

Smithfield RSL Masterplan

Transport Impact Assessment

Final Report

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Acknowledgment of Country

In the spirit of reconciliation, Stantec acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

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1. Introduction

1.1 Background

A planning proposal is to be lodged with Fairfield City Council to amend the land zoning of the whole site to permit a mixed-use, high-density residential and public recreation type development. The proposed site is located within Smithfield town centre and is bounded by Smithfield Road to the east, O'Connell Street to the west, Neville Street to the north and part of Brenan Street to the south. The proposal incorporates a new hotel, Food & Beverages/ Convenience floor area, medical centre and residential apartments while retaining the existing RSL club.

Smithfield RSL Club engaged Stantec to assist as part of transport engineering and design for the proposal, including the preparation of a transport impact assessment report as part of the planning proposal.

1.2 Purpose of this Report

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

- existing traffic and parking conditions surrounding the site
- the adequacy of existing public transport services
- suitability of the proposed parking in terms of supply (quantum) and layout
- service vehicle requirements
- pedestrian and bicycle requirements
- the traffic generating characteristics of the proposed development
- 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
- Fairfield City Wide Development Control Plan 2013 (DCP 2013) Amendment No 22
- Fairfield City Centre Development Control Plan 2013 Amendment No 04
- Transport for NSW's Guide to Traffic Generating Developments 2022 and Technical Direction Updated Traffic Surveys (TDT 2013/ 04a)
- Transport for NSW - Traffic Generation Surveys for Medical Centres – Analysis Report 2015
- Fairfield Local Environmental Plan (FLEP) 2013
- Australian/New Zealand Standard, Parking Facilities (AS 2890)
- traffic and car parking surveys undertaken by Matrix as referenced in the context of this report
- plans for the proposed development prepared by Benson McCormack Architects, Drawing Number DA-110-007 – DA-110-140, dated 05 December 2023
- other documents and data as referenced in this report.
- Guide to Transport Impact Assessment TS 00085 Version 1.1 (2024)



2. Strategic Context

2.1 Overview

The following sections provide an overview of the broader strategic planning across western Sydney, but also more locally within Smithfield as well as public domain space and interchange connections that will be central to realising the necessary change.

2.2 NSW State Policies

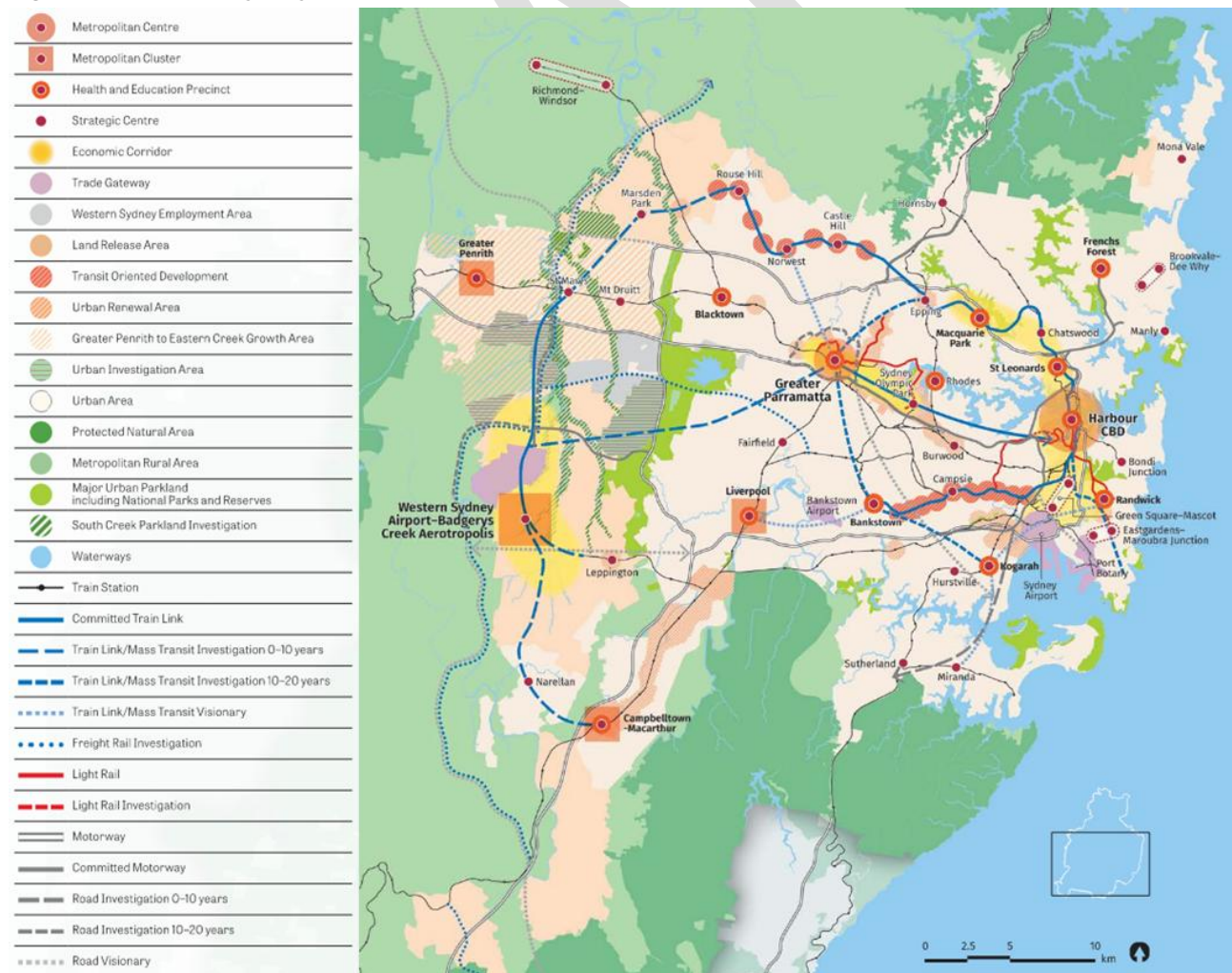
2.2.1 The Greater Sydney Region Plan 2018

The Greater Sydney Commission (GSC) is an independent organisation that leads metropolitan planning for Greater Sydney. It has prepared the Greater Sydney Region Plan which outlines how Greater Sydney will manage growth and guide infrastructure delivery. The plan has been prepared in conjunction with the NSW Government's Future Transport 2056 Strategy and informs Infrastructure NSW's State Infrastructure Strategy.

The GSC's vision is to create 'A Metropolis of Three Cities' – a Western Parkland City west of the M7, a Central River City with Greater Parramatta at its heart and an Eastern Harbour City. By integrating land use, transport links and infrastructure across the three cities, more people will have access within 30 minutes to jobs, education and essential services.

The Greater Sydney Region Plan is a 20-year plan with a 40-year vision and has four key focuses: infrastructure and collaboration, liveability, productivity and sustainability. The Greater Sydney Structure Plan 2056, with Parramatta at its heart, is shown in Figure 2.1.

Figure 2.1 – Greater Sydney Structure Plan 2056: Metropolis of Three Cities

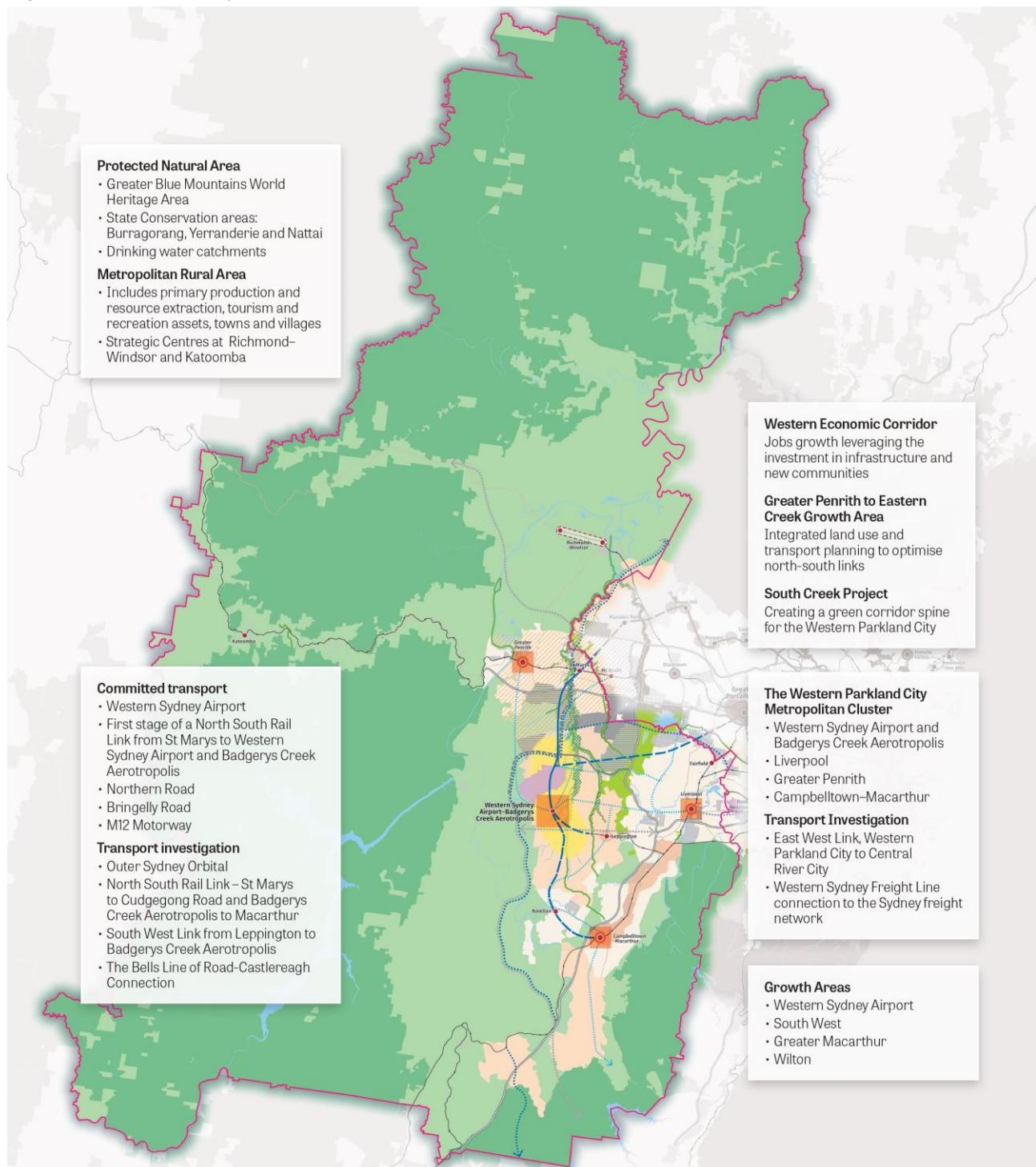


Source: Greater Sydney Commission

2.2.2 Western City District Plan

The Western City District Plan is a 40-year vision for Greater Sydney that is accompanied by a 20-year guide to manage the economic, social and environmental growth associated with it. The plan aims to bridge the gap between regional and local planning by implementing the Greater Sydney Region Plan at a district level.

Figure 2.2 – Western City District Plan



Source: Greater Sydney Commission

This will make housing and employment opportunities more accessible within the Western City District, which will be achieved by the following:

- Creating a once-in-a-generation economic boom with the Western Sydney Airport and Badgerys Creek Aerotropolis bringing together infrastructure, businesses and knowledge-intensive jobs.

- Transforming the Western City District over the next 20 to 40 years by building on the Western Sydney City Deal – enhancing natural and community assets and developing a more contained Western City District with a greater range of employment, transport and services aligned with growth.
- Delivering the first stage of the North South Rail Link.
- Fostering and building strong relationships between Liverpool, Greater Penrith and Campbelltown-Macarthur reinforced by the emerging Badgerys Creek Aerotropolis forming a unique metropolitan cluster.
- Investing in and providing major transport infrastructure links to support people and freight purposes.
- Developing a range of housing, providing access to public transport and infrastructure including schools, hospitals and community facilities.
- Integrating walking and cycling paths, bushland and a green urban landscape framed by the Greater Blue Mountains World Heritage Area, the Scenic Hills and Western Sydney Parklands.
- Enhancing and protecting South Creek, Georges River and Hawkesbury-Nepean river systems.
- Protecting the District's natural landscapes, heritage and tourism assets, unique rural areas and villages, and as well as the environmental, social and economic values of the Metropolitan Rural Area.

2.2.3 Future Transport Strategy

Future Transport Strategy sets out the NSW Government's vision for how transport will be planned, amended and forecasted within NSW, for Regional NSW and the Six Cities Region. The Six Cities Region is a global city region that encompasses 43 Local Government Areas within NSW that will deliver education opportunities and industry growth. The Future Transport Strategy replaces the Future Transport 2056 which was published in 2018 and builds upon the previously covered strategies while keeping customers and community at the heart of decision making.

Future Transport Strategy is supported by regional and metropolitan plans, which provide guidance and planning for these areas.

2.3 Local Context

2.3.1 Local Strategic Planning Statement 2020

The Local Strategic Planning Statement (LSPS) discusses the strategy for the Fairfield community's economic, social and environmental land use needs over the next 20 years. It implements and provides a line-of-sight to the Priorities and Actions of the Western City District Plan (2018) and the Goals and Outcomes of the Fairfield City Plan (Community Strategic Plan). It sets clear planning priorities about what will be needed, such as jobs, homes, services and parks, where these should be best located and when they will be delivered.

The LSPS sets short, medium and long-term actions to deliver the priorities for the community's future, and builds on planning work found in Council's other plans, studies and strategies such as the Local Environmental Plan (LEP), Development Control Plans (DCP) and Development Contributions Plan.

2.3.2 Fairfield City Council Bike Plan 2021

Fairfield City Council developed the Fairfield City Council Bike Plan 2021 with the intention of increasing bicycle use to improve the accessibility and liveability of the Fairfield LGA. The strategy aims to provide a more integrated cycle network by upgrading and constructing missing critical cycle links, with considerations given to the funding involved.

Key objectives encompass the following:

- Review and analysis of the limitations and deficiencies associated with the existing cycleway network and shared paths within the Fairfield LGA
- Outline feasibility of potential bike routes, based on key trip generators and recreational opportunities as they will represent common route destinations
- Identify appropriate locations of future amenity and bicycle facilities to create and promote cyclist-friendly environments, with considerations of existing cycling infrastructure
- Endorsement of educational programs and awareness supporting bicycles as an equal first choice mode of transport to cars thereby reducing traffic congestion on the road network.

3. Existing Conditions

3.1 Subject Site

The site is at 88-102 Smithfield Road, Smithfield, and bounded by Neville Street, O'Connell Street, Brenan Street and Cumberland Highway (Smithfield Road).

The surrounding properties mostly include low-density residential dwellings with retail and commercial land uses along Cumberland Highway and the town centre to the north. St Gertrude's Catholic Primary School and several churches are also north of the site.

The location of the subject site in relation to its surrounding environs is shown in Figure 3.1.

Figure 3.1 – Subject Site and its Environs



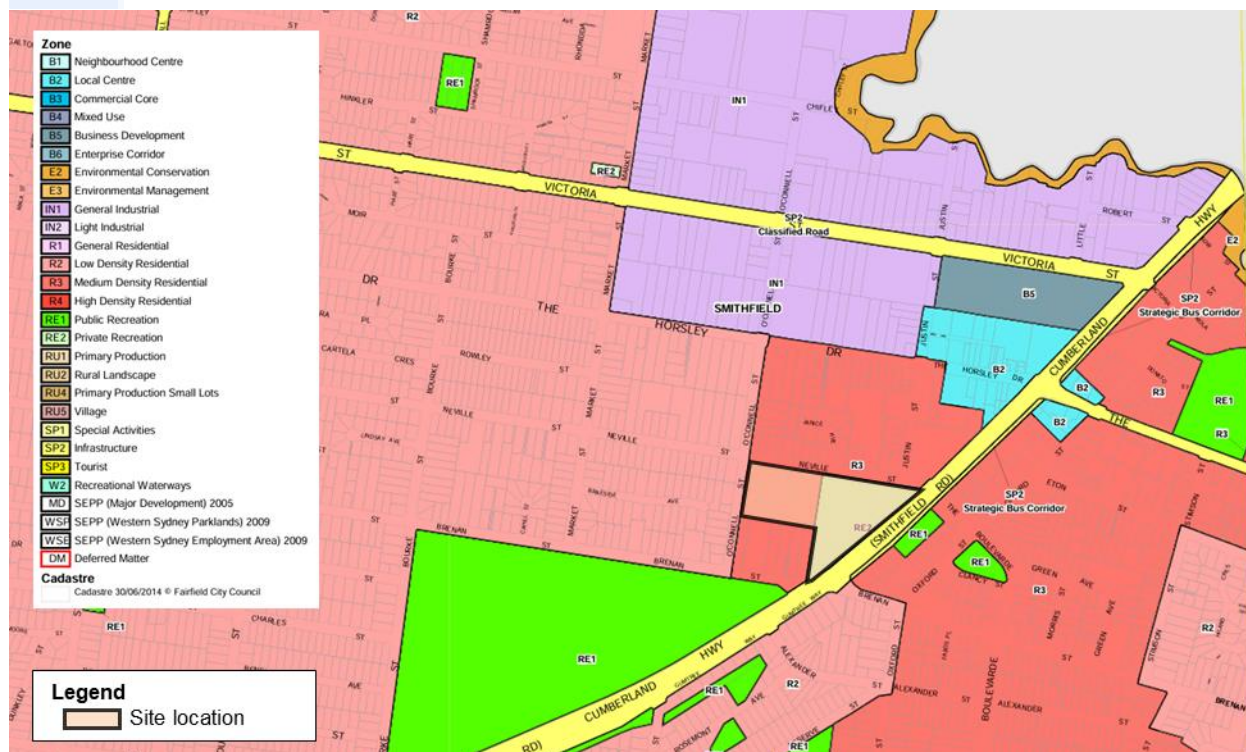
Base Image Source: Nearmap

3.2 Land Uses

The eastern part of the site (existing RSL club) is currently zoned as RE1 – Public Recreation and the western part of the site is zoned as R3 – Medium Density Residential in Fairfield Local Environmental Plan (FLEP) 2013.

The land use zonings of the site and surroundings are shown in Figure 3.2.

Figure 3.2 – Land Use Map



Base Image Source: Fairfield Local Environmental Plan 2013

3.3 Road Network

3.3.1 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 that 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) 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.

3.3.2 Surrounding Road Network

Cumberland Highway (Smithfield Road)

Cumberland Highway is a state road and functions as an Arterial Road providing a major north-south connection between Wentworthville and Liverpool. It is a two-way road configured with three lanes in each direction, set within an approximate 20-metre-wide carriageway. Cumberland Highway runs along the eastern boundary of the site and intersects with Brenan Street south of the site and has a posted speed limit of 70 kilometres per hour with kerbside parking generally not permitted in the vicinity. Cumberland Highway is shown in Figure 3.3 and Figure 3.4.

A dedicated access driveway (with a slip lane for entering vehicles) provides access to and from the site for northbound traffic.

Figure 3.3 – Cumberland Highway (looking north)



Figure 3.4 – Cumberland Highway (looking south)



Brenan Street

Brenan Street carries approximately 14,000 vehicles per day and functions as a sub-arterial road south of the site, serving as a connection to both local roads and major roads such as the Cumberland Highway and O'Connell Street. It is a two-way road with one traffic lane in each direction, set within a 12-metre-wide carriageway. The road has a posted speed limit of 50 kilometres per hour with unrestricted kerbside parking on both sides. Brenan Road is shown in Figure 3.5 and Figure 3.6.

Figure 3.5 – Brenan Street (looking east)



Figure 3.6 – Brenan Street (looking west)



Neville Street

Neville Street functions as a collector road north of the site and provides access to the RSL club via three existing access driveways. The daily traffic flow on Neville Street is approximately 7,500 vehicles per day. It is a two-way road consisting of one traffic lane in each direction, set within a 12-metre-wide carriageway. There is a posted speed limit of 50 kilometres per hour with 'No Stopping' restrictions between 10pm and 6am. Neville Road is shown in Figure 3.7.

Figure 3.7 – Neville Street (looking east)



O'Connell Street

O'Connell Street functions as a local road and is located on the west side of the site. O'Connell Street is orientated in a north-south direction, providing access to the existing residential dwellings on both sides of the road. The daily traffic flow on O'Connell Street is approximately 4,000 vehicles per day. It is a two-way road consisting of one traffic lane in each direction, set within a 9.5-metre-wide carriageway. There is a posted speed limit of 50 kilometres per hour with unrestricted kerbside parking on both sides. O'Connell Street is shown in Figure 3.8 Figure 3.9.

Figure 3.8 – O'Connell Street (looking north)

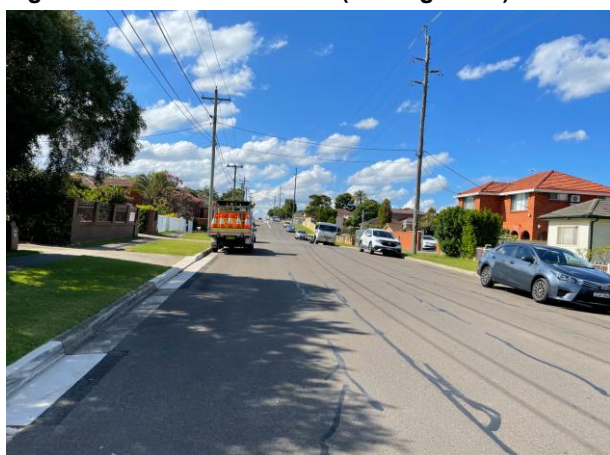
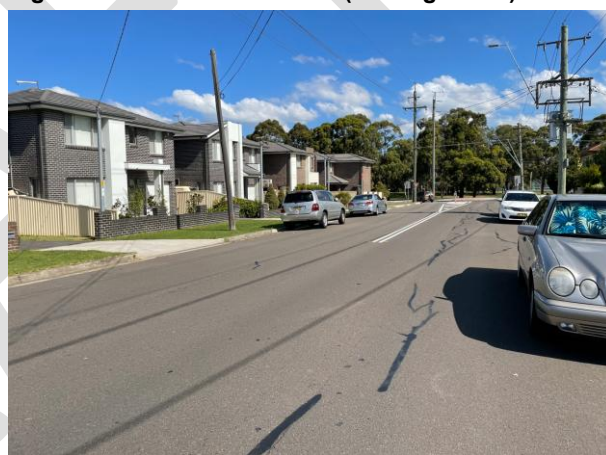


Figure 3.9 – O'Connell Street (looking south)



3.3.3 Surrounding Intersections

The following intersections currently exist in the vicinity of the site:

- Cumberland Highway/ The Horsley Drive (signalised)
- The Horsley Drive/ Justin Street (signalised)
- Neville Street/ Justin Street (priority-controlled)
- Neville Street/ O'Connell Street (roundabout)
- O'Connell Street/ Brenan Street (priority-controlled)
- Cumberland Highway/ Brenan Street (signalised).

3.4 Traffic Volumes

Stantec commissioned traffic surveys at key intersections surrounding the site in March 2023 during the following periods:

- 6:30am and 10:00am
- 2:30am and 6:00pm

The AM and PM network peak hours were from 8:00am to 9:00am and 3:15pm to 4:15pm respectively, with the surveyed traffic turning volumes provided in Appendix A.



3.5 Intersection Operation

The operation of the key intersections within the study area have been assessed using SIDRA INTERSECTION¹ (SIDRA), a computer-based modelling software package that calculates intersection performance.

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

Table 3.1 shows the criteria that SIDRA adopts in assessing the level of service.

Table 3.1 – SIDRA 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
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but crash study required
D	43 to 56	Near capacity	Near capacity, crash 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 3.2 presents a summary of the existing (2025) operation of the analysed intersections, with full results presented in Appendix D. The existing condition (2025) traffic volume was estimated based on 2023 traffic survey data and applying an annual growth rate as discussed in Section 6.4 of this report.

Table 3.2 – Existing Operating Conditions

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	95 th Percentile Queue (m)	Level of Service (LOS)
Cumberland Highway/ The Horsley Drive	AM	1.019	77.5	260	F
	PM	1.007	73.6	418.1	F
O'Connell Street/ Neville Street	AM	0.299	11.9	5.6	A
	PM	0.29	10.6	5.7	A
The Horsley Drive/ Justin Street	AM	0.369	14.9	60.2	B
	PM	0.362	23.6	111.2	B
Neville Street/ Justin Street	AM	0.131	4.8	0.8	A
	PM	0.077	4.3	0.3	A
Brenan Street/ O'Connell Street	AM	0.407	11.2	8.2	A
	PM	0.328	11	5.7	A
Cumberland Highway/ Brenan Street	AM	0.685	19.1	170.5	B
	PM	0.67	19.4	117.5	B

As outlined in Table 3.2, most intersections are operating well with spare capacity in both peak periods. The Cumberland Highway/ The Horsley Drive intersection shows some congestion with queuing along the Cumberland Highway, with an overall LOS F and DOS at capacity.

Overall, while most intersections in the study area operate well at LOS A/B during the weekday peak periods, select key intersections on the Cumberland Highway are close to capacity with queues forming along the Cumberland Highway.

¹ Program used under license from Akcelik & Associates Pty Ltd.

3.6 Existing Car Parking

Detailed parking surveys were completed on the on-site and surrounding on-street car parking on Thursday 2 March 2023 between 3.00pm and 7.00pm. An inventory of publicly available on-street car parking on the surrounding streets, namely Neville Street, Brenan Street and O'Connell Street have also been completed.

During consultation with council (Council Letter. Dated 04 October 2023, also included in Appendix B), it was agreed to undertake additional parking surveys for the following days to capture weekend parking demands, including Friday evening peak as well as parking demands during an event scenario:

- Friday and Saturday – 11-12 August 2023 between 3:00pm and 10:00pm
- Sunday – 13 August 2023 between 10:00am and 5:00pm.

It is to be noted that the RSL club hosted a day event (CMT Managements Annual Singing Competition) on 13 August 2023 (Sunday) between 10am and 5pm, hence the parking survey time was adjusted to capture peak parking demand during the event.

The car parking survey area is illustrated in Figure 3.10, with a breakdown of parking supply detailed in Table 3.3.

Figure 3.10 – Parking Survey Area



Base Image Source: Nearmap

3.6.1 Supply

The existing club includes a total on-site parking supply of 384 spaces, including 10 accessible spaces, five spaces for staff and 20 reserved spaces (including 10 spaces for the directors). The existing on-site car parks are accessed via the three Neville Street access driveways and single Cumberland Highway access.

The surrounding on-street parking within the study area (refer Figure 3.10) incorporates 115 available spaces. This includes 50 spaces on Neville Street and 47 spaces on O'Connell Street in addition to a bus zone adjacent to the St Gertrudes Catholic Primary School.

Table 3.3 – On-Street Car Parking Supply

Location	Supply
Neville Street	50
O'Connell Street	47
Brenan Street	17
Total	114

Figure 3.11 – Surrounding Parking Restrictions



Base Image Source: Nearmap

3.6.2 Demand

A parking survey (on-site and on-street) has been undertaken for the existing RSL club parking and surrounding road network to understand the current parking demand of the club. The survey was conducted for a typical weekday (Thursday 2nd March 2023) between 3pm and 7pm covering the PM peak hour. Table 3.4 shows the summary of parking survey results for a typical weekday (Thursday).

Table 3.4 – Summary of Parking Demands on site during Weekday (Thursday)

RSL car park	Supply	Demand				
		15:00	16:00	17:00	18:00	19:00
General, including public and staff	364	85	76	76	97	203
Accessible parking	10	5	5	7	8	8
Reserved for directors only	10	1	1	1	1	3
Total	384	91	82	84	106	214

As shown in Table 3.4, the parking demand during a typical weekday is well within the existing supply. Peak demand occurs in the hour from 7pm with demand around 56 per cent.

Table 3.5 shows parking survey results undertaken for weekends, including Friday evening peak as well as an event scenario.

Table 3.5 – Summary of Parking Demand during Weekend and Event Scenario

Hour Starting		15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00
Capacity		384							
Friday	Number of Parking	222	159	163	224	225	219	218	202
	Occupancy (%)	58%	41%	42%	58%	59%	57%	57%	53%
Saturday	Number of Parking	125	137	160	236	287	317	288	260
	Occupancy (%)	33%	36%	42%	61%	75%	83%	75%	68%
		10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00
Sunday	Number of Parking	131	123	130	178	193	167	157	151
	Occupancy (%)	34%	32%	34%	46%	50%	43%	41%	39%

Based on Table 3.5, Saturday comparatively has a higher parking demand with a peak occurring at 8pm which comprises 83 per cent of the on-site parking supply. The peak demand for Friday and Sunday appears to be low when compared to the peak parking demand for Saturday.

As noted above, the Sunday (13 August 2023) parking survey includes a typical day event scenario, covering the survey period between 10am and 5pm. The daylong singing event hosted by the club was organised by a management company and had limited capacity and included participants from different age groups (including children). The peak parking demand for such an event is anticipated to be low during any peak hour (also as shown in the table above) due to the following reasons:

- The event is assumed to organize singing competition for different age-groups throughout the day. Participants for different age-groups are assumed to arrive/depart to/from the site throughout the day distributing the peak parking demand
- The event day peak parking demand is between 2pm and 3pm, which is outside the typical club peak activity hours (typically between 6pm and 10pm during Friday and Saturday).

Given the site is expected to host medium to large events in the future (including during Saturday peak), the peak parking demand is anticipated to be much higher as discussed in Section 5 of this report.

The on-street parking supply appears to be sufficient to cater for the on-street parking demand as shown in Figure 3.12 to Figure 3.14 for the survey period.

Figure 3.12 – On-Street Parking Demand (Friday)

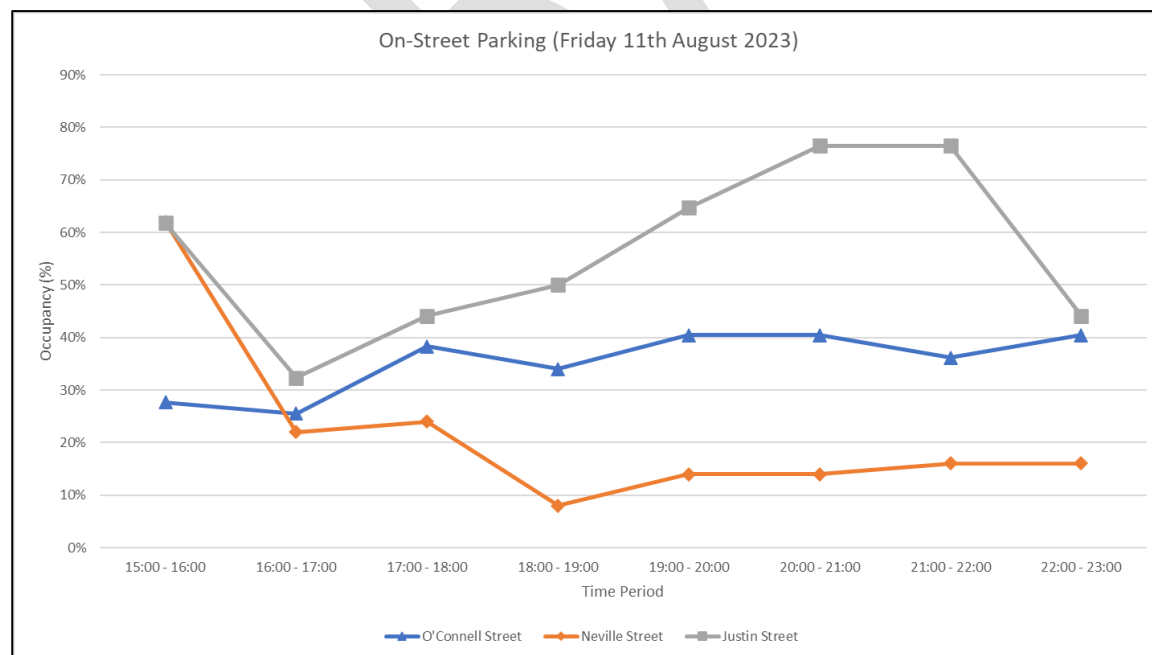
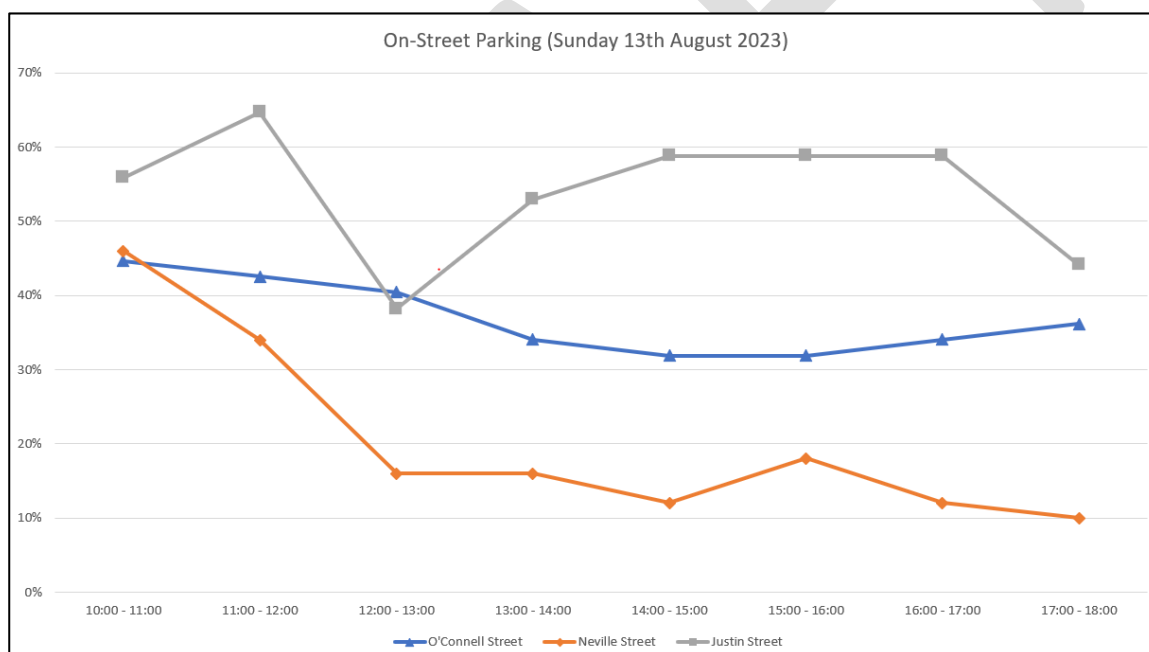


Figure 3.13 – On-Street Parking Demand (Saturday)



Figure 3.14 – On-Street Parking Demand (Sunday)



As shown above, on-street parking is operating under capacity with peak on-street parking found to be on Friday. Justin Street appears to experience higher on-street parking demand compared to O'Connell Street and Neville Street.

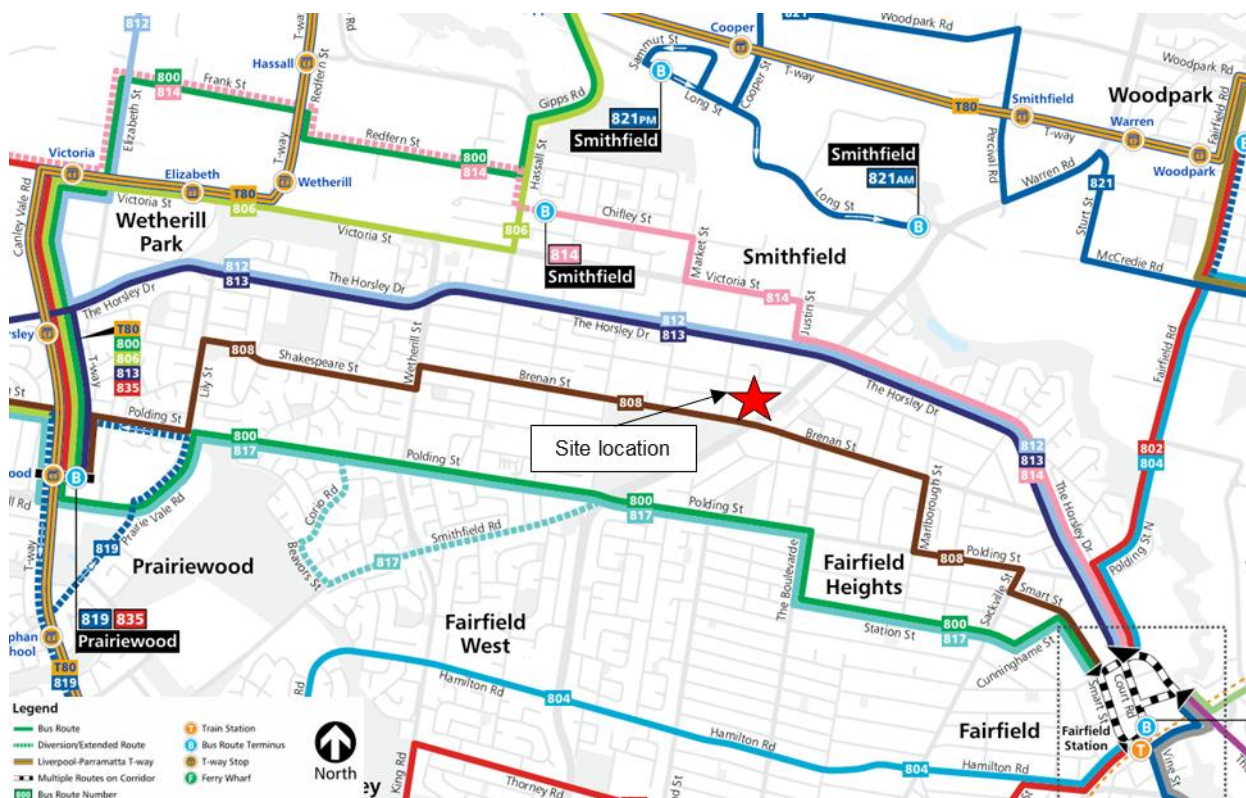
3.7 Public Transport

The site is serviced by a number of bus routes, which operate along Brenan Street, The Horsley Drive and Justin Street. A review of public transport services near the site is summarised in Table 3.6 and shown indicatively in Figure 3.15.

