

## Appendix F

Transport Impact Assessment prepared by GTA Consultants

Planning Proposal Dunmore Street, Pendle Hill | April 2020

## Fresh Hope Care, Pendle Hill

11.3

Dunmore Street, Pendle Hill Transport Impact Assessment

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Prepared by: GTA Consultants (NSW) Pty Ltd for Fresh Hope Care on 23/03/20 Reference: N1170350 Issue #: A



## Fresh Hope Care, Pendle Hill

## Dunmore Street, Pendle Hill Transport Impact Assessment

Client: Fresh Hope Care on 23/03/20 Reference: N1170350 Issue #: A

#### **Quality Record**

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
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## 1. INTRODUCTION





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### 1.1. Background

It is understood that a planning proposal is to be lodged with Cumberland City Council (Council) for redevelopment of the Fresh Hope Care retirement living and residential care facility located on Dunmore Street, Pendle Hill.

The indicative Masterplan includes a 240-bed residential aged care (RAC) facility, approximately 650 new residential dwellings comprising independent living units (ILUs) and affordable housing (AH) units across 20 buildings. There are currently 186 RAC beds and 86 ILUs across the existing facility. Therefore, the proposal would potentially result in a net increase of 54 RAC beds and 564 residential dwellings. The development site also includes two heritage listed buildings; Dunmore House and Ashwood House (which are to be retained), as well as Pathways Community Church and six residential detached dwellings along Pendle Way.

Fresh Hope Care commissioned GTA Consultants to undertake a transport assessment for the planning proposal.

### **1.2.** Purpose of this Report

This report sets out an assessment of the anticipated transport implications of the planning proposal, including consideration of the following:

- existing traffic and parking conditions surrounding the site
- car parking, emergency and service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the planning proposal
- suitability of the proposed access arrangements for the site
- the transport impact of the development proposal on the surrounding road network.

### 1.3. References

In preparing this report, reference has been made to the following:

- an inspection of the site and its surrounds
- Holroyd Development Control Plan (DCP) 2013
- Holroyd Local Environmental Plan (LEP) 2013
- NSW Government State Environmental Planning Policy Housing for Seniors or People with a Disability 2004
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 1: Off-Street Parking AS/NZS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2018
- Australian Standard/ New Zealand Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS/NZS 2890.6:2009
- traffic and car parking surveys undertaken by Matrix as referenced in the context of this report
- Fresh Hope Care Dunmore Street, Pendle Hill Indicative Masterplan prepared by GMU, Taylor Brammer and Thomson Adsett dated February 2020
- GTA Consultants Bonds Spinning Mills, Pendle Hill Traffic and Transport Report dated 5 June 2013.
- other documents and data as referenced in this report.



# 2. EXISTING CONDITIONS





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### 2.1. Site Location

The site for Fresh Hope Care, Pendle Hill has historically been located within the Holroyd City Council local government area, however, became part of the Cumberland City Council local government area as a result of the 2016 merger with parts of Auburn City Council and Parramatta City Council. The site is located about five kilometres west of Parramatta CBD, Sydney's 'Central River City'.

The site of over seven hectares has frontages of approximately 330 metres to the north on Dunmore Street and 220 metres to the west on Pendle Way. As illustrated in Figure 2.1, the site incorporates zonings of R2 Low Density Residential, R3 Medium Density Residential and R4 High Density Residential. As previously mentioned, the current Fresh Hope Care retirement living and residential care facility has 186 RAC beds, 86 ILUs and two heritage listed buildings (Dunmore House and Ashwood House), whilst the broader site also includes Pathways Community Church and six residential detached dwellings along Pendle Way. The site currently has four vehicle crossovers along Dunmore Street and eight crossovers along Pendle Way.





Base image source: Holroyd Local Environmental Plan 2013

The location of the subject site and its surrounding environs is shown in Figure 2.2. Pendle Hill is predominantly low density residential to the south of the site, with medium and high density residential to the north and a local centre north-west. The local centre includes a Woolworths supermarket, a medical centre and various business services and food offerings. Pendle Hill railway station is located adjacent to the local centre, about 400 metres northwest of the site, as shown in Figure 2.3. Melrose Village (another aged care facility) is located north of the railway line adjacent to industrial uses. The former Bonds Spinning Mills industrial site directly to the east of the site has recently been rezoned for a mixed-use development, which will comprise high density residential apartments, 6,000 square metres of retail space and over 5,000 square metres of public park.





Figure 2.2: Site location and surrounds

Basemap source: Sydway

Figure 2.3: Site proximity to Pendle Hill Station



Basemap source: Nearmap, imagery dated 21 July 2019



## 2.2. Transport Network

### 2.2.1. Road Hierarchy

Roads are classified according to the functions they perform. The main purpose of defining a road's functional class is to provide a basis for establishing the policies which guide the management of the road according to their intended service or qualities.

In terms of functional road classification, State roads are strategically important as they form the primary network used for the movement of people and goods between regions, and throughout the State. Transport for NSW (TfNSW, formerly Roads and Maritime Services) is responsible for funding, prioritising and carrying out works on State roads. State roads generally include roads classified as freeways, state highways, and main roads under the Roads Act 1993, and the regulation to manage the road system is stated in the Australian Road Rules.

TfNSW defines four levels in a typical functional road hierarchy, ranking from high mobility and low accessibility, to high accessibility and low mobility. These road classes are:

Arterial Roads – Controlled by TfNSW, typically no limit in flow and designed to carry vehicles long distance between regional centres.

**Sub-Arterial Roads** – Managed by either Council or TfNSW under a joint agreement. Typically, their operating capacity ranges between 10,000 and 20,000 vehicles per day, and their aim is to carry through traffic between specific areas in a sub region or provide connectivity from arterial road routes (regional links).

**Collector Roads** – Provide connectivity between local sites and the sub-arterial road network, and typically carry between 2,000 and 10,000 vehicles per day.

**Local Roads** – Provide direct access to properties and the collector road system and typically carry between 500 and 4,000 vehicles per day.

### 2.2.2. Surrounding Road Network

Cumberland Highway (Emert Street), Great Western Highway and M4 Western Motorway are key multi-lane arterial roads located within approximately one kilometre of the site.

Goodall Street, Wentworth Avenue and Dunmore Street are classified Regional Roads and generally provide one traffic lane and one parking lane in each direction. Goodall Street and Dunmore Street have a posted speed limit of 50 kilometres per hour and Wentworth Avenue has a posted speed limit of 60 kilometres per hour near the site. Dunmore Street and Wentworth Avenue are linked by Goodall Street and the two link Pendle Hill with Cumberland Highway to the east.

Jones Street, Goodall Street, Pendle Way and Gilba Road are local roads that generally provide one traffic lane and one parking lane in each direction, with posted speed limits of 50 kilometres per hour.

The surrounding roads are shown in Figure 2.4 to Figure 2.7.



#### Figure 2.6: Goodall Street (looking south)

Figure 2.4: Dunmore Street (looking east)

#### Figure 2.5: Wentworth Avenue (looking west)



Figure 2.7: Pendle Way (looking south)



### 2.2.3. Surrounding Intersections

The following intersections are located near the site and provide access into the precinct:

- Gilba Road/ Pendle Way (roundabout)
- Goodall Street/ Wentworth Avenue (signalised)
- Goodall Street/ Dunmore Street (signalised)
- Dunmore Street/ Pendle Way (signalised)
- Jones Street/ Dunmore Street (roundabout).

## 2.3. Traffic Volumes

Traffic surveys were completed at the abovementioned intersections during the following peak periods:

- Thursday 2 May 2019 from 7:15am to 8:45am to 4:45pm to 6:15pm
- Saturday 4 May 2019 from 10:30am to 12:30pm.



The morning and afternoon peak hours on the Thursday were found to occur from 7:30am to 8.30am and 5:15pm to 6:15pm respectively. The Saturday peak occurred from 11:15pm to 12:15pm. Full survey results are included in Appendix A.

## 2.4. Intersection Operation

The operation of the key intersections has been assessed using SIDRA INTERSECTION<sup>1</sup>, a computer-based modelling package which calculates intersection performance.

The commonly used measure of intersection performance, as defined by TfNSW, is vehicle delay. SIDRA INTERSECTION determines the average delay that vehicles encounter and provides a measure of the level of service.

Table 2.1 shows the criteria that SIDRA INTERSECTION adopts in assessing the level of service.

Table 2.1: SIDRA INTERSECTION level of service criteria

Level of Service (LOS)	Average Delay per vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way & Stop Sign	
A	Less than 14	Good operation	Good operation	
В	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity	
с	29 to 42	Satisfactory	Satisfactory, but accident study required	
D	D 43 to 56		Near capacity, accident study required	
E 57 to 70		At capacity, at signals incidents will cause excessive delays	At capacity, requires other control mode	
F Greater than 70		Extra capacity required	Extreme delay, major treatment required	

Table 2.2 presents a summary of the existing operation of the intersection, with full results presented in Appendix B. Signalised intersection results are based on the overall performance, whilst unsignalised intersection results are based on the movement with highest delay.

<sup>1</sup> Program used under license from Akcelik & Associates Pty Ltd.



Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Pendle Way/	AM	0.65	10	50	A
Gilba Road	PM	0.47	9	12	А
(Roundabout)	Sat	0.34	11	11	A
Dunmore Street/	AM	0.72	18	58	В
Pendle Way	PM	0.64	17	76	В
(Signals)	Sat	0.53	16	48	В
Dunmore Street/	AM	0.96	23	103	В
Goodall Street	PM	0.67	17	70	В
(Signals)	Sat	0.65	15	47	В
Wentworth Avenue/	AM	0.88	29	123	В
Goodall Street	PM	0.75	24	111	В
(Signals)	Sat	0.53	21	67	В
Dunmore Street/	AM	0.52	11	12	A
Jones Street	PM	0.52	11	27	A
(Roundabout)	Sat	0.37	10	10	A

 Table 2.2:
 Existing operating conditions

Table 2.2 indicates that the study intersections currently operate satisfactorily, with acceptable delays and queues during the surveyed peak periods. It should be noted that the Dunmore Street/ Goodall Street intersection is approaching capacity during the AM road network peak.

## 2.5. Public Transport

### 2.5.1. Trains

Pendle Hill railway station is located about 400 metres north of the site (a six to eight-minute walk) and serviced by the North Shore and Western Line (T1) and Cumberland Line (T5). The T1 line provides six services during peak periods to/ from Sydney CBD and half hourly off peak. Between the T1 and T5 lines, there are four to six services across the day to/ from Parramatta CBD and Blacktown. The T5 line also provides direct services to/ from Richmond, Cabramatta and Liverpool across the day. The train network is shown in Figure 2.8.



Figure 2.8: Surrounding train network



Source: https://transportnsw.info

#### 2.5.2. Buses

There are three bus routes that service Pendle Hill as follows:

- Bus route 700 Blacktown to Parramatta via Prospect, Pendle Hill, Wentworthville and Westmead, with services every 15 minutes in peaks and 30 minutes interpeak. The nearest bus stops are along Smith Street and Pendle Way further south of the site.
- Bus route 705 Blacktown to Parramatta via Lalor Park, Seven Hills, Toongabbie, Pendle Hill, Wentworthville and Westmead, with services every 30 minutes in peaks and hourly interpeak. The nearest bus stops are adjacent to the site on Dunmore Street and at Pendle Hill railway station.
- Bus route 708 Northmead and Parramatta via Constitution Hill, Pendle Hill, Wentworthville and Westmead, with
  one service in the peak direction daily. The nearest bus stops are adjacent to the site on Dunmore Street and at
  Pendle Hill railway station.

The surrounding bus network is shown in Figure 2.9.



Figure 2.9: Surrounding bus network



Source: http://www.cdcbus.com.au

## 2.6. Pedestrians and Cyclists

### 2.6.1. Pedestrian Accessibility

Footpaths are provided on both sides of majority of the surrounding roads including Dunmore Street, Pendle Way, Gilba Road and Goodall Street. The site is conveniently located south of Pendle Hill railway station and the local centre, with the nearby signalised intersections providing controlled crossing locations on two of the three legs.

Based on an average walking speed of five kilometres per hour, the walking catchment for the site is shown in Figure 2.10 and illustrates that the Great Western Highway and Western Motorway present physical barriers for pedestrian movement towards the south, however surrounding key facilities and services are within appropriate walking distance from the site.





#### Figure 2.10: Existing catchment map for walking

Source: https://app.targomo.com

### 2.6.2. Cycling Facilities

Figure 2.11 highlights the cycling catchment of the site, with key employment and health precincts, such as Westmead and Parramatta CBD within the 30-minute catchment. Figure 2.12 shows the surrounding bicycle network and illustrates a general absence of dedicated or marked cycle routes in the Pendle Hill area. There is an opportunity for a link to Westmead and Parramatta CBD via Wentworth Avenue and Alexandra Avenue, generally along the railway alignment.





### Figure 2.11: Existing catchment map for cycling

Source: https://app.targomo.com





Base source: https://www.rms.nsw.gov.au/maps/cycleway\_finder\_accessed 18 February 2020



## 3. DEVELOPMENT PROPOSAL





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## 3.1. Land Uses

The indicative Masterplan includes a 240-bed RAC and approximately 650 new residential dwellings comprising of independent living units (ILU) and affordable housing (AH) units. The two heritage listed buildings, Dunmore House and Ashwood House, are to be retained. For the purposes of this planning proposal, it is assumed that the average residential dwelling size (ILUs and AH) will be two bedrooms.

Information provided by the project economists, Ethos Urban, suggests that this proposal would result in 320 direct ongoing jobs, including 210 full-time jobs. Notwithstanding, not all staff will be present on-site at any one time, given the facility will be operated in shifts. Based on GTA's experience with similar facilities, it is expected that the RAC will be typically staffed by 30 people (including back-of-house staff) at any one time, except during staff changeover when there would be up to 50 people for a short period of time. This estimate has been adopted for the purposes of the transport assessment and will be revisited as part of any future development application(s).

### 3.2. Internal Road Network

The proposed internal road network comprises four key roads that service the individual buildings as follows:

- Proposed Road 1 two-way north-south alignment intersecting with Dunmore Street at an existing crossover location, 95 metres east of Pendle Way
- Proposed Road 2 two-way north-south alignment intersecting with Dunmore Street at an existing crossover location, 40 metres east of Goodall Street
- Proposed Road 3 two-way east-west alignment intersecting with Pendle Way, approximately 50 metres south of Macklin Street
- Proposed Road 4 two-way east-west alignment intersecting with Pendle Way, approximately 130 metres south
  of Macklin Street.

Two existing vehicle crossovers and driveways that provide access to the heritage listed Dunmore House and Ashwood House buildings will be retained along Dunmore Street. As such, there will be no net change in vehicle crossovers along Dunmore Street; with there being a reduction of at least three crossovers along Pendle Way.

The layout of the internal road network is show in Figure 3.1



Figure 3.1: Indicative Masterplan



Source: Taylor Brammer Landscape Architects Pty Ltd dated 3 February 2020

All internal roads will function as private roads and allow for two-way vehicle access. The width of internal roads will be between six and eight metres, which is based on the requirements of the Holroyd DCP 2013 for an 'Minor Access Street' and 'Access Place'.

