therefore considered that, in combination with the existing well-lit footway running the entire length of Forties Road, any safety issues resulting directly from the development proposals will be negligible.

4.4.5 Emergency Vehicle Access

To ensure adequate emergency vehicle access, the British Standard BS9999:2008, as published in October 2008, should be applied to new developments within Dundee. The latest version of these standards state that the minimum road width, to ensure adequate emergency vehicle access, is 3.7m (kerb to kerb). This requirement is adequately satisfied along the length of Forties Road as well as the site access junction. Taking into account the potential for on-street parking to occur along Forties Road, the design of the surrounding road network is such that

the relevant technical standards that require a minimum road width of 3.7m remains satisfied.

In addition to the above, reference should also be made to the Scottish Government policy document, *'Designing Streets'*. Page 44 of this document notes the following:

"The requirements for emergency vehicles are generally dictated by the fire service requirements".

While the document '*Designing Streets'* is not strictly applicable to an industrial site, the Scottish Fire and Rescue Service (SFRS) has recommended full compliance with Standard 2.12 of the Building (Scotland) Technical Standards (Fire Service Access). Within this document, the following standards are of significance to the proposed EfW CHP scheme:

- Standard 2.12, Mandatory – *"Every building must be accessible to the fire and rescue service";*
- Standard 2.12.1, Vehicle Access Provision – *"Access from a public road should be provided to assist fire and rescue personnel in their rescue and fire-fighting operations";*
- Standard 2.12.2, Vehicle Access Routes – *"Fire and rescue service vehicles should not have to reverse more than 20m from the end of an access road. Where any dead-end route is more than 20m long turning facilities should be provided. This can be a turning circle or a hammerhead"*.

As indicated in the site layout (see Figure 2), the road design incorporates a 'loop' access road which provide two access / egress routes for emergency vehicles, thus meeting the requirements of the SFRS and satisfying the relevant technical standards. It should be noted that the secondary site access junction is for emergency vehicle use only.

4.5 Parking Provision

4.5.1 Parking Proposals

In accordance with the parking standards outlined in the Scottish Planning Policy (2014) document, there are no parking standards relating specifically to industrial developments. However, the DCC guidance document, *'Streets Ahead'* defines both car and cycle parking standards for a range of development types, including industrial land use.

As agreed with DCC during the TA scoping exercise, the number of car parking spaces that will be provided as part of the development proposals will remain approximately the same as what is currently provided at the DERL site (i.e. approximately 15 spaces). However, in accordance with the DCC parking standards, disabled parking and cycle parking will also need to be provided. The number of on-site parking spaces is therefore summarised in Table 4.3 and has been calculated in accordance with DCC parking standards.

Table 4.3: Dundee City Council Parking Standards and Proposed Parking Provision (Factories and Warehouses)

DCC Parking Standards			EfW CHP Parking Provision		
General Vehicle Provision	Disabled Vehicle Provision (DCC standards)	Cycle Parking (DCC standards)	General Vehicle Provision	Disabled Vehicle Provision	Cycle Parking
No change to the existing provision.	1 space per disabled employee plus 2 spaces or 5%, whichever is greater	1 space per 2,000m2 GFA	15 standard spaces.	3 spaces	3 spaces (5 spaces will be provided as part of the development proposals)

Note: the DCC parking standards are derived from Tables 6.8.18 and 6.8.2 of the DCC guidance document, *Streets Ahead.* No information is available on the number of existing disabled employees. A single space plus 2 additional spaces has therefore been assumed as a proxy.

Based on the above, the cycle parking will consist of 3 covered 'Sheffield' style parking hoops (each hoop provides parking for 2 bicycles), which will be located near the main site entrance / reception area.

5 Travel Plan Framework

5.1 Introduction

Current local and national transport policy guidance highlights the importance of Travel Plans in relation to new developments. This chapter provides a Travel Plan framework, offering a preliminary outline of the likely contents of a full Travel Plan. Specific details of any potential staff Travel Plan will be discussed with DCC officers should planning consent be awarded in favour of the development proposals.

5.2 Industrial Development Travel Plans

The key role of industrial development Travel Plans is to ensure that staff and visitors are made aware of the sustainable travel opportunities within the area and are provided with accurate information to enable them to make an informed decision as to their choice of mode of transport when travelling to / from the site.

Items which may be covered in any future Travel Plan for the proposed EfW CHP scheme includes:

- Provision of sustainable travel information on staff notice boards; and
- Enter into discussions with local transport operators.

The final details of the Travel Plan will be subject to approval by DCC officers and will reflect contemporary details of the local road network and available public transport services / timetables at that time. Importantly, any Travel Plan should be considered as a 'live' document, and should be updated as and when new sustainable travel opportunities become available.

6 Traffic Impact Assessment

6.1 Introduction

The purpose of this chapter is to provide details of the trip generation and trip distribution methodologies which have been employed to assess the likely impact of vehicular trips associated with the development proposals on the operation of the surrounding road network.

Through a detailed scoping exercise, it was identified that the assessment should consider the impact of development related trips during a representative AM and PM weekday peak period. It was also identified that Junction Turning Counts (JTC) and Automatic Traffic Counts (ATC) were required. The purpose of collecting ATC data was to inform the work of other supporting documents which form part of the overall planning application, namely the Environmental Statement (ES).

6.2 Observed Traffic Flows

6.2.1 Traffic Surveys and Assessment Periods

Through discussions with DCC transport officers, it was agreed that traffic surveys were not to be undertaken during the months of December 2015 or January 2016. Consequently, a series of traffic surveys were undertaken in February 2016 where four junctions and three links were assessed. The junctions included the following:

- **Junction 1**: Drumgeith Road / Forties Road (3-arm priority junction);
- **Junction 2**: Drumgeith Road / Kellas Road / Baldovie Road (3-arm priority junction);
- **Junction 3:** Drumgeith Road / Ballumbie Road (3-arm priority junction); and
- **Junction 4:** Forties Road / ATS Site / Piper Street (4-arm priority junction).

In conjunction with the above, the geographic scope of this traffic assessment also includes the existing 3-arm DERL site access onto Forties Road.

The location of the traffic survey locations is illustrated in Figure 7.

Classified junction turning counts were subsequently undertaken on the 2nd of February 2016 for the following time periods:

- **Weekday AM period:** 07:00 – 10:00hrs; and
- **Weekday PM period:** 16:00 – 17:00hrs

From these surveys, the network peak hours for the study area were identified as follows:

- **Weekday AM:** 07:35 - 08:35hrs; and
- **Weekday PM:** 16:30 - 17:30hrs.

Appendix B summarises the raw observed survey data.

In conjunction with the classified junction turning count surveys, ATC's were also undertaken for three separate link locations, as illustrated in Figure 7. These surveys were undertaken over a 24 hour period for seven consecutive days between Tuesday 2nd February and Monday 8th February 2016. The ATC survey locations were as follows:

- **ATC site no. 1**: on Drumgeith Road, approximately 250m west of Drumgeith Road / Forties Road 3-arm priority junction;
- **ATC site no. 2**: on Balunie Drive, approximately 100m east of Balunie Drive / Balmoral Avenue 3-arm priority junction; and
- **ATC site no. 3:** on Forties Road, approximately 250m south of the access junction into the 'Baldovie Energy Recycling Limited' site.

6.3 Future Year Base Traffic Flows

6.3.1 Assessment Years

Construction is proposed to commence in summer 2017, with the proposed year of opening being 2020. In accordance with the adopted Scottish Government Transport Assessment Guidelines, and following the TA scoping exercise, it was considered that the junctions being assessed as part of the traffic impact assessment would be for the following two future year scenarios:

- Base 2020; and
- Total 2020.

The 2020 Total traffic conditions have been derived by adding the assigned development traffic to the equivalent Base 2020 traffic conditions, the latter of which also includes the committed developments identified in section 6.3.3 of this chapter.

6.3.2 Growth Factors

As discussed and agreed with DCC transport officers, and in accordance with current DCC guidance, no growth factor has been applied to the existing 2016 traffic flows to determine the 2020 background traffic flows.

6.3.3 Committed Development Trip Generation and Distribution

A search for planning applications within 1km of the development site was undertake using DCC's online planning portal on 8 June 2016. This search focused on major new developments, including new buildings, sites of >10 residential dwellings or any other changes of use which may result in increased vehicular traffic.

A review of the search outputs identified a number of developments that may need to be accounted for within the TA. These are summarised in Table 6.1, along with 3 additional developments which were identified post-scoping. It is acknowledged that some of these developments may now have been 'built-out' and / or are operational. Where this is the case, the traffic generation associated with the development will already have been accounted for by the traffic surveys which were undertaken. Furthermore, the table shows that a number of the developments have either been refused planning permission and / or deemed not to generate any significant numbers of new trips. All such developments can therefore be excluded from the committed development list.

Table 6.1: Potential Committed Developments (specific to this Transport Assessment)

Application Ref	Address	Proposal Description	To be Included? / Reason
15/00530/FULL	Site 1 Forties Road Baldovie Industrial Estate Dundee DD4 0NS	Change of use to from vacant industrial unit to indoor football & multi sports centre.	**No** Application refused.
15/00035/FULM	Michelin Tyres plc Baldovie Road Dundee DD4 8UQ	Proposed erection of storage/process (20,000sqm), production (2000sqm) and office (550sqm) extensions to south and west of existing building, including associated access, loading area and erection of new security fence, pump house/tanks all with associated landscaping works. Proposed excavation and filling works to north and west of existing building to form flood storage area, including landscaping works.	**No** In accordance with Section 2 of the Transport Statement submitted in support of this application, no significant additional traffic generation expected: "With no proposed increase in the manufacturing capacity of the factory the number of HGV movements will remain largely unaltered".

14/00475/FULL	Land To North Of Barlow Avenue And East Of Fowler Road West Pitkerro Industrial Estate Dundee DD5 3RU	Erection of industrial building and formation of secure yard for commercial vehicle parking.	**No** No TA or TS was prepared in support of this application, suggesting minimal traffic generation.
15/00257/FULL	Land At Aberlady Crescent Dundee DD4 0LF	Erection of 26 Houses	**No** Consent not yet granted. Furthermore, no TA or TS was prepared in support of this application, suggesting minimal traffic generation.
15/00503/FULL	Land At Aberlady Crescent Dundee DD4 0LF	Erection of 24 Houses (Phase 2)	**No** Consent not yet granted. Furthermore, no TA or TS was prepared in support of this application, suggesting minimal traffic generation.
14/00847/FULL	Land To North Of Drumgeith Road And West Of Summerfield Avenue Dundee DD4 0JE	Erection of 11 houses and formation of access road, SUDS basin and associated access (variation to planning application ref: 14/00086/FULL)	No No TA or TS was prepared in support of this application, suggesting minimal traffic generation.
14/00827/FULL	Land To North Of Whitfield Terrace And East Of Whitfield Loan Dundee DD4 0BE	Erection of 30no. two storey semi-detached houses	**No** Application withdrawn. Furthermore, no TA or TS was prepared in support of this application, suggesting minimal traffic generation.
15/00120/FULL	Land To North Of Whitfield Terrace And East of Whitfield Loan Dundee DD4 0BE	Erection of 30No two storey detached houses (re-application)	**Yes** Traffic generation data will be extracted from the associated TS.
15/00148/FULL	St Pius Rc Primary School Banchory Road Dundee DD4 7TQ	New Nursery Unit	**No** No TA or TS was prepared in support of this application,

			suggesting minimal traffic generation.
14/00086/FUL	Land to the north of Drumgeith Road and west of Summerfield Avenue, Dundee (Phase 1)	Erection of 49 dwelling units, access roads, landscaping and associated drainage facilities	**No** Within the context of traffic and transportation, this development has been identified as having minimal impact on the operation of the surrounding road network. This is supported by the fact that a TS was submitted in support of the application rather than a full, detailed TA, thereby suggesting low levels of traffic generation.
15/00442/FULL	Phase 2, Land to the north of Drumgeith Road and west of Summerfield Avenue, Dundee	Phase 2 – 12 domestic dwellings, including associated landscaping and car parking.	**No** Construction has not yet started. Development is predicted to begin in August 2018. No TA or TS was prepared in support of this application, suggesting minimal traffic generation.
16/00536/FULL	Phase 3 Land to the north of Drumgeith Road and west of Summerfield Avenue, Dundee	Erection of 28 houses and associated access roads, car parking and landscaping.	**No** Approved subject to conditions. Development to begin in August 2019. No TA or TS was prepared in support of this application, suggesting minimal traffic generation.

Based on the committed development search identified in the above table, the residential development located off Whitfield Terrace was identified by DCC transport officers as needing to be included within the junction capacity assessments outlined in this chapter. No further developments from the above table are included in the traffic impact assessment. The total traffic generation associated with the single committed development identified above is summarised in Tale 6.2.

Table 6.2: Committed Development Trips (no. of vehicles), Planning Application Ref: 15/00120/FULL

Weekday Peak Hour	Trip Generation (veh. No.)	
	In	Out
AM	5	12
PM	12	7

It should be noted that as the development is located over 1.2km west of the proposed EfW CHP development site, it would be expected that only a proportion of the trips associated with this site are likely to travel east along Drumgeith Road and past the junction with Forties Road. In the absence of any specific data, along with the proximity of the site in relation to Dundee City Centre, it was considered that 60% of the committed development trips would travel to / from the west, with the remaining 40% travelling to / from the east along Drumgeith Road and past Forties Road.

Based on this percentage split, the total number of car-based trips which travel through the study area is summarised in Table 6.3.

Table 6.3: Committed Development Trips (no. of vehicles), 15/00120/FULL

Weekday Peak Hour	Trip Generation (veh. No.)	
	In	Out
AM	2	5
PM	5	3

6.4 Development Trip Generation

6.4.1 Person Trip Generation

A TA often includes a person trip assessment, particularly for residential or retail developments. This typically considers the levels of person trips which are likely to be generated by a proposed development and the distribution of these trips between various modes of transport.

However, due to the nature of the proposed EfW CHP scheme (i.e. the site is already an existing, operational industrial facility), and the fact that the number of staff members on-site at any one time is very small (i.e. approximately 25), the requirement for a person trip assessment to be undertaken as part of this assessment was not identified as part of the TA scoping process.

6.4.2 Vehicular Trip Generation

The proposed EfW CHP scheme will be operational 24 hours a day, 7 days per week. Weekend traffic generation will be significantly lower than during the mid-week period due to limited / no waste material deliveries over the course of an average weekend. The focus of the junction capacity assessments is therefore on the weekday AM and PM peak periods.

Table 6.4 summarises the number of trips which are currently generated by the existing DERL facility. Table 6.5 summarises the number of new trips likely to be generated by the proposed EfW CHP scheme. These values are based upon observed data obtained from a similar waste processing facility located in Plymouth which is also operated by MVV. The proposed flows reflect additional (new) trips which are over and above the existing trip generation. The proposed flows should therefore be added to the existing flows to obtain the total number of vehicles arriving / departing the development once the proposed EfW CHP scheme becomes operational.

The number of trips outlined in Table 6.4 and Table 6.5 differ slightly from those values identified as part of the scoping process. This follows a detailed analysis of the operational activities of both the DERL facility and the predicted vehicle movements associated with the proposed EfW CHP scheme. However, the difference is marginal and, combined with the low number of overall trips, it is considered that this will have a negligible impact on the operation of the surrounding road network.

Table 6.4: Existing DERL Development Trips (peak hour)

Weekday Peak Hour	No. of Cars		No. of HGVs	
	In	Out	In	Out
AM	31	10	7	11
PM	4	51	0	3

Table 6.5: Proposed Development Trips (additional / new trips, peak hour)

Weekday Peak Hour	No. of Cars		No. of HGVs	
	In	Out	In	Out
AM	5	3	5	3
PM	5	5	3	3

6.4.3 Trip Distribution and Assignment

The development trips have been distributed and assigned onto the local road network in accordance with observed turning counts from the traffic surveys outlined in Section 6.2.1. Details of this distribution are summarised in Table 6.6.

Table 6.6: Development Trip Distribution (%), car (HGV)

Origin/ Destination	AM Period		PM Period	
	Arrivals	Departures	Arrivals	Departures
Drumgeith Road (west)	71% (60%)	56% (60%)	80% (60%)	80% (60%)
Ballumbie Road	4% (0%)	6% (0%)	3% (0%)	4% (0%)
Kellas Road	15% (0%)	6% (0%)	4% (0%)	7% (0%)
Baldovie Road	10% (40%)	33% (40%)	13% (40%)	9% (40%)

The principle of the above methodology for the distribution of development related trips has been agreed with DCC as part of the scoping exercise.

Figure 8a and Figure 8b illustrates the proposed distribution of the development trips. The assigned development trips are then shown in Figure 9a and Figure 9b.

6.4.4 Total Traffic (2020)

The 2020 Total traffic conditions have been derived by adding the assigned development traffic to the equivalent Base 2020 traffic conditions, the latter of which includes the committed development trips referred to in Section 6.3.3.

6.5 Junction Analysis

6.5.1 Overview

This section presents the results of the assessment of the predicted impact of the generated traffic on the operation of the local road network in 2020.

6.5.2 Percentage Impact Analysis

While the junctions which are to be included within the traffic impact assessment were agreed with DCC transport officers as part of the scoping process, it is common to undertake a percentage impact assessment of development related trips on the surrounding road network vs. the Base traffic flows. The percentage impact of two-way flows on the approach links to each of the 4 junctions identified in Section 6.2.1 has therefore been undertaken.

The two-way percentage impacts shown in Figures 10a and 10b are direct comparisons between the assigned number of generated trips against the 2016 observed traffic counts. This calculation does not take into account any committed development related traffic at these junctions. The percentage impact values therefore provides a robust assessment as they have been calculated against lower background traffic flows and they will therefore be higher than if they were compared against background traffic plus committed development traffic.

In addition to Figures 10a and 10b, Table 6.7 summarises the level of impact at each of the surveyed junctions.

Table 6.7: Percentage Impact Analysis (average, 2-way), Highest Value on any Approach Arm

Junction Name	Time Period (Peak Hour)		Capacity Assessment Required? (refer to discussion below table)
	AM	PM	
Forties Road / Piper Street	17.2%	56.0%	✓
Forties Road / Drumgeith Road	11.3%	30.1%	✓
Drumgeith Road / Ballumbie Road	0.46%	0.47%	×
Drumgeith Road / Kellas Road / Baldovie Road	0.48%	0.41%	×

Of the 4 junctions which have underwent a percentage impact analysis, 2 of them have been identified as having a percentage impact of 5% or higher in either the AM or PM peak periods. It should be understood that the high percentage impact at the latter two junctions is primarily a function of the low volume of traffic which is predicted to be generated by the proposed EfW CHP schemes versus the low background traffic flows. In other words, the number of development trips is proportionally high when compared to the background traffic flows, but is actually very low in reality.

An example of this is on the southern arm of the Forties Road / Piper Street junction where the two-way percentage impact as a result of the development trips during the PM period is 56%. However, this represents a total two-way flow of only 16 development trips on the Forties Road (south arm). Over the peak hour, this equates to 4 development trips every 15 minutes (two-way). It is therefore considered that this low number of development related trips will have minimal impact on the operation of this section of the local road network.

Despite only two of the junctions being identified with a percentage impact of 5% or higher, it is considered that to ensure a robust assessment, and in conjunction with the agreed scope, all 4 junctions should undergo a full junction capacity assessment.

A summary of the junction model results are provided in the sections below, with the full model outputs included in Appendix C.

Figure 11a and 11b show the Total 2020 traffic flows for the AM and PM peak periods, respectively.

6.5.3 Junction 1: Drumgeith Road / Forties Road

Table 6.8 summarises the junction analysis results for the Drumgeith Road / Forties Road priority junction during the AM peak period. Table 6.9 provides the equivalent results but for the PM peak period.

Table 6.8: Weekday AM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Forties Road left turn	0	0.12	0	0.13
Forties Road right turn	0	0.15	0	0.17
Drumgeith Road (W) right turn and ahead	1	0.23	1	0.26

Table 6.9: Weekday PM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Forties Road left turn	0	0.10	0	0.11
Forties Road right turn	0	0.06	0	0.07
Drumgeith Road (W) right turn and ahead	0	0.07	0	0.11

As shown above, during the opening year of 2020, the Drumgeith Road / Forties Road priority junction is predicted to operate within capacity in both the AM and PM peak periods, with ample reserve capacity to accommodate all development related traffic. The results are all below the practical capacity threshold of 0.85, where we would conclude no detrimental impact resulting from the assignment of the EfW development proposals.

6.5.4 Junction 2: Drumgeith Road / Kellas Road / Baldovie Road Priority Junction

Table 6.10 summarises the junction analysis results for the Drumgeith Road / Kellas Road / Baldovie Road priority junction during the AM peak period. Table 6.11 provides the equivalent results but for the PM peak period.

Table 6.10: Weekday AM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Kellas Road left turn	1	0.35	1	0.35
Kellas Road right turn	21	1.03	22	1.04
Baldovie Road right turn and ahead	0	0.15	0	0.15

Table 6.11: Weekday PM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Kellas Road left turn	0	0.23	0	0.23
Kellas Road right turn	1	0.32	1	0.32
Baldovie Road right turn and ahead	1	0.32	1	0.32

Table 6.10 highlights that during the AM peak period for both the 2020 Base and 2020 Total scenarios Kellas Road is predicted to experience minor capacity problems for those wishing to turn right onto Drumgeith Road, with an RFC value of 1.03 under the 2020 Base scenario. While this is above the practical capacity threshold of 0.85, it should be noted that there is only a marginal increase in the RFC value to 1.04 in the 2020 Total scenario, with the mean maximum queue length increasing by only 1 vehicle.

Furthermore, the mean maximum queue length recorded during the observed traffic surveys of 15 vehicles is predicted to occur for only a very short space of time. This is clearly demonstrated by the queue length observations, as shown in Chart 1, where the mean maximum queue length on Kellas Road is between 2 and 8 vehicles for nearly half the total AM survey period.

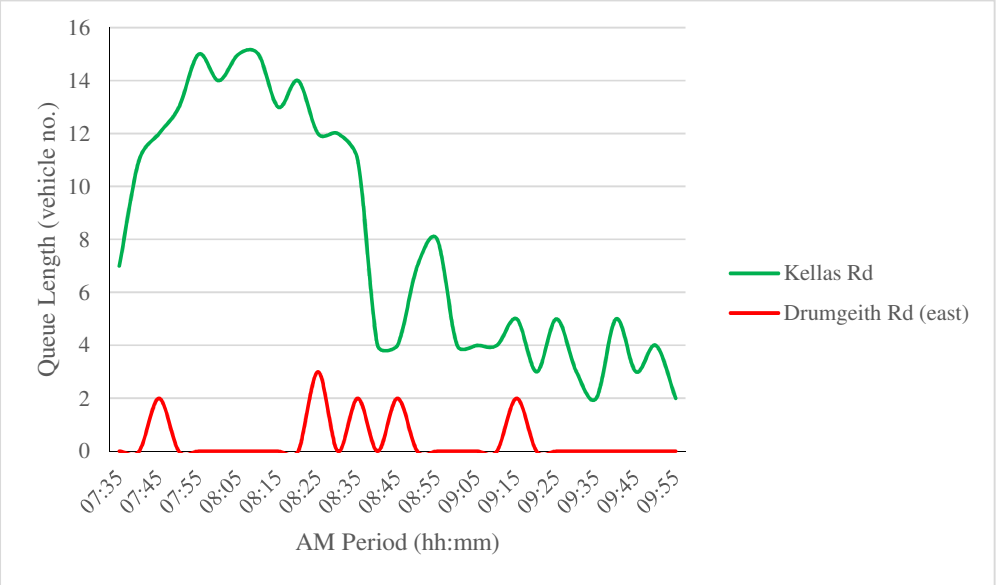


Chart 1: Kellas Road Mean Maximum Queue Length (observed, 2016), veh. no.

All other movements are predicted to operate within capacity during each scenario for both the AM and PM peak periods. Based on these results, it is considered that the impact of the development proposals on the operation of the Kellas Road junction will therefore be negligible.

6.5.5 Junction 3: Drumgeith Road / Ballumbie Road Priority Junction

Table 6.12 summarises the junction analysis results for the Drumgeith Road / Ballumbie Road priority junction during the AM peak period. Table 6.13 provides the equivalent results but for the PM peak period.

Table 6.12: Weekday AM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Ballumbie Road left turn	0	0.20	0	0.20
Ballumbie Road right turn	1	0.59	2	0.60
Drumgeith Road (E) right turn and ahead	0	0.16	0	0.16

Table 6.13: Weekday PM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Ballumbie Road left turn	0	0.22	0	0.22
Ballumbie Road right turn	1	0.34	1	0.35
Drumgeith Road (E) right turn and ahead	0	0.24	0	0.24

As shown above, the Drumgeith Road / Ballumbie Road priority junction is predicted to operate within capacity in both the AM and PM peak periods, with negligible impact as a result of development related traffic.

6.5.6 Junction 4: Forties Road / ATS Site / Piper Street Priority Junction

Table 6.14 summarises the junction analysis results for the Forties Road / ATS Site / Piper Street priority junction during the AM peak period. Table 6.15 provides the equivalent results but for the PM peak period.

Table 6.14: Weekday AM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
ATS Site left turn and ahead	0	0.00	0	0.00
ATS Site right turn and ahead	0	0.03	0	0.03
Forties Road (N) left turn, ahead, right turn	0	0.04	0	0.04
Piper Street to left turn and ahead	0	0.02	0	0.02
Piper Street right turn and ahead	0	0.00	0	0.00
Forties Road (S) left turn, ahead, right turn	0	0.00	0	0.00

Table 6.15: Weekday PM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
ATS Site left turn and ahead	0	0.00	0	0.00
ATS Site right turn and ahead	0	0.00	0	0.00
Forties Road (N) left turn, ahead, right turn	0	0.02	0	0.02
Piper Street to left turn and ahead	0	0.04	0	0.04
Piper Street right turn and ahead	0	0.00	0	0.00
Forties Road (S) left turn, ahead, right turn	0	0.00	0	0.00

As shown above, the Forties Road / ATS Site / Piper Street priority junction is predicted to operate within capacity in both the AM and PM peak periods, with no capacity issues or delays anticipated under the 2020 design year Base and Total scenarios.

6.5.7 Junction 5: Site Access / Forties Road Priority Junction

Table 6.16 summarises the junction analysis results for the Site Access / Forties Road priority junction during the AM peak period. Table 6.17 provides the equivalent results but for the PM peak period.

Table 6.16: Weekday AM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Site Access left turn	0	0.00	0	0.00
Site Access right turn	0	0.06	0	0.08
Forties Road (N) right turn and ahead	0	0.01	0	0.01

Table 6.17: Weekday PM Peak Period Capacity Results

Approach Arm	2020 Base		2020 Total	
	Mean Max Q	RFC	Mean Max Q	RFC
Site Access left turn	0	0.03	0	0.03
Site Access right turn	0	0.08	0	0.09
Forties Road (N) right turn and ahead	0	0.00	0	0.00

As shown above, the Site Access / Forties Road priority junction is predicted to operate within capacity in both the AM and PM peak periods, with ample reserve capacity to accommodate all development related traffic.

6.5.8 Michelin Factory Construction Traffic Impacts

As confirmed by MVV on 9 May 2016, construction works were ongoing at the neighbouring Michelin factory site during the same week at the ATC surveys, namely 2 to 8 February 2016, resulting in a total of 36 HGV trips to and from the Michelin site, all of which used the southern end of Forties Road to access / egress the site. The implications of these construction works is that the traffic surveys will have recorded higher than normal HGV flows on Forties Road than would be found on a typical weekday.

Based on the assumption that the construction site was operational during weekday periods (i.e. over the course of five days) and between the hours of 09:00hrs and 17:00hrs, this equates to approximately seven one-way movements per day, or a single one-way trip per hour. Table 6.18 provides a summary of the traffic flows on Forties Road between the junction with Piper Street and the access / egress to the DERL site. Here it can be seen that the Michelin traffic had minimal impact on the traffic flows along Forties Road, particularly with respect to the number of HGV movements.

Table 6.18: Impact of Michelin Construction Traffic on Forties Road (5 day, daily avg.)

Location	Direction	Observed weekday vehicle no. (5day, daily avg.)		Estimated weekday vehicle no. (5day, daily avg.)	
		All vehicles	HGV	All vehicles. Minus Michelin	All HGV. Minus Michelin
Forties Rd (between Piper Street and DERL site access)	North	279	33	272	26
	South	303	21	296	14

6.5.9 Summary

Vehicle trip rates have been identified for the proposed development and the subsequent traffic generation assigned onto the road network based upon the assumptions and parameters outlined in Section 6.4. The junctions identified through the scoping process and subsequent percentage impact analysis have been modelled and assessed using the standard industry software Junctions9 for both Base and Total scenarios during the AM and PM weekday peak periods. Future year assessments have been undertaken for the opening year of 2020.

The results of this assessment show that the development traffic generated by the proposed EfW CHP scheme will have a negligible impact on the operation of the local road network. Background traffic levels are such that the existing junctions will operate with no detrimental impact and no capacity mitigation measures being required.

All model output files are included within Appendix C.

7 Summary and Conclusions

7.1 Summary

Ove Arup and Partners Scotland Ltd (Arup) has been commissioned by MVV Environment Services Ltd (MVV) to prepare a Transport Assessment (TA) in support of a planning application for the Energy from Waste Combined Heat and Power (EfW CHP) scheme, located to the east of Forties Road in the Baldovie Industrial Estate, Dundee.

The location of the site is indicated in Figure 1, with the site layout illustrated in Figure 2. The purpose of this TA has been to consider the accessibility of the development by all modes of transport. This has involved a detailed scoping exercise and a review of issues relating to the provision of pedestrian and cycle facilities along with vehicular access and public transport provision.

7.2 Conclusions

The application proposals detailed within this report will provide good quality connectivity and high levels of accessibility within and around the development site.

More specifically, the findings of this TA include:

- The development will consist of an EfW CHP facility, with associated parking and infrastructure;
- Vehicular access will be provided by means of the existing 3-arm priority junction which provides access into the Dundee Energy Recycling Ltd (DERL) site from Forties Road;
- The vehicular access strategy will maintain the existing function of Forties Road in keeping with the overall road hierarchy of the Baldovie Industrial Estate;
- Vehicular and cycle parking will be provided in accordance with Dundee City Council (DCC) parking standards;
- The internal site layout will prioritise the safe movement of HGVs and minimising any potential interaction / conflict with pedestrian movements;
- A staff Travel Plan will be developed following discussions with DCC transportation officers. This will provide members of staff with accurate information to enable them to make an informed choice in terms of their chosen mode of travel;
- Modelling of the key junctions on the local road network within the vicinity of the site indicates that there will be no detrimental impacts to existing traffic flows in either the weekday AM or PM periods on a representative day as a consequence of traffic associated with the development proposals; and

- The proposed site access solution will minimise vehicle conflicts, provide clear direct access to the development site and accommodate the additional traffic generated by the application proposals.

Based on the above, it is considered that the development proposals will have no significant detrimental impact on the operation of the surrounding transport networks.

Figures

1:50000

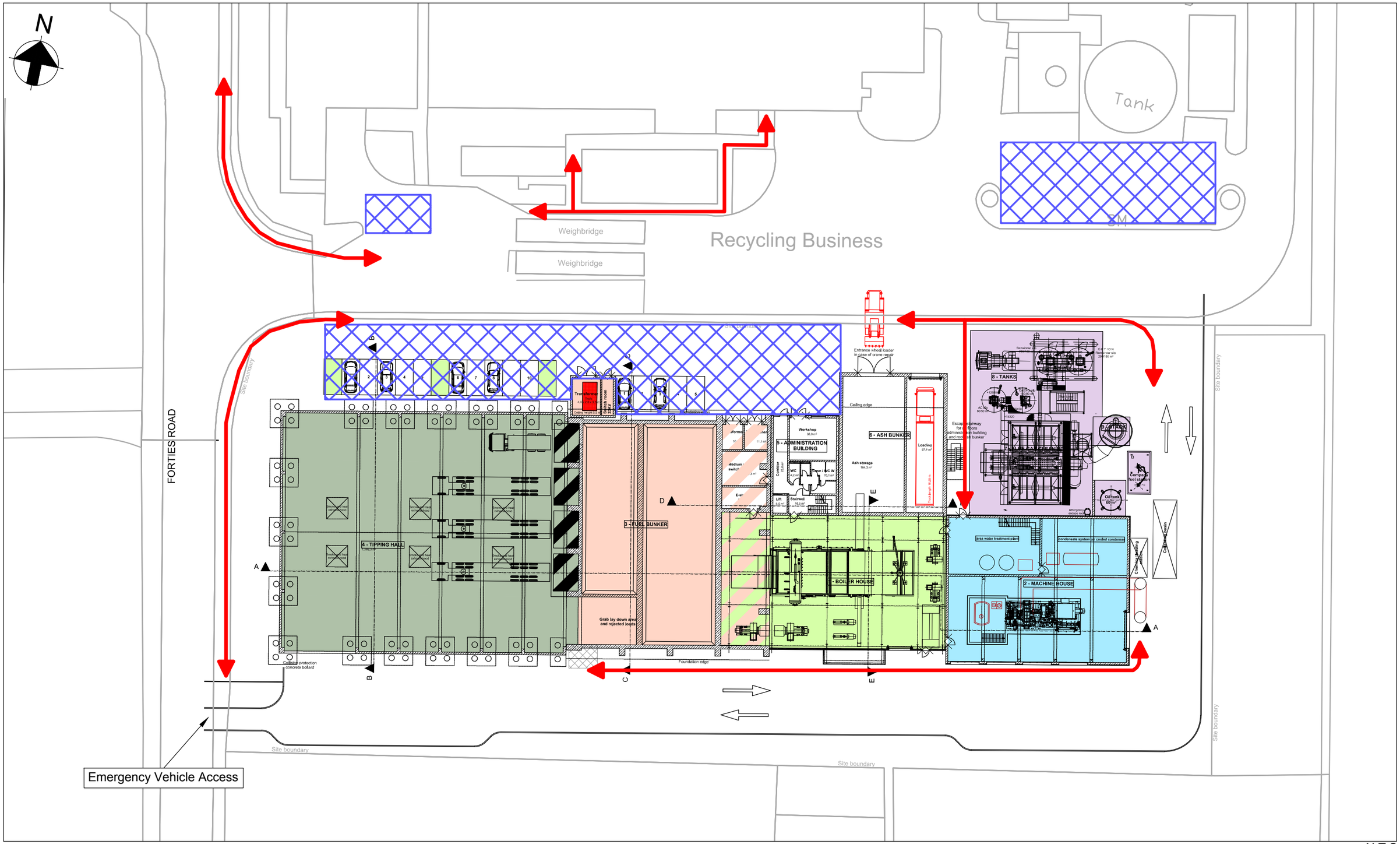
MVV Environment

ARUP

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Site Location

Job No: 245510-02 Figure: 1



N.T.S

MVV Environment

ARUP

Note

1. The material contained on this figure is based upon drawing/plan PA05. Recieved from MVV, dated 25/10/2016

Legend

Indicative Parking/Non-operational Area.

Pedestrian Route.

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Site Layout

Job No: 245510-02 Figure: 2

N

N.T.S

MVV Environment

ARUP

Legend

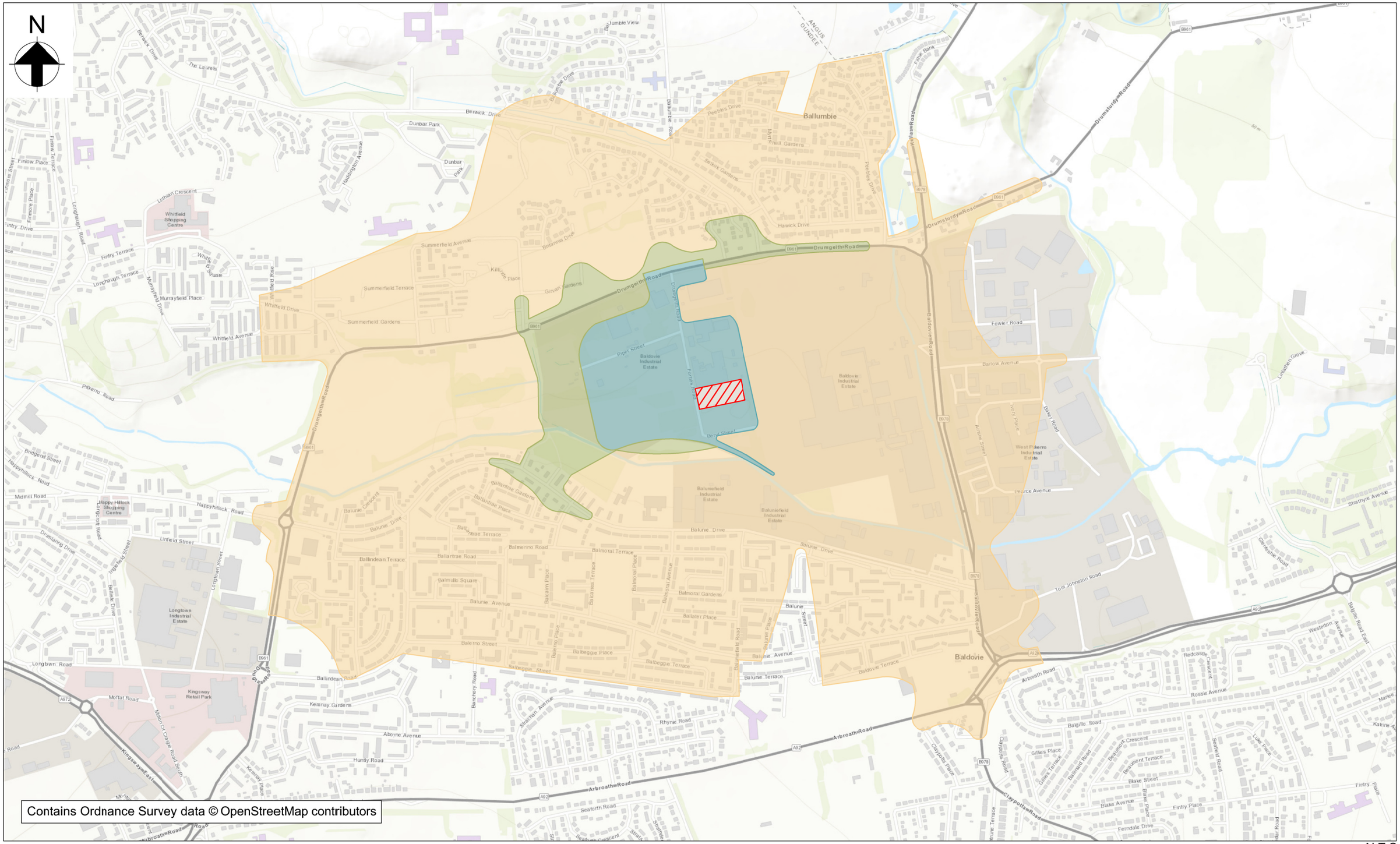
- EfW Site Boundary.
- Bus Stop.
- Pedestrian Route.
- Shared Pedestrian/Cycle Route.