Table 3.6 – Public Transport Provision

Service	Route #	Route Description	Location of Stop	Distance to Stop
Bus	808	Liverpool to/from Fairfield via Abbotsbury	Brenan Street at Cumberland Highway	Approx. 170m
Bus	812	Blacktown to/from Fairfield via Prospect Highway	The Horsley Drive at Justin Street	Approx. 290m
Bus	813	Bonnyrigg and Western Sydney Parklands to/from Fairfield	The Horsley Drive at Justin Street	Approx. 290m
Bus	814	Fairfield to Smithfield and Wetherill Park Industrial Area (Loop Service)	Justin Street at The Horsley Drive	Approx. 290m

Figure 3.15 – Surrounding Public Transport Network



Source: TfNSW, accessed April 2025

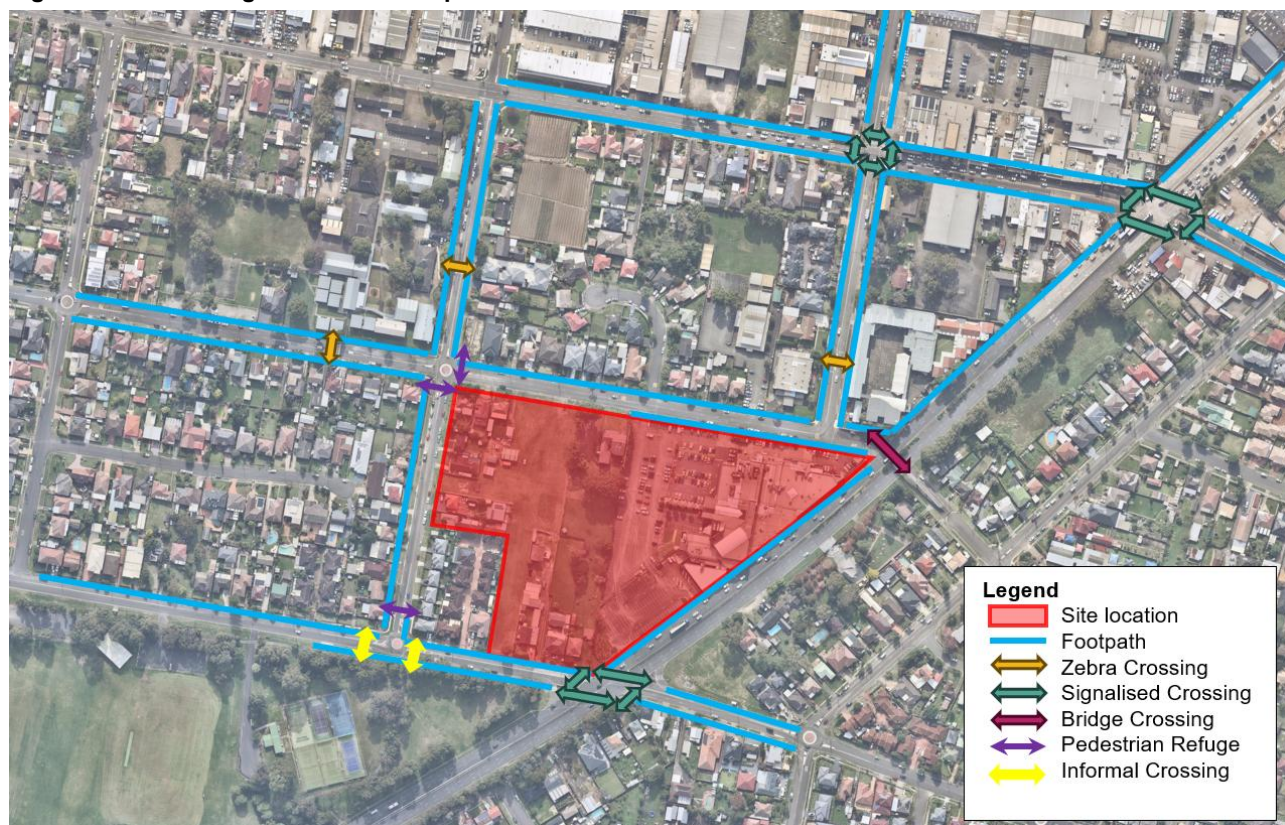
3.8 Pedestrian Infrastructure

Pedestrian infrastructure is provided on most roads surrounding the site including both sides of Brenan Street and the western side of Smithfield Road between Neville Street and Brenan Street. Footpaths on Neville Street terminate approximately 85 metres south of the O'Connell Street/ Neville Street roundabout and no footpaths are provided on O'Connell Street.

It is noted that the refuge island at the O'Connell Street/ Neville Street roundabout is not compliant with a current width of approximately 2 metres. The refuge island should be 2.5 metres in width to provide sufficient space for pedestrians to utilise this zone. While the existing refuge island provides an insufficient width, it is still considered as an improvement to the surrounding pedestrian infrastructure as opposed to providing no refuge at all.

The existing pedestrian infrastructure is shown in Figure 3.16.

Figure 3.16 – Existing Pedestrian Footpaths



Base Image Source: Nemap

3.9 Cycle Infrastructure

Cycling infrastructure within Smithfield generally relies on cyclists sharing road space with general traffic. The existing cycle network is shown in Figure 3.17.

Figure 3.17 – Fairfield City Cycleways

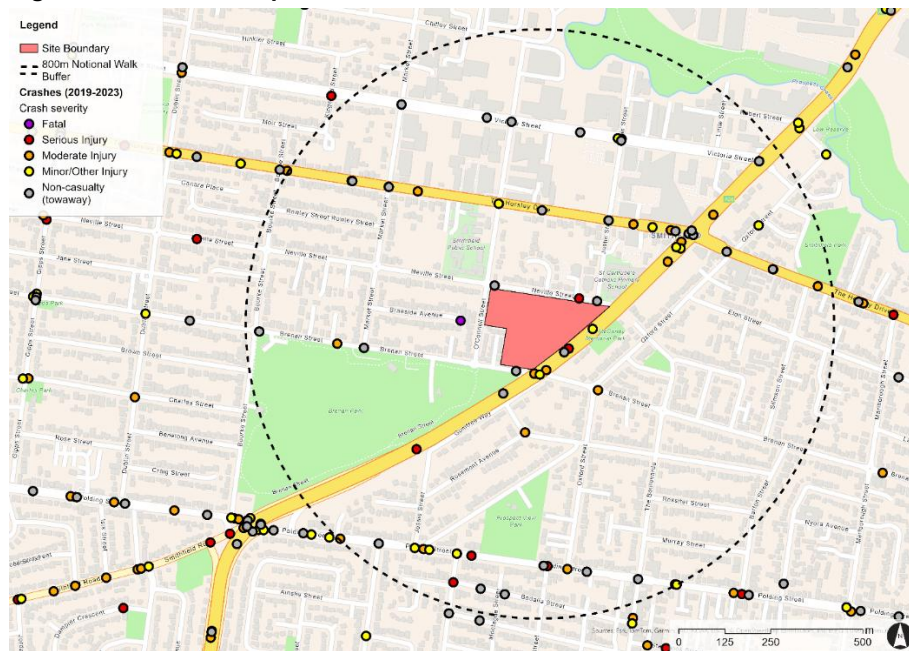


Base Image Source: Fairfield City Council

3.10 Crash History

An analysis of the most recent five-year period of available crash data from 2019 to 2023 has been completed based on crash data sourced from TfNSW OpenData portal for the roads surrounding the site within an 800m catchment. The locations and severity of the crash data for the five-year period are shown in Figure 3.18 and summarised in Table 3.7.

Figure 3.18 – Crash Map from 2019 to 2023



Base Image Source: Transport for NSW

Table 3.7 – Recorded Crashes from 2019 to 2023

Road	Number of Crashes	People Injured	Number of Fatalities
The Horsley Dr	36	24	1
Justin St	1	0	0
Cumberland Hwy	38	29	0
Polding St	32	28	0
Braeside Ave	1	0	1
Brenan St	6	4	0
Neville St	3	1	0
Bourke St	2	1	0
Victoria St	12	9	0
Bodalla St	3	1	0
Alexander St	1	1	0
Oxford St	1	1	0
Total	136	99	2

The following key statistics can be drawn from the crash data:

- There were 136 crashes in the most recent five-year data period
- 2 fatalities were recorded during the five-year period
- 73 per cent of crashes resulted in an injury
- 63 per cent of crashes occurred during daylight hours
- 27 per cent of crashes were rear end crashes
- Cluster of crashes at The Horsley Drive/ Cumberland Highway and Brenan Street/ Cumberland Highway intersections.

4. Planning Proposal

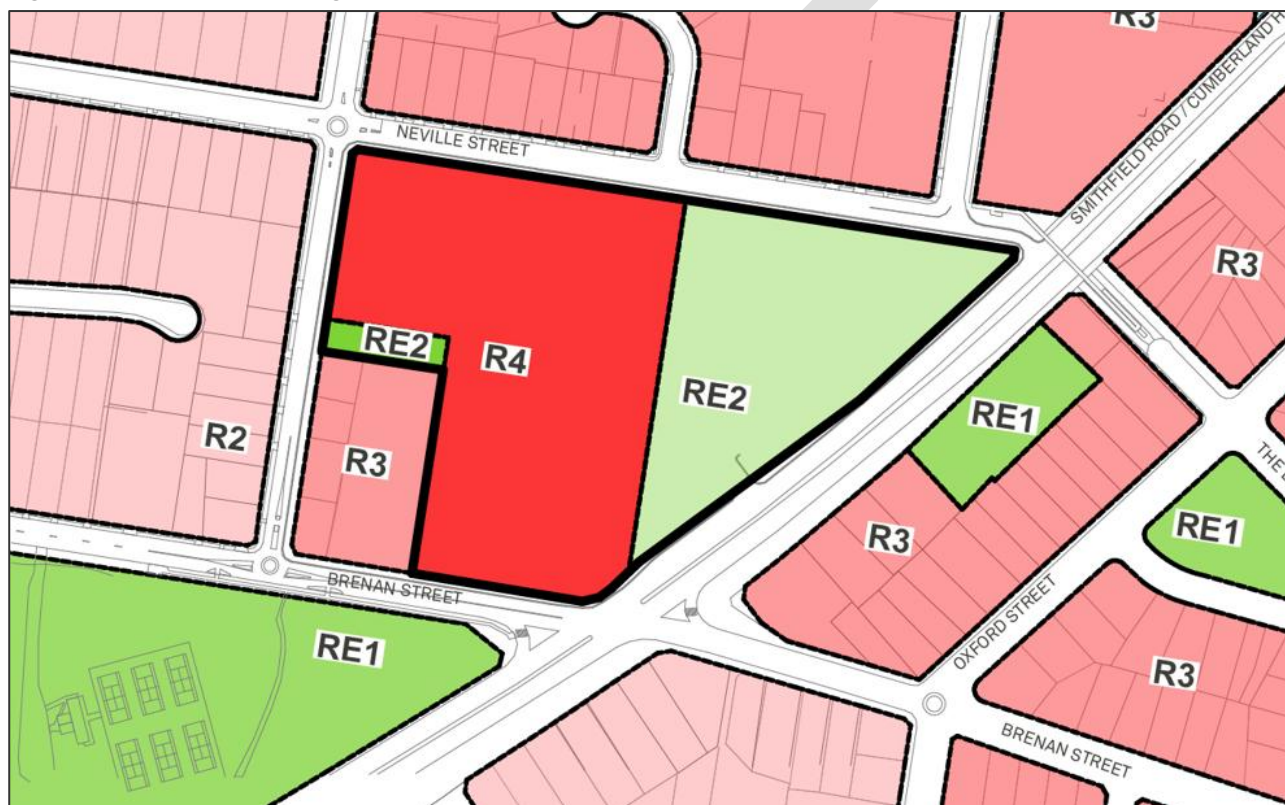
4.1 Land Uses

The planning proposal seeks to amend FLEP 2013 to rezone the entire site as follows –

- Uplift from R3 to R4 to the west.
- The zoning for the RSL site, to the east, remains unchanged at RE2, however it is identified as a Key Site, in which the additional permitted uses of 'hotel or motel accommodation' would be allowed without the GFA limitation to make this a viable part of the masterplan. The RE2 site area is also reduced by almost 25% to allow for an optimised residential development in the R4 zone.

The proposed rezoning of the whole site is shown in Figure 4.1.

Figure 4.1 – Proposed Zoning Plan

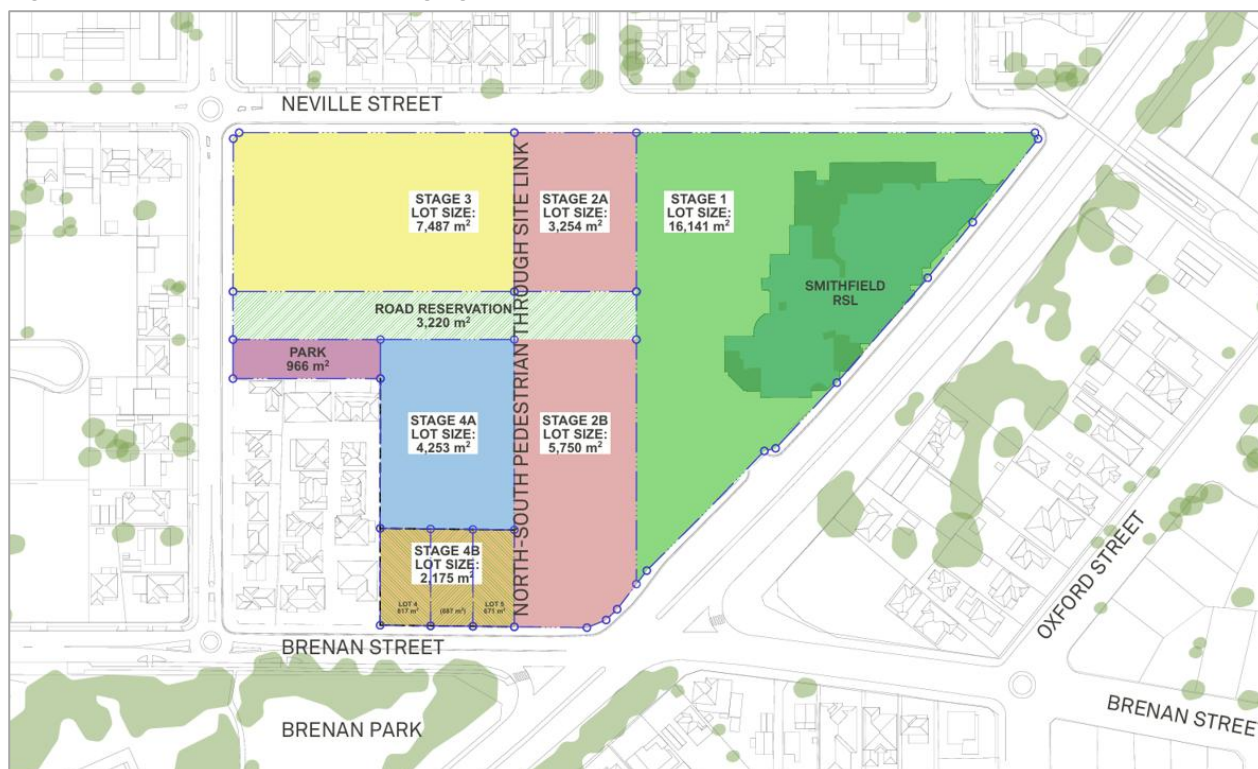


Source: Benson McCormack Architects, dated 4 July 2025.

A Concept Masterplan has been developed for the site. The entire site will be developed in four stages as shown indicatively in Figure 4.2 and development schedules provided in Table 4.1. It includes the defined precincts and associated land use intention on each area/ stage of the proposed site. Key to this is the intention to maintain the existing RSL Club uses in the north-east corner, with parking and access to be incorporated as needed to accommodate such known existing (and future) demand. The proposed residential development is located in the north-west corner and on the south side of the site. The open space and common access from the west also facilitate the necessary future access requirements. The proposed medical centre is proposed to be within the multi-storey car park located on the south-east corner of the site.

Overall, the concept masterplan is well considered with respect to a range of existing land uses, user groups and existing road corridors to ensure future users have defined access routes and logical internal connections, with separation of users appropriate.

Figure 4.2 – Concept Masterplan Staging



Source: Benson McCormack Architects, dated 4 July 2025.

Table 4.1 – Proposed Development Schedule

Land Use		Size
RSL Club		9,056 m ²
Hotel	Number of rooms	168 rooms
	Bar/lounge/dining/function/office	614 m ²
Food & Beverage / Convenience		367 m ²
Medical Centre		402 m ²
Residential (Stage 2)	1-bedroom	20 dwellings
	2-bedrooms	120 dwellings
	3-bedrooms	44 dwellings
Residential (Stage 3)	1-bedroom	30 dwellings
	2-bedrooms	74 dwellings
	3-bedrooms	23 dwellings
Residential (Stage 4)	1-bedroom	28 dwellings
	2-bedrooms	70 dwellings
	3-bedrooms	27 dwellings

4.2 Road Network and Vehicle Access

A new access is proposed via O'Connell Street to access the proposed Stage 2 and Stage 3 developments and multi-storey car park, excluding the proposed hotel.

The existing access off Neville Street located on the north-east side of the site is proposed to be retained (although moved west slightly). The Neville Street access is proposed to be used by the Hotel as well as by service vehicles to access the loading dock area.

Access to the Stage 3 residential development is proposed via Brenan Street located approximately 75 metres west of the Cumberland Highway/Brenan Street intersection. This access is proposed to be a left in/left out with right out only from the site to minimise any impacts on the adjacent state road operation. Vehicles coming from the east are anticipated

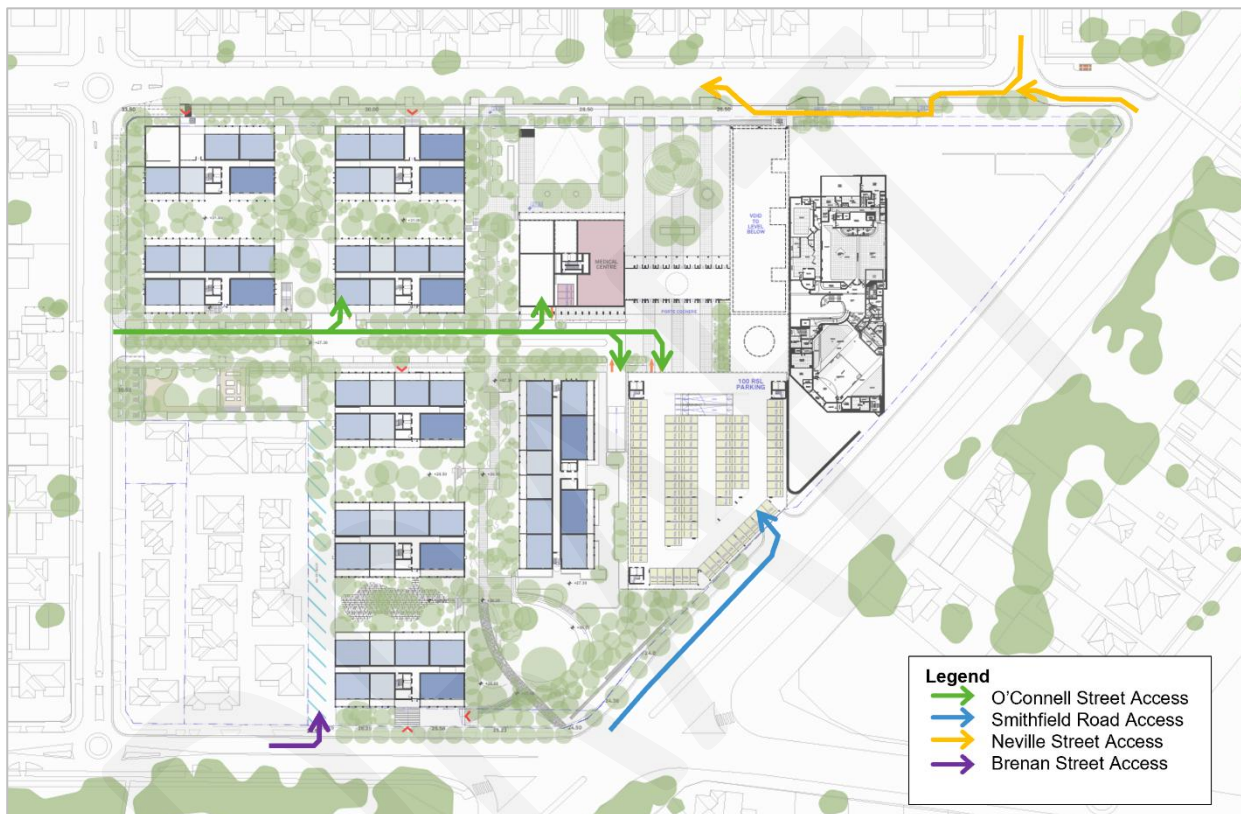
to travel west and make a U-turn from Brennan Street/O'Connell Street roundabout and turn left to access the proposed residential development.

The existing Cumberland Highway access is intended to be retained to provide access to a proposed multi-storey car park. This access is intended to be used by RSL club patrons only.

The proposed access arrangements for the development seeks to distribute traffic around the surrounding road network to minimise impact. These access arrangements are shown in Figure 4.3.

All internal roads and new access driveway on O'Connell Street will be designed in accordance with relevant guidelines and standards to accommodate the intended largest vehicle movements. The on-site car park layouts and circulation paths would be designed in accordance with the dimensional requirements as set out in the relevant Australian/New Zealand Standards (AS2890:1-6).

Figure 4.3 – Proposed Site Access Arrangements



Base Image Source: Benson McCormack Architects, dated 4 July 2025.

Overall, the planning proposal seeks to deliver logical and appropriate access arrangements and to ensure equitable distribution of traffic across the surrounding road network. With O'Connell Street and Cumberland Highway likely facilitating the most site-generated traffic, the internal separation of users and internal connections have been considered to ensure seamless vehicular access for proposed developments.

4.3 Car Parking

The proposal indicatively includes 1,424 on-site parking spaces for the various existing and potential future land uses. Table 4.2 includes a breakdown noting that it is intended for the club parking to be relocated to within a new multi-deck car park.

Table 4.2 – Proposed Parking Supply and Location

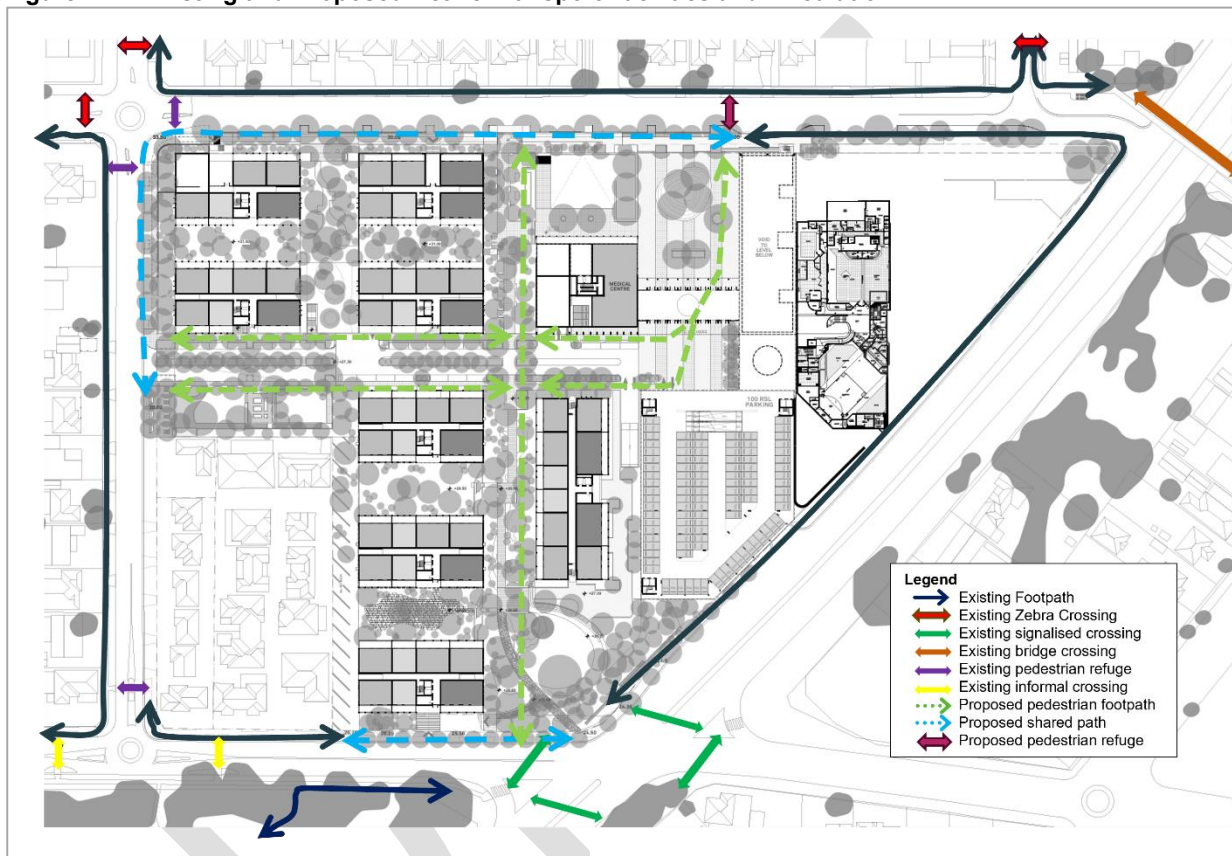
Land Use	Size (no. of spaces)
RSL Club	767 (including the existing 384 parking spaces)
Hotel	55
Medical Centre	10
Residential (Stage 2)	252
Residential (Stage 3)	170

Land Use	Size (no. of spaces)
Residential (Stage 4)	170
Total	1,424

4.4 Active Transport Facilities

The planning proposal considers extensive active transport connectivity throughout the site and utilises existing active transport links between the proposed access locations and the wider Smithfield community. As such, the proposal seeks to incorporate pedestrian footpaths, shared paths, and a new crossing that interacts with key existing linkages via the proposed site access locations. The existing and proposed active transport links within and in the vicinity of the site are illustrated in Figure 4.4.

Figure 4.4 – Existing and Proposed Active Transport Facilities and Circulation



Base Image Source: Benson McCormack Architects, dated 4 July 2025.

A shared path is proposed on the northern, western and southern sides of the proposed site, which connects with the existing surrounding pedestrian footpaths and crossing facilities. A new pedestrian refuge is also proposed on Neville Street located east of Janice Avenue and will provide pedestrian connectivity to access key destinations, including St Gertrude's Catholic Primary School and Smithfield Town Centre. Considering the current pedestrian demand and potential future pedestrian trip generation (as discussed in Section 6.3), a pedestrian (zebra) crossing warrant assessment is unlikely to meet at this location, as such a pedestrian refuge island is considered appropriate.

The proposed shared path on Brenan Street connects with the existing signalised pedestrian crossing at Brenan Street/Cumberland Highway intersection and provides access to the Brenan Park.

Overall, the proposal provides a good internal and external active transport linkage between the site and the surrounding existing active transport network. With the proposed active transport provision on Neville Street and relocating the existing RSL club parking, the proposal provides an opportunity to activate the Neville Street frontage with safe pedestrian connectivity with the Smithfield Town Centre, including schools and commercial/retail area.

4.5 Loading Areas and Waste Collection

The existing loading dock facilities as well as access to the loading dock area via Neville Street located on the north side of the existing RSL club are proposed to be retained. It is anticipated that the existing loading dock area and access are sufficient to accommodate the largest intended service vehicle movements.

Residential waste collection facilities are proposed internally. Access for waste collection trucks is proposed via O'Connell Street access. Further assessment of the loading dock area and service vehicle access, including swept path analysis will be undertaken as part of the future DA's to ensure all service area is designed in accordance with the relevant standards (AS2890:1-6).

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5. Parking Impact Appraisal

5.1 Car Parking

5.1.1 Car Parking Requirements

The car parking requirements for different development types are set out in DCP 2013. Table 5.1 sets out the minimum parking requirements for the proposed residential, hotel, medical centre and ancillary uses associated with the Concept Masterplan, with the following demand assumptions incorporated:

- **Hotel** – based on number of rooms, gross leasable area for bar/lounge/dining/function and office
- **Residential apartments** – based on the number of bedroom types provided in Table 4.1
- **Medical Centre** – based on number of consulting rooms/ staff.

Note: The information relating to the number of consulting rooms/ staff are not known at this stage. However, for the purpose of this parking calculation, it has been assumed that there are likely to be four consulting rooms.

Smithfield RSL Club – The Fairfield DCP 2013 does not provide any parking rate for a RSL club. In the absence of any parking rate, reference is made to the parking survey data discussed in Section 3.6.2 and previous approved parking provision for existing RSL club discussion in Section 5.1.2. It is important to note that the proposal would retain the existing Smithfield RSL club.

The parking requirements for the above proposed land uses are estimated based on the DCP 2013 and provided in Table 5.1.

Table 5.1 – Fairfield DCP 2013 Minimum Car Parking Requirements

Land Use	Size	Statutory Car Parking Rate	Minimum Car Parking Requirement	Concept Masterplan Parking Supply
RSL Club	9,056 m ²	-	390 (based on previous DA approval)	767
Hotel	168 rooms	1 space per 3 bedrooms accommodation	56	55
F&B / Convenience	367 m ²	1 space per 40m ² GLA	9	-
Medical Centre	402 m ² GFA (4 consulting rooms)	3 per consulting room or per health care staff, whichever is greater	12	10
Residential	436 dwellings	1-2 beds: 1 per apartment 3 or more beds: 1.5 per apartment 1 visitor space per 4 apartments	592 (483 residential parking, plus 109 visitors' parking)	592
		Total	1,059	1,424

Based on Table 5.1 the planning proposal is required to provide a minimum 1,059 parking spaces per DCP 2013. The proposed development seeks to increase onsite parking in particular for the RSL to ensure in any future event scenarios parking can be accommodated on site and not impact on street parking surrounding the site.

It should also be noted that the proposed land uses are indicative at this stage and will be finalized during the Development Application (DA) phase. It is anticipated that part of the RSL, F&B and medical centre components may be converted to ancillary uses (e.g., meeting rooms, flexible workspaces, dining, gym facilities) associated with the hotel, which are not expected to generate additional parking demand.

The Concept Masterplan has been designed with flexibility to accommodate additional parking spaces if required in the future. However, the proposal incorporates 365 parking spaces in surplus to the minimum requirements outlined above.

5.1.2 Adequacy of Parking Supply

Overall, the Concept Masterplan comprises 1,424 on-site parking spaces. These are intended to be spread across the site to appropriately accommodate parking where it is needed for both existing and proposed land uses, with future Development Applications to further confirm location, allocation and demand profiles for all land uses.

Table 5.1 provides an indicative breakdown of parking with each land use meeting or exceeding the minimum requirements, except for the proposed hotel and medical centre land use which have minor shortfalls of one and two



parking spaces respectively. It is to be noted that the hotel also includes bar/lounge/ dining area. This area is, however, considered to be ancillary as the RSL club also comprises of the same facilities. Therefore, the hotel's bar/lounge/ dining area is not anticipated to generate any additional trips and hence the parking supply is considered appropriate.

The overall proposed parking provision of 657 car parking spaces (excluding RSL club and ancillary land uses) satisfies the minimum parking requirement of 660 spaces (excluding RSL club and ancillary land uses) with minor shortfall of three car parking spaces. Additional parking spaces can be reallocated if required at the future Development Applications stage when a detailed parking demand and supply as well as allocation of parking spaces analysis will be undertaken.

With the historical DA approved 390 parking spaces translating to the current supply of 384 spaces, the existing club operates within the bounds of the approval. However, given the site is expected to host medium to large events in the future, allowance for up to 767 spaces would readily accommodate any such future peak demand from larger events without impacting on street parking.

Some on-street parking demand was observed on Justin Street and on Neville Street, especially during school drop off/pick up period. These parking demands at these times are associated with the adjacent school and not with this development.

As such, the proposed Concept Masterplan parking supply is considered appropriate having regard to existing and proposed land uses.

5.2 Accessible Parking

Regarding the accessible parking requirement, reference is made to Building Codes of Australia (BCA) which provides accessible parking rates for various types of buildings as shown below:

- RSL Club (Class 9) – 1 accessible parking space for every 100 car parking spaces or part thereof
- Residential/Hotel (Class 3) – 1 accessible parking space for each adaptable unit/accessible room
- Food & Beverage/ Convenience (Class 6) – 1 accessible parking for every 50 car parking spaces

Based on the above, the proposal requires the provision of eight accessible parking spaces for the RSL club and one accessible parking for the Food & Beverage/ Convenience area.

The accessible parking requirement for the residential and hotel is based on the number of adaptable units/accessible rooms, which are yet to be determined and is anticipated to be finalised as part of future Development Applications. Sufficient accessible parking spaces will be provided for the proposed residential and hotel once the number of adaptable/accessible unit are known. All accessible parking spaces will be designed in accordance with the relevant standards.

5.3 Bicycle Parking

The Fairfield Citywide DCP 2013 (Amendment 22) recommends providing sufficient bicycle facilities for any new developments to promote sustainable transport mode, however the DCP 2013 does not provide any bicycle parking rates for new developments. However, Fairfield City Centre DCP 2013 (Amendment 4) provides bicycle parking rates for different land use types as outlined in Table 5.2

Table 5.2 – Bicycle Parking Requirement

Land Use	Size	DCP Bicycle Parking Rate	Bicycle Parking Requirement
RSL Club*	9,056 m ²	1 space per 200m ² NFA**	39
Hotel*	168 rooms, 614 m ² bar/lounge/dining/function/office	1 per 25 m ² bar floor area for staff 1 per 25 m ² bar floor area for visitor	50 (25 staff plus 25 visitors)
F&B / Convenience	367 m ²	1 space per 300m ² GFA	2
Medical Centre*	402 m ²	1 per 400 m ² GFA for staff 1 per 200 m ² for visitor	5 (2 staff plus 3 visitor)
Residential	436 dwellings	1 space per 3 dwellings	146
Total			242

* Bike rate from Austroads Guide to Traffic Management Part 11: Parking.

** NFA=85% of GFA



Table 5.2 indicates that the planning proposal is required to provide a minimum 242 bicycle spaces, including 39 spaces for the RSL club, 146 spaces for residential and 57 spaces for the combined non-residential uses. It is to be noted that the DCP 2013 does not provide any bicycle parking requirements for a hotel, medical centre or an RSL club type land use. As such, bicycle parking rates provided in Austroads guidelines (Part 11: Parking) have been used to guide the bicycle parking requirements for these land uses.

DCP 2013 also includes requirements for non-residential land use end-of-trip facilities, inclusive of communal showers, changing facilities and lockers. These will be outlined in the subsequent staged Development Applications.

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6. Traffic Impact Assessment

6.1 Traffic Generation

Traffic generation rates for the proposed land uses have been sourced from the *TfNSW Guide to Traffic Generating Developments 2002* (the Guide) and *Technical Direction Updated Traffic Surveys* (TDT 2013/ 04a). In absence of any trip generations rates for any specific land uses, reference has been made to other available sources. The trip generation estimation and assumptions are discussed in detail below.