It is recommended that 1.8-metre-wide footpaths are provided on at least one side of the internal road network, based on Austroads<sup>2</sup> guidance, for wheelchairs and scooters to pass. Where this cannot be achieved, it is recommended that minimum 1.5-metre-wide footpaths are provided (based on the DCP 2013 for R4 high density residential zones), with intermittent widening to 1.8 metres (minimum 2 metres long with 0.4-metre splays on each side) at maximum 30-metre intervals to allow passing. The passing bays should be located where clear sight distances can be achieved and near kerb ramps where possible.

It is understood all parking will be provided within basement car parks, with consolidated basements being considered for buildings. Vehicle access to the basements will be primarily from the internal road network.

<sup>&</sup>lt;sup>2</sup> Table 5.1 of Austroads Guide to Road Design: Part 6A Paths for Walking and Cycling



# 4. PARKING AND LOADING ASSESSMENT





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## 4.1. Bicycle Parking

The minimum bicycle parking requirements for different development types are set out in the Holroyd DCP 2013. The DCP does not include specific requirements for seniors living or residential aged care developments. On this basis, the rates for residential flat buildings has been considered for this proposal as follows, with the corresponding requirements summarised in Table 4.1:

- ILU/ AH residents 1 space per 2 units (minimum)
- Visitors/ RAC staff 1 space per 10 units (or beds in the case of RAC visitors).

Table 4.1:	Holroyd DCP	2013 bicyc	le parking	requirements
------------	-------------	------------	------------	--------------

Building/ Use Quantity		DCP Parking Rate	Parking Requirement
RAC	240	0.1 spaces per bed	24
ILU and AH Residents	650	0.5 spaces per unit	325
ILU and AH Visitors	650	0.1 spaces per unit	65
Tc	tal		414

Based on the above, the proposal should provide 325 bicycle spaces for ILU and AH residents and 65 spaces for visitors proportionally distributed across each building. A further 24 bicycle spaces should be provided for staff and visitors at the RAC facility.

The RAC facility should also provide staff amenities such as showers and lockers suitable for end-of-trip use for those who cycle to work as their main mode of travel.

## 4.2. Car Parking

The Holroyd DCP 2013 states that car parking for seniors living or residential aged care developments should be provided in accordance with the State Environment Planning Policy – Housing for Seniors or People with a Disability, 2004 (SEPP Seniors).

For visitor parking, the minimum Holroyd DCP 2013 requirement of one space per five units for residential flat buildings is recommended to be adopted.

Table 4.2 summarises the car parking requirements for the proposal, based on the assumption that the average ILU and AH size is two bedrooms.

Building/ Use Quantity		SEPP Parking Rate	Parking Requirement	
RAC Visitors	RAC Visitors 240		24	
RAC Staff	50	1 space per 2 staff	24	
ILU and AH Residents	650	0.5 spaces per bedroom	650	
ILU and AH Visitors 650		1 space per 5 units <sup>[1]</sup>	82	
То	tal		780	

#### Table 4.2: SEPP Seniors and DCP 2013 car parking requirements

Based on the above, the proposal is required to provide 780 car parking spaces distributed proportionally across each building.



#### Accessible Parking

Holroyd DCP 2013 does not specify accessible parking requirements. Notwithstanding, the requirements of the Australian Government's Disability (Access to Premises – Buildings) Standard 2010, National Construction Code of Australian (previously known as the Building Code of Australia) and AS2890 are as follows:

- Disability (Access to Premises Buildings) Standard 2010 one space for every 100 car parking spaces or part thereof.
- National Construction Code of Australia one space for every 100 car parking spaces or part thereof.
- AS2890.6:2019 one space for first 20 car parking spaces, two spaces for 21-50 car parking space and one space for every additional 50 spaces or part thereof.

Based on this, between 8 and 18 accessible spaces would be the minimum requirements for this development; although the opportunity to provide more spaces should be considered if basement spatials permit.

#### Electric Vehicle Provisions

In order to future proof the proposal, it is recommended that an allowance for electric vehicles is considered as part of any future development application(s). There is currently no formal transport engineering guidance that dictates the level of electric vehicle charging provision requirements. Typically, this is determined by a Sustainability Consultant, and dependent on whether the development will be certified for Green Star, where some guidance on the level of electric vehicle charging is available.

Therefore, GTA recommends that as part of any future development application(s), a Sustainability Consultant provides advice on the minimum percentage of EV charging compatible parking spaces (resident and visitors).

Such provisions could be either provided via:

- required electrical services to allow for future residents to install charging infrastructure
- a portion of parking spaces with standardised EV charging facilities.

## 4.3. Ambulance Parking

SEPP Seniors requires one parking space suitable for an ambulance to be provided for residential care facilities. Therefore, the RAC facility is required to provide one dedicated ambulance space.

Whilst a dedicated ambulance space is not required for the independent living unit buildings, ambulance vehicles will be able to access these buildings via the proposed internal road network.

## 4.4. Loading and Waste Collection

The Holroyd DCP 2013 does not have specific requirements for on-site removalist vehicle parking. Notwithstanding, it is recommended that suitable loading/ unloading areas are provided near each building, with footpaths of appropriate width (typically 1.8m wide as per Table 5.1 of the Austroads Guide to Road Design: Part 6A Paths for Walking and Cycling) to/ from these loading areas for delivery of large items, such as furniture and appliances.

In regard to waste collection, Council advised that they could service a residential development with a private road system and the normal Council fees applied. If a private contractor is to be used, a Council availability charge would apply as the service is available but not used. Council uses a 10.5-metre garbage truck, which requires 4.5 metre height clearance. On this basis, it is recommended that the site and all waste collection areas (whether along the internal road network or within buildings) are designed for Council's waste truck (as a minimum), noting that whilst it is not an Australian Standard or Austroads design vehicle, it is a commonly used vehicle size for residential waste collection.



## 5. TRAFFIC ASSESSMENT





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## 5.1. Traffic Generation

### 5.1.1. Existing Site

At the time of the intersection surveys, traffic counts were also completed at the existing site access driveways for the Fresh Hope Care site to understand existing site generation. The peak hour traffic volumes during the surveyed road network peak periods have been summarised in Table 5.1.

Peak Period	Inbound	Outbound	Total
Weekday AM	16	11	27
Weekday PM	12	20	32
Saturday Midday	23	33	56

### 5.1.2. Proposed Scheme

Traffic generation estimates for the planning proposal have been determined having consideration to the Guide to Traffic Generating Developments, TfNSW 2002 (the Guide) and Technical Direction: Updated Traffic Surveys (TDT 2013/ 04a), together with the nearby Bonds Spinning Mills mixed-use development proposal (GTA, 2013).

Table 5.2 summarises the anticipated traffic generating capacity of the proposal.

Use	Quantity	Traffic generation rate (trips / hour)		Traffic generation estimates (trips / hour)			
		AM	РМ	Sat	AM	РМ	Sat
ILU/ AH	650	0.16 trips per dwelling	0.18 trips per dwelling	0.14 trips per dwelling	104	117	91
RAC	240	0.1 trips per dwelling	0.1 trips per dwelling	0.2 trips per dwelling	24	24	48
	Total					141	139

 Table 5.2:
 Future traffic generation estimates

In addition, the directional split of traffic (i.e. the ratio between the inbound and outbound traffic movements) for the proposal has been assessed as follows, with the resultant splits summarised in Table 5.3:

- Weekday AM: 20 per cent in and 80 per cent out
- Weekday PM: 70 per cent in and 30 per cent out
- Saturday Midday: 50 per cent in and 50 per cent out.

#### Table 5.3: Future traffic generation directional split

Peak Period	Inbound	Outbound	Total
Weekday AM	26	102	128
Weekday PM	99	42	141
Saturday Midday	70	69	139



### 5.1.3. Net Traffic Generation

Table 5.4 summarises the net increase in traffic generation resulting from the development proposal.

Table 5.4: Net change traffic generation

Peak Period	Inbound	Outbound	Total
Weekday AM	+10	+91	+101
Weekday PM	+87	+22	+109
Saturday Midday	+47	+37	+83

Compared to the existing facility, the proposal is expected to generate an additional 100-110 vehicle trips during any weekday peak hour and an additional 85 vehicle trips during the Saturday peak hour.

## 5.2. Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposal will be influenced by a number of factors, including the:

- configuration of the arterial road network in the immediate vicinity of the site
- existing operation of intersections providing access between the local and arterial road network
- distribution of households in the vicinity of the site
- surrounding employment centres, retail centres and schools in relation to the site
- likely distribution of employee's residences in relation to the site
- configuration of access points to the site.

Having consideration for the above, for the purposes of estimating vehicle movements, the directional distributions have been assumed:

- Pendle Way (South) 60%
- Dunmore Street (East) 20%
- Wentworth Avenue (East or West) 10%
- Gilba Road (West) 5%
- Jones Street (South) 5%.

### 5.3. Bonds Spinning Mills Mixed Use Development

As previously mentioned, the former Bonds Spinning Mills site located to the east has been rezoned from IN2 Light Industrial to R4 High Density Residential, B2 Local Centre and RE1 Public, to enable redevelopment for residential and retail purposes. Whilst it is understood that no development application has been submitted, the development (as documented at the rezoning stage) has been considered as part of this traffic assessment to understand the cumulative impacts on the surrounding road network.

It is understood that the Bonds Spinning Mills Mixed Use Development has the potential to accommodate 1,260 residential units, 3,160 square metres of supermarket and 2,840 square metres of retail. A summary of the anticipated traffic generation of this development is provided in Table 5.5, which is based on the traffic generation rates adopted in the Traffic and Transport Report (GTA, 2013) that accompanied the planning proposal for the site. The directional distribution and assignment from the traffic report was also adopted.



Use	Size	Traffic gen	eration rate (tri	ps / hour)	Traffic generat	tion estimates (	(trips / hour)
Use	Size	AM	PM	Sat	AM	РМ	Sat
Residential	1,260 units	0.32 trips per dwelling	0.18 trips per dwelling	0.23 trips per dwelling	403	227	290
Retail - Supermarket	3,160sqm	58 trips per 1,000sqm	116 trips per 1,000sqm	110 trips per 1,000sqm	183	367	348
Retail - Speciality	2,840sqm	18 trips per 1,000sqm	35 trips per 1,000sqm	80 trips per 1,000sqm	50	99	227
		Total		636	693	865	

Table 5.5: Bonds Spinning Mills mixed-used development - traffic generation estimates

## 5.4. Traffic Impacts

### 5.4.1. Existing plus Proposal

The study intersections have been reassessed to include traffic associated with the proposal when it is ultimately completed, noting it will be staged development. The SIDRA modelling results are summarised in Table 5.6, with full results presented in Appendix B.

Intersection	Peak	Existing Level of Service (LOS)	Degree of Saturation (DOS)	Average Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
	AM	A	0.65	10	50	А
Pendle Way/ Gilba Road	PM	A	0.47	9	12	А
	Sat	A	0.35	11	11	А
	AM	В	0.72	18	59	В
Dunmore Street/ Pendle Way	PM	В	0.67	17	70	В
	Sat	В	0.55	16	50	В
	AM	В	0.99	25	102	В
Dunmore Street/ Goodall Street	PM	В	0.69	17	71	В
	Sat	В	0.67	15	49	В
	AM	В	0.89	29	125	С
Wentworth Avenue/ Goodall Street	PM	В	0.76	24	114	В
	Sat	В	0.54	21	68	В
	AM	A	0.54	11	12	А
Dunmore Street/ Jones Street	PM	A	0.53	11	28	А
	Sat	А	0.37	10	16	А

Table 5.6: Intersection operating conditions – Existing plus Proposal

Table 5.6 indicates that the study intersections will continue to operate satisfactorily during the peak periods, with acceptable delays and queues. The Dunmore Street/ Goodall Street intersection would be at capacity, however still operating at an overall Level of Service B during the AM road network peak.



### 5.4.2. Existing plus Proposal and Bonds Spinning Mills

The study intersections were also reassessed to include traffic associated with the proposal and the Bonds Spinning Mills development. The SIDRA modelling results are summarised in Table 5.7, with full results presented in Appendix B.

Intersection	Peak	Existing Level of Service (LOS)	Degree of Saturation (DOS)	Average Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
	AM	A	0.66	10	51	А
Pendle Way/ Gilba Road	PM	A	0.48	9	12	А
	Sat	A	0.36	11	11	А
	AM	В	0.76	18	64	В
Dunmore Street/ Pendle Way	PM	В	0.75	18	80	В
	Sat	В	0.70	18	54	В
	AM	В	1.05	38	196	С
Dunmore Street/ Goodall Street	PM	В	0.80	19	85	В
	Sat	В	0.80	16	77	В
	AM	В	0.92	31	125	С
Wentworth Avenue/ Goodall Street	PM	В	0.85	26	130	В
	Sat	В	0.59	21	72	В
	AM	A	0.62	11	15	А
Dunmore Street/ Jones Street	PM	A	0.60	12	37	А
	Sat	A	0.46	11	22	A

Table 5.7: Intersection operating conditions - Existing plus Proposal and Bonds Spinning Mills development

Table 5.6 indicates that the study intersections will continue to operate satisfactorily during the peak periods with acceptable delays and queues. The Dunmore Street/ Goodall Street intersection would potentially exceed capacity during the AM road network peak, with increased queuing, however still operating at an overall Level of Service C. The potential for minor improvements at this intersection could be considered during at the Development Application stage.

## 5.5. Site Access Points

The proposal will have four new two-way private roads that will intersect with the adjacent local roads and will be used by the majority of the development-generated traffic to access the site. Unused vehicular crossovers, specifically on Pendle Way, would be removed to increase on-street parking supply for the general public.

The new private roads are located more than 40 metres (centre to centre) from the nearest intersections on the opposite side of the road. This is consistent with Holroyd DCP 2013 requirements for access place or roads to a collector road. Goodall Street is a Regional Road and the same requirement has been applied to the location of Proposed Road 2.

Based on the anticipated traffic generation, distribution and assignment determined in the preceding sections, it is expected there would be up to 45 vehicles per hour exiting the site at any access (i.e. less than a vehicle every minute) and 25 vehicles per hour entering the site at any access for any individual movement (i.e. less than a vehicle every two minutes). Therefore, the development traffic entering or exiting the site is not expected to significantly impact the operation of the surrounding road network.



## 5.6. Summary

On the basis of the above, the anticipated traffic volumes associated with the proposal would not be expected to compromise the safety or function of the surrounding road network, including when considering cumulative traffic impacts of the future Bonds Spinning Mills redevelopment.