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee

Transport Assessment

Title : Pedestrian and Cycle Links

Job No: 245510-02 Figure: 3



N.T.S

MVV Environment

ARUP

Legend

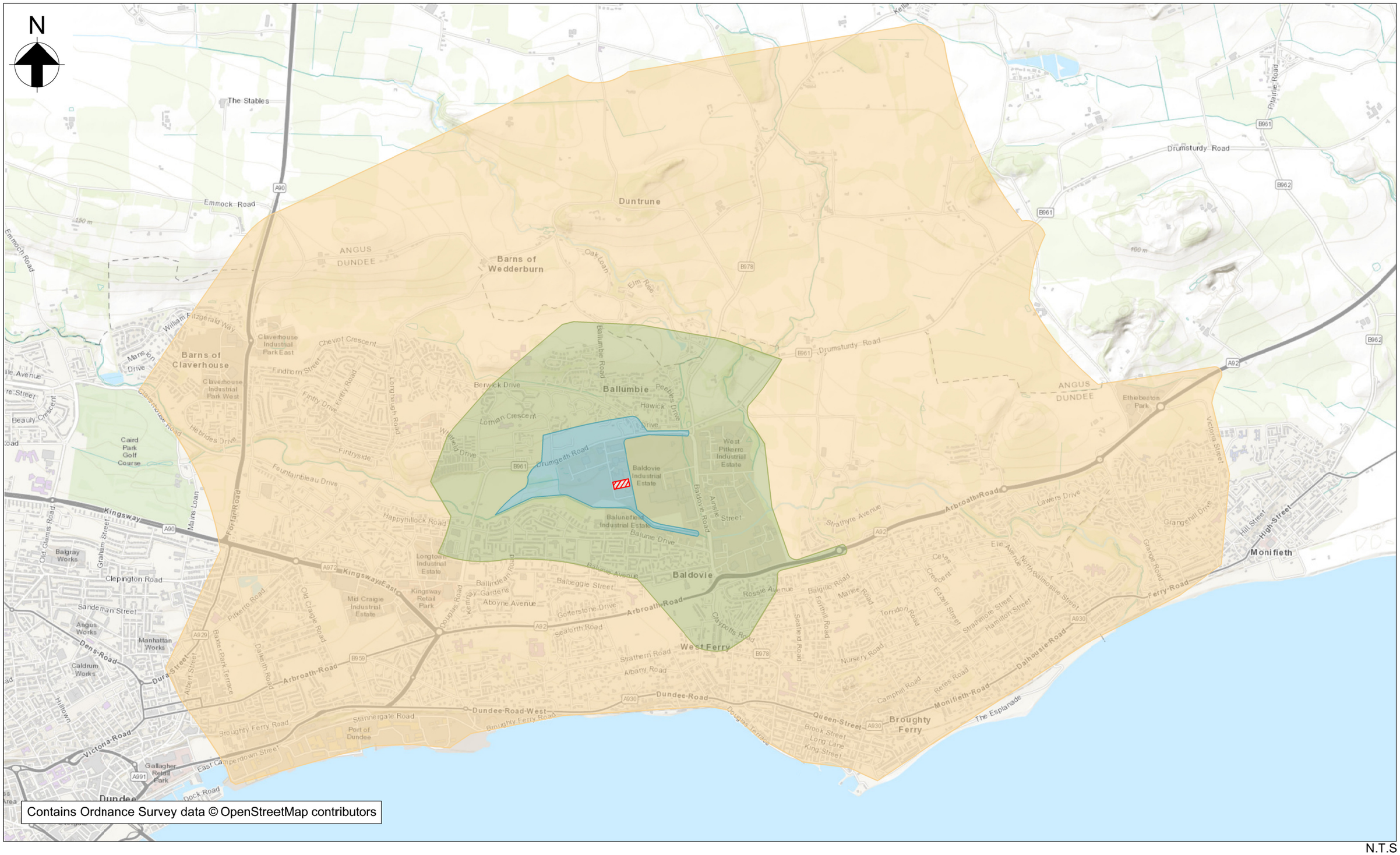
- EfW Site Location
- 400m
- 800m
- 1600m

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee

Transport Assessment

Title : Pedestrian Isochrome

Job No: 245510-02 Figure: 4



N.T.S

MVV Environment

ARUP

Legend

- EfW Site Location
- 1km
- 2km
- 5km

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee

Transport Assessment

Title : Cycle Isochrome

Job No: 245510-02 Figure: 5

N.T.S

MVV Environment

ARUP

Accident Severity

- Fatal
- Serious
- Slight

EfW Site Boundary

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Accident Location (2011 - 2015)

Job No: 245510-02 Figure: 6

N.T.S

MVV Environment

ARUP

Legend

- Junction Turning Survey (Jtn)
- ATC Sites (ATC)
- EfW Site Boundary

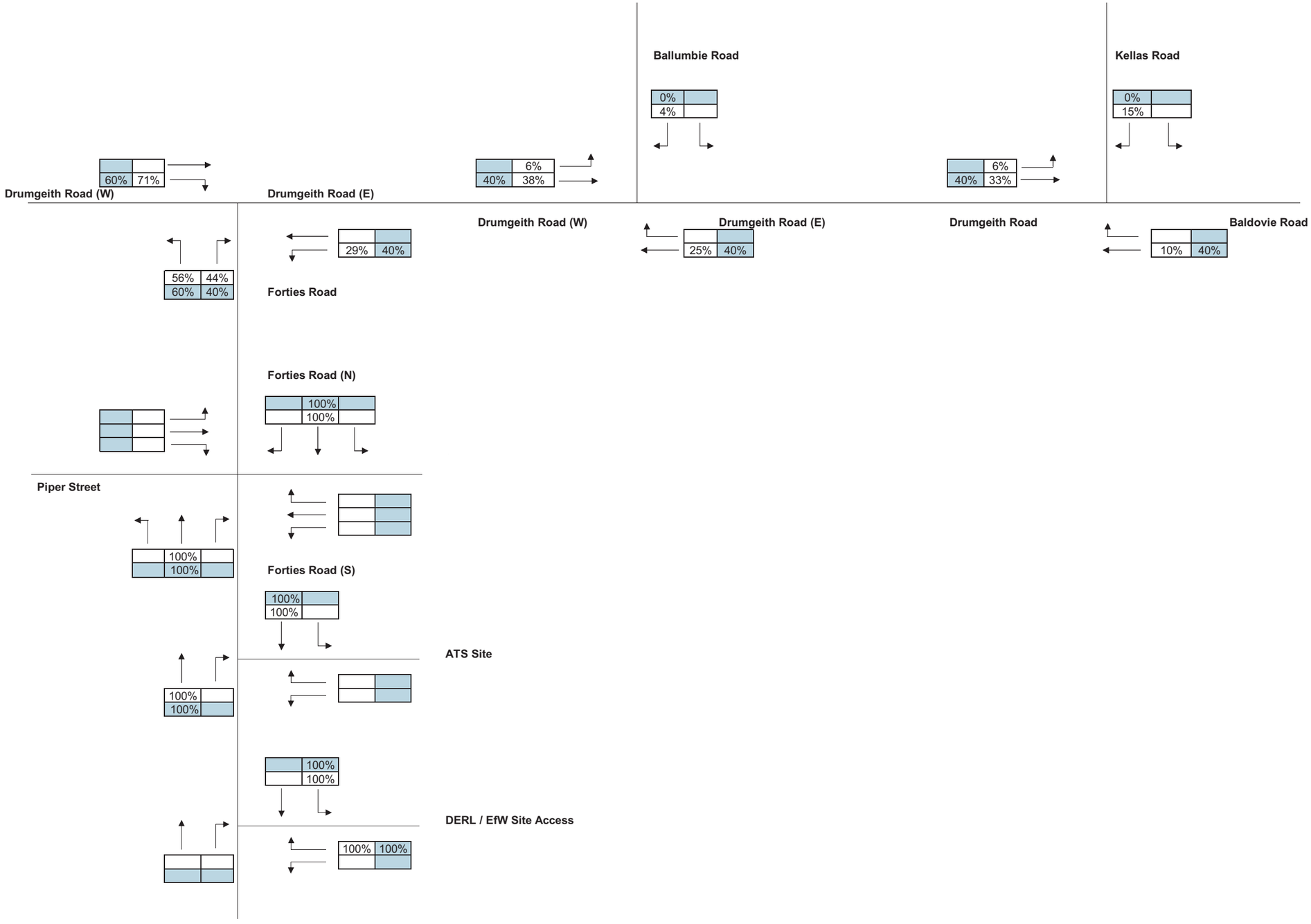
Energy from Waste Combined Heat & Power Facility
Forties Road, Dundee
Transport Assessment

Title : Location of Traffic Surveys (February 2016)

Job No: 245510-02 Figure: 7

Key

5%	Car / LGV
6%	HGV / PSV



N.T.S

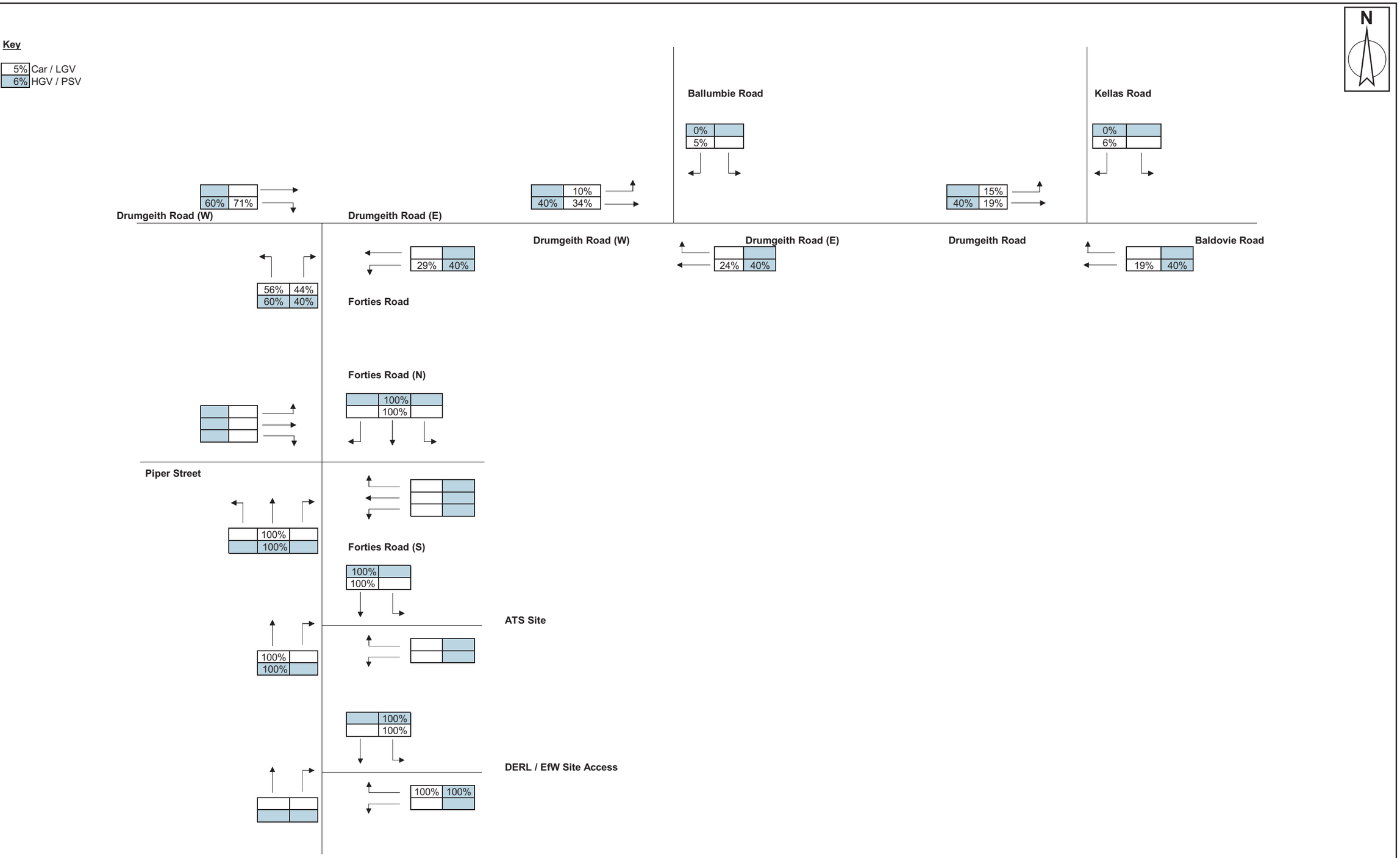
MVV Environment

ARUP

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Percentage Distribution of Development Trips (AM Peak)

Job No: 245510-02 Figure: 8a



N.T.S

MVV Environment

ARUP

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Percentage Distribution of Development Trips (PM Peak)

Job No: 245510-02 Figure: 8b

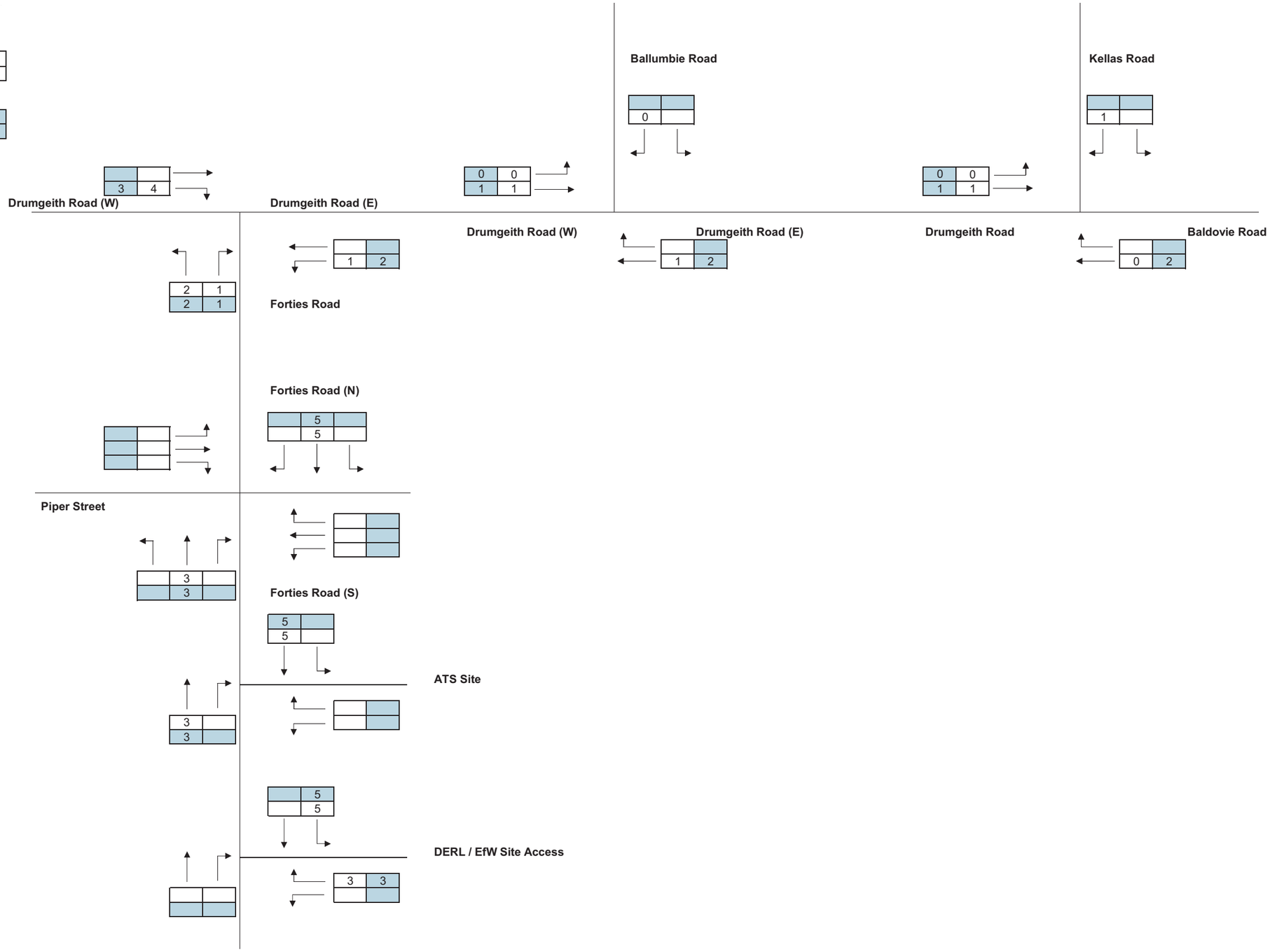
Trip Generation:

CARS

	AM	PM
IN	5	5
OUT	3	3

HGVs

	AM	PM
IN	5	5
OUT	3	3



N.T.S

MVV Environment ARUP		**Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee** Transport Assessment Title : Assigned Development Trips (AM Peak) Job No: 245510-02 Figure: 9a

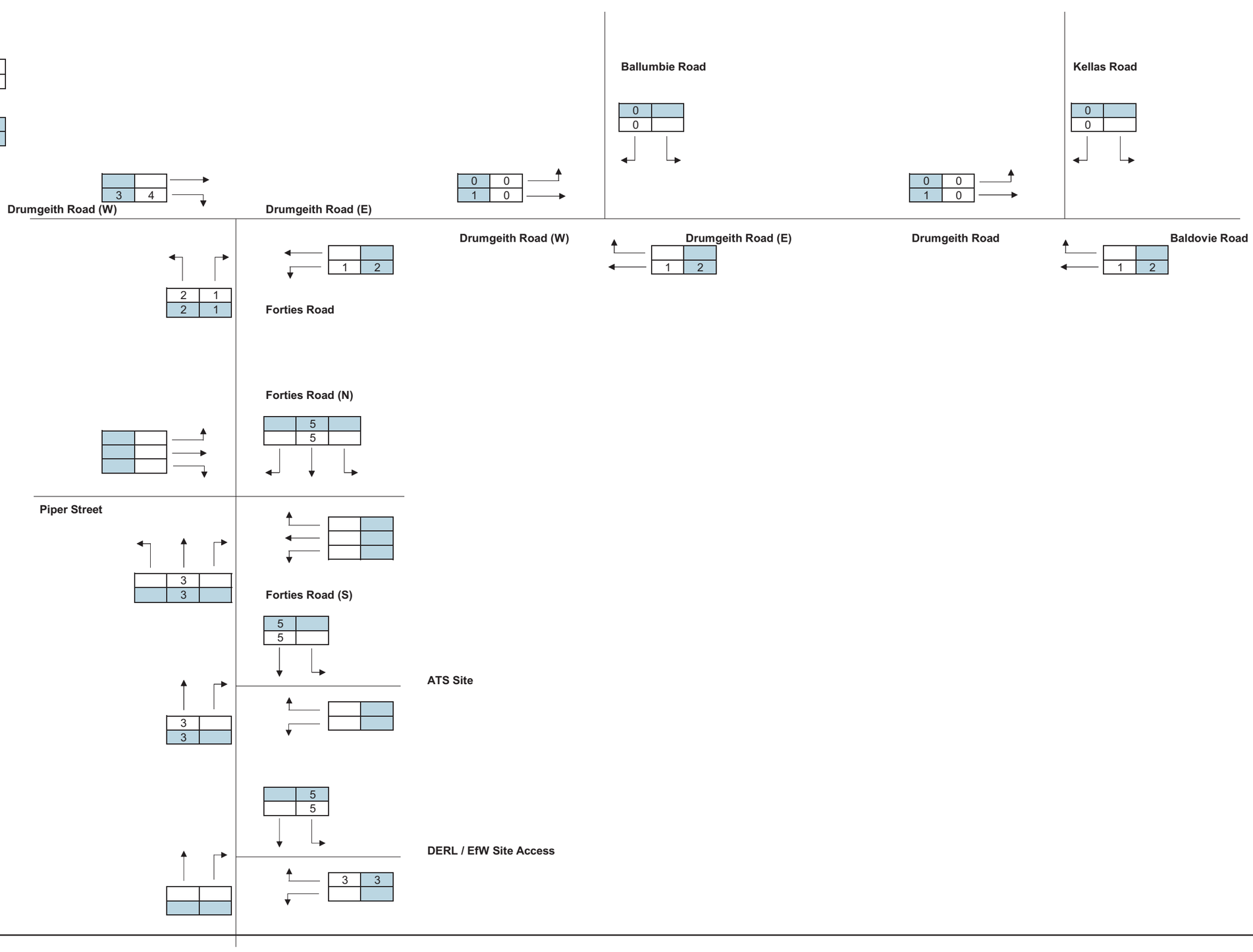
Trip Generation:

CARS

	AM	PM
IN	5	5
OUT	3	3

HGVs

	AM	PM
IN	5	5
OUT	3	3



N.T.S

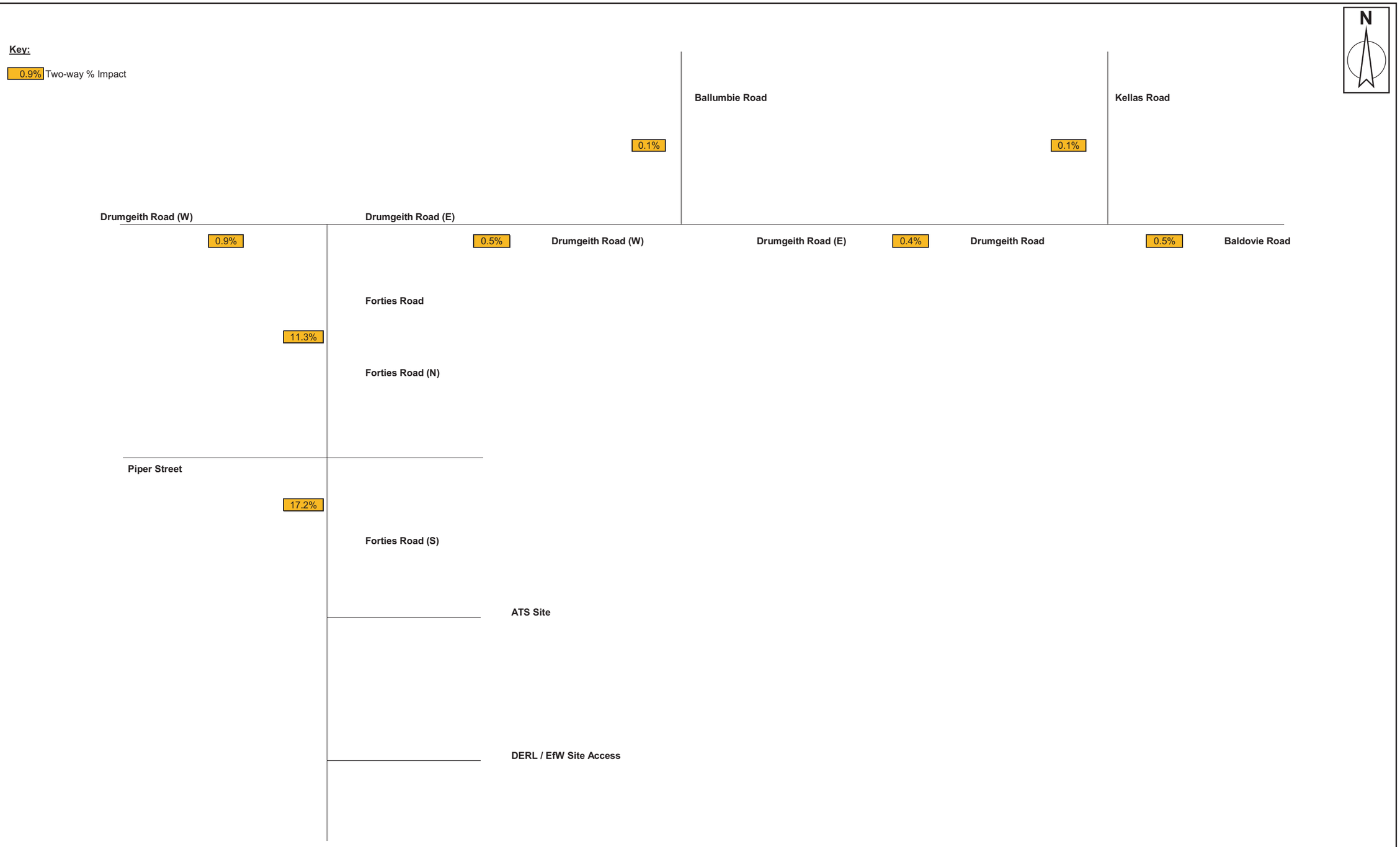
MVV Environment

ARUP

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Assigned Development Trips (PM Peak)

Job No: 245510-02 Figure: 9b



N.T.S

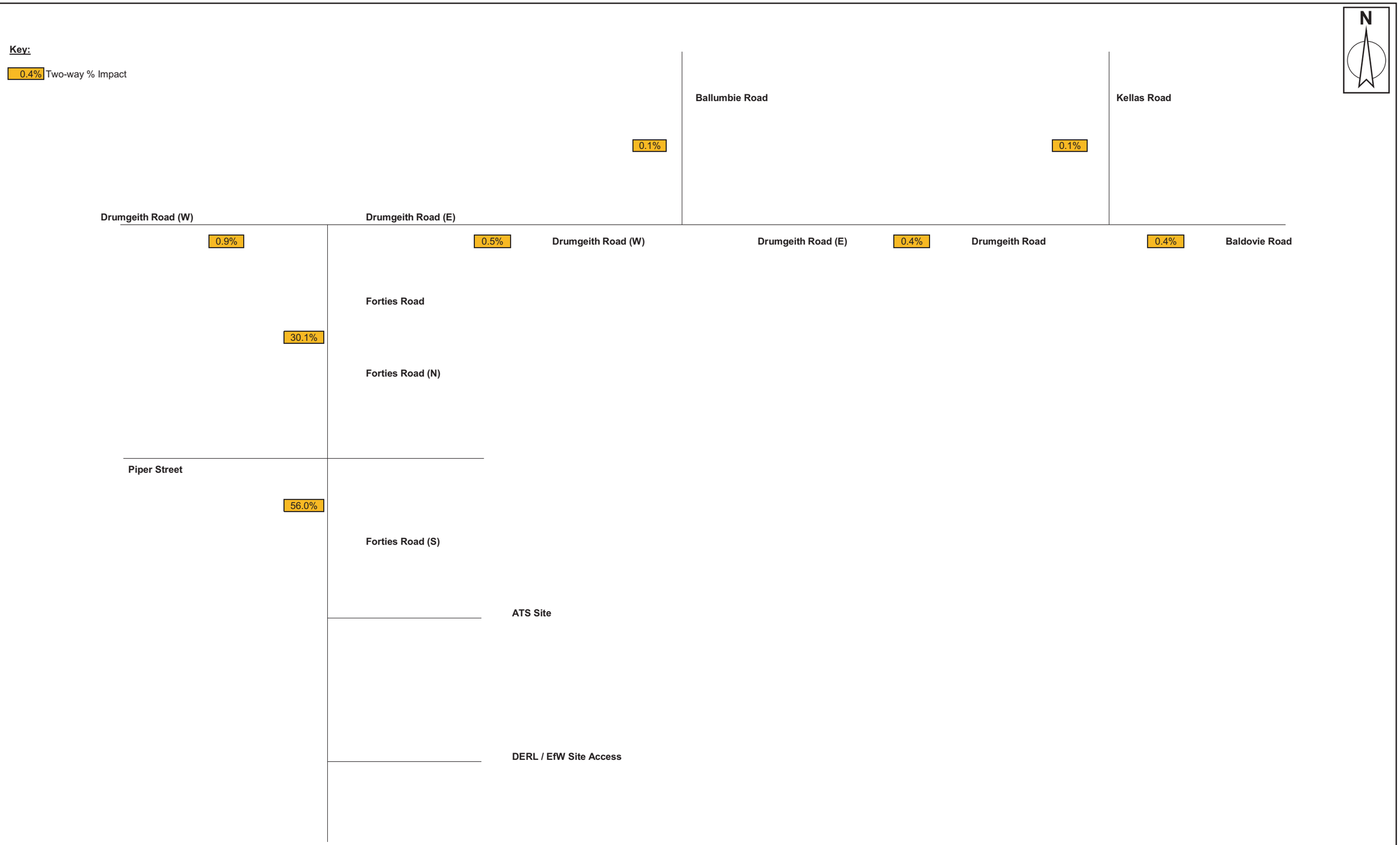
MVV Environment

ARUP

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Two-way Percentage Impact (AM Peak)

Job No: 245510-02 Figure: 10a



N.T.S

MVV Environment

ARUP

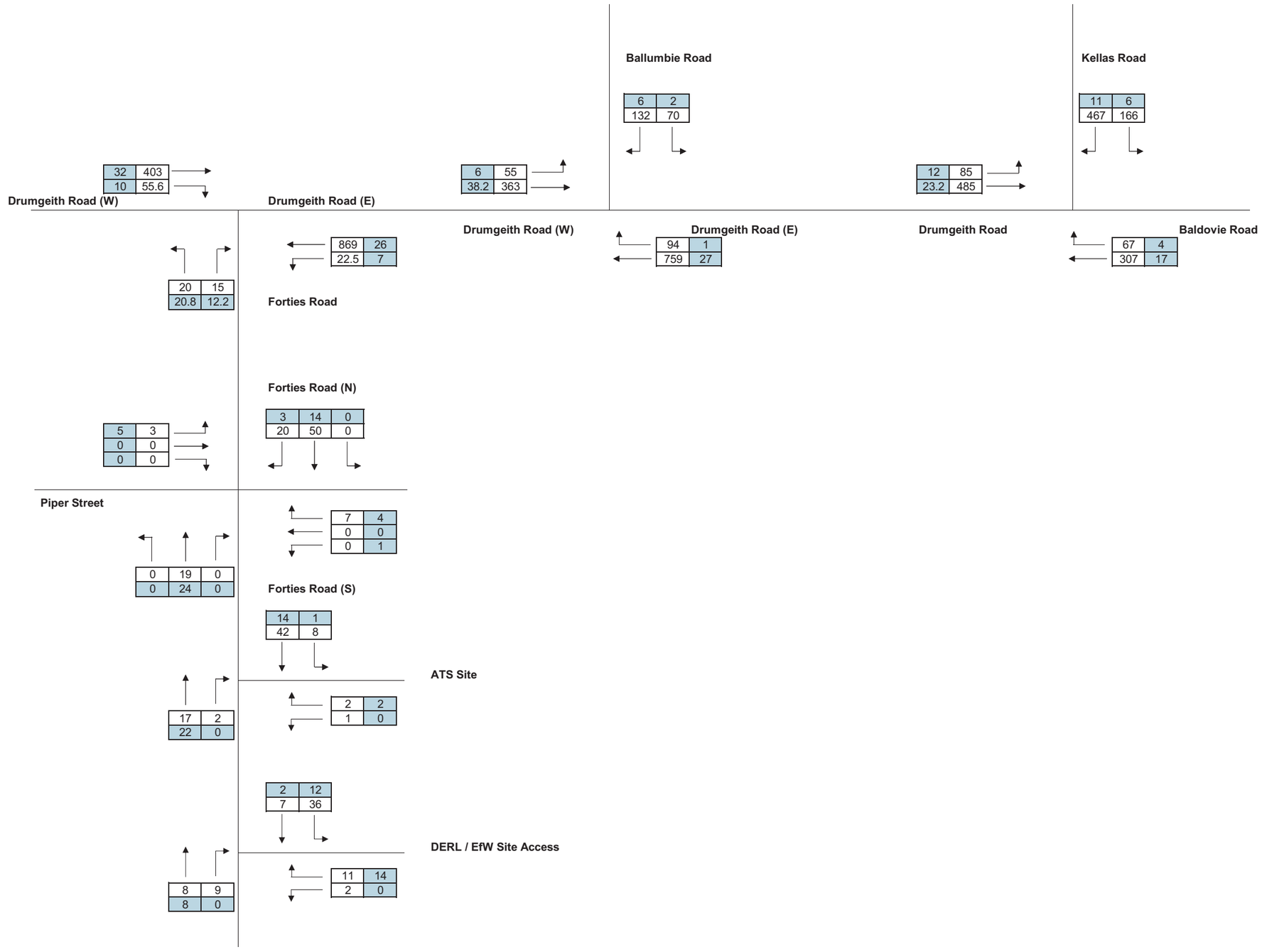
Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : Two-way Percentage Impact (PM Peak)

Job No: 245510-02 Figure: 10b

Key:

Cars / LGV
HGV / PSV



N.T.S

MVV Environment

ARUP

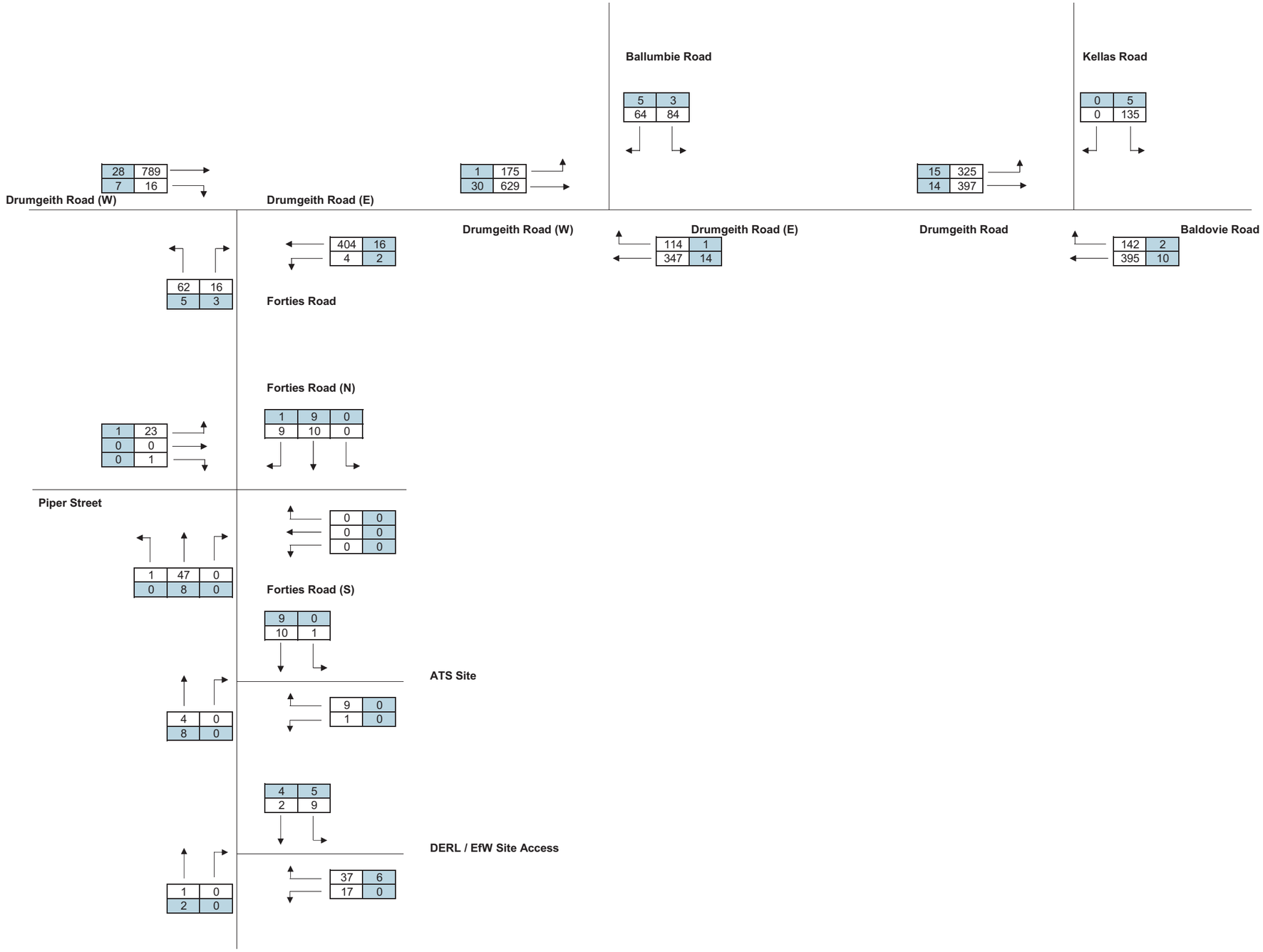
Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

Title : 2020 Total Trips (AM Peak)

Job No: 245510-02 Figure: 11a

Key:

	Cars / LGV
	HGV / PSV



N.T.S

MVV Environment

ARUP

Energy from Waste Combined Heat and Power Facility, Forties Road, Dundee
Transport Assessment

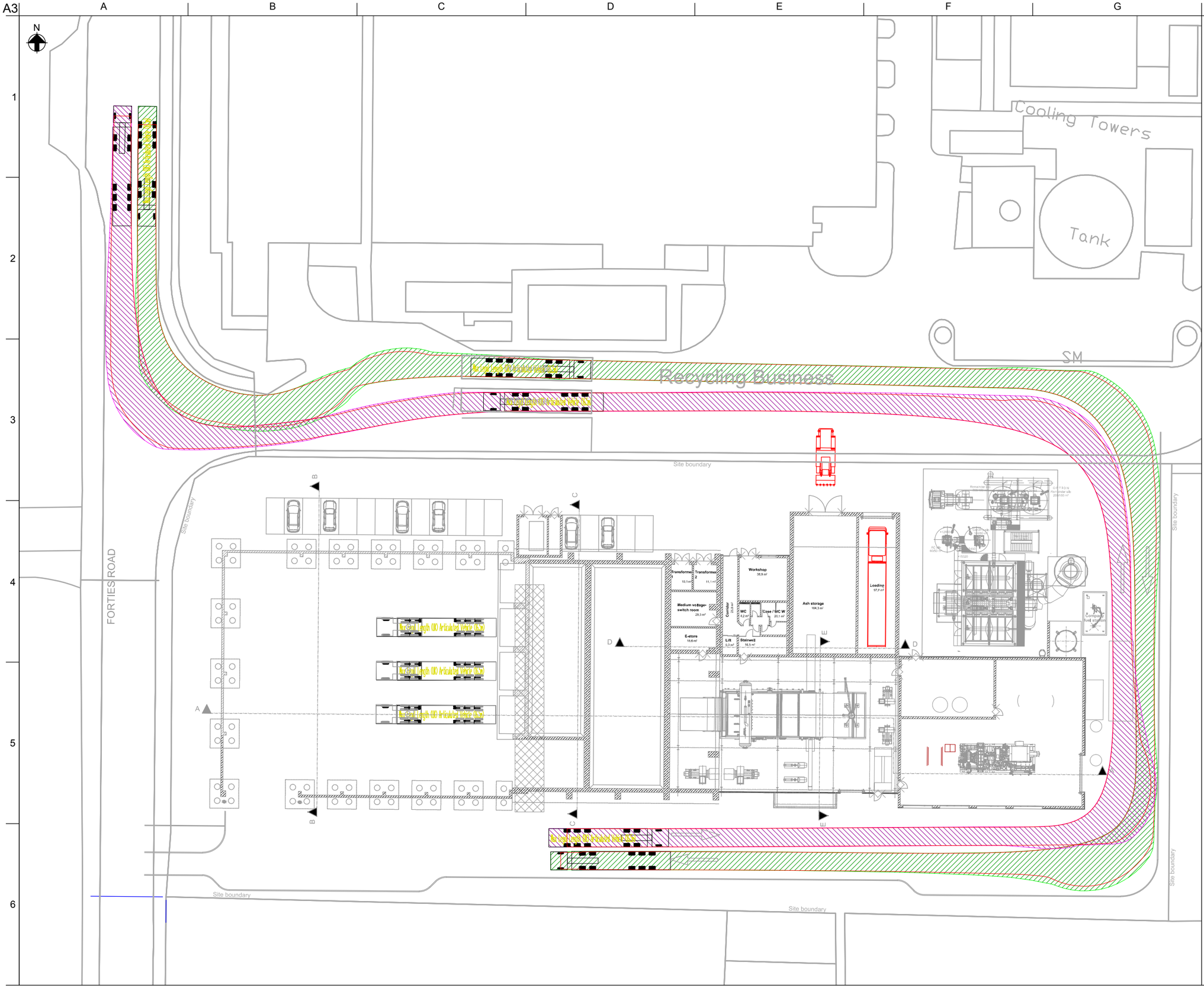
Title : 2020 Total Trips (PM Peak)

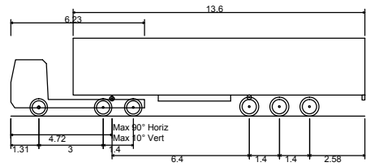
Job No: 245510-02 Figure: 11b

Appendix A

Vehicle Tracking Assessment

A3





Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.632m
Min Body Ground Clearance	0.396m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.870m

Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

Rev	Date	By	Chkd	Appd
I2	26/10/16	ML	NM	GLD
Issued for Information				
I1	09/02/16	ML	NM	GLD
Issued for Information				

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www.arup.com

Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Site Layout -
16.5m Articulated Vehicle
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

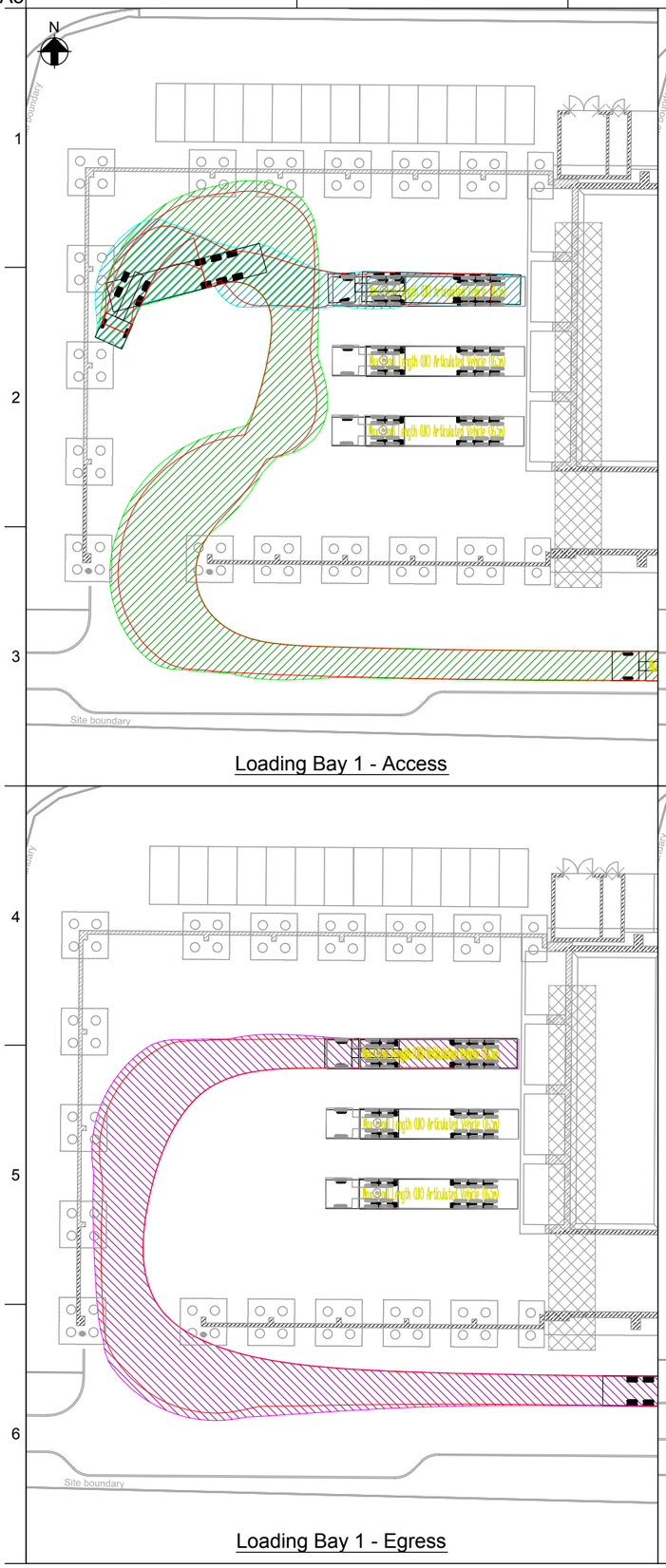
Arup Job No **245510-02**

Rev **I2**

Name **ATR 02**

Do not scale

A3



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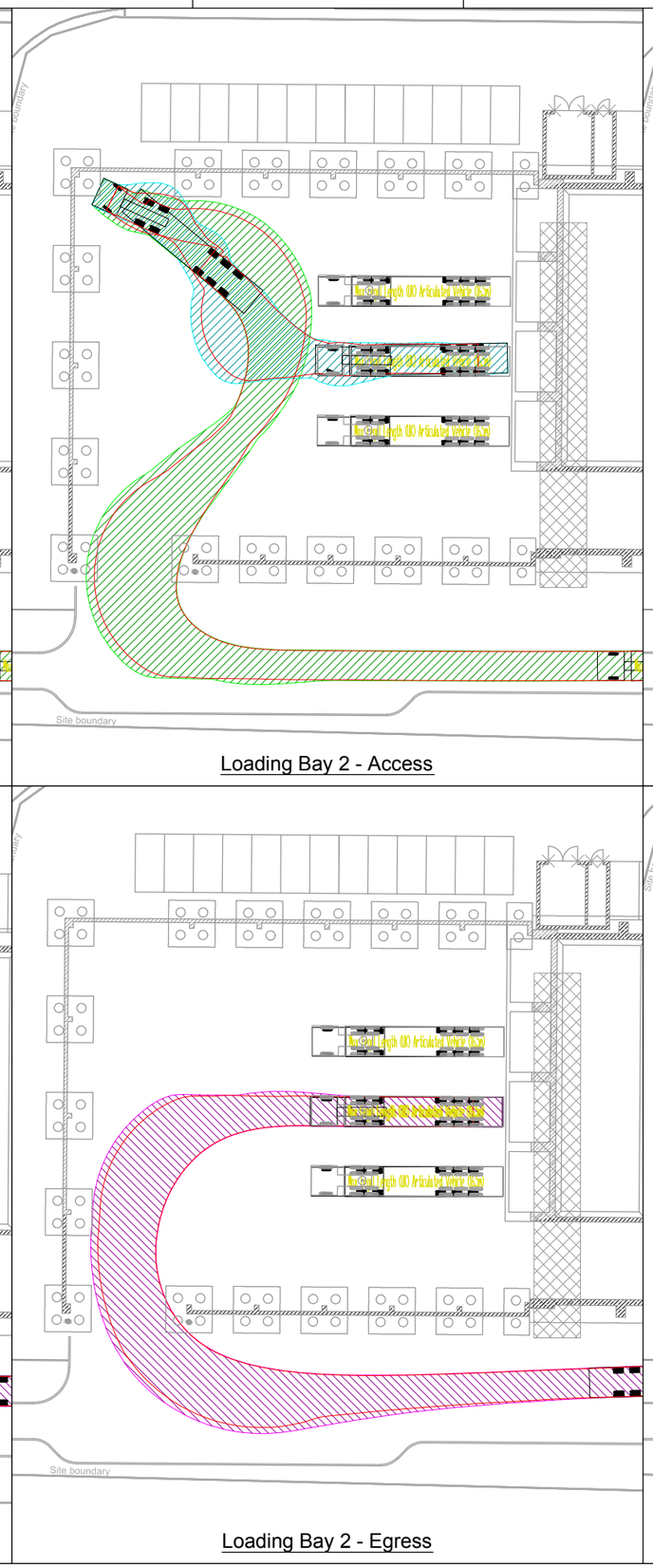