High-density residential apartments – The trip generation for the proposed high-density residential apartments are estimated based on the Sydney-based average trip generation rates for AM and PM peak hour provided in the *Technical Direction Updated Traffic Surveys* (TDT 2013/ 04a).

F&B facilities – Trip generation rates based on the TDT 2013/ 04a have been adopted. Given the proximity to the proposed high-density residential area, it is expected that a proportion of trips will be ancillary within the overall development. As such, for the purpose of this assessment, a 15 per cent reduction has been made.

Hotel – The trips for the proposed hotel land use are estimated based on the trip rates provided in the *TfNSW Guide to Traffic Generating Developments 2002* (the Guide). The Guide also recommends considering an 85 per cent occupancy on the peak day of the week. This has been adopted in this assessment.

Medical Centre – Reference is made to the Transport for NSW's *Traffic Generation Surveys for Medical Centres – Analysis Report* (by TEF Consulting, dated August 2015) to estimate the trip generation from the proposed medical centre. The traffic surveys were undertaken in 2015 for a total of 20 medical centres in New South Wales, including 14 centres from Sydney Greater Metropolitan Area. The Transport for NSW's *Traffic Generation Surveys for Medical Centres – Analysis Report* provides a detailed site analysis of all surveyed sites including the peak hour trip generation rates and is considered appropriate for estimating trip generation for the proposed medical centre. Considering the similarities of site characteristics (e.g., availability of dedicated parking spaces, adjacent road function, surrounding land uses etc.), the peak hour trip generation rate for Site 1, which is located on Military Road in Mosman, is considered appropriate to estimate proposed medical centre's trip generation.

Smithfield RSL Club - Transport for NSW's trip generation guides (the Guide and TDT 2013/04a) do not provide any trip generation rates for a RSL club and as such, the parking survey data has been used to derive peak hour trip generation rates for the club and is considered appropriate.

It is proposed to retain the existing RSL club with no changes to its current typical operation and gross floor area (GFA). The proposed multi-storey car parking area includes provision for 767 car parking spaces for the existing RSL club, including the relocation of the existing 384 parking spaces (except for the loading bays as discussed in Section 4.3).

The parking survey data indicates that the existing parking provision is adequate to cater for any day-to-day operation and any minor events on a Sunday as discussed in Section 3. As such, no change is anticipated regarding the trip generation from the existing RSL club based on its typical operation. However, given the additional number of parking spaces (as discussed above and also in Section 5.1), an additional scenario is considered for estimating trips generated from the club considering full parking supply during weekday.

The following two scenarios are considered to estimate the trips generated from the Smithfield RSL club:

- Scenario 1 - Typical weekday based on RSL club's existing parking provision: No change to the existing RSL club trips. Existing trips for the club obtained from the traffic and parking surveys have been redistributed to the proposed multi-storey car park access points based on the assumed distribution (discussed below).
- Scenario 2 - Typical weekday based on RSL club's proposed parking provision: additional trip generation is considered based on the proposed 767 parking spaces for the RSL club.

Based on the above, the estimated development traffic as well as the trip generation rates for various proposed land uses are provided in Table 6.1 and Table 6.2.

6.1.1 Scenario 1 – Typical weekday based on RSL club's existing parking provision

No additional trip generation is considered from the RSL club. The existing trips from the club have already been captured in the traffic and parking survey data. Trips associated with other proposed developments are based on the trip generation rates provided in the TfNSW Guidelines and are shown in Table 6.1. Therefore, AM peak trip generation rate is assumed to be 50 per cent of PM peak trip generation rate for F&B area.

Table 6.1 – Scenario 1 - Traffic Generation Estimates

Land Use	Size	Traffic Generation Rate (vehicle trips/hour)		Traffic Generation Estimate (vehicle trips/hour)	
		AM	PM	AM	PM
RSL Club	384 existing parking spaces (total 767 parking spaces)	No additional trip is considered from existing RSL club			
Hotel ^[1]	168 rooms	0.4/room	0.4/room	58	58
F&B / Convenience ^[2]	367 m ²	2.03/100sqm ^[3]	4.06/100sqm	7	13
Medical Centre ^[2]	402 m ²	5.8/100 sqm	5.8/100 sqm	20	20
Residential	436 dwellings	0.19/apt	0.15/apt	83	66
Total				168	157

^[1] – based on 85 per cent occupancy as per Transport for NSW's Guidelines

^[2] – assumed 15 per cent internal trips

^[3] - assumed 50 per cent of PM peak trip rate as AM peak trip rate

Table 6.1 indicates that the proposal could potentially generate around 182 vehicle trips in the AM peak and 168 trips in the PM peak.

6.1.2 Scenario 2 – Typical weekday based on RSL club's proposed parking provision

For the purpose of estimating the typical weekday trip generation rates for the Smithfield RSL club based on an event scenario with the proposed parking provision of 767 spaces, the parking survey data for a typical weekday (Thursday) is used. This also aligns with the modelled scenario to assess the performance of the surrounding road network and key intersections and is considered adequate for this traffic impact assessment.

As shown in Table 3.4, the peak parking demand for the RSL club during a typical weekday PM peak (Thursday between 7pm and 8pm) is 214 parking spaces. Conservatively assuming that each parked vehicle completes one trip during the peak and considering the existing total parking provision of 384 spaces, this represents a 0.557 trip rate per parking space ($214/384 = 0.557$ vehicular trips per parking space). The traffic survey data at the RSL club accesses has also been considered to estimate the trip generation rate. The traffic survey data shows that a total of 183 vehicles per hour accessed the club parking during PM peak hour. This results in a 0.48 trip rate per parking space ($184\text{vph}/384 \text{ parking spaces} = 0.48 \text{ trips per parking spaces per hour}$). Based on the above, a 0.557 trip rate has been adopted to estimate the total trips generated by the club and is conservative.

Given the peak times of club activities, the parking survey includes the PM peak period only (between 3pm and 8pm) and excludes the weekday AM peak.

The RSL club has also provided members and visitors profile for the following two weeks period covering the club operation (between 9am and 5am):

- Week 1 – between 15 May and 21 May 2023
- Week 2 – between 22 May and 28 May 2023.

Figure 6.1 to Figure 6.3 shows the analysis of the patron data (club members and visitors), which confirms high patron demand during the PM peak and low demand in the AM peak. It is to be noted that the hourly breakdown of visitor data is not available and as such, has not been included to understand the AM peak hour trip generation rate for the club. As shown in Figure 6.1 and Figure 6.2, the AM peak patronage demand (members only) typically represents 20 – 37 per cent of the PM peak patronage demand and as such, an average of 30 per cent is adopted as the AM to PM trip ratio to estimate the AM peak hour trip generation rate.

Figure 6.1 – Weekly Patronage Profile (Week 1 - between 15 May and 21 May 2023)

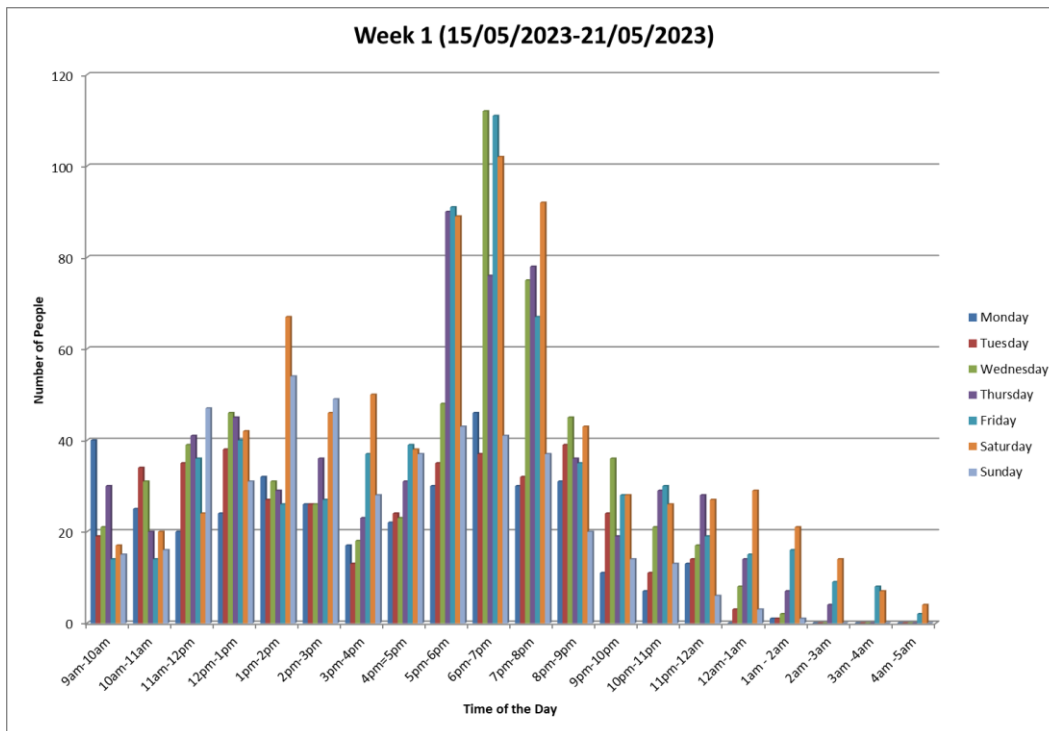


Figure 6.2 – Weekly Patronage Profile (Week 2 -between 22 May and 28 May 2023)

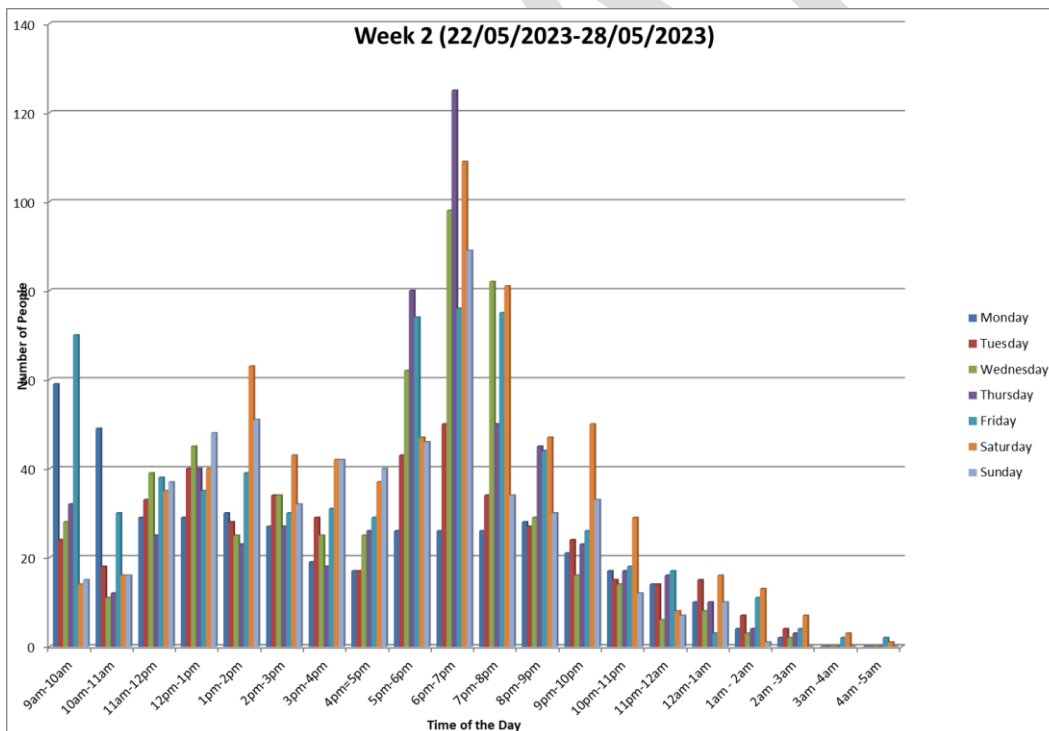
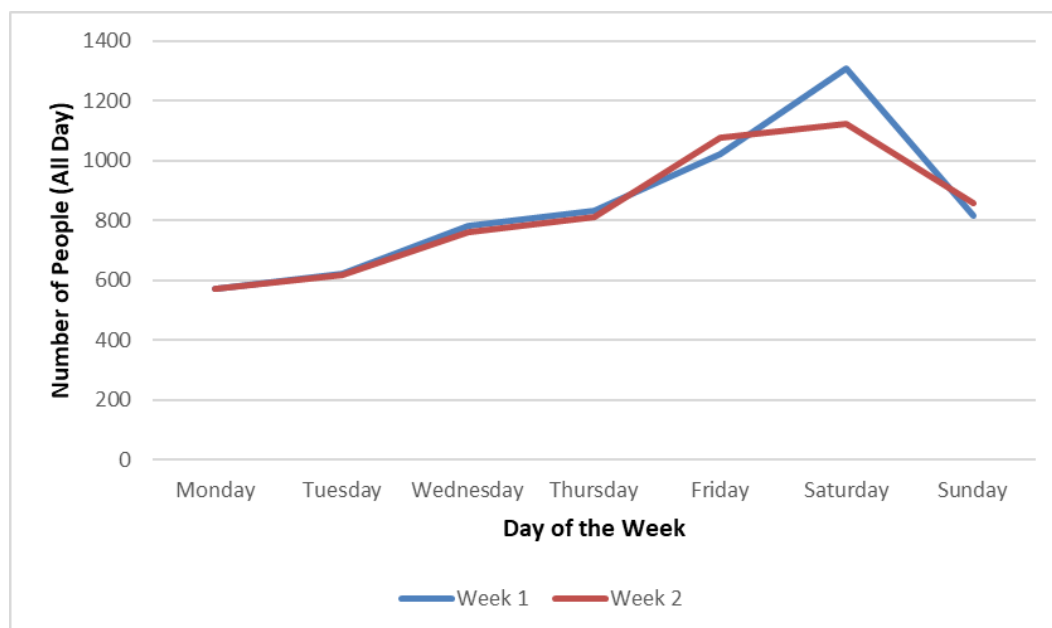


Figure 6.3 –Total Daily Patronage during Week 1 and Week 2



Based on the above, the following trip generation rates has been adopted to estimate the trip generation for the existing RSL club:

- AM peak: 0.185 trips per parking space per hour (30% of PM peak trip rate)
- PM peak: 0.557 trips per parking space per hour

As discussed above, the proposed parking provision of 767 spaces for the RSL club includes the relocation of the existing 384 spaces. As such, any trips associated the existing car parking area have already been captured in the traffic and parking survey data and have been assigned to the proposed multi-storey car park access points. Therefore, the additional 383 spaces will be considered to estimate the additional trips associated with the new parking provision.

Based on the above, estimates of peak hour traffic generation for the proposed uses are summarised in Table 6.2.

Table 6.2 – Scenario 2 - Traffic Generation Estimates

Land Use	Size	Traffic Generation Rate (vehicle trips/hour)		Traffic Generation Estimate (vehicle trips/hour)	
		AM	PM	AM	PM
RSL Club	383 new parking spaces (total 767 parking spaces)	0.185/1 parking space	0.557/1 parking spaces	71	213
Hotel ^[1]	168 rooms	0.4/room	0.4/room	58	58
F&B / Convenience ^[2]	367 m ²	2.03/100sqm ^[3]	4.06/100sqm	7	13
Medical Centre ^[2]	402 m ²	5.8/100 sqm	5.8/100 sqm	20	20
Residential	436 dwellings	0.19/apt	0.15/apt	83	66
Total				239	370

^[1] – based on 85 per cent occupancy as per Transport for NSW's Guidelines

^[2] - assumed 15 per cent internal trips

^[3] - assumed 50 per cent of PM peak trip rate as AM peak trip rate

Table 6.2 indicates that the proposal could potentially generate around 253 vehicle trips in the AM peak and 381 trips in the PM peak.

6.2 Distribution and Assignment

The directional distribution and assignment of traffic generated by the proposed development 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 residences in relation to the site
- configuration of access points to the site.

Having considered the above, the following directional distributions, based on the Journey-to-Work data sourced from the Australian Bureau of Statistics (ABS), have been assumed for each of the land uses:

- 17% from North
- 32% from South
- 16% from East
- 35% from West.

The assumed trip distribution and estimated trips for various proposed developments is provided in Appendix C.

6.3 Person-based Trip Generation

To understand the likely trips generated by the planning proposal induced by other modes of travel, the anticipated person trip rates have been sourced from the reference sites outlined in TDT 2013/04a. The person trip generation rates for the proposed land uses are sourced from taking the average of the surveyed developments across Sydney.

The anticipated person trip generation associated with the development is summarised in Table 6.3.

Table 6.3 – Peak Person Trip Generation Estimates

Land Use	Size	Person Trip Generation Rate		Person Trip Generation Estimate	
		AM	PM	AM	PM
Residential	436 units	0.66 person trips per unit	0.56 person trips per unit	288	245
Hotel ^[1]	168 units	0.66 person trips per unit	0.56 person trips per unit	111	95
F&B / Convenience ^[1]	367 m ² GLFA	3.57 person trips per 100m ² GLFA	7.46 person trips per 100m ² GLFA	14	28
Total				413	368

[1] Hotels are assumed to share similar characteristics to high-density residential in terms of person trip generation. Therefore, person trip rates for high-density residential are adopted for hotel land uses.

[2] Specialty Food & Beverages (F&B) GLFA is assumed to equate to 80 per cent GFA, or 313 sqm GLFA, in accordance with Small Suburban Shopping Centres Analysis report ("Analysis Report") prepared by Bitzios on behalf of Transport for NSW dated 7 November 2018.

It is to be noted that the TDT 2013/04a does not provide any person-based trip generation rates for an RSL club and as such, is not included in the person-based trip calculation. It is anticipated that due to the nature of the operation of the RSL club, all patrons would travel to/from the club by car which is already captured in the vehicular trip generation estimation as shown in Table 6.2.

Table 6.3 indicates that the planning proposal is expected to generate approximately 413 and 368 person trips in the AM and PM peak hours respectively. The Journey-to-work data has also been analysed to understand the mode share data for the proposed development and is presented in Table 6.4.

Table 6.4 – Trip Generation by Transport Mode

Travel Mode	Mode Split (%)	Person Trip Generation Estimate	
		AM	PM
Vehicle, as driver	85.21%	352	313
Vehicle, as passenger	5.63%	23	21
Train	3.17%	13	12
Bus	0%	0	0
Walking and cycling	3.88%	16	14
Others	2.11%	9	8
Total		413	368

As shown above, the development is anticipated to increase the active transport share on the surrounding road network by 17 and 15 person-trips per hour during AM and PM peak hours respectively. This is considered to be minor and anticipated to have no material impact on the surrounding road network operation.

6.4 Development Impacts

6.4.1 Future Scenarios

It is to be noted that the opening/completion year of the project is not known at this stage. As such, the future road network performance has been assessed for a 10-years' horizon year (2035) assuming the opening year has already been included in the assessment scenarios and also would provide a good understanding of future year (post-opening) road network performance. The models will be updated at future Development Application stages to include an opening year and future year road network performance when completion year of the proposed development is known.

To assess the future operation of the road network, modelling was conducted for the following scenarios:

- 10-year horizon (2035) without development traffic
- 10-year horizon (2035) with development traffic.
 - Scenario 1 – Typical weekday based on RSL club's existing parking provision
 - Scenario 2 – Typical weekday based on RSL club's proposed parking provision (potential event scenario)

Traffic Growth

To understand the annual traffic growth rate in the area, the STFM output data for the years 2021 and 2036 have been analysed. The STFM output data indicates that Smithfield Road/Cumberland Highway adjacent to the proposed site would experience an annual growth rate of one per cent between 2021 and 2036.

In this regard, reference is also made to the 'Fairfield City Future Traffic Model' study (prepared by GTA (now Stantec), dated 16 July 2021). The Fairfield City Model covers a wider area adjacent to the proposed site, including sections of Cumberland Highway and The Horsley Drive, and estimates the traffic growth based on the population and employment data for the area. Based on the analysis of the data, the future traffic growth is anticipated to be approximately 1.7% and 1.4% per annum in the AM and PM peak hours respectively. This is considered to be conservative and aligns with the Sydney-wide average growth rate of 1.5 per cent and is adopted for the future year traffic assessment. These growth rates have been applied to background traffic to understand future road network conditions.

10-year Horizon (2035) without Development Traffic

Table 6.5 provides an overview of intersection performance results for the surrounding key intersections for the future 10-year horizon (2035) for both AM and PM peak hours without the development traffic.

Table 6.5 – 10-Year Design Horizon (2035) without Development Traffic

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Cumberland Highway/ The Horsley Drive	AM	1.157	135.6	260	F
	PM	1.143	132.3	652.8	F
O'Connell Street/ Neville Street	AM	0.357	12.4	7	A
	PM	0.336	10.9	6.9	A
The Horsley Drive/ Justin Street	AM	0.85	24.4	111.2	B
	PM	0.685	35.8	173.5	C
Neville Street/ Justin Street	AM	0.149	5	1	A
	PM	0.087	4.4	0.3	A
Brenan Street/ O'Connell Street	AM	0.725	12.7	12.3	A
	PM	0.378	11.5	7.1	A
Cumberland Highway/ Brenan Street	AM	0.995	58.7	431	E
	PM	0.721	21.7	136.4	B

10-year Horizon (2035) with Development Traffic

Scenario 1 – Typical weekday based on RSL club's existing parking provision

Table 6.6 provides an overview of intersection performance results for the surrounding key intersections, including proposed site accesses for the future 10-year horizon (2035) for both AM and PM peak hours with the development traffic and based on existing parking provision for RSL club.

Table 6.6 – Scenario 1 - 10-Year Design Horizon with Development Traffic

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Cumberland Highway/ The Horsley Drive	AM	1.196	139.5	452.1	F
	PM	1.225	184	1062.8	F
O'Connell Street/ Neville Street	AM	0.422	12.7	18.6	A
	PM	0.378	11.1	20.1	A
The Horsley Drive/ Justin Street	AM	0.539	14.1	97.6	B
	PM	0.759	21.6	125.1	B
Neville Street/ Justin Street	AM	0.157	5.1	2.8	A
	PM	0.102	4.6	1.3	A
Brenan Street/ O'Connell Street	AM	0.814	17	113.5	B
	PM	0.515	12.7	25.4	A
Cumberland Highway/ Brenan Street	AM	1.162	138.2	1171.6	F
	PM	0.916	26.8	225.3	B
O'Connell Street/Site Access	AM	0.153	6.9	1.7	A
	PM	0.11	6.1	1.4	A
Brenan Street/Site Access	AM	0.305	11.3	0.7	A
	PM	0.241	8.8	0.1	A
Neville Street/Site Access	AM	0.19	6.8	1.7	A
	PM	0.115	6.2	1.3	A

Scenario 2 – Typical weekday based on RSL club's proposed parking provision

Table 6.7 provides an overview of intersection performance results for the surrounding key intersections, including proposed site accesses for the future 10-year horizon (2035) for PM peak hours with the development traffic and based on proposed parking provision for RSL club. Considering the nature of RSL club operation, it is anticipated that such scenario (Scenario 2) would only occur during PM peak hour when the club would host a large event during weekday. As such, weekday PM peak has been assessed for Scenario 2 and is considered appropriate.



Table 6.7 – Scenario 2 - 10-Year Design Horizon with Development Traffic

Intersection	Peak	Degree of Saturation (DOS)	Average Delay (sec)	95th Percentile Queue (m)	Level of Service (LOS)
Cumberland Highway/ The Horsley Drive	PM	1.228	166.7	1237.6	F
O'Connell Street/ Neville Street	PM	0.415	11.4	22.2	A
The Horsley Drive/ Justin Street	PM	0.885	28.8	190.4	C
Neville Street/ Justin Street	PM	0.109	4.7	1.6	A
Brenan Street/ O'Connell Street	PM	0.586	13.9	26.9	A
Cumberland Highway/ Brenan Street	PM	0.939	23.1	224.5	B
O'Connell Street/Site Access	PM	0.135	6.3	2.7	A
Brenan Street/Site Access	PM	0.246	9.1	0.1	A
Neville Street/Site Access	PM	0.122	6.2	1.3	A

As shown in Table 6.5 and Table 6.7, all local road study area intersections would operate at LOS C or better both with and without development traffic in the plus 10-year future scenario.

The Cumberland Highway signalised intersections would operate at LOS F with significant queuing and DOS above one during both weekday peak hours. This intersection is performing similarly when compared to the 'without' development scenario with only some additional delay associated with the planning proposal.

As discussed above, Scenario 2 represents a potential event case scenario which is not expected to impact the AM peak period with events typically occurring later in the day and/ or on weekends. As such, AM peak hour has not been included.

Site Access Layout

O'Connell Street Access

Access via O'Connell Street is proposed to be a priority-controlled intersection with all movements permitted to/from the site. The indicative intersection layout is shown in Figure 6.4.

Figure 6.4 – Indicative O'Connell Street Access Layout



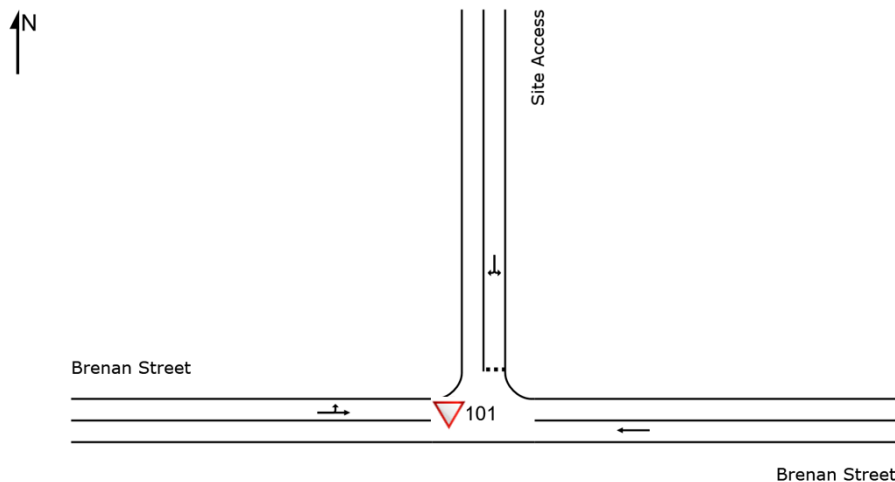
As discussed in section 6.2, the trip distribution assumptions assigned 35% of the traffic for RSL to be generated to and from the west. With the intersection controls in place at the surrounding road network (e.g. No right turn into the site from Smithfield Rd), the O'Connell Rd access is predicted to provide accessibility for majority (68%) of the trips generated by the proposed development in the future. The intersection modelling results presented in Table 6.7 indicate that the proposed access intersection would perform satisfactorily with the development traffic in the AM and PM peak hours. The access will be designed in accordance with the relevant Australian/New Zealand standards to accommodate the largest service vehicle movements.

Brenan Street Access

Brenan Street access is proposed to be a priority-controlled intersection with left-in/left-out and right-out movements only. Right in from Brenan Street into the site is not allowed to avoid any impacts on the adjacent Brenan Street/Smithfield Road signalised intersection.

Indicative layout of the proposed site access is shown in Figure 6.5.

Figure 6.5 – Indicative Brenan Street Access Layout



The proposed Brenan Street access is performing well with development traffic in the AM and PM peak hours. It is to be noted that approximately 110-metre-long queues are observed on the Brenan Street west approach in the AM and PM peak hours in future 10-year horizon scenarios which may impact the Brenan Street access. Mitigation measures to minimise such queue lengths are discussed in the following section of the report.

Smithfield Road/ Cumberland Highway Access

The existing access to the proposed multi-storied car park via Smithfield Road is proposed to be retained. One entry boom gate and two exit boom gates are proposed as shown in Figure 6.6. As mentioned above, vehicular trips associated with the RSL club are anticipated to use this access.

Figure 6.6 – Indicative Smithfield Road Access Layout



Source: Benson McCormack Architects, dated 4 July 2025.

Queuing analysis at this access has been undertaken to understand any impacts on the adjacent Smithfield Road/ Cumberland Highway operation. In this regard, the maximum capacity of the proposed multi-storey car park is considered for undertaking the queuing analysis and is conservative given that the existing parking survey results indicate the actual demand for RSL club is low.

The following assumptions are made for the queuing analysis:

- Maximum theoretical capacity – 85 percent of the total 767 parking i.e. 652
- Vehicular trips at the access – 32 percent (as per the assumed trip distribution) of 647 spaces i.e. 209 vehicular trips per hour
- Boom gate average service time – 10 seconds

Based on the above, approximately five vehicles could queue as a worst-case scenario considering maximum theoretical capacity of the proposed multi-storey car park.

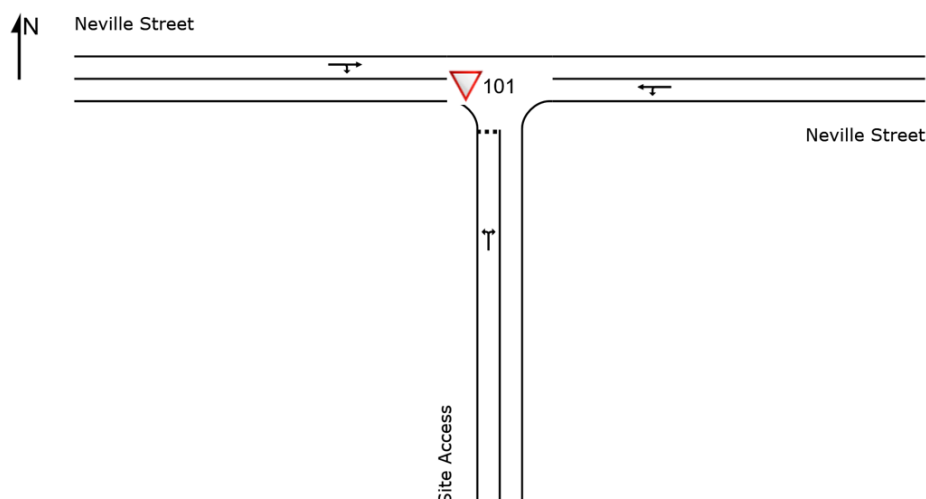
The proposal is to provide approximately 60 metres of storage length or spaces for approximately 10 vehicles (assuming six-metre vehicle length). As such, the proposal can accommodate the potential queuing within the proposed storage length and is anticipated to have no impact on Smithfield Road. However, it is important to note that the above queuing analysis considers the worst-case scenario and assumes the proposed car parking operating at capacity which is very unlikely to occur during a typical club operation and event scenarios (based on the parking survey). As such, the proposed Smithfield Road access is anticipated to perform satisfactorily.

Neville Street Access

The existing service vehicle access off Neville Street located on the western side of Justin Street is proposed to be retained to provide access to the existing loading dock area. Swept path analysis will be undertaken at future DA stage to accommodate the largest service vehicle access to the loading dock.

The existing RSL car parking access located just on the western side of the loading dock access is also proposed to be retained to provide access for the proposed hotel. An indicative layout of hotel access is shown in Figure 6.7.

Figure 6.7 – Indicative Neville Street Access Layout



6.4.2 Comparison Development Traffic with Background Traffic

Further to the above, it is important to understand the proportional effects associated with site-generated traffic on the operation of the study intersections. A summary of the proportional increase at key intersections surrounding the site is provided in Table 6.8 for future year 2035. The development traffic volume for Scenario 1 (typical RSL club operation during weekday peaks) is used to estimate the development traffic proportion in comparison with the future total intersection volume (background plus development).

Table 6.8 – Summary of Traffic Volumes through Key Study Intersections

Intersection	Peak	Future (2035) background traffic volumes with dev.	Development traffic volumes	Percentage of dev. traffic contribution
Cumberland Highway/ The Horsley Drive	AM	5956	47	0.8%
	PM	6453	69	1.1%
O'Connell Street/ Neville Street	AM	1194	312	35.3%
	PM	891	266	42.4%
The Horsley Drive/ Justin Street	AM	1882	55	3.0%
	PM	1854	66	3.7%
Neville Street/ Justin Street	AM	513	55	11.9%
	PM	365	66	22.0%
Brenan Street/ O'Connell Street	AM	1183	120	11.3%
	PM	1002	167	20.0%
Cumberland Highway/ Brenan Street	AM	4931	60	1.2%
	PM	5147	103	2%

As shown in Table 6.8, the planning proposal would present a variable traffic impact on the surrounding road network. As expected, the proportional effect on the local road surrounding intersections is notable however the associated impacts are minor due to spare capacity and existing good level of intersection operation.

In contrast, the proportional effects on the Cumberland Highway intersections are low and in order of one to two per cent in the post-development plus 10-year design horizon scenarios. This represents a minor increase in overall traffic volumes through the intersections. The percentages of development traffic at the Cumberland Highway/Brenan Street intersection are also low.

The future (2033) mid-block traffic volume data for Neville Street, O'Connell Street and Brenan Street have been assessed and is summarised in Table 6.9. As shown, the proportion of development traffic at Neville Street and Brenan Street are lower when compared to the development traffic proportion at the key intersections located on these roads. O'Connell Street, being the key site access road, has significant development traffic proportion. As shown below, the surrounding road network and key local intersections are anticipated to have spare capacity to accommodate such increase of traffic volume due to the proposed development.

Table 6.9 – Summary of Mid-block Traffic Volume through Mid-block of Surrounding Key Local Roads

Road	Peak	Traffic Volume in 10 Years with Development		Developmental Impact (%)
Neville Street	AM	556	55	11%
	PM	419	73	21%
O'Connell Street	AM	524	93	22%
	PM	392	134	52%
Brenan Street	AM	1054	60	6%
	PM	884	84	11%

6.5 Potential Mitigation Measures

The Cumberland Highway/ The Horsley Drive intersection formed part of the TfNSW Urban Road Pinch Point Program due to historical queues and delays. This matter was also raised by the community as part of community consultation, as included in Appendix E. With the Cumberland Highway and The Horsley Drive both being state roads, improving their mid-block capacity and intersection operation would trigger a network-wide study. It is understood that such studies have not been commissioned by TfNSW with no confirmation of future intent to complete.

In addition, the following mitigation measures may be considered as part of any such study:

- Implementing 'No Stopping' on The Horsley Drive west approach to the Cumberland Highway during PM peak hour
- Extending the Brenan Street 'no parking' zones to cover 60 metres on the east and west approaches to the Cumberland Highway.

Such measures would have a moderate impact on the overall operation of each of the Cumberland Highway intersections during the PM peak hour. In both instances, the average delay decreases by 15 to 20 seconds, queues by 70 to 100 metres and with no change to the level of service. The degree of saturation similarly marginally improves. Based on the discussion and feedback received from the Council, it is understood that these on-street parking spaces, especially along the Horsley Drive are critical for the local business. Any intervention to such parking provision may have detrimental impacts to local business. Such details could form part of future stakeholder engagement, and subject to any such future Transport for NSW road network studies.

7. Conclusion

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

- The planning proposal seeks to amend FLEP 2013 to rezone the entire site as follows:
 - Uplift from R3 to R4 to the west.
 - The zoning for the RSL site, to the east, remains unchanged at RE2, however it is identified as a Key Site, in which the additional permitted uses of 'hotel or motel accommodation' would be allowed without the GFA limitation to make this a viable part of the masterplan. The RE2 site area is also reduced by almost 25% to allow for an optimised residential development in the R4 zone.
- The proposal would provide a range of different land uses, including high density residential apartments (436 units), hotel (168 rooms), food & beverage / convenience (367 sqm), medical centre (402 sqm) as well as a multi-storey car park with 767 parking spaces for the RSL club. The existing RSL club is proposed to be retained with no change to the existing RSL club's operation and gross floor area (GFA), however may hold larger events in the future and hence the increase in parking provision.
- Parking survey data indicates that the peak parking demand for the existing RSL club (Saturday evening) is typically within the limit of the existing parking supply (384 spaces).
- The planning proposal is required to provide a minimum total of 1,059 parking spaces based on the DCP 2013 parking rates and previous approved DA for existing Smithfield RSL club.
- The proposed provision of 1,424 parking spaces satisfies the overall parking requirements for the proposal and provisions for future event scenarios.
- The bar/lounge/dining/function area proposed within the hotel is anticipated to be mainly ancillary to the hotel. As such, no/minimal parking demand is anticipated for the bar/lounge/dining/function area. On this basis, the proposed provision of 55 parking spaces for hotel is considered appropriate.
- All proposed site accesses (via O'Connell Street, Neville Street and Brenan Street), including the internal site road on O'Connell Street would be designed in accordance with relevant guidelines and standards. The on-site car park layouts and circulation paths would be designed in accordance with the dimensional requirements as set out in the relevant Australian Standards.
- The proposed shared path along the site boundary on Neville Street, O'Connell Street and Brenan Street as well as the proposed pedestrian refuge on Neville Street adjacent to Janice Avenue are anticipated to provide a safe and continuous active transport connection to the wider area, including Smithfield town centre and surrounding schools.
- All proposed parking layouts and circulation paths would be designed consistent with the dimensional requirements as set out in the Australian Standard for Off Street Car Parking (AS/NZS2890.1:2004 and AS/NZS2890.6:2009).
- A total of 242 bicycle parking spaces are required, including 39 spaces for the RSL club, 146 spaces for the residential land uses, and 57 spaces for the combined non-residential uses (hotel, f&b/ convenience, medical centre). The quantum of bicycle parking facilities across the various precincts would form part of future Development Applications.
- Loading docks for use by the club and proposed hotel would be provided in the north-east section of the site with dedicated access via Neville Street. Residential loading would occur on-site with access via the potential site access on O'Connell Street. All internal roads and driveways would be designed to accommodate the largest design vehicle.
- In the absence of any trip generation rates for a RSL club in Transport for NSW's Guidelines, parking survey data as well as club's patron data has been used to estimate the trip generation rates for the existing Smithfield RSL club. Two scenarios are considered to estimate the total trip generation from the existing RSL club, namely Scenario 1 (based on RSL club's existing parking provision) and Scenario 2 (based on the RSL club's proposed parking provision to consider future potential event scenario).
- In Scenario 1, the planning proposal is expected to generate up to about 168 and 157 vehicle trips in the weekday AM and PM peak hours respectively. In Scenario 2, about 239 and 370 vehicle trips are expected to be generated in the weekday AM and PM peak hours respectively.
- Modelling of the study intersections indicates that all local road intersections are operating well and similarly both with and without development traffic. Each of these intersections would continue to operate at level of service C or better with the degree of saturation indicating spare capacity and minor associated queuing on each approach.
- The Cumberland Highway study intersections at Horsley Drive and Brenan Street shows queuing and delay under existing conditions. The planning proposal, while showing some change, would not materially change the overall intersection operation.