## 6. CONCLUSION





Document Set ID: 7953019 Version: 1, Version Date: 28/04/2020 N1170350 // 23/03/20 Transport Impact Assessment // Issue: A Fresh Hope Care, Pendle Hill, Dunmore Street, Pendle Hill 2

Based on the analysis and discussions presented within this report, the following conclusions are made:

- The indicative Masterplan includes a 240-bed residential aged care (RAC) facility, approximately 650 new residential dwellings comprising independent living units (ILU) and affordable housing (AH) units across 20 buildings. This represents a net increase of 54 RAC beds and 564 residential dwellings compared with the existing facility.
- 2. It is recommended that the planning proposal provides 325 bicycle spaces for ILU and AH residents and 65 spaces for visitors, proportionally distributed across each building. A further 24 bicycle spaces are recommended for staff and visitors of the RAC facility.
- 3. The planning proposal generates a requirement for 780 car parking spaces, proportionally distributed across each building, to comply with SEPP Seniors and Holroyd DCP 2013.
- 4. The site is expected to generate between 135 and 145 vehicle trips in any weekday or Saturday peak hours, which is an additional 90 to 110 vehicle trips compared with the existing facility.
- 5. SIDRA intersection modelling suggests that the study intersections will continue to operate satisfactorily during the peak periods with the development traffic, including when considering cumulative traffic impacts of the future Bonds Spinning Mills redevelopment.
- 6. Therefore, the proposal is not expected to compromise the safety or function of the surrounding road network.



## **A. SURVEY RESULTS**





Document Set ID: 7953019 Version: 1, Version Date: 28/04/2020 N1170350 // 23/03/20 Transport Impact Assessment // Issue: A Fresh Hope Care, Pendle Hill, Dunmore Street, Pendle Hill

A-1





Approach						Jone	es St											Dunm	ore St					
Direction		irection Left Turn			irection Through			Direction Right Tur			irection 3 (U Turn)	U		irection Left Turr			irection Through			Direction Right Tur			irection 6 (U Turn)	
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:15 to 7:30	23	0	23	2	0	2	14	1	15	0	0	0	6	1	7	42	1	43	1	0	1	0	0	0
7:30 to 7:45	42	3	45	1	0	1	18	0	18	0	0	0	7	0	7	34	2	36	0	0	0	3	0	3
7:45 to 8:00	28	2	30	3	0	3	18	0	18	0	0	0	9	0	9	50	4	54	2	0	2	1	0	1
8:00 to 8:15	30	1	31	3	0	3	28	1	29	0	0	0	9	2	11	55	0	55	0	0	0	1	0	1
8:15 to 8:30	49	0	49	3	0	3	23	1	24	0	0	0	7	0	7	67	1	68	3	0	3	1	0	1
8:30 to 8:45	34	1	35	3	1	4	15	0	15	0	0	0	8	1	9	49	3	52	0	0	0	1	0	1
AM Totals	206	7	213	15	1	16	116	3	119	0	0	0	46	4	50	297	11	308	6	0	6	7	0	7
16:45 to 17:00	41	2	43	6	0	6	4	0	4	0	0	0	20	0	20	105	2	107	2	0	2	0	0	0
17:00 to 17:15	26	1	27	5	0	5	11	0	11	0	0	0	13	1	14	100	1	101	3	0	3	1	0	1
17:15 to 17:30	38	0	38	5	0	5	3	0	3	0	0	0	18	0	18	107	0	107	9	0	9	0	0	0
17:30 to 17:45	33	1	34	7	0	7	8	0	8	0	0	0	9	1	10	106	1	107	1	0	1	0	0	0
17:45 to 18:00	32	0	32	3	1	4	5	0	5	0	0	0	8	0	8	118	2	120	3	0	3	0	0	0
18:00 to 18:15	34	1	35	3	0	3	6	0	6	0	0	0	14	0	14	104	2	106	4	0	4	1	0	1
PM Totals	204	5	209	29	1	30	37	0	37	0	0	0	82	2	84	640	8	648	22	0	22	2	0	2

Approach						Jone	es St											Dunm	ore St					
Direction		Direction Left Turr			irection Through	-		Direction Right Tur			irection 9 (U Turn)	ÐU		irection Left Turr			irection : Through			irection : Right Tur			ection 1 (U Turn)	2U
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:15 to 7:30	2	0	2	6	0	6	6	0	6	0	0	0	3	0	3	76	0	76	45	3	48	0	0	0
7:30 to 7:45	2	0	2	8	0	8	10	0	10	0	0	0	5	0	5	89	0	89	58	2	60	0	0	0
7:45 to 8:00	1	0	1	5	0	5	11	0	11	0	0	0	9	0	9	90	1	91	51	3	54	0	0	0
8:00 to 8:15	1	0	1	3	0	3	10	0	10	0	0	0	8	0	8	90	2	92	66	0	66	0	0	0
8:15 to 8:30	4	0	4	1	0	1	4	0	4	0	0	0	4	0	4	90	3	93	72	2	74	0	0	0
8:30 to 8:45	0	0	0	17	0	17	6	0	6	0	0	0	4	0	4	92	4	96	65	0	65	0	0	0
AM Totals	10	0	10	40	0	40	47	0	47	0	0	0	33	0	33	527	10	537	357	10	367	0	0	0
16:45 to 17:00	3	0	3	4	0	4	9	0	9	0	0	0	5	0	5	52	2	54	46	1	47	0	0	0
17:00 to 17:15	1	0	1	2	0	2	6	0	6	0	0	0	8	0	8	43	0	43	46	0	46	0	0	0
17:15 to 17:30	3	0	3	4	0	4	10	0	10	0	0	0	10	0	10	58	0	58	47	2	49	0	0	0
17:30 to 17:45	3	0	3	8	0	8	8	0	8	0	0	0	7	1	8	62	1	63	55	2	57	0	0	0
17:45 to 18:00	1	0	1	6	0	6	4	0	4	0	0	0	21	0	21	69	0	69	45	0	45	2	0	2
18:00 to 18:15	2	0	2	7	0	7	5	0	5	0	0	0	13	0	13	55	0	55	66	0	66	0	0	0
PM Totals	13	0	13	31	0	31	42	0	42	0	0	0	64	1	65	339	3	342	305	5	310	2	0	2

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 1. Dunmore St / Jones St
Day/Date	: Thu, 2nd May 2019
Weather	: Fine
Description	: Classified Intersection Count

: Hourly Summary





Approach						Jone	es St											Dunm	ore St					
Direction		irection Left Turn			irection Through		Direction 3 Direction 3U (Right Turn) (U Turn)				irection Left Turr			irection Through			Direction Right Tur			irection 6 (U Turn)				
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:15 to 8:15	123	6	129	9	0	9	78	2	80	0	0	0	31	3	34	181	7	188	3	0	3	5	0	5
7:30 to 8:30	149	6	155	10	0	10	87	2	89	0	0	0	32	2	34	206	7	213	5	0	5	6	0	6
7:45 to 8:45	141	4	145	12	1	13	84	2	86	0	0	0	33	3	36	221	8	229	5	0	5	4	0	4
AM Totals	206	7	213	15	1	16	116	3	119	0	0	0	46	4	50	297	11	308	6	0	6	7	0	7
16:45 to 17:45	138	4	142	23	0	23	26	0	26	0	0	0	60	2	62	418	4	422	15	0	15	1	0	1
17:00 to 18:00	129	2	131	20	1	21	27	0	27	0	0	0	48	2	50	431	4	435	16	0	16	1	0	1
17:15 to 18:15	137	2	139	18	1	19	22	0	22	0	0	0	49	1	50	435	5	440	17	0	17	1	0	1
PM Totals	204	5	209	29	1	30	37	0	37	0	0	0	82	2	84	640	8	648	22	0	22	2	0	2

Approach						Jone	es St											Dunm	ore St					
Direction		Direction Left Turn			irection Through			Direction 9 Direction 9U (Right Turn) (U Turn)				irection Left Turr			irection Through			irection : tight Tur			rection 1 (U Turn)			
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:15 to 8:15	6	0	6	22	0	22	37	0	37	0	0	0	25	0	25	345	3	348	220	8	228	0	0	0
7:30 to 8:30	8	0	8	17	0	17	35	0	35	0	0	0	26	0	26	359	6	365	247	7	254	0	0	0
7:45 to 8:45	6	0	6	26	0	26	31	0	31	0	0	0	25	0	25	362	10	372	254	5	259	0	0	0
AM Totals	10	0	10	40	0	40	47	0	47	0	0	0	33	0	33	527	10	537	357	10	367	0	0	0
16:45 to 17:45	10	0	10	18	0	18	33	0	33	0	0	0	30	1	31	215	3	218	194	5	199	0	0	0
17:00 to 18:00	8	0	8	20	0	20	28	0	28	0	0	0	46	1	47	232	1	233	193	4	197	2	0	2
17:15 to 18:15	9	0	9	25	0	25	27	0	27	0	0	0	51	1	52	244	1	245	213	4	217	2	0	2
PM Totals	13	0	13	31	0	31	42	0	42	0	0	0	64	1	65	339	3	342	305	5	310	2	0	2

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 1. Dunmore St / Jones St
Day/Date	: Sat, 4th May 2019
Weather	: Fine
Description	: Classified Intersection Count
	: Peak Hour Summary



Approach		Jones St	:	D	unmore	St		Jones St	:	D	unmore	St	otal
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand T
11:15 to 12:15	203	2	205	353	0	353	66	0	66	479	4	483	1,107

Approach			Jones St			Dunmore St			Jones St			Dunmore St			Total
Time Period			Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand T
10:30	to	11:30	160	2	162	351	2	353	61	0	61	454	8	462	1,038
10:45	to	11:45	181	2	183	338	2	340	60	0	60	465	2	467	1,050
11:00	to	12:00	200	2	202	343	1	344	62	0	62	480	4	484	1,092
11:15	to	12:15	203	2	205	353	0	353	66	0	66	479	4	483	1,107
11:30	to	12:30	200	1	201	347	0	347	63	0	63	474	3	477	1,088
	Total			3	363	698	2	700	124	0	124	928	11	939	2,126
Job No.	: N4949														
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Client	: GTA														
Suburb	: Pendle Hill														
Location	: 2. Dunmore St / Goodall St														
Day/Date	: Thu, 2nd May 2019														
Weather	: Fine														
Description	: Classified Intersection Count														
	: Peak Hour Summary														



	Approach	D	unmore	St	G	ioodall S	St	D	<b>Total</b>		
	Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand 1
AM	7:30 to 8:30	509	23	532	495	19	514	710	20	730	1,776
PM	17:15 to 18:15	611	8	619	678	3	681	476	7	483	1,783

h
<b>Starting</b> <b>Heavi</b> 410 16
509 23
527 22 <b>549</b>
666 30 696
616 9
633 7
611 8
913

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 2. Dunmore St / Goodall St
Day/Date	: Sat, 4th May 2019
Weather	: Fine
Description	: Classified Intersection Count



: Peak Hour Summary

Approach	D	unmore	St	Ġ	Goodall S	St	D	otal		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand T
11:15 to 12:15	519	3	522	444	6	450	457	6	463	1,435

Approach	D	unmore	St	Goodall St Dunmore St						Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand T
10:30 to 11:30	478	3	481	467	7	474	433	7	440	1,395
10:45 to 11:45	487	3	490	458	6	464	458	4	462	1,416
11:00 to 12:00	503	2	505	440	6	446	466	5	471	1,422
11:15 to 12:15	519	3	522	444	6	450	457	6	463	1,435
11:30 to 12:30	486	4	490	453	4	457	418	8	426	1,373
Total	964	7	971	920	11	931	851	15	866	2,768

Job No.	· N4949
Client	: GTA
Client	. GIA
Suburb	: Pendle Hill
Location	: 3. Dunmore St / Pendle Way
Day/Date	: Thu, 2nd May 2019
Weather	: Fine
Description	: Classified Intersection Count
	: Peak Hour Summary

Pendle Way

**Grand Total** 

1,769

1,719

	Ap	proa	ich	Pe	endle W	ау	D	unmore	St	Pendle Way			
	Tim	e Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM	7:30	to	8:30	635	25	660	536	23	559	537	13	550	
PM	16:45	to	17:45	491	5	496	788	8	796	418	9	427	

Ар	proa	ich	Pe	endle W	ay	D	unmore	St	Pe	endle W	ау	leto'
Tim	e Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand Total
7:15	to	8:15	687	18	705	478	24	502	522	11	533	1,7
7:30	to	8:30	635	25	660	536	23	559	537	13	550	1,7
7:45	to	8:45	557	22	579	536	17	553	538	11	549	1,6
AN	/I Tot	als	919	27	946	738	32	770	775	17	792	2,5
16:45	to	17:45	491	5	496	788	8	796	418	9	427	1,7
17:00	to	18:00	517	4	521	786	7	793	394	4	398	1,7
17:15	to	18:15	504	2	506	764	5	769	401	5	406	1,6
PN	1 Tot	als	743	6	749	1,164	9	1,173	619	11	630	2,5

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 3. Dunmore St / Pendle Way
Day/Date	: Sat, 4th May 2019
Weather	: Fine
Description	: Classified Intersection Count
	: Peak Hour Summary



Appr	oach	Pe	endle W	ау	D	Dunmore St Pendle Way				
Time F	Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
11:15 to	0 12:15	418	5	423	473	4	477	373	4	377

Ap	proa	ich	Pe	endle W	ау	D	unmore	St	Pe	endle W	ау	otal
Tim	e Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand Total
10:30	to	11:30	426	5	431	494	5	499	332	9	341	1,271
10:45	to	11:45	423	4	427	471	4	475	352	5	357	1,259
11:00	to	12:00	418	5	423	475	3	478	361	5	366	1,267
11:15	to	12:15	418	5	423	473	4	477	373	4	377	1,277
11:30	to	12:30	433	6	439	469	5	474	347	6	353	1,266
	Total		859	11	870	963	10	973	679	15	694	2,537

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 4. Pendle Way / Gilba Rd
Day/Date	: Thu, 2nd May 2019
Weather	: Fine
Description	: Classified Intersection Count



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scription : Classified Intersection Coun : Peak Hour Summary

	Ap	proa	ch	Pe	endle W	ay	Pe	endle W	ay		Gilba Rd	I	Total
	Tim	e Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand 1
AM	7:30	to	8:30	454	17	471	205	5	210	618	14	632	1,313
PM	17:15	to	18:15	616	8	624	198	7	205	423	1	424	1,253

P	pproa	ach	Pe	endle W	ау
Tiı	ne Pe	riod	Lights	Heavies	Total
7:15	to	8:15	425	17	442
7:30	to	8:30	454	17	471
7:45	to	8:45	455	17	472
Α	M Tot	als	664	24	688
16:45	to	17:45	582	12	594
17:00	to	18:00	598	8	606
17:15	to	18:15	616	8	624
Р	M Tot	als	895	15	910

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 4. Pendle Way / Gilba Rd
Day/Date	: Sat, 4th May 2019
Weather	: Fine
Description	: Classified Intersection Count



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ion	: Classified Intersection Cou
	: Peak Hour Summary

Approach	Pe	endle W	ay		Ре	ndle Wa	ay		Gilba Rd	I	otal
Time Period	Lights	Heavies	Total	44 4	Lights	Heavies	Total	Lights	Heavies	Total	Grand T
11:30 to 12:30	416	4	420	2:	213	3	216	343	5	348	984

A	oproa	ich	Pe	endle W	ау
Tim	ie Pei	riod	Lights	Heavies	Total
10:30	to	11:30		3	374
10:45	to	11:45	364	3	367
11:00	to	12:00	367	3	370
11:15	to	12:15	387	3	390
11:30	to	12:30	416	4	420
	Tota	1	787	7	794