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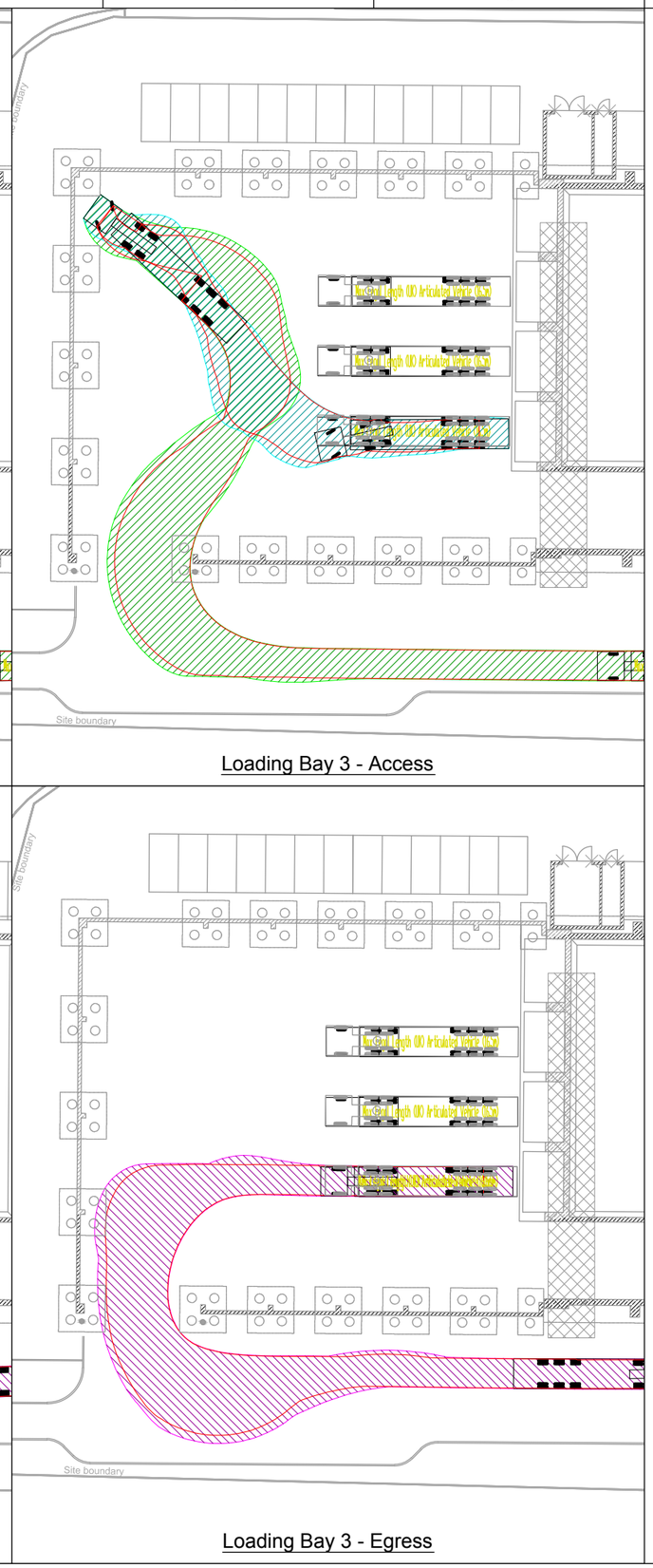
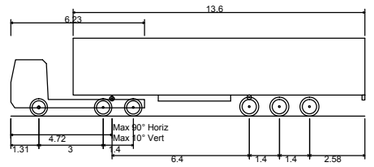


Loading Bay 3 - Access

Loading Bay 1 - Egress

Loading Bay 2 - Egress

Loading Bay 3 - Egress



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Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

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	Issued for Information			

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Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Tipping Hall -
16.5m Articulated Vehicle
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

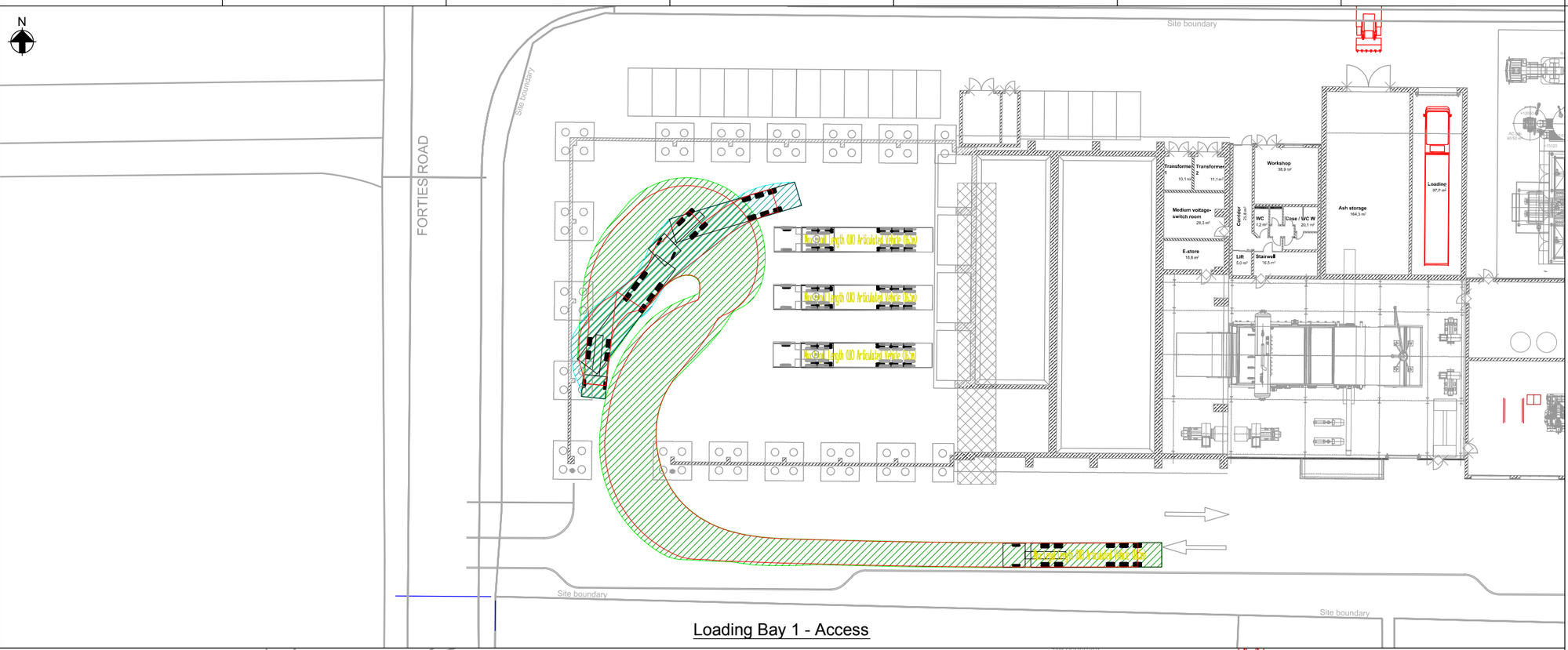
Arup Job No **245510-02**

Rev **I2**

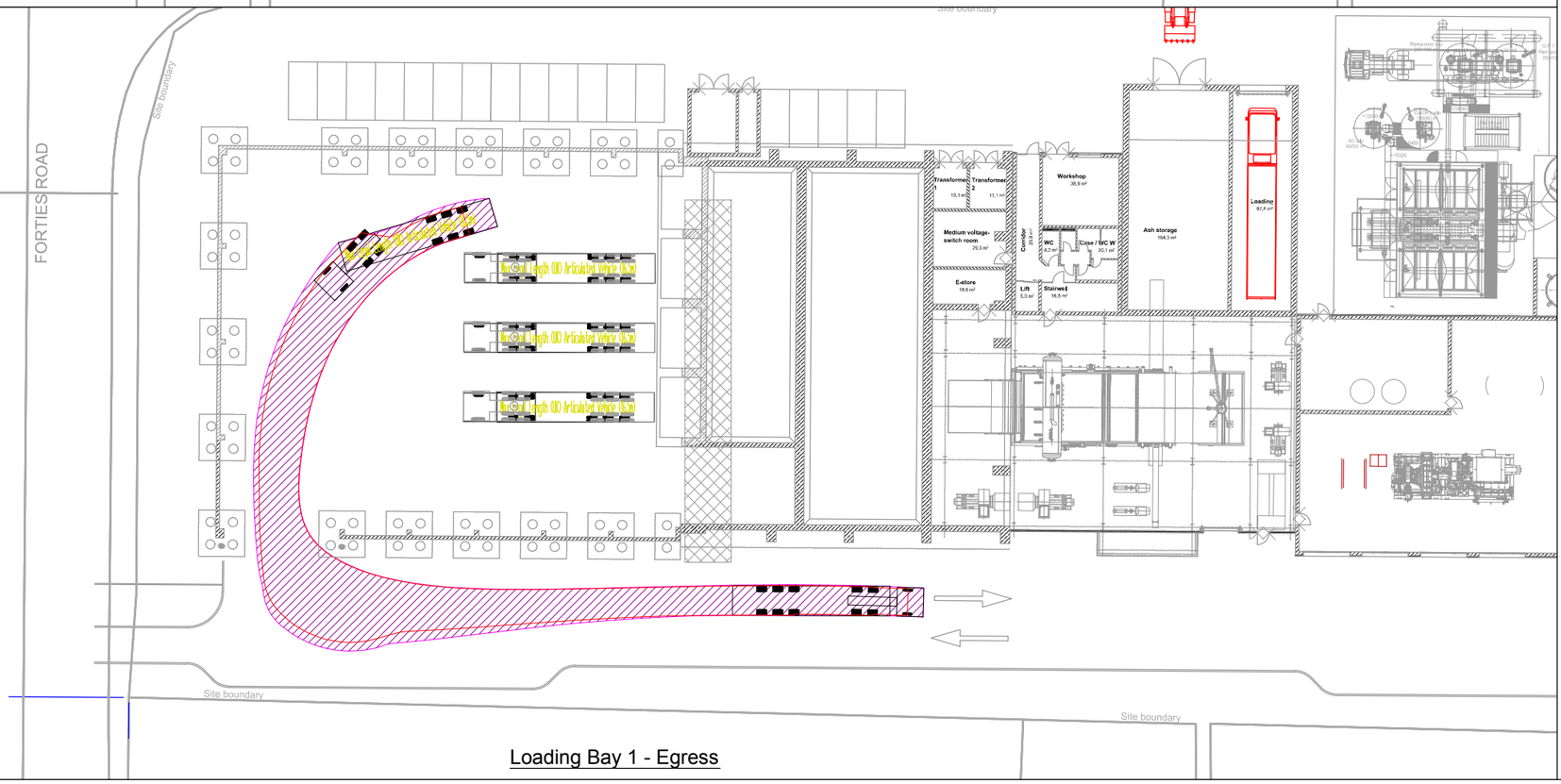
Name **ATR 03**

Do not scale

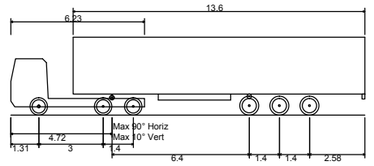
A3



Loading Bay 1 - Access



Loading Bay 1 - Egress



Max Legal Length (UK) Articulated Vehicle (16.5m)

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Overall Width	2.550m
Overall Body Height	3.632m
Min Body Ground Clearance	0.396m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.870m

Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

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Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Tipping Hall -
16.5m Articulated Vehicle
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

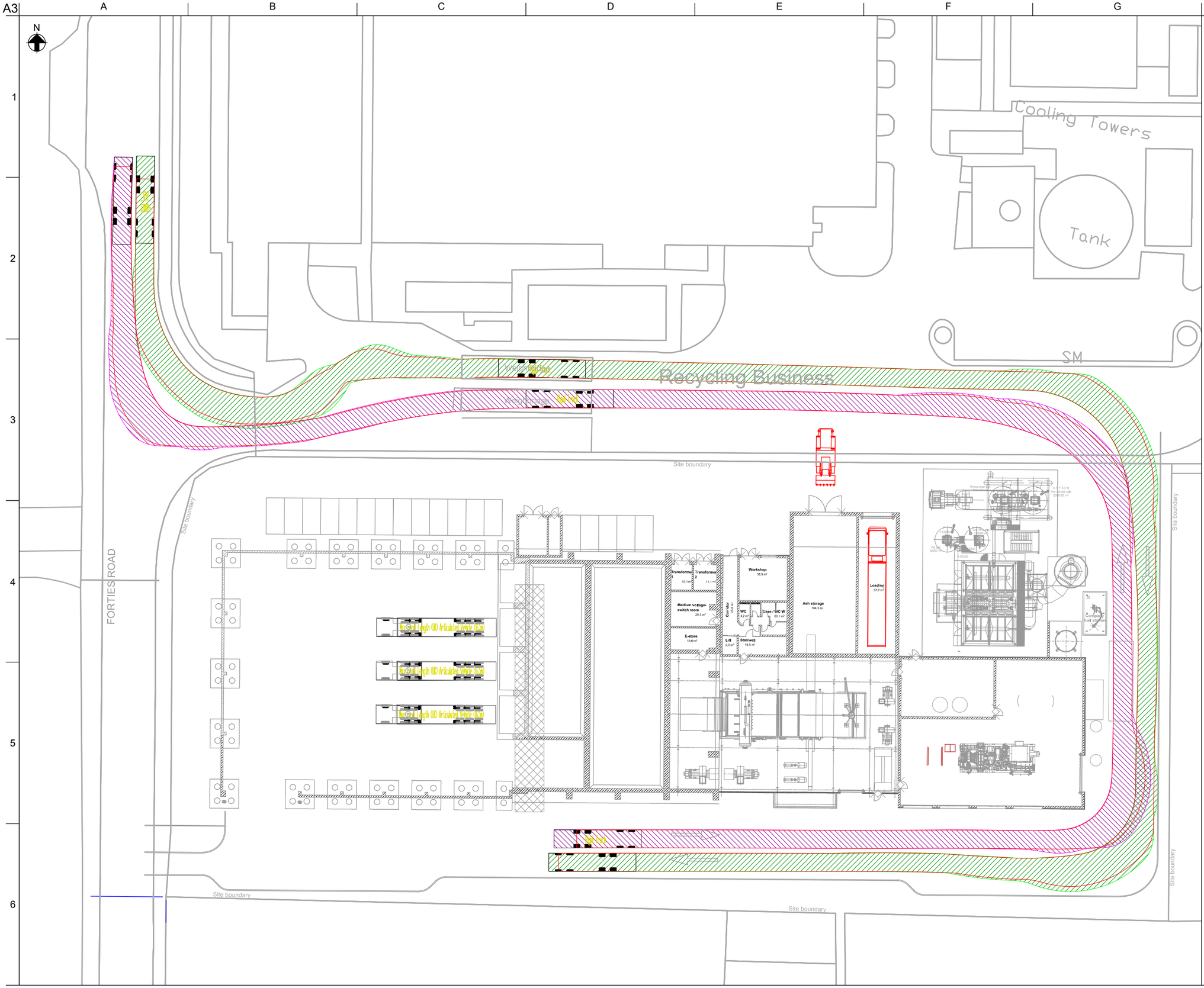
Suitability **Information**

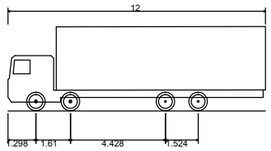
Arup Job No **245510-02**

Rev **I2**

Name **ATR 03.1**

Do not scale





Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	11.900m

Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

Rev	Date	By	Chkd	Appd
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	Issued for Information			

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Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Site Layout -
4-Axle Rigid Truck
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

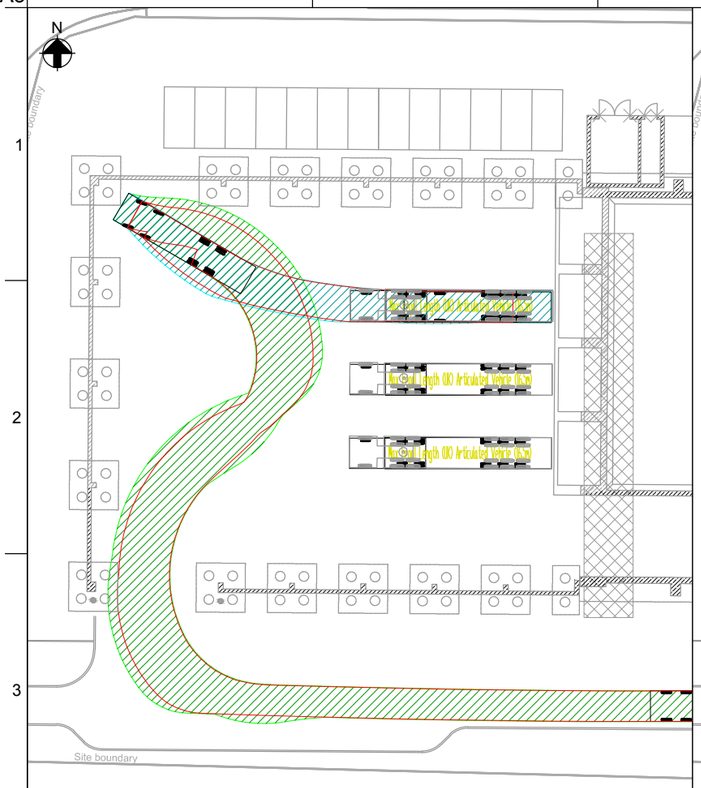
Arup Job No **245510-02**

Rev **I2**

Name **ATR 04**

Do not scale

A3



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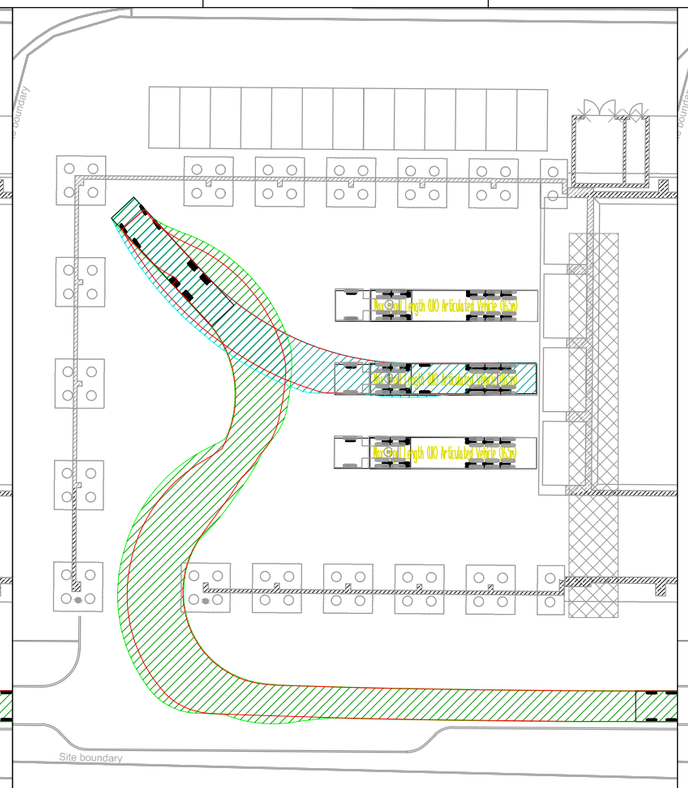

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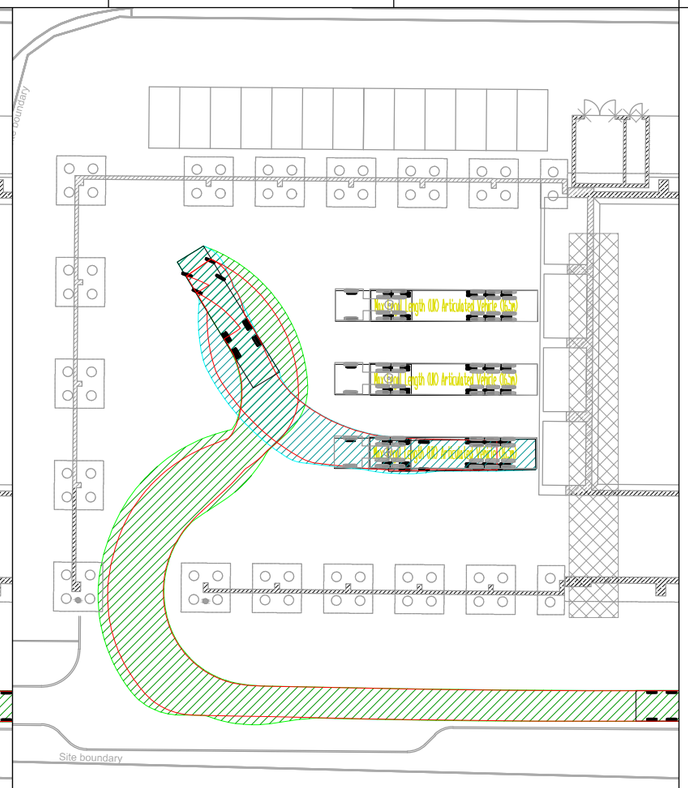

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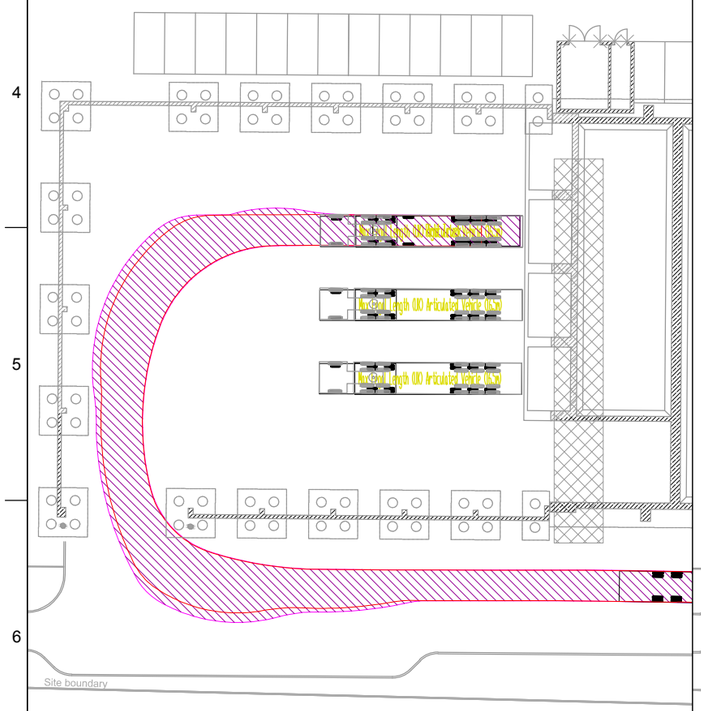

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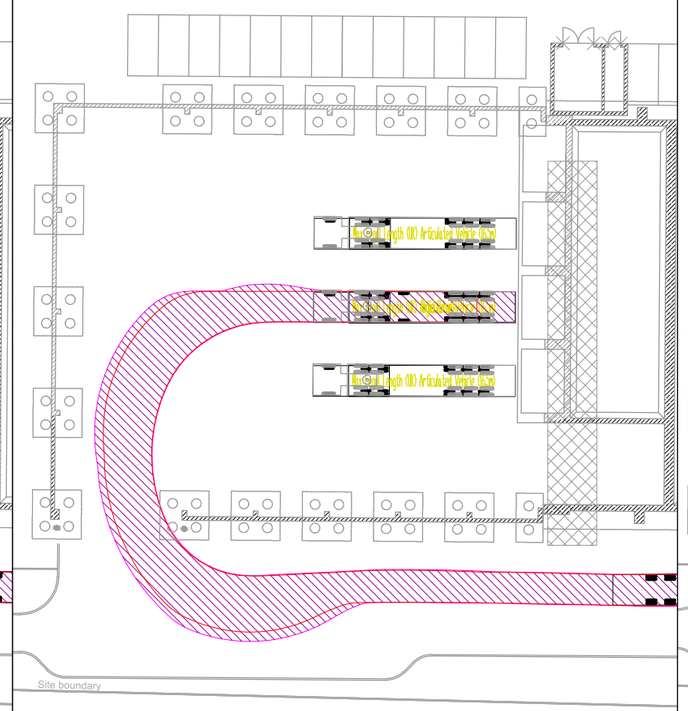

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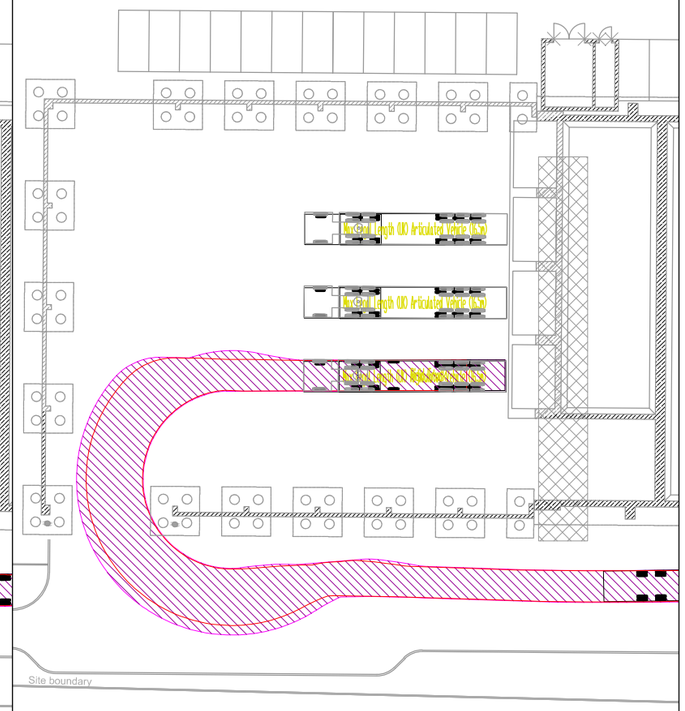

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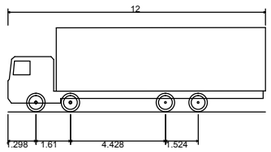

Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	11.900m

Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

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Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Tipping Hall -
4-Axle Rigid Truck
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

Arup Job No **245510-02**

Rev **I2**

Name
ATR 05

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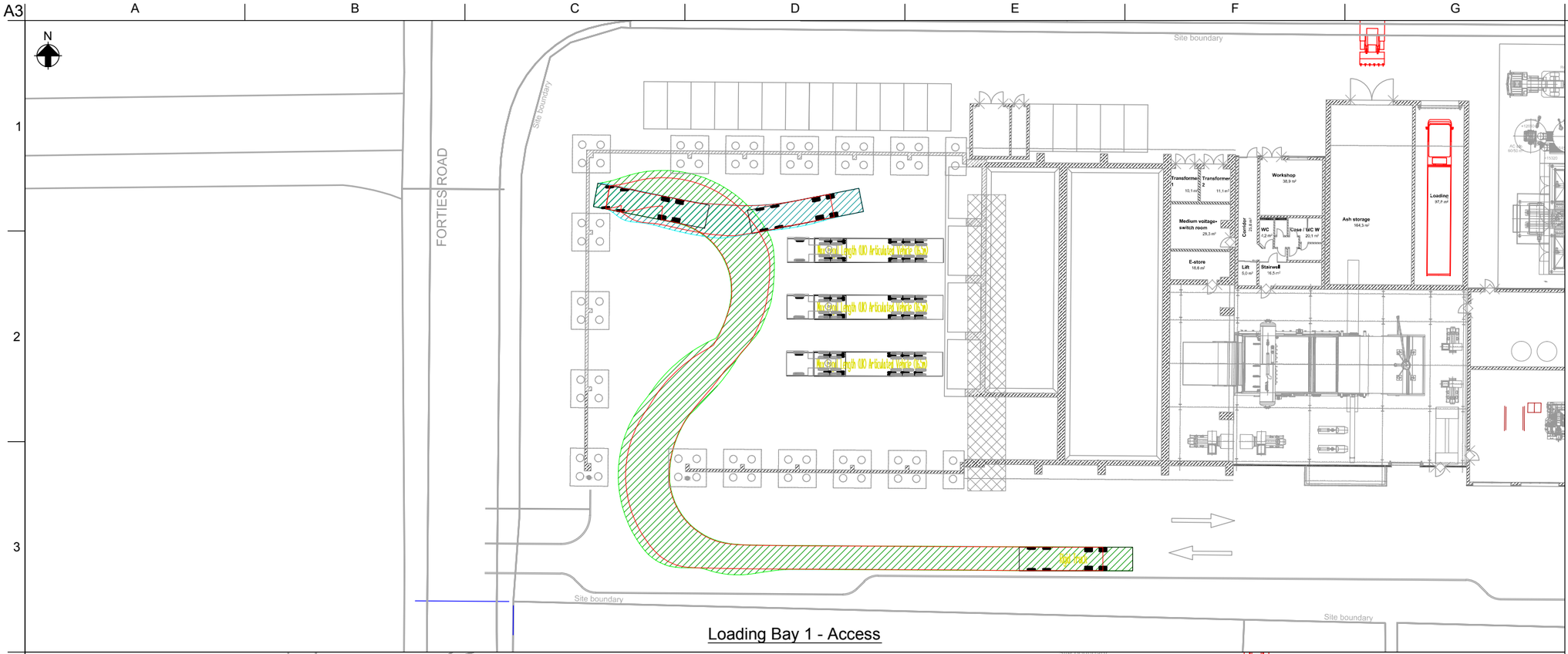

Loading Bay 1 - Access

Loading Bay 1 - Egress

Rigid Truck	
Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	11.900m

Legend

🟩	Access vehicle envelope
🟪	Egress vehicle envelope
▨	Conflict between vehicles accessing & egressing site

Rev	Date	By	Chkd	Appd
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Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Tipping Hall -
4-Axle Rigid Truck
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

Arup Job No
245510-02

Rev
I2

Name
ATR 05.1

Do not scale

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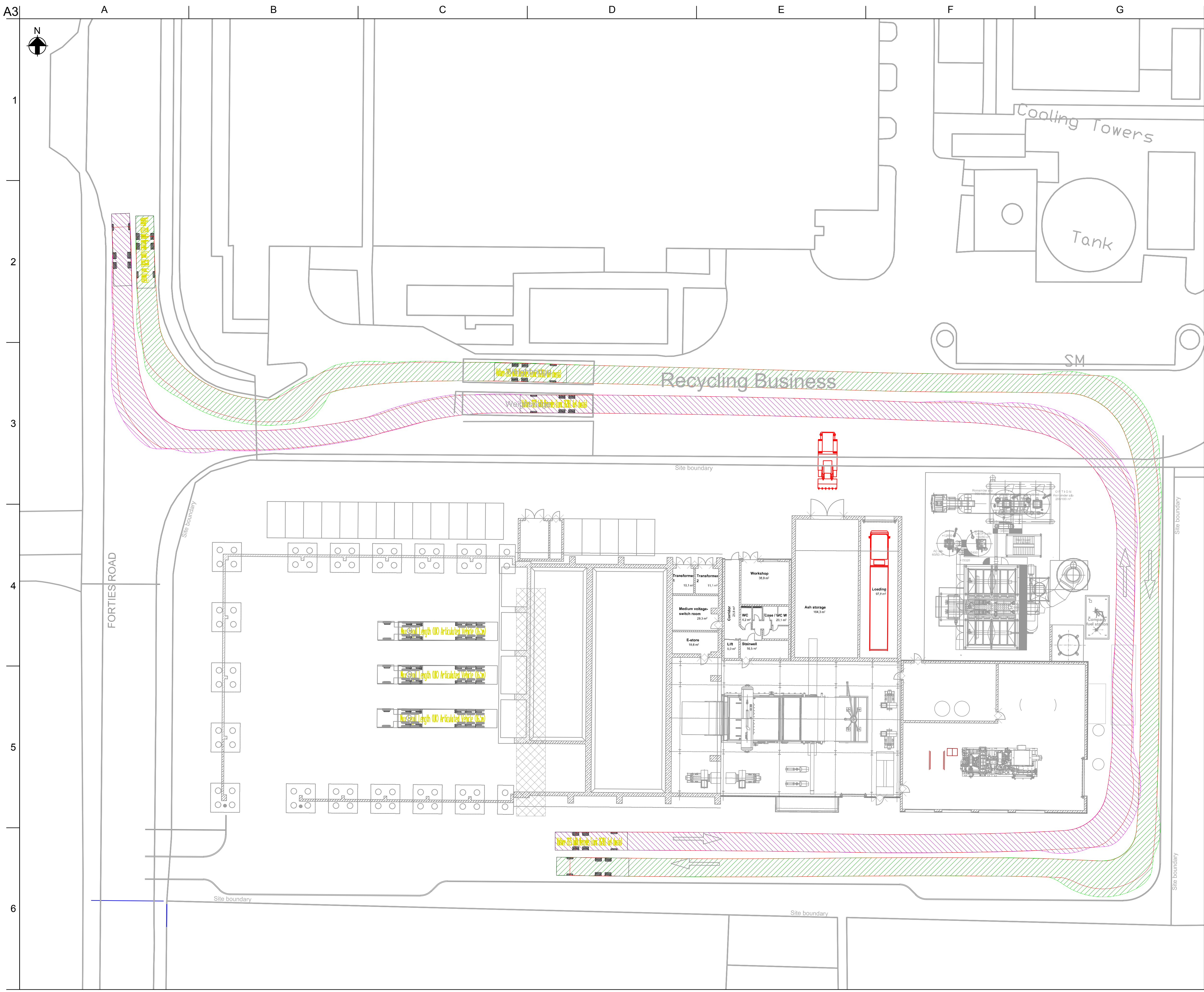

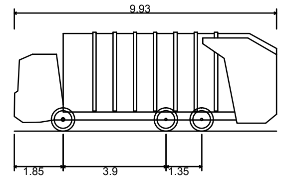

Vulture 2225 (with Mercedes Econic 2628LL 6x4 chassis)

Overall Length	9.930m
Overall Width	2.490m
Overall Body Height	3.749m
Min Body Ground Clearance	0.302m
Track Width	2.490m
Lock to Lock Time	4.00s
Wall to Wall Turning Radius	9.100m

Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

Rev	Date	By	Chkd	Appd
I2	26/10/16	ML	NM	GLD
	Issued for Information			
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	Issued for Information			

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Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Site Layout -
3-Axle Refuse Vehicle
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

Arup Job No **245510-02**

Rev **I2**

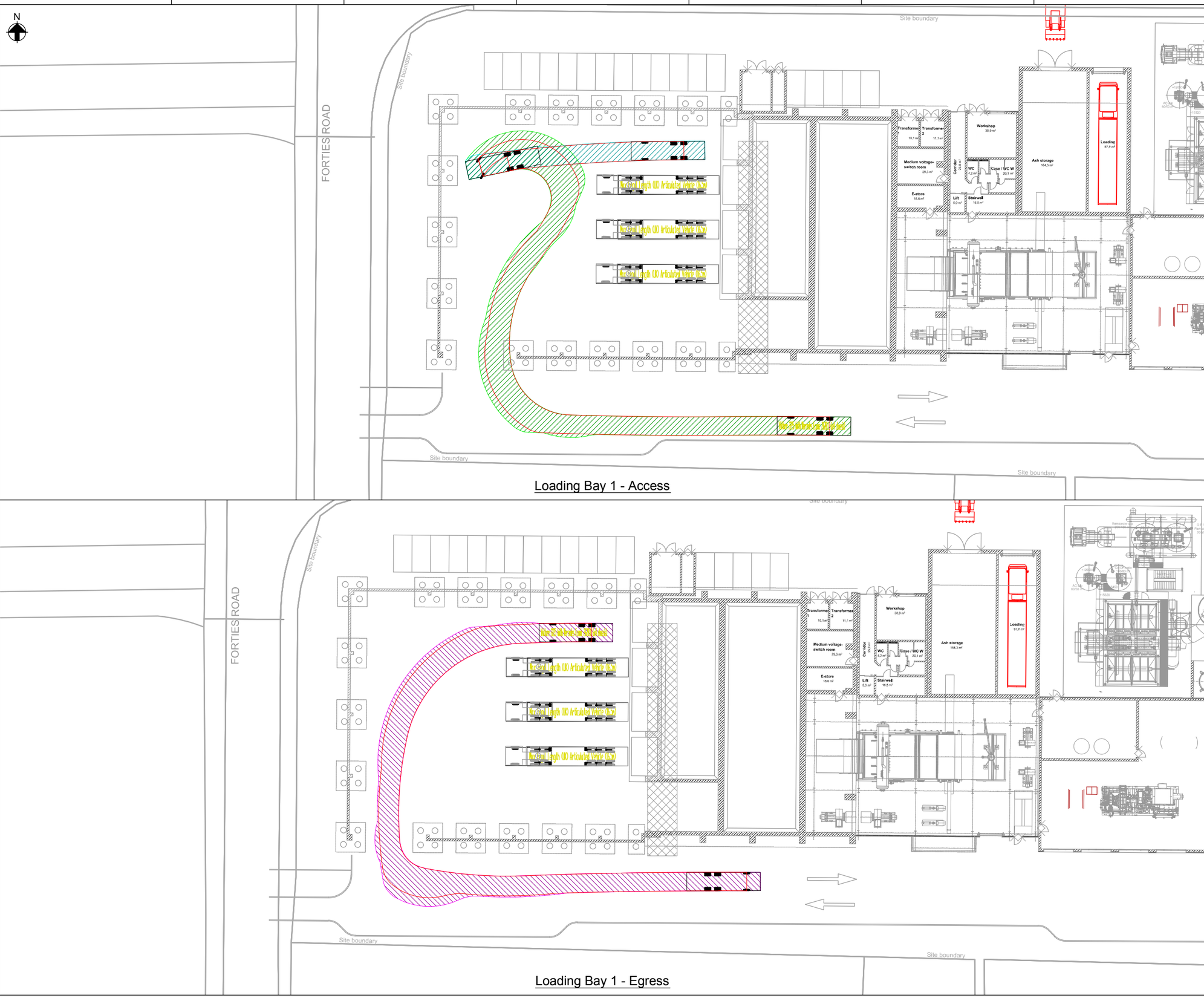
Name **ATR 06**

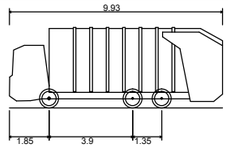
Do not scale

A3

A B C D E F G

1 2 3 4 5 6





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Track Width	2.490m
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Wall to Wall Turning Radius	9.100m

Legend

- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site

Rev	Date	By	Chkd	Appd
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	Issued for Information			

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West Lothian, EH30 9SE
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www.arup.com

Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
Proposed Tipping Hall -
3-Axle Refuse Vehicle
Swept Path Analysis

Scale at A3 1:500

Role Consultancy

Suitability **Information**

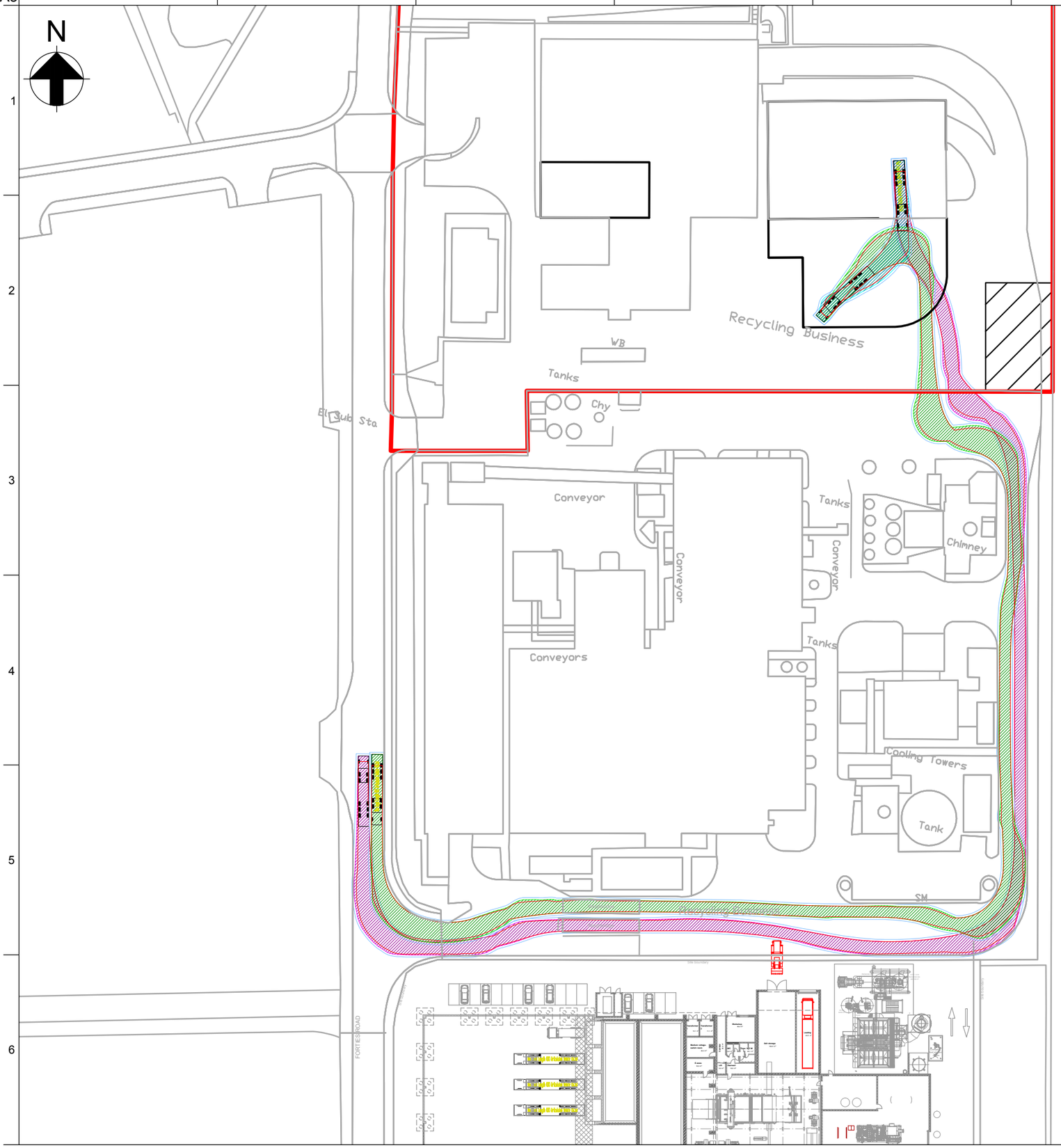
Arup Job No **245510-02**

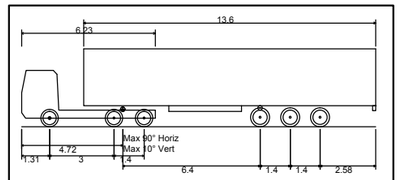
Rev **I2**

Name **ATR 07**

Do not scale

A3





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Overall Body Height	3.632m
Min Body Ground Clearance	0.396m
Max Track Width	2.500m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	6.870m

Legend

- ATS Boundary (Retained by Dundee City Council)
- Subjects licensed by MVV Environment Services Ltd
- Area reserved for RCV parking
- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site
- 0.5m all-round buffer

Notes

1. The layout contained on this drawing is based upon drawing 300-15 (PA05). Received from MVV, dated 24/10/2016

Rev	Date	By	Chkd	Appd
I2	27/10/16	ML	NM	GLD
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	Issued for Information			

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www.arup.com

Client
MVV Environment Services Ltd

Project Title
Energy from Waste.
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
ATS Site
16.5m Articulated Vehicle
Swept Path Analysis