- The 'Fairfield City Future Traffic Model' applies an annual future year growth rate of 1.7 and 1.4 per cent during AM and PM peak hours respectively, with this similarly applied to future year modelling to ensure consistency and robust approach. Such growth rates also align with the Sydney average growth rate of 1.5 per cent and represent the local traffic growth and development patterns.
- The Cumberland Highway study intersections would operate at LOS F with and without development in future years. This is associated with the applied high growth rates and through traffic on the state road network.
- The proportional contribution of development traffic to the Cumberland Highway intersections is low and around one to two per cent in future 2035 scenarios. The proportional effect on the local roads is notable and associated impacts minor due to spare capacity and existing good level of intersection operation.
- The Cumberland Highway/ The Horsley Drive intersection formed part of the Transport for NSW Urban Road Pinch Point Program due to historical queues and delays with any such improvements to the state road network beyond the scope of the potential development in isolation. Such network-wide studies, in addition to a review of the applied annual growth rates, are understood to not be in planning.
- Minor mitigation measures such as the timed extension of 'no parking' restrictions on approaches to the Cumberland Highway study intersections could be considered as part of any such future assessments. Such measures show a moderate and manageable impact on intersection operation, with both average delay and queuing decreasing and degree of saturation improving. The degree of saturation similarly marginally improves. Based on the discussion and feedback received from the Council, it is understood that these on-street parking spaces, especially along the Horsley Drive is critical for the local business. Any intervention to such parking provision may have detrimental impacts to local business. Such details could form part of future stakeholder engagement and are subject to potential future Transport for NSW road network studies.
- Overall, the planning proposal contemplates a manageable and practical Concept Masterplan that includes a range of land uses in various precincts across the site. The site access arrangements, on-site parking and manageable traffic impacts align with broader planning and can be supported and transport grounds.

Appendix A. Survey Results

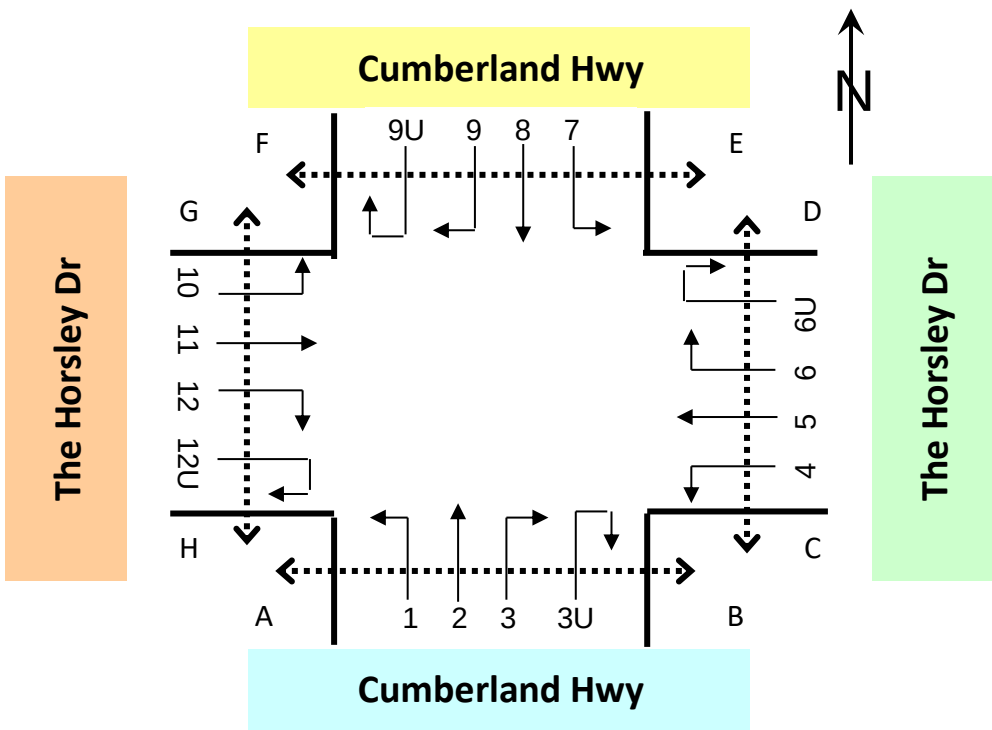
DRAFT



Job No. : AUNSW6016
Client : Stantec Australia Pty Ltd
Suburb : Smithfield
Location : 1. Cumberland Hwy & The Horsley Dr

Day/Date : Thursday, 9th March 2023
Weather : Fine
Description : Classified Intersection Count

: Peak Hour Summary



AM

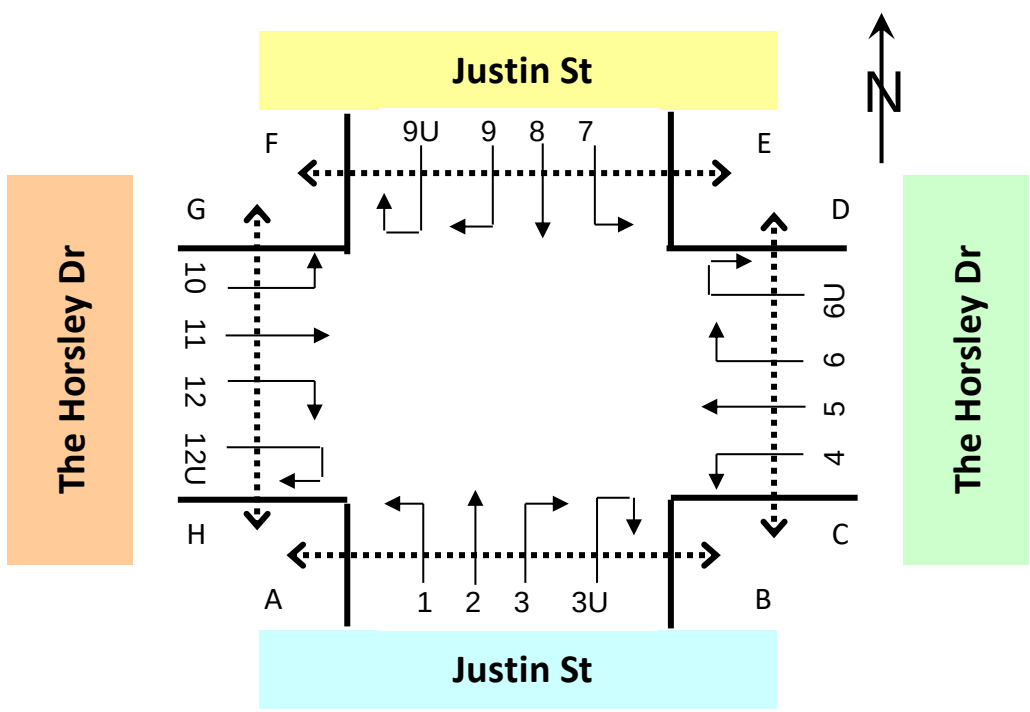
PM

Approach	Cumberland Hwy			The Horsley Dr			Cumberland Hwy			The Horsley Dr			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:15 to 8:15	1,903	137	2,040	731	112	843	1,458	264	1,722	502	48	550	5,155
16:00 to 17:00	1,377	89	1,466	571	84	655	2,811	162	2,973	420	17	437	5,531

Approach	Cumberland Hwy			The Horsley Dr			Cumberland Hwy			The Horsley Dr			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00 to 8:00	1,937	156	2,093	728	104	832	1,358	245	1,603	482	44	526	5,054
7:15 to 8:15	1,903	137	2,040	731	112	843	1,458	264	1,722	502	48	550	5,155
7:30 to 8:30	1,801	123	1,924	729	112	841	1,468	265	1,733	522	48	570	5,068
7:45 to 8:45	1,770	129	1,899	729	117	846	1,469	254	1,723	513	49	562	5,030
8:00 to 9:00	1,642	127	1,769	766	123	889	1,415	258	1,673	549	49	598	4,929
8:15 to 9:15	1,672	144	1,816	732	120	852	1,318	249	1,567	539	43	582	4,817
8:30 to 9:30	1,584	176	1,760	702	127	829	1,251	255	1,506	520	45	565	4,660
8:45 to 9:45	1,463	187	1,650	657	125	782	1,281	284	1,565	503	38	541	4,538
9:00 to 10:00	1,399	189	1,588	601	127	728	1,192	286	1,478	478	37	515	4,309
AM Totals	4,978	472	5,450	2,095	354	2,449	3,965	789	4,754	1,509	130	1,639	14,292
15:00 to 16:00	1,232	91	1,323	543	81	624	2,725	216	2,941	442	18	460	5,348
15:15 to 16:15	1,347	91	1,438	560	90	650	2,727	194	2,921	437	18	455	5,464
15:30 to 16:30	1,372	94	1,466	567	89	656	2,758	178	2,936	436	15	451	5,509
15:45 to 16:45	1,363	85	1,448	575	89	664	2,770	167	2,937	439	20	459	5,508
16:00 to 17:00	1,377	89	1,466	571	84	655	2,811	162	2,973	420	17	437	5,531
16:15 to 17:15	1,280	73	1,353	604	85	689	2,734	146	2,880	463	17	480	5,402
16:30 to 17:30	1,222	60	1,282	633	78	711	2,871	131	3,002	452	16	468	5,463
16:45 to 17:45	1,177	61	1,238	663	78	741	2,795	129	2,924	475	11	486	5,389
17:00 to 18:00	1,157	57	1,214	704	76	780	2,703	115	2,818	486	10	496	5,308
PM Totals	3,766	237	4,003	1,818	241	2,059	8,239	493	8,732	1,348	45	1,393	16,187

Job No. : AUNSW6016
Client : Stantec Australia Pty Ltd
Suburb : Smithfield
Location : 3. The Horsley Dr & Justin St

Day/Date : Thursday, 2nd March 2023
Weather : Fine
Description : Classified Intersection Count
: Peak Hour Summary



AM

PM

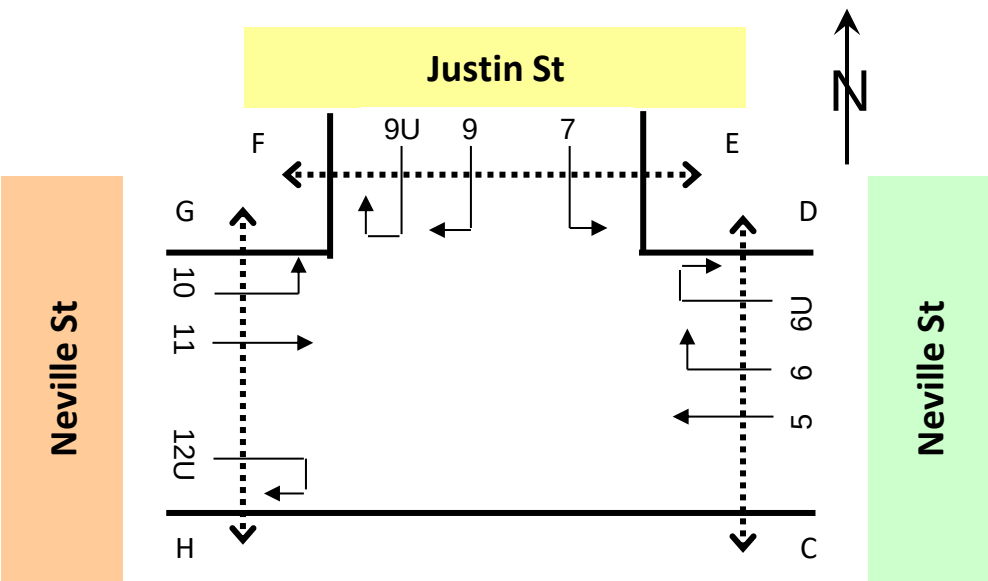
Approach		Justin St			The Horsley Dr			Justin St			The Horsley Dr			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
8:00	to 9:00	94	3	97	740	25	765	73	5	78	530	35	565	1,505
15:15	to 16:15	107	2	109	724	36	760	172	4	176	456	22	478	1,523

Approach		Justin St			The Horsley Dr			Justin St			The Horsley Dr			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00	to 8:00	46	2	48	626	39	665	26	9	35	520	40	560	1,308
7:15	to 8:15	48	3	51	657	41	698	27	9	36	535	36	571	1,356
7:30	to 8:30	60	3	63	684	33	717	44	8	52	541	35	576	1,408
7:45	to 8:45	70	5	75	701	25	726	60	8	68	541	39	580	1,449
8:00	to 9:00	94	3	97	740	25	765	73	5	78	530	35	565	1,505
8:15	to 9:15	96	2	98	748	18	766	87	4	91	513	36	549	1,504
8:30	to 9:30	90	2	92	706	24	730	76	5	81	467	33	500	1,403
8:45	to 9:45	72	0	72	668	29	697	68	2	70	474	32	506	1,345
9:00	to 10:00	47	1	48	583	38	621	69	4	73	475	35	510	1,252
AM Totals		187	6	193	1,949	102	2,051	168	18	186	1,525	110	1,635	4,065
15:00	to 16:00	119	2	121	710	42	752	149	4	153	457	19	476	1,502
15:15	to 16:15	107	2	109	724	36	760	172	4	176	456	22	478	1,523
15:30	to 16:30	64	2	66	707	41	748	187	5	192	470	25	495	1,501
15:45	to 16:45	50	1	51	713	36	749	174	5	179	508	20	528	1,507
16:00	to 17:00	41	0	41	701	33	734	169	3	172	528	17	545	1,492
16:15	to 17:15	42	0	42	691	30	721	148	3	151	528	15	543	1,457
16:30	to 17:30	41	1	42	702	29	731	138	3	141	534	14	548	1,462
16:45	to 17:45	39	1	40	733	28	761	135	2	137	533	16	549	1,487
17:00	to 18:00	43	1	44	738	26	764	123	3	126	524	12	536	1,470
PM Totals		203	3	206	2,149	101	2,250	441	10	451	1,509	48	1,557	4,464

Job No. : AUNSW6016
Client : Stantec Australia Pty Ltd
Suburb : Smithfield
Location : 4. Neville St & Justin St

Day/Date : Thursday, 2nd March 2023
Weather : Fine
Description : Classified Intersection Count

: Peak Hour Summary



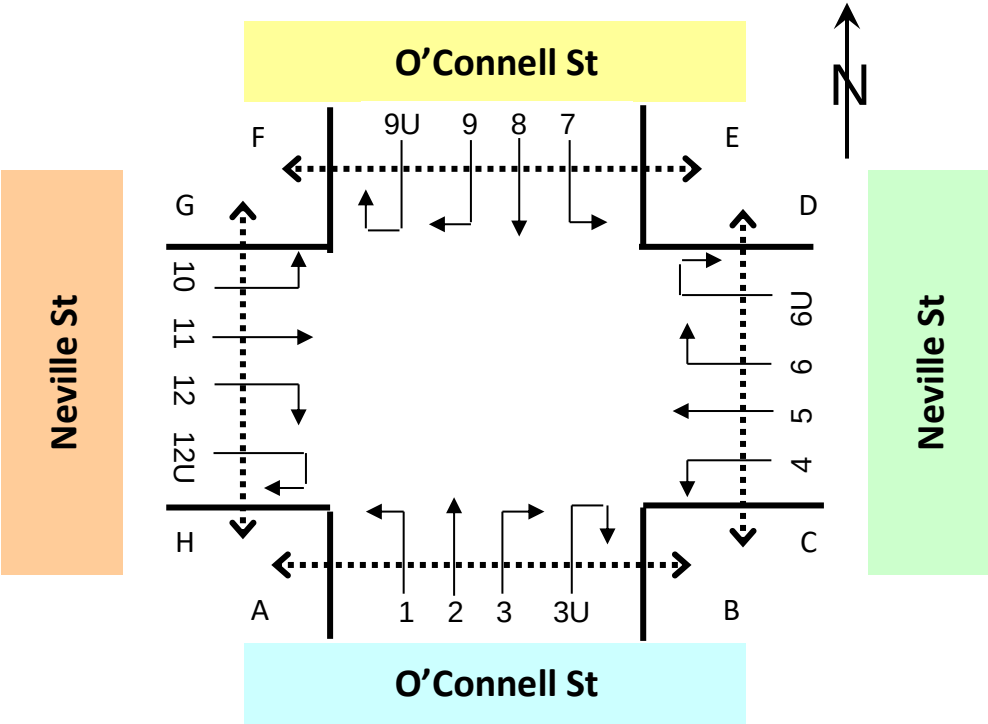
Approach		Neville St			Justin St			Neville St			Grand Total
		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM 8:00 to 9:00		71	2	73	218	4	222	80	1	81	376
PM 15:00 to 16:00		38	0	38	129	6	135	106	2	108	281

Approach		Neville St			Justin St			Neville St			Grand Total
		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00 to 8:00		32	2	34	23	1	24	24	2	26	84
7:15 to 8:15		47	3	50	37	2	39	31	2	33	122
7:30 to 8:30		49	2	51	83	2	85	48	2	50	186
7:45 to 8:45		65	3	68	145	3	148	62	3	65	281
8:00 to 9:00		71	2	73	218	4	222	80	1	81	376
8:15 to 9:15		61	1	62	216	3	219	84	1	85	366
8:30 to 9:30		53	1	54	178	2	180	77	1	78	312
8:45 to 9:45		35	0	35	117	1	118	59	0	59	212
9:00 to 10:00		17	0	17	45	1	46	42	1	43	106
AM Totals		120	4	124	286	6	292	146	4	150	566
15:00 to 16:00		38	0	38	129	6	135	106	2	108	281
15:15 to 16:15		30	0	30	124	5	129	93	2	95	254
15:30 to 16:30		18	0	18	91	3	94	60	2	62	174
15:45 to 16:45		11	0	11	85	1	86	47	1	48	145
16:00 to 17:00		12	0	12	83	0	83	32	0	32	127
16:15 to 17:15		8	0	8	75	1	76	33	0	33	117
16:30 to 17:30		8	1	9	85	2	87	33	1	34	130
16:45 to 17:45		6	1	7	83	2	85	32	1	33	125
17:00 to 18:00		7	1	8	82	3	85	35	1	36	129
PM Totals		57	1	58	294	9	303	173	3	176	537

Job No. : AUNSW6016
Client : Stantec Australia Pty Ltd
Suburb : Smithfield
Location : 5. Neville St & O’Connell St

Day/Date : Thursday, 2nd March 2023
Weather : Fine
Description : Classified Intersection Count

: Peak Hour Summary



AM

PM

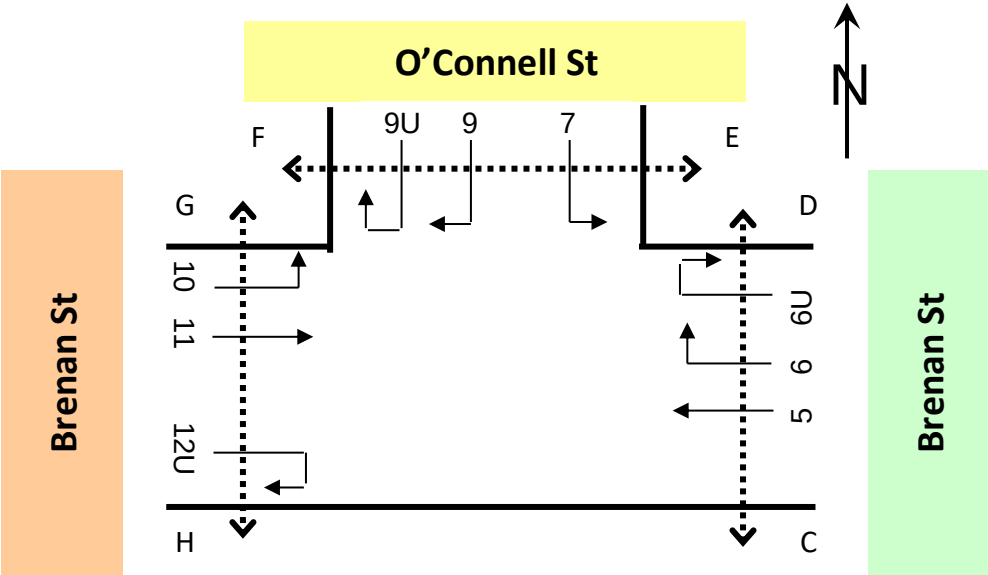
Approach	O’Connell St			Neville St			O’Connell St			Neville St			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
8:15 to 9:15	179	1	180	265	5	270	124	3	127	208	4	212	789
15:00 to 16:00	118	3	121	296	7	303	125	2	127	121	1	122	673

Approach	O’Connell St			Neville St			O’Connell St			Neville St			Grand Total
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00 to 8:00	99	6	105	25	3	28	22	0	22	34	1	35	190
7:15 to 8:15	114	4	118	36	3	39	27	1	28	51	1	52	237
7:30 to 8:30	122	1	123	67	2	69	42	2	44	70	4	74	310
7:45 to 8:45	148	1	149	141	5	146	65	2	67	115	5	120	482
8:00 to 9:00	181	1	182	243	6	249	105	2	107	181	4	185	723
8:15 to 9:15	179	1	180	265	5	270	124	3	127	208	4	212	789
8:30 to 9:30	171	2	173	244	4	248	122	2	124	202	1	203	748
8:45 to 9:45	137	3	140	187	1	188	106	3	109	153	0	153	590
9:00 to 10:00	86	2	88	96	1	97	70	4	74	82	1	83	342
AM Totals	366	9	375	364	10	374	197	6	203	297	6	303	1,255
15:00 to 16:00	118	3	121	296	7	303	125	2	127	121	1	122	673
15:15 to 16:15	81	5	86	285	6	291	90	3	93	61	1	62	532
15:30 to 16:30	65	5	70	151	4	155	86	1	87	37	2	39	351
15:45 to 16:45	73	4	77	124	2	126	76	2	78	36	2	38	319
16:00 to 17:00	78	3	81	122	1	123	88	3	91	27	3	30	325
16:15 to 17:15	83	1	84	110	1	111	90	2	92	26	3	29	316
16:30 to 17:30	91	2	93	123	3	126	76	2	78	29	2	31	328
16:45 to 17:45	89	2	91	114	3	117	78	1	79	33	1	34	321
17:00 to 18:00	86	2	88	109	4	113	73	2	75	35	0	35	311
PM Totals	282	8	290	527	12	539	286	7	293	183	4	187	1,309

Job No. : AUNSW6016
Client : Stantec Australia Pty Ltd
Suburb : Smithfield
Location : 6. O'Connell St & Brennan St

Day/Date : Thursday, 2nd March 2023
Weather : Fine
Description : Classified Intersection Count

: Peak Hour Summary



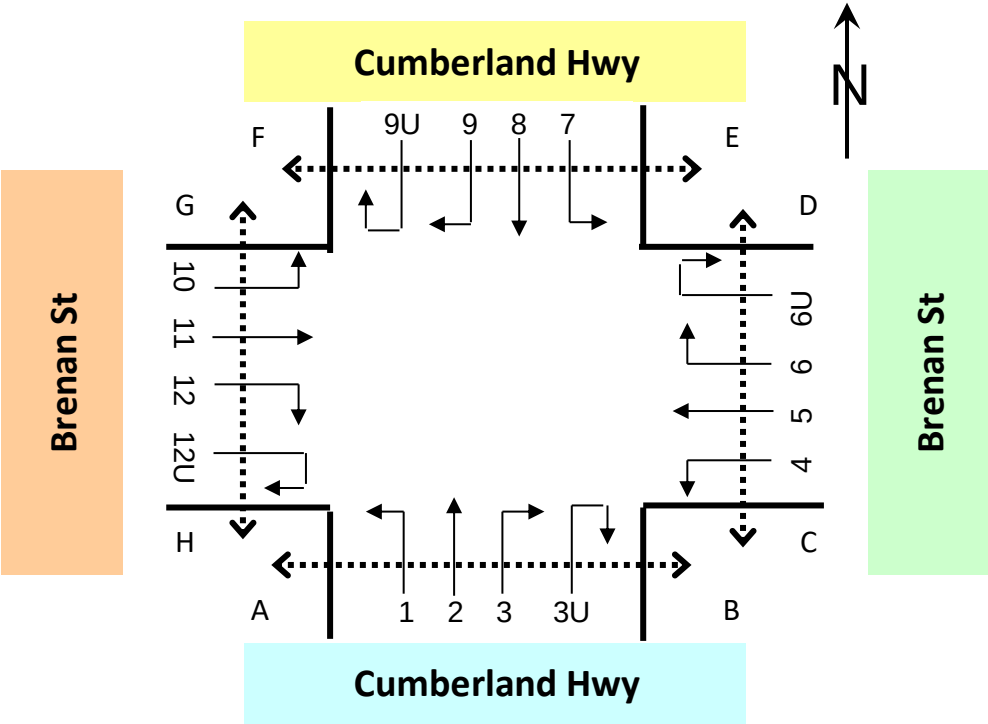
Approach		Brenan St			O'Connell St			Brenan St			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
AM 8:15 to 9:15		408	11	419	201	2	203	266	7	273	
PM 15:00 to 16:00		351	10	361	161	3	164	264	13	277	802

Approach		Brenan St			O'Connell St			Brenan St			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00 to 8:00		271	17	288	29	2	31	150	5	155	474
7:15 to 8:15		304	16	320	32	1	33	176	6	182	535
7:30 to 8:30		331	11	342	49	1	50	197	5	202	594
7:45 to 8:45		379	10	389	84	1	85	225	6	231	705
8:00 to 9:00		431	11	442	155	1	156	267	7	274	872
8:15 to 9:15		408	11	419	201	2	203	266	7	273	895
8:30 to 9:30		394	10	404	197	1	198	263	5	268	870
8:45 to 9:45		325	12	337	164	2	166	240	5	245	748
9:00 to 10:00		233	10	243	108	2	110	200	4	204	557
AM Totals		935	38	973	292	5	297	617	16	633	1,903
15:00 to 16:00		351	10	361	161	3	164	264	13	277	802
15:15 to 16:15		329	11	340	135	3	138	219	14	233	711
15:30 to 16:30		353	13	366	119	2	121	208	10	218	705
15:45 to 16:45		377	12	389	105	3	108	213	8	221	718
16:00 to 17:00		408	10	418	116	3	119	209	7	216	753
16:15 to 17:15		422	10	432	111	3	114	233	3	236	782
16:30 to 17:30		428	9	437	105	4	109	221	2	223	769
16:45 to 17:45		438	6	444	105	3	108	204	2	206	758
17:00 to 18:00		417	7	424	108	5	113	198	4	202	739
PM Totals		1,176	27	1,203	385	11	396	671	24	695	2,294

Job No. : AUNSW6016
Client : Stantec Australia Pty Ltd
Suburb : Smithfield
Location : 7. Cumberland Hwy & Brennan St

Day/Date : Thursday, 2nd March 2023
Weather : Fine
Description : Classified Intersection Count

: Peak Hour Summary



AM

PM

Approach		Cumberland Hwy			Brenan St			Cumberland Hwy			Brenan St			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
8:00	to 9:00	1,923	148	2,071	358	10	368	1,097	134	1,231	356	8	364	4,034
15:15	to 16:15	1,451	107	1,558	323	8	331	1,943	121	2,064	341	13	354	4,307

Approach		Cumberland Hwy			Brenan St			Cumberland Hwy			Brenan St			Grand Total
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:00	to 8:00	2,151	162	2,313	183	12	195	1,068	121	1,189	175	7	182	3,879
7:15	to 8:15	2,133	146	2,279	211	13	224	1,136	119	1,255	201	9	210	3,968
7:30	to 8:30	2,091	140	2,231	246	8	254	1,119	137	1,256	221	7	228	3,969
7:45	to 8:45	1,973	146	2,119	323	8	331	1,092	131	1,223	283	9	292	3,965
8:00	to 9:00	1,923	148	2,071	358	10	368	1,097	134	1,231	356	8	364	4,034
8:15	to 9:15	1,756	152	1,908	357	9	366	1,018	122	1,140	415	9	424	3,838
8:30	to 9:30	1,611	172	1,783	347	9	356	1,009	118	1,127	414	7	421	3,687
8:45	to 9:45	1,516	184	1,700	277	10	287	1,003	136	1,139	372	6	378	3,504
9:00	to 10:00	1,346	178	1,524	217	7	224	956	138	1,094	308	6	314	3,156
AM Totals		5,420	488	5,908	758	29	787	3,121	393	3,514	839	21	860	11,069
15:00	to 16:00	1,400	97	1,497	339	7	346	1,809	123	1,932	391	13	404	4,179
15:15	to 16:15	1,451	107	1,558	323	8	331	1,943	121	2,064	341	13	354	4,307
15:30	to 16:30	1,442	100	1,542	350	11	361	1,926	111	2,037	324	10	334	4,274
15:45	to 16:45	1,377	89	1,466	362	11	373	1,982	118	2,100	284	9	293	4,232
16:00	to 17:00	1,369	96	1,465	397	10	407	1,901	116	2,017	306	9	315	4,204
16:15	to 17:15	1,311	81	1,392	410	9	419	1,926	109	2,035	320	6	326	4,172
16:30	to 17:30	1,275	77	1,352	418	8	426	1,926	90	2,016	298	6	304	4,098
16:45	to 17:45	1,372	80	1,452	418	4	422	1,933	77	2,010	282	5	287	4,171
17:00	to 18:00	1,370	60	1,430	403	5	408	1,942	62	2,004	270	6	276	4,118
PM Totals		4,139	253	4,392	1,139	22	1,161	5,652	301	5,953	967	28	995	12,501

Appendix B. Stakeholder's Consultation

DRAFT



Khan, Bayzid

From: James Hall <James.HALL@transport.nsw.gov.au>
Sent: Monday, April 3, 2023 7:16 PM
To: Khan, Bayzid
Cc: Jennifer Chen
Subject: FW: Request for pre-planning proposal meeting - Planning Proposal for Mixed Use Developments at Smithfield RSL Site (Fairfield LGA)
Attachments: SIDRA methodology

Hi Bayzid,

Hope you have been well.

I am temporarily helping out Strategic Land Use and have been asked to review your email below and forward a response on behalf of Jennifer Chen who is currently on leave.

TfNSW has reviewed your proposed transport assessment methodology below and is of the view that the methodology is sound and provides the following suggested advice for your consideration in the development of the study:

- Prior to undertaking the traffic modelling, traffic generation rates for each specific land use should be agreed with TfNSW.
- STFM data can be provided subject to Stantec signing a standard 'Access Agreement'. It should also be noted that a fee may be payable for the provision of this data.
- As you would appreciate, TfNSW is of the view that consistent with the current practice of minimising vehicular access to Highways as much as possible, the existing vehicular access on Cumberland Highway should only be retained for the RSL Club. All vehicular access to the new proposed land uses should be via the local road network.
- SIDRA models should be networked (where required) and back of queues observed to ensure models appropriately calibrated.

Happy to discuss further if required.

Regards,

James Hall

Senior Land Use Planner
Land Use Assessment Eastern
Greater Sydney
Transport for NSW

M 0418 962 609 **E** james.hall@transport.nsw.gov.au

transport.nsw.gov.au

27-31 Argyle Street
Parramatta NSW 2150

From: Khan, Bayzid <Bayzid.Khan@stantec.com>

Sent: Wednesday, 8 March 2023 9:09 AM

To: Development Sydney <Development.Sydney@transport.nsw.gov.au>

Cc: Hazell, Rhys <rhys.hazell@stantec.com>; Wayne Camenzuli <wayne@innovacapital.com.au>; 'Glenn McCormack' <glennm@bensonmccormack.com>

Subject: Request for pre-planning proposal meeting - Planning Proposal for Mixed Use Developments at Smithfield RSL Site (Fairfield LGA)

You don't often get email from bayzid.khan@stantec.com. [Learn why this is important](#)

CAUTION: This email is sent from an external source. Do not click any links or open attachments unless you recognise the sender and know the content is safe.

Hi,

We are currently working on a transport assessment to support a Planning Proposal for a mixed-use development at Smithfield RSL site. The site is bounded by Cumberland Highway to the east, Neville Street to the north, O'Connell Street to the west and Brennan Street to the south as shown in the figure below.



The site is currently zoned as 'R3 – Medium Density Residential' and 'RE2 – Private Recreation' under the Fairfield Local Environmental Plan (FLEP) 2013.

The proposed development yields (to be confirmed at later stage) are as follows:

Existing RSL Club (retain) – 7,732.5 m²

Hotel - 216 rooms

Seniors - 146 dwelling units

Residential - 203 dwelling units

Retail - 676.4 m²

Commercial/Medical - 3928 m²

Child Care - 114 Children

Based on the above, the proposed development is expected to generate approx. 309 veh/hr during AM peak and 392 veh/hr during PM peak (excluding existing RSL club).

The main access to the proposed site would be via O'Connell Street with internal connectivity to various proposed developments. The existing access to the RSL club via Neville Street and to car park (south of RSL Club) via Cumberland Highway would be retained.

Our transport assessment will include following intersections to be assessed in SIDRA during weekday AM/PM peaks:.

- Cumberland Highway/ The Horsley Drive
- The Horsley Drive/ Justin Street
- Neville Street/ Justin Street
- Neville Street/ O'Connell Street
- O'Connell Street/ Brenan Street
- Cumberland Highway/ Brenan Street

In addition, we are also conducting a parking survey of the existing RSL parking area to understand current parking demand for the club.

We are proposing to estimate the future growth rate of the area based on STFM link volume data for various horizon years.

We would like to engage with TfNSW at early stage to initiate communication protocol regarding the PP and to understand:

- TfNSW's initial view of the proposed mixed-use development at Smithfield RSL site and especially in regard to surrounding road network, including Cumberland Highway
- TfNSW's agreement of the proposed scope, including proposed intersections for SIDRA modelling
- Any proposed/committed road/transport infrastructure upgrades in the vicinity of the site
- Any proposed/committed developments in the vicinity of the site
- Communication protocol with TfNSW's AAI team for STFM volume data to estimate future growth rates
- Communication protocol with any other TfNSW's team regarding the proposal

We would like to arrange a meeting with TfNSW's concerned officer to discuss the above. Please let us know your availability and we will send a Microsoft Teams meeting invite to book the time and date in your calendar.

Please feel free to contact me for any clarification.

Regards,

Bayzid Khan

Principal Transportation Engineer

Direct: +61 2 8484 7195

Bayzid.Khan@stantec.com

Stantec Australia
Level 9, The Forum, 203 Pacific Highway
St Leonards NSW 2065



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SMITHFIELD RSL SITE

Planning Proposal - Scoping Stage

TRAFFIC MANAGEMENT COMMENTS

1. Modelling

- Traffic modelling relies on a minimal traffic survey. No indication on whether this is a weekday or weekend period.
- Given the scale of the proposal, site location, surrounding land uses (including schools) further traffic surveys need to be undertaken to provide an accurate understanding of existing traffic conditions in the area and implications these have for the proposal and surrounding road network.
- The additional surveys should cover a school day with normal conditions during the week (avoiding Monday and Friday) and a day on the weekend. Hours during weekday should cover peak period including school hours of operation. 6am-10am and 2:30pm-7pm weekday.
- The parking survey should cover an event day at RSL when it is peak period at the club for restaurants etc.
- Noted that TfNSW support SIDRA modelling rather utilising Council's Eastern Area Mesoscopic Model prepared in 2021. Council is seeking confirmation from TfNSW on appropriate approach for traffic modelling.
- Applicant should also liaise further with TfNSW prior to final submission of Planning Proposal.