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 5. Wentworth Ave / Goodall St
Day/Date	: Thu, 2nd May 2019
Weather	: Fine
Description	: Classified Intersection Count
	: Peak Hour Summary



	Ap	oproa	ch	G	ioodall S	St	We	ntworth	Ave	Wei	ntworth	Ave	Total
	Tim	e Per	iod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand 1
AM	7:30	to	8:30	610	18	628	531	23	554	630	40	670	1,852
PM	17:15	to	18:15	549	1	550	566	15	581	668	6	674	1,805

Ap	proa	ich	G	ioodall S	St	We	ntworth	Ave		Wei	ntworth	Ave	otal
Tim	ie Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total	Grand Total
7:15	to	8:15	634	14	648	479	20	499		588	48	636	1,783
7:30	to	8:30	610	18	628	531	23	554		630	40	670	1,852
7:45	to	8:45	604	18	622	531	18	549		644	32	676	1,847
AN	/I Tot	als	918	24	942	750	31	781		921	60	981	2,704
16:45	to	17:45	554	4	558	552	10	562		650	6	656	1,776
17:00	to	18:00	546	1	547	534	13	547		659	4	663	1,757
17:15	to	18:15	549	1	550	566	15	581		668	6	674	1,805
PN	/I Tot	als	817	4	821	862	21	883		999	8	1,007	2,711



Approach	G	Goodall S	St	Wei	ntworth	Ave	Wer	ntworth	Ave	otal
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand T
10:45 to 11:45	450	5	455	432	8	440	585	7	592	1,487

Ap	oproa	ich	G	ioodall S	St	Wei	ntworth	Ave	
Tim	ie Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	
10:30	to	11:30	434	7	441	410	9	419	1
10:45	to	11:45	450	5	455	432	8	440	
11:00	to	12:00	448	5	453	412	8	420	
11:15	to	12:15	467	5	472	408	11	419	
11:30	to	12:30	450	7	457	409	10	419	
	Tota		884	14	898	819	19	838	

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 9. Pathways Community Church Driveway / Pendle Way
Day/Date	: Thu, 2nd May 2019
Weather	: Fine
Description	: Classified Intersection Count

: Peak Hour Summary



**Grand Total** 

1,200

1,156

	Ap	proa	ich	Pe	endle W	ay	Chu	ch Drive	eway	Pe	endle Wa	ay
	Tim	e Pe	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
AM	7:15	to	8:15	665	17	682	0	0	0	496	22	518
PM	17:15	to	18:15	514	5	519	1	0	1	631	5	636

Ар	proa	ich	Pe	endle Wa	ау	Chu	rch Drive	eway	Pe	endle W	ау
Tim	e Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:15	to	8:15	665	17	682	0	0	0	496	22	518
7:30	to	8:30	645	15	660	0	0	0	498	21	519
7:45	to	8:45	563	14	577	0	0	0	489	17	506
AN	1 Tot	als	913	19	932	0	0	0	714	28	742
16:45	to	17:45	487	8	495	2	0	2	644	6	650
17:00	to	18:00	511	5	516	2	0	2	632	5	637
17:15	to	18:15	514	5	519	1	0	1	631	5	636
PN	1 Tot	als	751	8	759	2	0	2	970	9	979

Job No.	: N4949
Client	: GTA
Suburb	: Pendle Hill
Location	: 9. Pathways Community Church Driveway / Pendle Way
Day/Date	: Sat, 4th May 2019
Weather	: Fine

: Classified Intersection Count

: Peak Hour Summary

Description



Ap	oproa	ch	Pe	endle W	ау	Chu	rch Drive	eway	Pe	endle W	ау	otal
Tim	ie Per	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	E puer5
10:30	to	11:30	438	4	442	3	0	3	443	10	453	89

Ap	proa	ich	Pe	endle W	ау	Chu	rch Drive	eway	Pe	endle W	ау	otal
Tim	e Pei	riod	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Grand Total
10:30	to	11:30	438	4	442	3	0	3	443	10	453	898
10:45	to	11:45	441	3	444	2	0	2	445	7	452	898
11:00	to	12:00	441	3	444	2	0	2	442	7	449	895
11:15	to	12:15	437	4	441	1	0	1	440	4	444	886
11:30	to	12:30	436	6	442	1	0	1	434	4	438	881
	Total		874	10	884	4	0	4	877	14	891	1,779

# B. INTERSECTION MODELLING RESULTS





Document Set ID: 7953019 Version: 1, Version Date: 28/04/2020 N1170350 // 23/03/20 Transport Impact Assessment // Issue: A Fresh Hope Care, Pendle Hill, Dunmore Street, Pendle Hill

# **USER REPORT FOR SITE**

Project: 200218sid-N170350 230-290 Dunmore Street, Pendle Hill

## V Site: v [(1) Pendle Way/ Gilba Road AM]

Site Category: -Roundabout

Move	ement F	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	271	5.4	0.373	4.3	LOS A	3.3	23.8	0.30	0.46	0.30	43.4
2	T1	225	1.4	0.373	3.9	LOS A	3.3	23.8	0.30	0.46	0.30	44.3
Appro	ach	496	3.6	0.373	4.2	LOS A	3.3	23.8	0.30	0.46	0.30	43.8
North	Pendle	Way										
8	T1	171	2.5	0.287	7.3	LOS A	2.0	14.1	0.70	0.73	0.70	40.8
9	R2	51	2.1	0.287	10.0	LOS A	2.0	14.1	0.70	0.73	0.70	44.7
Appro	ach	221	2.4	0.287	7.9	LOS A	2.0	14.1	0.70	0.73	0.70	42.0
West:	Gilba R	oad										
10	L2	273	1.5	0.650	7.6	LOS A	7.0	49.6	0.76	0.73	0.80	43.8
12	R2	393	2.7	0.650	10.0	LOS A	7.0	49.6	0.76	0.73	0.80	39.2
Appro	ach	665	2.2	0.650	9.1	LOS A	7.0	49.6	0.76	0.73	0.80	41.6
All Ve	hicles	1382	2.7	0.650	7.1	LOS A	7.0	49.6	0.59	0.63	0.60	42.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Site Category: -Roundabout

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	276	5.3	0.377	4.3	LOS A	3.3	24.1	0.30	0.46	0.30	43.4
2	T1	225	1.4	0.377	3.9	LOS A	3.3	24.1	0.30	0.46	0.30	44.3
Appro	ach	501	3.6	0.377	4.2	LOS A	3.3	24.1	0.30	0.46	0.30	43.8
North:	Pendle	Way										
8	T1	171	2.5	0.288	7.3	LOS A	2.0	14.1	0.71	0.73	0.71	40.8
9	R2	51	2.1	0.288	10.0	LOS A	2.0	14.1	0.71	0.73	0.71	44.7
Appro	ach	221	2.4	0.288	7.9	LOS A	2.0	14.1	0.71	0.73	0.71	42.0
West:	Gilba R	oad										
10	L2	273	1.5	0.651	7.7	LOS A	7.0	49.8	0.76	0.73	0.80	43.8
12	R2	394	2.7	0.651	10.1	LOS A	7.0	49.8	0.76	0.73	0.80	39.2
Appro	ach	666	2.2	0.651	9.1	LOS A	7.0	49.8	0.76	0.73	0.80	41.6
All Ve	hicles	1388	2.7	0.651	7.1	LOS A	7.0	49.8	0.59	0.63	0.60	42.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Site Category: -Roundabout

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	279	5.3	0.379	4.3	LOS A	3.4	24.4	0.30	0.46	0.30	43.4
2	T1	225	1.4	0.379	3.9	LOS A	3.4	24.4	0.30	0.46	0.30	44.3
Appro	ach	504	3.5	0.379	4.2	LOS A	3.4	24.4	0.30	0.46	0.30	43.8
North:	Pendle	Way										
8	T1	171	2.5	0.290	7.4	LOS A	2.0	14.2	0.71	0.74	0.71	40.7
9	R2	51	2.1	0.290	10.1	LOS A	2.0	14.2	0.71	0.74	0.71	44.6
Appro	ach	221	2.4	0.290	8.0	LOS A	2.0	14.2	0.71	0.74	0.71	42.0
West:	Gilba R	oad										
10	L2	273	1.5	0.658	7.8	LOS A	7.2	51.3	0.77	0.73	0.81	43.7
12	R2	401	2.6	0.658	10.2	LOS A	7.2	51.3	0.77	0.73	0.81	39.1
Appro	ach	674	2.2	0.658	9.2	LOS A	7.2	51.3	0.77	0.73	0.81	41.5
All Ve	hicles	1399	2.7	0.658	7.2	LOS A	7.2	51.3	0.59	0.64	0.61	42.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## **₩** Site: v [(1) Pendle Way/ Gilba Road PM]

Site Category: -Roundabout

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	463	1.4	0.468	4.3	LOS A	4.6	32.9	0.30	0.46	0.30	43.4
2	T1	194	1.1	0.468	3.9	LOS A	4.6	32.9	0.30	0.46	0.30	44.3
Appro	ach	657	1.3	0.468	4.2	LOS A	4.6	32.9	0.30	0.46	0.30	43.7
North:	Pendle	Way										
8	T1	174	3.6	0.245	6.3	LOS A	1.6	11.6	0.59	0.64	0.59	41.5
9	R2	42	2.5	0.245	9.0	LOS A	1.6	11.6	0.59	0.64	0.59	45.2
Appro	ach	216	3.4	0.245	6.8	LOS A	1.6	11.6	0.59	0.64	0.59	42.6
West:	Gilba Re	oad										
10	L2	162	0.0	0.424	6.0	LOS A	3.3	22.9	0.56	0.65	0.56	44.6
12	R2	284	0.4	0.424	8.4	LOS A	3.3	22.9	0.56	0.65	0.56	40.3
Appro	ach	446	0.2	0.424	7.5	LOS A	3.3	22.9	0.56	0.65	0.56	42.4
All Ve	hicles	1319	1.3	0.468	5.7	LOS A	4.6	32.9	0.43	0.56	0.43	43.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Site Category: -Roundabout

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No Cycles	
South	: Pendle	Way										
1	L2	464	1.4	0.469	4.3	LOS A	4.7	33.0	0.30	0.46	0.30	43.4
2	T1	194	1.1	0.469	3.9	LOS A	4.7	33.0	0.30	0.46	0.30	44.3
Appro	ach	658	1.3	0.469	4.2	LOS A	4.7	33.0	0.30	0.46	0.30	43.7
North:	Pendle	Way										
8	T1	174	3.6	0.246	6.3	LOS A	1.6	11.7	0.59	0.65	0.59	41.5
9	R2	42	2.5	0.246	9.0	LOS A	1.6	11.7	0.59	0.65	0.59	45.2
Appro	ach	216	3.4	0.246	6.8	LOS A	1.6	11.7	0.59	0.65	0.59	42.6
West:	Gilba Ro	oad										
10	L2	162	0.0	0.428	6.0	LOS A	3.3	23.2	0.56	0.65	0.56	44.6
12	R2	288	0.4	0.428	8.4	LOS A	3.3	23.2	0.56	0.65	0.56	40.3
Appro	ach	451	0.2	0.428	7.6	LOS A	3.3	23.2	0.56	0.65	0.56	42.3
All Ve	hicles	1324	1.3	0.469	5.8	LOS A	4.7	33.0	0.43	0.56	0.43	43.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Site Category: -Roundabout

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	474	1.3	0.475	4.3	LOS A	4.8	33.9	0.30	0.46	0.30	43.4
2	T1	194	1.1	0.475	3.9	LOS A	4.8	33.9	0.30	0.46	0.30	44.3
Appro	ach	667	1.3	0.475	4.2	LOS A	4.8	33.9	0.30	0.46	0.30	43.7
North:	Pendle	Way										
8	T1	174	3.6	0.250	6.4	LOS A	1.6	11.9	0.61	0.66	0.61	41.5
9	R2	42	2.5	0.250	9.1	LOS A	1.6	11.9	0.61	0.66	0.61	45.1
Appro	ach	216	3.4	0.250	7.0	LOS A	1.6	11.9	0.61	0.66	0.61	42.5
West:	Gilba R	oad										
10	L2	162	0.0	0.440	6.1	LOS A	3.5	24.2	0.57	0.65	0.57	44.6
12	R2	302	0.3	0.440	8.4	LOS A	3.5	24.2	0.57	0.65	0.57	40.3
Appro	ach	464	0.2	0.440	7.6	LOS A	3.5	24.2	0.57	0.65	0.57	42.3
All Vel	hicles	1347	1.3	0.475	5.8	LOS A	4.8	33.9	0.44	0.56	0.44	42.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

# <sup>₩</sup> Site: v [(1) Pendle Way/ Gilba Road SAT]

Site Category: -Roundabout

Move	ement F	Performanc	ce - Vel	nicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	280	0.8	0.328	4.5	LOS A	2.6	18.3	0.35	0.49	0.35	43.3
2	T1	131	0.8	0.328	4.2	LOS A	2.6	18.3	0.35	0.49	0.35	44.1
Appro	ach	411	0.8	0.328	4.4	LOS A	2.6	18.3	0.35	0.49	0.35	43.5
North:	Pendle	Way										
8	T1	138	1.5	0.235	6.1	LOS A	1.5	10.8	0.56	0.64	0.56	41.4
9	R2	78	0.0	0.235	8.7	LOS A	1.5	10.8	0.56	0.64	0.56	45.1
9u	U	1	0.0	0.235	11.1	LOS A	1.5	10.8	0.56	0.64	0.56	48.3
Appro	ach	217	1.0	0.235	7.0	LOS A	1.5	10.8	0.56	0.64	0.56	43.2
West:	Gilba R	oad										
10	L2	126	0.8	0.344	5.3	LOS A	2.6	18.0	0.44	0.60	0.44	44.8
12	R2	266	0.8	0.344	7.7	LOS A	2.6	18.0	0.44	0.60	0.44	40.6
Appro	ach	393	0.8	0.344	6.9	LOS A	2.6	18.0	0.44	0.60	0.44	42.4
All Ve	hicles	1020	0.8	0.344	5.9	LOS A	2.6	18.3	0.43	0.57	0.43	43.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Site Category: -Roundabout

Move	ment P	erformanc	ce - Vel	nicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
1	L2	282	0.7	0.329	4.5	LOS A	2.6	18.4	0.35	0.49	0.35	43.3
2	T1	131	0.8	0.329	4.2	LOS A	2.6	18.4	0.35	0.49	0.35	44.1
Appro	ach	413	0.8	0.329	4.4	LOS A	2.6	18.4	0.35	0.49	0.35	43.5
North:	Pendle	Way										
8	T1	138	1.5	0.236	6.1	LOS A	1.5	10.8	0.56	0.65	0.56	41.4
9	R2	78	0.0	0.236	8.7	LOS A	1.5	10.8	0.56	0.65	0.56	45.1
9u	U	1	0.0	0.236	11.2	LOS A	1.5	10.8	0.56	0.65	0.56	48.3
Appro	ach	217	1.0	0.236	7.1	LOS A	1.5	10.8	0.56	0.65	0.56	43.2
West:	Gilba R	oad										
10	L2	126	0.8	0.346	5.3	LOS A	2.6	18.1	0.44	0.60	0.44	44.8
12	R2	268	0.8	0.346	7.7	LOS A	2.6	18.1	0.44	0.60	0.44	40.6
Appro	ach	395	0.8	0.346	6.9	LOS A	2.6	18.1	0.44	0.60	0.44	42.4
All Ve	hicles	1024	0.8	0.346	5.9	LOS A	2.6	18.4	0.43	0.57	0.43	43.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Site Category: -Roundabout