Scale at A3 1:1000

Role Consultancy

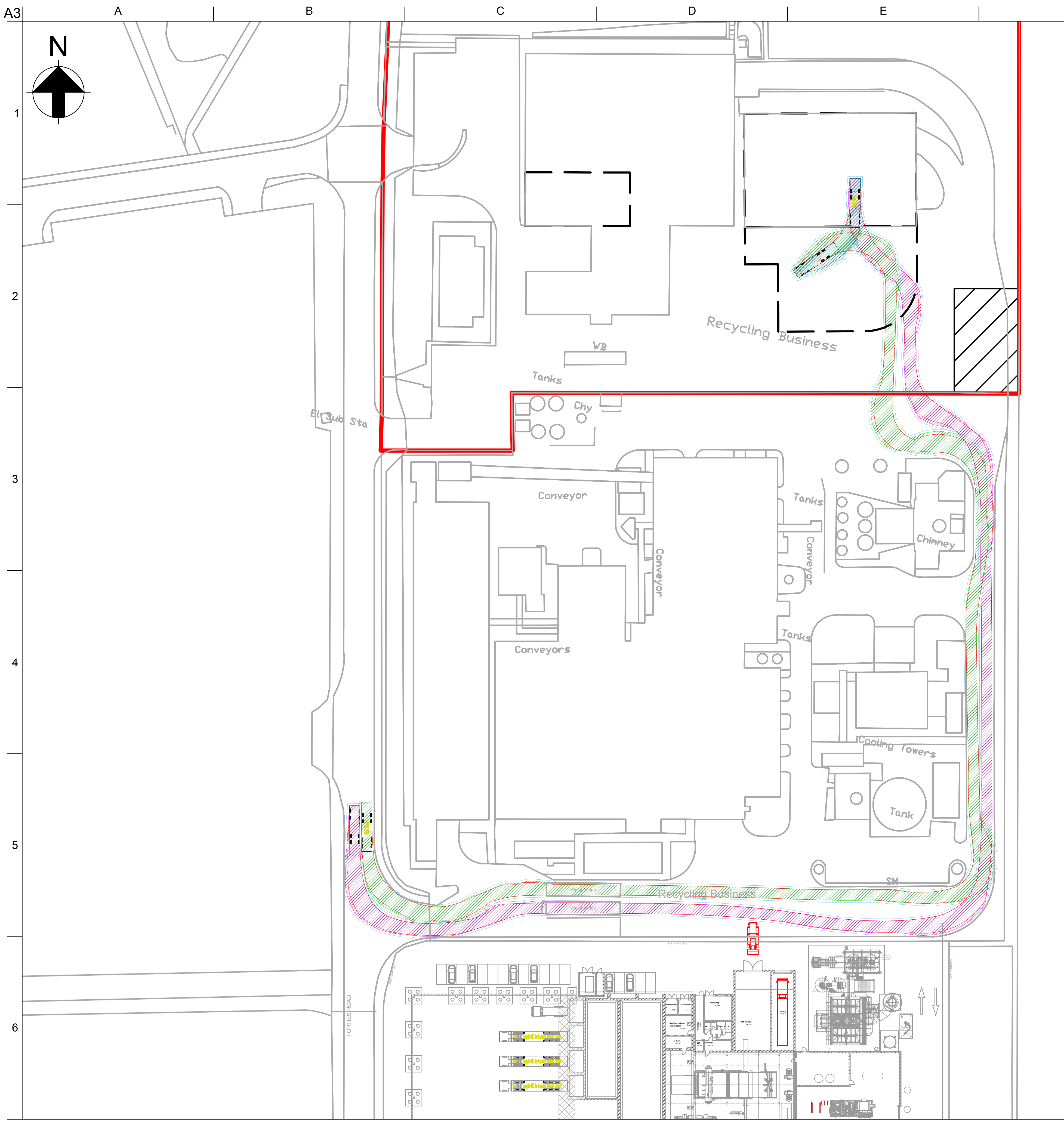
Suitability **For Information**

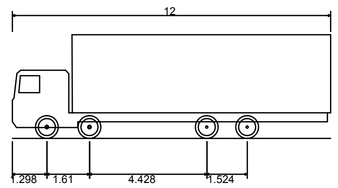
Arup Job No **245510-02**

Rev **I2**

Name **ATR 08**

Do not scale





Rigid Truck	
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Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	11.900m

Legend

- ATS Boundary (Retained by Dundee City Council)
- Subjects licensed by MVV Environment Services Ltd
- Area reserved for RCV parking
- Access vehicle envelope
- Egress vehicle envelope
- Conflict between vehicles accessing & egressing site
- 0.5m all-round buffer

Notes

1. The layout contained on this drawing is based upon drawing 300-15 (PA05). Received from MVV, dated 24/10/2016

Rev	Date	By	Chkd	Appd
I2	27/10/16	ML	NM	GLD
	Issued for Information			
I1	20/10/16	KB	NM	GLD
	Issued for Information			

ARUP

Scotstoun House, South Queensferry
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www.arup.com

Client
MVV Environment Services Ltd

Project Title
Energy from Waste,
Combined Heat and Power Facility
Forties Road, Dundee

Drawing Title
ATS Site
4-Axle Ridgid Truck
Swept Path Analysis

Scale at A3: 1:1000

Role: Consultancy

Suitability: **For Information**

Arup Job No: **245510-02**

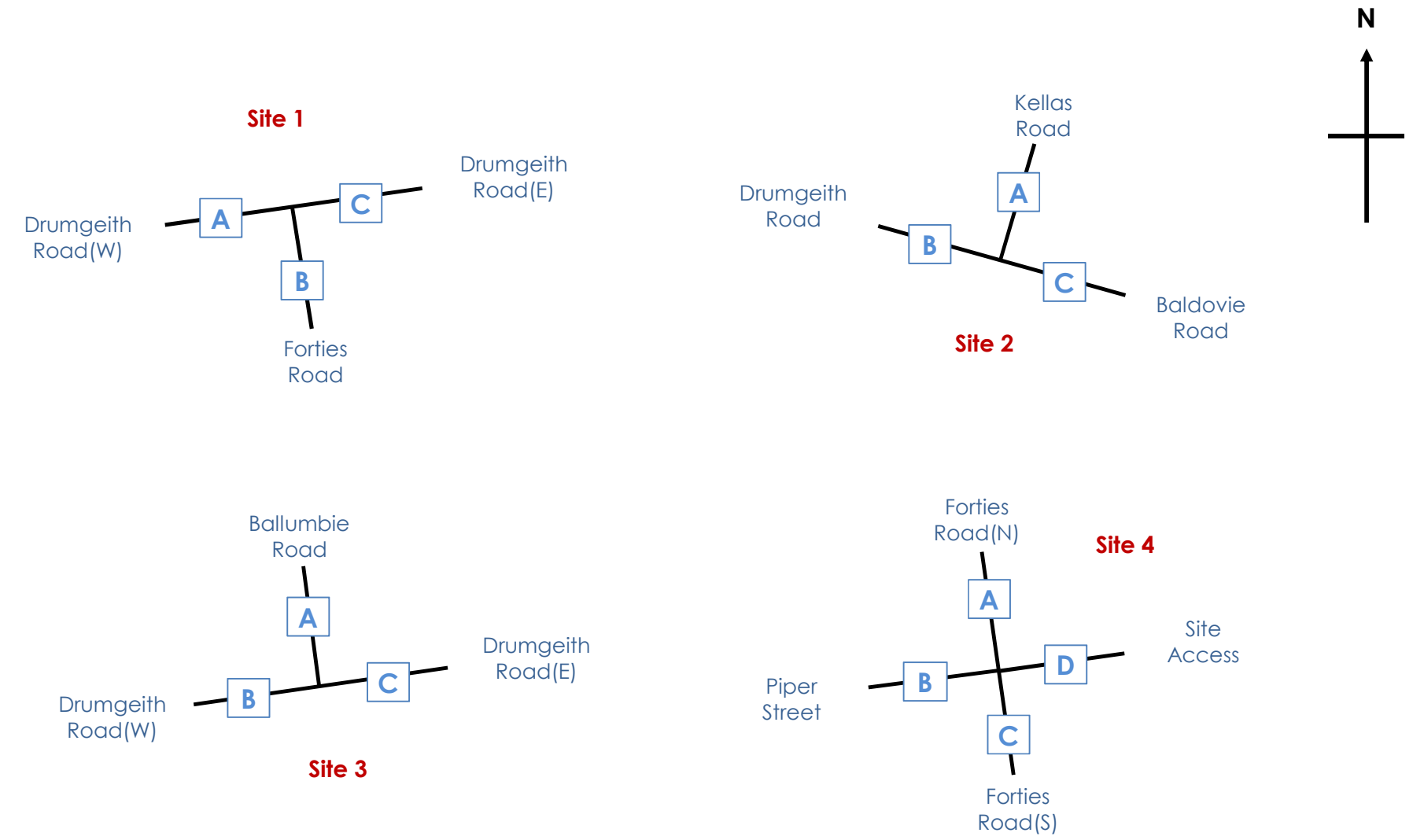
Rev: **I2**

Name: **ATR 09**

Do not scale

Appendix B

Observed Survey Data



NDC NATIONWIDE DATA COLLECTION	**Sites / Location:**	1 to 4 / Baldovie	**Project No:**	5950	**Drawing No:**	5950-01	**Drawn By:** CD
	Survey Date:	Tuesday 2nd February 2016	**Project Name:**	BALDOVIE			
	Survey Times:	07:00 to 10:00 and 16:00 to 19:00	**Drawing Title:**	Site Layout and Arm Labelling			

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	A to C - Drumgeith Road(W) to Drumgeith Road(E)				Veh. Total	A to B - Drumgeith Road(W) to Forties Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	9	0	0	1	10	4	0	0	0	4
07:05	12	1	0	0	13	5	0	0	0	5
07:10	12	0	0	0	12	10	0	0	0	10
07:15	18	0	1	1	20	6	0	0	0	6
07:20	20	1	0	0	21	5	0	0	0	5
07:25	19	0	0	1	20	6	0	0	0	6
07:30	33	0	0	0	33	5	2	0	0	7
07:35	35	0	2	0	37	8	1	0	0	9
07:40	33	1	0	1	35	4	0	0	0	4
07:45	40	1	0	0	41	7	1	0	0	8
07:50	34	2	1	1	38	7	0	1	0	8
07:55	34	0	0	1	35	7	1	0	0	8
08:00	18	1	0	1	20	3	0	0	0	3
08:05	28	1	1	1	31	4	0	0	0	4
08:10	37	4	2	2	45	3	0	0	0	3
08:15	41	3	0	0	44	4	0	0	0	4
08:20	37	2	0	0	39	3	0	1	0	4
08:25	32	0	0	1	33	1	1	1	0	3
08:30	29	2	1	0	32	1	0	0	0	1
08:35	35	1	2	0	38	4	0	0	0	4
08:40	33	1	2	1	37	2	0	1	0	3
08:45	33	4	1	0	38	5	1	0	0	6
08:50	30	3	1	1	35	2	0	1	0	3
08:55	26	2	1	1	30	1	1	1	0	3
09:00	30	4	1	0	35	2	0	0	0	2
09:05	37	2	1	1	41	1	0	1	0	2
09:10	27	1	3	1	32	3	1	0	0	4
09:15	27	1	0	0	28	6	4	1	0	11
09:20	17	4	1	0	22	6	3	2	0	11
09:25	23	2	0	0	25	2	1	1	0	4
09:30	27	1	0	0	28	4	1	1	0	6
09:35	21	2	0	2	25	1	1	0	0	2
09:40	32	0	1	1	34	6	0	1	0	7
09:45	15	2	0	0	17	2	0	1	0	3
09:50	22	4	1	1	28	1	1	1	0	3
09:55	20	1	0	0	21	6	1	1	0	8
Total	976	54	23	20	1073	147	21	16	0	184

Peak Hour 07:30 to 08:30

07:30	33	0	0	0	33	5	2	0	0	7
07:35	35	0	2	0	37	8	1	0	0	9
07:40	33	1	0	1	35	4	0	0	0	4
07:45	40	1	0	0	41	7	1	0	0	8
07:50	34	2	1	1	38	7	0	1	0	8
07:55	34	0	0	1	35	7	1	0	0	8
08:00	18	1	0	1	20	3	0	0	0	3
08:05	28	1	1	1	31	4	0	0	0	4
08:10	37	4	2	2	45	3	0	0	0	3
08:15	41	3	0	0	44	4	0	0	0	4
08:20	37	2	0	0	39	3	0	1	0	4
08:25	32	0	0	1	33	1	1	1	0	3
Total	402	15	6	8	431	56	6	3	0	65

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	A to C - Drumgeith Road(W) to Drumgeith Road(E)				Veh. Total	A to B - Drumgeith Road(W) to Forties Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	42	3	1	1	47	2	1	0	0	3
16:05	46	1	1	0	48	2	0	0	0	2
16:10	49	1	0	0	50	0	0	0	0	0
16:15	46	1	1	1	49	2	0	0	0	2
16:20	56	0	1	0	57	2	0	1	0	3
16:25	49	1	0	1	51	2	1	0	0	3
16:30	46	3	1	0	50	2	0	0	0	2
16:35	50	1	1	1	53	1	0	0	0	1
16:40	67	0	2	0	69	1	1	0	0	2
16:45	74	2	0	0	76	3	0	0	0	3
16:50	55	1	2	1	59	2	0	0	0	2
16:55	62	4	0	0	66	2	0	1	0	3
17:00	60	0	0	1	61	1	0	0	0	1
17:05	80	1	1	0	82	0	1	1	0	2
17:10	70	1	1	0	72	0	0	0	0	0
17:15	67	0	0	1	68	0	0	0	0	0
17:20	67	1	0	0	68	0	0	0	0	0
17:25	88	0	1	1	90	0	0	0	0	0
17:30	65	0	1	0	66	1	0	0	0	1
17:35	60	1	0	0	61	0	0	0	0	0
17:40	68	1	1	1	71	0	0	0	0	0
17:45	63	2	0	0	65	1	0	0	0	1
17:50	58	0	0	1	59	0	0	0	0	0
17:55	78	0	1	0	79	1	0	0	0	1
18:00	58	0	0	0	58	0	0	0	0	0
18:05	55	0	1	0	56	0	0	0	0	0
18:10	76	0	0	2	78	0	0	0	0	0
18:15	58	0	0	0	58	0	0	0	0	0
18:20	46	0	1	1	48	0	0	0	0	0
18:25	51	0	0	0	51	0	0	0	0	0
18:30	50	0	0	1	51	0	0	0	0	0
18:35	47	0	0	0	47	0	1	0	0	1
18:40	42	0	0	0	42	0	0	0	0	0
18:45	33	0	0	1	34	0	0	0	0	0
18:50	33	0	1	0	34	0	0	0	0	0
18:55	37	0	1	0	38	0	0	0	0	0
Total	2052	25	20	15	2112	25	5	3	0	33

Peak Hour 16:30 to 17:30

16:30	46	3	1	0	50	2	0	0	0	2
16:35	50	1	1	1	53	1	0	0	0	1
16:40	67	0	2	0	69	1	1	0	0	2
16:45	74	2	0	0	76	3	0	0	0	3
16:50	55	1	2	1	59	2	0	0	0	2
16:55	62	4	0	0	66	2	0	1	0	3
17:00	60	0	0	1	61	1	0	0	0	1
17:05	80	1	1	0	82	0	1	1	0	2
17:10	70	1	1	0	72	0	0	0	0	0
17:15	67	0	0	1	68	0	0	0	0	0
17:20	67	1	0	0	68	0	0	0	0	0
17:25	88	0	1	1	90	0	0	0	0	0
Total	786	14	9	5	814	12	2	2	0	16

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	B to A - Forties Road to Drumgeith Road(W)				Veh. Total	B to C - Forties Road to Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	2	0	0	0	2	1	0	0	0	1
07:05	2	0	0	0	2	2	1	0	0	3
07:10	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	1	0	0	0	1
07:25	1	0	1	0	2	1	0	0	0	1
07:30	2	2	0	0	4	0	0	0	0	0
07:35	1	4	0	0	5	1	4	0	0	5
07:40	3	4	0	0	7	5	1	0	0	6
07:45	1	1	0	0	2	1	1	0	0	2
07:50	1	0	0	0	1	0	1	0	0	1
07:55	2	1	0	0	3	0	2	0	0	2
08:00	1	1	0	0	2	0	1	0	0	1
08:05	2	1	1	0	4	2	1	0	0	3
08:10	5	1	0	0	6	0	0	0	0	0
08:15	0	2	0	0	2	1	0	0	0	1
08:20	1	2	0	0	3	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0	0
08:30	1	0	1	0	2	4	0	0	0	4
08:35	1	1	1	0	3	0	1	0	0	1
08:40	0	1	0	0	1	1	2	0	0	3
08:45	0	0	1	0	1	1	0	0	0	1
08:50	2	0	0	0	2	0	0	0	0	0
08:55	1	0	1	0	2	1	0	0	0	1
09:00	4	1	0	0	5	0	0	0	0	0
09:05	6	2	1	0	9	2	1	0	0	3
09:10	1	0	1	0	2	2	0	1	0	3
09:15	2	0	1	0	3	3	1	0	0	4
09:20	5	0	0	0	5	2	1	0	0	3
09:25	2	1	1	0	4	5	0	0	0	5
09:30	1	1	0	0	2	2	0	0	0	2
09:35	4	1	2	0	7	3	1	0	0	4
09:40	4	1	1	0	6	2	1	0	0	3
09:45	3	0	2	0	5	2	0	0	0	2
09:50	5	1	0	0	6	2	0	0	0	2
09:55	8	2	0	0	10	3	0	0	0	3
Total	74	31	15	0	120	50	20	1	0	71

Peak Hour 07:30 to 08:30

07:30	2	2	0	0	4	0	0	0	0	0
07:35	1	4	0	0	5	1	4	0	0	5
07:40	3	4	0	0	7	5	1	0	0	6
07:45	1	1	0	0	2	1	1	0	0	2
07:50	1	0	0	0	1	0	1	0	0	1
07:55	2	1	0	0	3	0	2	0	0	2
08:00	1	1	0	0	2	0	1	0	0	1
08:05	2	1	1	0	4	2	1	0	0	3
08:10	5	1	0	0	6	0	0	0	0	0
08:15	0	2	0	0	2	1	0	0	0	1
08:20	1	2	0	0	3	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0	0
Total	19	19	1	0	39	10	11	0	0	21

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	B to A - Forties Road to Drumgeith Road(W)				Veh. Total	B to C - Forties Road to Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	6	0	0	0	6	4	0	0	0	4
16:05	7	1	1	0	9	2	0	0	0	2
16:10	2	0	0	0	2	2	3	0	0	5
16:15	6	1	0	0	7	3	0	0	0	3
16:20	3	0	0	0	3	1	1	0	0	2
16:25	3	0	0	0	3	0	0	1	0	1
16:30	10	0	0	0	10	2	0	0	0	2
16:35	8	0	0	0	8	2	0	0	0	2
16:40	6	0	0	0	6	2	0	0	0	2
16:45	6	0	0	0	6	0	0	0	0	0
16:50	4	1	0	0	5	0	0	0	0	0
16:55	2	1	1	0	4	1	0	0	0	1
17:00	8	0	0	0	8	2	1	0	0	3
17:05	8	0	0	0	8	1	1	0	0	2
17:10	4	0	0	0	4	0	0	0	0	0
17:15	2	0	0	0	2	0	0	0	0	0
17:20	0	0	0	0	0	3	0	0	0	3
17:25	2	0	0	0	2	2	0	0	0	2
17:30	0	0	0	0	0	1	0	0	0	1
17:35	1	0	1	0	2	0	0	0	0	0
17:40	1	0	1	0	2	0	0	0	0	0
17:45	1	2	0	0	3	2	0	0	0	2
17:50	7	0	0	0	7	0	0	0	0	0
17:55	1	0	0	0	1	1	0	0	0	1
18:00	3	0	0	0	3	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	2	0	0	0	2	0	0	0	0	0
18:15	3	0	0	0	3	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	1	0	0	0	1
18:40	0	0	0	0	0	0	0	0	0	0
18:45	1	0	0	0	1	0	0	0	0	0
18:50	2	0	0	0	2	0	0	0	0	0
18:55	3	0	0	0	3	0	0	0	0	0
Total	112	6	4	0	122	32	6	1	0	39

Peak Hour 16:30 to 17:30

16:30	10	0	0	0	10	2	0	0	0	2
16:35	8	0	0	0	8	2	0	0	0	2
16:40	6	0	0	0	6	2	0	0	0	2
16:45	6	0	0	0	6	0	0	0	0	0
16:50	4	1	0	0	5	0	0	0	0	0
16:55	2	1	1	0	4	1	0	0	0	1
17:00	8	0	0	0	8	2	1	0	0	3
17:05	8	0	0	0	8	1	1	0	0	2
17:10	4	0	0	0	4	0	0	0	0	0
17:15	2	0	0	0	2	0	0	0	0	0
17:20	0	0	0	0	0	3	0	0	0	3
17:25	2	0	0	0	2	2	0	0	0	2
Total	60	2	1	0	63	15	2	0	0	17

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	C to B - Drumgeith Road(E) to Forties Road				Veh. Total	C to A - Drumgeith Road(E) to Drumgeith Road(W)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	2	0	0	0	2	52	2	0	0	54
07:05	2	0	0	0	2	35	0	1	1	37
07:10	0	1	0	0	1	41	1	3	0	45
07:15	3	0	0	0	3	38	0	1	0	39
07:20	3	0	0	0	3	37	1	0	1	39
07:25	5	1	0	0	6	44	0	0	0	44
07:30	3	0	0	0	3	67	1	0	0	68
07:35	3	0	0	0	3	62	2	0	1	65
07:40	3	0	0	0	3	62	2	0	1	65
07:45	1	1	0	0	2	66	0	1	0	67
07:50	2	2	0	0	4	76	0	0	0	76
07:55	3	0	0	0	3	72	5	0	1	78
08:00	3	0	0	0	3	77	1	1	0	79
08:05	0	0	0	0	0	78	0	0	1	79
08:10	0	2	0	0	2	86	1	0	0	87
08:15	2	0	0	0	2	65	1	1	1	68
08:20	1	0	0	0	1	76	2	0	0	78
08:25	3	0	0	0	3	76	1	3	0	80
08:30	0	0	0	0	0	71	0	0	0	71
08:35	2	0	0	0	2	61	0	0	1	62
08:40	0	0	0	0	0	65	0	0	0	65
08:45	0	0	0	0	0	44	0	2	1	47
08:50	0	0	1	0	1	54	2	1	0	57
08:55	3	1	0	0	4	51	4	0	0	55
09:00	3	0	0	0	3	42	2	0	2	46
09:05	6	0	0	0	6	33	0	0	1	34
09:10	3	1	0	0	4	38	0	1	0	39
09:15	2	0	0	0	2	27	1	1	0	29
09:20	2	0	0	0	2	19	3	0	0	22
09:25	2	0	0	0	2	34	2	2	0	38
09:30	4	1	1	0	6	30	0	1	3	34
09:35	3	0	0	0	3	34	4	0	0	38
09:40	4	0	0	0	4	28	2	0	0	30
09:45	1	0	0	0	1	31	0	0	1	32
09:50	5	1	0	0	6	27	1	2	1	31
09:55	6	0	0	0	6	21	1	1	0	23
Total	85	11	2	0	98	1820	42	22	17	1901

Peak Hour 07:30 to 08:30

07:30	3	0	0	0	3	67	1	0	0	68
07:35	3	0	0	0	3	62	2	0	1	65
07:40	3	0	0	0	3	62	2	0	1	65
07:45	1	1	0	0	2	66	0	1	0	67
07:50	2	2	0	0	4	76	0	0	0	76
07:55	3	0	0	0	3	72	5	0	1	78
08:00	3	0	0	0	3	77	1	1	0	79
08:05	0	0	0	0	0	78	0	0	1	79
08:10	0	2	0	0	2	86	1	0	0	87
08:15	2	0	0	0	2	65	1	1	1	68
08:20	1	0	0	0	1	76	2	0	0	78
08:25	3	0	0	0	3	76	1	3	0	80
Total	24	5	0	0	29	863	16	6	5	890

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	C to B - Drumgeith Road(E) to Forties Road				Veh. Total	C to A - Drumgeith Road(E) to Drumgeith Road(W)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	2	0	1	0	3	29	0	1	1	31
16:05	3	2	1	0	6	39	0	0	0	39
16:10	2	0	0	0	2	40	1	0	1	42
16:15	2	0	0	0	2	35	2	2	0	39
16:20	3	0	0	0	3	35	1	0	0	36
16:25	1	0	0	0	1	22	0	0	3	25
16:30	1	0	0	0	1	32	2	0	0	34
16:35	1	0	0	0	1	37	0	0	2	39
16:40	0	0	0	0	0	32	0	1	0	33
16:45	0	0	0	0	0	26	1	1	0	28
16:50	0	0	0	0	0	34	1	0	1	36
16:55	1	0	0	0	1	38	0	0	1	39
17:00	0	0	0	0	0	39	0	0	0	39
17:05	0	0	0	0	0	45	0	0	0	45
17:10	0	0	0	0	0	38	2	0	0	40
17:15	0	0	0	0	0	31	1	0	1	33
17:20	0	0	0	0	0	26	0	1	0	27
17:25	0	0	0	0	0	21	1	0	0	22
17:30	0	0	0	0	0	28	1	1	1	31
17:35	0	0	0	0	0	35	1	0	0	36
17:40	1	1	0	0	2	27	1	0	1	29
17:45	0	0	0	0	0	25	0	1	0	26
17:50	0	0	0	0	0	20	0	0	0	20
17:55	0	0	0	0	0	26	0	0	0	26
18:00	0	0	0	0	0	34	0	0	1	35
18:05	0	0	0	0	0	33	0	0	1	34
18:10	0	0	0	0	0	25	0	0	0	25
18:15	0	0	0	0	0	25	0	0	1	26
18:20	0	0	0	0	0	43	0	0	0	43
18:25	0	0	0	0	0	26	0	0	1	27
18:30	0	0	0	0	0	34	0	0	0	34
18:35	1	0	0	0	1	26	1	0	1	28
18:40	0	0	0	0	0	27	0	0	0	27
18:45	1	0	0	0	1	32	0	0		32
18:50	0	0	0	0	0	19	0	0	0	19
18:55	0	0	0	0	0	33	0	0	1	34
Total	19	3	2	0	24	1117	16	8	18	1159

Peak Hour 16:30 to 17:30

16:30	1	0	0	0	1	32	2	0	0	34
16:35	1	0	0	0	1	37	0	0	2	39
16:40	0	0	0	0	0	32	0	1	0	33
16:45	0	0	0	0	0	26	1	1	0	28
16:50	0	0	0	0	0	34	1	0	1	36
16:55	1	0	0	0	1	38	0	0	1	39
17:00	0	0	0	0	0	39	0	0	0	39
17:05	0	0	0	0	0	45	0	0	0	45
17:10	0	0	0	0	0	38	2	0	0	40
17:15	0	0	0	0	0	31	1	0	1	33
17:20	0	0	0	0	0	26	0	1	0	27
17:25	0	0	0	0	0	21	1	0	0	22
Total	3	0	0	0	3	399	8	3	5	415

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm A - Drumgeith Road(W)				Veh. Total	From Arm A - Drumgeith Road(W)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	54	2	0	0	56	13	0	0	1	14
07:05	37	0	1	1	39	17	1	0	0	18
07:10	41	1	3	0	45	22	0	0	0	22
07:15	38	0	1	0	39	24	0	1	1	26
07:20	37	1	0	1	39	25	1	0	0	26
07:25	45	0	1	0	46	25	0	0	1	26
07:30	69	3	0	0	72	38	2	0	0	40
07:35	63	6	0	1	70	43	1	2	0	46
07:40	65	6	0	1	72	37	1	0	1	39
07:45	67	1	1	0	69	47	2	0	0	49
07:50	77	0	0	0	77	41	2	2	1	46
07:55	74	6	0	1	81	41	1	0	1	43
08:00	78	2	1	0	81	21	1	0	1	23
08:05	80	1	1	1	83	32	1	1	1	35
08:10	91	2	0	0	93	40	4	2	2	48
08:15	65	3	1	1	70	45	3	0	0	48
08:20	77	4	0	0	81	40	2	1	0	43
08:25	76	1	3	0	80	33	1	1	1	36
08:30	72	0	1	0	73	30	2	1	0	33
08:35	62	1	1	1	65	39	1	2	0	42
08:40	65	1	0	0	66	35	1	3	1	40
08:45	44	0	3	1	48	38	5	1	0	44
08:50	56	2	1	0	59	32	3	2	1	38
08:55	52	4	1	0	57	27	3	2	1	33
09:00	46	3	0	2	51	32	4	1	0	37
09:05	39	2	1	1	43	38	2	2	1	43
09:10	39	0	2	0	41	30	2	3	1	36
09:15	29	1	2	0	32	33	5	1	0	39
09:20	24	3	0	0	27	23	7	3	0	33
09:25	36	3	3	0	42	25	3	1	0	29
09:30	31	1	1	3	36	31	2	1	0	34
09:35	38	5	2	0	45	22	3	0	2	27
09:40	32	3	1	0	36	38	0	2	1	41
09:45	34	0	2	1	37	17	2	1	0	20
09:50	32	2	2	1	37	23	5	2	1	31
09:55	29	3	1	0	33	26	2	1	0	29
Total	1894	73	37	17	2021	1123	75	39	20	1257

Peak Hour 07:30 to 08:30

07:30	69	3	0	0	72	38	2	0	0	40
07:35	63	6	0	1	70	43	1	2	0	46
07:40	65	6	0	1	72	37	1	0	1	39
07:45	67	1	1	0	69	47	2	0	0	49
07:50	77	0	0	0	77	41	2	2	1	46
07:55	74	6	0	1	81	41	1	0	1	43
08:00	78	2	1	0	81	21	1	0	1	23
08:05	80	1	1	1	83	32	1	1	1	35
08:10	91	2	0	0	93	40	4	2	2	48
08:15	65	3	1	1	70	45	3	0	0	48
08:20	77	4	0	0	81	40	2	1	0	43
08:25	76	1	3	0	80	33	1	1	1	36
Total	882	35	7	5	929	458	21	9	8	496

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm A - Drumgeith Road(W)				Veh. Total	From Arm A - Drumgeith Road(W)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	35	0	1	1	37	44	4	1	1	50
16:05	46	1	1	0	48	48	1	1	0	50
16:10	42	1	0	1	44	49	1	0	0	50
16:15	41	3	2	0	46	48	1	1	1	51
16:20	38	1	0	0	39	58	0	2	0	60
16:25	25	0	0	3	28	51	2	0	1	54
16:30	42	2	0	0	44	48	3	1	0	52
16:35	45	0	0	2	47	51	1	1	1	54
16:40	38	0	1	0	39	68	1	2	0	71
16:45	32	1	1	0	34	77	2	0	0	79
16:50	38	2	0	1	41	57	1	2	1	61
16:55	40	1	1	1	43	64	4	1	0	69
17:00	47	0	0	0	47	61	0	0	1	62
17:05	53	0	0	0	53	80	2	2	0	84
17:10	42	2	0	0	44	70	1	1	0	72
17:15	33	1	0	1	35	67	0	0	1	68
17:20	26	0	1	0	27	67	1	0	0	68
17:25	23	1	0	0	24	88	0	1	1	90
17:30	28	1	1	1	31	66	0	1	0	67
17:35	36	1	1	0	38	60	1	0	0	61
17:40	28	1	1	1	31	68	1	1	1	71
17:45	26	2	1	0	29	64	2	0	0	66
17:50	27	0	0	0	27	58	0	0	1	59
17:55	27	0	0	0	27	79	0	1	0	80
18:00	37	0	0	1	38	58	0	0	0	58
18:05	33	0	0	1	34	55	0	1	0	56
18:10	27	0	0	0	27	76	0	0	2	78
18:15	28	0	0	1	29	58	0	0	0	58
18:20	43	0	0	0	43	46	0	1	1	48
18:25	26	0	0	1	27	51	0	0	0	51
18:30	34	0	0	0	34	50	0	0	1	51
18:35	26	1	0	1	28	47	1	0	0	48
18:40	27	0	0	0	27	42	0	0	0	42
18:45	33	0	0	0	33	33	0	0	1	34
18:50	21	0	0	0	21	33	0	1	0	34
18:55	36	0	0	1	37	37	0	1	0	38
Total	1229	22	12	18	1281	2077	30	23	15	2145

Peak Hour 16:30 to 17:30

16:30	42	2	0	0	44	48	3	1	0	52
16:35	45	0	0	2	47	51	1	1	1	54
16:40	38	0	1	0	39	68	1	2	0	71
16:45	32	1	1	0	34	77	2	0	0	79
16:50	38	2	0	1	41	57	1	2	1	61
16:55	40	1	1	1	43	64	4	1	0	69
17:00	47	0	0	0	47	61	0	0	1	62
17:05	53	0	0	0	53	80	2	2	0	84
17:10	42	2	0	0	44	70	1	1	0	72
17:15	33	1	0	1	35	67	0	0	1	68
17:20	26	0	1	0	27	67	1	0	0	68
17:25	23	1	0	0	24	88	0	1	1	90
Total	459	10	4	5	478	798	16	11	5	830

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm B - Forties Road				Veh. Total	From Arm B - Forties Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	6	0	0	0	6	3	0	0	0	3
07:05	7	0	0	0	7	4	1	0	0	5
07:10	10	1	0	0	11	0	0	0	0	0
07:15	9	0	0	0	9	0	0	0	0	0
07:20	8	0	0	0	8	1	0	0	0	1
07:25	11	1	0	0	12	2	0	1	0	3
07:30	8	2	0	0	10	2	2	0	0	4
07:35	11	1	0	0	12	2	8	0	0	10
07:40	7	0	0	0	7	8	5	0	0	13
07:45	8	2	0	0	10	2	2	0	0	4
07:50	9	2	1	0	12	1	1	0	0	2
07:55	10	1	0	0	11	2	3	0	0	5
08:00	6	0	0	0	6	1	2	0	0	3
08:05	4	0	0	0	4	4	2	1	0	7
08:10	3	2	0	0	5	5	1	0	0	6
08:15	6	0	0	0	6	1	2	0	0	3
08:20	4	0	1	0	5	1	2	0	0	3
08:25	4	1	1	0	6	0	0	0	0	0
08:30	1	0	0	0	1	5	0	1	0	6
08:35	6	0	0	0	6	1	2	1	0	4
08:40	2	0	1	0	3	1	3	0	0	4
08:45	5	1	0	0	6	1	0	1	0	2
08:50	2	0	2	0	4	2	0	0	0	2
08:55	4	2	1	0	7	2	0	1	0	3
09:00	5	0	0	0	5	4	1	0	0	5
09:05	7	0	1	0	8	8	3	1	0	12
09:10	6	2	0	0	8	3	0	2	0	5
09:15	8	4	1	0	13	5	1	1	0	7
09:20	8	3	2	0	13	7	1	0	0	8
09:25	4	1	1	0	6	7	1	1	0	9
09:30	8	2	2	0	12	3	1	0	0	4
09:35	4	1	0	0	5	7	2	2	0	11
09:40	10	0	1	0	11	6	2	1	0	9
09:45	3	0	1	0	4	5	0	2	0	7
09:50	6	2	1	0	9	7	1	0	0	8
09:55	12	1	1	0	14	11	2	0	0	13
Total	232	32	18	0	282	124	51	16	0	191

Peak Hour 07:30 to 08:30

07:30	8	2	0	0	10	2	2	0	0	4
07:35	11	1	0	0	12	2	8	0	0	10
07:40	7	0	0	0	7	8	5	0	0	13
07:45	8	2	0	0	10	2	2	0	0	4
07:50	9	2	1	0	12	1	1	0	0	2
07:55	10	1	0	0	11	2	3	0	0	5
08:00	6	0	0	0	6	1	2	0	0	3
08:05	4	0	0	0	4	4	2	1	0	7
08:10	3	2	0	0	5	5	1	0	0	6
08:15	6	0	0	0	6	1	2	0	0	3
08:20	4	0	1	0	5	1	2	0	0	3
08:25	4	1	1	0	6	0	0	0	0	0
Total	80	11	3	0	94	29	30	1	0	60

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm B - Forties Road				Veh. Total	From Arm B - Forties Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	4	1	1	0	6	10	0	0	0	10
16:05	5	2	1	0	8	9	1	1	0	11
16:10	2	0	0	0	2	4	3	0	0	7
16:15	4	0	0	0	4	9	1	0	0	10
16:20	5	0	1	0	6	4	1	0	0	5
16:25	3	1	0	0	4	3	0	1	0	4
16:30	3	0	0	0	3	12	0	0	0	12
16:35	2	0	0	0	2	10	0	0	0	10
16:40	1	1	0	0	2	8	0	0	0	8
16:45	3	0	0	0	3	6	0	0	0	6
16:50	2	0	0	0	2	4	1	0	0	5
16:55	3	0	1	0	4	3	1	1	0	5
17:00	1	0	0	0	1	10	1	0	0	11
17:05	0	1	1	0	2	9	1	0	0	10
17:10	0	0	0	0	0	4	0	0	0	4
17:15	0	0	0	0	0	2	0	0	0	2
17:20	0	0	0	0	0	3	0	0	0	3
17:25	0	0	0	0	0	4	0	0	0	4
17:30	1	0	0	0	1	1	0	0	0	1
17:35	0	0	0	0	0	1	0	1	0	2
17:40	1	1	0	0	2	1	0	1	0	2
17:45	1	0	0	0	1	3	2	0	0	5
17:50	0	0	0	0	0	7	0	0	0	7
17:55	1	0	0	0	1	2	0	0	0	2
18:00	0	0	0	0	0	3	0	0	0	3
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	2	0	0	0	2
18:15	0	0	0	0	0	3	0	0	0	3
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	1	1	0	0	2	1	0	0	0	1
18:40	0	0	0	0	0	0	0	0	0	0
18:45	1	0	0	0	1	1	0	0	0	1
18:50	0	0	0	0	0	2	0	0	0	2
18:55	0	0	0	0	0	3	0	0	0	3
Total	44	8	5	0	57	144	12	5	0	161

Peak Hour 16:30 to 17:30

16:30	3	0	0	0	3	12	0	0	0	12
16:35	2	0	0	0	2	10	0	0	0	10
16:40	1	1	0	0	2	8	0	0	0	8
16:45	3	0	0	0	3	6	0	0	0	6
16:50	2	0	0	0	2	4	1	0	0	5
16:55	3	0	1	0	4	3	1	1	0	5
17:00	1	0	0	0	1	10	1	0	0	11
17:05	0	1	1	0	2	9	1	0	0	10
17:10	0	0	0	0	0	4	0	0	0	4
17:15	0	0	0	0	0	2	0	0	0	2
17:20	0	0	0	0	0	3	0	0	0	3
17:25	0	0	0	0	0	4	0	0	0	4
Total	15	2	2	0	19	75	4	1	0	80

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm C - Drumgeith Road(E)				Veh. Total	From Arm C - Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	10	0	0	1	11	54	2	0	0	56
07:05	14	2	0	0	16	37	0	1	1	39
07:10	12	0	0	0	12	41	2	3	0	46
07:15	18	0	1	1	20	41	0	1	0	42
07:20	21	1	0	0	22	40	1	0	1	42
07:25	20	0	0	1	21	49	1	0	0	50
07:30	33	0	0	0	33	70	1	0	0	71
07:35	36	4	2	0	42	65	2	0	1	68
07:40	38	2	0	1	41	65	2	0	1	68
07:45	41	2	0	0	43	67	1	1	0	69
07:50	34	3	1	1	39	78	2	0	0	80
07:55	34	2	0	1	37	75	5	0	1	81
08:00	18	2	0	1	21	80	1	1	0	82
08:05	30	2	1	1	34	78	0	0	1	79
08:10	37	4	2	2	45	86	3	0	0	89
08:15	42	3	0	0	45	67	1	1	1	70
08:20	37	2	0	0	39	77	2	0	0	79
08:25	32	0	0	1	33	79	1	3	0	83
08:30	33	2	1	0	36	71	0	0	0	71
08:35	35	2	2	0	39	63	0	0	1	64
08:40	34	3	2	1	40	65	0	0	0	65
08:45	34	4	1	0	39	44	0	2	1	47
08:50	30	3	1	1	35	54	2	2	0	58
08:55	27	2	1	1	31	54	5	0	0	59
09:00	30	4	1	0	35	45	2	0	2	49
09:05	39	3	1	1	44	39	0	0	1	40
09:10	29	1	4	1	35	41	1	1	0	43
09:15	30	2	0	0	32	29	1	1	0	31
09:20	19	5	1	0	25	21	3	0	0	24
09:25	28	2	0	0	30	36	2	2	0	40
09:30	29	1	0	0	30	34	1	2	3	40
09:35	24	3	0	2	29	37	4	0	0	41
09:40	34	1	1	1	37	32	2	0	0	34
09:45	17	2	0	0	19	32	0	0	1	33
09:50	24	4	1	1	30	32	2	2	1	37
09:55	23	1	0	0	24	27	1	1	0	29
Total	1026	74	24	20	1144	1905	53	24	17	1999

Peak Hour	07:30	to	08:30							
07:30	33	0	0	0	33	70	1	0	0	71
07:35	36	4	2	0	42	65	2	0	1	68
07:40	38	2	0	1	41	65	2	0	1	68
07:45	41	2	0	0	43	67	1	1	0	69
07:50	34	3	1	1	39	78	2	0	0	80
07:55	34	2	0	1	37	75	5	0	1	81
08:00	18	2	0	1	21	80	1	1	0	82
08:05	30	2	1	1	34	78	0	0	1	79
08:10	37	4	2	2	45	86	3	0	0	89
08:15	42	3	0	0	45	67	1	1	1	70
08:20	37	2	0	0	39	77	2	0	0	79
08:25	32	0	0	1	33	79	1	3	0	83
Total	412	26	6	8	452	887	21	6	5	919

Site No. 1
Location Drumgeith Road(W) / Forties Road / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm C - Drumgeith Road(E)				Veh. Total	From Arm C - Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	46	3	1	1	51	31	0	2	1	34
16:05	48	1	1	0	50	42	2	1	0	45
16:10	51	4	0	0	55	42	1	0	1	44
16:15	49	1	1	1	52	37	2	2	0	41
16:20	57	1	1	0	59	38	1	0	0	39
16:25	49	1	1	1	52	23	0	0	3	26
16:30	48	3	1	0	52	33	2	0	0	35
16:35	52	1	1	1	55	38	0	0	2	40
16:40	69	0	2	0	71	32	0	1	0	33
16:45	74	2	0	0	76	26	1	1	0	28
16:50	55	1	2	1	59	34	1	0	1	36
16:55	63	4	0	0	67	39	0	0	1	40
17:00	62	1	0	1	64	39	0	0	0	39
17:05	81	2	1	0	84	45	0	0	0	45
17:10	70	1	1	0	72	38	2	0	0	40
17:15	67	0	0	1	68	31	1	0	1	33
17:20	70	1	0	0	71	26	0	1	0	27
17:25	90	0	1	1	92	21	1	0	0	22
17:30	66	0	1	0	67	28	1	1	1	31
17:35	60	1	0	0	61	35	1	0	0	36
17:40	68	1	1	1	71	28	2	0	1	31
17:45	65	2	0	0	67	25	0	1	0	26
17:50	58	0	0	1	59	20	0	0	0	20
17:55	79	0	1	0	80	26	0	0	0	26
18:00	58	0	0	0	58	34	0	0	1	35
18:05	55	0	1	0	56	33	0	0	1	34
18:10	76	0	0	2	78	25	0	0	0	25
18:15	58	0	0	0	58	25	0	0	1	26
18:20	46	0	1	1	48	43	0	0	0	43
18:25	51	0	0	0	51	26	0	0	1	27
18:30	50	0	0	1	51	34	0	0	0	34
18:35	48	0	0	0	48	27	1	0	1	29
18:40	42	0	0	0	42	27	0	0	0	27
18:45	33	0	0	1	34	33	0	0	0	33
18:50	33	0	1	0	34	19	0	0	0	19
18:55	37	0	1	0	38	33	0	0	1	34
Total	2084	31	21	15	2151	1136	19	10	18	1183

Peak Hour 16:30 to 17:30

16:30	48	3	1	0	52	33	2	0	0	35
16:35	52	1	1	1	55	38	0	0	2	40
16:40	69	0	2	0	71	32	0	1	0	33
16:45	74	2	0	0	76	26	1	1	0	28
16:50	55	1	2	1	59	34	1	0	1	36
16:55	63	4	0	0	67	39	0	0	1	40
17:00	62	1	0	1	64	39	0	0	0	39
17:05	81	2	1	0	84	45	0	0	0	45
17:10	70	1	1	0	72	38	2	0	0	40
17:15	67	0	0	1	68	31	1	0	1	33
17:20	70	1	0	0	71	26	0	1	0	27
17:25	90	0	1	1	92	21	1	0	0	22
Total	801	16	9	5	831	402	8	3	5	418