2. Site Access

- Proposed primary site access on O'Connell St generates a lot of pressure local streets and adjoining residential properties.
- Road safety issues and traffic noise impacts on Street and residential properties need to be addressed/managed.
- Email from TfNSW refers to retaining access to the Cumberland Hwy only for the RSL Club. Further clarification required on how this relates to the expansion plans and capacity modelling included in the Club's proposal.
- Child Care/Seniors entry/exit on Brennan Street may need to be left in/out (impact of right turners into site on Brennan Street through traffic across Cumberland Highway (Smithfield Road) – more analysis needed here to protect capacity of Brennan Street heading west (if need access link to driveway to O'Connell Street).
- With the two primary schools in close proximity, Justin/Neville/O'Connell Streets are very busy before and after school – may need to consider pedestrian crossing facilities in O'Connell Street, from Brennan to The Horsley Drive, as part of the proposal (given the additional traffic pushed onto O'Connell Street).
- Little discussion on servicing access/capacity provided – apartments/seniors will require truck access (removalists/waste) and leaving at rear of club not appropriate (and the retail/commercial spaces need to be serviced).
- The Club should note that waste storage/collection considerations will affect future DAs – EPA requirement that FOGO be in place by 2030.

SMITHFIELD RSL SITE

Planning Proposal - Scoping Stage

3. Pedestrian Movements

- No assessment of increased pedestrian activity locally – drawing hotel/senior/apartments north to shops or south to Brenan Park – this may impact TCS operation significantly at some locations/times (persistent call for ped phase).
- Pedestrian entries and their location would need to be confirmed – Janice Avenue has night time No Stopping restrictions due to poor behaviour of patrons leaving the club late at night (noise). With the revised design, this can be reviewed – along with external parking restrictions.
- Pedestrian movement to schools/residents and businesses currently occurs from Brenan Street/ Park via O'Connell Street to Neville Street, Justin Street and The Horsley Drive the applicant needs to consider the impact the development will have on pedestrian access/crossing at existing roundabouts and traffic signals (when the pedestrian call button pressed) and possibly how this can be managed /addressed.

4. Car Parking

- The suggestion of removing parking in The Horsley Drive to improve capacity is not supported – business parking needed – widening is not an option (shops too expensive to acquire and relocate) – longer term improvement is deviating The Horsley Drive onto the end of Victoria Street and downgrading role THD plays across Cumberland Highway – beyond the capacity or requirement of this proposal.
- Further clarification required on car parking arrangements, appears lack of visitor parking for the Seniors component (but would tend to use the Club visitor parking)
- The numbers for the childcare centre are off – 1 per 10 for 114 children = 12 spaces + staff (assume 1 staff per 10 kids = another 12 spaces) – more than identified (note the ratio of staff to kids varies and if under 2's then ratio much higher – this may need to be resolved as part of a future DA and more detail).
- Comments included about Seniors SEPP and parking requirements – minimum requirement less than what has been proposed – need to ensure parking rates are able to be maintained at the level proposed and not reduced in the future when a DA is lodged.
- Identifying staff parking as part of the numbers would be useful – this helps confirm the centralised parking number for visitors to the site (seniors, club, non-guest hotel trips and retail/commercial clientele). Council estimates this at 443 spaces for the centralised component.

In reply please quote: 20/01787

Contact: Patrick Warren on 9725 0215

04 October 2023

Mr Wayne Camenzuli
PO Box 370
CRONULLA NSW 2230

Dear Wayne

SMITHFIELD RSL PLANNING PROPOSAL – TRAFFIC IMPACT ASSESSMENT AND MODELLING

This letter relates to matters associated with the major planning proposal being prepared for the Smithfield RSL Site and traffic issues as discussed at the recent meeting with Council officers on 23 September 2023. The issues raised below must be addressed prior to formally lodging the planning proposal on the NSW Planning Portal.

1. Traffic surveys

In Councils traffic comments forwarded to the applicant in July 2023, it was requested additional traffic surveys be undertaken by Stantec including, 2.30pm to 7pm weekdays. Stantec has indicated that an additional survey was undertaken from 3pm to 6pm on a weekday in August.

Council requests that an additional survey day be undertaken to cover the hours 2.30pm to 7pm on a school day with normal conditions during the week (avoiding Mondays and Fridays).

2. Queuing and Intersection Performance

The SIDRA output tables in Stantec's Traffic Impact Assessment Dated June 2023 show lengthy queues in the post development scenario at the following intersection approaches:

- West approach of the Brenan Street/ Smithfield Road Signalised intersection.
- West approach of the Brenan Street/ O'Connell Street intersection
- North Approach on the O'Connell Street/Brenan Street intersection
- South-West approach on the Smithfield Road/Brenan Street intersection
- East approach on the Smithfield Road/Brenan Street intersection.

The SIDRA modelling also predicts a decrease in the Level of Service (LOS) at the above intersections in the post development scenario. In order for the planning proposal to be supportable on traffic grounds, the above queue lengths and drops in LOS at these key intersections must be addressed further in the traffic impact assessment by the applicant.

Further to this the SIDRA modelling appears to treat the proposed O'Connell street access as a residential driveway. This access should be modelled as an intersection as the residential, commercial and hotel component are proposed to access the site at this location onto a proposed internal estate road and internal car parks.

3. Pedestrian Access & Movement

Detailed clarification is required on the proposed pedestrian access arrangements for the full scope of redevelopment incorporated under the Planning Proposal. This includes information on how pedestrians and active transport users will access and move through the site safely. In particular, these details need to be provided for key crossing points on local roads within vicinity of the site at O'Connell Street, Neville Street, Justin Street and Brenan Street.

4. Vehicle Access & Site Circulation

The traffic impact assessment shows the Cumberland highway access will be used for the existing club only and not the other proposed land uses. This is based on feedback from TfNSW.

The Report shows traffic for the residential, hotel and commercial component will enter and exit the site via the proposed O'Connell street access. Council requests more information demonstrating how site vehicle access and internal traffic circulation and associated parking for the different proposed land uses will be managed.

Further to this, it is Councils preferred position is that the proposed hotel ingress and egress be from Cumberland highway. The applicant is to undertake further consultation with TfNSW to assess access options at the Cumberland highway, including how this can be made more efficient for the club and hotel.

5. Trip Distribution

A percentage breakdown of the trip distribution should be provided for the proposal so that Council can understand where club patrons, residents and hotel guests will be travelling to and from. This should be provided for the AM and PM peak periods for a weekday and weekend.

6. Pedestrian movement

Stantec is to provide clarification on the modelled pedestrian movements at the surrounding signalised intersections. A default value of 50 movements has been modelled for the AM and PM peak periods in the pre and post development scenario.

Council needs an understanding of how this could be the case given that the development would provide a greater number of pedestrian movements at these locations. In addition, Council needs an understanding of how pedestrian movements at the roundabout intersections at Brenan/O'Connell streets and Brenan/ Neville Streets can be assessed within the Traffic Impact Assessment.

The above issues will need to be addressed in the traffic impact assessment and associated modelling for the proposal. Should you need any further clarification regarding the above please do not hesitate to contact the undersigned on 9725 0215.

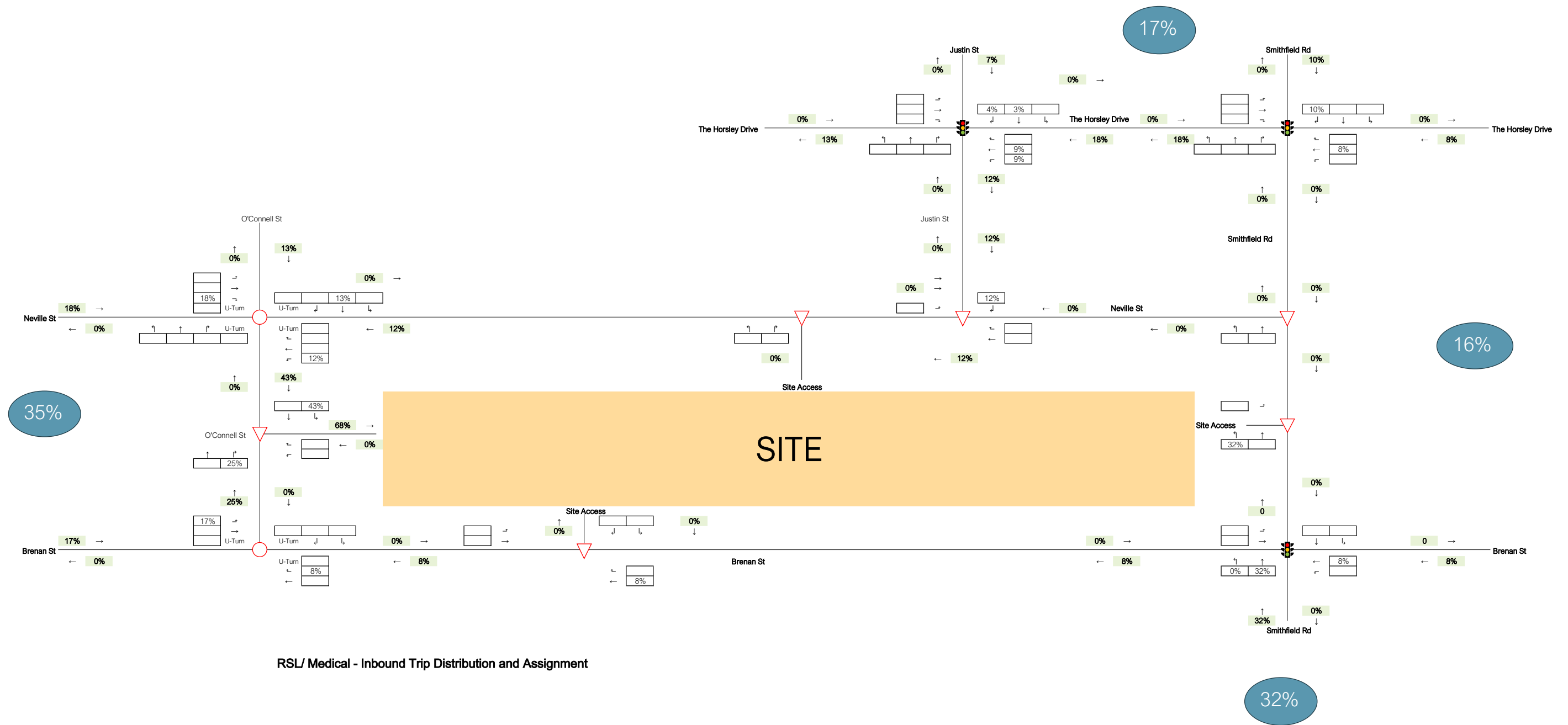


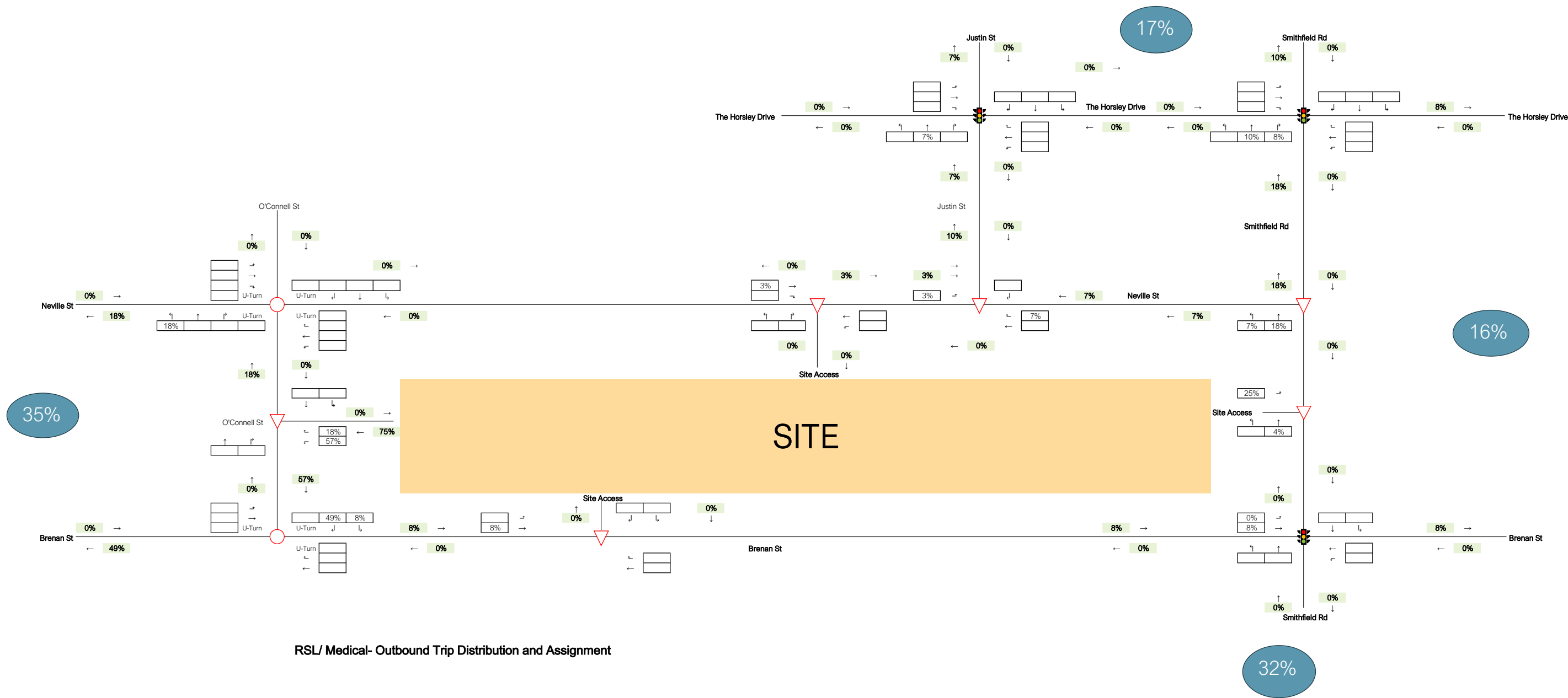
Patrick Warren
SENIOR STRATEGIC LANDUSE PLANNER

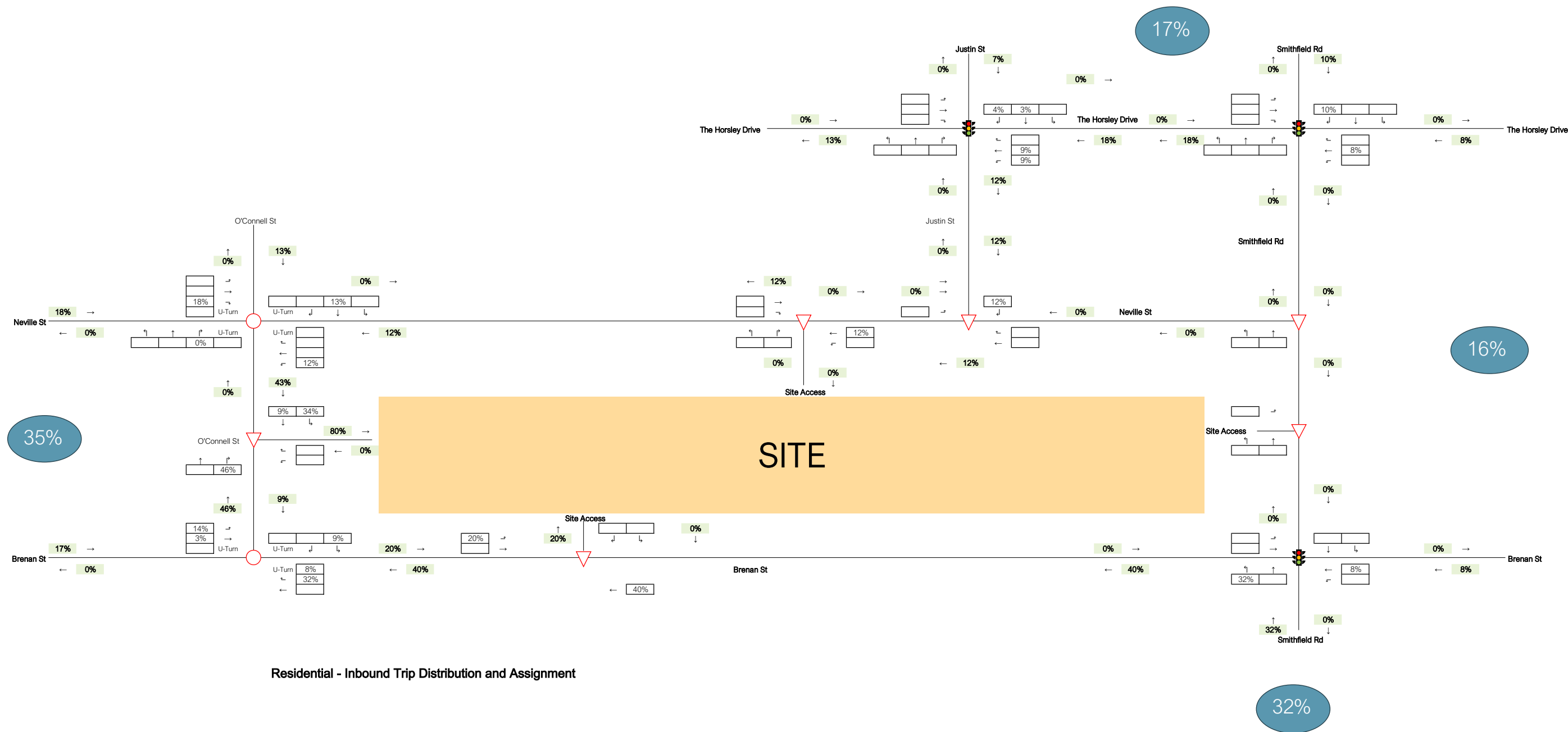
Appendix C. Trip Distribution and Assignment

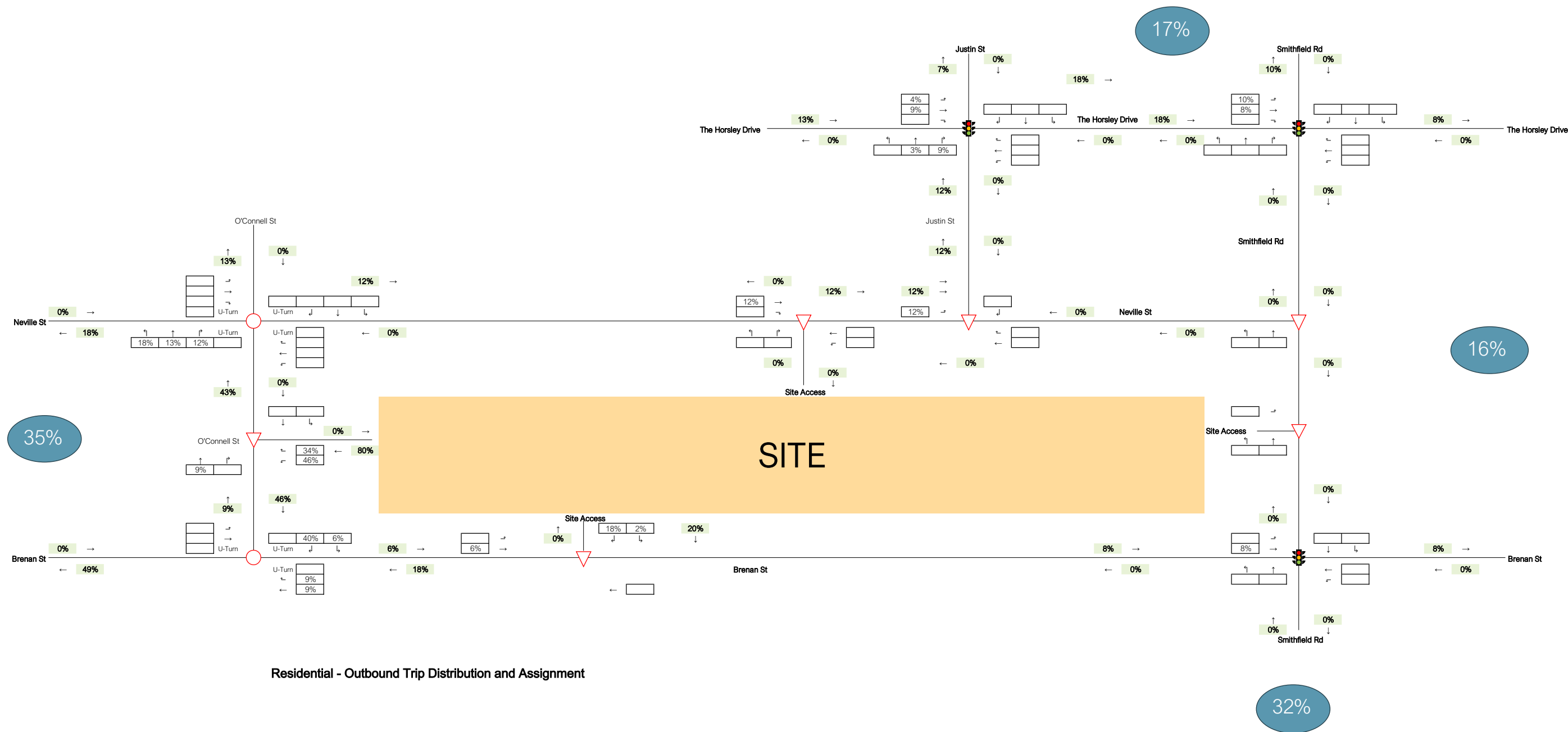
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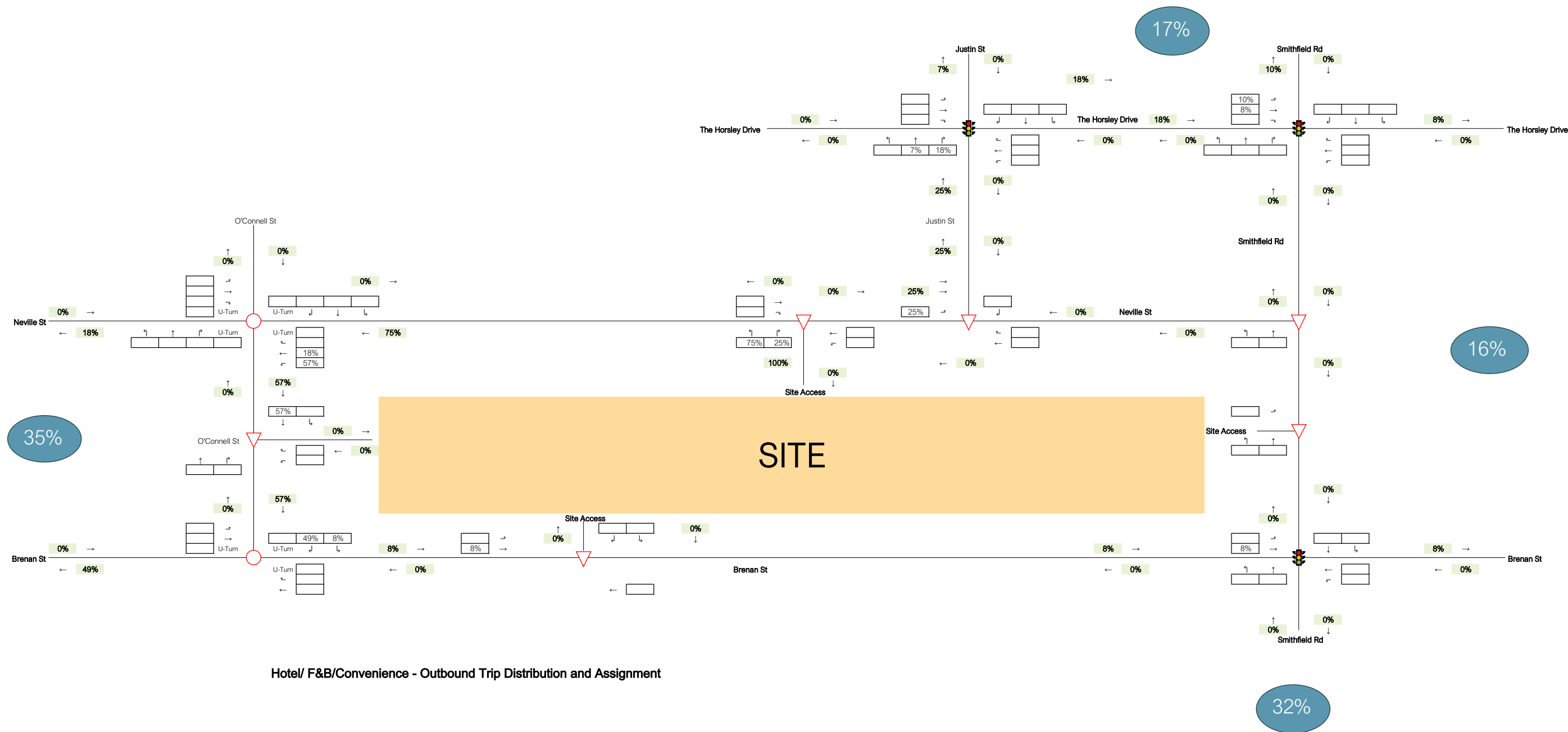












Appendix D. SIDRA Outputs

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USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 4 [4. Neville Street/Justin Street_2023_AM (Site Folder: 2023_AM)]

 Network: 1 [2023_AM (Network Folder: General)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%				[Veh. veh	Dist] m				
East: Neville Street														
5	T1	34	3.1	34	3.1	0.076	3.0	LOS A	0.3	2.0	0.33	0.57	0.33	22.8
6	R2	43	2.4	43	2.4	0.076	4.7	LOS A	0.3	2.0	0.33	0.57	0.33	22.8
Approach		77	2.7	77	2.7	0.076	4.0	LOS A	0.3	2.0	0.33	0.57	0.33	22.8
North: Justin Street														
9	R2	234	1.8	234	1.8	0.127	3.6	LOS A	0.0	0.0	0.00	0.50	0.00	33.7
Approach		234	1.8	234	1.8	0.127	3.6	NA	0.0	0.0	0.00	0.50	0.00	33.7
West: Neville Street														
10	L2	85	1.2	85	1.2	0.046	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	35.6
Approach		85	1.2	85	1.2	0.046	3.4	NA	0.0	0.0	0.00	0.45	0.00	35.6
All Vehicles		396	1.9	396	1.9	0.127	3.6	NA	0.3	2.0	0.06	0.50	0.06	33.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 1 [1. Smithfield Road/Brenan Street_2023_AM (Site Folder: 2023_AM)]**

 **Network: 1 [2023_AM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	86	2.4	86	2.4	0.198	49.4	LOS D	4.7	33.6	0.84	0.74	0.84	31.7
5	T1	301	2.8	301	2.8	* 0.669	48.5	LOS D	18.0	129.0	0.93	0.80	0.93	21.7
Approach		387	2.7	387	2.7	0.669	48.7	LOS D	18.0	129.0	0.91	0.78	0.91	24.5
NorthEast: Smithfield Road														
24b	L3	60	5.3	60	5.3	0.412	20.8	LOS B	9.2	69.6	0.50	0.54	0.50	44.3
25	T1	1236	11.2	1236	11.2	0.412	12.3	LOS A	15.5	119.1	0.51	0.48	0.51	53.1
Approach		1296	10.9	1296	10.9	0.412	12.7	LOS A	15.5	119.1	0.51	0.48	0.51	52.6
West: Brenan Street														
10a	L1	60	0.0	60	0.0	0.185	47.6	LOS D	4.6	32.5	0.83	0.71	0.83	9.6
11	T1	323	2.6	323	2.6	0.661	48.0	LOS D	17.7	126.5	0.92	0.79	0.92	24.7
Approach		383	2.2	383	2.2	0.661	48.0	LOS D	17.7	126.5	0.91	0.77	0.91	23.2
SouthWest: Smithfield Road														
30b	L3	160	2.0	160	2.0	0.661	22.3	LOS B	21.0	154.4	0.64	0.70	0.64	43.2
31	T1	2020	7.6	2020	7.6	* 0.661	15.5	LOS B	32.8	244.6	0.66	0.63	0.66	43.6
Approach		2180	7.1	2180	7.1	0.661	16.0	LOS B	32.8	244.6	0.66	0.64	0.66	43.6
All Vehicles		4246	7.4	4246	7.4	0.669	20.9	LOS B	32.8	244.6	0.66	0.62	0.66	40.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

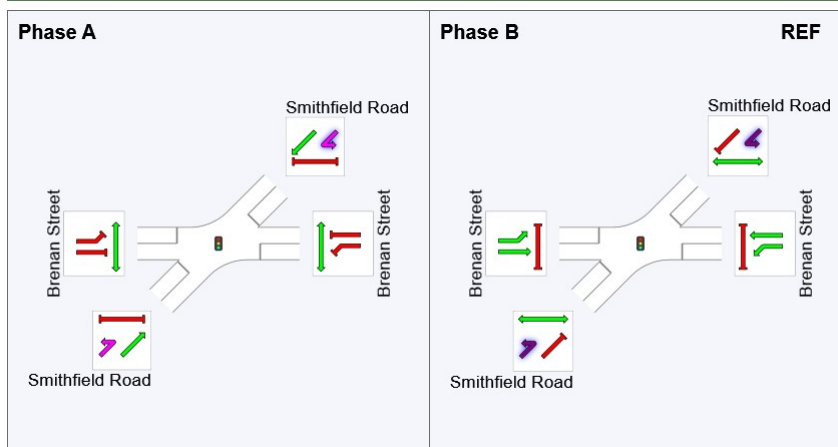
* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93

NorthEast: Smithfield Road											
P6 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95	
West: Brennan Street											
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93	
SouthWest: Smithfield Road											
P8 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95	
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	43	0
Green Time (sec)	91	37
Phase Time (sec)	97	43
Phase Split	69%	31%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
East: Brenan Street														
5	T1	283	3.3	283	3.3	0.393	3.9	LOS A	2.7	19.2	0.16	0.52	0.16	44.7
6	R2	172	0.6	172	0.6	0.393	6.9	LOS A	2.7	19.2	0.16	0.52	0.16	33.9
6u	U	11	10.0	11	10.0	0.393	8.4	LOS A	2.7	19.2	0.16	0.52	0.16	33.9
Approach		465	2.5	465	2.5	0.393	5.1	LOS A	2.7	19.2	0.16	0.52	0.16	42.9
North: O'Connell Street														
7	L2	135	0.8	135	0.8	0.232	7.0	LOS A	1.4	10.0	0.59	0.67	0.59	33.6
9	R2	29	0.0	29	0.0	0.232	9.7	LOS A	1.4	10.0	0.59	0.67	0.59	43.3
9u	U	1	0.0	1	0.0	0.232	11.1	LOS A	1.4	10.0	0.59	0.67	0.59	33.6
Approach		165	0.6	165	0.6	0.232	7.5	LOS A	1.4	10.0	0.59	0.67	0.59	37.1
West: Brenan Street														
10	L2	40	0.0	40	0.0	0.335	6.0	LOS A	2.6	18.7	0.52	0.54	0.52	43.0
11	T1	248	3.0	248	3.0	0.335	5.9	LOS A	2.6	18.7	0.52	0.54	0.52	43.0
12u	U	1	0.0	1	0.0	0.335	10.2	LOS A	2.6	18.7	0.52	0.54	0.52	46.3
Approach		289	2.5	289	2.5	0.335	5.9	LOS A	2.6	18.7	0.52	0.54	0.52	43.1
All Vehicles		920	2.2	920	2.2	0.393	5.8	LOS A	2.7	19.2	0.35	0.55	0.35	42.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

▼ Site: 3 [3. Smithfield Road/Neville Street_2023_AM (Site Folder: 2023_AM)]

■ Network: 1 [2023_AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
NorthEast: Smithfield Road														
25	T1	1178	12.0	1178	12.0	0.217	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1178	12.0	1178	12.0	0.217	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
SouthWest: Smithfield Road														
30b	L3	77	2.7	77	2.7	0.459	7.5	LOS A	0.0	0.0	0.00	0.10	0.00	64.5
31	T1	1796	7.4	1796	7.4	0.459	0.1	LOS A	1.4	10.4	0.00	0.03	0.00	68.1
Approach		1873	7.3	1873	7.3	0.459	0.4	NA	1.4	10.4	0.00	0.03	0.00	67.9
All Vehicles		3051	9.1	3051	9.1	0.459	0.3	NA	1.4	10.4	0.00	0.02	0.00	68.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 5 [5. O'Connell Street/Neville Street_2023_AM (Site Folder: 2023_AM)]**

 **Network: 1 [2023_AM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: O'Connell Street														
1	L2	21	0.0	21	0.0	0.235	5.2	LOS A	1.4	10.1	0.56	0.62	0.56	36.5
2	T1	101	1.0	101	1.0	0.235	4.9	LOS A	1.4	10.1	0.56	0.62	0.56	35.4
3	R2	62	0.0	62	0.0	0.235	8.0	LOS A	1.4	10.1	0.56	0.62	0.56	30.5
3u	U	7	0.0	7	0.0	0.235	9.3	LOS A	1.4	10.1	0.56	0.62	0.56	30.5
Approach		192	0.5	192	0.5	0.235	6.1	LOS A	1.4	10.1	0.56	0.62	0.56	34.4
East: Neville Street														
4	L2	102	1.0	102	1.0	0.289	4.5	LOS A	1.9	13.4	0.50	0.53	0.50	34.1
5	T1	139	2.3	139	2.3	0.289	4.2	LOS A	1.9	13.4	0.50	0.53	0.50	38.1
6	R2	20	10.5	20	10.5	0.289	7.5	LOS A	1.9	13.4	0.50	0.53	0.50	37.0
6u	U	1	0.0	1	0.0	0.289	11.3	LOS A	1.9	13.4	0.50	0.53	0.50	34.1
Approach		262	2.4	262	2.4	0.289	4.6	LOS A	1.9	13.4	0.50	0.53	0.50	37.1
North: O'Connell Street														
7	L2	20	0.0	20	0.0	0.134	4.6	LOS A	0.8	5.5	0.49	0.60	0.49	31.6
8	T1	32	0.0	32	0.0	0.134	4.3	LOS A	0.8	5.5	0.49	0.60	0.49	31.6
9	R2	34	3.1	34	3.1	0.134	7.5	LOS A	0.8	5.5	0.49	0.60	0.49	37.6
9u	U	27	3.8	27	3.8	0.134	11.6	LOS A	0.8	5.5	0.49	0.60	0.49	39.5
Approach		113	1.9	113	1.9	0.134	7.1	LOS A	0.8	5.5	0.49	0.60	0.49	36.3
West: Neville Street														
10	L2	43	4.9	43	4.9	0.238	6.1	LOS A	1.5	10.7	0.54	0.65	0.54	43.7
11	T1	69	3.0	69	3.0	0.238	5.9	LOS A	1.5	10.7	0.54	0.65	0.54	42.6
12	R2	38	0.0	38	0.0	0.238	9.1	LOS A	1.5	10.7	0.54	0.65	0.54	42.6
12u	U	44	0.0	44	0.0	0.238	11.8	LOS A	1.5	10.7	0.54	0.65	0.54	49.3
Approach		195	2.2	195	2.2	0.238	7.9	LOS A	1.5	10.7	0.54	0.65	0.54	44.9
All Vehicles		761	1.8	761	1.8	0.289	6.2	LOS A	1.9	13.4	0.52	0.59	0.52	38.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 7 [7. The Horsley Drive/Justin Street_2023_AM (Site Folder: 2023_AM)]**