Move	ment P	Performanc	ce - Vel	hicles								
Mov ID	Turn	Demand l Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	e Way										
1	L2	301	0.7	0.343	4.6	LOS A	2.8	19.6	0.36	0.49	0.36	43.3
2	T1	131	0.8	0.343	4.2	LOS A	2.8	19.6	0.36	0.49	0.36	44.1
Appro	ach	432	0.7	0.343	4.4	LOS A	2.8	19.6	0.36	0.49	0.36	43.5
North:	Pendle	Way										
8	T1	138	1.5	0.240	6.2	LOS A	1.6	11.0	0.58	0.66	0.58	41.3
9	R2	78	0.0	0.240	8.9	LOS A	1.6	11.0	0.58	0.66	0.58	45.0
9u	U	1	0.0	0.240	11.3	LOS A	1.6	11.0	0.58	0.66	0.58	48.3
Appro	ach	217	1.0	0.240	7.2	LOS A	1.6	11.0	0.58	0.66	0.58	43.1
West:	Gilba R	oad										
10	L2	126	0.8	0.361	5.3	LOS A	2.7	19.3	0.45	0.61	0.45	44.7
12	R2	287	0.7	0.361	7.7	LOS A	2.7	19.3	0.45	0.61	0.45	40.6
Appro	ach	414	0.8	0.361	7.0	LOS A	2.7	19.3	0.45	0.61	0.45	42.3
All Ve	hicles	1062	0.8	0.361	6.0	LOS A	2.8	19.6	0.44	0.57	0.44	42.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way AM]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Move	ement F	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	272	2.7	0.237	6.0	LOS A	3.7	26.5	0.50	0.42	0.50	39.5
3	R2	423	4.5	0.581	19.0	LOS B	8.0	58.4	0.82	0.89	1.08	32.4
Appro	ach	695	3.8	0.581	13.9	LOS A	8.0	58.4	0.70	0.71	0.85	34.2
East:	Dunmor	e Street										
4	L2	343	3.7	0.301	10.0	LOS A	4.6	32.9	0.48	0.69	0.48	38.7
6	R2	245	4.7	0.686	30.9	LOS C	7.2	52.7	0.98	0.87	1.08	21.0
Appro	ach	588	4.1	0.686	18.7	LOS B	7.2	52.7	0.69	0.77	0.73	30.6
North:	Pendle	Way										
7	L2	348	2.4	0.411	15.8	LOS B	6.8	48.7	0.70	0.76	0.70	29.5
8	T1	231	2.3	0.724	28.6	LOS C	7.1	50.4	1.00	0.91	1.16	22.2
Appro	ach	579	2.4	0.724	20.9	LOS B	7.1	50.4	0.82	0.82	0.89	26.1
All Ve	hicles	1862	3.4	0.724	17.6	LOS B	8.0	58.4	0.73	0.76	0.82	30.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way AM - Dev]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	274	2.7	0.239	6.0	LOS A	3.7	26.8	0.50	0.42	0.50	39.5
3	R2	425	4.5	0.584	19.1	LOS B	8.1	58.7	0.83	0.89	1.08	32.4
Appro	ach	699	3.8	0.584	14.0	LOS A	8.1	58.7	0.70	0.71	0.85	34.2
East:	Dunmore	e Street										
4	L2	366	3.4	0.321	10.1	LOS A	4.9	35.6	0.49	0.69	0.49	38.6
6	R2	248	4.7	0.695	31.1	LOS C	7.4	53.7	0.98	0.88	1.09	20.9
Appro	ach	615	3.9	0.695	18.5	LOS B	7.4	53.7	0.69	0.77	0.74	30.7
North:	Pendle	Way										
7	L2	348	2.4	0.411	15.8	LOS B	6.8	48.7	0.70	0.76	0.70	29.5
8	T1	231	2.3	0.724	28.6	LOS C	7.1	50.4	1.00	0.91	1.16	22.2
Appro	ach	579	2.4	0.724	20.9	LOS B	7.1	50.4	0.82	0.82	0.89	26.1
All Ve	hicles	1893	3.4	0.724	17.6	LOS B	8.1	58.7	0.73	0.76	0.82	30.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way AM - Dev + Bond]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Move	ement F	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	274	2.7	0.233	5.5	LOS A	3.6	25.6	0.48	0.40	0.48	40.2
3	R2	476	4.0	0.625	18.9	LOS B	8.8	63.6	0.83	0.91	1.11	32.5
Appro	ach	749	3.5	0.625	14.0	LOS A	8.8	63.6	0.70	0.72	0.88	34.2
East:	Dunmor	e Street										
4	L2	404	3.1	0.353	10.2	LOS A	5.6	40.3	0.51	0.70	0.51	38.5
6	R2	251	4.6	0.764	33.7	LOS C	7.9	57.3	1.00	0.93	1.22	20.0
Appro	ach	655	3.7	0.764	19.2	LOS B	7.9	57.3	0.69	0.79	0.78	30.5
North:	Pendle	Way										
7	L2	356	2.4	0.435	16.6	LOS B	7.2	51.6	0.73	0.77	0.73	28.9
8	T1	231	2.3	0.724	28.6	LOS C	7.1	50.4	1.00	0.91	1.16	22.2
Appro	ach	586	2.3	0.724	21.3	LOS B	7.2	51.6	0.84	0.82	0.90	25.9
All Ve	hicles	1991	3.2	0.764	17.9	LOS B	8.8	63.6	0.74	0.77	0.85	30.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way PM]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, C (\* Variable Phase)

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Pendle	Way										
2	T1	274	0.0	0.326	12.2	LOS A	5.3	37.4	0.70	0.59	0.70	32.6
3	R2	259	0.8	0.628	22.8	LOS B	6.7	47.1	0.87	0.83	0.91	30.4
Appro	ach	533	0.4	0.628	17.3	LOS B	6.7	47.1	0.79	0.71	0.80	31.2
East:	Dunmore	e Street										
4	L2	434	0.5	0.642	21.9	LOS B	10.8	75.8	0.88	0.83	0.88	30.9
6	R2	376	0.8	0.558	21.2	LOS B	9.0	63.2	0.85	0.81	0.85	25.3
Appro	ach	809	0.7	0.642	21.6	LOS B	10.8	75.8	0.87	0.82	0.87	28.7
North:	Pendle	Way										
7	L2	214	1.0	0.146	5.0	LOS A	0.7	5.1	0.24	0.60	0.24	40.0
8	T1	214	1.5	0.257	11.8	LOS A	4.0	28.5	0.67	0.56	0.67	33.0
Appro	ach	427	1.2	0.257	8.4	LOS A	4.0	28.5	0.46	0.58	0.46	36.2
All Ve	hicles	1769	0.7	0.642	17.1	LOS B	10.8	75.8	0.74	0.73	0.75	30.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way PM - Dev]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Move	ement P	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	275	0.0	0.293	10.1	LOS A	4.9	34.1	0.64	0.54	0.64	34.6
3	R2	280	0.8	0.519	22.3	LOS B	6.3	44.5	0.88	0.85	1.06	30.7
Appro	ach	555	0.4	0.519	16.3	LOS B	6.3	44.5	0.76	0.70	0.85	32.1
East:	Dunmor	e Street										
4	L2	439	0.5	0.376	10.3	LOS A	6.2	43.6	0.52	0.71	0.52	38.5
6	R2	377	0.8	0.648	24.3	LOS B	9.9	69.5	0.91	0.84	0.93	23.8
Appro	ach	816	0.6	0.648	16.8	LOS B	9.9	69.5	0.70	0.77	0.71	31.5
North	Pendle	Way										
7	L2	216	1.0	0.202	10.6	LOS A	3.0	21.1	0.50	0.68	0.50	33.8
8	T1	216	1.5	0.674	27.6	LOS B	6.4	45.6	0.99	0.86	1.09	22.6
Appro	ach	432	1.2	0.674	19.1	LOS B	6.4	45.6	0.74	0.77	0.80	27.2
All Ve	hicles	1802	0.7	0.674	17.2	LOS B	9.9	69.5	0.73	0.75	0.77	30.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way PM - Dev + Bond]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Move	ement F	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	275	0.0	0.274	8.8	LOS A	4.5	31.8	0.60	0.51	0.60	36.0
3	R2	369	0.6	0.600	22.4	LOS B	7.8	55.0	0.88	0.91	1.18	30.7
Appro	ach	644	0.3	0.600	16.6	LOS B	7.8	55.0	0.76	0.74	0.93	32.2
East:	Dunmor	e Street										
4	L2	502	0.4	0.419	10.0	LOS A	7.1	49.8	0.52	0.71	0.52	38.7
6	R2	386	0.8	0.742	28.3	LOS B	11.3	79.5	0.97	0.90	1.08	22.0
Appro	ach	888	0.6	0.742	18.0	LOS B	11.3	79.5	0.71	0.79	0.76	30.9
North:	Pendle	Way										
7	L2	229	0.9	0.234	12.4	LOS A	3.6	25.4	0.57	0.70	0.57	32.3
8	T1	216	1.5	0.749	30.0	LOS C	6.8	48.0	1.00	0.92	1.21	21.6
Appro	ach	445	1.2	0.749	20.9	LOS B	6.8	48.0	0.78	0.81	0.88	26.1
All Ve	hicles	1978	0.6	0.749	18.2	LOS B	11.3	79.5	0.74	0.78	0.84	30.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way SAT]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, C (\* Variable Phase)

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	lows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	175	1.2	0.176	8.3	LOS A	2.7	19.2	0.56	0.46	0.56	36.6
3	R2	271	1.2	0.528	17.2	LOS B	5.8	41.2	0.75	0.78	0.75	33.5
Appro	ach	445	1.2	0.528	13.7	LOS A	5.8	41.2	0.68	0.66	0.68	34.3
East:	Dunmore	e Street										
4	L2	267	1.2	0.515	24.6	LOS B	6.8	48.0	0.89	0.80	0.89	29.6
6	R2	235	0.4	0.450	24.2	LOS B	5.8	40.9	0.87	0.79	0.87	23.8
Appro	ach	502	0.8	0.515	24.4	LOS B	6.8	48.0	0.88	0.80	0.88	27.2
North:	Pendle	Way										
7	L2	197	1.1	0.134	5.0	LOS A	0.7	4.7	0.24	0.60	0.24	40.0
8	T1	200	1.1	0.201	8.4	LOS A	3.2	22.3	0.57	0.47	0.57	36.5
Appro	ach	397	1.1	0.201	6.7	LOS A	3.2	22.3	0.41	0.53	0.41	38.2
All Ve	hicles	1344	1.0	0.528	15.7	LOS B	6.8	48.0	0.67	0.67	0.67	31.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way SAT - Dev]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, C (\* Variable Phase)

Move	ement P	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	lows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	176	1.2	0.177	8.3	LOS A	2.7	19.4	0.56	0.46	0.56	36.6
3	R2	282	1.1	0.552	17.4	LOS B	6.2	43.6	0.77	0.79	0.77	33.4
Appro	ach	458	1.1	0.552	13.9	LOS A	6.2	43.6	0.69	0.66	0.69	34.2
East:	Dunmor	e Street										
4	L2	277	1.1	0.533	24.8	LOS B	7.1	50.0	0.89	0.81	0.89	29.5
6	R2	236	0.4	0.452	24.2	LOS B	5.9	41.1	0.87	0.79	0.87	23.8
Appro	ach	513	0.8	0.533	24.5	LOS B	7.1	50.0	0.88	0.80	0.88	27.2
North:	Pendle	Way										
7	L2	198	1.1	0.135	5.0	LOS A	0.7	4.7	0.24	0.60	0.24	40.0
8	T1	201	1.0	0.202	8.4	LOS A	3.2	22.5	0.57	0.48	0.57	36.5
Appro	ach	399	1.1	0.202	6.7	LOS A	3.2	22.5	0.41	0.53	0.41	38.2
All Ve	hicles	1369	1.0	0.552	15.8	LOS B	7.1	50.0	0.68	0.68	0.68	31.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(2) Dunmore Street / Pendle Way SAT - Dev + Bond]

Site Category: -

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Site User-Given Cycle Time) Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B\*, C Output Phase Sequence: A, B\*, C (\* Variable Phase)