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	A to C - Kellas Road to Baldovie Road				Veh. Total	A to B - Kellas Road to Drumgeith Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	4	0	0	0	4	15	0	0	0	15
07:05	7	0	2	0	9	12	0	0	0	12
07:10	3	0	0	0	3	15	0	2	0	17
07:15	2	0	0	0	2	15	0	0	0	15
07:20	6	0	0	0	6	14	0	0	0	14
07:25	5	0	1	0	6	22	1	0	0	23
07:30	5	0	0	0	5	36	0	0	0	36
07:35	8	0	0	0	8	29	2	0	0	31
07:40	8	1	0	0	9	38	1	0	0	39
07:45	9	0	0	0	9	39	0	0	0	39
07:50	22	1	0	0	23	38	2	0	0	40
07:55	14	0	0	0	14	36	3	0	0	39
08:00	12	0	0	1	13	51	0	1	0	52
08:05	18	0	0	0	18	51	0	0	0	51
08:10	12	2	0	0	14	39	0	0	0	39
08:15	14	0	0	0	14	37	1	0	0	38
08:20	15	0	0	0	15	39	1	0	0	40
08:25	17	0	0	0	17	42	0	0	0	42
08:30	17	0	1	0	18	26	0	0	0	26
08:35	12	0	0	0	12	33	0	0	0	33
08:40	16	0	0	0	16	24	0	0	0	24
08:45	15	0	0	0	15	21	0	0	0	21
08:50	15	1	0	0	16	30	3	0	0	33
08:55	20	1	0	1	22	32	2	0	0	34
09:00	6	0	0	0	6	19	0	0	1	20
09:05	6	2	0	0	8	18	1	0	0	19
09:10	9	0	0	0	9	19	0	0	0	19
09:15	6	0	0	0	6	10	1	0	0	11
09:20	7	0	0	0	7	11	1	0	0	12
09:25	8	0	0	0	8	16	0	2	0	18
09:30	5	0	1	0	6	11	1	0	0	12
09:35	11	0	0	0	11	16	1	0	0	17
09:40	14	1	0	0	15	10	0	0	0	10
09:45	11	1	0	0	12	24	0	0	0	24
09:50	8	0	0	0	8	13	1	0	0	14
09:55	4	1	0	0	5	10	0	1	0	11
Total	371	11	5	2	389	911	22	6	1	940
Peak Hour	07:45	to	08:45							
07:45	9	0	0	0	9	39	0	0	0	39
07:50	22	1	0	0	23	38	2	0	0	40
07:55	14	0	0	0	14	36	3	0	0	39
08:00	12	0	0	1	13	51	0	1	0	52
08:05	18	0	0	0	18	51	0	0	0	51
08:10	12	2	0	0	14	39	0	0	0	39
08:15	14	0	0	0	14	37	1	0	0	38
08:20	15	0	0	0	15	39	1	0	0	40
08:25	17	0	0	0	17	42	0	0	0	42
08:30	17	0	1	0	18	26	0	0	0	26
08:35	12	0	0	0	12	33	0	0	0	33
08:40	16	0	0	0	16	24	0	0	0	24
Total	178	3	1	1	183	455	7	1	0	463

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	A to C - Kellas Road to Baldovie Road				Veh. Total	A to B - Kellas Road to Drumgeith Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	6	0	0	0	6	8	0	1	1	10
16:05	5	0	0	0	5	10	0	0	0	10
16:10	16	1	0	0	17	9	0	0	0	9
16:15	11	0	0	0	11	16	0	0	0	16
16:20	7	0	0	0	7	8	0	0	0	8
16:25	7	0	0	0	7	11	0	0	1	12
16:30	11	1	0	0	12	6	0	0	1	7
16:35	13	0	0	0	13	11	0	0	0	11
16:40	13	1	0	0	14	11	0	2	0	13
16:45	11	0	0	0	11	8	1	0	0	9
16:50	2	1	0	0	3	14	0	0	0	14
16:55	9	0	0	0	9	14	0	0	0	14
17:00	14	0	0	0	14	9	0	0	0	9
17:05	6	0	0	0	6	7	0	0	0	7
17:10	14	1	0	0	15	12	1	0	0	13
17:15	15	0	0	0	15	10	0	0	0	10
17:20	13	1	0	0	14	14	0	0	0	14
17:25	14	0	0	0	14	6	0	1	0	7
17:30	11	0	0	0	11	12	0	0	0	12
17:35	8	0	0	0	8	12	1	0	0	13
17:40	11	0	0	0	11	8	0	0	0	8
17:45	9	0	0	0	9	13	0	0	0	13
17:50	11	0	0	0	11	4	0	0	0	4
17:55	8	0	0	0	8	7	0	0	0	7
18:00	7	0	0	0	7	17	0	0	0	17
18:05	5	0	0	0	5	11	0	0	0	11
18:10	5	0	0	0	5	12	0	0	0	12
18:15	6	0	0	0	6	9	0	0	0	9
18:20	7	0	0	0	7	17	0	0	0	17
18:25	4	0	0	0	4	8	0	0	0	8
18:30	6	0	0	0	6	7	0	0	0	7
18:35	7	0	0	0	7	7	0	0	0	7
18:40	9	0	0	0	9	14	0	0	0	14
18:45	10	0	0	0	10	8	0	0	0	8
18:50	11	0	0	0	11	8	0	0	0	8
18:55	6	0	1	0	7	9	0	0	0	9
Total	328	6	1	0	335	367	3	4	3	377
Peak Hour	16:35	to	17:35							
16:35	13	0	0	0	13	11	0	0	0	11
16:40	13	1	0	0	14	11	0	2	0	13
16:45	11	0	0	0	11	8	1	0	0	9
16:50	2	1	0	0	3	14	0	0	0	14
16:55	9	0	0	0	9	14	0	0	0	14
17:00	14	0	0	0	14	9	0	0	0	9
17:05	6	0	0	0	6	7	0	0	0	7
17:10	14	1	0	0	15	12	1	0	0	13
17:15	15	0	0	0	15	10	0	0	0	10
17:20	13	1	0	0	14	14	0	0	0	14
17:25	14	0	0	0	14	6	0	1	0	7
17:30	11	0	0	0	11	12	0	0	0	12
Total	135	4	0	0	139	128	2	3	0	133

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Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	B to A - Drumgeith Road to Kellas Road				Veh. Total	B to C - Drumgeith Road to Baldovie Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	1	0	0	0	1	12	0	0	0	12
07:05	2	0	0	0	2	20	2	0	0	22
07:10	3	0	0	0	3	14	1	0	0	15
07:15	4	0	0	0	4	21	0	0	0	21
07:20	2	1	0	0	3	21	0	1	0	22
07:25	3	0	0	0	3	16	0	0	0	16
07:30	8	0	0	0	8	26	0	0	0	26
07:35	9	0	1	0	10	38	2	1	0	41
07:40	4	0	0	0	4	36	3	0	0	39
07:45	5	2	0	0	7	52	0	0	0	52
07:50	8	0	1	0	9	53	2	0	0	55
07:55	7	0	0	1	8	37	1	0	0	38
08:00	4	0	0	0	4	30	2	0	0	32
08:05	5	2	0	1	8	24	0	2	0	26
08:10	13	0	1	0	14	39	1	1	0	41
08:15	17	1	0	0	18	39	3	0	0	42
08:20	6	1	0	0	7	43	1	0	0	44
08:25	2	0	0	0	2	36	1	0	0	37
08:30	4	1	0	0	5	54	1	1	0	56
08:35	5	1	0	0	6	32	1	2	0	35
08:40	11	1	0	0	12	44	1	1	0	46
08:45	7	1	0	0	8	27	4	1	0	32
08:50	5	1	1	0	7	30	1	0	0	31
08:55	7	0	0	0	7	21	3	2	0	26
09:00	6	2	0	0	8	25	1	1	0	27
09:05	9	0	0	0	9	22	2	1	0	25
09:10	7	0	0	0	7	16	1	3	0	20
09:15	8	1	0	0	9	22	2	1	0	25
09:20	8	2	1	0	11	20	3	0	0	23
09:25	7	1	0	0	8	22	3	0	0	25
09:30	8	0	0	0	8	13	1	0	0	14
09:35	6	0	0	0	6	22	3	0	0	25
09:40	11	0	1	0	12	14	1	0	0	15
09:45	6	0	0	0	6	12	2	0	0	14
09:50	3	2	0	0	5	12	2	0	0	14
09:55	2	0	0	0	2	12	2	1	0	15
Total	223	20	6	2	251	977	53	19	0	1049
Peak Hour	07:45	to	08:45							
07:45	5	2	0	0	7	52	0	0	0	52
07:50	8	0	1	0	9	53	2	0	0	55
07:55	7	0	0	1	8	37	1	0	0	38
08:00	4	0	0	0	4	30	2	0	0	32
08:05	5	2	0	1	8	24	0	2	0	26
08:10	13	0	1	0	14	39	1	1	0	41
08:15	17	1	0	0	18	39	3	0	0	42
08:20	6	1	0	0	7	43	1	0	0	44
08:25	2	0	0	0	2	36	1	0	0	37
08:30	4	1	0	0	5	54	1	1	0	56
08:35	5	1	0	0	6	32	1	2	0	35
08:40	11	1	0	0	12	44	1	1	0	46
Total	87	9	2	2	100	483	14	7	0	504

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	B to A - Drumgeith Road to Kellas Road				Veh. Total	B to C - Drumgeith Road to Baldovie Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	13	0	0	0	13	31	1	1	0	33
16:05	16	0	1	0	17	28	3	0	0	31
16:10	12	2	0	0	14	41	2	0	0	43
16:15	21	0	1	0	22	32	0	0	0	32
16:20	28	0	0	0	28	26	1	0	0	27
16:25	15	0	0	0	15	26	1	2	0	29
16:30	17	3	0	0	20	27	1	0	0	28
16:35	24	0	1	0	25	20	1	1	0	22
16:40	27	1	0	0	28	33	0	1	0	34
16:45	20	2	1	0	23	48	0	0	0	48
16:50	28	1	0	0	29	26	0	2	0	28
16:55	24	2	0	0	26	25	2	0	0	27
17:00	24	1	0	0	25	21	1	0	0	22
17:05	32	2	0	0	34	46	0	1	0	47
17:10	32	0	0	0	32	44	0	1	0	45
17:15	31	0	0	0	31	34	0	0	0	34
17:20	25	1	0	0	26	33	1	0	0	34
17:25	40	0	0	0	40	39	0	1	0	40
17:30	26	0	0	0	26	32	0	1	0	33
17:35	25	0	0	0	25	28	1	0	0	29
17:40	21	1	0	0	22	38	0	0	0	38
17:45	16	1	0	0	17	35	1	1	0	37
17:50	24	0	0	0	24	18	0	0	0	18
17:55	21	0	1	0	22	25	0	0	0	25
18:00	30	0	0	0	30	23	0	0	0	23
18:05	21	0	0	0	21	37	0	1	0	38
18:10	28	0	0	0	28	41	0	0	0	41
18:15	17	0	0	0	17	33	0	0	0	33
18:20	20	0	0	0	20	23	0	0	0	23
18:25	16	0	1	0	17	29	0	1	0	30
18:30	12	0	0	0	12	34	0	0	0	34
18:35	11	0	0	0	11	37	0	0	0	37
18:40	11	0	0	0	11	26	0	0	0	26
18:45	9	0	0	0	9	22	1	0	0	23
18:50	7	0	0	0	7	24	0	0	0	24
18:55	11	0	2	0	13	22	0	0	0	22
Total	755	17	8	0	780	1107	17	14	0	1138
Peak Hour	16:35	to	17:35							
16:35	24	0	1	0	25	20	1	1	0	22
16:40	27	1	0	0	28	33	0	1	0	34
16:45	20	2	1	0	23	48	0	0	0	48
16:50	28	1	0	0	29	26	0	2	0	28
16:55	24	2	0	0	26	25	2	0	0	27
17:00	24	1	0	0	25	21	1	0	0	22
17:05	32	2	0	0	34	46	0	1	0	47
17:10	32	0	0	0	32	44	0	1	0	45
17:15	31	0	0	0	31	34	0	0	0	34
17:20	25	1	0	0	26	33	1	0	0	34
17:25	40	0	0	0	40	39	0	1	0	40
17:30	26	0	0	0	26	32	0	1	0	33
Total	333	10	2	0	345	401	5	8	0	414

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	C to B - Baldovie Road to Drumgeith Road				Veh. Total	C to A - Baldovie Road to Kellas Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	38	2	0	0	40	5	0	0	0	5
07:05	16	0	1	0	17	2	0	0	0	2
07:10	15	5	1	0	21	3	0	0	0	3
07:15	23	0	1	0	24	5	0	0	0	5
07:20	12	1	0	0	13	4	0	0	0	4
07:25	20	0	1	0	21	4	0	0	0	4
07:30	15	1	0	0	16	1	0	0	1	2
07:35	14	0	0	0	14	4	0	0	0	4
07:40	20	2	0	0	22	7	0	0	0	7
07:45	25	1	1	0	27	4	1	0	0	5
07:50	30	0	0	0	30	1	0	0	0	1
07:55	27	1	0	0	28	6	0	0	0	6
08:00	25	1	0	0	26	6	1	0	0	7
08:05	26	2	0	0	28	5	0	0	0	5
08:10	28	1	0	0	29	4	0	0	0	4
08:15	25	0	1	0	26	7	0	0	0	7
08:20	28	0	1	0	29	8	0	0	0	8
08:25	33	2	2	0	37	6	0	0	1	7
08:30	25	0	0	0	25	9	1	0	0	10
08:35	33	0	0	0	33	7	0	0	0	7
08:40	24	0	0	0	24	9	0	0	0	9
08:45	18	1	3	0	22	7	0	0	0	7
08:50	26	0	1	0	27	6	0	0	0	6
08:55	22	4	0	0	26	10	0	0	0	10
09:00	20	1	0	0	21	8	0	0	0	8
09:05	30	0	0	0	30	7	0	0	0	7
09:10	18	0	1	0	19	9	0	1	1	11
09:15	14	1	1	0	16	8	0	0	0	8
09:20	9	2	0	0	11	3	0	1	0	4
09:25	23	0	1	0	24	8	0	0	0	8
09:30	16	1	0	0	17	5	0	0	0	5
09:35	15	3	0	0	18	4	0	0	0	4
09:40	18	1	0	0	19	10	0	0	0	10
09:45	15	1	1	0	17	10	0	0	0	10
09:50	19	2	1	0	22	2	0	0	0	2
09:55	22	1	1	0	24	3	0	0	0	3
Total	787	37	19	0	843	207	3	2	3	215
Peak Hour	07:45	to	08:45							
07:45	25	1	1	0	27	4	1	0	0	5
07:50	30	0	0	0	30	1	0	0	0	1
07:55	27	1	0	0	28	6	0	0	0	6
08:00	25	1	0	0	26	6	1	0	0	7
08:05	26	2	0	0	28	5	0	0	0	5
08:10	28	1	0	0	29	4	0	0	0	4
08:15	25	0	1	0	26	7	0	0	0	7
08:20	28	0	1	0	29	8	0	0	0	8
08:25	33	2	2	0	37	6	0	0	1	7
08:30	25	0	0	0	25	9	1	0	0	10
08:35	33	0	0	0	33	7	0	0	0	7
08:40	24	0	0	0	24	9	0	0	0	9
Total	329	8	5	0	342	72	3	0	1	76

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Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	C to B - Baldovie Road to Drumgeith Road				Veh. Total	C to A - Baldovie Road to Kellas Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	29	0	2	0	31	17	0	0	0	17
16:05	34	2	0	0	36	14	1	0	0	15
16:10	30	1	1	0	32	12	0	0	0	12
16:15	35	1	1	0	37	17	0	2	0	19
16:20	36	1	0	0	37	10	0	0	0	10
16:25	27	1	0	1	29	8	0	0	0	8
16:30	33	2	0	0	35	13	0	0	1	14
16:35	38	0	0	0	38	12	0	0	0	12
16:40	23	0	0	0	23	13	0	0	0	13
16:45	22	0	0	0	22	12	0	0	0	12
16:50	32	0	0	0	32	10	0	0	0	10
16:55	39	0	0	0	39	9	0	0	0	9
17:00	44	0	0	0	44	12	0	0	0	12
17:05	46	0	0	0	46	15	0	0	0	15
17:10	35	3	0	0	38	14	0	0	0	14
17:15	34	0	0	0	34	15	0	0	0	15
17:20	24	0	1	0	25	10	1	0	0	11
17:25	21	2	0	0	23	7	0	0	0	7
17:30	30	1	0	0	31	8	0	0	0	8
17:35	37	0	0	0	37	6	0	0	0	6
17:40	23	0	0	0	23	12	0	0	0	12
17:45	22	0	1	0	23	14	1	0	0	15
17:50	26	0	0	0	26	10	0	0	0	10
17:55	22	0	0	0	22	16	0	0	0	16
18:00	17	0	0	0	17	13	0	1	0	14
18:05	24	0	0	0	24	11	0	0	1	12
18:10	22	0	0	0	22	11	0	0	0	11
18:15	34	0	0	0	34	8	0	0	0	8
18:20	22	0	0	0	22	7	0	0	0	7
18:25	19	0	0	0	19	8	0	0	0	8
18:30	16	0	0	0	16	4	0	0	0	4
18:35	18	1	0	0	19	6	0	0	0	6
18:40	21	0	0	0	21	4	0	0	0	4
18:45	14	0	0	0	14	7	0	0	0	7
18:50	20	0	0	0	20	4	0	0	0	4
18:55	28	0	0	0	28	8	0	0	0	8
Total	997	15	6	1	1019	377	3	3	2	385
Peak Hour	16:35	to	17:35							
16:35	38	0	0	0	38	12	0	0	0	12
16:40	23	0	0	0	23	13	0	0	0	13
16:45	22	0	0	0	22	12	0	0	0	12
16:50	32	0	0	0	32	10	0	0	0	10
16:55	39	0	0	0	39	9	0	0	0	9
17:00	44	0	0	0	44	12	0	0	0	12
17:05	46	0	0	0	46	15	0	0	0	15
17:10	35	3	0	0	38	14	0	0	0	14
17:15	34	0	0	0	34	15	0	0	0	15
17:20	24	0	1	0	25	10	1	0	0	11
17:25	21	2	0	0	23	7	0	0	0	7
17:30	30	1	0	0	31	8	0	0	0	8
Total	388	6	1	0	395	137	1	0	0	138

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	To Arm A - Kellas Road				Veh. Total	From Arm A - Kellas Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	6	0	0	0	6	19	0	0	0	19
07:05	4	0	0	0	4	19	0	2	0	21
07:10	6	0	0	0	6	18	0	2	0	20
07:15	9	0	0	0	9	17	0	0	0	17
07:20	6	1	0	0	7	20	0	0	0	20
07:25	7	0	0	0	7	27	1	1	0	29
07:30	9	0	0	1	10	41	0	0	0	41
07:35	13	0	1	0	14	37	2	0	0	39
07:40	11	0	0	0	11	46	2	0	0	48
07:45	9	3	0	0	12	48	0	0	0	48
07:50	9	0	1	0	10	60	3	0	0	63
07:55	13	0	0	1	14	50	3	0	0	53
08:00	10	1	0	0	11	63	0	1	1	65
08:05	10	2	0	1	13	69	0	0	0	69
08:10	17	0	1	0	18	51	2	0	0	53
08:15	24	1	0	0	25	51	1	0	0	52
08:20	14	1	0	0	15	54	1	0	0	55
08:25	8	0	0	1	9	59	0	0	0	59
08:30	13	2	0	0	15	43	0	1	0	44
08:35	12	1	0	0	13	45	0	0	0	45
08:40	20	1	0	0	21	40	0	0	0	40
08:45	14	1	0	0	15	36	0	0	0	36
08:50	11	1	1	0	13	45	4	0	0	49
08:55	17	0	0	0	17	52	3	0	1	56
09:00	14	2	0	0	16	25	0	0	1	26
09:05	16	0	0	0	16	24	3	0	0	27
09:10	16	0	1	1	18	28	0	0	0	28
09:15	16	1	0	0	17	16	1	0	0	17
09:20	11	2	2	0	15	18	1	0	0	19
09:25	15	1	0	0	16	24	0	2	0	26
09:30	13	0	0	0	13	16	1	1	0	18
09:35	10	0	0	0	10	27	1	0	0	28
09:40	21	0	1	0	22	24	1	0	0	25
09:45	16	0	0	0	16	35	1	0	0	36
09:50	5	2	0	0	7	21	1	0	0	22
09:55	5	0	0	0	5	14	1	1	0	16
Total	430	23	8	5	466	1282	33	11	3	1329
Peak Hour	07:45	to	08:45							
07:45	9	3	0	0	12	48	0	0	0	48
07:50	9	0	1	0	10	60	3	0	0	63
07:55	13	0	0	1	14	50	3	0	0	53
08:00	10	1	0	0	11	63	0	1	1	65
08:05	10	2	0	1	13	69	0	0	0	69
08:10	17	0	1	0	18	51	2	0	0	53
08:15	24	1	0	0	25	51	1	0	0	52
08:20	14	1	0	0	15	54	1	0	0	55
08:25	8	0	0	1	9	59	0	0	0	59
08:30	13	2	0	0	15	43	0	1	0	44
08:35	12	1	0	0	13	45	0	0	0	45
08:40	20	1	0	0	21	40	0	0	0	40
Total	159	12	2	3	176	633	10	2	1	646

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	To Arm A - Kellas Road				Veh. Total	From Arm A - Kellas Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	30	0	0	0	30	14	0	1	1	16
16:05	30	1	1	0	32	15	0	0	0	15
16:10	24	2	0	0	26	25	1	0	0	26
16:15	38	0	3	0	41	27	0	0	0	27
16:20	38	0	0	0	38	15	0	0	0	15
16:25	23	0	0	0	23	18	0	0	1	19
16:30	30	3	0	1	34	17	1	0	1	19
16:35	36	0	1	0	37	24	0	0	0	24
16:40	40	1	0	0	41	24	1	2	0	27
16:45	32	2	1	0	35	19	1	0	0	20
16:50	38	1	0	0	39	16	1	0	0	17
16:55	33	2	0	0	35	23	0	0	0	23
17:00	36	1	0	0	37	23	0	0	0	23
17:05	47	2	0	0	49	13	0	0	0	13
17:10	46	0	0	0	46	26	2	0	0	28
17:15	46	0	0	0	46	25	0	0	0	25
17:20	35	2	0	0	37	27	1	0	0	28
17:25	47	0	0	0	47	20	0	1	0	21
17:30	34	0	0	0	34	23	0	0	0	23
17:35	31	0	0	0	31	20	1	0	0	21
17:40	33	1	0	0	34	19	0	0	0	19
17:45	30	2	0	0	32	22	0	0	0	22
17:50	34	0	0	0	34	15	0	0	0	15
17:55	37	0	1	0	38	15	0	0	0	15
18:00	43	0	1	0	44	24	0	0	0	24
18:05	32	0	0	1	33	16	0	0	0	16
18:10	39	0	0	0	39	17	0	0	0	17
18:15	25	0	0	0	25	15	0	0	0	15
18:20	27	0	0	0	27	24	0	0	0	24
18:25	24	0	1	0	25	12	0	0	0	12
18:30	16	0	0	0	16	13	0	0	0	13
18:35	17	0	0	0	17	14	0	0	0	14
18:40	15	0	0	0	15	23	0	0	0	23
18:45	16	0	0	0	16	18	0	0	0	18
18:50	11	0	0	0	11	19	0	0	0	19
18:55	19	0	2	0	21	15	0	1	0	16
Total	1132	20	11	2	1165	695	9	5	3	712
Peak Hour	16:35	to	17:35							
16:35	36	0	1	0	37	24	0	0	0	24
16:40	40	1	0	0	41	24	1	2	0	27
16:45	32	2	1	0	35	19	1	0	0	20
16:50	38	1	0	0	39	16	1	0	0	17
16:55	33	2	0	0	35	23	0	0	0	23
17:00	36	1	0	0	37	23	0	0	0	23
17:05	47	2	0	0	49	13	0	0	0	13
17:10	46	0	0	0	46	26	2	0	0	28
17:15	46	0	0	0	46	25	0	0	0	25
17:20	35	2	0	0	37	27	1	0	0	28
17:25	47	0	0	0	47	20	0	1	0	21
17:30	34	0	0	0	34	23	0	0	0	23
Total	470	11	2	0	483	263	6	3	0	272

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	To Arm B - Drumgeith Road				Veh. Total	From Arm B - Drumgeith Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	53	2	0	0	55	13	0	0	0	13
07:05	28	0	1	0	29	22	2	0	0	24
07:10	30	5	3	0	38	17	1	0	0	18
07:15	38	0	1	0	39	25	0	0	0	25
07:20	26	1	0	0	27	23	1	1	0	25
07:25	42	1	1	0	44	19	0	0	0	19
07:30	51	1	0	0	52	34	0	0	0	34
07:35	43	2	0	0	45	47	2	2	0	51
07:40	58	3	0	0	61	40	3	0	0	43
07:45	64	1	1	0	66	57	2	0	0	59
07:50	68	2	0	0	70	61	2	1	0	64
07:55	63	4	0	0	67	44	1	0	1	46
08:00	76	1	1	0	78	34	2	0	0	36
08:05	77	2	0	0	79	29	2	2	1	34
08:10	67	1	0	0	68	52	1	2	0	55
08:15	62	1	1	0	64	56	4	0	0	60
08:20	67	1	1	0	69	49	2	0	0	51
08:25	75	2	2	0	79	38	1	0	0	39
08:30	51	0	0	0	51	58	2	1	0	61
08:35	66	0	0	0	66	37	2	2	0	41
08:40	48	0	0	0	48	55	2	1	0	58
08:45	39	1	3	0	43	34	5	1	0	40
08:50	56	3	1	0	60	35	2	1	0	38
08:55	54	6	0	0	60	28	3	2	0	33
09:00	39	1	0	1	41	31	3	1	0	35
09:05	48	1	0	0	49	31	2	1	0	34
09:10	37	0	1	0	38	23	1	3	0	27
09:15	24	2	1	0	27	30	3	1	0	34
09:20	20	3	0	0	23	28	5	1	0	34
09:25	39	0	3	0	42	29	4	0	0	33
09:30	27	2	0	0	29	21	1	0	0	22
09:35	31	4	0	0	35	28	3	0	0	31
09:40	28	1	0	0	29	25	1	1	0	27
09:45	39	1	1	0	41	18	2	0	0	20
09:50	32	3	1	0	36	15	4	0	0	19
09:55	32	1	2	0	35	14	2	1	0	17
Total	1698	59	25	1	1783	1200	73	25	2	1300
Peak Hour	07:45	to	08:45							
07:45	64	1	1	0	66	57	2	0	0	59
07:50	68	2	0	0	70	61	2	1	0	64
07:55	63	4	0	0	67	44	1	0	1	46
08:00	76	1	1	0	78	34	2	0	0	36
08:05	77	2	0	0	79	29	2	2	1	34
08:10	67	1	0	0	68	52	1	2	0	55
08:15	62	1	1	0	64	56	4	0	0	60
08:20	67	1	1	0	69	49	2	0	0	51
08:25	75	2	2	0	79	38	1	0	0	39
08:30	51	0	0	0	51	58	2	1	0	61
08:35	66	0	0	0	66	37	2	2	0	41
08:40	48	0	0	0	48	55	2	1	0	58
Total	784	15	6	0	805	570	23	9	2	604

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	To Arm B - Drumgeith Road				Veh. Total	From Arm B - Drumgeith Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	37	0	3	1	41	44	1	1	0	46
16:05	44	2	0	0	46	44	3	1	0	48
16:10	39	1	1	0	41	53	4	0	0	57
16:15	51	1	1	0	53	53	0	1	0	54
16:20	44	1	0	0	45	54	1	0	0	55
16:25	38	1	0	2	41	41	1	2	0	44
16:30	39	2	0	1	42	44	4	0	0	48
16:35	49	0	0	0	49	44	1	2	0	47
16:40	34	0	2	0	36	60	1	1	0	62
16:45	30	1	0	0	31	68	2	1	0	71
16:50	46	0	0	0	46	54	1	2	0	57
16:55	53	0	0	0	53	49	4	0	0	53
17:00	53	0	0	0	53	45	2	0	0	47
17:05	53	0	0	0	53	78	2	1	0	81
17:10	47	4	0	0	51	76	0	1	0	77
17:15	44	0	0	0	44	65	0	0	0	65
17:20	38	0	1	0	39	58	2	0	0	60
17:25	27	2	1	0	30	79	0	1	0	80
17:30	42	1	0	0	43	58	0	1	0	59
17:35	49	1	0	0	50	53	1	0	0	54
17:40	31	0	0	0	31	59	1	0	0	60
17:45	35	0	1	0	36	51	2	1	0	54
17:50	30	0	0	0	30	42	0	0	0	42
17:55	29	0	0	0	29	46	0	1	0	47
18:00	34	0	0	0	34	53	0	0	0	53
18:05	35	0	0	0	35	58	0	1	0	59
18:10	34	0	0	0	34	69	0	0	0	69
18:15	43	0	0	0	43	50	0	0	0	50
18:20	39	0	0	0	39	43	0	0	0	43
18:25	27	0	0	0	27	45	0	2	0	47
18:30	23	0	0	0	23	46	0	0	0	46
18:35	25	1	0	0	26	48	0	0	0	48
18:40	35	0	0	0	35	37	0	0	0	37
18:45	22	0	0	0	22	31	1	0	0	32
18:50	28	0	0	0	28	31	0	0	0	31
18:55	37	0	0	0	37	33	0	2	0	35
Total	1364	18	10	4	1396	1862	34	22	0	1918

Peak Hour 16:35 to 17:35

16:35	49	0	0	0	49	44	1	2	0	47
16:40	34	0	2	0	36	60	1	1	0	62
16:45	30	1	0	0	31	68	2	1	0	71
16:50	46	0	0	0	46	54	1	2	0	57
16:55	53	0	0	0	53	49	4	0	0	53
17:00	53	0	0	0	53	45	2	0	0	47
17:05	53	0	0	0	53	78	2	1	0	81
17:10	47	4	0	0	51	76	0	1	0	77
17:15	44	0	0	0	44	65	0	0	0	65
17:20	38	0	1	0	39	58	2	0	0	60
17:25	27	2	1	0	30	79	0	1	0	80
17:30	42	1	0	0	43	58	0	1	0	59
Total	516	8	4	0	528	734	15	10	0	759

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	To Arm C - Baldovie Road				Veh. Total	From Arm C - Baldovie Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	16	0	0	0	16	43	2	0	0	45
07:05	27	2	2	0	31	18	0	1	0	19
07:10	17	1	0	0	18	18	5	1	0	24
07:15	23	0	0	0	23	28	0	1	0	29
07:20	27	0	1	0	28	16	1	0	0	17
07:25	21	0	1	0	22	24	0	1	0	25
07:30	31	0	0	0	31	16	1	0	1	18
07:35	46	2	1	0	49	18	0	0	0	18
07:40	44	4	0	0	48	27	2	0	0	29
07:45	61	0	0	0	61	29	2	1	0	32
07:50	75	3	0	0	78	31	0	0	0	31
07:55	51	1	0	0	52	33	1	0	0	34
08:00	42	2	0	1	45	31	2	0	0	33
08:05	42	0	2	0	44	31	2	0	0	33
08:10	51	3	1	0	55	32	1	0	0	33
08:15	53	3	0	0	56	32	0	1	0	33
08:20	58	1	0	0	59	36	0	1	0	37
08:25	53	1	0	0	54	39	2	2	1	44
08:30	71	1	2	0	74	34	1	0	0	35
08:35	44	1	2	0	47	40	0	0	0	40
08:40	60	1	1	0	62	33	0	0	0	33
08:45	42	4	1	0	47	25	1	3	0	29
08:50	45	2	0	0	47	32	0	1	0	33
08:55	41	4	2	1	48	32	4	0	0	36
09:00	31	1	1	0	33	28	1	0	0	29
09:05	28	4	1	0	33	37	0	0	0	37
09:10	25	1	3	0	29	27	0	2	1	30
09:15	28	2	1	0	31	22	1	1	0	24
09:20	27	3	0	0	30	12	2	1	0	15
09:25	30	3	0	0	33	31	0	1	0	32
09:30	18	1	1	0	20	21	1	0	0	22
09:35	33	3	0	0	36	19	3	0	0	22
09:40	28	2	0	0	30	28	1	0	0	29
09:45	23	3	0	0	26	25	1	1	0	27
09:50	20	2	0	0	22	21	2	1	0	24
09:55	16	3	1	0	20	25	1	1	0	27
Total	1348	64	24	2	1438	994	40	21	3	1058

Peak Hour 07:45 to 08:45

07:45	61	0	0	0	61	29	2	1	0	32
07:50	75	3	0	0	78	31	0	0	0	31
07:55	51	1	0	0	52	33	1	0	0	34
08:00	42	2	0	1	45	31	2	0	0	33
08:05	42	0	2	0	44	31	2	0	0	33
08:10	51	3	1	0	55	32	1	0	0	33
08:15	53	3	0	0	56	32	0	1	0	33
08:20	58	1	0	0	59	36	0	1	0	37
08:25	53	1	0	0	54	39	2	2	1	44
08:30	71	1	2	0	74	34	1	0	0	35
08:35	44	1	2	0	47	40	0	0	0	40
08:40	60	1	1	0	62	33	0	0	0	33
Total	661	17	8	1	687	401	11	5	1	418

Site No. 2
Location Kellas Road / Drumgeith Road / Baldovie Road
Date Tuesday 2nd February 2016

Time	To Arm C - Baldovie Road				Veh. Total	From Arm C - Baldovie Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	37	1	1	0	39	46	0	2	0	48
16:05	33	3	0	0	36	48	3	0	0	51
16:10	57	3	0	0	60	42	1	1	0	44
16:15	43	0	0	0	43	52	1	3	0	56
16:20	33	1	0	0	34	46	1	0	0	47
16:25	33	1	2	0	36	35	1	0	1	37
16:30	38	2	0	0	40	46	2	0	1	49
16:35	33	1	1	0	35	50	0	0	0	50
16:40	46	1	1	0	48	36	0	0	0	36
16:45	59	0	0	0	59	34	0	0	0	34
16:50	28	1	2	0	31	42	0	0	0	42
16:55	34	2	0	0	36	48	0	0	0	48
17:00	35	1	0	0	36	56	0	0	0	56
17:05	52	0	1	0	53	61	0	0	0	61
17:10	58	1	1	0	60	49	3	0	0	52
17:15	49	0	0	0	49	49	0	0	0	49
17:20	46	2	0	0	48	34	1	1	0	36
17:25	53	0	1	0	54	28	2	0	0	30
17:30	43	0	1	0	44	38	1	0	0	39
17:35	36	1	0	0	37	43	0	0	0	43
17:40	49	0	0	0	49	35	0	0	0	35
17:45	44	1	1	0	46	36	1	1	0	38
17:50	29	0	0	0	29	36	0	0	0	36
17:55	33	0	0	0	33	38	0	0	0	38
18:00	30	0	0	0	30	30	0	1	0	31
18:05	42	0	1	0	43	35	0	0	1	36
18:10	46	0	0	0	46	33	0	0	0	33
18:15	39	0	0	0	39	42	0	0	0	42
18:20	30	0	0	0	30	29	0	0	0	29
18:25	33	0	1	0	34	27	0	0	0	27
18:30	40	0	0	0	40	20	0	0	0	20
18:35	44	0	0	0	44	24	1	0	0	25
18:40	35	0	0	0	35	25	0	0	0	25
18:45	32	1	0	0	33	21	0	0	0	21
18:50	35	0	0	0	35	24	0	0	0	24
18:55	28	0	1	0	29	36	0	0	0	36
Total	1435	23	15	0	1473	1374	18	9	3	1404

Peak Hour 16:35 to 17:35

16:35	33	1	1	0	35	50	0	0	0	50
16:40	46	1	1	0	48	36	0	0	0	36
16:45	59	0	0	0	59	34	0	0	0	34
16:50	28	1	2	0	31	42	0	0	0	42
16:55	34	2	0	0	36	48	0	0	0	48
17:00	35	1	0	0	36	56	0	0	0	56
17:05	52	0	1	0	53	61	0	0	0	61
17:10	58	1	1	0	60	49	3	0	0	52
17:15	49	0	0	0	49	49	0	0	0	49
17:20	46	2	0	0	48	34	1	1	0	36
17:25	53	0	1	0	54	28	2	0	0	30
17:30	43	0	1	0	44	38	1	0	0	39
Total	536	9	8	0	553	525	7	1	0	533

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	A to C - Ballumbie Road to Drumgeith Road(E)				Veh. Total	A to B - Ballumbie Road to Drumgeith Road(W)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	4	0	0	0	4	10	0	0	0	10
07:05	7	0	0	0	7	6	0	0	1	7
07:10	3	1	0	0	4	10	0	0	0	10
07:15	4	0	0	0	4	13	0	0	0	13
07:20	1	0	0	0	1	8	0	0	1	9
07:25	1	0	0	0	1	16	0	0	0	16
07:30	3	0	0	0	3	10	0	0	0	10
07:35	9	0	0	0	9	12	0	0	1	13
07:40	8	0	0	0	8	11	0	0	1	12
07:45	7	0	0	0	7	10	0	0	0	10
07:50	7	0	0	0	7	10	0	0	0	10
07:55	6	0	0	0	6	10	1	0	1	12
08:00	7	0	0	0	7	11	0	0	0	11
08:05	2	0	1	0	3	9	0	0	1	10
08:10	1	0	0	0	1	12	0	0	0	12
08:15	9	1	0	0	10	10	0	0	1	11
08:20	7	0	0	0	7	8	0	0	0	8
08:25	1	0	0	0	1	14	0	0	0	14
08:30	6	0	0	0	6	15	0	0	0	15
08:35	7	0	0	0	7	7	0	0	1	8
08:40	13	0	0	0	13	15	0	0	0	15
08:45	6	0	0	0	6	3	0	0	1	4
08:50	5	0	0	0	5	14	0	0	0	14
08:55	3	1	0	0	4	7	0	0	0	7
09:00	8	1	0	0	9	7	0	0	1	8
09:05	1	0	0	0	1	3	0	0	1	4
09:10	4	0	0	0	4	6	0	0	0	6
09:15	10	1	0	0	11	4	0	0	0	4
09:20	4	0	0	0	4	2	0	0	0	2
09:25	3	1	0	0	4	7	2	0	0	9
09:30	5	0	0	0	5	6	0	0	3	9
09:35	6	0	0	0	6	15	0	0	0	15
09:40	4	0	0	0	4	13	0	0	0	13
09:45	3	0	0	0	3	7	0	0	1	8
09:50	2	1	0	0	3	2	0	0	1	3
09:55	2	0	0	0	2	3	0	0	0	3
Total	179	7	1	0	187	326	3	0	16	345

Peak Hour 07:45 to 08:45

07:45	7	0	0	0	7	10	0	0	0	10
07:50	7	0	0	0	7	10	0	0	0	10
07:55	6	0	0	0	6	10	1	0	1	12
08:00	7	0	0	0	7	11	0	0	0	11
08:05	2	0	1	0	3	9	0	0	1	10
08:10	1	0	0	0	1	12	0	0	0	12
08:15	9	1	0	0	10	10	0	0	1	11
08:20	7	0	0	0	7	8	0	0	0	8
08:25	1	0	0	0	1	14	0	0	0	14
08:30	6	0	0	0	6	15	0	0	0	15
08:35	7	0	0	0	7	7	0	0	1	8
08:40	13	0	0	0	13	15	0	0	0	15
Total	73	1	1	0	75	131	1	0	4	136

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	A to C - Ballumbie Road to Drumgeith Road(E)				Veh. Total	A to B - Ballumbie Road to Drumgeith Road(W)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	9	0	0	0	9	6	0	0	0	6
16:05	13	0	0	0	13	9	0	0	0	9
16:10	7	0	0	0	7	4	0	0	1	5
16:15	7	0	0	0	7	6	0	0	0	6
16:20	8	0	0	0	8	5	0	0	0	5
16:25	6	0	0	0	6	6	0	0	1	7
16:30	13	1	0	0	14	5	0	0	0	5
16:35	6	0	0	0	6	3	0	0	1	4
16:40	6	0	0	0	6	5	0	0	0	5
16:45	7	0	0	0	7	6	0	0	0	6
16:50	8	0	0	0	8	5	1	0	1	7
16:55	2	0	0	0	2	3	0	0	1	4
17:00	7	1	0	0	8	9	0	0	0	9
17:05	9	0	0	0	9	7	0	0	0	7
17:10	4	0	0	0	4	6	0	0	1	7
17:15	11	0	0	0	11	5	0	0	0	5
17:20	4	1	0	0	5	4	0	0	0	4
17:25	7	0	0	0	7	5	0	0	0	5
17:30	6	0	0	0	6	6	1	0	1	8
17:35	6	0	0	0	6	6	0	0	0	6
17:40	10	0	0	0	10	3	2	0	1	6
17:45	7	0	0	0	7	5	0	0	0	5
17:50	7	0	0	0	7	4	0	0	0	4
17:55	4	0	0	0	4	10	0	0	0	10
18:00	10	0	0	0	10	11	0	0	2	13
18:05	17	0	0	0	17	9	0	0	0	9
18:10	9	0	0	0	9	7	0	0	0	7
18:15	6	0	0	0	6	3	0	0	1	4
18:20	12	0	0	0	12	10	0	0	0	10
18:25	5	0	1	0	6	6	0	0	1	7
18:30	7	0	0	0	7	11	0	0	0	11
18:35	7	0	0	0	7	12	0	0	1	13
18:40	5	0	0	0	5	6	0	0	0	6
18:45	6	1	0	0	7	10	0	0	0	10
18:50	8	0	0	0	8	6	0	0	1	7
18:55	5	0	0	0	5	6	0	0	0	6
Total	271	4	1	0	276	230	4	0	14	248
Peak Hour	16:40	to	17:40							
16:40	6	0	0	0	6	5	0	0	0	5
16:45	7	0	0	0	7	6	0	0	0	6
16:50	8	0	0	0	8	5	1	0	1	7
16:55	2	0	0	0	2	3	0	0	1	4
17:00	7	1	0	0	8	9	0	0	0	9
17:05	9	0	0	0	9	7	0	0	0	7
17:10	4	0	0	0	4	6	0	0	1	7
17:15	11	0	0	0	11	5	0	0	0	5
17:20	4	1	0	0	5	4	0	0	0	4
17:25	7	0	0	0	7	5	0	0	0	5
17:30	6	0	0	0	6	6	1	0	1	8
17:35	6	0	0	0	6	6	0	0	0	6
Total	77	2	0	0	79	67	2	0	4	73

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	B to A - Drumgeith Road(W) to Ballumbie Road				Veh. Total	B to C - Drumgeith Road(W) to Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	1	0	0	0	1	9	0	0	1	10
07:05	2	0	0	0	2	13	2	0	0	15
07:10	0	0	0	0	0	13	0	0	0	13
07:15	1	0	0	0	1	18	0	0	1	19
07:20	3	0	0	0	3	18	1	1	0	20
07:25	2	0	0	0	2	16	0	0	1	17
07:30	7	0	0	0	7	28	0	0	0	28
07:35	3	0	0	0	3	32	3	2	0	37
07:40	5	1	0	0	6	31	2	0	1	34
07:45	6	0	0	0	6	31	2	0	0	33
07:50	4	1	0	0	5	35	2	1	1	39
07:55	2	0	0	0	2	29	1	0	1	31
08:00	4	1	0	0	5	16	2	0	1	19
08:05	5	0	0	0	5	23	2	1	1	27
08:10	5	2	0	1	8	36	2	2	1	41
08:15	6	0	0	0	6	34	3	0	0	37
08:20	3	0	0	0	3	33	1	0	0	34
08:25	5	0	0	0	5	26	1	0	1	28
08:30	6	0	0	0	6	32	2	1	0	35
08:35	7	0	0	0	7	27	2	2	0	31
08:40	10	0	0	0	10	25	3	2	1	31
08:45	9	0	0	0	9	23	4	1	0	28
08:50	6	1	0	0	7	26	2	1	1	30
08:55	7	0	0	1	8	21	2	1	0	24
09:00	6	1	0	0	7	23	2	1	0	26
09:05	12	1	0	0	13	26	3	1	1	31
09:10	6	0	0	0	6	21	1	4	0	26
09:15	10	0	0	0	10	19	1	0	1	21
09:20	3	0	0	0	3	18	6	1	0	25
09:25	6	0	0	0	6	23	2	0	0	25
09:30	3	0	0	0	3	27	1	0	0	28
09:35	4	0	0	0	4	22	3	0	2	27
09:40	5	0	0	0	5	27	1	1	1	30
09:45	2	0	0	0	2	16	2	0	0	18
09:50	5	0	0	0	5	17	4	1	0	22
09:55	6	0	0	0	6	15	1	0	1	17
Total	177	8	0	2	187	849	66	24	18	957
Peak Hour	07:45	to	08:45							
07:45	6	0	0	0	6	31	2	0	0	33
07:50	4	1	0	0	5	35	2	1	1	39
07:55	2	0	0	0	2	29	1	0	1	31
08:00	4	1	0	0	5	16	2	0	1	19
08:05	5	0	0	0	5	23	2	1	1	27
08:10	5	2	0	1	8	36	2	2	1	41
08:15	6	0	0	0	6	34	3	0	0	37
08:20	3	0	0	0	3	33	1	0	0	34
08:25	5	0	0	0	5	26	1	0	1	28
08:30	6	0	0	0	6	32	2	1	0	35
08:35	7	0	0	0	7	27	2	2	0	31
08:40	10	0	0	0	10	25	3	2	1	31
Total	63	4	0	1	68	347	23	9	7	386