 **Network: 1 [2023_AM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 85 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Justin Street														
1	L2	25	0.0	25	0.0	0.061	31.5	LOS C	0.8	5.8	0.82	0.68	0.82	23.7
2	T1	43	7.3	43	7.3	* 0.210	28.8	LOS C	2.6	19.0	0.84	0.69	0.84	27.2
3	R2	34	0.0	34	0.0	0.210	32.2	LOS C	2.6	19.0	0.84	0.69	0.84	15.6
Approach		102	3.1	102	3.1	0.210	30.6	LOS C	2.6	19.0	0.84	0.69	0.84	23.8
East: The Horsley Drive														
4	L2	137	0.8	137	0.8	* 0.421	12.2	LOS A	10.1	72.3	0.55	0.55	0.55	26.5
5	T1	572	3.7	572	3.7	0.421	9.6	LOS A	10.1	72.3	0.57	0.56	0.57	32.4
6	R2	97	4.3	97	4.3	0.421	14.3	LOS A	7.6	54.8	0.60	0.58	0.60	33.9
Approach		805	3.3	805	3.3	0.421	10.6	LOS A	10.1	72.3	0.57	0.56	0.57	32.1
North: Justin Street														
7	L2	31	10.3	31	10.3	0.079	31.9	LOS C	1.0	7.7	0.82	0.69	0.82	23.7
8	T1	32	3.3	32	3.3	0.141	28.2	LOS B	1.7	12.5	0.83	0.66	0.83	24.5
9	R2	20	5.3	20	5.3	0.141	31.6	LOS C	1.7	12.5	0.83	0.66	0.83	28.5
Approach		82	6.4	82	6.4	0.141	30.4	LOS C	1.7	12.5	0.82	0.67	0.82	25.4
West: The Horsley Drive														
10	L2	64	4.9	64	4.9	0.294	11.5	LOS A	6.4	47.0	0.49	0.47	0.49	35.9
11	T1	495	6.4	495	6.4	0.294	8.7	LOS A	6.4	47.0	0.52	0.48	0.52	29.9
12	R2	36	5.9	36	5.9	0.294	13.3	LOS A	5.4	40.0	0.54	0.50	0.54	29.1
Approach		595	6.2	595	6.2	0.294	9.3	LOS A	6.4	47.0	0.51	0.48	0.51	31.1
All Vehicles		1584	4.5	1584	4.5	0.421	12.4	LOS A	10.1	72.3	0.58	0.55	0.58	30.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

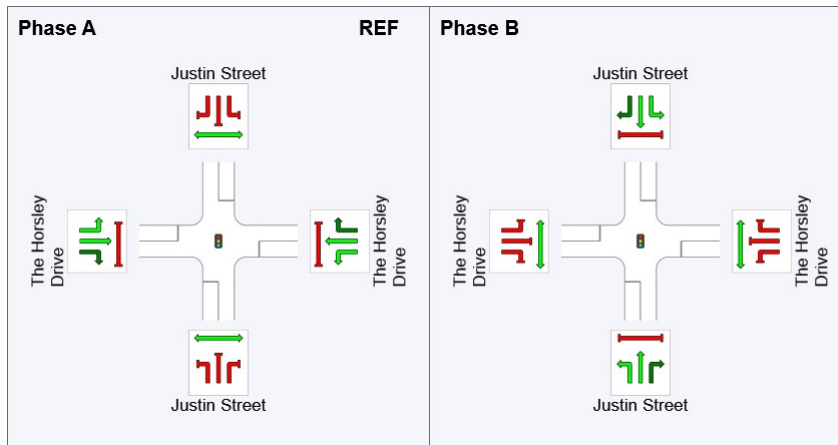
* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop	Travel Time	Travel Dist.	Aver. Speed

		ped/h	sec		[Ped ped	Dist] m		Rate		sec	m	m/sec
South: Justin Street												
P1	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06	
East: The Horsley Drive												
P2	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06	
North: Justin Street												
P3	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06	
West: The Horsley Drive												
P4	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06	
All Pedestrians		211	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	0	59
Green Time (sec)	53	20
Phase Time (sec)	59	26
Phase Split	69%	31%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 8 [8. Smithfield Road/The Horsely Drive_2023_AM (Site Folder: 2023_AM)]**

 **Network: 1 [2023_AM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C*, D, E, F, F1*, F2*

Output Phase Sequence: A, B*, D, E, F, F2*

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
East: The Horsely Drive														
4a	L1	34	3.1	34	3.1	0.519	33.1	LOS C	20.8	152.6	0.76	0.76	0.76	29.9
5	T1	613	5.8	613	5.8	* 0.982	56.2	LOS D	26.5	207.0	0.83	0.91	1.02	21.5
6b	R3	289	32.0	289	32.0	0.982	110.2	LOS F	26.5	207.0	0.97	1.13	1.58	20.8
Approach		936	13.8	936	13.8	0.982	72.1	LOS F	26.5	207.0	0.87	0.97	1.19	21.3
NorthEast: Smithfield Road														
24b	L3	478	27.1	478	27.1	0.476	15.6	LOS B	12.3	106.1	0.48	0.74	0.48	50.2
25	T1	1144	12.2	1144	12.2	0.767	48.3	LOS D	26.2	202.6	0.95	0.85	0.98	24.7
26a	R1	139	1.5	139	1.5	* 0.935	93.7	LOS F	11.2	79.7	1.00	1.01	1.50	15.6
Approach		1761	15.4	1761	15.4	0.935	43.0	LOS D	26.2	202.6	0.83	0.83	0.89	30.2
West: The Horsely Drive														
10a	L1	196	8.6	196	8.6	0.928	74.8	LOS F	23.6	177.2	1.00	1.17	1.34	20.9
11	T1	434	8.0	434	8.0	0.928	78.4	LOS F	24.8	185.6	1.00	1.14	1.34	20.2
Approach		629	8.2	629	8.2	0.928	77.3	LOS F	24.8	185.6	1.00	1.15	1.34	20.4
SouthWest: Smithfield Road														
30b	L3	99	1.1	99	1.1	0.979	107.2	LOS F	50.2	371.4	1.00	1.26	1.42	8.8
31	T1	1675	7.7	1675	7.7	* 0.979	90.5	LOS F	56.8	424.3	1.00	1.22	1.39	21.3
32a	R1	88	3.6	88	3.6	0.553	41.9	LOS C	3.6	26.2	1.00	0.77	1.00	32.8
Approach		1862	7.2	1862	7.2	0.979	89.1	LOS F	56.8	424.3	1.00	1.20	1.38	21.1
All Vehicles		5188	11.3	5188	11.3	0.982	68.9	LOS E	56.8	424.3	0.92	1.03	1.17	23.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

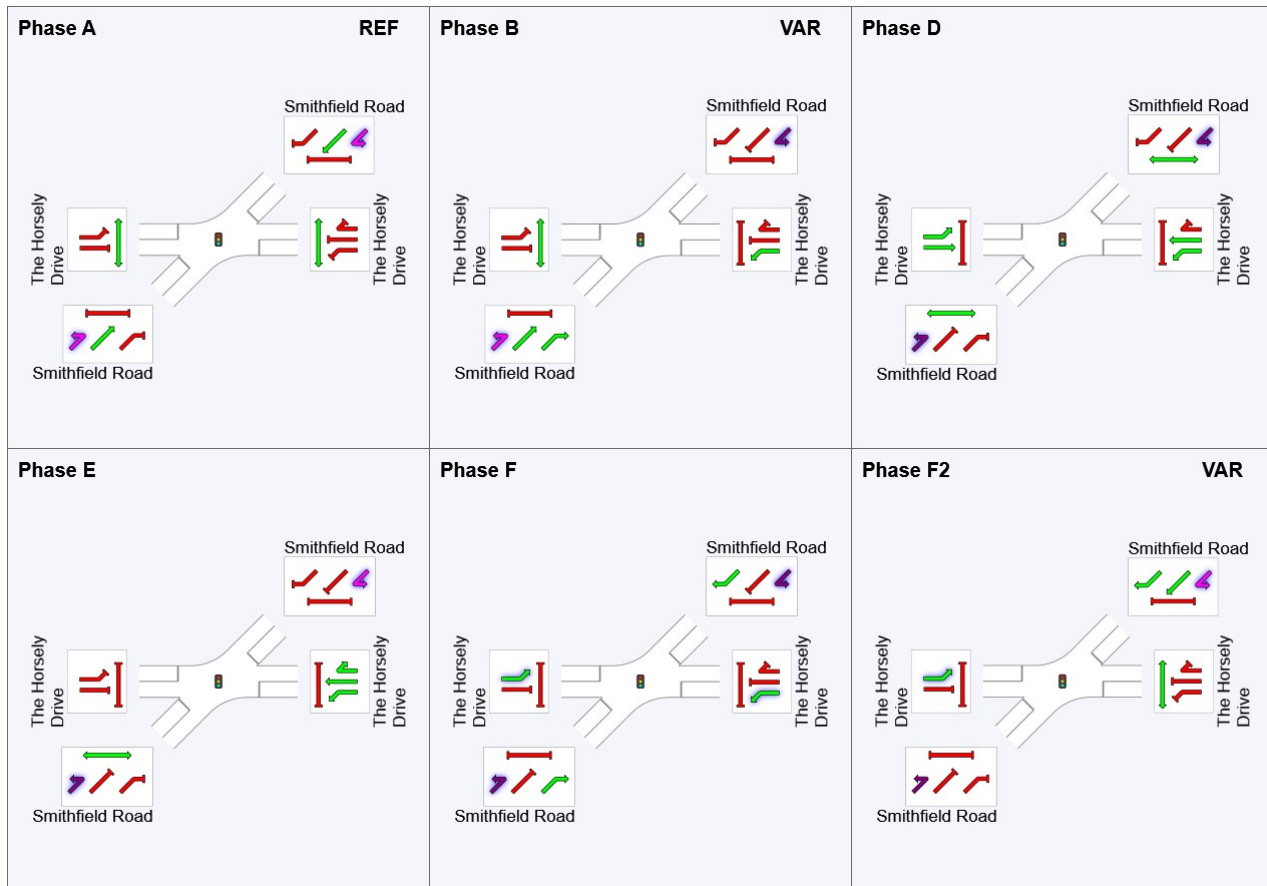
* Critical Movement (Signal Timing)

Pedestrian Movement Performance										
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE	Prop. Que	Effective Stop	Travel Time	Travel Dist	Aver. Speed

		ped/h	sec		[Ped ped	Dist] m		Rate	sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B	D	E	F	F2
Phase Change Time (sec)	0	43	55	86	123	135
Green Time (sec)	37	6	25	31	6	***
Phase Time (sec)	43	12	31	37	12	5
Phase Split	31%	9%	22%	26%	9%	4%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

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Organisation: STANTEC NEW ZEALAND | Licence: NETWORK / Enterprise | Created: Wednesday, 13 March 2024 11:28:03 AM
Project: \\au2012-pfss01\shared_projects\300304533\technical\modelling\240220_88-102 Smithfield Rd, Smithfield.sip9

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 8 [8. Smithfield Road/The Horsely Drive_2023_PM (Site Folder: 2023_PM)]

 Network: 2 [2023_PM (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C, D, E, F, F1*, F2*

Output Phase Sequence: A, C, D, E, F

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c			sec	[Veh. veh				
East: The Horsely Drive														
4a	L1	27	3.8	27	3.8	0.840	57.9	LOS E	32.7	241.3	1.00	0.95	1.09	21.5
5	T1	453	6.5	453	6.5	0.840	56.1	LOS D	32.7	241.3	1.00	0.95	1.09	21.5
6b	R3	204	31.4	204	31.4	*0.963	107.6	LOS F	8.9	79.3	1.00	1.08	1.67	21.0
Approach		684	13.8	684	13.8	0.963	71.5	LOS F	32.7	241.3	1.00	0.99	1.26	21.3
NorthEast: Smithfield Road														
24b	L3	751	10.5	751	10.5	0.623	13.3	LOS A	18.7	142.7	0.48	0.76	0.48	52.3
25	T1	2122	5.7	2122	5.7	*0.988	83.5	LOS F	80.5	590.6	0.94	1.15	1.33	16.8
26a	R1	202	2.6	202	2.6	*0.753	48.4	LOS D	8.4	60.3	1.00	0.89	1.09	25.0
Approach		3075	6.6	3075	6.6	0.988	64.0	LOS E	80.5	590.6	0.83	1.04	1.10	23.5
West: The Horsely Drive														
10a	L1	100	2.1	100	2.1	0.969	92.3	LOS F	22.8	164.6	0.99	1.25	1.50	18.6
11	T1	379	4.4	379	4.4	*0.969	93.4	LOS F	22.8	164.6	0.98	1.25	1.53	18.1
Approach		479	4.0	479	4.0	0.969	93.2	LOS F	22.8	164.6	0.98	1.25	1.52	18.2
SouthWest: Smithfield Road														
30b	L3	57	3.7	57	3.7	0.739	53.9	LOS D	23.6	173.9	0.92	0.87	0.92	16.3
31	T1	1351	6.7	1351	6.7	0.739	41.1	LOS C	30.5	226.0	0.91	0.83	0.91	34.3
32a	R1	106	3.0	106	3.0	0.568	71.9	LOS F	7.2	51.4	1.00	0.79	1.00	24.3
Approach		1514	6.3	1514	6.3	0.739	43.8	LOS D	30.5	226.0	0.92	0.83	0.92	32.8
All Vehicles		5752	7.2	5752	7.2	0.988	62.0	LOS E	80.5	590.6	0.89	0.99	1.11	24.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

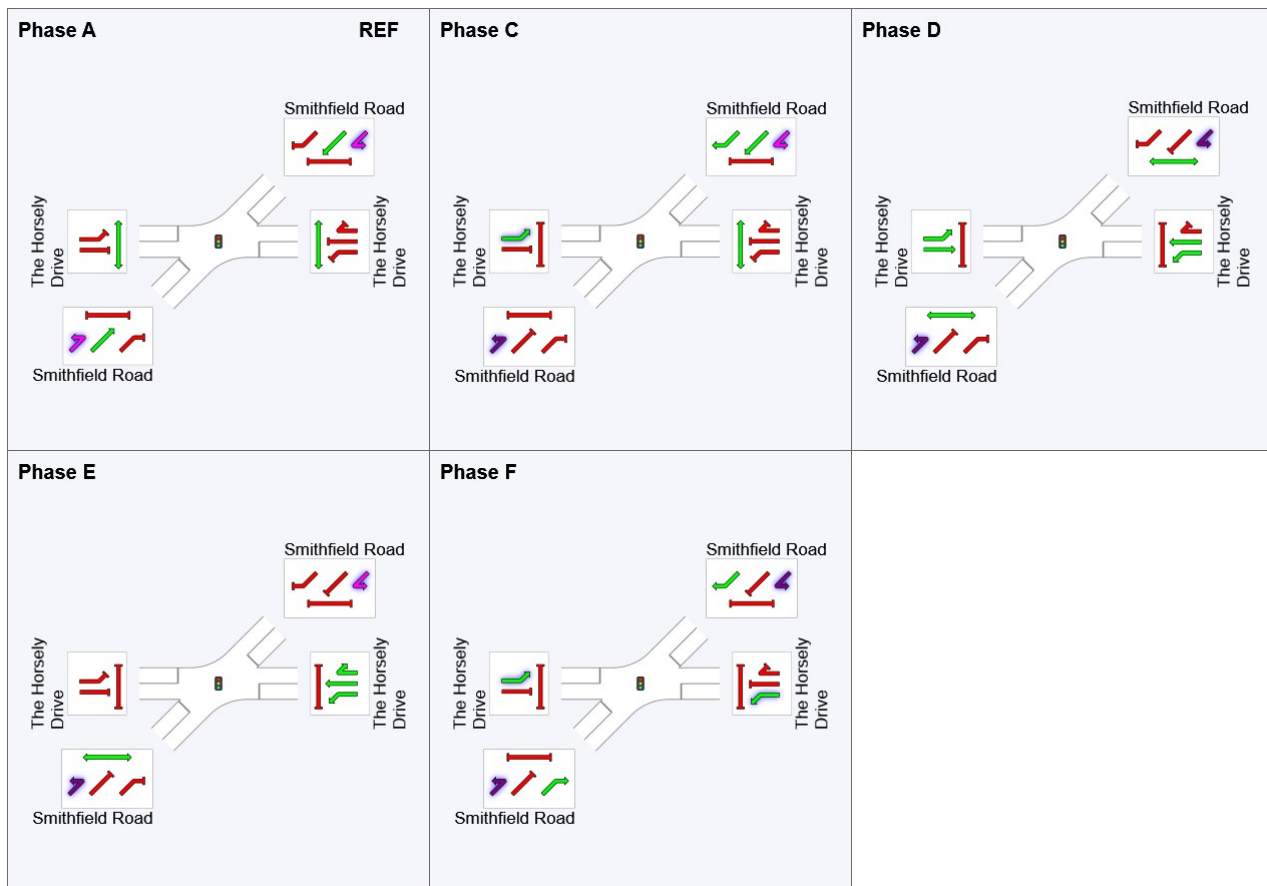
Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	C	D	E	F
Phase Change Time (sec)	0	59	71	103	120
Green Time (sec)	53	6	26	11	14
Phase Time (sec)	59	12	32	17	20
Phase Split	42%	9%	23%	12%	14%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site: 1 [1. Smithfield Road/Brenan Street_2023_PM (Site Folder: 2023_PM)]

Network: 2 [2023_PM (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	68	1.5	68	1.5	0.191	51.9	LOS D	4.1	29.4	0.86	0.73	0.86	31.2
5	T1	280	2.6	280	2.6	0.671	51.6	LOS D	16.8	120.3	0.95	0.80	0.95	20.9
Approach		348	2.4	348	2.4	0.671	51.7	LOS D	16.8	120.3	0.93	0.79	0.93	23.4
NorthEast: Smithfield Road														
24b	L3	155	6.1	155	6.1	0.636	23.0	LOS B	19.0	139.5	0.59	0.67	0.59	42.6
25	T1	2018	5.8	2018	5.8	* 0.636	13.6	LOS A	30.6	224.8	0.61	0.59	0.61	51.8
Approach		2173	5.9	2173	5.9	0.636	14.2	LOS A	30.6	224.8	0.61	0.59	0.61	51.0
West: Brenan Street														
10a	L1	55	7.7	55	7.7	0.301	52.6	LOS D	6.4	51.4	0.88	0.74	0.88	9.0
11	T1	412	25.1	412	25.1	* 1.073	141.5	LOS F	26.9	228.5	0.98	1.44	1.73	12.3
Approach		466	23.0	466	23.0	1.073	131.1	LOS F	26.9	228.5	0.97	1.35	1.63	12.1
SouthWest: Smithfield Road														
30b	L3	80	5.3	80	5.3	0.487	18.8	LOS B	11.2	83.0	0.50	0.55	0.50	47.8
31	T1	1560	7.0	1560	7.0	0.487	11.2	LOS A	19.7	146.3	0.51	0.49	0.51	48.7
Approach		1640	6.9	1640	6.9	0.487	11.6	LOS A	19.7	146.3	0.51	0.49	0.51	48.6
All Vehicles		4627	7.7	4627	7.7	1.073	27.9	LOS B	30.6	228.5	0.64	0.65	0.70	36.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

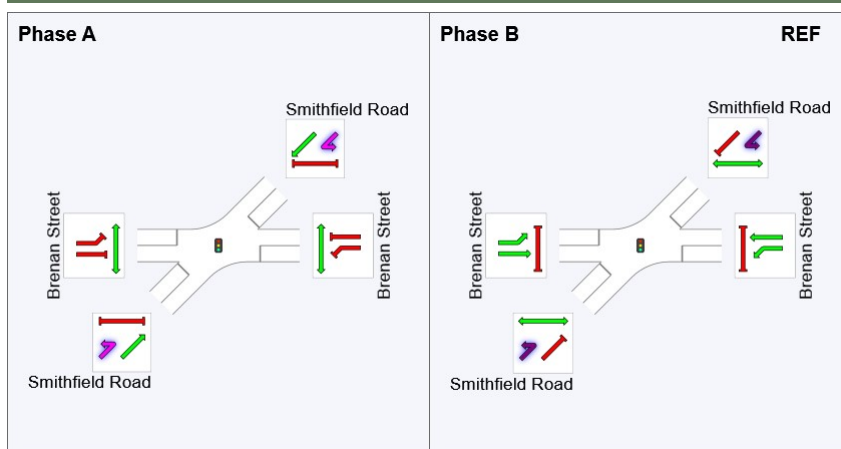
* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93

NorthEast: Smithfield Road											
P6 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95	
West: Brennan Street											
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93	
SouthWest: Smithfield Road											
P8 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95	
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	39	0
Green Time (sec)	95	33
Phase Time (sec)	101	39
Phase Split	72%	28%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

▼ Site: 3 [3. Smithfield Road/Neville Street_2023_PM (Site Folder: 2023_PM)]

■ Network: 2 [2023_PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
NorthEast: Smithfield Road														
25	T1	2149	5.6	2149	5.6	0.381	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.7
Approach		2149	5.6	2149	5.6	0.381	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.7
SouthWest: Smithfield Road														
30b	L3	32	0.0	32	0.0	0.276	7.4	LOS A	0.0	0.0	0.00	0.04	0.00	67.5
31	T1	1514	6.3	1514	6.3	0.276	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	69.1
Approach		1545	6.2	1545	6.2	0.276	0.2	NA	0.0	0.0	0.00	0.01	0.00	69.0
All Vehicles		3695	5.9	3695	5.9	0.381	0.1	NA	0.0	0.0	0.00	0.01	0.00	69.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

Site: 4 [4. Neville Street/Justin Street_2023_PM (Site Folder: 2023_PM)]

Network: 2 [2023_PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
East: Neville Street														
5	T1	13	0.0	13	0.0	0.029	2.5	LOS A	0.1	0.7	0.25	0.52	0.25	24.1
6	R2	19	0.0	19	0.0	0.029	4.3	LOS A	0.1	0.7	0.25	0.52	0.25	24.1
Approach		32	0.0	32	0.0	0.029	3.6	LOS A	0.1	0.7	0.25	0.52	0.25	24.1
North: Justin Street														
9	R2	136	3.9	136	3.9	0.075	3.6	LOS A	0.0	0.0	0.00	0.50	0.00	33.7
Approach		136	3.9	136	3.9	0.075	3.6	NA	0.0	0.0	0.00	0.50	0.00	33.7
West: Neville Street														
10	L2	100	2.1	100	2.1	0.055	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	35.6
Approach		100	2.1	100	2.1	0.055	3.4	NA	0.0	0.0	0.00	0.45	0.00	35.6
All Vehicles		267	2.8	267	2.8	0.075	3.5	NA	0.1	0.7	0.03	0.48	0.03	34.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: O'Connell Street														
1	L2	13	0.0	13	0.0	0.114	5.9	LOS A	0.6	4.7	0.52	0.61	0.52	43.4
2	T1	49	4.3	49	4.3	0.114	5.9	LOS A	0.6	4.7	0.52	0.61	0.52	40.7
3	R2	26	12.0	26	12.0	0.114	9.4	LOS A	0.6	4.7	0.52	0.61	0.52	34.7
3u	U	2	0.0	2	0.0	0.114	10.5	LOS A	0.6	4.7	0.52	0.61	0.52	34.7
Approach		91	5.8	91	5.8	0.114	7.1	LOS A	0.6	4.7	0.52	0.61	0.52	40.1
East: Neville Street														
4	L2	87	1.2	87	1.2	0.294	3.5	LOS A	1.9	13.7	0.36	0.42	0.36	34.9
5	T1	199	1.6	199	1.6	0.294	3.2	LOS A	1.9	13.7	0.36	0.42	0.36	38.5
6	R2	18	11.8	18	11.8	0.294	6.5	LOS A	1.9	13.7	0.36	0.42	0.36	37.5
6u	U	2	0.0	2	0.0	0.294	10.4	LOS A	1.9	13.7	0.36	0.42	0.36	34.9
Approach		306	2.1	306	2.1	0.294	3.5	LOS A	1.9	13.7	0.36	0.42	0.36	37.9
North: O'Connell Street														
7	L2	23	0.0	23	0.0	0.106	3.3	LOS A	0.6	4.1	0.30	0.46	0.30	32.8
8	T1	43	4.9	43	4.9	0.106	3.1	LOS A	0.6	4.1	0.30	0.46	0.30	32.8
9	R2	26	4.0	26	4.0	0.106	6.2	LOS A	0.6	4.1	0.30	0.46	0.30	38.1
9u	U	6	16.7	6	16.7	0.106	10.6	LOS A	0.6	4.1	0.30	0.46	0.30	39.0
Approach		99	4.3	99	4.3	0.106	4.5	LOS A	0.6	4.1	0.30	0.46	0.30	35.8
West: Neville Street														
10	L2	11	0.0	11	0.0	0.070	4.6	LOS A	0.4	2.8	0.34	0.51	0.34	44.6
11	T1	40	2.6	40	2.6	0.070	4.5	LOS A	0.4	2.8	0.34	0.51	0.34	43.8
12	R2	7	0.0	7	0.0	0.070	7.7	LOS A	0.4	2.8	0.34	0.51	0.34	43.8
12u	U	7	0.0	7	0.0	0.070	10.4	LOS A	0.4	2.8	0.34	0.51	0.34	50.1
Approach		65	1.6	65	1.6	0.070	5.6	LOS A	0.4	2.8	0.34	0.51	0.34	45.0
All Vehicles		561	3.0	561	3.0	0.294	4.5	LOS A	1.9	13.7	0.37	0.47	0.37	38.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 7 [7. The Horsley Drive/Justin Street_2023_PM (Site Folder: 2023_PM)]**

 **Network: 2 [2023_PM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Justin Street														
1	L2	37	2.9	37	2.9	0.097	39.6	LOS C	1.5	11.0	0.84	0.70	0.84	21.5
2	T1	40	0.0	40	0.0	0.243	37.9	LOS C	3.4	24.0	0.87	0.72	0.87	24.8
3	R2	38	2.8	38	2.8	0.243	41.3	LOS C	3.4	24.0	0.87	0.72	0.87	13.2
Approach		115	1.8	115	1.8	0.243	39.6	LOS C	3.4	24.0	0.86	0.71	0.86	21.0
East: The Horsley Drive														
4	L2	55	1.9	55	1.9	* 0.371	11.7	LOS A	10.1	73.5	0.48	0.45	0.48	27.5
5	T1	675	4.5	675	4.5	0.371	9.0	LOS A	10.1	73.5	0.49	0.47	0.49	33.0
6	R2	71	9.0	71	9.0	0.371	13.5	LOS A	8.5	62.3	0.52	0.50	0.52	34.4
Approach		800	4.7	800	4.7	0.371	9.6	LOS A	10.1	73.5	0.50	0.47	0.50	33.0
North: Justin Street														
7	L2	81	3.9	81	3.9	0.214	41.7	LOS C	3.5	25.1	0.87	0.74	0.87	21.3
8	T1	41	2.6	41	2.6	0.334	39.6	LOS C	4.7	33.1	0.90	0.75	0.90	21.1
9	R2	63	0.0	63	0.0	* 0.334	43.1	LOS D	4.7	33.1	0.90	0.75	0.90	25.5
Approach		185	2.3	185	2.3	0.334	41.7	LOS C	4.7	33.1	0.89	0.74	0.89	22.9
West: The Horsley Drive														
10	L2	93	2.3	93	2.3	0.079	11.2	LOS A	1.8	12.6	0.40	0.60	0.40	34.9
11	T1	400	5.0	400	5.0	0.347	8.0	LOS A	9.0	65.5	0.47	0.42	0.47	30.9
12	R2	11	10.0	11	10.0	0.347	11.5	LOS A	9.0	65.5	0.47	0.42	0.47	30.9
Approach		503	4.6	503	4.6	0.347	8.7	LOS A	9.0	65.5	0.45	0.45	0.45	32.3
All Vehicles		1603	4.2	1603	4.2	0.371	15.1	LOS B	10.1	73.5	0.55	0.52	0.55	29.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

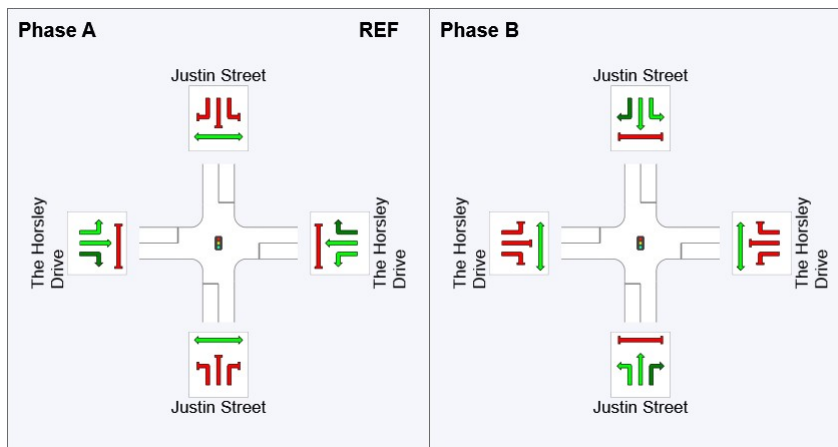
* Critical Movement (Signal Timing)

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop	Travel Time	Travel Dist.	Aver. Speed

		ped/h	sec		[Ped ped	Dist] m		Rate		sec	m	m/sec
South: Justin Street												
P1	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01	
East: The Horsley Drive												
P2	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01	
North: Justin Street												
P3	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01	
West: The Horsley Drive												
P4	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01	
All Pedestrians		211	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01	

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase



Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	0	76
Green Time (sec)	70	23
Phase Time (sec)	76	29
Phase Split	72%	28%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	279	2.6	279	2.6	0.332	4.0	LOS A	1.9	13.6	0.16	0.49	0.16	45.1
6	R2	63	4.2	63	4.2	0.332	7.0	LOS A	1.9	13.6	0.16	0.49	0.16	34.8
6u	U	16	0.0	16	0.0	0.332	8.3	LOS A	1.9	13.6	0.16	0.49	0.16	34.8
Approach		358	2.7	358	2.7	0.332	4.7	LOS A	1.9	13.6	0.16	0.49	0.16	44.3
North: O'Connell Street														
7	L2	113	0.8	113	0.8	0.357	6.8	LOS A	7.0	49.5	0.55	0.68	0.55	33.7
9	R2	33	5.4	33	5.4	0.357	9.7	LOS A	7.0	49.5	0.55	0.68	0.55	43.2
9u	U	1	0.0	1	0.0	0.357	10.9	LOS A	7.0	49.5	0.55	0.68	0.55	33.7
Approach		146	1.8	146	1.8	0.357	7.5	LOS A	7.0	49.5	0.55	0.68	0.55	37.8
West: Brenan Street														
10	L2	13	13.3	13	13.3	0.470	4.9	LOS A	14.3	104.1	0.32	0.46	0.32	44.0
11	T1	231	4.6	231	4.6	0.470	4.5	LOS A	14.3	104.1	0.32	0.46	0.32	44.0
12u	U	2	0.0	2	0.0	0.470	8.8	LOS A	14.3	104.1	0.32	0.46	0.32	46.9
Approach		245	5.0	245	5.0	0.470	4.5	LOS A	14.3	104.1	0.32	0.46	0.32	44.0
All Vehicles		749	3.3	749	3.3	0.470	5.2	LOS A	14.3	104.1	0.29	0.52	0.29	43.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 1 [1. Smithfield Road/Brenan Street_2033_wo_AM (Site Folder: 2033_without_dev_AM)]

 Network: 3 [2033_withoutDev_AM (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	102	2.1	102	2.1	0.249	51.7	LOS D	5.7	40.9	0.87	0.75	0.87	31.1
5	T1	355	2.4	355	2.4	* 0.860	61.4	LOS E	24.9	178.0	0.99	0.98	1.16	18.9
Approach		457	2.3	457	2.3	0.860	59.2	LOS E	24.9	178.0	0.96	0.93	1.09	22.0
NorthEast: Smithfield Road														
24b	L3	71	4.5	71	4.5	0.414	21.2	LOS B	14.5	109.4	0.49	0.52	0.49	44.3
25	T1	1438	9.6	1438	9.6	0.414	11.8	LOS A	15.6	118.3	0.50	0.47	0.50	53.6
Approach		1508	9.4	1508	9.4	0.414	12.2	LOS A	15.6	118.3	0.50	0.47	0.50	53.1
West: Brenan Street														
10a	L1	71	0.0	70	0.0	0.235	49.9	LOS D	5.7	40.3	0.85	0.73	0.85	9.3
11	T1	381	2.2	379	2.2	0.840	57.8	LOS E	23.6	168.2	0.97	0.93	1.09	22.4
Approach		452	1.9	449 ^{N1}	1.9	0.840	56.6	LOS E	23.6	168.2	0.95	0.90	1.06	21.2
SouthWest: Smithfield Road														
30b	L3	188	1.7	188	1.7	0.850	31.8	LOS C	39.4	288.0	0.82	0.87	0.86	35.5
31	T1	2363	6.5	2363	6.5	* 0.850	21.1	LOS B	50.4	372.2	0.84	0.81	0.85	38.5
Approach		2552	6.1	2552	6.1	0.850	21.9	LOS B	50.4	372.2	0.83	0.82	0.85	38.2
All Vehicles		4968	6.4	4966 ^{N1}	6.4	0.860	25.5	LOS B	50.4	372.2	0.75	0.73	0.79	37.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

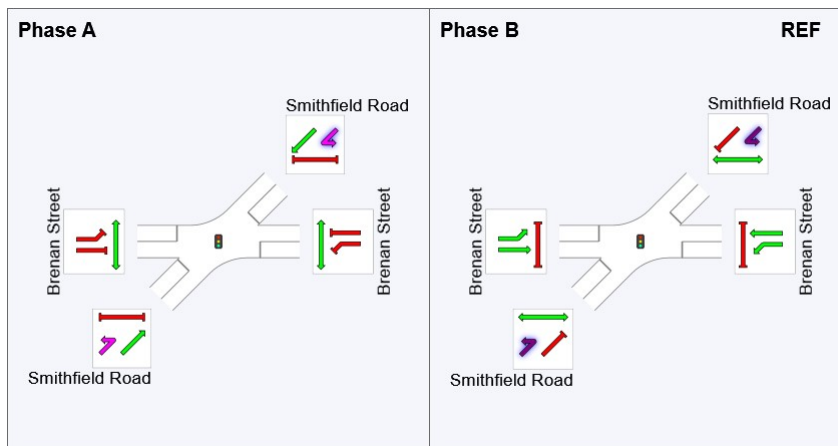
* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95
West: Brenan Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
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Phase Change Time (sec)	41	0
Green Time (sec)	93	35
Phase Time (sec)	99	41
Phase Split	71%	29%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 2 [2. Brenan Street/O'Connell Street_2033_wo_AM (Site Folder: 2033_without_dev_AM)]**

 **Network: 3 [2033_withoutDev_AM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	334	2.8	334	2.8	0.468	4.0	LOS A	3.6	25.7	0.18	0.52	0.18	44.6
6	R2	203	0.5	203	0.5	0.468	7.0	LOS A	3.6	25.7	0.18	0.52	0.18	33.7
6u	U	13	8.3	13	8.3	0.468	8.5	LOS A	3.6	25.7	0.18	0.52	0.18	33.7
Approach		549	2.1	549	2.1	0.468	5.2	LOS A	3.6	25.7	0.18	0.52	0.18	42.8
North: O'Connell Street														
7	L2	159	0.7	156	0.7	0.340	7.7	LOS A	1.8	12.8	0.65	0.73	0.65	32.6
9	R2	35	0.0	34	0.0	0.340	10.4	LOS A	1.8	12.8	0.65	0.73	0.65	42.8
9u	U	1	0.0	1	0.0	0.340	11.8	LOS A	1.8	12.8	0.65	0.73	0.65	32.6
Approach		195	0.5	191 ^{N1}	0.5	0.340	8.2	LOS A	1.8	12.8	0.65	0.73	0.65	36.2
West: Brenan Street														
10	L2	47	0.0	47	0.0	0.486	6.6	LOS A	3.5	24.6	0.60	0.59	0.60	42.6
11	T1	293	2.5	293	2.5	0.486	6.5	LOS A	3.5	24.6	0.60	0.59	0.60	42.6
12u	U	1	0.0	1	0.0	0.486	10.8	LOS A	3.5	24.6	0.60	0.59	0.60	46.1
Approach		341	2.2	341	2.2	0.486	6.5	LOS A	3.5	24.6	0.60	0.59	0.60	42.6
All Vehicles		1085	1.8	1082 ^{N1}	1.8	0.486	6.2	LOS A	3.6	25.7	0.40	0.58	0.40	41.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

▼ Site: 3 [3. Smithfield Road/Neville Street_2033_wo_AM (Site Folder: 2033_without_dev_AM)]

■ Network: 3 [2033_withoutDev_AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
NorthEast: Smithfield Road														
25	T1	1368	10.3	1368	10.3	0.250	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		1368	10.3	1368	10.3	0.250	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.8
SouthWest: Smithfield Road														
30b	L3	91	2.3	91	2.3	0.433	7.4	LOS A	19.3	141.7	0.00	0.08	0.00	65.6
31	T1	2323	6.5	2323	6.5	0.433	0.1	LOS A	42.0	310.5	0.00	0.02	0.00	68.3
Approach		2414	6.4	2413 ^N ₁	6.4	0.433	0.3	NA	42.0	310.5	0.00	0.03	0.00	68.2
All Vehicles		3782	7.8	3782	7.8	0.433	0.2	NA	42.0	310.5	0.00	0.02	0.00	68.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

▼ Site: 4 [4. Neville Street/Justin Street_2033_wo_AM (Site Folder: 2033_without_dev_AM)]