Move	ement F	Performanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Pendle	Way										
2	T1	176	1.2	0.157	6.1	LOS A	2.4	16.6	0.49	0.40	0.49	39.4
3	R2	402	0.8	0.540	18.6	LOS B	7.6	53.7	0.81	0.88	1.04	32.7
Appro	ach	578	0.9	0.540	14.8	LOS B	7.6	53.7	0.71	0.73	0.87	33.9
East:	Dunmor	e Street										
4	L2	397	0.8	0.332	9.6	LOS A	5.2	36.6	0.48	0.69	0.48	39.0
6	R2	255	0.4	0.638	29.1	LOS C	7.2	50.6	0.96	0.84	1.00	21.7
Appro	ach	652	0.6	0.638	17.2	LOS B	7.2	50.6	0.67	0.75	0.68	31.6
North:	Pendle	Way										
7	L2	217	1.0	0.253	14.8	LOS B	3.9	27.3	0.64	0.72	0.64	30.3
8	T1	201	1.0	0.696	28.8	LOS C	6.1	43.3	1.00	0.88	1.14	22.1
Appro	ach	418	1.0	0.696	21.6	LOS B	6.1	43.3	0.81	0.80	0.88	25.8
All Ve	hicles	1647	0.8	0.696	17.5	LOS B	7.6	53.7	0.72	0.76	0.80	31.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street AM]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h		
East: Dunmore Street														
5	T1	262	5.2	0.241	5.6	LOS A	3.1	23.0	0.52	0.44	0.52	43.9		
6	R2	298	3.5	0.675	19.1	LOS B	6.5	46.5	0.96	0.88	1.06	32.5		
Appro	ach	560	4.3	0.675	12.7	LOS A	6.5	46.5	0.75	0.67	0.81	37.2		
North: Goodall Street														
7	L2	262	1.6	0.342	15.4	LOS B	4.4	31.4	0.72	0.75	0.72	34.9		
9	R2	279	5.7	0.873	35.0	LOS C	8.4	61.9	1.00	1.09	1.56	24.8		
Appro	ach	541	3.7	0.873	25.5	LOS B	8.4	61.9	0.86	0.93	1.15	28.9		
West:	Dunmor	e Street												
10	L2	397	3.2	0.460	9.1	LOS A	4.5	32.4	0.49	0.69	0.49	39.1		
11	T1	372	2.3	0.964	48.1	LOS D	14.5	103.4	0.87	1.33	1.96	22.6		
Appro	ach	768	2.7	0.964	27.9	LOS B	14.5	103.4	0.68	1.00	1.20	28.5		
All Ve	hicles	1869	3.5	0.964	22.7	LOS B	14.5	103.4	0.75	0.88	1.07	30.8		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street AM - Dev]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h		
East: Dunmore Street														
5	T1	267	5.1	0.237	5.1	LOS A	3.1	22.4	0.50	0.42	0.50	44.4		
6	R2	303	3.5	0.675	18.9	LOS B	6.5	47.0	0.96	0.87	1.05	32.6		
Appro	ach	571	4.2	0.675	12.4	LOS A	6.5	47.0	0.74	0.66	0.79	37.4		
North: Goodall Street														
7	L2	263	1.6	0.360	16.2	LOS B	4.6	32.7	0.74	0.76	0.74	34.3		
9	R2	280	5.6	0.985	58.7	LOS E	11.7	85.8	1.00	1.43	2.30	18.6		
Appro	ach	543	3.7	0.985	38.1	LOS C	11.7	85.8	0.88	1.11	1.55	24.1		
West:	Dunmor	e Street												
10	L2	402	3.1	0.471	9.1	LOS A	4.6	32.9	0.49	0.69	0.49	39.1		
11	T1	387	2.2	0.951	43.2	LOS D	14.2	101.5	0.85	1.27	1.83	23.9		
Appro	bach	789	2.7	0.951	25.8	LOS B	14.2	101.5	0.67	0.98	1.15	29.4		
All Ve	hicles	1903	3.4	0.985	25.3	LOS B	14.2	101.5	0.75	0.92	1.15	29.6		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street AM - Dev + Bond]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h		
East: Dunmore Street														
5	T1	309	4.4	0.274	5.2	LOS A	3.6	26.4	0.51	0.43	0.51	44.2		
6	R2	313	3.4	0.838	29.1	LOS C	7.6	54.5	1.00	1.07	1.66	27.7		
Appro	ach	622	3.9	0.838	17.2	LOS B	7.6	54.5	0.76	0.75	1.09	34.3		
North: Goodall Street														
7	L2	286	1.5	0.392	16.4	LOS B	5.1	36.1	0.75	0.77	0.75	34.2		
9	R2	280	5.6	0.985	58.7	LOS E	11.7	85.8	1.00	1.43	2.30	18.6		
Appro	ach	566	3.5	0.985	37.3	LOS C	11.7	85.8	0.88	1.10	1.52	24.4		
West:	Dunmor	e Street												
10	L2	402	3.1	0.494	9.1	LOS A	4.6	32.9	0.49	0.69	0.49	39.1		
11	T1	446	1.9	1.045	94.3	LOS F	27.6	196.3	1.00	1.89	2.82	14.7		
Appro	ach	848	2.5	1.045	54.0	LOS D	27.6	196.3	0.76	1.32	1.72	20.4		
All Ve	hicles	2037	3.2	1.045	38.1	LOS C	27.6	196.3	0.79	1.09	1.47	24.6		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street PM]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 54 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles			
East: Dunmore Street														
5	T1	409	0.8	0.498	12.4	LOS A	8.0	56.5	0.78	0.67	0.78	38.1		
6	R2	242	2.2	0.661	24.4	LOS B	5.7	40.9	0.97	0.88	1.16	29.8		
Appro	ach	652	1.3	0.661	16.8	LOS B	8.0	56.5	0.85	0.75	0.92	34.7		
North: Goodall Street														
7	L2	289	0.4	0.274	10.9	LOS A	3.9	27.2	0.54	0.70	0.54	38.1		
9	R2	427	0.5	0.660	21.3	LOS B	9.9	69.9	0.90	0.84	0.92	30.7		
Appro	ach	717	0.4	0.660	17.1	LOS B	9.9	69.9	0.75	0.78	0.77	33.4		
West:	Dunmor	e Street												
10	L2	247	1.7	0.203	8.3	LOS A	2.5	17.9	0.41	0.66	0.41	39.8		
11	T1	261	1.2	0.666	23.2	LOS B	6.9	48.5	0.97	0.85	1.06	31.5		
Appro	ach	508	1.4	0.666	16.0	LOS B	6.9	48.5	0.70	0.76	0.74	34.8		
All Ve	hicles	1877	1.0	0.666	16.7	LOS B	9.9	69.9	0.77	0.76	0.81	34.2		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street PM - Dev]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 54 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h		
East:	East: Dunmore Street													
5	T1	411	0.8	0.499	12.4	LOS A	8.0	56.7	0.78	0.67	0.78	38.1		
6	R2	243	2.2	0.671	24.8	LOS B	5.8	41.3	0.97	0.89	1.19	29.6		
Appro	ach	654	1.3	0.671	17.0	LOS B	8.0	56.7	0.85	0.75	0.93	34.6		
North: Goodall Street														
7	L2	294	0.4	0.278	10.9	LOS A	3.9	27.7	0.54	0.70	0.54	38.1		
9	R2	432	0.5	0.666	21.5	LOS B	10.1	71.1	0.90	0.84	0.93	30.7		
Appro	ach	725	0.4	0.666	17.2	LOS B	10.1	71.1	0.76	0.79	0.77	33.4		
West:	Dunmor	e Street												
10	L2	248	1.7	0.204	8.3	LOS A	2.5	17.9	0.41	0.66	0.41	39.8		
11	T1	269	1.2	0.687	23.6	LOS B	7.2	50.7	0.98	0.87	1.09	31.4		
Appro	bach	518	1.4	0.687	16.3	LOS B	7.2	50.7	0.71	0.77	0.76	34.7		
All Ve	hicles	1897	1.0	0.687	16.9	LOS B	10.1	71.1	0.77	0.77	0.82	34.1		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street PM - Dev + Bond]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 54 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h		
East: Dunmore Street														
5	T1	484	0.7	0.521	10.6	LOS A	9.0	63.1	0.74	0.65	0.74	39.5		
6	R2	272	1.9	0.707	26.0	LOS B	6.5	45.9	0.98	0.94	1.32	29.0		
Appro	ach	756	1.1	0.707	16.1	LOS B	9.0	63.1	0.82	0.75	0.95	35.1		
North	Goodal	Street												
7	L2	336	0.3	0.339	12.3	LOS A	5.1	35.5	0.60	0.73	0.60	37.0		
9	R2	432	0.5	0.791	27.7	LOS B	12.1	84.9	0.98	0.95	1.18	27.7		
Appro	ach	767	0.4	0.791	20.9	LOS B	12.1	84.9	0.81	0.85	0.93	31.2		
West:	Dunmor	e Street												
10	L2	248	1.7	0.210	8.7	LOS A	2.7	19.0	0.43	0.67	0.43	39.4		
11	T1	373	0.8	0.802	25.5	LOS B	10.7	75.6	1.00	1.00	1.25	30.4		
Appro	ach	621	1.2	0.802	18.8	LOS B	10.7	75.6	0.77	0.87	0.92	33.3		
All Ve	hicles	2144	0.9	0.802	18.6	LOS B	12.1	84.9	0.81	0.82	0.93	33.2		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(3) Dunmore Street / Goodall Street SAT]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	Movement Performance - Vehicles													
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h		
East:	East: Dunmore Street													
5	T1	299	0.4	0.276	6.2	LOS A	3.8	26.9	0.55	0.47	0.55	43.2		
6	R2	251	0.8	0.427	16.0	LOS B	4.4	31.3	0.83	0.77	0.83	34.3		
Appro	ach	549	0.6	0.427	10.7	LOS A	4.4	31.3	0.68	0.61	0.68	38.8		
North: Goodall Street														
7	L2	241	1.7	0.245	11.2	LOS A	3.2	22.4	0.56	0.70	0.56	37.8		
9	R2	233	0.9	0.634	26.0	LOS B	5.6	39.7	0.97	0.84	1.04	28.4		
Appro	ach	474	1.3	0.634	18.5	LOS B	5.6	39.7	0.76	0.77	0.80	32.6		
West:	Dunmor	e Street												
10	L2	213	1.5	0.215	11.1	LOS A	2.7	19.3	0.55	0.70	0.55	37.5		
11	T1	275	1.1	0.649	20.7	LOS B	6.6	46.5	0.96	0.84	1.03	32.9		
Appro	ach	487	1.3	0.649	16.5	LOS B	6.6	46.5	0.78	0.78	0.82	34.6		
All Ve	hicles	1511	1.0	0.649	15.0	LOS B	6.6	46.5	0.74	0.71	0.76	35.4		

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
## Site: [(3) Dunmore Street / Goodall Street SAT - Dev]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	Performanc	ce - Vel	hicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East:	Dunmor	e Street										
5	T1	301	0.3	0.278	6.2	LOS A	3.9	27.1	0.55	0.47	0.55	43.2
6	R2	253	0.8	0.433	16.1	LOS B	4.5	31.8	0.83	0.77	0.83	34.3
Appro	ach	554	0.6	0.433	10.7	LOS A	4.5	31.8	0.68	0.61	0.68	38.8
North	: Goodal	I Street										
7	L2	243	1.7	0.247	11.2	LOS A	3.2	22.6	0.56	0.70	0.56	37.8
9	R2	235	0.9	0.639	26.1	LOS B	5.7	40.2	0.97	0.85	1.04	28.4
Appro	ach	478	1.3	0.639	18.5	LOS B	5.7	40.2	0.76	0.77	0.80	32.6
West:	Dunmor	re Street										
10	L2	215	1.5	0.218	11.1	LOS A	2.8	19.6	0.55	0.70	0.55	37.5
11	T1	283	1.1	0.668	21.0	LOS B	6.9	48.5	0.97	0.85	1.05	32.7
Appro	bach	498	1.3	0.668	16.7	LOS B	6.9	48.5	0.79	0.79	0.84	34.5
All Ve	hicles	1529	1.0	0.668	15.1	LOS B	6.9	48.5	0.74	0.72	0.77	35.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(3) Dunmore Street / Goodall Street SAT - Dev + Bond]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 50 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase A Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East:	Dunmore	e Street										
5	T1	440	0.2	0.379	5.6	LOS A	5.6	39.3	0.55	0.48	0.55	43.8
6	R2	308	0.7	0.573	18.9	LOS B	5.8	40.6	0.90	0.84	1.02	32.7
Appro	ach	748	0.4	0.573	11.1	LOS A	5.8	40.6	0.69	0.63	0.75	38.6
North	Goodal	l Street										
7	L2	299	1.4	0.340	13.4	LOS A	4.6	32.7	0.66	0.74	0.66	36.2
9	R2	235	0.9	0.799	31.3	LOS C	6.5	45.7	1.00	0.98	1.35	26.2
Appro	ach	534	1.2	0.799	21.3	LOS B	6.5	45.7	0.81	0.85	0.96	31.1
West:	Dunmor	e Street										
10	L2	215	1.5	0.210	10.5	LOS A	2.6	18.7	0.53	0.69	0.53	37.9
11	T1	422	0.7	0.781	21.6	LOS B	10.9	76.8	0.98	0.96	1.18	32.4
Appro	ach	637	1.0	0.781	17.9	LOS B	10.9	76.8	0.83	0.87	0.96	33.9
All Ve	hicles	1919	0.8	0.799	16.2	LOS B	10.9	76.8	0.77	0.77	0.88	34.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street AM]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	329	3.2	0.292	11.9	LOS A	5.8	42.1	0.49	0.69	0.49	43.6
3	R2	332	2.5	0.872	43.3	LOS D	14.2	101.3	0.91	0.98	1.28	28.6
Appro	ach	661	2.9	0.872	27.6	LOS B	14.2	101.3	0.70	0.84	0.89	34.5
East:	Wentwo	rth Avenue										
4	L2	252	2.5	0.229	13.5	LOS A	4.5	32.3	0.49	0.71	0.49	43.4
5	T1	332	5.4	0.828	38.0	LOS C	14.0	102.4	1.00	0.99	1.24	36.9
Appro	ach	583	4.2	0.828	27.4	LOS B	14.0	102.4	0.78	0.87	0.92	39.0
West:	Wentwo	orth Avenue										
11	T1	339	6.8	0.328	10.6	LOS A	7.2	53.5	0.59	0.51	0.59	51.1
12	R2	366	5.2	0.883	48.3	LOS D	16.8	122.8	1.00	1.00	1.37	27.4
Appro	ach	705	6.0	0.883	30.2	LOS C	16.8	122.8	0.80	0.76	0.99	37.1
All Ve	hicles	1949	4.4	0.883	28.5	LOS B	16.8	122.8	0.76	0.82	0.93	36.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street AM - Dev]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ment P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	335	3.1	0.296	12.0	LOS A	6.0	42.9	0.49	0.69	0.49	43.6
3	R2	337	2.5	0.885	45.3	LOS D	14.8	105.9	0.92	1.00	1.33	28.0
Appro	ach	672	2.8	0.885	28.7	LOS C	14.8	105.9	0.71	0.85	0.91	34.1
East:	Wentwo	rth Avenue										
4	L2	253	2.5	0.230	13.5	LOS A	4.5	32.4	0.49	0.71	0.49	43.4
5	T1	332	5.4	0.828	38.0	LOS C	14.0	102.4	1.00	0.99	1.24	36.9
Appro	ach	584	4.1	0.828	27.4	LOS B	14.0	102.4	0.78	0.87	0.92	39.0
West:	Wentwo	orth Avenue										
11	T1	339	6.8	0.328	10.6	LOS A	7.2	53.5	0.59	0.51	0.59	51.1
12	R2	367	5.2	0.893	49.7	LOS D	17.2	125.4	1.00	1.01	1.40	27.0
Appro	ach	706	6.0	0.893	30.9	LOS C	17.2	125.4	0.80	0.77	1.01	36.7
All Ve	hicles	1962	4.3	0.893	29.1	LOS C	17.2	125.4	0.76	0.83	0.95	36.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street AM - Dev + Bond]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	I Street										
1	L2	335	3.1	0.291	11.5	LOS A	5.8	41.4	0.48	0.69	0.48	43.9
3	R2	346	2.4	0.878	43.6	LOS D	14.9	106.6	0.91	0.99	1.29	28.5
Appro	ach	681	2.8	0.878	27.8	LOS B	14.9	106.6	0.69	0.84	0.89	34.5
East:	Wentwo	rth Avenue										
4	L2	276	2.3	0.250	13.6	LOS A	5.0	35.8	0.50	0.72	0.50	43.3
5	T1	332	5.4	0.924	50.8	LOS D	16.4	120.4	1.00	1.15	1.54	32.7
Appro	ach	607	4.0	0.924	33.9	LOS C	16.4	120.4	0.77	0.95	1.07	36.0
West:	Wentwo	orth Avenue										
11	T1	339	6.8	0.336	11.2	LOS A	7.4	55.1	0.60	0.52	0.60	50.7
12	R2	367	5.2	0.891	49.3	LOS D	17.1	124.9	1.00	1.00	1.39	27.1
Appro	ach	706	6.0	0.891	31.0	LOS C	17.1	124.9	0.81	0.77	1.01	36.7
All Ve	hicles	1995	4.3	0.924	30.8	LOS C	17.1	124.9	0.76	0.85	0.99	35.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street PM]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	332	0.0	0.282	11.4	LOS A	5.7	39.6	0.47	0.69	0.47	44.1
3	R2	247	0.4	0.664	37.1	LOS C	9.2	64.8	0.96	0.84	1.01	30.7
Appro	ach	579	0.2	0.664	22.4	LOS B	9.2	64.8	0.68	0.75	0.70	37.2
East:	Wentwo	rth Avenue										
4	L2	316	0.3	0.339	18.5	LOS B	7.4	52.0	0.64	0.76	0.64	40.1
5	T1	296	5.0	0.749	34.9	LOS C	11.7	85.3	0.99	0.90	1.11	38.1
Appro	ach	612	2.6	0.749	26.4	LOS B	11.7	85.3	0.81	0.83	0.87	39.0
West:	Wentwo	orth Avenue										
11	T1	264	2.4	0.215	6.5	LOS A	4.3	30.5	0.45	0.38	0.45	54.2
12	R2	445	0.0	0.750	31.8	LOS C	15.9	111.4	0.92	0.87	0.99	33.1
Appro	ach	709	0.9	0.750	22.4	LOS B	15.9	111.4	0.74	0.69	0.79	40.2
All Ve	hicles	1900	1.2	0.750	23.7	LOS B	15.9	111.4	0.75	0.75	0.79	38.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street PM - Dev]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	333	0.0	0.282	11.4	LOS A	5.7	39.8	0.47	0.69	0.47	44.1
3	R2	248	0.4	0.689	37.5	LOS C	9.4	65.7	0.96	0.85	1.03	30.5
Appro	ach	581	0.2	0.689	22.6	LOS B	9.4	65.7	0.68	0.76	0.71	37.1
East:	Wentwo	rth Avenue										
4	L2	320	0.3	0.344	18.5	LOS B	7.5	52.8	0.64	0.76	0.64	40.1
5	T1	296	5.0	0.749	34.9	LOS C	11.7	85.3	0.99	0.90	1.11	38.1
Appro	ach	616	2.6	0.749	26.4	LOS B	11.7	85.3	0.81	0.83	0.87	39.0
West:	Wentwo	orth Avenue										
11	T1	264	2.4	0.215	6.5	LOS A	4.3	30.5	0.45	0.38	0.45	54.2
12	R2	449	0.0	0.764	32.4	LOS C	16.3	114.2	0.92	0.88	1.01	32.9
Appro	ach	714	0.9	0.764	22.8	LOS B	16.3	114.2	0.75	0.70	0.80	39.9
All Ve	hicles	1911	1.2	0.764	23.9	LOS B	16.3	114.2	0.75	0.76	0.80	38.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