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	B to A - Drumgeith Road(W) to Ballumbie Road				Veh. Total	B to C - Drumgeith Road(W) to Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	8	0	0	0	8	39	2	1	1	43
16:05	13	0	0	0	13	33	2	1	0	36
16:10	11	0	0	0	11	40	4	0	0	44
16:15	10	0	0	0	10	42	0	1	1	44
16:20	14	0	0	0	14	43	1	0	0	44
16:25	13	0	0	0	13	35	2	2	1	40
16:30	14	0	0	0	14	34	3	1	0	38
16:35	10	0	0	0	10	38	1	1	0	40
16:40	17	0	0	0	17	52	0	2	1	55
16:45	16	0	0	0	16	59	2	0	0	61
16:50	13	0	0	0	13	44	1	2	1	48
16:55	16	0	0	0	16	45	4	0	0	49
17:00	19	0	0	0	19	43	1	0	1	45
17:05	12	0	0	0	12	70	2	1	0	73
17:10	12	1	0	0	13	66	0	1	0	67
17:15	16	0	0	0	16	47	0	0	1	48
17:20	17	0	0	0	17	50	1	0	0	51
17:25	12	0	0	0	12	79	0	1	1	81
17:30	14	0	0	0	14	50	0	1	0	51
17:35	13	0	0	0	13	50	1	0	0	51
17:40	19	0	0	0	19	47	1	0	1	49
17:45	26	0	0	0	26	36	2	1	0	39
17:50	19	0	0	0	19	42	0	0	1	43
17:55	31	0	0	0	31	45	0	1	0	46
18:00	8	0	0	0	8	47	0	0	0	47
18:05	20	0	0	0	20	40	0	1	0	41
18:10	20	0	0	2	22	51	0	0	0	51
18:15	16	0	0	0	16	43	0	0	0	43
18:20	12	0	0	1	13	36	0	1	0	37
18:25	19	0	0	0	19	32	0	0	0	32
18:30	11	0	0	1	12	39	0	0	0	39
18:35	11	0	0	0	11	38	0	0	0	38
18:40	9	0	0	0	9	33	0	0	0	33
18:45	9	0	0	1	10	23	0	0	0	23
18:50	11	0	0	0	11	23	0	1	0	24
18:55	12	0	0	0	12	24	0	1	0	25
Total	523	1	0	5	529	1558	30	21	10	1619
Peak Hour	16:40	to	17:40							
16:40	17	0	0	0	17	52	0	2	1	55
16:45	16	0	0	0	16	59	2	0	0	61
16:50	13	0	0	0	13	44	1	2	1	48
16:55	16	0	0	0	16	45	4	0	0	49
17:00	19	0	0	0	19	43	1	0	1	45
17:05	12	0	0	0	12	70	2	1	0	73
17:10	12	1	0	0	13	66	0	1	0	67
17:15	16	0	0	0	16	47	0	0	1	48
17:20	17	0	0	0	17	50	1	0	0	51
17:25	12	0	0	0	12	79	0	1	1	81
17:30	14	0	0	0	14	50	0	1	0	51
17:35	13	0	0	0	13	50	1	0	0	51
Total	177	1	0	0	178	655	12	8	5	680

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	C to B - Drumgeith Road(E) to Drumgeith Road(W)				Veh. Total	C to A - Drumgeith Road(E) to Ballumbie Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	45	2	0	0	47	7	0	0	0	7
07:05	30	0	1	0	31	1	0	0	0	1
07:10	33	2	3	0	38	2	3	0	0	5
07:15	26	0	1	0	27	3	0	0	0	3
07:20	32	1	0	0	33	0	0	0	0	0
07:25	36	1	0	0	37	4	0	1	0	5
07:30	59	1	0	0	60	2	0	0	0	2
07:35	56	2	0	0	58	2	0	0	0	2
07:40	53	3	0	0	56	4	1	0	0	5
07:45	58	0	1	0	59	9	0	0	0	9
07:50	66	2	0	0	68	7	0	0	0	7
07:55	66	4	0	0	70	10	0	0	0	10
08:00	67	1	1	0	69	9	0	0	0	9
08:05	70	0	0	0	70	10	0	0	0	10
08:10	69	3	0	0	72	9	0	0	0	9
08:15	62	1	1	0	64	6	0	0	0	6
08:20	67	2	0	0	69	6	0	0	0	6
08:25	69	1	3	0	73	11	0	0	0	11
08:30	53	0	0	0	53	11	0	0	0	11
08:35	55	0	0	0	55	10	0	0	0	10
08:40	55	0	0	0	55	3	0	0	0	3
08:45	38	0	2	0	40	7	1	0	0	8
08:50	41	2	2	0	45	9	0	0	0	9
08:55	47	5	0	0	52	7	1	0	0	8
09:00	38	2	0	1	41	4	0	0	0	4
09:05	36	1	0	0	37	8	0	0	0	8
09:10	35	0	1	0	36	4	0	0	0	4
09:15	22	1	1	0	24	7	1	0	0	8
09:20	21	3	0	0	24	1	0	0	0	1
09:25	30	0	3	0	33	4	1	0	0	5
09:30	26	1	1	0	28	1	0	0	0	1
09:35	22	4	0	0	26	4	0	0	0	4
09:40	19	1	0	0	20	4	0	0	0	4
09:45	25	1	0	0	26	2	0	0	0	2
09:50	30	1	2	0	33	5	1	0	0	6
09:55	24	2	1	0	27	3	0	0	0	3
Total	1581	50	24	1	1656	196	9	1	0	206
Peak Hour	07:45	to	08:45							
07:45	58	0	1	0	59	9	0	0	0	9
07:50	66	2	0	0	68	7	0	0	0	7
07:55	66	4	0	0	70	10	0	0	0	10
08:00	67	1	1	0	69	9	0	0	0	9
08:05	70	0	0	0	70	10	0	0	0	10
08:10	69	3	0	0	72	9	0	0	0	9
08:15	62	1	1	0	64	6	0	0	0	6
08:20	67	2	0	0	69	6	0	0	0	6
08:25	69	1	3	0	73	11	0	0	0	11
08:30	53	0	0	0	53	11	0	0	0	11
08:35	55	0	0	0	55	10	0	0	0	10
08:40	55	0	0	0	55	3	0	0	0	3
Total	757	14	6	0	777	101	0	0	0	101

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	C to B - Drumgeith Road(E) to Drumgeith Road(W)				Veh. Total	C to A - Drumgeith Road(E) to Ballumbie Road				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	27	0	3	1	31	11	0	0	0	11
16:05	34	2	0	0	36	9	0	0	0	9
16:10	36	1	1	0	38	5	0	0	0	5
16:15	32	2	1	0	35	9	0	0	0	9
16:20	32	1	0	0	33	12	0	0	0	12
16:25	18	0	0	2	20	11	1	0	0	12
16:30	28	2	0	1	31	9	0	0	0	9
16:35	38	0	0	0	38	8	0	0	0	8
16:40	26	0	1	0	27	6	0	0	0	6
16:45	21	1	1	0	23	7	0	0	0	7
16:50	29	0	0	0	29	11	0	0	0	11
16:55	36	0	0	0	36	14	0	0	0	14
17:00	36	0	0	0	36	9	0	0	0	9
17:05	32	0	0	0	32	13	0	0	0	13
17:10	33	3	0	0	36	14	1	0	0	15
17:15	24	0	0	0	24	10	0	0	0	10
17:20	23	0	1	0	24	10	0	0	0	10
17:25	16	1	1	0	18	3	0	0	0	3
17:30	23	0	0	0	23	11	1	0	0	12
17:35	27	1	0	0	28	18	0	0	0	18
17:40	23	0	0	0	23	8	0	0	0	8
17:45	23	0	1	0	24	9	0	0	0	9
17:50	13	0	0	0	13	13	0	0	0	13
17:55	18	0	0	0	18	13	0	0	0	13
18:00	22	0	0	0	22	8	0	0	0	8
18:05	23	0	0	0	23	5	0	0	0	5
18:10	20	0	0	0	20	8	0	0	0	8
18:15	24	0	0	0	24	11	0	0	0	11
18:20	31	0	0	0	31	8	0	0	0	8
18:25	22	0	0	0	22	9	0	0	0	9
18:30	21	0	0	0	21	6	0	0	0	6
18:35	17	1	0	0	18	6	0	0	0	6
18:40	27	0	0	0	27	7	0	0	0	7
18:45	19	0	0	0	19	4	0	0	0	4
18:50	14	0	0	0	14	5	0	0	0	5
18:55	26	0	0	0	26	3	0	0	0	3
Total	914	15	10	4	943	323	3	0	0	326
Peak Hour	16:40	to	17:40							
16:40	26	0	1	0	27	6	0	0	0	6
16:45	21	1	1	0	23	7	0	0	0	7
16:50	29	0	0	0	29	11	0	0	0	11
16:55	36	0	0	0	36	14	0	0	0	14
17:00	36	0	0	0	36	9	0	0	0	9
17:05	32	0	0	0	32	13	0	0	0	13
17:10	33	3	0	0	36	14	1	0	0	15
17:15	24	0	0	0	24	10	0	0	0	10
17:20	23	0	1	0	24	10	0	0	0	10
17:25	16	1	1	0	18	3	0	0	0	3
17:30	23	0	0	0	23	11	1	0	0	12
17:35	27	1	0	0	28	18	0	0	0	18
Total	326	6	4	0	336	126	2	0	0	128

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm A - Ballumbie Road				Veh. Total	From Arm A - Ballumbie Road				Veh. Total	Time
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV		
07:00	8	0	0	0	8	14	0	0	0	14	07:00
07:05	3	0	0	0	3	13	0	0	1	14	07:05
07:10	2	3	0	0	5	13	1	0	0	14	07:10
07:15	4	0	0	0	4	17	0	0	0	17	07:15
07:20	3	0	0	0	3	9	0	0	1	10	07:20
07:25	6	0	1	0	7	17	0	0	0	17	07:25
07:30	9	0	0	0	9	13	0	0	0	13	07:30
07:35	5	0	0	0	5	21	0	0	1	22	07:35
07:40	9	2	0	0	11	19	0	0	1	20	07:40
07:45	15	0	0	0	15	17	0	0	0	17	07:45
07:50	11	1	0	0	12	17	0	0	0	17	07:50
07:55	12	0	0	0	12	16	1	0	1	18	07:55
08:00	13	1	0	0	14	18	0	0	0	18	08:00
08:05	15	0	0	0	15	11	0	1	1	13	08:05
08:10	14	2	0	1	17	13	0	0	0	13	08:10
08:15	12	0	0	0	12	19	1	0	1	21	08:15
08:20	9	0	0	0	9	15	0	0	0	15	08:20
08:25	16	0	0	0	16	15	0	0	0	15	08:25
08:30	17	0	0	0	17	21	0	0	0	21	08:30
08:35	17	0	0	0	17	14	0	0	1	15	08:35
08:40	13	0	0	0	13	28	0	0	0	28	08:40
08:45	16	1	0	0	17	9	0	0	1	10	08:45
08:50	15	1	0	0	16	19	0	0	0	19	08:50
08:55	14	1	0	1	16	10	1	0	0	11	08:55
09:00	10	1	0	0	11	15	1	0	1	17	09:00
09:05	20	1	0	0	21	4	0	0	1	5	09:05
09:10	10	0	0	0	10	10	0	0	0	10	09:10
09:15	17	1	0	0	18	14	1	0	0	15	09:15
09:20	4	0	0	0	4	6	0	0	0	6	09:20
09:25	10	1	0	0	11	10	3	0	0	13	09:25
09:30	4	0	0	0	4	11	0	0	3	14	09:30
09:35	8	0	0	0	8	21	0	0	0	21	09:35
09:40	9	0	0	0	9	17	0	0	0	17	09:40
09:45	4	0	0	0	4	10	0	0	1	11	09:45
09:50	10	1	0	0	11	4	1	0	1	6	09:50
09:55	9	0	0	0	9	5	0	0	0	5	09:55
Total	373	17	1	2	393	505	10	1	16	532	Total
Peak Hour	07:45	to	08:45								Peak Hour
07:45	15	0	0	0	15	17	0	0	0	17	07:45
07:50	11	1	0	0	12	17	0	0	0	17	07:50
07:55	12	0	0	0	12	16	1	0	1	18	07:55
08:00	13	1	0	0	14	18	0	0	0	18	08:00
08:05	15	0	0	0	15	11	0	1	1	13	08:05
08:10	14	2	0	1	17	13	0	0	0	13	08:10
08:15	12	0	0	0	12	19	1	0	1	21	08:15
08:20	9	0	0	0	9	15	0	0	0	15	08:20
08:25	16	0	0	0	16	15	0	0	0	15	08:25
08:30	17	0	0	0	17	21	0	0	0	21	08:30
08:35	17	0	0	0	17	14	0	0	1	15	08:35
08:40	13	0	0	0	13	28	0	0	0	28	08:40
Total	164	4	0	1	169	204	2	1	4	211	Total

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm A - Ballumbie Road				Veh. Total	From Arm A - Ballumbie Road				Veh. Total	Time
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV		
16:00	19	0	0	0	19	15	0	0	0	15	16:00
16:05	22	0	0	0	22	22	0	0	0	22	16:05
16:10	16	0	0	0	16	11	0	0	1	12	16:10
16:15	19	0	0	0	19	13	0	0	0	13	16:15
16:20	26	0	0	0	26	13	0	0	0	13	16:20
16:25	24	1	0	0	25	12	0	0	1	13	16:25
16:30	23	0	0	0	23	18	1	0	0	19	16:30
16:35	18	0	0	0	18	9	0	0	1	10	16:35
16:40	23	0	0	0	23	11	0	0	0	11	16:40
16:45	23	0	0	0	23	13	0	0	0	13	16:45
16:50	24	0	0	0	24	13	1	0	1	15	16:50
16:55	30	0	0	0	30	5	0	0	1	6	16:55
17:00	28	0	0	0	28	16	1	0	0	17	17:00
17:05	25	0	0	0	25	16	0	0	0	16	17:05
17:10	26	2	0	0	28	10	0	0	1	11	17:10
17:15	26	0	0	0	26	16	0	0	0	16	17:15
17:20	27	0	0	0	27	8	1	0	0	9	17:20
17:25	15	0	0	0	15	12	0	0	0	12	17:25
17:30	25	1	0	0	26	12	1	0	1	14	17:30
17:35	31	0	0	0	31	12	0	0	0	12	17:35
17:40	27	0	0	0	27	13	2	0	1	16	17:40
17:45	35	0	0	0	35	12	0	0	0	12	17:45
17:50	32	0	0	0	32	11	0	0	0	11	17:50
17:55	44	0	0	0	44	14	0	0	0	14	17:55
18:00	16	0	0	0	16	21	0	0	2	23	18:00
18:05	25	0	0	0	25	26	0	0	0	26	18:05
18:10	28	0	0	2	30	16	0	0	0	16	18:10
18:15	27	0	0	0	27	9	0	0	1	10	18:15
18:20	20	0	0	1	21	22	0	0	0	22	18:20
18:25	28	0	0	0	28	11	0	1	1	13	18:25
18:30	17	0	0	1	18	18	0	0	0	18	18:30
18:35	17	0	0	0	17	19	0	0	1	20	18:35
18:40	16	0	0	0	16	11	0	0	0	11	18:40
18:45	13	0	0	1	14	16	1	0	0	17	18:45
18:50	16	0	0	0	16	14	0	0	1	15	18:50
18:55	15	0	0	0	15	11	0	0	0	11	18:55
Total	846	4	0	5	855	501	8	1	14	524	Total
Peak Hour	16:40	to	17:40								Peak Hour
16:40	23	0	0	0	23	11	0	0	0	11	16:40
16:45	23	0	0	0	23	13	0	0	0	13	16:45
16:50	24	0	0	0	24	13	1	0	1	15	16:50
16:55	30	0	0	0	30	5	0	0	1	6	16:55
17:00	28	0	0	0	28	16	1	0	0	17	17:00
17:05	25	0	0	0	25	16	0	0	0	16	17:05
17:10	26	2	0	0	28	10	0	0	1	11	17:10
17:15	26	0	0	0	26	16	0	0	0	16	17:15
17:20	27	0	0	0	27	8	1	0	0	9	17:20
17:25	15	0	0	0	15	12	0	0	0	12	17:25
17:30	25	1	0	0	26	12	1	0	1	14	17:30
17:35	31	0	0	0	31	12	0	0	0	12	17:35
Total	303	3	0	0	306	144	4	0	4	152	Total

3
Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Tuesday 2nd February 2016

To Arm B - Drumgeith Road(W)				Veh. Total	From Arm B - Drumgeith Road(W)				Veh. Total
LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
55	2	0	0	57	10	0	0	1	11
36	0	1	1	38	15	2	0	0	17
43	2	3	0	48	13	0	0	0	13
39	0	1	0	40	19	0	0	1	20
40	1	0	1	42	21	1	1	0	23
52	1	0	0	53	18	0	0	1	19
69	1	0	0	70	35	0	0	0	35
68	2	0	1	71	35	3	2	0	40
64	3	0	1	68	36	3	0	1	40
68	0	1	0	69	37	2	0	0	39
76	2	0	0	78	39	3	1	1	44
76	5	0	1	82	31	1	0	1	33
78	1	1	0	80	20	3	0	1	24
79	0	0	1	80	28	2	1	1	32
81	3	0	0	84	41	4	2	2	49
72	1	1	1	75	40	3	0	0	43
75	2	0	0	77	36	1	0	0	37
83	1	3	0	87	31	1	0	1	33
68	0	0	0	68	38	2	1	0	41
62	0	0	1	63	34	2	2	0	38
70	0	0	0	70	35	3	2	1	41
41	0	2	1	44	32	4	1	0	37
55	2	2	0	59	32	3	1	1	37
54	5	0	0	59	28	2	1	1	32
45	2	0	2	49	29	3	1	0	33
39	1	0	1	41	38	4	1	1	44
41	0	1	0	42	27	1	4	0	32
26	1	1	0	28	29	1	0	1	31
23	3	0	0	26	21	6	1	0	28
37	2	3	0	42	29	2	0	0	31
32	1	1	3	37	30	1	0	0	31
37	4	0	0	41	26	3	0	2	31
32	1	0	0	33	32	1	1	1	35
32	1	0	1	34	18	2	0	0	20
32	1	2	1	36	22	4	1	0	27
27	2	1	0	30	21	1	0	1	23
1907	53	24	17	2001	1026	74	24	20	1144
07:45	to	08:45							
68	0	1	0	69	37	2	0	0	39
76	2	0	0	78	39	3	1	1	44
76	5	0	1	82	31	1	0	1	33
78	1	1	0	80	20	3	0	1	24
79	0	0	1	80	28	2	1	1	32
81	3	0	0	84	41	4	2	2	49
72	1	1	1	75	40	3	0	0	43
75	2	0	0	77	36	1	0	0	37
83	1	3	0	87	31	1	0	1	33
68	0	0	0	68	38	2	1	0	41
62	0	0	1	63	34	2	2	0	38
70	0	0	0	70	35	3	2	1	41
888	15	6	4	913	410	27	9	8	454

3
Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Tuesday 2nd February 2016

To Arm B - Drumgeith Road(W)				Veh. Total	From Arm B - Drumgeith Road(W)				Veh. Total
LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
33	0	3	1	37	47	2	1	1	51
43	2	0	0	45	46	2	1	0	49
40	1	1	1	43	51	4	0	0	55
38	2	1	0	41	52	0	1	1	54
37	1	0	0	38	57	1	0	0	58
24	0	0	3	27	48	2	2	1	53
33	2	0	1	36	48	3	1	0	52
41	0	0	1	42	48	1	1	0	50
31	0	1	0	32	69	0	2	1	72
27	1	1	0	29	75	2	0	0	77
34	1	0	1	36	57	1	2	1	61
39	0	0	1	40	61	4	0	0	65
45	0	0	0	45	62	1	0	1	64
39	0	0	0	39	82	2	1	0	85
39	3	0	1	43	78	1	1	0	80
29	0	0	0	29	63	0	0	1	64
27	0	1	0	28	67	1	0	0	68
21	1	1	0	23	91	0	1	1	93
29	1	0	1	31	64	0	1	0	65
33	1	0	0	34	63	1	0	0	64
26	2	0	1	29	66	1	0	1	68
28	0	1	0	29	62	2	1	0	65
17	0	0	0	17	61	0	0	1	62
28	0	0	0	28	76	0	1	0	77
33	0	0	2	35	55	0	0	0	55
32	0	0	0	32	60	0	1	0	61
27	0	0	0	27	71	0	0	2	73
27	0	0	1	28	59	0	0	0	59
41	0	0	0	41	48	0	1	1	50
28	0	0	1	29	51	0	0	0	51
32	0	0	0	32	50	0	0	1	51
29	1	0	1	31	49	0	0	0	49
33	0	0	0	33	42	0	0	0	42
29	0	0	0	29	32	0	0	1	33
20	0	0	1	21	34	0	1	0	35
32	0	0	0	32	36	0	1	0	37
1144	19	10	18	1191	2081	31	21	15	2148
16:40	to	17:40							
31	0	1	0	32	69	0	2	1	72
27	1	1	0	29	75	2	0	0	77
34	1	0	1	36	57	1	2	1	61
39	0	0	1	40	61	4	0	0	65
45	0	0	0	45	62	1	0	1	64
39	0	0	0	39	82	2	1	0	85
39	3	0	1	43	78	1	1	0	80
29	0	0	0	29	63	0	0	1	64
27	0	1	0	28	67	1	0	0	68
21	1	1	0	23	91	0	1	1	93
29	1	0	1	31	64	0	1	0	65
33	1	0	0	34	63	1	0	0	64
393	8	4	4	409	832	13	8	5	858

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm C - Drumgeith Road(E)				Veh. Total	From Arm C - Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	13	0	0	1	14	52	2	0	0	54
07:05	20	2	0	0	22	31	0	1	0	32
07:10	16	1	0	0	17	35	5	3	0	43
07:15	22	0	0	1	23	29	0	1	0	30
07:20	19	1	1	0	21	32	1	0	0	33
07:25	17	0	0	1	18	40	1	1	0	42
07:30	31	0	0	0	31	61	1	0	0	62
07:35	41	3	2	0	46	58	2	0	0	60
07:40	39	2	0	1	42	57	4	0	0	61
07:45	38	2	0	0	40	67	0	1	0	68
07:50	42	2	1	1	46	73	2	0	0	75
07:55	35	1	0	1	37	76	4	0	0	80
08:00	23	2	0	1	26	76	1	1	0	78
08:05	25	2	2	1	30	80	0	0	0	80
08:10	37	2	2	1	42	78	3	0	0	81
08:15	43	4	0	0	47	68	1	1	0	70
08:20	40	1	0	0	41	73	2	0	0	75
08:25	27	1	0	1	29	80	1	3	0	84
08:30	38	2	1	0	41	64	0	0	0	64
08:35	34	2	2	0	38	65	0	0	0	65
08:40	38	3	2	1	44	58	0	0	0	58
08:45	29	4	1	0	34	45	1	2	0	48
08:50	31	2	1	1	35	50	2	2	0	54
08:55	24	3	1	0	28	54	6	0	0	60
09:00	31	3	1	0	35	42	2	0	1	45
09:05	27	3	1	1	32	44	1	0	0	45
09:10	25	1	4	0	30	39	0	1	0	40
09:15	29	2	0	1	32	29	2	1	0	32
09:20	22	6	1	0	29	22	3	0	0	25
09:25	26	3	0	0	29	34	1	3	0	38
09:30	32	1	0	0	33	27	1	1	0	29
09:35	28	3	0	2	33	26	4	0	0	30
09:40	31	1	1	1	34	23	1	0	0	24
09:45	19	2	0	0	21	27	1	0	0	28
09:50	19	5	1	0	25	35	2	2	0	39
09:55	17	1	0	1	19	27	2	1	0	30
Total	1028	73	25	18	1144	1777	59	25	1	1862

Peak Hour	07:45	to	08:45							
07:45	38	2	0	0	40	67	0	1	0	68
07:50	42	2	1	1	46	73	2	0	0	75
07:55	35	1	0	1	37	76	4	0	0	80
08:00	23	2	0	1	26	76	1	1	0	78
08:05	25	2	2	1	30	80	0	0	0	80
08:10	37	2	2	1	42	78	3	0	0	81
08:15	43	4	0	0	47	68	1	1	0	70
08:20	40	1	0	0	41	73	2	0	0	75
08:25	27	1	0	1	29	80	1	3	0	84
08:30	38	2	1	0	41	64	0	0	0	64
08:35	34	2	2	0	38	65	0	0	0	65
08:40	38	3	2	1	44	58	0	0	0	58
Total	420	24	10	7	461	858	14	6	0	878

Site No. 3
Location Ballumbie Road / Drumgeith Road(W) / Drumgeith Road(E)
Date Tuesday 2nd February 2016

Time	To Arm C - Drumgeith Road(E)				Veh. Total	From Arm C - Drumgeith Road(E)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	48	2	1	1	52	38	0	3	1	42
16:05	46	2	1	0	49	43	2	0	0	45
16:10	47	4	0	0	51	41	1	1	0	43
16:15	49	0	1	1	51	41	2	1	0	44
16:20	51	1	0	0	52	44	1	0	0	45
16:25	41	2	2	1	46	29	1	0	2	32
16:30	47	4	1	0	52	37	2	0	1	40
16:35	44	1	1	0	46	46	0	0	0	46
16:40	58	0	2	1	61	32	0	1	0	33
16:45	66	2	0	0	68	28	1	1	0	30
16:50	52	1	2	1	56	40	0	0	0	40
16:55	47	4	0	0	51	50	0	0	0	50
17:00	50	2	0	1	53	45	0	0	0	45
17:05	79	2	1	0	82	45	0	0	0	45
17:10	70	0	1	0	71	47	4	0	0	51
17:15	58	0	0	1	59	34	0	0	0	34
17:20	54	2	0	0	56	33	0	1	0	34
17:25	86	0	1	1	88	19	1	1	0	21
17:30	56	0	1	0	57	34	1	0	0	35
17:35	56	1	0	0	57	45	1	0	0	46
17:40	57	1	0	1	59	31	0	0	0	31
17:45	43	2	1	0	46	32	0	1	0	33
17:50	49	0	0	1	50	26	0	0	0	26
17:55	49	0	1	0	50	31	0	0	0	31
18:00	57	0	0	0	57	30	0	0	0	30
18:05	57	0	1	0	58	28	0	0	0	28
18:10	60	0	0	0	60	28	0	0	0	28
18:15	49	0	0	0	49	35	0	0	0	35
18:20	48	0	1	0	49	39	0	0	0	39
18:25	37	0	1	0	38	31	0	0	0	31
18:30	46	0	0	0	46	27	0	0	0	27
18:35	45	0	0	0	45	23	1	0	0	24
18:40	38	0	0	0	38	34	0	0	0	34
18:45	29	1	0	0	30	23	0	0	0	23
18:50	31	0	1	0	32	19	0	0	0	19
18:55	29	0	1	0	30	29	0	0	0	29
Total	1829	34	22	10	1895	1237	18	10	4	1269
Peak Hour	16:40	to	17:40							
16:40	58	0	2	1	61	32	0	1	0	33
16:45	66	2	0	0	68	28	1	1	0	30
16:50	52	1	2	1	56	40	0	0	0	40
16:55	47	4	0	0	51	50	0	0	0	50
17:00	50	2	0	1	53	45	0	0	0	45
17:05	79	2	1	0	82	45	0	0	0	45
17:10	70	0	1	0	71	47	4	0	0	51
17:15	58	0	0	1	59	34	0	0	0	34
17:20	54	2	0	0	56	33	0	1	0	34
17:25	86	0	1	1	88	19	1	1	0	21
17:30	56	0	1	0	57	34	1	0	0	35
17:35	56	1	0	0	57	45	1	0	0	46
Total	732	14	8	5	759	452	8	4	0	464

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	A to D - Forties Road(N) to Site Access				Veh. Total	A to C - Forties Road(N) to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	0	0	0	0	0	5	0	0	0	5
07:05	0	0	0	0	0	2	0	0	0	2
07:10	0	0	0	0	0	5	1	0	0	6
07:15	0	0	0	0	0	7	0	0	0	7
07:20	0	0	0	0	0	5	0	0	0	5
07:25	0	0	0	0	0	3	0	0	0	3
07:30	0	1	0	0	1	3	2	0	0	5
07:35	0	0	0	0	0	6	0	0	0	6
07:40	0	0	0	0	0	7	1	0	0	8
07:45	0	0	0	0	0	4	2	0	0	6
07:50	0	0	0	0	0	2	0	1	0	3
07:55	0	0	0	0	0	7	1	0	0	8
08:00	0	0	0	0	0	3	0	0	0	3
08:05	0	0	0	0	0	3	0	0	0	3
08:10	0	0	0	0	0	2	1	0	0	3
08:15	0	0	0	0	0	3	0	0	0	3
08:20	0	0	0	0	0	4	0	1	0	5
08:25	0	0	0	0	0	3	1	1	0	5
08:30	0	0	0	0	0	1	0	0	0	1
08:35	0	0	0	0	0	4	0	0	0	4
08:40	0	0	0	0	0	2	0	1	0	3
08:45	0	0	0	0	0	1	0	0	0	1
08:50	0	0	0	0	0	2	0	2	0	4
08:55	0	0	0	0	0	2	1	1	0	4
09:00	0	0	0	0	0	1	0	0	0	1
09:05	0	0	0	0	0	2	0	1	0	3
09:10	0	0	0	0	0	3	1	0	0	4
09:15	1	2	0	0	3	1	0	1	0	2
09:20	0	0	0	0	0	4	2	2	0	8
09:25	0	0	0	0	0	2	1	1	0	4
09:30	0	0	0	0	0	2	2	1	0	5
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	2	0	1	0	3
09:45	1	0	0	0	1	1	0	1	0	2
09:50	0	0	0	0	0	1	2	1	0	4
09:55	0	1	0	0	1	5	0	1	0	6
Total	2	4	0	0	6	110	18	17	0	145

Peak Hour 09:00 to 10:00

09:00	0	0	0	0	0	1	0	0	0	1
09:05	0	0	0	0	0	2	0	1	0	3
09:10	0	0	0	0	0	3	1	0	0	4
09:15	1	2	0	0	3	1	0	1	0	2
09:20	0	0	0	0	0	4	2	2	0	8
09:25	0	0	0	0	0	2	1	1	0	4
09:30	0	0	0	0	0	2	2	1	0	5
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	2	0	1	0	3
09:45	1	0	0	0	1	1	0	1	0	2
09:50	0	0	0	0	0	1	2	1	0	4
09:55	0	1	0	0	1	5	0	1	0	6
Total	2	3	0	0	5	24	8	10	0	42

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	A to D - Forties Road(N) to Site Access				Veh. Total	A to C - Forties Road(N) to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	1	0	1	0	2
16:05	0	0	0	0	0	1	1	1	0	3
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	1	0	0	0	1
16:20	0	0	0	0	0	1	0	1	0	2
16:25	0	0	0	0	0	1	0	0	0	1
16:30	0	0	0	0	0	0	1	0	0	1
16:35	0	0	0	0	0	1	0	0	0	1
16:40	0	0	0	0	0	0	1	0	0	1
16:45	0	0	0	0	0	1	0	0	0	1
16:50	0	0	0	0	0	1	0	0	0	1
16:55	0	0	0	0	0	1	0	1	0	2
17:00	0	0	0	0	0	1	0	0	0	1
17:05	0	0	0	0	0	0	0	1	0	1
17:10	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	0	0	0	0	1	0	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	1	0	0	0	1
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	1	0	0	1
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	12	4	5	0	21

Peak Hour 16:00 to 17:00

Time	A to D - Forties Road(N) to Site Access				Veh. Total	A to C - Forties Road(N) to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	1	0	1	0	2
16:05	0	0	0	0	0	1	1	1	0	3
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	1	0	0	0	1
16:20	0	0	0	0	0	1	0	1	0	2
16:25	0	0	0	0	0	1	0	0	0	1
16:30	0	0	0	0	0	0	1	0	0	1
16:35	0	0	0	0	0	1	0	0	0	1
16:40	0	0	0	0	0	0	1	0	0	1
16:45	0	0	0	0	0	1	0	0	0	1
16:50	0	0	0	0	0	1	0	0	0	1
16:55	0	0	0	0	0	1	0	1	0	2
Total	0	0	0	0	0	9	3	4	0	16

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	A to B - Forties Road(N) to Piper Street				Veh. Total	B to A - Piper Street to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	1	0	0	0	1	1	0	0	0	1
07:05	3	0	0	0	3	1	0	0	0	1
07:10	4	0	0	0	4	0	0	0	0	0
07:15	3	0	0	0	3	0	0	0	0	0
07:20	1	0	0	0	1	0	0	0	0	0
07:25	5	0	0	0	5	0	0	0	0	0
07:30	3	0	0	0	3	0	0	0	0	0
07:35	5	0	0	0	5	1	0	0	0	1
07:40	0	0	0	0	0	1	0	0	0	1
07:45	4	0	0	0	4	0	0	0	0	0
07:50	4	2	0	0	6	0	0	0	0	0
07:55	2	0	0	0	2	1	0	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0
08:05	1	0	0	0	1	0	1	0	0	1
08:10	1	1	0	0	2	0	1	0	0	1
08:15	1	0	0	0	1	0	2	0	0	2
08:20	1	0	0	0	1	0	1	0	0	1
08:25	1	0	0	0	1	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:35	1	0	0	0	1	0	1	0	0	1
08:40	0	0	0	0	0	0	1	0	0	1
08:45	3	1	0	0	4	1	0	0	0	1
08:50	0	0	0	0	0	0	0	0	0	0
08:55	2	1	0	0	3	1	0	0	0	1
09:00	3	0	0	0	3	3	0	0	0	3
09:05	3	0	0	0	3	4	2	0	0	6
09:10	2	0	0	0	2	1	0	0	0	1
09:15	4	2	0	0	6	4	0	0	0	4
09:20	3	1	0	0	4	5	0	0	0	5
09:25	3	0	0	0	3	3	1	0	0	4
09:30	4	1	1	0	6	2	1	0	0	3
09:35	4	1	0	0	5	4	0	1	0	5
09:40	5	0	0	0	5	0	1	0	0	1
09:45	4	0	0	0	4	5	0	0	0	5
09:50	5	0	0	0	5	5	1	0	0	6
09:55	5	0	0	0	5	5	0	0	0	5
Total	91	10	1	0	102	48	13	1	0	62
Peak Hour	09:00	to	10:00							
09:00	3	0	0	0	3	3	0	0	0	3
09:05	3	0	0	0	3	4	2	0	0	6
09:10	2	0	0	0	2	1	0	0	0	1
09:15	4	2	0	0	6	4	0	0	0	4
09:20	3	1	0	0	4	5	0	0	0	5
09:25	3	0	0	0	3	3	1	0	0	4
09:30	4	1	1	0	6	2	1	0	0	3
09:35	4	1	0	0	5	4	0	1	0	5
09:40	5	0	0	0	5	0	1	0	0	1
09:45	4	0	0	0	4	5	0	0	0	5
09:50	5	0	0	0	5	5	1	0	0	6
09:55	5	0	0	0	5	5	0	0	0	5
Total	45	5	1	0	51	41	6	1	0	48

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	A to B - Forties Road(N) to Piper Street				Veh. Total	B to A - Piper Street to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	2	1	0	0	3	7	0	0	0	7
16:05	4	1	0	0	5	5	0	0	0	5
16:10	3	0	0	0	3	5	3	0	0	8
16:15	2	0	0	0	2	8	1	0	0	9
16:20	3	0	0	0	3	2	0	0	0	2
16:25	2	0	0	0	2	3	0	0	0	3
16:30	2	0	0	0	2	9	0	0	0	9
16:35	0	0	0	0	0	3	0	0	0	3
16:40	2	0	0	0	2	4	0	0	0	4
16:45	2	0	0	0	2	1	0	0	0	1
16:50	1	0	0	0	1	0	0	0	0	0
16:55	2	0	0	0	2	1	0	0	0	1
17:00	0	0	0	0	0	1	0	0	0	1
17:05	0	1	0	0	1	1	1	0	0	2
17:10	0	0	0	0	0	1	0	0	0	1
17:15	0	0	0	0	0	1	0	0	0	1
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	1	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	1	0	0	1	0	0	0	0	0
17:45	1	0	0	0	1	2	1	0	0	3
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	1	0	0	0	1	1	0	0	0	1
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	27	4	0	0	31	56	6	0	0	62

Peak Hour 16:00 to 17:00

16:00	2	1	0	0	3	7	0	0	0	7
16:05	4	1	0	0	5	5	0	0	0	5
16:10	3	0	0	0	3	5	3	0	0	8
16:15	2	0	0	0	2	8	1	0	0	9
16:20	3	0	0	0	3	2	0	0	0	2
16:25	2	0	0	0	2	3	0	0	0	3
16:30	2	0	0	0	2	9	0	0	0	9
16:35	0	0	0	0	0	3	0	0	0	3
16:40	2	0	0	0	2	4	0	0	0	4
16:45	2	0	0	0	2	1	0	0	0	1
16:50	1	0	0	0	1	0	0	0	0	0
16:55	2	0	0	0	2	1	0	0	0	1
Total	25	2	0	0	27	48	4	0	0	52

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	B to D - Piper Street to Site Access				Veh. Total	B to C - Piper Street to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	0	0	0	0	0	0	0	0	0	0
07:05	0	0	0	0	0	0	0	0	0	0
07:10	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	0	0	0	0	0
07:25	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0
07:35	0	0	0	0	0	0	0	0	0	0
07:40	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0
07:50	0	0	0	0	0	0	0	0	0	0
07:55	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	0	0	0	0
08:05	0	0	0	0	0	0	0	0	0	0
08:10	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0
08:20	0	0	0	0	0	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:35	0	0	0	0	0	0	0	0	0	0
08:40	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0	0
08:55	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	3	0	0	0	3
09:40	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	1	0	0	1
09:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	1	0	0	4

Peak Hour	09:00	to	10:00							
09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	3	0	0	0	3
09:40	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	1	0	0	1
09:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	3	1	0	0	4

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	B to D - Piper Street to Site Access				Veh. Total	B to C - Piper Street to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	1	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	1	0	0	0	1
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0
17:05	0	0	0	0	0	0	0	0	0	0
17:10	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	0	0	0	0
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	0	0	2

Peak Hour 16:00 to 17:00

Time	B to D - Piper Street to Site Access				Veh. Total	B to C - Piper Street to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	1	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	1	0	0	0	1
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2	0	0	0	2

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	C to B - Forties Road(S) to Piper Street				Veh. Total	C to A - Forties Road(S) to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	0	0	0	0	0	1	0	0	0	1
07:05	0	0	0	0	0	1	0	0	0	1
07:10	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	0	0	0	0	0
07:25	0	0	0	0	0	0	2	0	0	2
07:30	0	0	0	0	0	0	0	1	0	1
07:35	0	0	0	0	0	2	7	0	0	9
07:40	0	0	0	0	0	2	5	0	0	7
07:45	0	0	0	0	0	1	0	0	0	1
07:50	0	0	0	0	0	0	1	0	0	1
07:55	0	0	0	0	0	0	2	0	0	2
08:00	0	0	0	0	0	1	2	0	0	3
08:05	0	0	0	0	0	2	1	1	0	4
08:10	0	0	0	0	0	2	0	0	0	2
08:15	0	0	0	0	0	0	1	0	0	1
08:20	0	0	0	0	0	1	0	0	0	1
08:25	0	0	0	0	0	1	0	0	0	1
08:30	0	0	0	0	0	4	0	1	0	5
08:35	0	0	0	0	0	2	1	1	0	4
08:40	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	1	0	1
08:50	0	0	0	0	0	0	0	0	0	0
08:55	0	0	0	0	0	1	0	1	0	2
09:00	0	0	0	0	0	3	1	0	0	4
09:05	0	0	0	0	0	1	1	3	0	5
09:10	0	0	0	0	0	1	0	0	0	1
09:15	1	0	0	0	1	0	2	1	0	3
09:20	0	0	0	0	0	1	0	0	0	1
09:25	0	0	1	0	1	4	0	1	0	5
09:30	0	0	0	0	0	1	2	0	0	3
09:35	0	0	0	0	0	0	2	1	0	3
09:40	0	0	0	0	0	3	0	1	0	4
09:45	0	0	0	0	0	2	0	2	0	4
09:50	0	0	0	0	0	1	0	0	0	1
09:55	0	1	0	0	1	5	0	0	0	5
Total	1	1	1	0	3	43	30	15	0	88
Peak Hour	09:00	to	10:00							
09:00	0	0	0	0	0	3	1	0	0	4
09:05	0	0	0	0	0	1	1	3	0	5
09:10	0	0	0	0	0	1	0	0	0	1
09:15	1	0	0	0	1	0	2	1	0	3
09:20	0	0	0	0	0	1	0	0	0	1
09:25	0	0	1	0	1	4	0	1	0	5
09:30	0	0	0	0	0	1	2	0	0	3
09:35	0	0	0	0	0	0	2	1	0	3
09:40	0	0	0	0	0	3	0	1	0	4
09:45	0	0	0	0	0	2	0	2	0	4
09:50	0	0	0	0	0	1	0	0	0	1
09:55	0	1	0	0	1	5	0	0	0	5
Total	1	1	1	0	3	22	8	9	0	39

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	C to B - Forties Road(S) to Piper Street				Veh. Total	C to A - Forties Road(S) to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	2	0	0	0	2
16:05	0	0	0	0	0	4	1	0	0	5
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	1	1	1	0	3
16:25	0	0	0	0	0	2	0	0	0	2
16:30	0	0	0	0	0	2	0	0	0	2
16:35	0	0	0	0	0	4	0	0	0	4
16:40	0	0	0	0	0	3	0	0	0	3
16:45	0	0	0	0	0	5	1	0	0	6
16:50	0	0	0	0	0	4	0	0	0	4
16:55	0	0	0	0	0	4	1	1	0	6
17:00	1	0	0	0	1	7	1	1	0	9
17:05	0	0	0	0	0	5	0	0	0	5
17:10	0	0	0	0	0	4	0	0	0	4
17:15	0	0	0	0	0	3	0	0	0	3
17:20	0	0	0	0	0	2	0	0	0	2
17:25	0	0	0	0	0	1	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	1	0	1	0	2
17:40	0	0	0	0	0	1	0	0	0	1
17:45	0	0	0	0	0	2	1	0	0	3
17:50	0	0	0	0	0	6	0	0	0	6
17:55	0	0	0	0	0	2	0	0	0	2
18:00	0	0	0	0	0	3	0	1	0	4
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	2	0	0	0	2
18:15	0	0	0	0	0	3	0	0	0	3
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	0	0	0	0
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	1	0	0	0	1
18:50	0	0	0	0	0	3	0	0	0	3
18:55	0	0	0	0	0	2	0	0	0	2
Total	1	0	0	0	1	79	6	5	0	90