■ Network: 3 [2033_withoutDev_AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
East: Neville Street														
5	T1	40	2.6	40	2.6	0.093	3.2	LOS A	0.3	2.5	0.36	0.58	0.36	22.2
6	R2	51	2.1	51	2.1	0.093	4.9	LOS A	0.3	2.5	0.36	0.58	0.36	22.2
Approach		91	2.3	91	2.3	0.093	4.2	LOS A	0.3	2.5	0.36	0.58	0.36	22.2
North: Justin Street														
9	R2	276	1.5	267	1.6	0.145	3.6	LOS A	0.0	0.0	0.00	0.50	0.00	33.7
Approach		276	1.5	267 ^{N1}	1.6	0.145	3.6	NA	0.0	0.0	0.00	0.50	0.00	33.7
West: Neville Street														
10	L2	101	1.0	101	1.0	0.055	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	35.6
Approach		101	1.0	101	1.0	0.055	3.4	NA	0.0	0.0	0.00	0.45	0.00	35.6
All Vehicles		467	1.6	458 ^{N1}	1.6	0.145	3.6	NA	0.3	2.5	0.07	0.50	0.07	33.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 5 [5. O'Connell Street/Neville Street_2033_wo_AM (Site Folder: 2033_without_dev_AM)]**

 **Network: 3 [2033_withoutDev_AM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: O'Connell Street														
1	L2	25	0.0	25	0.0	0.291	5.7	LOS A	1.8	12.9	0.62	0.66	0.62	36.3
2	T1	119	0.9	119	0.9	0.291	5.5	LOS A	1.8	12.9	0.62	0.66	0.62	35.0
3	R2	74	0.0	74	0.0	0.291	8.6	LOS A	1.8	12.9	0.62	0.66	0.62	30.0
3u	U	8	0.0	8	0.0	0.291	9.9	LOS A	1.8	12.9	0.62	0.66	0.62	30.0
Approach		226	0.5	226	0.5	0.291	6.7	LOS A	1.8	12.9	0.62	0.66	0.62	34.0
East: Neville Street														
4	L2	121	0.9	118	0.9	0.345	4.9	LOS A	2.3	16.7	0.56	0.57	0.56	33.7
5	T1	164	1.9	159	2.0	0.345	4.7	LOS A	2.3	16.7	0.56	0.57	0.56	37.9
6	R2	23	9.1	23	9.3	0.345	8.0	LOS A	2.3	16.7	0.56	0.57	0.56	36.7
6u	U	1	0.0	1	0.0	0.345	11.8	LOS A	2.3	16.7	0.56	0.57	0.56	33.7
Approach		309	2.0	300 ^{N1}	2.1	0.345	5.0	LOS A	2.3	16.7	0.56	0.57	0.56	36.9
North: O'Connell Street														
7	L2	23	0.0	23	0.0	0.167	5.0	LOS A	1.0	7.0	0.55	0.64	0.55	31.1
8	T1	38	0.0	38	0.0	0.167	4.7	LOS A	1.0	7.0	0.55	0.64	0.55	31.1
9	R2	40	2.6	40	2.6	0.167	8.0	LOS A	1.0	7.0	0.55	0.64	0.55	37.4
9u	U	33	3.2	33	3.2	0.167	12.1	LOS A	1.0	7.0	0.55	0.64	0.55	39.2
Approach		134	1.6	134	1.6	0.167	7.5	LOS A	1.0	7.0	0.55	0.64	0.55	36.0
West: Neville Street														
10	L2	51	4.2	51	4.2	0.295	6.6	LOS A	1.9	13.7	0.60	0.69	0.60	43.3
11	T1	82	2.6	82	2.6	0.295	6.5	LOS A	1.9	13.7	0.60	0.69	0.60	42.2
12	R2	45	0.0	45	0.0	0.295	9.6	LOS A	1.9	13.7	0.60	0.69	0.60	42.2
12u	U	53	0.0	53	0.0	0.295	12.3	LOS A	1.9	13.7	0.60	0.69	0.60	49.0
Approach		231	1.8	231	1.8	0.295	8.4	LOS A	1.9	13.7	0.60	0.69	0.60	44.6
All Vehicles		900	1.5	891 ^{N1}	1.5	0.345	6.7	LOS A	2.3	16.7	0.59	0.63	0.59	38.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 7 [7. The Horsley Drive/Justin Street_2033_wo_AM (Site Folder: 2033_without_dev_AM)]**

 **Network: 3 [2033_withoutDev_AM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 85 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Justin Street														
1	L2	29	0.0	29	0.0	0.082	30.9	LOS C	1.1	7.9	0.81	0.68	0.81	24.1
2	T1	51	6.3	51	6.3	* 0.329	30.0	LOS C	3.1	22.1	0.86	0.72	0.86	26.8
3	R2	40	0.0	40	0.0	0.329	33.7	LOS C	3.1	22.1	0.87	0.72	0.87	15.1
Approach		120	2.6	120	2.6	0.329	31.5	LOS C	3.1	22.1	0.85	0.71	0.85	23.5
East: The Horsley Drive														
4	L2	162	0.6	153	0.7	* 0.789	16.5	LOS B	21.1	150.9	0.69	0.68	0.72	23.2
5	T1	673	3.1	635	3.2	0.789	14.9	LOS B	21.1	150.9	0.70	0.70	0.76	29.7
6	R2	114	3.7	107	3.8	0.789	47.7	LOS D	6.7	48.4	1.00	1.00	1.30	23.2
Approach		948	2.8	895 ^{N1}	2.8	0.789	19.1	LOS B	21.1	150.9	0.74	0.73	0.82	27.7
North: Justin Street														
7	L2	36	8.8	36	8.8	0.133	32.8	LOS C	1.2	9.2	0.83	0.71	0.83	23.4
8	T1	37	2.9	37	2.9	0.164	28.4	LOS B	2.0	14.5	0.83	0.67	0.83	24.4
9	R2	23	4.5	23	4.5	0.164	31.8	LOS C	2.0	14.5	0.83	0.67	0.83	28.5
Approach		96	5.5	96	5.5	0.164	30.9	LOS C	2.0	14.5	0.83	0.68	0.83	25.3
West: The Horsley Drive														
10	L2	76	4.2	76	4.2	0.697	15.2	LOS B	16.1	117.9	0.72	0.67	0.72	34.5
11	T1	580	5.4	580	5.4	0.697	15.2	LOS B	16.1	117.9	0.75	0.70	0.78	25.5
12	R2	42	5.0	42	5.0	0.697	42.8	LOS D	5.2	37.7	0.98	0.91	1.16	16.2
Approach		698	5.3	698	5.3	0.697	16.8	LOS B	16.1	117.9	0.76	0.71	0.79	26.4
All Vehicles		1862	3.8	1809 ^{N1}	4.0	0.789	19.7	LOS B	21.1	150.9	0.76	0.72	0.81	26.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

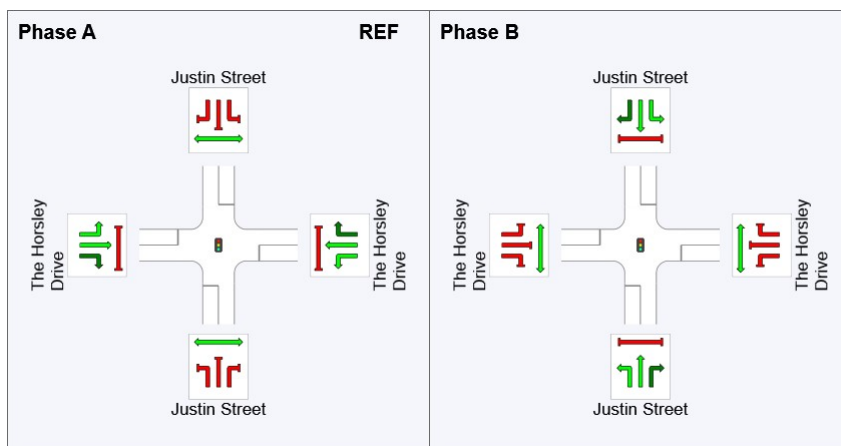
* Critical Movement (Signal Timing)

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Justin Street											
P1	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
East: The Horsley Drive											
P2	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
North: Justin Street											
P3	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
West: The Horsley Drive											
P4	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
All Pedestrians		211	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
-------	---	---

Phase Change Time (sec)	0	59
Green Time (sec)	53	20
Phase Time (sec)	59	26
Phase Split	69%	31%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 8 [8. Smithfield Road/The Horsely Drive_2033_wo_AM (Site Folder: 2033_without_dev_AM)]**

 **Network: 3 [2033_withoutDev_AM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C*, D, E, F, F1*, F2*

Output Phase Sequence: A, B*, D, E, F, F2*

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: The Horsely Drive														
4a	L1	40	2.6	40	2.6	0.589	34.4	LOS C	24.8	180.6	0.80	0.79	0.80	29.3
5	T1	719	5.0	719	5.0	* 1.114	91.5	LOS F	45.9	351.6	0.87	1.06	1.26	15.1
6b	R3	325	28.5	325	28.5	1.114	198.8	LOS F	45.9	351.6	1.00	1.39	2.10	13.6
Approach		1084	11.9	1084	11.9	1.114	121.6	LOS F	45.9	351.6	0.91	1.15	1.49	14.6
NorthEast: Smithfield Road														
24b	L3	542	23.9	542	23.9	0.539	16.2	LOS B	15.1	127.1	0.51	0.76	0.51	49.9
25	T1	1328	10.5	1328	10.5	0.917	68.0	LOS E	39.3	300.2	0.98	1.05	1.24	19.6
26a	R1	164	1.3	164	1.3	* 1.103	182.5	LOS F	19.6	138.6	1.00	1.27	2.08	8.7
Approach		2035	13.3	2035	13.3	1.103	63.5	LOS E	39.3	300.2	0.86	0.99	1.11	23.8
West: The Horsely Drive														
10a	L1	228	7.4	228	7.4	1.077	136.0	LOS F	35.0	260.2	1.00	1.40	1.86	12.0
11	T1	507	6.8	507	6.8	1.077	150.1	LOS F	41.3	305.9	1.00	1.50	1.86	12.2
Approach		736	7.0	736	7.0	1.077	145.7	LOS F	41.3	305.9	1.00	1.47	1.86	12.1
SouthWest: Smithfield Road														
30b	L3	117	0.8	117	0.8	1.133	174.4	LOS F	58.2	424.3	1.00	1.36	2.04	4.4
31	T1	1959	5.9	1959	5.9	* 1.133	186.2	LOS F	58.2	424.3	1.00	1.62	2.02	11.5
32a	R1	104	2.7	104	2.7	0.648	42.8	LOS D	4.4	31.4	1.00	0.79	1.05	32.5
Approach		2180	5.4	2180	5.4	1.133	178.7	LOS F	58.2	424.3	1.00	1.56	1.97	11.5
All Vehicles		6035	9.5	6034 ^N ₁	9.5	1.133	125.6	LOS F	58.2	424.3	0.94	1.28	1.58	14.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

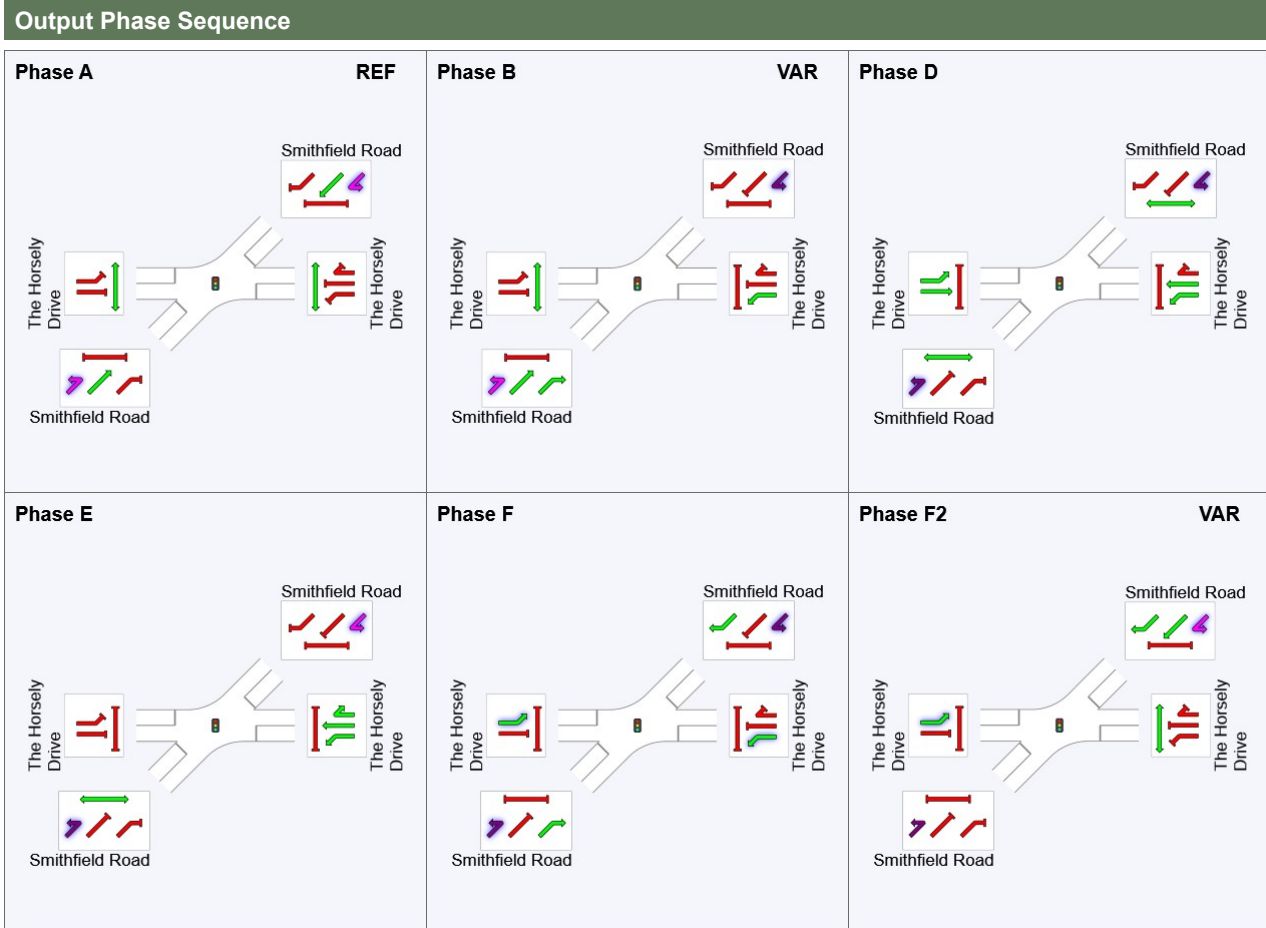
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped	Dist]			sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B	D	E	F	F2
Phase Change Time (sec)	0	43	55	86	123	135
Green Time (sec)	37	6	25	31	6	***
Phase Time (sec)	43	12	31	37	12	5
Phase Split	31%	9%	22%	26%	9%	4%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

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Organisation: STANTEC NEW ZEALAND | Licence: NETWORK / Enterprise | Created: Wednesday, 13 March 2024 11:30:09 AM
Project: \\au2012-pfss01\shared_projects\300304533\technical\modelling\240220_88-102 Smithfield Rd, Smithfield.sip9

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 1 [1. Smithfield Road/Brenan Street_2033_wo_PM (Site Folder: 2033_without_dev_PM)]

 Network: 4 [2033_withoutDev_PM (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	79	1.1	79	1.1	0.223	52.3	LOS D	4.9	34.6	0.87	0.74	0.87	31.1
5	T1	321	1.8	321	1.8	0.784	55.7	LOS D	20.5	145.4	0.97	0.89	1.04	20.0
Approach		400	1.6	400	1.6	0.784	55.1	LOS D	20.5	145.4	0.95	0.86	1.01	22.6
NorthEast: Smithfield Road														
24b	L3	177	4.6	158	4.6	0.643	22.2	LOS B	19.1	139.1	0.59	0.67	0.59	43.0
25	T1	2301	4.4	2059	4.4	* 0.643	13.5	LOS A	31.5	229.0	0.62	0.59	0.62	51.8
Approach		2478	4.4	2218 ^N ₁	4.4	0.643	14.2	LOS A	31.5	229.0	0.61	0.60	0.61	51.1
West: Brenan Street														
10a	L1	62	4.1	62	4.1	0.264	52.1	LOS D	5.7	43.3	0.87	0.73	0.87	9.0
11	T1	364	18.6	364	18.6	* 0.942	78.5	LOS F	26.8	217.5	0.99	1.12	1.33	18.8
Approach		426	16.5	426	16.5	0.942	74.6	LOS F	26.8	217.5	0.97	1.06	1.27	18.0
SouthWest: Smithfield Road														
30b	L3	92	2.7	92	2.7	0.548	19.9	LOS B	13.8	100.5	0.53	0.59	0.53	46.4
31	T1	1777	5.2	1777	5.2	0.548	12.1	LOS A	24.0	175.2	0.55	0.53	0.55	47.6
Approach		1868	5.0	1868	5.0	0.548	12.5	LOS A	24.0	175.2	0.55	0.53	0.55	47.5
All Vehicles		5173	5.4	4912 ^N ₁	5.7	0.942	22.1	LOS B	31.5	229.0	0.65	0.63	0.68	40.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

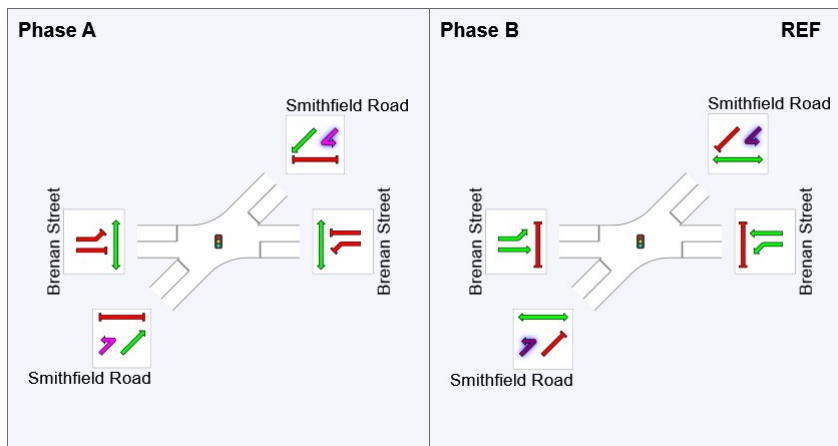
* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95
West: Brenan Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
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Phase Change Time (sec)	39	0
Green Time (sec)	95	33
Phase Time (sec)	101	39
Phase Split	72%	28%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 2 [2. Brenan Street/O'Connell Street_2033_wo_PM (Site Folder: 2033_without_dev_PM)]**

 **Network: 4 [2033_withoutDev_PM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	319	2.6	319	2.6	0.378	4.0	LOS A	2.3	16.8	0.18	0.49	0.18	45.0
6	R2	73	4.2	73	4.2	0.378	7.1	LOS A	2.3	16.8	0.18	0.49	0.18	34.6
6u	U	18	0.0	18	0.0	0.378	8.4	LOS A	2.3	16.8	0.18	0.49	0.18	34.6
Approach		409	2.7	409	2.7	0.378	4.8	LOS A	2.3	16.8	0.18	0.49	0.18	44.2
North: O'Connell Street														
7	L2	129	0.8	129	0.8	0.396	7.3	LOS A	1.5	10.3	0.60	0.71	0.60	33.0
9	R2	37	5.4	37	5.4	0.396	10.2	LOS A	1.5	10.3	0.60	0.71	0.60	42.8
9u	U	1	0.0	1	0.0	0.396	11.4	LOS A	1.5	10.3	0.60	0.71	0.60	33.0
Approach		167	1.8	167	1.8	0.396	8.0	LOS A	1.5	10.3	0.60	0.71	0.60	37.1
West: Brenan Street														
10	L2	14	13.3	14	13.3	0.499	5.1	LOS A	2.1	15.6	0.36	0.47	0.36	43.8
11	T1	263	4.6	263	4.6	0.499	4.6	LOS A	2.1	15.6	0.36	0.47	0.36	43.8
12u	U	2	0.0	2	0.0	0.499	9.0	LOS A	2.1	15.6	0.36	0.47	0.36	46.8
Approach		279	5.0	279	5.0	0.499	4.7	LOS A	2.1	15.6	0.36	0.47	0.36	43.9
All Vehicles		856	3.3	856	3.3	0.499	5.4	LOS A	2.3	16.8	0.32	0.53	0.32	43.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

▼ Site: 3 [3. Smithfield Road/Neville Street_2033_wo_PM (Site Folder: 2033_without_dev_PM)]

■ Network: 4 [2033_withoutDev_PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
NorthEast: Smithfield Road														
25	T1	2452	4.8	2190	4.8	0.386	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.7
Approach		2452	4.8	2190 ^N ₁	4.8	0.386	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.7
SouthWest: Smithfield Road														
30b	L3	36	0.0	36	0.0	0.357	7.4	LOS A	0.0	0.0	0.00	0.04	0.00	67.7
31	T1	1794	5.2	1794	5.2	0.357	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	69.0
Approach		1829	5.1	1829	5.1	0.357	0.2	NA	0.0	0.0	0.00	0.01	0.00	69.0
All Vehicles		4281	4.9	4020 ^N ₁	5.3	0.386	0.1	NA	0.0	0.0	0.00	0.01	0.00	69.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

▼ Site: 4 [4. Neville Street/Justin Street_2033_wo_PM (Site Folder: 2033_without_dev_PM)]

■ Network: 4 [2033_withoutDev_PM (Network Folder: General)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Neville Street														
5	T1	15	0.0	15	0.0	0.034	2.6	LOS A	0.1	0.8	0.27	0.53	0.27	23.7
6	R2	22	0.0	22	0.0	0.034	4.4	LOS A	0.1	0.8	0.27	0.53	0.27	23.7
Approach		37	0.0	37	0.0	0.034	3.7	LOS A	0.1	0.8	0.27	0.53	0.27	23.7
North: Justin Street														
9	R2	155	3.3	155	3.3	0.085	3.6	LOS A	0.0	0.0	0.00	0.50	0.00	33.7
Approach		155	3.3	155	3.3	0.085	3.6	NA	0.0	0.0	0.00	0.50	0.00	33.7
West: Neville Street														
10	L2	115	1.8	115	1.8	0.063	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	35.6
Approach		115	1.8	115	1.8	0.063	3.4	NA	0.0	0.0	0.00	0.45	0.00	35.6
All Vehicles		306	2.3	306	2.3	0.085	3.5	NA	0.1	0.8	0.03	0.48	0.03	34.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 5 [5. O'Connell Street/Neville Street_2033_wo_PM (Site Folder: 2033_without_dev_PM)]**

 **Network: 4 [2033_withoutDev_PM (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: O'Connell Street														
1	L2	15	0.0	15	0.0	0.135	6.3	LOS A	0.8	5.6	0.55	0.64	0.55	43.2
2	T1	57	3.6	57	3.6	0.135	6.3	LOS A	0.8	5.6	0.55	0.64	0.55	40.4
3	R2	29	10.3	29	10.3	0.135	9.8	LOS A	0.8	5.6	0.55	0.64	0.55	34.3
3u	U	2	0.0	2	0.0	0.135	10.9	LOS A	0.8	5.6	0.55	0.64	0.55	34.3
Approach		103	5.0	103	5.0	0.135	7.4	LOS A	0.8	5.6	0.55	0.64	0.55	39.9
East: Neville Street														
4	L2	100	1.0	100	1.0	0.328	3.6	LOS A	2.3	16.6	0.40	0.44	0.40	34.6
5	T1	227	1.3	227	1.3	0.328	3.3	LOS A	2.3	16.6	0.40	0.44	0.40	38.4
6	R2	21	10.0	21	10.0	0.328	6.6	LOS A	2.3	16.6	0.40	0.44	0.40	37.4
6u	U	2	0.0	2	0.0	0.328	10.5	LOS A	2.3	16.6	0.40	0.44	0.40	34.6
Approach		351	1.8	351	1.8	0.328	3.7	LOS A	2.3	16.6	0.40	0.44	0.40	37.8
North: O'Connell Street														
7	L2	26	0.0	26	0.0	0.115	3.5	LOS A	0.7	4.8	0.33	0.47	0.33	32.6
8	T1	49	4.2	49	4.2	0.115	3.2	LOS A	0.7	4.8	0.33	0.47	0.33	32.6
9	R2	31	3.4	31	3.4	0.115	6.4	LOS A	0.7	4.8	0.33	0.47	0.33	38.1
9u	U	6	14.3	6	14.3	0.115	10.7	LOS A	0.7	4.8	0.33	0.47	0.33	39.2
Approach		113	3.6	113	3.6	0.115	4.5	LOS A	0.7	4.8	0.33	0.47	0.33	35.7
West: Neville Street														
10	L2	12	0.0	12	0.0	0.080	4.7	LOS A	0.5	3.2	0.37	0.51	0.37	44.5
11	T1	46	2.2	46	2.2	0.080	4.7	LOS A	0.5	3.2	0.37	0.51	0.37	43.7
12	R2	8	0.0	8	0.0	0.080	7.8	LOS A	0.5	3.2	0.37	0.51	0.37	43.7
12u	U	8	0.0	8	0.0	0.080	10.6	LOS A	0.5	3.2	0.37	0.51	0.37	50.0
Approach		75	1.4	75	1.4	0.080	5.7	LOS A	0.5	3.2	0.37	0.51	0.37	44.9
All Vehicles		641	2.5	641	2.5	0.328	4.7	LOS A	2.3	16.6	0.41	0.49	0.41	38.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 7 [7. The Horsley Drive/Justin Street_2033_wo_PM (Site Folder: 2033_without_dev_PM)]**

 **Network: 4 [2033_withoutDev_PM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
South: Justin Street														
1	L2	42	2.4	42	2.4	0.135	43.7	LOS D	1.9	13.3	0.88	0.72	0.88	20.5
2	T1	46	0.0	46	0.0	0.413	44.3	LOS D	4.3	30.3	0.94	0.76	0.94	23.4
3	R2	43	2.4	43	2.4	0.413	47.7	LOS D	4.3	30.3	0.94	0.76	0.94	11.9
Approach		132	1.6	132	1.6	0.413	45.2	LOS D	4.3	30.3	0.92	0.75	0.92	19.7
East: The Horsley Drive														
4	L2	63	1.6	63	1.6	0.415	10.3	LOS A	11.3	81.6	0.45	0.43	0.45	29.0
5	T1	771	3.9	771	3.9	0.415	8.2	LOS A	11.3	81.6	0.48	0.47	0.48	33.5
6	R2	80	7.7	80	7.7	0.415	13.9	LOS A	9.6	69.7	0.54	0.52	0.54	34.2
Approach		914	4.0	914	4.0	0.415	8.9	LOS A	11.3	81.6	0.49	0.47	0.49	33.4
North: Justin Street														
7	L2	93	3.3	93	3.3	0.298	46.2	LOS D	4.2	30.4	0.92	0.76	0.92	20.3
8	T1	47	2.2	47	2.2	0.467	44.4	LOS D	5.8	40.6	0.95	0.78	0.95	20.0
9	R2	73	0.0	73	0.0	* 0.467	47.8	LOS D	5.8	40.6	0.95	0.78	0.95	24.4
Approach		213	1.9	213	1.9	0.467	46.3	LOS D	5.8	40.6	0.94	0.77	0.94	21.9
West: The Horsley Drive														
10	L2	106	1.9	106	1.9	0.099	9.5	LOS A	2.1	15.0	0.36	0.55	0.36	35.8
11	T1	457	4.3	457	4.3	* 0.490	7.9	LOS A	10.6	77.0	0.49	0.46	0.49	31.0
12	R2	12	8.3	12	8.3	0.490	11.4	LOS A	10.6	77.0	0.50	0.46	0.50	31.0
Approach		575	3.9	575	3.9	0.490	8.2	LOS A	10.6	77.0	0.47	0.47	0.47	32.6
All Vehicles		1833	3.6	1833	3.6	0.490	15.6	LOS B	11.3	81.6	0.56	0.53	0.56	29.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

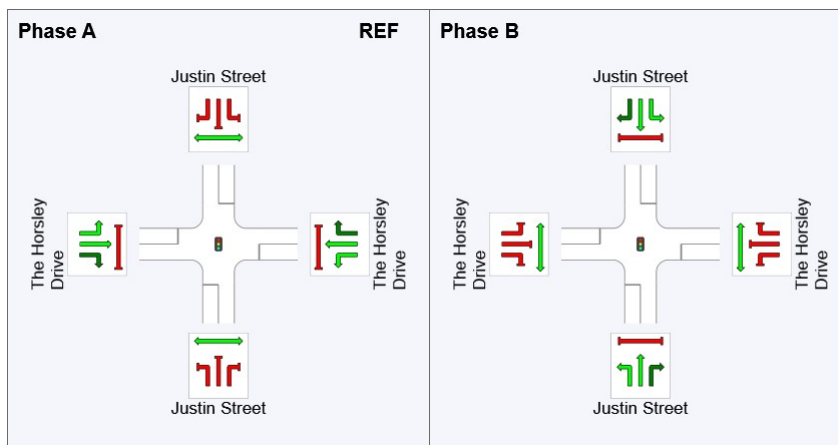
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m					
South: Justin Street											
P1	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
East: The Horsley Drive											
P2	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
North: Justin Street											
P3	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
West: The Horsley Drive											
P4	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
All Pedestrians		211	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

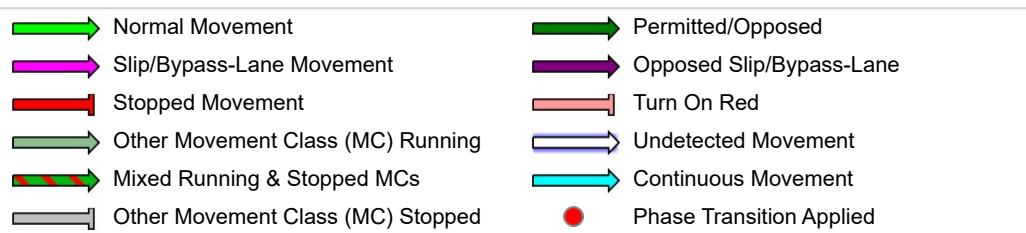
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	0	80
Green Time (sec)	74	19
Phase Time (sec)	80	25

Phase Split	76%	24%
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See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 8 [8. Smithfield Road/The Horsely Drive_2033_wo_PM (Site Folder: 2033_without_dev_PM)]**

 **Network: 4 [2033_withoutDev_PM (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C, D, E, F, F1*, F2*

Output Phase Sequence: A, C, D, E, F

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: The Horsely Drive														
4a	L1	32	3.2	32	3.2	0.952	82.9	LOS F	46.6	341.6	1.00	1.11	1.31	16.7
5	T1	516	5.6	516	5.6	0.952	81.1	LOS F	46.6	341.6	1.00	1.11	1.31	16.7
6b	R3	225	28.0	225	28.0	* 1.147	221.6	LOS F	15.1	130.7	1.00	1.36	2.32	12.4
Approach		773	12.0	773	12.0	1.147	122.1	LOS F	46.6	341.6	1.00	1.19	1.61	14.4
NorthEast: Smithfield Road														
24b	L3	851	9.0	851	9.0	0.798	23.2	LOS B	29.4	221.6	0.76	0.89	0.76	46.0
25	T1	2421	4.8	2421	4.8	* 1.121	180.8	LOS F	129.5	943.8	1.00	1.65	1.95	8.7
26a	R1	232	2.2	232	2.2	* 0.861	58.4	LOS E	11.7	83.4	1.00	0.97	1.23	22.1
Approach		3503	5.7	3503	5.7	1.121	134.4	LOS F	129.5	943.8	0.94	1.42	1.61	13.5
West: The Horsely Drive														
10a	L1	115	1.8	115	1.8	1.095	164.3	LOS F	34.3	246.1	1.00	1.52	1.98	11.2
11	T1	433	3.8	433	3.8	* 1.095	170.0	LOS F	34.3	246.1	1.00	1.59	2.01	11.1
Approach		547	3.4	547	3.4	1.095	168.8	LOS F	34.3	246.1	1.00	1.57	2.00	11.2
SouthWest: Smithfield Road														
30b	L3	67	3.1	67	3.1	0.861	69.2	LOS E	33.5	245.5	0.99	1.03	1.12	13.0
31	T1	1582	5.7	1582	5.7	0.861	52.1	LOS D	41.5	304.9	0.98	0.97	1.08	30.2
32a	R1	125	2.5	125	2.5	0.667	73.4	LOS F	8.6	61.6	1.00	0.82	1.05	24.0
Approach		1775	5.4	1775	5.4	0.861	54.2	LOS D	41.5	304.9	0.98	0.96	1.08	29.2
All Vehicles		6598	6.1	6598	6.1	1.147	114.3	LOS F	129.5	943.8	0.96	1.28	1.50	15.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

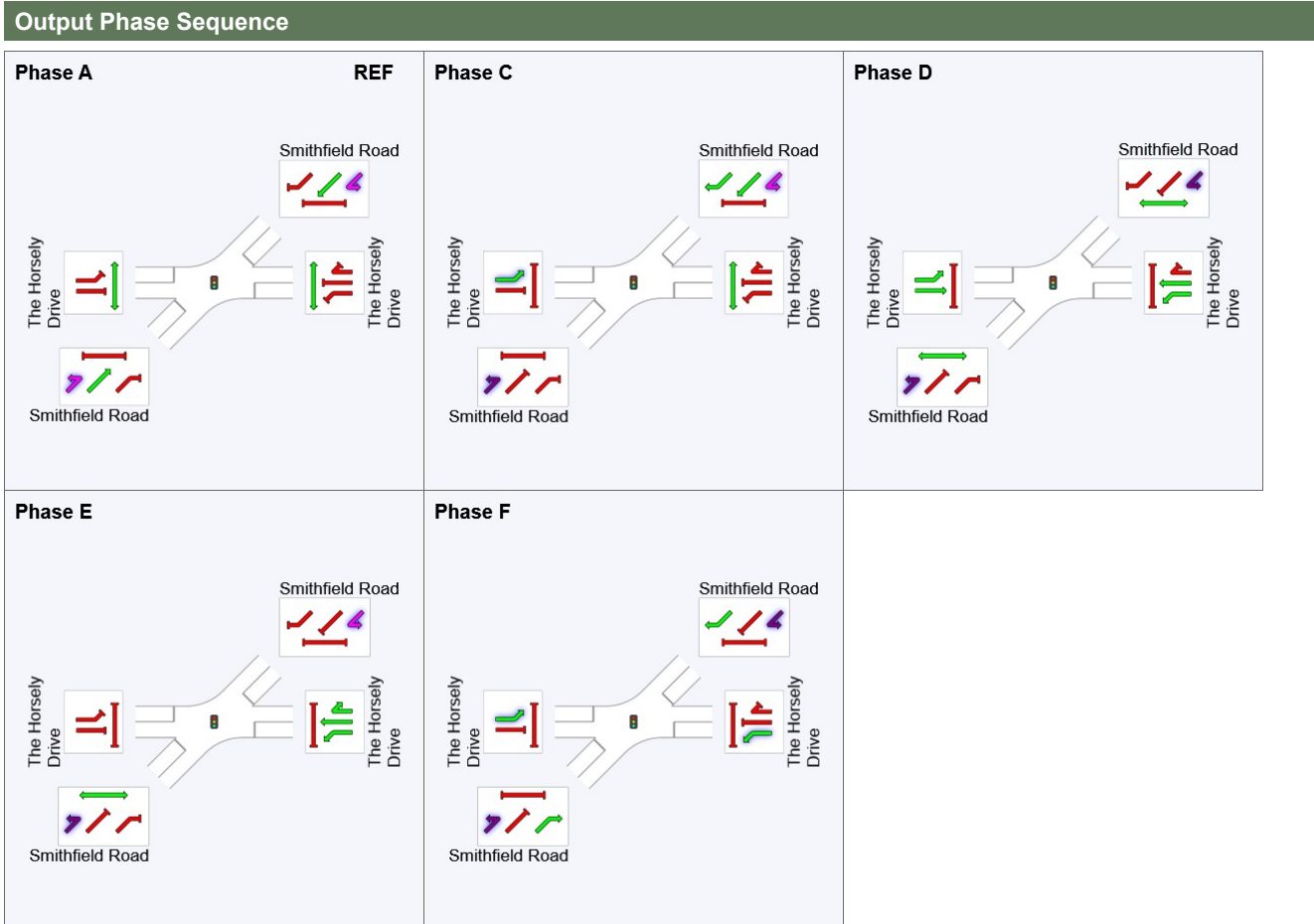
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance										
Mov	Dem.	Aver.	Level of	AVERAGE BACK OF		Prop.	Effective	Travel	Travel	Aver.