#### Site: [(4) Wentworth Avenue / Goodall Street PM - Dev + Bond]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	333	0.0	0.277	10.9	LOS A	5.5	38.4	0.46	0.68	0.46	44.4
3	R2	277	0.4	0.807	39.4	LOS C	11.0	77.0	0.94	0.92	1.17	29.9
Appro	ach	609	0.2	0.807	23.9	LOS B	11.0	77.0	0.68	0.79	0.78	36.4
East:	Wentwo	rth Avenue										
4	L2	362	0.3	0.370	17.6	LOS B	8.3	58.3	0.63	0.76	0.63	40.7
5	T1	296	5.0	0.795	37.6	LOS C	12.2	89.3	1.00	0.95	1.19	37.1
Appro	ach	658	2.4	0.795	26.6	LOS B	12.2	89.3	0.80	0.85	0.88	38.7
West:	Wentwo	orth Avenue										
11	T1	264	2.4	0.228	7.9	LOS A	4.7	33.8	0.49	0.42	0.49	53.1
12	R2	449	0.0	0.847	39.7	LOS C	18.6	130.4	0.96	0.94	1.19	30.1
Appro	ach	714	0.9	0.847	28.0	LOS B	18.6	130.4	0.79	0.75	0.93	37.4
All Ve	hicles	1981	1.2	0.847	26.2	LOS B	18.6	130.4	0.75	0.79	0.87	37.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street SAT]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Goodal	Il Street										
1	L2	291	1.8	0.265	12.7	LOS A	5.4	38.0	0.51	0.70	0.51	43.1
3	R2	206	0.0	0.531	35.6	LOS C	7.4	51.6	0.94	0.81	0.94	31.3
Appro	ach	497	1.1	0.531	22.2	LOS B	7.4	51.6	0.69	0.74	0.69	37.2
East:	Wentwo	rth Avenue										
4	L2	195	1.6	0.196	15.8	LOS B	3.9	27.7	0.55	0.72	0.55	41.8
5	T1	246	3.4	0.525	28.5	LOS C	8.5	61.2	0.91	0.76	0.91	40.8
Appro	ach	441	2.6	0.525	22.9	LOS B	8.5	61.2	0.75	0.74	0.75	41.2
West:	Wentwo	orth Avenue										
11	T1	334	1.6	0.270	6.8	LOS A	5.6	40.0	0.47	0.40	0.47	54.0
12	R2	292	1.1	0.514	30.1	LOS C	9.5	66.9	0.87	0.81	0.87	33.9
Appro	ach	625	1.3	0.514	17.7	LOS B	9.5	66.9	0.66	0.60	0.66	43.9
All Ve	hicles	1563	1.6	0.531	20.6	LOS B	9.5	66.9	0.69	0.68	0.69	41.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street SAT - Dev]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ment P	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	293	1.8	0.267	12.7	LOS A	5.4	38.4	0.51	0.70	0.51	43.1
3	R2	208	0.0	0.536	35.6	LOS C	7.5	52.2	0.94	0.81	0.94	31.2
Appro	ach	501	1.1	0.536	22.2	LOS B	7.5	52.2	0.69	0.74	0.69	37.2
East:	Wentwo	rth Avenue										
4	L2	197	1.6	0.198	15.8	LOS B	3.9	28.0	0.55	0.72	0.55	41.8
5	T1	246	3.4	0.525	28.5	LOS C	8.5	61.2	0.91	0.76	0.91	40.8
Appro	ach	443	2.6	0.525	22.9	LOS B	8.5	61.2	0.75	0.74	0.75	41.2
West:	Wentwo	orth Avenue										
11	T1	334	1.6	0.270	6.8	LOS A	5.6	40.0	0.47	0.40	0.47	54.0
12	R2	294	1.1	0.518	30.2	LOS C	9.6	67.5	0.87	0.82	0.87	33.8
Appro	ach	627	1.3	0.518	17.7	LOS B	9.6	67.5	0.66	0.60	0.66	43.8
All Ve	hicles	1572	1.6	0.536	20.6	LOS B	9.6	67.5	0.69	0.68	0.69	41.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## Site: [(4) Wentworth Avenue / Goodall Street SAT - Dev + Bond]

Site Category: -Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog Phase Times determined by the program Phase Sequence: Variable Phasing Reference Phase: Phase C Input Phase Sequence: A, B, C Output Phase Sequence: A, B, C

Move	ement P	Performanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South	: Gooda	ll Street										
1	L2	293	1.8	0.257	11.7	LOS A	5.1	35.9	0.48	0.69	0.48	43.8
3	R2	264	0.0	0.526	31.6	LOS C	8.9	62.4	0.90	0.81	0.90	32.8
Appro	ach	557	0.9	0.526	21.1	LOS B	8.9	62.4	0.68	0.75	0.68	37.8
East:	Wentwo	rth Avenue										
4	L2	253	1.3	0.237	14.5	LOS A	4.8	34.1	0.52	0.72	0.52	42.7
5	T1	246	3.4	0.583	30.6	LOS C	8.8	63.5	0.94	0.79	0.94	39.9
Appro	ach	499	2.3	0.583	22.4	LOS B	8.8	63.5	0.73	0.75	0.73	41.1
West:	Wentwo	orth Avenue										
11	T1	334	1.6	0.299	9.3	LOS A	6.6	47.0	0.55	0.47	0.55	52.0
12	R2	294	1.1	0.589	33.1	LOS C	10.1	71.6	0.92	0.83	0.92	32.6
Appro	ach	627	1.3	0.589	20.4	LOS B	10.1	71.6	0.72	0.64	0.72	42.2
All Ve	hicles	1683	1.5	0.589	21.3	LOS B	10.1	71.6	0.71	0.71	0.71	40.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

# Site: [(5) Dunmore Street / Jones Street AM ]

Site Category: -Roundabout

Move	ement P	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones	Street										
1	L2	163	3.9	0.242	4.7	LOS A	1.0	6.9	0.35	0.61	0.35	40.8
2	T1	11	0.0	0.242	4.4	LOS A	1.0	6.9	0.35	0.61	0.35	38.5
3	R2	94	2.2	0.242	7.7	LOS A	1.0	6.9	0.35	0.61	0.35	<b>41</b> .1
Appro	ach	267	3.1	0.242	5.7	LOS A	1.0	6.9	0.35	0.61	0.35	40.8
East:	Dunmor	e Street										
4	L2	36	5.9	0.285	5.9	LOS A	1.7	12.2	0.55	0.62	0.55	39.5
5	T1	224	3.3	0.285	5.8	LOS A	1.7	12.2	0.55	0.62	0.55	43.0
6	R2	5	0.0	0.285	9.0	LOS A	1.7	12.2	0.55	0.62	0.55	39.
6u	U	6	0.0	0.285	10.5	LOS A	1.7	12.2	0.55	0.62	0.55	42.9
Appro	ach	272	3.5	0.285	6.0	LOS A	1.7	12.2	0.55	0.62	0.55	42.
North	: Jones S	Street										
7	L2	8	0.0	0.076	6.7	LOS A	0.4	2.5	0.58	0.72	0.58	36.2
8	T1	18	0.0	0.076	6.5	LOS A	0.4	2.5	0.58	0.72	0.58	35.7
9	R2	37	0.0	0.076	9.7	LOS A	0.4	2.5	0.58	0.72	0.58	39.0
Appro	ach	63	0.0	0.076	8.4	LOS A	0.4	2.5	0.58	0.72	0.58	37.8
West:	Dunmor	e Street										
10	L2	27	0.0	0.519	4.4	LOS A	3.5	25.1	0.36	0.54	0.36	39.9
11	T1	384	1.6	0.519	4.3	LOS A	3.5	25.1	0.36	0.54	0.36	43.2
12	R2	267	2.8	0.519	7.5	LOS A	3.5	25.1	0.36	0.54	0.36	41.
Appro	ach	679	2.0	0.519	5.6	LOS A	3.5	25.1	0.36	0.54	0.36	42.
All Ve	hicles	1281	2.5	0.519	5.8	LOS A	3.5	25.1	0.41	0.58	0.41	42.

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Move	ement P	Performanc	ce - Vel	hicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones :	Street										
1	L2	164	3.8	0.243	4.7	LOS A	1.0	7.0	0.35	0.62	0.35	40.7
2	T1	11	0.0	0.243	4.4	LOS A	1.0	7.0	0.35	0.62	0.35	38.5
3	R2	94	2.2	0.243	7.7	LOS A	1.0	7.0	0.35	0.62	0.35	41.1
Appro	ach	268	3.1	0.243	5.7	LOS A	1.0	7.0	0.35	0.62	0.35	40.8
East:	Dunmor	e Street										
4	L2	36	5.9	0.289	5.9	LOS A	1.7	12.4	0.56	0.62	0.56	39.4
5	T1	226	3.3	0.289	5.8	LOS A	1.7	12.4	0.56	0.62	0.56	43.0
6	R2	5	0.0	0.289	9.0	LOS A	1.7	12.4	0.56	0.62	0.56	39.7
6u	U	6	0.0	0.289	10.5	LOS A	1.7	12.4	0.56	0.62	0.56	42.9
Appro	ach	274	3.5	0.289	6.0	LOS A	1.7	12.4	0.56	0.62	0.56	42.5
North	Jones S	Street										
7	L2	8	0.0	0.078	6.9	LOS A	0.4	2.6	0.59	0.72	0.59	36.0
8	T1	18	0.0	0.078	6.7	LOS A	0.4	2.6	0.59	0.72	0.59	35.4
9	R2	37	0.0	0.078	9.9	LOS A	0.4	2.6	0.59	0.72	0.59	38.8
Appro	ach	63	0.0	0.078	8.6	LOS A	0.4	2.6	0.59	0.72	0.59	37.6
West:	Dunmor	e Street										
10	L2	27	0.0	0.537	4.4	LOS A	3.7	26.7	0.37	0.54	0.37	39.9
11	T1	404	1.6	0.537	4.3	LOS A	3.7	26.7	0.37	0.54	0.37	43.2
12	R2	273	2.7	0.537	7.6	LOS A	3.7	26.7	0.37	0.54	0.37	41.7
Appro	ach	704	1.9	0.537	5.6	LOS A	3.7	26.7	0.37	0.54	0.37	42.5
All Ve	hicles	1309	2.4	0.537	5.8	LOS A	3.7	26.7	0.42	0.58	0.42	42.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Move	ement P	erformanc	:e - Vel	nicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones	Street										
1	L2	180	3.5	0.311	4.9	LOS A	1.4	9.7	0.40	0.65	0.40	40.3
2	T1	11	0.0	0.311	4.6	LOS A	1.4	9.7	0.40	0.65	0.40	37.9
3	R2	147	1.4	0.311	7.9	LOS A	1.4	9.7	0.40	0.65	0.40	40.6
Appro	bach	338	2.5	0.311	6.2	LOS A	1.4	9.7	0.40	0.65	0.40	40.4
East:	Dunmor	e Street										
4	L2	49	4.3	0.339	6.0	LOS A	2.1	15.4	0.60	0.65	0.60	39.3
5	T1	256	2.9	0.339	6.0	LOS A	2.1	15.4	0.60	0.65	0.60	42.8
6	R2	5	0.0	0.339	9.1	LOS A	2.1	15.4	0.60	0.65	0.60	39.5
6u	U	6	0.0	0.339	10.7	LOS A	2.1	15.4	0.60	0.65	0.60	42.7
Appro	ach	317	3.0	0.339	6.1	LOS A	2.1	15.4	0.60	0.65	0.60	42.3
North	: Jones S	Street										
7	L2	8	0.0	0.092	8.0	LOS A	0.5	3.4	0.69	0.77	0.69	34.9
8	T1	18	0.0	0.092	7.8	LOS A	0.5	3.4	0.69	0.77	0.69	34.1
9	R2	37	0.0	0.092	11.0	LOS A	0.5	3.4	0.69	0.77	0.69	37.7
Appro	ach	63	0.0	0.092	9.7	LOS A	0.5	3.4	0.69	0.77	0.69	36.4
West:	Dunmor	e Street										
10	L2	27	0.0	0.622	4.9	LOS A	4.9	34.8	0.51	0.59	0.51	39.3
11	T1	464	1.4	0.622	4.8	LOS A	4.9	34.8	0.51	0.59	0.51	42.6
12	R2	279	2.6	0.622	8.1	LOS A	4.9	34.8	0.51	0.59	0.51	41.2
Appro	ach	771	1.8	0.622	6.0	LOS A	4.9	34.8	0.51	0.59	0.51	42.0
All Ve	hicles	1488	2.1	0.622	6.2	LOS A	4.9	34.8	0.51	0.62	0.51	41.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