Peak Hour	16:00	to	17:00							
16:00	0	0	0	0	0	2	0	0	0	2
16:05	0	0	0	0	0	4	1	0	0	5
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	1	1	1	0	3
16:25	0	0	0	0	0	2	0	0	0	2
16:30	0	0	0	0	0	2	0	0	0	2
16:35	0	0	0	0	0	4	0	0	0	4
16:40	0	0	0	0	0	3	0	0	0	3
16:45	0	0	0	0	0	5	1	0	0	6
16:50	0	0	0	0	0	4	0	0	0	4
16:55	0	0	0	0	0	4	1	1	0	6
Total	0	0	0	0	0	31	4	2	0	37

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	C to D - Forties Road(S) to Site Access				Veh. Total	D to C - Site Access to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	0	0	0	0	0	0	0	0	0	0
07:05	0	0	0	0	0	0	0	0	0	0
07:10	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	0	0	0	0	0
07:25	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0
07:35	0	0	0	0	0	0	0	0	0	0
07:40	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0
07:50	0	0	0	0	0	0	0	0	0	0
07:55	0	0	0	0	0	0	0	0	0	0
08:00	0	0	0	0	0	0	1	0	0	1
08:05	0	0	0	0	0	0	0	0	0	0
08:10	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0
08:20	0	0	0	0	0	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:35	0	0	0	0	0	0	0	0	0	0
08:40	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0	0
08:55	0	1	0	0	1	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	0	0	0	0
09:55	1	0	0	0	1	0	2	0	0	2
Total	1	1	0	0	2	0	3	0	0	3

Peak Hour 09:00 to 10:00

09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	0	0	0	0
09:55	1	0	0	0	1	0	2	0	0	2
Total	1	0	0	0	1	0	2	0	0	2

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	C to D - Forties Road(S) to Site Access				Veh. Total	D to C - Site Access to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	0	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0
17:05	0	0	0	0	0	0	0	0	0	0
17:10	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	0	0	0	0
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Peak Hour 16:00 to 17:00

Time	C to D - Forties Road(S) to Site Access				Veh. Total	D to C - Site Access to Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	0	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	D to B - Site Access to Piper Street				Veh. Total	D to A - Site Access to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	0	0	0	0	0	0	0	0	0	0
07:05	0	0	0	0	0	0	1	0	0	1
07:10	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	0	0	0	0	0
07:25	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0
07:35	0	0	0	0	0	0	1	0	0	1
07:40	0	0	0	0	0	5	0	0	0	5
07:45	0	0	0	0	0	0	1	0	0	1
07:50	0	0	0	0	0	0	1	0	0	1
07:55	0	0	0	0	0	0	1	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0
08:05	0	0	0	0	0	0	0	0	0	0
08:10	0	0	0	0	0	2	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0
08:20	0	0	0	0	0	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:35	0	0	0	0	0	0	0	0	0	0
08:40	0	0	0	0	0	0	1	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0	0
08:55	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	1	0	0	1
09:55	0	0	0	0	0	1	1	0	0	2
Total	0	0	0	0	0	8	8	0	0	16

Peak Hour	09:00	to	10:00							
09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0	0
09:45	0	0	0	0	0	0	0	0	0	0
09:50	0	0	0	0	0	0	1	0	0	1
09:55	0	0	0	0	0	1	1	0	0	2
Total	0	0	0	0	0	1	2	0	0	3

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	D to B - Site Access to Piper Street				Veh. Total	D to A - Site Access to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	0	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0
17:05	0	0	0	0	0	0	0	0	0	0
17:10	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	0	0	0	0
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Peak Hour 16:00 to 17:00

Time	D to B - Site Access to Piper Street				Veh. Total	D to A - Site Access to Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	0	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm A - Forties Road(N)				Veh. Total	From Arm A - Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	2	0	0	0	2	6	0	0	0	6
07:05	2	1	0	0	3	5	0	0	0	5
07:10	0	0	0	0	0	9	1	0	0	10
07:15	0	0	0	0	0	10	0	0	0	10
07:20	0	0	0	0	0	6	0	0	0	6
07:25	0	2	0	0	2	8	0	0	0	8
07:30	0	0	1	0	1	6	3	0	0	9
07:35	3	8	0	0	11	11	0	0	0	11
07:40	8	5	0	0	13	7	1	0	0	8
07:45	1	1	0	0	2	8	2	0	0	10
07:50	0	2	0	0	2	6	2	1	0	9
07:55	1	3	0	0	4	9	1	0	0	10
08:00	1	2	0	0	3	3	0	0	0	3
08:05	2	2	1	0	5	4	0	0	0	4
08:10	4	1	0	0	5	3	2	0	0	5
08:15	0	3	0	0	3	4	0	0	0	4
08:20	1	1	0	0	2	5	0	1	0	6
08:25	1	0	0	0	1	4	1	1	0	6
08:30	4	0	1	0	5	1	0	0	0	1
08:35	2	2	1	0	5	5	0	0	0	5
08:40	0	2	0	0	2	2	0	1	0	3
08:45	1	0	1	0	2	4	1	0	0	5
08:50	0	0	0	0	0	2	0	2	0	4
08:55	2	0	1	0	3	4	2	1	0	7
09:00	6	1	0	0	7	4	0	0	0	4
09:05	5	3	3	0	11	5	0	1	0	6
09:10	2	0	0	0	2	5	1	0	0	6
09:15	4	2	1	0	7	6	4	1	0	11
09:20	6	0	0	0	6	7	3	2	0	12
09:25	7	1	1	0	9	5	1	1	0	7
09:30	3	3	0	0	6	6	3	2	0	11
09:35	4	2	2	0	8	4	1	0	0	5
09:40	3	1	1	0	5	7	0	1	0	8
09:45	7	0	2	0	9	6	0	1	0	7
09:50	6	2	0	0	8	6	2	1	0	9
09:55	11	1	0	0	12	10	1	1	0	12
Total	99	51	16	0	166	203	32	18	0	253
Peak Hour	09:00	to	10:00							
09:00	6	1	0	0	7	4	0	0	0	4
09:05	5	3	3	0	11	5	0	1	0	6
09:10	2	0	0	0	2	5	1	0	0	6
09:15	4	2	1	0	7	6	4	1	0	11
09:20	6	0	0	0	6	7	3	2	0	12
09:25	7	1	1	0	9	5	1	1	0	7
09:30	3	3	0	0	6	6	3	2	0	11
09:35	4	2	2	0	8	4	1	0	0	5
09:40	3	1	1	0	5	7	0	1	0	8
09:45	7	0	2	0	9	6	0	1	0	7
09:50	6	2	0	0	8	6	2	1	0	9
09:55	11	1	0	0	12	10	1	1	0	12
Total	64	16	10	0	90	71	16	11	0	98

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm A - Forties Road(N)				Veh. Total	From Arm A - Forties Road(N)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	9	0	0	0	9	3	1	1	0	5
16:05	9	1	0	0	10	5	2	1	0	8
16:10	5	3	0	0	8	3	0	0	0	3
16:15	8	1	0	0	9	3	0	0	0	3
16:20	3	1	1	0	5	4	0	1	0	5
16:25	5	0	0	0	5	3	0	0	0	3
16:30	11	0	0	0	11	2	1	0	0	3
16:35	7	0	0	0	7	1	0	0	0	1
16:40	7	0	0	0	7	2	1	0	0	3
16:45	6	1	0	0	7	3	0	0	0	3
16:50	4	0	0	0	4	2	0	0	0	2
16:55	5	1	1	0	7	3	0	1	0	4
17:00	8	1	1	0	10	1	0	0	0	1
17:05	6	1	0	0	7	0	1	1	0	2
17:10	5	0	0	0	5	0	0	0	0	0
17:15	4	0	0	0	4	0	0	0	0	0
17:20	2	0	0	0	2	0	0	0	0	0
17:25	2	0	0	0	2	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:35	1	0	1	0	2	0	0	0	0	0
17:40	1	0	0	0	1	1	1	0	0	2
17:45	4	2	0	0	6	1	0	0	0	1
17:50	6	0	0	0	6	0	0	0	0	0
17:55	2	0	0	0	2	1	0	0	0	1
18:00	3	0	1	0	4	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	2	0	0	0	2	0	0	0	0	0
18:15	3	0	0	0	3	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	1	0	0	0	1	1	1	0	0	2
18:40	0	0	0	0	0	0	0	0	0	0
18:45	1	0	0	0	1	0	0	0	0	0
18:50	3	0	0	0	3	0	0	0	0	0
18:55	2	0	0	0	2	0	0	0	0	0
Total	135	12	5	0	152	39	8	5	0	52
Peak Hour	16:00	to	17:00							
16:00	9	0	0	0	9	3	1	1	0	5
16:05	9	1	0	0	10	5	2	1	0	8
16:10	5	3	0	0	8	3	0	0	0	3
16:15	8	1	0	0	9	3	0	0	0	3
16:20	3	1	1	0	5	4	0	1	0	5
16:25	5	0	0	0	5	3	0	0	0	3
16:30	11	0	0	0	11	2	1	0	0	3
16:35	7	0	0	0	7	1	0	0	0	1
16:40	7	0	0	0	7	2	1	0	0	3
16:45	6	1	0	0	7	3	0	0	0	3
16:50	4	0	0	0	4	2	0	0	0	2
16:55	5	1	1	0	7	3	0	1	0	4
Total	79	8	2	0	89	34	5	4	0	43

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm B - Piper Street				Veh. Total	From Arm B - Piper Street				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	1	0	0	0	1	1	0	0	0	1
07:05	3	0	0	0	3	1	0	0	0	1
07:10	4	0	0	0	4	0	0	0	0	0
07:15	3	0	0	0	3	0	0	0	0	0
07:20	1	0	0	0	1	0	0	0	0	0
07:25	5	0	0	0	5	0	0	0	0	0
07:30	3	0	0	0	3	0	0	0	0	0
07:35	5	0	0	0	5	1	0	0	0	1
07:40	0	0	0	0	0	1	0	0	0	1
07:45	4	0	0	0	4	0	0	0	0	0
07:50	4	2	0	0	6	0	0	0	0	0
07:55	2	0	0	0	2	1	0	0	0	1
08:00	0	0	0	0	0	0	0	0	0	0
08:05	1	0	0	0	1	0	1	0	0	1
08:10	1	1	0	0	2	0	1	0	0	1
08:15	1	0	0	0	1	0	2	0	0	2
08:20	1	0	0	0	1	0	1	0	0	1
08:25	1	0	0	0	1	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:35	1	0	0	0	1	0	1	0	0	1
08:40	0	0	0	0	0	0	1	0	0	1
08:45	3	1	0	0	4	1	0	0	0	1
08:50	0	0	0	0	0	0	0	0	0	0
08:55	2	1	0	0	3	1	0	0	0	1
09:00	3	0	0	0	3	3	0	0	0	3
09:05	3	0	0	0	3	4	2	0	0	6
09:10	2	0	0	0	2	1	0	0	0	1
09:15	5	2	0	0	7	4	0	0	0	4
09:20	3	1	0	0	4	5	0	0	0	5
09:25	3	0	1	0	4	3	1	0	0	4
09:30	4	1	1	0	6	2	1	0	0	3
09:35	4	1	0	0	5	7	0	1	0	8
09:40	5	0	0	0	5	0	1	0	0	1
09:45	4	0	0	0	4	5	0	0	0	5
09:50	5	0	0	0	5	5	2	0	0	7
09:55	5	1	0	0	6	5	0	0	0	5
Total	92	11	2	0	105	51	14	1	0	66

Peak Hour 09:00 to 10:00

09:00	3	0	0	0	3	3	0	0	0	3
09:05	3	0	0	0	3	4	2	0	0	6
09:10	2	0	0	0	2	1	0	0	0	1
09:15	5	2	0	0	7	4	0	0	0	4
09:20	3	1	0	0	4	5	0	0	0	5
09:25	3	0	1	0	4	3	1	0	0	4
09:30	4	1	1	0	6	2	1	0	0	3
09:35	4	1	0	0	5	7	0	1	0	8
09:40	5	0	0	0	5	0	1	0	0	1
09:45	4	0	0	0	4	5	0	0	0	5
09:50	5	0	0	0	5	5	2	0	0	7
09:55	5	1	0	0	6	5	0	0	0	5
Total	46	6	2	0	54	44	7	1	0	52

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm B - Piper Street				Veh. Total	From Arm B - Piper Street				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	2	1	0	0	3	7	0	0	0	7
16:05	4	1	0	0	5	5	0	0	0	5
16:10	3	0	0	0	3	5	3	0	0	8
16:15	2	0	0	0	2	8	1	0	0	9
16:20	3	0	0	0	3	2	0	0	0	2
16:25	2	0	0	0	2	4	0	0	0	4
16:30	2	0	0	0	2	9	0	0	0	9
16:35	0	0	0	0	0	4	0	0	0	4
16:40	2	0	0	0	2	4	0	0	0	4
16:45	2	0	0	0	2	1	0	0	0	1
16:50	1	0	0	0	1	0	0	0	0	0
16:55	2	0	0	0	2	1	0	0	0	1
17:00	1	0	0	0	1	1	0	0	0	1
17:05	0	1	0	0	1	1	1	0	0	2
17:10	0	0	0	0	0	1	0	0	0	1
17:15	0	0	0	0	0	1	0	0	0	1
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	1	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	1	0	0	1	0	0	0	0	0
17:45	1	0	0	0	1	2	1	0	0	3
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	1	0	0	0	1	1	0	0	0	1
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	28	4	0	0	32	58	6	0	0	64

Peak Hour 16:00 to 17:00

16:00	2	1	0	0	3	7	0	0	0	7
16:05	4	1	0	0	5	5	0	0	0	5
16:10	3	0	0	0	3	5	3	0	0	8
16:15	2	0	0	0	2	8	1	0	0	9
16:20	3	0	0	0	3	2	0	0	0	2
16:25	2	0	0	0	2	4	0	0	0	4
16:30	2	0	0	0	2	9	0	0	0	9
16:35	0	0	0	0	0	4	0	0	0	4
16:40	2	0	0	0	2	4	0	0	0	4
16:45	2	0	0	0	2	1	0	0	0	1
16:50	1	0	0	0	1	0	0	0	0	0
16:55	2	0	0	0	2	1	0	0	0	1
Total	25	2	0	0	27	50	4	0	0	54

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm C - Forties Road(S)				Veh. Total	From Arm C - Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	5	0	0	0	5	1	0	0	0	1
07:05	2	0	0	0	2	1	0	0	0	1
07:10	5	1	0	0	6	0	0	0	0	0
07:15	7	0	0	0	7	0	0	0	0	0
07:20	5	0	0	0	5	0	0	0	0	0
07:25	3	0	0	0	3	0	2	0	0	2
07:30	3	2	0	0	5	0	0	1	0	1
07:35	6	0	0	0	6	2	7	0	0	9
07:40	7	1	0	0	8	2	5	0	0	7
07:45	4	2	0	0	6	1	0	0	0	1
07:50	2	0	1	0	3	0	1	0	0	1
07:55	7	1	0	0	8	0	2	0	0	2
08:00	3	1	0	0	4	1	2	0	0	3
08:05	3	0	0	0	3	2	1	1	0	4
08:10	2	1	0	0	3	2	0	0	0	2
08:15	3	0	0	0	3	0	1	0	0	1
08:20	4	0	1	0	5	1	0	0	0	1
08:25	3	1	1	0	5	1	0	0	0	1
08:30	1	0	0	0	1	4	0	1	0	5
08:35	4	0	0	0	4	2	1	1	0	4
08:40	2	0	1	0	3	0	0	0	0	0
08:45	1	0	0	0	1	0	0	1	0	1
08:50	2	0	2	0	4	0	0	0	0	0
08:55	2	1	1	0	4	1	1	1	0	3
09:00	1	0	0	0	1	3	1	0	0	4
09:05	2	0	1	0	3	1	1	3	0	5
09:10	3	1	0	0	4	1	0	0	0	1
09:15	1	0	1	0	2	1	2	1	0	4
09:20	4	2	2	0	8	1	0	0	0	1
09:25	2	1	1	0	4	4	0	2	0	6
09:30	2	2	1	0	5	1	2	0	0	3
09:35	3	0	0	0	3	0	2	1	0	3
09:40	2	0	1	0	3	3	0	1	0	4
09:45	1	0	1	0	2	2	0	2	0	4
09:50	1	3	1	0	5	1	0	0	0	1
09:55	5	2	1	0	8	6	1	0	0	7
Total	113	22	17	0	152	45	32	16	0	93
Peak Hour	09:00	to	10:00							
09:00	1	0	0	0	1	3	1	0	0	4
09:05	2	0	1	0	3	1	1	3	0	5
09:10	3	1	0	0	4	1	0	0	0	1
09:15	1	0	1	0	2	1	2	1	0	4
09:20	4	2	2	0	8	1	0	0	0	1
09:25	2	1	1	0	4	4	0	2	0	6
09:30	2	2	1	0	5	1	2	0	0	3
09:35	3	0	0	0	3	0	2	1	0	3
09:40	2	0	1	0	3	3	0	1	0	4
09:45	1	0	1	0	2	2	0	2	0	4
09:50	1	3	1	0	5	1	0	0	0	1
09:55	5	2	1	0	8	6	1	0	0	7
Total	27	11	10	0	48	24	9	10	0	43

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm C - Forties Road(S)				Veh. Total	From Arm C - Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	1	0	1	0	2	2	0	0	0	2
16:05	1	1	1	0	3	4	1	0	0	5
16:10	0	0	0	0	0	0	0	0	0	0
16:15	1	0	0	0	1	0	0	0	0	0
16:20	1	0	1	0	2	1	1	1	0	3
16:25	2	0	0	0	2	2	0	0	0	2
16:30	0	1	0	0	1	2	0	0	0	2
16:35	2	0	0	0	2	4	0	0	0	4
16:40	0	1	0	0	1	3	0	0	0	3
16:45	1	0	0	0	1	5	1	0	0	6
16:50	1	0	0	0	1	4	0	0	0	4
16:55	1	0	1	0	2	4	1	1	0	6
17:00	1	0	0	0	1	8	1	1	0	10
17:05	0	0	1	0	1	5	0	0	0	5
17:10	0	0	0	0	0	4	0	0	0	4
17:15	0	0	0	0	0	3	0	0	0	3
17:20	0	0	0	0	0	2	0	0	0	2
17:25	0	0	0	0	0	1	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	1	0	1	0	2
17:40	1	0	0	0	1	1	0	0	0	1
17:45	0	0	0	0	0	2	1	0	0	3
17:50	0	0	0	0	0	6	0	0	0	6
17:55	1	0	0	0	1	2	0	0	0	2
18:00	0	0	0	0	0	3	0	1	0	4
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	2	0	0	0	2
18:15	0	0	0	0	0	3	0	0	0	3
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	1	0	0	1	0	0	0	0	0
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	1	0	0	0	1
18:50	0	0	0	0	0	3	0	0	0	3
18:55	0	0	0	0	0	2	0	0	0	2
Total	14	4	5	0	23	80	6	5	0	91

Peak Hour 16:00 to 17:00

Time	To Arm C - Forties Road(S)				Veh. Total	From Arm C - Forties Road(S)				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	1	0	1	0	2	2	0	0	0	2
16:05	1	1	1	0	3	4	1	0	0	5
16:10	0	0	0	0	0	0	0	0	0	0
16:15	1	0	0	0	1	0	0	0	0	0
16:20	1	0	1	0	2	1	1	1	0	3
16:25	2	0	0	0	2	2	0	0	0	2
16:30	0	1	0	0	1	2	0	0	0	2
16:35	2	0	0	0	2	4	0	0	0	4
16:40	0	1	0	0	1	3	0	0	0	3
16:45	1	0	0	0	1	5	1	0	0	6
16:50	1	0	0	0	1	4	0	0	0	4
16:55	1	0	1	0	2	4	1	1	0	6
Total	11	3	4	0	18	31	4	2	0	37

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm D - Site Access				Veh. Total	From Arm D - Site Access				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
07:00	0	0	0	0	0	0	0	0	0	0
07:05	0	0	0	0	0	0	1	0	0	1
07:10	0	0	0	0	0	0	0	0	0	0
07:15	0	0	0	0	0	0	0	0	0	0
07:20	0	0	0	0	0	0	0	0	0	0
07:25	0	0	0	0	0	0	0	0	0	0
07:30	0	1	0	0	1	0	0	0	0	0
07:35	0	0	0	0	0	0	1	0	0	1
07:40	0	0	0	0	0	5	0	0	0	5
07:45	0	0	0	0	0	0	1	0	0	1
07:50	0	0	0	0	0	0	1	0	0	1
07:55	0	0	0	0	0	0	1	0	0	1
08:00	0	0	0	0	0	0	1	0	0	1
08:05	0	0	0	0	0	0	0	0	0	0
08:10	0	0	0	0	0	2	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0
08:20	0	0	0	0	0	0	0	0	0	0
08:25	0	0	0	0	0	0	0	0	0	0
08:30	0	0	0	0	0	0	0	0	0	0
08:35	0	0	0	0	0	0	0	0	0	0
08:40	0	0	0	0	0	0	1	0	0	1
08:45	0	0	0	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0	0
08:55	0	1	0	0	1	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	1	2	0	0	3	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0	0
09:45	1	0	0	0	1	0	0	0	0	0
09:50	0	0	0	0	0	0	1	0	0	1
09:55	1	1	0	0	2	1	3	0	0	4
Total	3	5	0	0	8	8	11	0	0	19

Peak Hour 09:00 to 10:00

09:00	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0
09:10	0	0	0	0	0	0	0	0	0	0
09:15	1	2	0	0	3	0	0	0	0	0
09:20	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0
09:35	0	0	0	0	0	0	0	0	0	0
09:40	0	0	0	0	0	0	0	0	0	0
09:45	1	0	0	0	1	0	0	0	0	0
09:50	0	0	0	0	0	0	1	0	0	1
09:55	1	1	0	0	2	1	3	0	0	4
Total	3	3	0	0	6	1	4	0	0	5

Site No. 4
Location Forties Road(N) / Piper Street / Forties Road(S) / Site Access
Date Tuesday 2nd February 2016

Time	To Arm D - Site Access				Veh. Total	From Arm D - Site Access				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	0	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0
17:05	0	0	0	0	0	0	0	0	0	0
17:10	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0
17:20	0	0	0	0	0	0	0	0	0	0
17:25	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0
17:35	0	0	0	0	0	0	0	0	0	0
17:40	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0
17:50	0	0	0	0	0	0	0	0	0	0
17:55	0	0	0	0	0	0	0	0	0	0
18:00	0	0	0	0	0	0	0	0	0	0
18:05	0	0	0	0	0	0	0	0	0	0
18:10	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0
18:20	0	0	0	0	0	0	0	0	0	0
18:25	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0
18:35	0	0	0	0	0	0	0	0	0	0
18:40	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0
18:50	0	0	0	0	0	0	0	0	0	0
18:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Peak Hour 16:00 to 17:00

Time	To Arm D - Site Access				Veh. Total	From Arm D - Site Access				Veh. Total
	LV	OGV1	OGV2	PSV		LV	OGV1	OGV2	PSV	
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	0	0	0	0	0	0	0
16:10	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0
16:20	0	0	0	0	0	0	0	0	0	0
16:25	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0
16:35	0	0	0	0	0	0	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0

Appendix C

Junction Model Results

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 1 - Drumgeith Road_Forties Road.j9
Path: J:\240000\245000\245510-02\04 DELIVERABLES\4-04 Calcs\Modelling Files
Report generation date: 13/10/2016 12:00:27

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Base 2020							
Stream B-C	0.2	11.59	0.12	B	0.1	5.91	0.10	A
Stream B-A	0.2	22.87	0.15	C	0.1	11.56	0.06	B
Stream C-AB	0.7	6.17	0.23	A	0.1	4.14	0.07	A
Stream C-A								
Stream A-B								
Stream A-C								
	Total 2020							
Stream B-C	0.2	11.86	0.13	B	0.1	6.11	0.11	A
Stream B-A	0.3	23.91	0.17	C	0.1	12.37	0.07	B
Stream C-AB	0.8	6.53	0.26	A	0.3	4.15	0.11	A
Stream C-A								
Stream A-B								
Stream A-C								

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	Drumgeith Road / Forties Road
Location	Dundee
Site number	
Date	13/10/2016
Version	
Status	(new file)
Identifier	
Client	MVV
Jobnumber	245510-02
Enumerator	GLOBAL"matthew.cook
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
Base 2020	AM	ONE HOUR	07:20	08:50	15
Base 2020	PM	ONE HOUR	16:15	17:45	15
Total 2020	AM	ONE HOUR	07:20	08:50	15
Total 2020	PM	ONE HOUR	16:15	17:45	15

Base 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Forties Road	T-Junction	Two-way	1.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Drumgeith Road (E)		Major
B	Forties Road		Minor
C	Drumgeith 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	7.30			250.0	✓	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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	8.30	4.93	3.70	3.63	✓	2.00	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	725.676	0.125	0.315	0.198	0.450
1	B-C	885.569	0.128	0.324	-	-
1	C-B	718.741	0.263	0.263	-	-

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	Base 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	921.00	100.000
B		✓	62.00	100.000
C		✓	494.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	26.000	895.000
	B	25.000	0.000	37.000
	C	435.000	59.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	19	3
	B	44	0	51
	C	7	12	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.12	11.59	0.2	B
B-A	0.15	22.87	0.2	C
C-AB	0.23	6.17	0.7	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	42.06	647.03	0.065	41.65	0.1	8.974	A
B-A	27.10	412.10	0.066	26.70	0.1	13.437	B
C-AB	89.73	775.99	0.116	88.70	0.3	5.745	A
C-A	310.43			310.43			
A-B	23.29			23.29			
A-C	694.02			694.02			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	50.23	599.12	0.084	50.09	0.1	9.899	A
B-A	32.36	350.89	0.092	32.19	0.1	16.256	C
C-AB	123.60	794.75	0.156	123.08	0.4	5.880	A
C-A	354.23			354.23			
A-B	27.81			27.81			
A-C	828.72			828.72			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	61.51	530.84	0.116	61.28	0.2	11.570	B
B-A	39.64	266.46	0.149	39.23	0.2	22.773	C
C-AB	189.97	828.21	0.229	188.80	0.7	6.160	A
C-A	395.25			395.25			
A-B	34.07			34.07			
A-C	1014.98			1014.98			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	61.51	530.46	0.116	61.51	0.2	11.591	B
B-A	39.64	266.21	0.149	39.62	0.2	22.874	C
C-AB	190.52	828.86	0.230	190.49	0.7	6.168	A
C-A	394.70			394.70			
A-B	34.07			34.07			
A-C	1014.98			1014.98			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	50.23	598.62	0.084	50.45	0.1	9.920	A
B-A	32.36	350.57	0.092	32.76	0.1	16.332	C
C-AB	124.16	795.62	0.156	125.31	0.4	5.876	A
C-A	353.67			353.67			
A-B	27.81			27.81			
A-C	828.72			828.72			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	42.06	646.59	0.065	42.20	0.1	8.997	A
B-A	27.10	411.72	0.066	27.29	0.1	13.493	B
C-AB	90.37	776.57	0.116	90.91	0.3	5.761	A
C-A	309.80			309.80			
A-B	23.29			23.29			
A-C	694.02			694.02			

Base 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Forties Road	T-Junction	Two-way	0.62	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	Base 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	423.00	100.000
B		✓	80.00	100.000
C		✓	833.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	3.000	420.000
	B	17.000	0.000	63.000
	C	817.000	16.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	0	4
	B	12	0	5
	C	3	25	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.10	5.91	0.1	A
B-A	0.06	11.56	0.1	B
C-AB	0.07	4.14	0.1	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	49.80	766.07	0.065	49.51	0.1	5.272	A
B-A	14.33	476.32	0.030	14.20	0.0	8.722	A
C-AB	32.49	1008.42	0.032	32.30	0.0	4.136	A
C-A	616.10			616.10			
A-B	2.26			2.26			
A-C	328.85			328.85			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	59.47	743.79	0.080	59.39	0.1	5.523	A
B-A	17.12	431.64	0.040	17.07	0.0	9.724	A
C-AB	51.10	1090.88	0.047	50.98	0.1	3.833	A
C-A	723.38			723.38			
A-B	2.70			2.70			
A-C	392.67			392.67			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	72.83	712.57	0.102	72.72	0.1	5.908	A
B-A	20.96	369.85	0.057	20.88	0.1	11.551	B
C-AB	77.74	1169.39	0.066	77.56	0.1	3.593	A
C-A	870.80			870.80			
A-B	3.30			3.30			
A-C	480.93			480.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	72.83	712.50	0.102	72.83	0.1	5.908	A
B-A	20.96	369.84	0.057	20.96	0.1	11.556	B
C-AB	77.83	1169.47	0.067	77.83	0.1	3.577	A
C-A	870.71			870.71			
A-B	3.30			3.30			
A-C	480.93			480.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	59.47	743.69	0.080	59.58	0.1	5.527	A
B-A	17.12	431.62	0.040	17.20	0.0	9.730	A
C-AB	51.20	1091.02	0.047	51.38	0.1	3.771	A
C-A	723.28			723.28			
A-B	2.70			2.70			
A-C	392.67			392.67			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	49.80	765.93	0.065	49.87	0.1	5.278	A
B-A	14.33	476.31	0.030	14.38	0.0	8.729	A
C-AB	32.62	1008.52	0.032	32.73	0.0	4.082	A
C-A	615.97			615.97			
A-B	2.26			2.26			
A-C	328.85			328.85			

Total 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Forties Road	T-Junction	Two-way	1.74	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Total 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	924.00	100.000
B		✓	68.00	100.000
C		✓	501.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	29.000	895.000
	B	28.000	0.000	40.000
	C	435.000	66.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	24	3
	B	44	0	51
	C	7	15	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.13	11.86	0.2	B
B-A	0.17	23.91	0.3	C
C-AB	0.26	6.53	0.8	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	45.47	643.92	0.071	45.02	0.1	9.070	A
B-A	30.36	409.12	0.074	29.90	0.1	13.649	B
C-AB	103.15	775.19	0.133	101.95	0.3	5.949	A
C-A	304.40			304.40			
A-B	27.07			27.07			
A-C	694.02			694.02			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	54.30	595.28	0.091	54.15	0.1	10.043	B
B-A	36.25	347.07	0.104	36.04	0.2	16.656	C
C-AB	142.16	793.89	0.179	141.55	0.5	6.134	A
C-A	344.50			344.50			
A-B	32.33			32.33			
A-C	828.72			828.72			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66.50	525.57	0.127	66.24	0.2	11.830	B
B-A	44.39	261.37	0.170	43.91	0.3	23.787	C
C-AB	218.68	827.27	0.264	217.26	0.8	6.530	A
C-A	377.35			377.35			
A-B	39.59			39.59			
A-C	1014.98			1014.98			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66.50	524.91	0.127	66.49	0.2	11.857	B
B-A	44.39	261.17	0.170	44.38	0.3	23.906	C
C-AB	219.37	828.05	0.265	219.33	0.8	6.534	A
C-A	376.67			376.67			
A-B	39.59			39.59			
A-C	1014.98			1014.98			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	54.30	594.30	0.091	54.55	0.2	10.077	B
B-A	36.25	346.92	0.104	36.72	0.2	16.736	C
C-AB	142.84	794.93	0.180	144.24	0.5	6.121	A
C-A	343.82			343.82			
A-B	32.33			32.33			
A-C	828.72			828.72			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	45.47	643.09	0.071	45.62	0.1	9.100	A
B-A	30.36	408.89	0.074	30.57	0.1	13.712	B
C-AB	103.90	775.87	0.134	104.53	0.3	5.959	A
C-A	303.66			303.66			
A-B	27.07			27.07			
A-C	694.02			694.02			

Total 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Forties Road	T-Junction	Two-way	0.78	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Total 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	426.00	100.000
B		✓	86.00	100.000
C		✓	840.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	6.000	420.000
	B	19.000	0.000	67.000
	C	817.000	23.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	33	4
	B	17	0	7
	C	3	30	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.11	6.11	0.1	A
B-A	0.07	12.37	0.1	B
C-AB	0.11	4.15	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	53.97	763.70	0.071	53.65	0.1	5.422	A
B-A	16.74	473.60	0.035	16.57	0.0	9.213	A
C-AB	54.27	1030.48	0.053	53.91	0.1	4.154	A
C-A	601.77			601.77			
A-B	6.01			6.01			
A-C	328.85			328.85			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	64.45	741.03	0.087	64.37	0.1	5.692	A
B-A	19.98	428.06	0.047	19.93	0.1	10.319	B
C-AB	76.53	1090.24	0.070	76.35	0.1	3.970	A
C-A	706.85			706.85			
A-B	7.17			7.17			
A-C	392.67			392.67			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	78.93	709.15	0.111	78.80	0.1	6.109	A
B-A	24.48	365.11	0.067	24.37	0.1	12.357	B
C-AB	127.87	1191.06	0.107	127.39	0.3	3.715	A
C-A	831.57			831.57			
A-B	8.79			8.79			
A-C	480.93			480.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	78.93	709.06	0.111	78.93	0.1	6.112	A
B-A	24.48	365.03	0.067	24.47	0.1	12.367	B
C-AB	128.11	1191.29	0.108	128.11	0.3	3.689	A
C-A	831.33			831.33			
A-B	8.79			8.79			
A-C	480.93			480.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	64.45	740.90	0.087	64.57	0.1	5.698	A
B-A	19.98	427.96	0.047	20.09	0.1	10.328	B
C-AB	76.75	1090.55	0.070	77.24	0.1	3.894	A
C-A	706.63			706.63			
A-B	7.17			7.17			
A-C	392.67			392.67			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	53.97	763.53	0.071	54.05	0.1	5.431	A
B-A	16.74	473.54	0.035	16.79	0.0	9.224	A
C-AB	54.55	1030.69	0.053	54.72	0.1	4.122	A
C-A	601.49			601.49			
A-B	6.01			6.01			
A-C	328.85			328.85			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: Junction 2 - Drumgeith Road_Kellas Road_Baldovie Road.j9
Path: J:\240000\245000\245510-02\04 DELIVERABLES\4-04 Calcs\Modelling Files
Report generation date: 13/10/2016 12:15:06

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Base 2020							
Stream B-C	0.6	10.24	0.35	B	0.3	7.13	0.23	A
Stream B-A	20.8	138.00	1.03	F	0.5	11.73	0.32	B
Stream C-AB	0.2	8.19	0.15	A	0.5	9.67	0.32	A
Stream C-A								
Stream A-B								
Stream A-C								
	Total 2020							
Stream B-C	0.6	10.29	0.35	B	0.3	7.13	0.23	A
Stream B-A	22.1	145.49	1.04	F	0.5	11.77	0.32	B
Stream C-AB	0.2	8.22	0.15	A	0.5	9.67	0.32	A
Stream C-A								
Stream A-B								
Stream A-C								

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	Drumgeith Road / Kellas Road / Baldovie Road
Location	Dundee
Site number	
Date	13/10/2016
Version	
Status	(new file)
Identifier	
Client	MVV
Jobnumber	245510-02
Enumerator	GLOBAL"matthew.cook
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
Base 2020	AM	ONE HOUR	07:20	08:50	15
Base 2020	PM	ONE HOUR	16:15	17:45	15
Total 2020	AM	ONE HOUR	07:20	08:50	15
Total 2020	PM	ONE HOUR	16:15	17:45	15

Base 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Kellas Road / Baldovie Road	T-Junction	Two-way	40.65	E

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Drumgeith Road		Major
B	Kellas Road		Minor
C	Baldovie Road		Major

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)
C	10.00		✓	3.50	60.0	✓	2.00

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 (Left) (m)	Lane Width (Right) (m)	Visibility to left (m)	Visibility to right (m)
B	Two lanes	4.89	4.89	250	250

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	828.912	0.125	0.315	0.198	0.450
1	B-C	929.162	0.118	0.297	-	-
1	C-B	694.833	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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	Base 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	603.00	100.000
B		✓	649.00	100.000
C		✓	393.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	97.000	506.000
	B	477.000	0.000	172.000
	C	322.000	71.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	12	4
	B	2	0	3
	C	5	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.35	10.24	0.6	B
B-A	1.03	138.00	20.8	F
C-AB	0.15	8.19	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	133.38	682.91	0.195	132.38	0.2	6.723	A
B-A	366.29	617.85	0.593	360.57	1.4	13.983	B
C-AB	56.96	591.62	0.096	56.51	0.1	7.124	A
C-A	254.24			254.24			
A-B	81.79			81.79			
A-C	396.18			396.18			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	159.26	627.74	0.254	158.87	0.3	7.902	A
B-A	437.39	576.68	0.758	431.53	2.9	24.337	C
C-AB	68.31	573.42	0.119	68.19	0.1	7.550	A
C-A	303.29			303.29			
A-B	97.67			97.67			
A-C	473.08			473.08			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	195.06	557.10	0.350	194.26	0.5	10.197	B
B-A	535.69	519.99	1.030	491.93	13.8	80.280	F
C-AB	84.53	550.28	0.154	84.33	0.2	8.185	A
C-A	370.59			370.59			
A-B	119.61			119.61			
A-C	579.40			579.40			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	195.06	557.10	0.350	195.04	0.6	10.239	B
B-A	535.69	519.90	1.030	507.84	20.8	138.003	F
C-AB	84.53	550.26	0.154	84.53	0.2	8.193	A
C-A	370.59			370.59			
A-B	119.61			119.61			
A-C	579.40			579.40			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	159.26	601.60	0.265	159.96	0.4	8.410	A
B-A	437.39	576.54	0.759	505.49	3.8	69.108	F
C-AB	68.31	573.38	0.119	68.51	0.1	7.562	A
C-A	303.29			303.29			
A-B	97.67			97.67			
A-C	473.08			473.08			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	133.38	677.96	0.197	133.86	0.3	6.820	A
B-A	366.29	617.59	0.593	375.22	1.5	15.663	C
C-AB	56.96	591.61	0.096	57.08	0.1	7.142	A
C-A	254.24			254.24			
A-B	81.79			81.79			
A-C	396.18			396.18			

Base 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Kellas Road / Baldovie Road	T-Junction	Two-way	2.55	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	Base 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	750.00	100.000
B		✓	269.00	100.000
C		✓	546.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	340.000	410.000
	B	129.000	0.000	140.000
	C	402.000	144.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	4	3
	B	5	0	4
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	7.13	0.3	A
B-A	0.32	11.73	0.5	B
C-AB	0.32	9.67	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	109.62	768.30	0.143	108.93	0.2	5.672	A
B-A	101.97	584.99	0.174	101.10	0.2	7.798	A
C-AB	111.82	576.92	0.194	110.84	0.2	7.788	A
C-A	306.38			306.38			
A-B	266.21			266.21			
A-C	317.93			317.93			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	130.89	734.43	0.178	130.68	0.2	6.200	A
B-A	121.77	537.21	0.227	121.43	0.3	9.084	A
C-AB	136.14	561.93	0.242	135.79	0.3	8.529	A
C-A	363.23			363.23			
A-B	317.88			317.88			
A-C	379.64			379.64			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	160.31	685.72	0.234	159.95	0.3	7.116	A
B-A	149.13	471.60	0.316	148.44	0.5	11.671	B
C-AB	174.87	551.23	0.317	174.19	0.5	9.639	A
C-A	436.73			436.73			
A-B	389.32			389.32			
A-C	464.96			464.96			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	160.31	685.41	0.234	160.30	0.3	7.129	A
B-A	149.13	471.32	0.316	149.11	0.5	11.729	B
C-AB	174.87	551.33	0.317	174.85	0.5	9.672	A
C-A	436.73			436.73			
A-B	389.32			389.32			
A-C	464.96			464.96			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	130.89	734.01	0.178	131.24	0.2	6.214	A
B-A	121.77	536.77	0.227	122.44	0.3	9.139	A
C-AB	136.14	562.12	0.242	136.80	0.3	8.570	A
C-A	363.23			363.23			
A-B	317.88			317.88			
A-C	379.64			379.64			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	109.62	767.84	0.143	109.83	0.2	5.691	A
B-A	101.97	584.39	0.175	102.32	0.2	7.846	A
C-AB	111.82	576.98	0.194	112.18	0.3	7.831	A
C-A	306.38			306.38			
A-B	266.21			266.21			
A-C	317.93			317.93			

Total 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Kellas Road / Baldovie Road	T-Junction	Two-way	42.61	E

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Total 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	605.00	100.000
B		✓	650.00	100.000
C		✓	395.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	97.000	508.000
	B	478.000	0.000	172.000
	C	324.000	71.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	12	5
	B	2	0	3
	C	5	6	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.35	10.29	0.6	B
B-A	1.04	145.49	22.1	F
C-AB	0.15	8.22	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	133.38	680.90	0.196	132.38	0.2	6.747	A
B-A	367.06	615.84	0.596	361.27	1.4	14.120	B
C-AB	56.96	590.46	0.096	56.51	0.1	7.140	A
C-A	255.82			255.82			
A-B	81.79			81.79			
A-C	401.57			401.57			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	159.26	625.24	0.255	158.87	0.3	7.944	A
B-A	438.31	574.28	0.763	432.26	3.0	24.826	C
C-AB	68.32	572.05	0.119	68.20	0.1	7.571	A
C-A	305.17			305.17			
A-B	97.67			97.67			
A-C	479.52			479.52			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	195.06	555.34	0.351	194.26	0.5	10.247	B
B-A	536.81	517.04	1.038	490.70	14.5	83.292	F
C-AB	84.56	548.66	0.154	84.35	0.2	8.214	A
C-A	372.87			372.87			
A-B	119.61			119.61			
A-C	587.28			587.28			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	195.06	555.34	0.351	195.04	0.6	10.289	B
B-A	536.81	516.95	1.038	506.25	22.1	145.494	F
C-AB	84.56	548.64	0.154	84.55	0.2	8.221	A
C-A	372.87			372.87			
A-B	119.61			119.61			
A-C	587.28			587.28			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	159.26	597.28	0.267	159.96	0.4	8.493	A
B-A	438.31	574.13	0.763	511.06	3.9	76.382	F
C-AB	68.32	572.01	0.119	68.52	0.1	7.583	A
C-A	305.17			305.17			
A-B	97.67			97.67			
A-C	479.52			479.52			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	133.38	675.73	0.197	133.87	0.3	6.851	A
B-A	367.06	615.58	0.596	376.57	1.6	15.925	C
C-AB	56.96	590.44	0.096	57.09	0.1	7.155	A
C-A	255.82			255.82			
A-B	81.79			81.79			
A-C	401.57			401.57			

Total 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Kellas Road / Baldovie Road	T-Junction	Two-way	2.55	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Total 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	751.00	100.000
B		✓	269.00	100.000
C		✓	549.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	340.000	411.000
	B	129.000	0.000	140.000
	C	405.000	144.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	4	3
	B	5	0	4
	C	2	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.23	7.13	0.3	A
B-A	0.32	11.77	0.5	B
C-AB	0.32	9.67	0.5	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	109.62	768.04	0.143	108.93	0.2	5.674	A
B-A	101.97	584.29	0.175	101.10	0.2	7.809	A
C-AB	111.84	576.84	0.194	110.86	0.2	7.790	A
C-A	308.66			308.66			
A-B	266.21			266.21			
A-C	318.71			318.71			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	130.89	734.10	0.178	130.68	0.2	6.203	A
B-A	121.77	536.37	0.227	121.43	0.3	9.102	A
C-AB	136.18	561.91	0.242	135.84	0.3	8.531	A
C-A	365.93			365.93			
A-B	317.88			317.88			
A-C	380.56			380.56			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	160.31	685.28	0.234	159.95	0.3	7.122	A
B-A	149.13	470.57	0.317	148.44	0.5	11.708	B
C-AB	175.00	551.37	0.317	174.32	0.5	9.639	A
C-A	439.96			439.96			
A-B	389.32			389.32			
A-C	466.10			466.10			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	160.31	684.97	0.234	160.30	0.3	7.135	A
B-A	149.13	470.30	0.317	149.11	0.5	11.766	B
C-AB	175.00	551.47	0.317	174.98	0.5	9.674	A
C-A	439.96			439.96			
A-B	389.32			389.32			
A-C	466.10			466.10			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	130.89	733.68	0.178	131.24	0.2	6.217	A
B-A	121.77	535.94	0.227	122.45	0.3	9.156	A
C-AB	136.18	562.09	0.242	136.85	0.3	8.573	A
C-A	365.93			365.93			
A-B	317.88			317.88			
A-C	380.56			380.56			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	109.62	767.57	0.143	109.83	0.2	5.695	A
B-A	101.97	583.69	0.175	102.33	0.2	7.859	A
C-AB	111.84	576.90	0.194	112.20	0.3	7.835	A
C-A	308.66			308.66			
A-B	266.21			266.21			
A-C	318.71			318.71			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []

For sales and distribution information, program advice and maintenance, contact TRL:
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Filename: Junction 3 - Drumgeith Road_Ballumbie Road.j9
Path: J:\240000\245000\245510-02\04 DELIVERABLES\4-04 Calcs\Modelling Files
Report generation date: 13/10/2016 12:14:14

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Base 2020							
Stream B-C	0.2	11.11	0.20	B	0.3	10.46	0.22	B
Stream B-A	1.4	33.97	0.59	D	0.6	24.89	0.34	C
Stream C-AB	0.2	6.63	0.16	A	0.3	9.06	0.24	A
Stream C-A								
Stream A-B								
Stream A-C								
	Total 2020							
Stream B-C	0.3	11.25	0.20	B	0.3	10.56	0.22	B
Stream B-A	1.5	34.72	0.60	D	0.6	25.48	0.35	D
Stream C-AB	0.2	6.66	0.16	A	0.3	9.13	0.24	A
Stream C-A								
Stream A-B								
Stream A-C								

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	Drumgeith Road / Ballumbie Road
Location	Dundee
Site number	
Date	13/10/2016
Version	
Status	(new file)
Identifier	
Client	MVV
Jobnumber	245510-02
Enumerator	GLOBAL"matthew.cook
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
Base 2020	AM	ONE HOUR	07:20	08:50	15
Base 2020	PM	ONE HOUR	16:15	17:45	15
Total 2020	AM	ONE HOUR	07:20	08:50	15
Total 2020	PM	ONE HOUR	16:15	17:45	15

Base 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Ballumbie Road	T-Junction	Two-way	3.91	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Drumgeith Road (W)		Major
B	Ballumbie Road		Minor
C	Drumgeith Road (E)		Major

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)
C	6.40		✓	3.60	250.0	✓	6.00

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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	8.12	5.18	3.98	3.59	✓	2.00	37	63

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	597.338	0.107	0.270	0.170	0.386
1	B-C	683.190	0.103	0.260	-	-
1	C-B	828.254	0.315	0.315	-	-

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	Base 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	460.00	100.000
B		✓	210.00	100.000
C		✓	878.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	61.000	399.000
	B	138.000	0.000	72.000
	C	783.000	95.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	10	9
	B	4	0	3
	C	3	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.20	11.11	0.2	B
B-A	0.59	33.97	1.4	D
C-AB	0.16	6.63	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	55.83	546.70	0.102	55.37	0.1	7.541	A
B-A	108.05	372.27	0.290	106.38	0.4	13.997	B
C-AB	72.24	709.08	0.102	71.78	0.1	5.702	A
C-A	607.17			607.17			
A-B	50.52			50.52			
A-C	327.42			327.42			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66.67	507.66	0.131	66.52	0.2	8.403	A
B-A	129.02	328.35	0.393	128.08	0.7	18.606	C
C-AB	86.26	685.95	0.126	86.14	0.1	6.060	A
C-A	725.02			725.02			
A-B	60.32			60.32			
A-C	390.98			390.98			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81.65	420.60	0.194	81.29	0.2	10.915	B
B-A	158.02	267.44	0.591	155.09	1.4	32.500	D
C-AB	105.65	653.98	0.162	105.45	0.2	6.627	A
C-A	887.96			887.96			
A-B	73.88			73.88			
A-C	478.84			478.84			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81.65	415.47	0.197	81.63	0.2	11.107	B
B-A	158.02	267.45	0.591	157.80	1.4	33.967	D
C-AB	105.65	653.98	0.162	105.64	0.2	6.630	A
C-A	887.96			887.96			
A-B	73.88			73.88			
A-C	478.84			478.84			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66.67	504.15	0.132	67.03	0.2	8.491	A
B-A	129.02	328.46	0.393	131.99	0.7	19.326	C
C-AB	86.26	685.95	0.126	86.45	0.1	6.066	A
C-A	725.02			725.02			
A-B	60.32			60.32			
A-C	390.98			390.98			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	55.83	544.97	0.102	55.99	0.1	7.587	A
B-A	108.05	372.21	0.290	109.09	0.4	14.286	B
C-AB	72.24	709.08	0.102	72.36	0.1	5.713	A
C-A	607.17			607.17			
A-B	50.52			50.52			
A-C	327.42			327.42			

Base 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Ballumbie Road	T-Junction	Two-way	2.53	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	Base 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	834.00	100.000
B		✓	156.00	100.000
C		✓	473.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	176.000	658.000
	B	69.000	0.000	87.000
	C	358.000	115.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	1	4
	B	7	0	3
	C	3	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.22	10.46	0.3	B
B-A	0.34	24.89	0.6	C
C-AB	0.24	9.06	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	67.46	553.11	0.122	66.90	0.1	7.619	A
B-A	55.58	337.38	0.165	54.75	0.2	13.590	B
C-AB	87.44	623.60	0.140	86.79	0.2	6.764	A
C-A	277.61			277.61			
A-B	133.83			133.83			
A-C	515.19			515.19			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80.56	513.82	0.157	80.37	0.2	8.551	A
B-A	66.37	294.86	0.225	65.99	0.3	16.800	C
C-AB	104.42	583.89	0.179	104.20	0.2	7.576	A
C-A	331.49			331.49			
A-B	159.80			159.80			
A-C	615.19			615.19			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	98.66	454.16	0.217	98.29	0.3	10.409	B
B-A	81.29	235.84	0.345	80.34	0.5	24.618	C
C-AB	127.90	529.05	0.242	127.50	0.3	9.046	A
C-A	405.97			405.97			
A-B	195.72			195.72			
A-C	753.45			753.45			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	98.66	453.09	0.218	98.65	0.3	10.461	B
B-A	81.29	235.87	0.345	81.25	0.6	24.894	C
C-AB	127.90	529.05	0.242	127.90	0.3	9.063	A
C-A	405.97			405.97			
A-B	195.72			195.72			
A-C	753.45			753.45			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80.56	512.44	0.157	80.92	0.2	8.601	A
B-A	66.37	295.03	0.225	67.31	0.3	16.983	C
C-AB	104.42	583.89	0.179	104.81	0.2	7.594	A
C-A	331.49			331.49			
A-B	159.80			159.80			
A-C	615.19			615.19			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	67.46	551.93	0.122	67.66	0.1	7.659	A
B-A	55.58	337.45	0.165	56.00	0.2	13.708	B
C-AB	87.44	623.60	0.140	87.67	0.2	6.786	A
C-A	277.61			277.61			
A-B	133.83			133.83			
A-C	515.19			515.19			

Total 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Ballumbie Road	T-Junction	Two-way	3.96	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Total 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	462.00	100.000
B		✓	210.00	100.000
C		✓	881.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	61.000	401.000
	B	138.000	0.000	72.000
	C	786.000	95.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	10	10
	B	4	0	3
	C	3	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.20	11.25	0.3	B
B-A	0.60	34.72	1.5	D
C-AB	0.16	6.66	0.2	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	55.83	545.34	0.102	55.37	0.1	7.562	A
B-A	108.05	370.61	0.292	106.37	0.4	14.083	B
C-AB	72.24	707.61	0.102	71.78	0.1	5.715	A
C-A	609.49			609.49			
A-B	50.52			50.52			
A-C	332.08			332.08			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66.67	505.78	0.132	66.51	0.2	8.439	A
B-A	129.02	326.37	0.395	128.06	0.7	18.786	C
C-AB	86.26	684.20	0.126	86.14	0.1	6.077	A
C-A	727.80			727.80			
A-B	60.32			60.32			
A-C	396.54			396.54			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81.65	416.76	0.196	81.28	0.2	11.040	B
B-A	158.02	265.01	0.596	155.00	1.4	33.153	D
C-AB	105.65	651.84	0.162	105.45	0.2	6.653	A
C-A	891.36			891.36			
A-B	73.88			73.88			
A-C	485.66			485.66			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	81.65	411.36	0.198	81.63	0.3	11.245	B
B-A	158.02	265.02	0.596	157.79	1.5	34.720	D
C-AB	105.65	651.84	0.162	105.64	0.2	6.656	A
C-A	891.36			891.36			
A-B	73.88			73.88			
A-C	485.66			485.66			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	66.67	502.14	0.133	67.04	0.2	8.529	A
B-A	129.02	326.48	0.395	132.09	0.7	19.544	C
C-AB	86.26	684.20	0.126	86.45	0.1	6.084	A
C-A	727.80			727.80			
A-B	60.32			60.32			
A-C	396.54			396.54			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	55.83	543.58	0.103	55.99	0.1	7.609	A
B-A	108.05	370.56	0.292	109.11	0.4	14.379	B
C-AB	72.24	707.61	0.102	72.36	0.1	5.726	A
C-A	609.49			609.49			
A-B	50.52			50.52			
A-C	332.08			332.08			

Total 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Drumgeith Road / Ballumbie Road	T-Junction	Two-way	2.55	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Total 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	836.00	100.000
B		✓	156.00	100.000
C		✓	476.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	176.000	660.000
	B	69.000	0.000	87.000
	C	361.000	115.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	1	5
	B	7	0	3
	C	4	1	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.22	10.56	0.3	B
B-A	0.35	25.48	0.6	D
C-AB	0.24	9.13	0.3	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	67.46	551.17	0.122	66.89	0.1	7.651	A
B-A	55.58	334.94	0.166	54.75	0.2	13.711	B
C-AB	87.44	621.54	0.141	86.79	0.2	6.790	A
C-A	282.65			282.65			
A-B	133.83			133.83			
A-C	521.73			521.73			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80.56	511.41	0.158	80.36	0.2	8.599	A
B-A	66.37	291.95	0.227	65.98	0.3	17.015	C
C-AB	104.42	581.43	0.180	104.20	0.2	7.615	A
C-A	337.51			337.51			
A-B	159.80			159.80			
A-C	622.99			622.99			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	98.66	450.75	0.219	98.29	0.3	10.508	B
B-A	81.29	232.26	0.350	80.31	0.6	25.185	D
C-AB	127.91	526.04	0.243	127.50	0.3	9.114	A
C-A	413.34			413.34			
A-B	195.72			195.72			
A-C	763.01			763.01			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	98.66	449.63	0.219	98.65	0.3	10.564	B
B-A	81.29	232.29	0.350	81.24	0.6	25.481	D
C-AB	127.91	526.04	0.243	127.90	0.3	9.132	A
C-A	413.34			413.34			
A-B	195.72			195.72			
A-C	763.01			763.01			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	80.56	509.98	0.158	80.92	0.2	8.651	A
B-A	66.37	292.13	0.227	67.34	0.3	17.209	C
C-AB	104.42	581.43	0.180	104.82	0.2	7.637	A
C-A	337.51			337.51			
A-B	159.80			159.80			
A-C	622.99			622.99			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	67.46	549.97	0.123	67.66	0.1	7.691	A
B-A	55.58	335.01	0.166	56.00	0.2	13.826	B
C-AB	87.44	621.54	0.141	87.67	0.2	6.812	A
C-A	282.65			282.65			
A-B	133.83			133.83			
A-C	521.73			521.73			

Junctions 9

PICADY 9 - Priority Intersection Module

Version: 9.0.0.4211 []

Filename: Junction 4 - Forties Road_Piper Street_ATS Site.j9
Path: J:\240000\245000\245510-02\04 DELIVERABLES\4-04 Calcs\Modelling Files
Report generation date: 13/10/2016 12:28:25

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Base 2020							
Stream B-CD	0.0	12.04	0.00	B	0.0	0.00	0.00	A
Stream B-AD	0.0	10.03	0.03	B	0.0	0.00	0.00	A
Stream A-BCD	0.1	5.73	0.04	A	0.0	5.69	0.02	A
Stream A-B								
Stream A-C								
Stream D-AB	0.0	8.40	0.02	A	0.0	5.46	0.04	A
Stream D-BC	0.0	0.00	0.00	A	0.0	5.44	0.00	A
Stream C-ABD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-D								
Stream C-A								
	Total 2020							
Stream B-CD	0.0	12.12	0.00	B	0.0	0.00	0.00	A
Stream B-AD	0.0	10.14	0.03	B	0.0	0.00	0.00	A
Stream A-BCD	0.1	5.70	0.04	A	0.0	5.67	0.02	A
Stream A-B								
Stream A-C								
Stream D-AB	0.0	8.43	0.02	A	0.0	5.48	0.04	A
Stream D-BC	0.0	0.00	0.00	A	0.0	5.49	0.00	A
Stream C-ABD	0.0	0.00	0.00	A	0.0	0.00	0.00	A
Stream C-D								
Stream C-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	Forties Road / Piper Street / ATS Site
Location	Dundee
Site number	
Date	13/10/2016
Version	
Status	(new file)
Identifier	
Client	MVV
Jobnumber	245510-02
Enumerator	GLOBAL"matthew.cook
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
Base 2020	AM	ONE HOUR	07:20	08:50	15
Base 2020	PM	ONE HOUR	16:15	17:45	15
Total 2020	AM	ONE HOUR	07:20	08:50	15
Total 2020	PM	ONE HOUR	16:15	17:45	15

Base 2020, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Piper Street / ATS Site	Crossroads	Two-way	2.51	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

Arm	Name	Description	Arm type
A	Forties Road (N)		Major
B	ATS Site		Minor
C	Forties Road (S)		Major
D	Piper Street		Minor

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)
A	7.40			250.0	✓	0.00
C	7.40			150.0	✓	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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	4.62	3.60	3.53	3.50	✓	1.00	23	18
D	One lane plus flare	10.00	4.37	3.59	3.59	3.59	✓	1.00	200	60

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for A-D	Slope for B-A	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	Slope for D-C
1	A-D	718.741	-	-	-	-	-	-	0.262	0.374	0.262	-	-	-
1	B-A	540.441	0.092	0.234	0.234	-	-	-	0.147	0.334	-	0.234	0.234	0.117
1	B-C	620.793	0.089	0.226	-	-	-	-	-	-	-	-	-	-
1	B-D, nearside lane	482.654	0.083	0.209	0.209	-	-	-	0.131	0.298	0.131	-	-	-
1	B-D, offside lane	540.441	0.092	0.234	0.234	-	-	-	0.147	0.334	0.147	-	-	-
1	C-B	660.830	0.240	0.240	0.343	-	-	-	-	-	-	-	-	-
1	D-A	729.812	-	-	-	-	-	-	0.266	-	0.105	-	-	-
1	D-B, nearside lane	632.644	0.172	0.172	0.391	-	-	-	0.274	0.274	0.108	-	-	-
1	D-B, offside lane	688.464	0.187	0.187	0.425	-	-	-	0.298	0.298	0.118	-	-	-
1	D-C	688.464	-	0.187	0.425	0.149	0.298	0.298	0.298	0.298	0.118	-	-	-

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	Base 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	77.00	100.000
B		✓	12.00	100.000
C		✓	37.00	100.000
D		✓	8.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0.000	0.000	54.000	23.000
	B	11.000	0.000	1.000	0.000
	C	37.000	0.000	0.000	0.000
	D	8.000	0.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		A	B	C	D
From	A	0	0	17	13
	B	36	0	100	0
	C	57	0	0	0
	D	63	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.00	12.04	0.0	B
B-AD	0.03	10.03	0.0	B
A-BCD	0.04	5.73	0.1	A
A-B				
A-C				
D-AB	0.02	8.40	0.0	A
D-BC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.51	606.68	0.002	1.49	0.0	11.896	B
B-AD	11.26	516.03	0.022	11.14	0.0	9.695	A
A-BCD	20.90	736.16	0.028	20.75	0.0	5.699	A
A-B	0.00			0.00			
A-C	46.23			46.23			
D-AB	9.82	718.20	0.014	9.73	0.0	8.281	A
D-BC	0.00	657.16	0.000	0.00	0.0	0.000	A
C-ABD	0.00	642.67	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	43.73			43.73			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.80	603.89	0.003	1.79	0.0	11.957	B
B-AD	13.45	511.23	0.026	13.42	0.0	9.835	A
A-BCD	25.29	739.61	0.034	25.26	0.0	5.708	A
A-B	0.00			0.00			
A-C	54.87			54.87			
D-AB	11.72	715.94	0.016	11.70	0.0	8.332	A
D-BC	0.00	651.01	0.000	0.00	0.0	0.000	A
C-ABD	0.00	639.10	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	52.22			52.22			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	2.20	600.01	0.004	2.20	0.0	12.043	B
B-AD	16.47	504.67	0.033	16.43	0.0	10.028	B
A-BCD	31.53	744.39	0.042	31.48	0.1	5.722	A
A-B	0.00			0.00			
A-C	66.65			66.65			
D-AB	14.36	712.83	0.020	14.33	0.0	8.400	A
D-BC	0.00	642.59	0.000	0.00	0.0	0.000	A
C-ABD	0.00	634.21	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	63.96			63.96			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	2.20	600.00	0.004	2.20	0.0	12.043	B
B-AD	16.47	504.65	0.033	16.47	0.0	10.028	B
A-BCD	31.54	744.40	0.042	31.54	0.1	5.726	A
A-B	0.00			0.00			
A-C	66.64			66.64			
D-AB	14.36	712.83	0.020	14.36	0.0	8.400	A
D-BC	0.00	642.57	0.000	0.00	0.0	0.000	A
C-ABD	0.00	634.20	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	63.96			63.96			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.80	603.88	0.003	1.80	0.0	11.960	B
B-AD	13.45	511.20	0.026	13.48	0.0	9.839	A
A-BCD	25.30	739.61	0.034	25.35	0.0	5.714	A
A-B	0.00			0.00			
A-C	54.86			54.86			
D-AB	11.72	715.94	0.016	11.75	0.0	8.334	A
D-BC	0.00	650.97	0.000	0.00	0.0	0.000	A
C-ABD	0.00	639.07	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	52.22			52.22			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.51	606.67	0.002	1.51	0.0	11.899	B
B-AD	11.26	515.95	0.022	11.29	0.0	9.701	A
A-BCD	20.91	736.17	0.028	20.95	0.0	5.701	A
A-B	0.00			0.00			
A-C	46.22			46.22			
D-AB	9.82	718.20	0.014	9.84	0.0	8.283	A
D-BC	0.00	657.07	0.000	0.00	0.0	0.000	A
C-ABD	0.00	642.61	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	43.73			43.73			

Base 2020, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Piper Street / ATS Site	Crossroads	Two-way	1.96	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	Base 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	19.00	100.000
B		✓	0.00	100.000
C		✓	50.00	100.000
D		✓	25.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0.000	0.000	9.000	10.000
	B	0.000	0.000	0.000	0.000
	C	49.000	0.000	0.000	1.000
	D	24.000	0.000	1.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		A	B	C	D
From	A	0	0	44	10
	B	0	0	0	0
	C	10	0	0	0
	D	4	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.02	5.69	0.0	A
A-B				
A-C				
D-AB	0.04	5.46	0.0	A
D-BC	0.00	5.44	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	584.89	0.000	0.00	0.0	0.000	A
B-AD	0.00	514.14	0.000	0.00	0.0	0.000	A
A-BCD	8.40	713.85	0.012	8.34	0.0	5.630	A
A-B	0.00			0.00			
A-C	9.64			9.64			
D-AB	18.79	718.76	0.026	18.68	0.0	5.348	A
D-BC	0.75	670.94	0.001	0.75	0.0	5.371	A
C-ABD	0.00	655.64	0.000	0.00	0.0	0.000	A
C-D	0.75			0.75			
C-A	40.58			40.58			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	583.45	0.000	0.00	0.0	0.000	A
B-AD	0.00	511.75	0.000	0.00	0.0	0.000	A
A-BCD	10.05	712.92	0.014	10.04	0.0	5.653	A
A-B	0.00			0.00			
A-C	11.49			11.49			
D-AB	22.44	716.61	0.031	22.42	0.0	5.392	A
D-BC	0.90	667.50	0.001	0.90	0.0	5.399	A
C-ABD	0.00	654.61	0.000	0.00	0.0	0.000	A
C-D	0.90			0.90			
C-A	48.45			48.45			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	581.48	0.000	0.00	0.0	0.000	A
B-AD	0.00	508.48	0.000	0.00	0.0	0.000	A
A-BCD	12.36	711.63	0.017	12.34	0.0	5.687	A
A-B	0.00			0.00			
A-C	14.02			14.02			
D-AB	27.48	713.64	0.039	27.45	0.0	5.455	A
D-BC	1.10	662.78	0.002	1.10	0.0	5.440	A
C-ABD	0.00	653.22	0.000	0.00	0.0	0.000	A
C-D	1.10			1.10			
C-A	59.35			59.35			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	581.47	0.000	0.00	0.0	0.000	A
B-AD	0.00	508.48	0.000	0.00	0.0	0.000	A
A-BCD	12.36	711.63	0.017	12.36	0.0	5.689	A
A-B	0.00			0.00			
A-C	14.02			14.02			
D-AB	27.48	713.64	0.039	27.48	0.0	5.455	A
D-BC	1.10	662.77	0.002	1.10	0.0	5.440	A
C-ABD	0.00	653.21	0.000	0.00	0.0	0.000	A
C-D	1.10			1.10			
C-A	59.35			59.35			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	583.45	0.000	0.00	0.0	0.000	A
B-AD	0.00	511.74	0.000	0.00	0.0	0.000	A
A-BCD	10.05	712.92	0.014	10.07	0.0	5.658	A
A-B	0.00			0.00			
A-C	11.49			11.49			
D-AB	22.44	716.61	0.031	22.47	0.0	5.393	A
D-BC	0.90	667.49	0.001	0.90	0.0	5.400	A
C-ABD	0.00	654.60	0.000	0.00	0.0	0.000	A
C-D	0.90			0.90			
C-A	48.45			48.45			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	584.88	0.000	0.00	0.0	0.000	A
B-AD	0.00	514.11	0.000	0.00	0.0	0.000	A
A-BCD	8.40	713.85	0.012	8.41	0.0	5.635	A
A-B	0.00			0.00			
A-C	9.64			9.64			
D-AB	18.79	718.75	0.026	18.81	0.0	5.350	A
D-BC	0.75	670.91	0.001	0.75	0.0	5.371	A
C-ABD	0.00	655.62	0.000	0.00	0.0	0.000	A
C-D	0.75			0.75			
C-A	40.58			40.58			

Total 2020, AM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Piper Street / ATS Site	Crossroads	Two-way	2.24	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Total 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	87.00	100.000
B		✓	12.00	100.000
C		✓	43.00	100.000
D		✓	8.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0.000	0.000	64.000	23.000
	B	11.000	0.000	1.000	0.000
	C	43.000	0.000	0.000	0.000
	D	8.000	0.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		A	B	C	D
From	A	0	0	22	13
	B	36	0	100	0
	C	56	0	0	0
	D	63	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.00	12.12	0.0	B
B-AD	0.03	10.14	0.0	B
A-BCD	0.04	5.70	0.1	A
A-B				
A-C				
D-AB	0.02	8.43	0.0	A
D-BC	0.00	0.00	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.51	604.13	0.002	1.49	0.0	11.946	B
B-AD	11.26	512.42	0.022	11.14	0.0	9.765	A
A-BCD	21.23	741.24	0.029	21.07	0.0	5.682	A
A-B	0.00			0.00			
A-C	57.12			57.12			
D-AB	9.82	716.40	0.014	9.73	0.0	8.302	A
D-BC	0.00	653.04	0.000	0.00	0.0	0.000	A
C-ABD	0.00	639.97	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	50.50			50.50			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.80	600.85	0.003	1.79	0.0	12.018	B
B-AD	13.45	506.91	0.027	13.42	0.0	9.921	A
A-BCD	25.77	745.69	0.035	25.73	0.0	5.686	A
A-B	0.00			0.00			
A-C	67.79			67.79			
D-AB	11.72	713.80	0.016	11.70	0.0	8.357	A
D-BC	0.00	646.09	0.000	0.00	0.0	0.000	A
C-ABD	0.00	635.88	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	60.30			60.30			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	2.20	596.28	0.004	2.20	0.0	12.118	B
B-AD	16.47	499.38	0.033	16.43	0.0	10.138	B
A-BCD	32.25	751.89	0.043	32.20	0.1	5.695	A
A-B	0.00			0.00			
A-C	82.33			82.33			
D-AB	14.36	710.20	0.020	14.33	0.0	8.432	A
D-BC	0.00	636.57	0.000	0.00	0.0	0.000	A
C-ABD	0.00	630.27	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	73.86			73.86			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	2.20	596.27	0.004	2.20	0.0	12.119	B
B-AD	16.47	499.36	0.033	16.47	0.0	10.138	B
A-BCD	32.26	751.89	0.043	32.26	0.1	5.702	A
A-B	0.00			0.00			
A-C	82.33			82.33			
D-AB	14.36	710.20	0.020	14.36	0.0	8.432	A
D-BC	0.00	636.54	0.000	0.00	0.0	0.000	A
C-ABD	0.00	630.25	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	73.86			73.86			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.80	600.84	0.003	1.80	0.0	12.021	B
B-AD	13.45	506.88	0.027	13.48	0.0	9.925	A
A-BCD	25.77	745.70	0.035	25.82	0.0	5.697	A
A-B	0.00			0.00			
A-C	67.78			67.78			
D-AB	11.72	713.80	0.016	11.75	0.0	8.359	A
D-BC	0.00	646.05	0.000	0.00	0.0	0.000	A
C-ABD	0.00	635.85	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	60.30			60.30			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	1.51	604.13	0.002	1.51	0.0	11.949	B
B-AD	11.26	512.33	0.022	11.29	0.0	9.771	A
A-BCD	21.24	741.25	0.029	21.28	0.0	5.689	A
A-B	0.00			0.00			
A-C	57.11			57.11			
D-AB	9.82	716.40	0.014	9.84	0.0	8.306	A
D-BC	0.00	652.95	0.000	0.00	0.0	0.000	A
C-ABD	0.00	639.91	0.000	0.00	0.0	0.000	A
C-D	0.00			0.00			
C-A	50.50			50.50			

Total 2020, PM

Data Errors and Warnings

Severity	Area	Item	Description
Warning	Minor arm flare	Arm D - Minor arm geometry	Is flare very short? Estimated flare length is zero but has been increased to 1 because a zero flare length is not allowed.

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Piper Street / ATS Site	Crossroads	Two-way	1.60	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Total 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	29.00	100.000
B		✓	0.00	100.000
C		✓	56.00	100.000
D		✓	25.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To			
		A	B	C	D
From	A	0.000	0.000	19.000	10.000
	B	0.000	0.000	0.000	0.000
	C	55.000	0.000	0.000	1.000
	D	24.000	0.000	1.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To			
		A	B	C	D
From	A	0	0	47	10
	B	0	0	0	0
	C	15	0	0	0
	D	4	0	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-CD	0.00	0.00	0.0	A
B-AD	0.00	0.00	0.0	A
A-BCD	0.02	5.67	0.0	A
A-B				
A-C				
D-AB	0.04	5.48	0.0	A
D-BC	0.00	5.49	0.0	A
C-ABD	0.00	0.00	0.0	A
C-D				
C-A				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	581.55	0.000	0.00	0.0	0.000	A
B-AD	0.00	510.57	0.000	0.00	0.0	0.000	A
A-BCD	8.53	718.87	0.012	8.47	0.0	5.615	A
A-B	0.00			0.00			
A-C	20.78			20.78			
D-AB	18.79	716.89	0.026	18.68	0.0	5.362	A
D-BC	0.75	666.73	0.001	0.75	0.0	5.405	A
C-ABD	0.00	652.93	0.000	0.00	0.0	0.000	A
C-D	0.75			0.75			
C-A	47.62			47.62			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	579.46	0.000	0.00	0.0	0.000	A
B-AD	0.00	507.49	0.000	0.00	0.0	0.000	A
A-BCD	10.25	718.93	0.014	10.23	0.0	5.632	A
A-B	0.00			0.00			
A-C	24.75			24.75			
D-AB	22.44	714.37	0.031	22.42	0.0	5.410	A
D-BC	0.90	662.48	0.001	0.90	0.0	5.440	A
C-ABD	0.00	651.38	0.000	0.00	0.0	0.000	A
C-D	0.90			0.90			
C-A	56.86			56.86			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	576.59	0.000	0.00	0.0	0.000	A
B-AD	0.00	503.26	0.000	0.00	0.0	0.000	A
A-BCD	12.65	719.03	0.018	12.63	0.0	5.661	A
A-B	0.00			0.00			
A-C	30.21			30.21			
D-AB	27.48	710.90	0.039	27.45	0.0	5.477	A
D-BC	1.10	656.63	0.002	1.10	0.0	5.491	A
C-ABD	0.00	649.25	0.000	0.00	0.0	0.000	A
C-D	1.10			1.10			
C-A	69.64			69.64			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	576.58	0.000	0.00	0.0	0.000	A
B-AD	0.00	503.25	0.000	0.00	0.0	0.000	A
A-BCD	12.65	719.03	0.018	12.65	0.0	5.668	A
A-B	0.00			0.00			
A-C	30.21			30.21			
D-AB	27.48	710.90	0.039	27.48	0.0	5.477	A
D-BC	1.10	656.62	0.002	1.10	0.0	5.491	A
C-ABD	0.00	649.25	0.000	0.00	0.0	0.000	A
C-D	1.10			1.10			
C-A	69.64			69.64			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	579.46	0.000	0.00	0.0	0.000	A
B-AD	0.00	507.47	0.000	0.00	0.0	0.000	A
A-BCD	10.25	718.93	0.014	10.26	0.0	5.645	A
A-B	0.00			0.00			
A-C	24.75			24.75			
D-AB	22.44	714.37	0.031	22.47	0.0	5.410	A
D-BC	0.90	662.47	0.001	0.90	0.0	5.441	A
C-ABD	0.00	651.37	0.000	0.00	0.0	0.000	A
C-D	0.90			0.90			
C-A	56.86			56.86			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-CD	0.00	581.54	0.000	0.00	0.0	0.000	A
B-AD	0.00	510.54	0.000	0.00	0.0	0.000	A
A-BCD	8.53	718.87	0.012	8.54	0.0	5.620	A
A-B	0.00			0.00			
A-C	20.78			20.78			
D-AB	18.79	716.88	0.026	18.81	0.0	5.362	A
D-BC	0.75	666.70	0.001	0.75	0.0	5.407	A
C-ABD	0.00	652.91	0.000	0.00	0.0	0.000	A
C-D	0.75			0.75			
C-A	47.62			47.62			

Junctions 9

PICADY 9 - Priority Intersection Module

Filename: Junction 5 - Forties Road_Site Access.j9
Path: J:\240000\245000\245510-02\04 DELIVERABLES\4-04 Calcs\Modelling Files
Report generation date: 13/10/2016 13:51:00

Summary of junction performance

	AM				PM			
	Queue (PCU)	Delay (s)	RFC	LOS	Queue (PCU)	Delay (s)	RFC	LOS
	Base 2020							
Stream B-C	0.0	6.11	0.00	A	0.0	6.02	0.03	A
Stream B-A	0.1	10.91	0.06	B	0.1	7.40	0.08	A
Stream C-AB	0.0	5.15	0.01	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								
	Total 2020							
Stream B-C	0.0	6.17	0.00	A	0.0	6.12	0.03	A
Stream B-A	0.1	11.00	0.08	B	0.1	7.93	0.09	A
Stream C-AB	0.0	5.18	0.01	A	0.0	0.00	0.00	A
Stream C-A								
Stream A-B								
Stream A-C								

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	Forties Road / Site Access
Location	Dundee
Site number	
Date	13/10/2016
Version	
Status	(new file)
Identifier	
Client	MVV
Jobnumber	245510-02
Enumerator	GLOBAL\matthew.cook
Description	

Units

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

Analysis Options

Calculate Queue Percentiles	Calculate residual capacity	RFC Threshold	Average Delay threshold (s)	Queue threshold (PCU)
		0.85	36.00	20.00

Demand Set Summary

Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
Base 2020	AM	ONE HOUR	07:20	08:50	15
Base 2020	PM	ONE HOUR	16:15	17:45	15
Total 2020	AM	ONE HOUR	07:20	08:50	15
Total 2020	PM	ONE HOUR	16:15	17:45	15

Base 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Site Access	T-Junction	Two-way	3.21	A

Junction Network Options

Driving side	Lighting
Left	Normal/unknown

Arms

Arms

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

Major Arm Geometry

Arm	Width of carriageway (m)	Has kerbed central reserve	Has right turn bay	Visibility for right turn (m)	Blocks?	Blocking queue (PCU)
C	7.20			250.0	✓	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	Width at give-way (m)	Width at 5m (m)	Width at 10m (m)	Width at 15m (m)	Width at 20m (m)	Estimate flare length	Flare length (PCU)	Visibility to left (m)	Visibility to right (m)
B	One lane plus flare	10.00	7.04	4.59	3.80	3.60	✓	1.00	30	31

Slope / Intercept / Capacity

Priority Intersection Slopes and Intercepts

Junction	Stream	Intercept (PCU/hr)	Slope for A-B	Slope for A-C	Slope for C-A	Slope for C-B
1	B-A	569.999	0.098	0.249	0.156	0.355
1	B-C	607.520	0.088	0.223	-	-
1	C-B	718.741	0.264	0.264	-	-

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	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D1	Base 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	47.00	100.000
B		✓	21.00	100.000
C		✓	25.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	38.000	9.000
	B	19.000	0.000	2.000
	C	16.000	9.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	18	22
	B	58	0	0
	C	50	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	6.11	0.0	A
B-A	0.06	10.91	0.1	B
C-AB	0.01	5.15	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.51	596.57	0.003	1.50	0.0	6.049	A
B-A	22.60	559.39	0.040	22.34	0.1	10.587	B
C-AB	6.95	718.61	0.010	6.91	0.0	5.100	A
C-A	17.89			17.89			
A-B	33.76			33.76			
A-C	8.27			8.27			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.80	594.32	0.003	1.80	0.0	6.075	A
B-A	26.99	557.32	0.048	26.93	0.1	10.722	B
C-AB	8.34	718.61	0.012	8.33	0.0	5.115	A
C-A	21.33			21.33			
A-B	40.31			40.31			
A-C	9.87			9.87			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2.20	591.29	0.004	2.20	0.0	6.110	A
B-A	33.05	554.47	0.060	32.97	0.1	10.905	B
C-AB	10.29	718.63	0.014	10.27	0.0	5.139	A
C-A	26.05			26.05			
A-B	49.37			49.37			
A-C	12.09			12.09			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2.20	591.26	0.004	2.20	0.0	6.110	A
B-A	33.05	554.47	0.060	33.05	0.1	10.908	B
C-AB	10.29	718.63	0.014	10.29	0.0	5.146	A
C-A	26.05			26.05			
A-B	49.37			49.37			
A-C	12.09			12.09			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.80	594.27	0.003	1.80	0.0	6.078	A
B-A	26.99	557.32	0.048	27.06	0.1	10.729	B
C-AB	8.34	718.61	0.012	8.35	0.0	5.126	A
C-A	21.32			21.32			
A-B	40.31			40.31			
A-C	9.87			9.87			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.51	596.45	0.003	1.51	0.0	6.050	A
B-A	22.60	559.39	0.040	22.66	0.1	10.600	B
C-AB	6.95	718.61	0.010	6.96	0.0	5.107	A
C-A	17.89			17.89			
A-B	33.76			33.76			
A-C	8.27			8.27			

Base 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Site Access	T-Junction	Two-way	5.61	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D2	Base 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	10.00	100.000
B		✓	54.00	100.000
C		✓	3.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	4.000	6.000
	B	37.000	0.000	17.000
	C	3.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	0	67
	B	8	0	0
	C	67	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.02	0.0	A
B-A	0.08	7.40	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.80	621.67	0.021	12.71	0.0	5.911	A
B-A	30.08	570.10	0.053	29.85	0.1	7.193	A
C-AB	0.00	715.96	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	3.01			3.01			
A-C	7.54			7.54			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15.28	619.48	0.025	15.27	0.0	5.957	A
B-A	35.92	569.72	0.063	35.87	0.1	7.282	A
C-AB	0.00	715.41	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	3.60			3.60			
A-C	9.01			9.01			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	18.72	616.57	0.030	18.69	0.0	6.020	A
B-A	44.00	569.12	0.077	43.93	0.1	7.403	A
C-AB	0.00	714.67	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	4.40			4.40			
A-C	11.03			11.03			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	18.72	616.54	0.030	18.72	0.0	6.021	A
B-A	44.00	569.13	0.077	44.00	0.1	7.402	A
C-AB	0.00	714.67	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	4.40			4.40			
A-C	11.03			11.03			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15.28	619.41	0.025	15.31	0.0	5.961	A
B-A	35.92	569.75	0.063	35.99	0.1	7.287	A
C-AB	0.00	715.41	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	3.60			3.60			
A-C	9.01			9.01			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.80	621.50	0.021	12.82	0.0	5.913	A
B-A	30.08	570.18	0.053	30.13	0.1	7.202	A
C-AB	0.00	715.96	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	3.01			3.01			
A-C	7.54			7.54			

Total 2020, AM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Site Access	T-Junction	Two-way	3.38	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D3	Total 2020	AM	ONE HOUR	07:20	08:50	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	57.00	100.000
B		✓	27.00	100.000
C		✓	25.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	48.000	9.000
	B	25.000	0.000	2.000
	C	16.000	9.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	25	22
	B	56	0	0
	C	50	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.00	6.17	0.0	A
B-A	0.08	11.00	0.1	B
C-AB	0.01	5.18	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (07:20-07:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.51	592.39	0.003	1.50	0.0	6.091	A
B-A	29.36	558.88	0.053	29.02	0.1	10.592	B
C-AB	6.95	715.63	0.010	6.91	0.0	5.122	A
C-A	17.89			17.89			
A-B	45.17			45.17			
A-C	8.27			8.27			

Main results: (07:35-07:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.80	589.53	0.003	1.80	0.0	6.124	A
B-A	35.06	556.60	0.063	34.99	0.1	10.765	B
C-AB	8.34	715.06	0.012	8.33	0.0	5.141	A
C-A	21.32			21.32			
A-B	53.94			53.94			
A-C	9.87			9.87			

Main results: (07:50-08:05)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2.20	585.67	0.004	2.20	0.0	6.169	A
B-A	42.94	553.44	0.078	42.84	0.1	10.996	B
C-AB	10.29	714.29	0.014	10.28	0.0	5.171	A
C-A	26.04			26.04			
A-B	66.06			66.06			
A-C	12.09			12.09			

Main results: (08:05-08:20)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	2.20	585.64	0.004	2.20	0.0	6.169	A
B-A	42.94	553.44	0.078	42.94	0.1	11.000	B
C-AB	10.29	714.29	0.014	10.29	0.0	5.177	A
C-A	26.04			26.04			
A-B	66.06			66.06			
A-C	12.09			12.09			

Main results: (08:20-08:35)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.80	589.47	0.003	1.80	0.0	6.127	A
B-A	35.06	556.59	0.063	35.16	0.1	10.771	B
C-AB	8.34	715.06	0.012	8.36	0.0	5.152	A
C-A	21.32			21.32			
A-B	53.94			53.94			
A-C	9.87			9.87			

Main results: (08:35-08:50)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	1.51	592.24	0.003	1.51	0.0	6.093	A
B-A	29.36	558.88	0.053	29.44	0.1	10.610	B
C-AB	6.95	715.63	0.010	6.96	0.0	5.129	A
C-A	17.89			17.89			
A-B	45.17			45.17			
A-C	8.27			8.27			

Total 2020, PM

Data Errors and Warnings

No errors or warnings

Analysis Set Details

ID	Network flow scaling factor (%)
A1	100.000

Junction Network

Junctions

Junction	Name	Junction Type	Major road direction	Junction Delay (s)	Junction LOS
1	Forties Road / Site Access	T-Junction	Two-way	5.18	A

Junction Network Options

[same as above]

Arms

Arms

[same as above]

Major Arm Geometry

[same as above]

Minor Arm Geometry

[same as above]

Slope / Intercept / Capacity

[same as above]

Traffic Demand

Demand Set Details

ID	Scenario name	Time Period name	Traffic profile type	Model start time (HH:mm)	Model finish time (HH:mm)	Time segment length (min)
D4	Total 2020	PM	ONE HOUR	16:15	17:45	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	Use O-D data	Average Demand (Veh/hr)	Scaling Factor (%)
A		✓	20.00	100.000
B		✓	60.00	100.000
C		✓	3.00	100.000

Origin-Destination Data

Demand (Veh/hr)

		To		
		A	B	C
From	A	0.000	14.000	6.000
	B	43.000	0.000	17.000
	C	3.000	0.000	0.000

Vehicle Mix

Heavy Vehicle proportion

		To		
		A	B	C
From	A	0	36	67
	B	14	0	0
	C	67	0	0

Results

Results Summary for whole modelled period

Stream	Max RFC	Max delay (s)	Max Queue (PCU)	Max LOS
B-C	0.03	6.12	0.0	A
B-A	0.09	7.93	0.1	A
C-AB	0.00	0.00	0.0	A
C-A				
A-B				
A-C				

Main Results for each time segment

Main results: (16:15-16:30)

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.80	613.52	0.021	12.71	0.0	5.992	A
B-A	36.90	573.14	0.064	36.59	0.1	7.646	A
C-AB	0.00	712.97	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	14.33			14.33			
A-C	7.54			7.54			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15.28	610.76	0.025	15.27	0.0	6.044	A
B-A	44.07	572.50	0.077	44.00	0.1	7.764	A
C-AB	0.00	711.85	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	17.12			17.12			
A-C	9.01			9.01			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	18.72	607.02	0.031	18.69	0.0	6.118	A
B-A	53.97	571.59	0.094	53.88	0.1	7.927	A
C-AB	0.00	710.30	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	20.96			20.96			
A-C	11.03			11.03			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	18.72	606.98	0.031	18.72	0.0	6.119	A
B-A	53.97	571.60	0.094	53.97	0.1	7.928	A
C-AB	0.00	710.30	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	20.96			20.96			
A-C	11.03			11.03			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	15.28	610.70	0.025	15.31	0.0	6.046	A
B-A	44.07	572.52	0.077	44.16	0.1	7.768	A
C-AB	0.00	711.85	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	17.12			17.12			
A-C	9.01			9.01			

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

Stream	Total Demand (PCU/hr)	Capacity (PCU/hr)	RFC	Throughput (PCU/hr)	End queue (PCU)	Delay (s)	LOS
B-C	12.80	613.37	0.021	12.82	0.0	5.994	A
B-A	36.90	573.17	0.064	36.97	0.1	7.653	A
C-AB	0.00	712.97	0.000	0.00	0.0	0.000	A
C-A	0.00			0.00			
A-B	14.33			14.33			
A-C	7.54			7.54			