## **▼**Site: [(5) Dunmore Street / Jones Street PM]

Site Category: -Roundabout

		erformanc										
Mov ID	Turn	Demand I Total veh/h	lows= HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones S	Street										
1	L2	146	1.4	0.199	5.5	LOS A	0.9	6.4	0.50	0.67	0.50	40.8
2	T1	20	5.3	0.199	5.3	LOS A	0.9	6.4	0.50	0.67	0.50	38.1
3	R2	23	0.0	0.199	8.5	LOS A	0.9	6.4	0.50	0.67	0.50	41.1
Appro	ach	189	1.7	0.199	5.9	LOS A	0.9	6.4	0.50	0.67	0.50	40.7
East:	Dunmore	e Street										
4	L2	53	2.0	0.515	6.0	LOS A	3.8	26.5	0.62	0.65	0.62	39.2
5	T1	463	1.1	0.515	6.0	LOS A	3.8	26.5	0.62	0.65	0.62	42.7
6	R2	18	0.0	0.515	9.2	LOS A	3.8	26.5	0.62	0.65	0.62	39.4
6u	U	1	0.0	0.515	10.7	LOS A	3.8	26.5	0.62	0.65	0.62	42.6
Appro	ach	535	1.2	0.515	6.1	LOS A	3.8	26.5	0.62	0.65	0.62	42.4
North:	Jones S	Street										
7	L2	9	0.0	0.063	5.3	LOS A	0.2	1.6	0.40	0.63	0.40	38.0
8	T1	26	0.0	0.063	5.0	LOS A	0.2	1.6	0.40	0.63	0.40	37.8
9	R2	28	0.0	0.063	8.3	LOS A	0.2	1.6	0.40	0.63	0.40	40.7
Appro	ach	64	0.0	0.063	6.5	LOS A	0.2	1.6	0.40	0.63	0.40	39.3
West:	Dunmor	e Street										
10	L2	55	1.9	0.388	4.0	LOS A	2.3	16.1	0.22	0.52	0.22	40.4
11	T1	258	0.4	0.388	3.9	LOS A	2.3	16.1	0.22	0.52	0.22	43.7
12	R2	228	1.8	0.388	7.1	LOS A	2.3	16.1	0.22	0.52	0.22	42.4
12u	U	2	0.0	0.388	8.6	LOS A	2.3	16.1	0.22	0.52	0.22	44.8
Appro	ach	543	1.2	0.388	5.3	LOS A	2.3	16.1	0.22	0.52	0.22	42.9
All Ve	hicles	1332	1.2	0.515	5.7	LOS A	3.8	26.5	0.43	0.60	0.43	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

ID		Demand F	lowe									
		Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Jo	ones Stre	et										
1 I	L2	151	1.4	0.206	5.6	LOS A	1.0	6.8	0.52	0.68	0.52	40.7
2 -	T1	20	5.3	0.206	5.4	LOS A	1.0	6.8	0.52	0.68	0.52	38.0
3 F	R2	23	0.0	0.206	8.6	LOS A	1.0	6.8	0.52	0.68	0.52	41.1
Approact	h	194	1.6	0.206	5.9	LOS A	1.0	6.8	0.52	0.68	0.52	40.6
East: Du	nmore S	treet										
4 I	L2	53	2.0	0.532	6.1	LOS A	3.9	27.9	0.64	0.65	0.64	39.2
5 -	T1	481	1.1	0.532	6.0	LOS A	3.9	27.9	0.64	0.65	0.64	42.7
6 F	R2	18	0.0	0.532	9.2	LOS A	3.9	27.9	0.64	0.65	0.64	39.3
6u	U	1	0.0	0.532	10.8	LOS A	3.9	27.9	0.64	0.65	0.64	42.5
Approact	h	553	1.1	0.532	6.1	LOS A	3.9	27.9	0.64	0.65	0.64	42.3
North: Jo	ones Stre	et										
7 I	L2	9	0.0	0.063	5.3	LOS A	0.2	1.6	0.41	0.63	0.41	38.0
8 -	T1	26	0.0	0.063	5.1	LOS A	0.2	1.6	0.41	0.63	0.41	37.8
9 F	R2	28	0.0	0.063	8.3	LOS A	0.2	1.6	0.41	0.63	0.41	40.7
Approact	h	64	0.0	0.063	6.5	LOS A	0.2	1.6	0.41	0.63	0.41	39.3
West: Du	unmore S	Street										
10 I	L2	55	1.9	0.391	4.0	LOS A	2.3	16.4	0.22	0.52	0.22	40.4
11 -	Т1	262	0.4	0.391	3.9	LOS A	2.3	16.4	0.22	0.52	0.22	43.7
12 F	R2	229	1.8	0.391	7.1	LOS A	2.3	16.4	0.22	0.52	0.22	42.4
12u	U	2	0.0	0.391	8.6	LOS A	2.3	16.4	0.22	0.52	0.22	44.8
Approact	h	548	1.2	0.391	5.3	LOS A	2.3	16.4	0.22	0.52	0.22	42.9
All Vehic	les	1359	1.2	0.532	5.8	LOS A	3.9	27.9	0.44	0.60	0.44	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Move	ment P	erformanc	e - Vel	nicles								
Mov ID	Turn	Demand F Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones :	Street										
1	L2	179	1.2	0.273	5.9	LOS A	1.4	9.8	0.58	0.73	0.58	40.3
2	T1	20	5.3	0.273	5.8	LOS A	1.4	9.8	0.58	0.73	0.58	37.4
3	R2	46	0.0	0.273	8.9	LOS A	1.4	9.8	0.58	0.73	0.58	40.5
Appro	ach	245	1.3	0.273	6.5	LOS A	1.4	9.8	0.58	0.73	0.58	40.2
East:	Dunmor	e Street										
4	L2	68	1.5	0.598	7.0	LOS A	5.3	37.3	0.70	0.72	0.75	38.7
5	T1	524	1.0	0.598	6.9	LOS A	5.3	37.3	0.70	0.72	0.75	42.3
6	R2	18	0.0	0.598	10.2	LOS A	5.3	37.3	0.70	0.72	0.75	38.8
6u	U	1	0.0	0.598	11.7	LOS A	5.3	37.3	0.70	0.72	0.75	42.1
Appro	ach	612	1.0	0.598	7.0	LOS A	5.3	37.3	0.70	0.72	0.75	41.9
North:	Jones S	Street										
7	L2	9	0.0	0.068	5.7	LOS A	0.3	1.9	0.47	0.65	0.47	37.6
8	T1	26	0.0	0.068	5.5	LOS A	0.3	1.9	0.47	0.65	0.47	37.3
9	R2	28	0.0	0.068	8.7	LOS A	0.3	1.9	0.47	0.65	0.47	40.3
Appro	ach	64	0.0	0.068	6.9	LOS A	0.3	1.9	0.47	0.65	0.47	38.9
West:	Dunmor	e Street										
10	L2	55	1.9	0.449	4.2	LOS A	2.9	20.7	0.29	0.52	0.29	40.1
11	T1	305	0.3	0.449	4.0	LOS A	2.9	20.7	0.29	0.52	0.29	43.4
12	R2	247	1.7	0.449	7.3	LOS A	2.9	20.7	0.29	0.52	0.29	42.1
12u	U	2	0.0	0.449	8.8	LOS A	2.9	20.7	0.29	0.52	0.29	44.6
Appro	ach	609	1.0	0.449	5.4	LOS A	2.9	20.7	0.29	0.52	0.29	42.7
All Ve	hicles	1531	1.0	0.598	6.3	LOS A	5.3	37.3	0.51	0.64	0.53	41.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

# Site: [(5) Dunmore Street / Jones Street SAT]

Site Category: -Roundabout

Move	ement P	erformanc	ce - Vel	nicles								
Mov ID	Turn	Demand I Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones	Street										
1	L2	166	0.6	0.190	4.6	LOS A	0.7	5.0	0.32	0.58	0.32	41.
2	T1	16	0.0	0.190	4.3	LOS A	0.7	5.0	0.32	0.58	0.32	39.
3	R2	34	3.1	0.190	7.6	LOS A	0.7	5.0	0.32	0.58	0.32	41.
Appro	bach	216	1.0	0.190	5.1	LOS A	0.7	5.0	0.32	0.58	0.32	41.4
East:	Dunmor	e Street										
4	L2	33	0.0	0.252	5.1	LOS A	1.4	10.0	0.46	0.56	0.46	40.
5	T1	217	0.0	0.252	5.1	LOS A	1.4	10.0	0.46	0.56	0.46	43.
6	R2	16	0.0	0.252	8.4	LOS A	1.4	10.0	0.46	0.56	0.46	40.
6u	U	1	0.0	0.252	9.9	LOS A	1.4	10.0	0.46	0.56	0.46	43.
Appro	bach	266	0.0	0.252	5.3	LOS A	1.4	10.0	0.46	0.56	0.46	43.
North	: Jones S	Street										
7	L2	9	0.0	0.068	5.3	LOS A	0.2	1.7	0.40	0.64	0.40	37.
8	T1	22	0.0	0.068	5.1	LOS A	0.2	1.7	0.40	0.64	0.40	37.
9	R2	36	0.0	0.068	8.3	LOS A	0.2	1.7	0.40	0.64	0.40	40.
9u	U	2	0.0	0.068	9.8	LOS A	0.2	1.7	0.40	0.64	0.40	22.
Appro	bach	69	0.0	0.068	6.9	LOS A	0.2	1.7	0.40	0.64	0.40	38.
West:	Dunmor	e Street										
10	L2	27	0.0	0.366	4.0	LOS A	2.0	14.1	0.22	0.50	0.22	40.
11	T1	301	0.3	0.366	3.9	LOS A	2.0	14.1	0.22	0.50	0.22	43.
12	R2	180	1.8	0.366	7.2	LOS A	2.0	14.1	0.22	0.50	0.22	42.
Appro	bach	508	0.8	0.366	5.1	LOS A	2.0	14.1	0.22	0.50	0.22	43.
All Ve	hicles	1060	0.6	0.366	5.2	LOS A	2.0	14.1	0.31	0.54	0.31	42.

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Move	ement P	erformanc	ce - Vel	nicles								
Mov ID	Turn	Demand l Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones	Street										
1	L2	168	0.6	0.206	5.0	LOS A	0.8	5.9	0.40	0.63	0.40	41.2
2	T1	16	0.0	0.206	4.7	LOS A	0.8	5.9	0.40	0.63	0.40	39.0
3	R2	34	3.1	0.206	8.1	LOS A	0.8	5.9	0.40	0.63	0.40	41.4
Appro	bach	218	1.0	0.206	5.5	LOS A	0.8	5.9	0.40	0.63	0.40	41.1
East:	Dunmor	e Street										
4	L2	33	0.0	0.357	5.3	LOS A	2.2	15.6	0.50	0.57	0.50	39.9
5	T1	333	0.0	0.357	5.3	LOS A	2.2	15.6	0.50	0.57	0.50	43.
6	R2	16	0.0	0.357	8.5	LOS A	2.2	15.6	0.50	0.57	0.50	40.
6u	U	1	0.0	0.357	10.1	LOS A	2.2	15.6	0.50	0.57	0.50	43.
Appro	bach	382	0.0	0.357	5.4	LOS A	2.2	15.6	0.50	0.57	0.50	43.0
North	: Jones S	Street										
7	L2	9	0.0	0.069	5.3	LOS A	0.3	1.8	0.41	0.65	0.41	37.0
8	T1	22	0.0	0.069	5.1	LOS A	0.3	1.8	0.41	0.65	0.41	37.4
9	R2	36	0.0	0.069	8.4	LOS A	0.3	1.8	0.41	0.65	0.41	40.3
9u	U	2	0.0	0.069	9.9	LOS A	0.3	1.8	0.41	0.65	0.41	22.0
Appro	bach	69	0.0	0.069	7.0	LOS A	0.3	1.8	0.41	0.65	0.41	38.0
West:	Dunmor	e Street										
10	L2	27	0.0	0.374	4.0	LOS A	2.1	14.9	0.22	0.50	0.22	40.
11	T1	309	0.3	0.374	3.9	LOS A	2.1	14.9	0.22	0.50	0.22	43.9
12	R2	182	1.7	0.374	7.2	LOS A	2.1	14.9	0.22	0.50	0.22	42.0
Appro	bach	519	0.8	0.374	5.0	LOS A	2.1	14.9	0.22	0.50	0.22	43.
All Ve	hicles	1188	0.5	0.374	5.4	LOS A	2.2	15.6	0.36	0.56	0.36	42.

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

Move	ement P	erformanc	e - Vel	hicles								
Mov ID	Turn	Demand F Total veh/h	lows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	
South	: Jones	Street										
1	L2	205	0.5	0.278	5.4	LOS A	1.3	9.0	0.48	0.68	0.48	40.7
2	T1	16	0.0	0.278	5.1	LOS A	1.3	9.0	0.48	0.68	0.48	38.3
3	R2	60	1.8	0.278	8.4	LOS A	1.3	9.0	0.48	0.68	0.48	40.9
Appro	ach	281	0.7	0.278	6.0	LOS A	1.3	9.0	0.48	0.68	0.48	40.6
East:	Dunmor	e Street										
4	L2	59	0.0	0.454	5.8	LOS A	3.2	22.1	0.59	0.63	0.59	39.5
5	T1	397	0.0	0.454	5.7	LOS A	3.2	22.1	0.59	0.63	0.59	43.0
6	R2	16	0.0	0.454	9.0	LOS A	3.2	22.1	0.59	0.63	0.59	39.6
6u	U	1	0.0	0.454	10.5	LOS A	3.2	22.1	0.59	0.63	0.59	42.8
Appro	ach	473	0.0	0.454	5.9	LOS A	3.2	22.1	0.59	0.63	0.59	42.5
North	: Jones S	Street										
7	L2	9	0.0	0.076	6.0	LOS A	0.3	2.2	0.50	0.68	0.50	36.9
8	T1	22	0.0	0.076	5.8	LOS A	0.3	2.2	0.50	0.68	0.50	36.5
9	R2	36	0.0	0.076	9.0	LOS A	0.3	2.2	0.50	0.68	0.50	39.7
9u	U	2	0.0	0.076	10.5	LOS A	0.3	2.2	0.50	0.68	0.50	22.2
Appro	ach	69	0.0	0.076	7.6	LOS A	0.3	2.2	0.50	0.68	0.50	37.9
West:	Dunmor	e Street										
10	L2	27	0.0	0.461	4.2	LOS A	3.0	21.0	0.31	0.52	0.31	40.3
11	T1	374	0.3	0.461	4.1	LOS A	3.0	21.0	0.31	0.52	0.31	43.5
12	R2	219	1.4	0.461	7.3	LOS A	3.0	21.0	0.31	0.52	0.31	42.2
Appro	bach	620	0.7	0.461	5.2	LOS A	3.0	21.0	0.31	0.52	0.31	43.0
All Ve	hicles	1443	0.4	0.461	5.7	LOS A	3.2	22.1	0.44	0.59	0.44	42.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Organisation: GTA CONSULTANTS | Created: Thursday, 12 March 2020 4:57:15 PM Project: P:\N17000-17099\N170350 230-290 Dunmore Street, Pendle Hill\Modelling\200218sid-N170350 230-290 Dunmore Street, Pendle Hill.sip8



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