ID	Crossing	Flow	Delay	Service	QUEUE		Que	Stop	Time	Dist.	Speed
		ped/h	sec		[Ped	Dist]		Rate			
					ped	m			sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	C	D	E	F
Phase Change Time (sec)	0	59	71	104	120
Green Time (sec)	53	6	27	10	14
Phase Time (sec)	59	12	33	16	20
Phase Split	42%	9%	24%	11%	14%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 8 [8. Smithfield Road/The Horsely Drive_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]

 Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C*, D, E, F, F1*, F2*

Output Phase Sequence: A, B*, D, E, F, F2*

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: The Horsely Drive														
4a	L1	40	2.6	40	2.6	0.606	35.3	LOS C	25.6	186.3	0.81	0.79	0.81	28.9
5	T1	732	5.0	732	5.0	* 1.147	101.9	LOS F	49.6	379.5	0.88	1.10	1.32	13.9
6b	R3	325	28.5	325	28.5	1.147	224.0	LOS F	49.6	379.5	1.00	1.45	2.23	12.4
Approach		1097	11.9	1097	11.9	1.147	135.7	LOS F	49.6	379.5	0.92	1.19	1.57	13.3
NorthEast: Smithfield Road														
24b	L3	542	23.9	542	23.9	0.550	17.8	LOS B	16.4	138.6	0.55	0.77	0.55	48.9
25	T1	1328	10.5	1328	10.5	0.902	63.9	LOS E	38.4	293.2	0.97	1.02	1.20	20.5
26a	R1	180	1.3	180	1.3	* 1.108	186.5	LOS F	21.8	154.2	1.00	1.30	2.09	8.5
Approach		2051	13.3	2051	13.3	1.108	62.4	LOS E	38.4	293.2	0.87	0.98	1.10	24.0
West: The Horsely Drive														
10a	L1	239	7.4	239	7.4	1.100	154.3	LOS F	38.6	287.1	1.00	1.47	1.95	11.1
11	T1	515	6.8	515	6.8	1.100	167.8	LOS F	42.9	318.2	1.00	1.57	1.96	11.2
Approach		754	7.0	754	7.0	1.100	163.5	LOS F	42.9	318.2	1.00	1.54	1.96	11.2
SouthWest: Smithfield Road														
30b	L3	117	0.8	117	0.8	1.139	178.9	LOS F	58.2	424.3	1.00	1.37	2.06	4.3
31	T1	1966	5.9	1966	5.9	* 1.139	190.5	LOS F	58.2	424.3	1.00	1.63	2.04	11.3
32a	R1	111	2.7	111	2.7	0.687	43.2	LOS D	4.6	33.3	1.00	0.80	1.08	32.3
Approach		2194	5.4	2193 ^N ₁	5.4	1.139	182.5	LOS F	58.2	424.3	1.00	1.58	1.99	11.3
All Vehicles		6095	9.4	6094 ^N ₁	9.4	1.147	131.3	LOS F	58.2	424.3	0.94	1.30	1.61	14.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

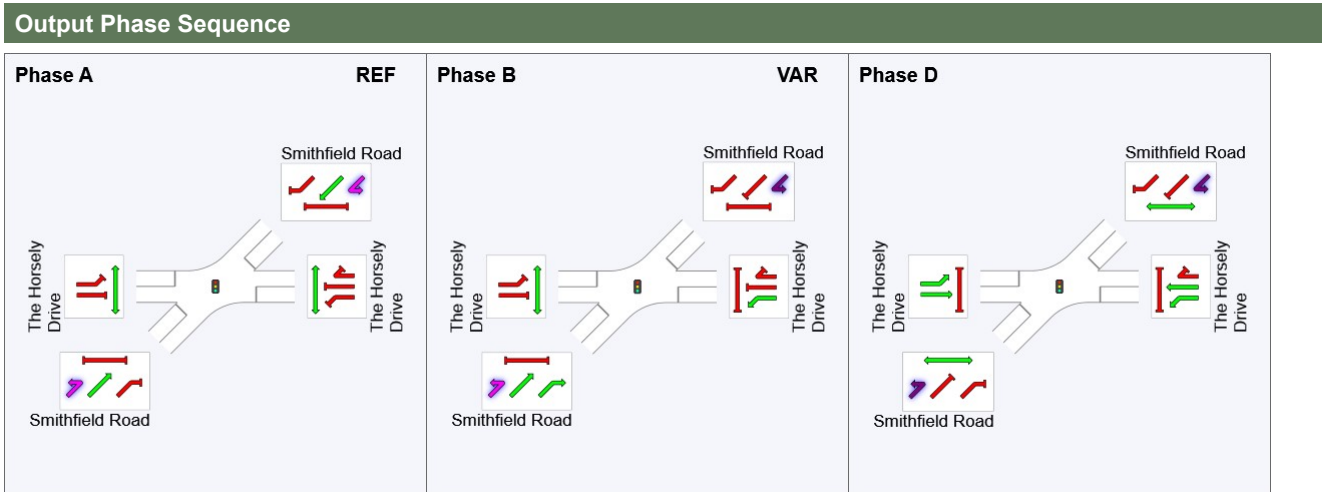
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

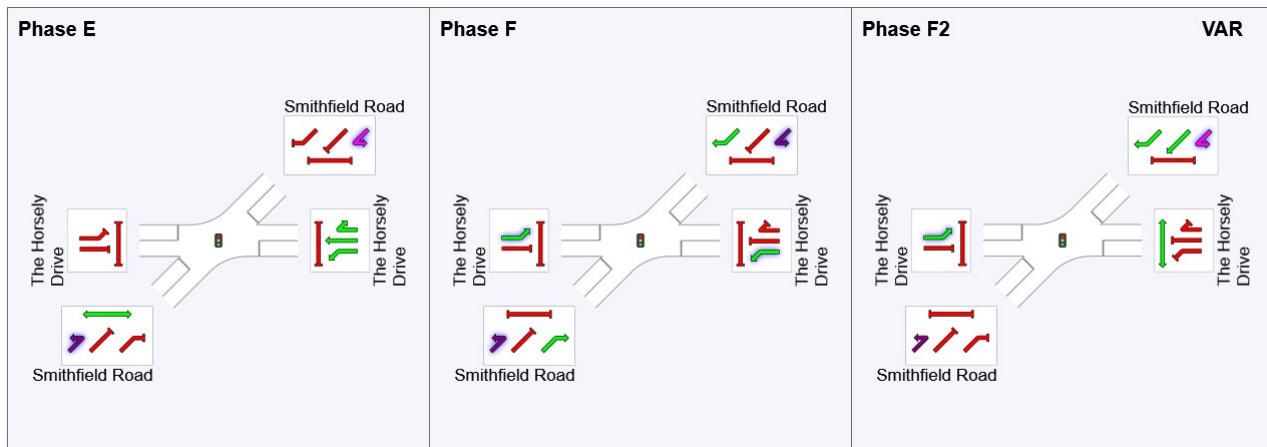
Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.





REF: Reference Phase

VAR: Variable Phase



Phase Timing Summary

Phase	A	B	D	E	F	F2
Phase Change Time (sec)	0	43	55	86	122	134
Green Time (sec)	37	6	25	30	6	***
Phase Time (sec)	43	12	31	36	12	6
Phase Split	31%	9%	22%	26%	9%	4%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Inter-green Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its inter-green time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

 **Site: 5 [5. O'Connell Street/Neville Street_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]**

 **Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: O'Connell Street														
1	L2	53	0.0	53	0.0	0.373	6.0	LOS A	2.5	17.7	0.67	0.70	0.67	36.1
2	T1	128	0.9	128	0.9	0.373	5.8	LOS A	2.5	17.7	0.67	0.70	0.67	34.7
3	R2	99	0.0	99	0.0	0.373	8.9	LOS A	2.5	17.7	0.67	0.70	0.67	29.6
3u	U	8	0.0	8	0.0	0.373	10.1	LOS A	2.5	17.7	0.67	0.70	0.67	29.6
Approach		288	0.4	288	0.4	0.373	7.0	LOS A	2.5	17.7	0.67	0.70	0.67	33.9
East: Neville Street														
4	L2	146	0.9	141	0.9	0.391	5.4	LOS A	2.7	19.4	0.62	0.62	0.62	33.3
5	T1	168	1.9	163	2.0	0.391	5.1	LOS A	2.7	19.4	0.62	0.62	0.62	37.8
6	R2	23	9.1	22	9.3	0.391	8.5	LOS A	2.7	19.4	0.62	0.62	0.62	36.5
6u	U	1	0.0	1	0.0	0.391	12.3	LOS A	2.7	19.4	0.62	0.62	0.62	33.3
Approach		339	2.0	328 ^{N1}	2.0	0.391	5.5	LOS A	2.7	19.4	0.62	0.62	0.62	36.5
North: O'Connell Street														
7	L2	23	0.0	23	0.0	0.194	5.6	LOS A	1.2	8.3	0.60	0.67	0.60	30.6
8	T1	51	0.0	51	0.0	0.194	5.3	LOS A	1.2	8.3	0.60	0.67	0.60	30.6
9	R2	40	2.6	40	2.6	0.194	8.5	LOS A	1.2	8.3	0.60	0.67	0.60	37.1
9u	U	33	3.2	33	3.2	0.194	12.7	LOS A	1.2	8.3	0.60	0.67	0.60	38.8
Approach		146	1.4	146	1.4	0.194	7.9	LOS A	1.2	8.3	0.60	0.67	0.60	35.4
West: Neville Street														
10	L2	51	4.2	51	4.2	0.346	7.1	LOS A	2.3	16.7	0.66	0.72	0.66	42.9
11	T1	94	2.6	94	2.6	0.346	7.0	LOS A	2.3	16.7	0.66	0.72	0.66	41.6
12	R2	62	0.0	62	0.0	0.346	10.1	LOS A	2.3	16.7	0.66	0.72	0.66	41.6
12u	U	53	0.0	53	0.0	0.346	12.8	LOS A	2.3	16.7	0.66	0.72	0.66	48.6
Approach		259	1.7	259	1.7	0.346	8.9	LOS A	2.3	16.7	0.66	0.72	0.66	43.8
All Vehicles		1033	1.4	1022 ^{N1}	1.4	0.391	7.1	LOS A	2.7	19.4	0.64	0.67	0.64	37.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 7 [7. The Horsley Drive/Justin Street_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]**

 **Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 85 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Justin Street														
1	L2	29	0.0	29	0.0	0.102	31.1	LOS C	1.4	10.2	0.82	0.67	0.82	24.2
2	T1	60	6.3	60	6.3	* 0.411	31.0	LOS C	3.6	25.9	0.88	0.73	0.88	26.5
3	R2	51	0.0	51	0.0	0.411	35.4	LOS C	3.6	25.9	0.90	0.75	0.90	14.6
Approach		140	2.7	140	2.7	0.411	32.6	LOS C	3.6	25.9	0.87	0.73	0.87	23.0
East: The Horsley Drive														
4	L2	182	0.6	170	0.7	* 0.808	18.1	LOS B	23.9	171.2	0.72	0.72	0.77	22.2
5	T1	681	3.1	637	3.2	0.808	15.2	LOS B	23.9	171.2	0.72	0.73	0.78	29.5
6	R2	114	3.7	106	3.8	0.808	50.7	LOS D	5.7	41.1	1.00	1.02	1.39	22.4
Approach		977	2.7	914 ^{N1}	2.8	0.808	19.8	LOS B	23.9	171.2	0.75	0.76	0.85	27.3
North: Justin Street														
7	L2	36	8.8	36	8.8	0.154	33.2	LOS C	1.2	9.4	0.84	0.71	0.84	23.3
8	T1	45	2.9	45	2.9	0.202	29.5	LOS C	2.5	18.1	0.85	0.69	0.85	24.0
9	R2	27	4.5	27	4.5	0.202	33.0	LOS C	2.5	18.1	0.85	0.69	0.85	28.2
Approach		108	5.3	108	5.3	0.202	31.6	LOS C	2.5	18.1	0.85	0.70	0.85	25.1
West: The Horsley Drive														
10	L2	78	4.2	78	4.2	0.808	22.7	LOS B	21.7	159.0	0.82	0.84	0.92	31.6
11	T1	586	5.4	586	5.4	0.808	22.5	LOS B	21.7	159.0	0.84	0.87	0.98	21.8
12	R2	42	5.0	42	5.0	0.808	50.4	LOS D	5.6	41.0	1.00	1.04	1.41	14.6
Approach		706	5.3	706	5.3	0.808	24.2	LOS B	21.7	159.0	0.85	0.87	1.00	23.0
All Vehicles		1932	3.8	1868 ^{N1}	3.9	0.808	23.1	LOS B	23.9	171.2	0.80	0.80	0.91	25.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

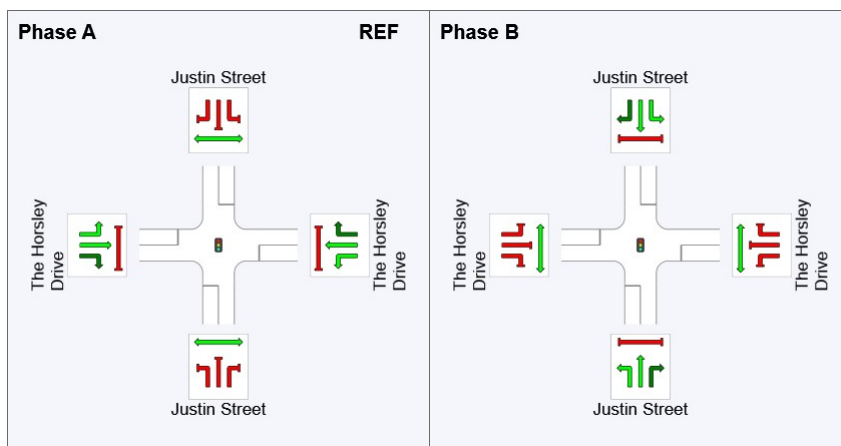
* Critical Movement (Signal Timing)

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Justin Street											
P1	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
East: The Horsley Drive											
P2	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
North: Justin Street											
P3	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
West: The Horsley Drive											
P4	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
All Pedestrians		211	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
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Phase Change Time (sec)	0	59
Green Time (sec)	53	20
Phase Time (sec)	59	26
Phase Split	69%	31%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Site: 4 [4. Neville Street/Justin Street_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]

Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
East: Neville Street														
5	T1	57	2.6	57	2.6	0.124	3.4	LOS A	0.5	3.4	0.38	0.60	0.38	21.7
6	R2	61	2.1	61	2.1	0.124	5.2	LOS A	0.5	3.4	0.38	0.60	0.38	21.7
Approach		118	2.3	118	2.3	0.124	4.3	LOS A	0.5	3.4	0.38	0.60	0.38	21.7
North: Justin Street														
9	R2	304	1.5	292	1.6	0.159	3.6	LOS A	0.0	0.0	0.00	0.49	0.00	33.7
Approach		304	1.5	292 ^{N1}	1.6	0.159	3.6	NA	0.0	0.0	0.00	0.49	0.00	33.7
West: Neville Street														
10	L2	116	1.0	116	1.0	0.063	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	35.6
Approach		116	1.0	116	1.0	0.063	3.4	NA	0.0	0.0	0.00	0.45	0.00	35.6
All Vehicles		538	1.6	526 ^{N1}	1.6	0.159	3.7	NA	0.5	3.4	0.09	0.51	0.09	33.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: 3 [3. Smithfield Road/Neville Street_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]

Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
NorthEast: Smithfield Road														
25	T1	1368	10.3	1368	10.3	0.250	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		1368	10.3	1368	10.3	0.250	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.8
SouthWest: Smithfield Road														
30b	L3	118	2.3	118	2.3	0.441	7.4	LOS A	21.1	155.3	0.00	0.10	0.00	64.5
31	T1	2338	6.5	2337	6.5	0.441	0.1	LOS A	43.6	322.1	0.00	0.03	0.00	68.0
Approach		2456	6.3	2455 ^N ₁	6.3	0.441	0.4	NA	43.6	322.1	0.00	0.03	0.00	67.9
All Vehicles		3824	7.7	3824	7.7	0.441	0.3	NA	43.6	322.1	0.00	0.02	0.00	68.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 2 [2. Brenan Street/O'Connell Street_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]**

 **Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	340	2.8	340	2.8	0.615	5.3	LOS A	5.3	38.0	0.41	0.58	0.41	43.7
6	R2	227	0.5	227	0.5	0.615	8.3	LOS A	5.3	38.0	0.41	0.58	0.41	31.6
6u	U	14	8.3	14	8.3	0.615	9.9	LOS A	5.3	38.0	0.41	0.58	0.41	31.6
Approach		581	2.1	581	2.1	0.615	6.6	LOS A	5.3	38.0	0.41	0.58	0.41	41.3
North: O'Connell Street														
7	L2	174	0.7	171	0.7	0.511	8.9	LOS A	3.3	22.9	0.73	0.81	0.78	30.4
9	R2	115	0.0	113	0.0	0.511	11.6	LOS A	3.3	22.9	0.73	0.81	0.78	41.5
9u	U	1	0.0	1	0.0	0.511	13.0	LOS A	3.3	22.9	0.73	0.81	0.78	30.4
Approach		289	0.4	285 ^{N1}	0.4	0.511	10.0	LOS A	3.3	22.9	0.73	0.81	0.78	37.3
West: Brenan Street														
10	L2	75	0.0	75	0.0	0.582	7.2	LOS A	4.0	28.8	0.69	0.65	0.69	42.0
11	T1	294	2.5	294	2.5	0.582	7.0	LOS A	4.0	28.8	0.69	0.65	0.69	42.0
12u	U	1	0.0	1	0.0	0.582	11.3	LOS A	4.0	28.8	0.69	0.65	0.69	45.7
Approach		369	2.0	369	2.0	0.582	7.0	LOS A	4.0	28.8	0.69	0.65	0.69	42.0
All Vehicles		1240	1.7	1235 ^{N1}	1.7	0.615	7.5	LOS A	5.3	38.0	0.57	0.66	0.58	40.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: 1 [1. Smithfield Road/Brenan Street_2033_w_AM_sc1 (Site Folder: 2033_with_dev_AM)]

Network: 10 [2033_withDev_AM-Scenario 1 (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	102	2.1	102	2.1	0.254	51.0	LOS D	5.8	41.7	0.86	0.75	0.86	31.4
5	T1	368	2.4	368	2.4	* 0.894	66.7	LOS E	27.1	193.3	0.99	1.04	1.23	17.9
Approach		471	2.3	471	2.3	0.894	63.3	LOS E	27.1	193.3	0.96	0.98	1.15	21.1
NorthEast: Smithfield Road														
24b	L3	71	4.5	71	4.5	0.414	21.3	LOS B	14.5	109.3	0.49	0.52	0.49	44.2
25	T1	1438	9.6	1438	9.6	0.414	11.8	LOS A	15.6	118.2	0.50	0.47	0.50	53.6
Approach		1508	9.4	1508	9.4	0.414	12.3	LOS A	15.6	118.2	0.50	0.47	0.50	53.0
West: Brenan Street														
10a	L1	71	0.0	70	0.0	0.243	50.0	LOS D	5.9	41.9	0.85	0.73	0.85	9.3
11	T1	395	2.2	392	2.2	0.868	61.0	LOS E	25.2	179.6	0.97	0.97	1.14	21.8
Approach		465	1.9	462 ^{N1}	1.9	0.868	59.3	LOS E	25.2	179.6	0.95	0.93	1.10	20.7
SouthWest: Smithfield Road														
30b	L3	195	1.7	195	1.7	0.891	41.6	LOS C	49.1	359.2	0.88	0.96	0.98	29.9
31	T1	2409	6.5	2409	6.5	* 0.891	29.9	LOS C	60.0	443.2	0.89	0.91	0.97	32.5
Approach		2604	6.1	2604	6.1	0.891	30.8	LOS C	60.0	443.2	0.89	0.91	0.97	32.3
All Vehicles		5048	6.3	5046 ^{N1}	6.3	0.894	30.9	LOS C	60.0	443.2	0.79	0.79	0.86	33.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

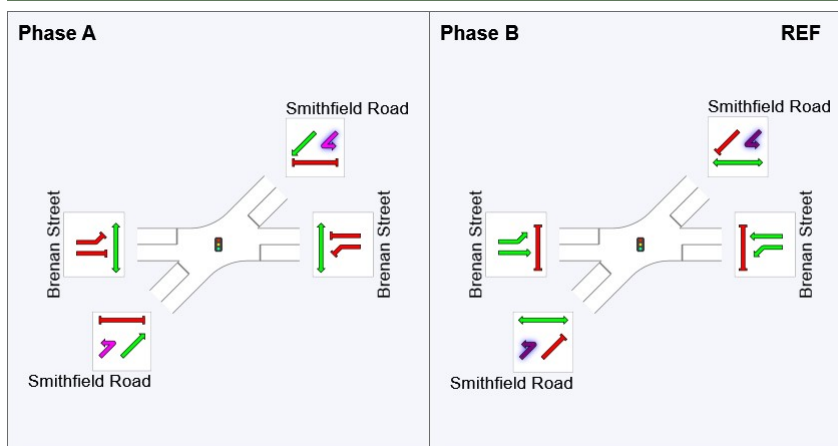
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec

East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95
West: Brenan Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	41	0
Green Time (sec)	93	35
Phase Time (sec)	99	41
Phase Split	71%	29%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time,

Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

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Project: \\au2012-pfss01\shared_projects\300304533\technical\modelling\240220_88-102 Smithfield Rd, Smithfield.sip9

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 3 [3. Smithfield Road/Neville Street_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]

 Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
NorthEast: Smithfield Road														
25	T1	2452	4.3	2190	4.2	0.385	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.7
Approach		2452	4.3	2190 ^N ₁	4.2	0.385	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.7
SouthWest: Smithfield Road														
30b	L3	65	0.0	65	0.0	0.377	7.4	LOS A	0.0	0.0	0.00	0.07	0.00	65.9
31	T1	1814	4.6	1814	4.6	0.377	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	68.1
Approach		1879	4.5	1879	4.5	0.377	0.3	NA	0.0	0.0	0.00	0.02	0.00	68.0
All Vehicles		4331	4.3	4069 ^N ₁	4.6	0.385	0.2	NA	0.0	0.0	0.00	0.01	0.00	68.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 1 [1. Smithfield Road/Brenan Street_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]**

 **Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	79	1.1	79	1.1	0.234	52.4	LOS D	5.2	36.6	0.87	0.74	0.87	31.2
5	T1	339	1.8	339	1.8	0.824	58.5	LOS E	22.1	157.1	0.98	0.93	1.10	19.4
Approach		418	1.6	418	1.6	0.824	57.4	LOS E	22.1	157.1	0.96	0.89	1.05	22.0
NorthEast: Smithfield Road														
24b	L3	177	4.6	158	4.7	0.643	22.3	LOS B	19.0	138.3	0.59	0.67	0.59	43.0
25	T1	2301	4.4	2058	4.4	* 0.643	13.5	LOS A	31.5	228.7	0.61	0.59	0.61	51.8
Approach		2478	4.4	2216 ^N ₁	4.4	0.643	14.2	LOS A	31.5	228.7	0.61	0.60	0.61	51.1
West: Brenan Street														
10a	L1	62	4.1	62	4.1	0.272	52.2	LOS D	5.9	44.9	0.87	0.73	0.87	9.0
11	T1	376	18.6	376	18.6	* 0.971	88.5	LOS F	28.1	228.5	0.99	1.18	1.41	17.4
Approach		438	16.6	438	16.6	0.971	83.3	LOS F	28.1	228.5	0.97	1.12	1.33	16.8
SouthWest: Smithfield Road														
30b	L3	109	2.7	109	2.7	0.567	20.1	LOS B	14.8	107.7	0.54	0.61	0.54	45.9
31	T1	1833	5.2	1833	5.2	0.567	12.3	LOS A	25.3	185.0	0.56	0.54	0.56	47.3
Approach		1942	5.0	1942	5.0	0.567	12.8	LOS A	25.3	185.0	0.56	0.54	0.56	47.2
All Vehicles		5276	5.4	5014 ^N ₁	5.7	0.971	23.3	LOS B	31.5	228.7	0.65	0.65	0.69	39.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

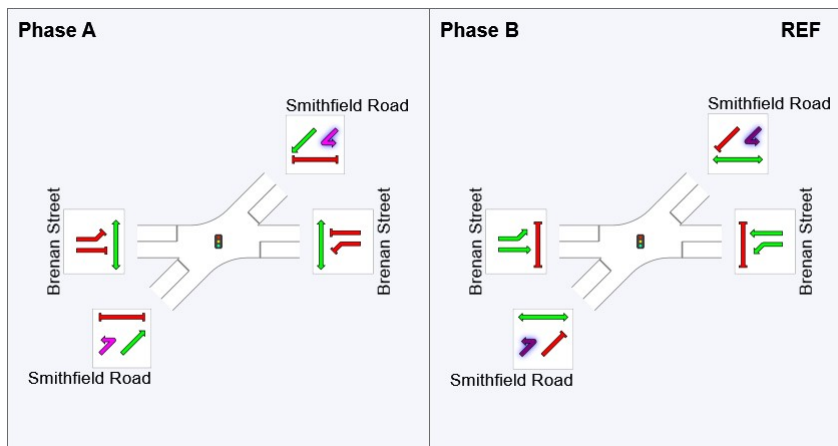
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
					[Ped	Dist]					

	ped/h	sec		ped	m		sec	m	m/sec
East: Brenan Street									
P2 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0 0.93
NorthEast: Smithfield Road									
P6 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8 0.95
West: Brenan Street									
P4 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0 0.93
SouthWest: Smithfield Road									
P8 Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5 0.95
All Pedestrians	211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8 0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	39	0
Green Time (sec)	95	33
Phase Time (sec)	101	39
Phase Split	72%	28%

See the Timing Analysis report for more detailed information including input values of

Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 2 [2. Brenan Street/O'Connell Street_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]**

 **Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	321	2.1	321	2.1	0.507	5.1	LOS A	3.4	24.1	0.35	0.56	0.35	44.6
6	R2	106	2.0	106	2.0	0.507	8.6	LOS A	3.4	24.1	0.35	0.56	0.35	32.9
6u	U	23	0.0	23	0.0	0.507	9.4	LOS A	3.4	24.1	0.35	0.56	0.35	32.9
Approach		451	2.0	451	2.0	0.507	6.2	LOS A	3.4	24.1	0.35	0.56	0.35	43.3
North: O'Connell Street														
7	L2	146	0.5	146	0.5	0.585	9.9	LOS A	2.9	20.6	0.67	0.82	0.78	30.3
9	R2	108	1.9	108	1.9	0.585	13.1	LOS A	2.9	20.6	0.67	0.82	0.78	43.7
9u	U	1	0.0	1	0.0	0.585	13.7	LOS A	2.9	20.6	0.67	0.82	0.78	30.3
Approach		256	1.1	256	1.1	0.585	11.3	LOS A	2.9	20.6	0.67	0.82	0.78	38.8
West: Brenan Street														
10	L2	53	5.9	53	5.9	0.628	6.0	LOS A	2.8	20.1	0.47	0.53	0.47	43.9
11	T1	265	4.1	265	4.1	0.628	5.2	LOS A	2.8	20.1	0.47	0.53	0.47	43.9
12u	U	2	0.0	2	0.0	0.628	9.5	LOS A	2.8	20.1	0.47	0.53	0.47	46.8
Approach		320	4.4	320	4.4	0.628	5.4	LOS A	2.8	20.1	0.47	0.53	0.47	43.9
All Vehicles		1026	2.5	1026	2.5	0.628	7.2	LOS A	3.4	24.1	0.47	0.62	0.50	42.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 5 [5. O'Connell Street/Neville Street_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]**

 **Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
South: O'Connell Street														
1	L2	37	0.0	37	0.0	0.191	7.0	LOS A	1.1	8.2	0.59	0.67	0.59	45.5
2	T1	58	2.9	58	2.9	0.191	6.6	LOS A	1.1	8.2	0.59	0.67	0.59	40.8
3	R2	48	7.9	48	7.9	0.191	10.0	LOS A	1.1	8.2	0.59	0.67	0.59	34.4
3u	U	2	0.0	2	0.0	0.191	11.1	LOS A	1.1	8.2	0.59	0.67	0.59	34.4
Approach		145	3.8	145	3.8	0.191	7.9	LOS A	1.1	8.2	0.59	0.67	0.59	41.3
East: Neville Street														
4	L2	135	0.6	135	0.6	0.396	5.0	LOS A	2.9	20.8	0.52	0.52	0.52	35.2
5	T1	232	1.2	232	1.2	0.396	4.0	LOS A	2.9	20.8	0.52	0.52	0.52	38.6
6	R2	21	9.1	21	9.1	0.396	7.3	LOS A	2.9	20.8	0.52	0.52	0.52	37.8
6u	U	2	0.0	2	0.0	0.396	11.2	LOS A	2.9	20.8	0.52	0.52	0.52	35.2
Approach		389	1.4	389	1.4	0.396	4.6	LOS A	2.9	20.8	0.52	0.52	0.52	38.0
North: O'Connell Street														
7	L2	26	0.0	26	0.0	0.147	4.1	LOS A	0.9	6.2	0.43	0.54	0.43	34.0
8	T1	71	1.9	71	1.9	0.147	5.1	LOS A	0.9	6.2	0.43	0.54	0.43	34.0
9	R2	31	3.0	31	3.0	0.147	7.0	LOS A	0.9	6.2	0.43	0.54	0.43	38.6
9u	U	6	12.5	6	12.5	0.147	11.3	LOS A	0.9	6.2	0.43	0.54	0.43	40.5
Approach		134	2.3	134	2.3	0.147	5.6	LOS A	0.9	6.2	0.43	0.54	0.43	36.5
West: Neville Street														
10	L2	12	0.0	12	0.0	0.128	5.0	LOS A	0.8	5.4	0.41	0.56	0.41	44.9
11	T1	58	2.0	58	2.0	0.128	4.9	LOS A	0.8	5.4	0.41	0.56	0.41	44.2
12	R2	39	0.0	39	0.0	0.128	8.9	LOS A	0.8	5.4	0.41	0.56	0.41	44.2
12u	U	8	0.0	8	0.0	0.128	10.8	LOS A	0.8	5.4	0.41	0.56	0.41	50.3
Approach		117	1.0	117	1.0	0.128	6.7	LOS A	0.8	5.4	0.41	0.56	0.41	45.0
All Vehicles		785	1.9	785	1.9	0.396	5.7	LOS A	2.9	20.8	0.50	0.56	0.50	39.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

▼ Site: 4 [4. Neville Street/Justin Street_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]

■ Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Neville Street														
5	T1	36	0.0	36	0.0	0.062	2.8	LOS A	0.2	1.6	0.29	0.54	0.29	23.9
6	R2	29	0.0	29	0.0	0.062	4.6	LOS A	0.2	1.6	0.29	0.54	0.29	23.9
Approach		65	0.0	65	0.0	0.062	3.6	LOS A	0.2	1.6	0.29	0.54	0.29	23.9
North: Justin Street														
9	R2	192	2.3	192	2.3	0.105	3.9	LOS A	0.0	0.0	0.00	0.52	0.00	35.4
Approach		192	2.3	192	2.3	0.105	3.9	NA	0.0	0.0	0.00	0.52	0.00	35.4
West: Neville Street														
10	L2	122	1.5	122	1.5	0.066	3.5	LOS A	0.0	0.0	0.00	0.46	0.00	35.9
Approach		122	1.5	122	1.5	0.066	3.5	NA	0.0	0.0	0.00	0.46	0.00	35.9
All Vehicles		379	1.6	379	1.6	0.105	3.7	NA	0.2	1.6	0.05	0.50	0.05	35.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

 **Site: 7 [7. The Horsley Drive/Justin Street_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]**

 **Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %				[Veh. veh	Dist] m				
South: Justin Street														
1	L2	42	2.1	42	2.1	0.151	45.7	LOS D	1.9	13.6	0.90	0.72	0.90	20.0
2	T1	56	0.0	56	0.0	0.497	46.0	LOS D	4.9	34.4	0.96	0.78	0.96	23.5
3	R2	43	2.1	43	2.1	0.497	49.5	LOS D	4.9	34.4	0.96	0.78	0.96	11.7
Approach		141	1.3	141	1.3	0.497	47.0	LOS D	4.9	34.4	0.94	0.76	0.94	19.8
East: The Horsley Drive														
4	L2	89	0.9	89	0.9	0.430	11.4	LOS A	11.9	85.6	0.46	0.46	0.46	29.5
5	T1	786	3.2	786	3.2	0.430	8.6	LOS A	11.9	85.6	0.50	0.49	0.50	34.0
6	R2	80	6.5	80	6.5	0.430	14.6	LOS B	10.5	75.6	0.56	0.54	0.56	34.5
Approach		956	3.3	956	3.3	0.430	9.4	LOS A	11.9	85.6	0.50	0.49	0.50	33.8
North: Justin Street														
7	L2	93	2.9	93	2.9	0.334	48.3	LOS D	4.3	31.2	0.94	0.76	0.94	19.8
8	T1	56	1.7	56	1.7	0.500	43.8	LOS D	6.4	45.2	0.95	0.78	0.95	20.6
9	R2	78	0.0	78	0.0	* 0.500	47.5	LOS D	6.4	45.2	0.95	0.78	0.95	25.2
Approach		226	1.6	226	1.6	0.500	46.9	LOS D	6.4	45.2	0.95	0.78	0.95	22.1
West: The Horsley Drive														
10	L2	106	1.6	106	1.6	0.104	9.6	LOS A	2.2	15.7	0.36	0.54	0.36	36.5
11	T1	458	3.8	458	3.8	* 0.512	8.5	LOS A	11.0	79.5	0.51	0.48	0.51	30.5
12	R2	12	7.7	12	7.7	0.512	12.0	LOS A	11.0	79.5	0.52	0.48	0.52	30.5
Approach		576	3.4	576	3.4	0.512	8.8	LOS A	11.0	79.5	0.49	0.49	0.49	32.5
All Vehicles		1899	3.0	1899	3.0	0.512	16.5	LOS B	11.9	85.6	0.58	0.54	0.58	29.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

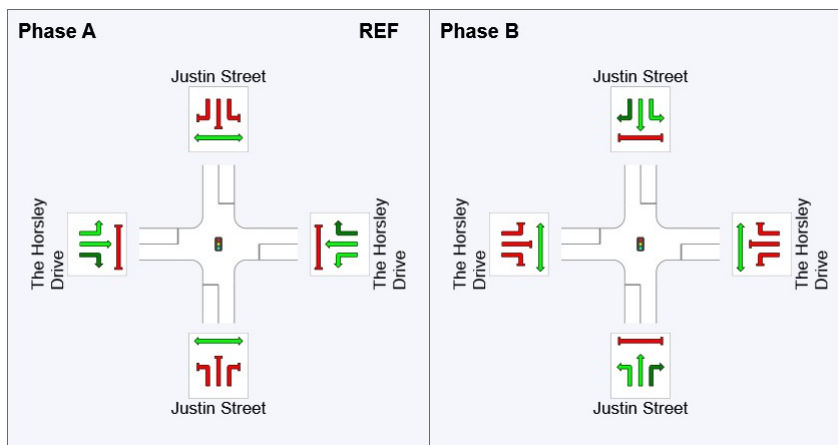
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m					
South: Justin Street											
P1	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
East: The Horsley Drive											
P2	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
North: Justin Street											
P3	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
West: The Horsley Drive											
P4	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
All Pedestrians		211	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	0	80
Green Time (sec)	74	19
Phase Time (sec)	80	25

Phase Split	76%	24%
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See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 8 [8. Smithfield Road/The Horsely Drive_2033_w_PM_sc1 (Site Folder: 2033_with_dev_PM)]**

 **Network: 9 [2033_withDev_PM-Scenario 1 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C, D, E, F, F1*, F2*

Output Phase Sequence: A, C, D, E, F

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: The Horsely Drive														
4a	L1	32	2.9	32	2.9	0.979	94.7	LOS F	51.8	376.3	1.00	1.18	1.40	15.1
5	T1	535	4.5	535	4.5	0.979	92.7	LOS F	51.8	376.3	1.00	1.18	1.40	15.1
6b	R3	225	25.4	225	25.4	* 1.131	208.8	LOS F	14.5	123.9	1.00	1.34	2.26	13.0
Approach		792	10.4	792	10.4	1.131	125.8	LOS F	51.8	376.3	1.00	1.22	1.64	14.1
NorthEast: Smithfield Road														
24b	L3	851	8.0	851	8.0	0.795	23.3	LOS B	29.4	219.9	0.76	0.89	0.76	46.0
25	T1	2421	4.3	2421	4.3	* 1.121	181.2	LOS F	130.1	943.9	1.00	1.66	1.95	8.7
26a	R1	255	1.8	255	1.8	0.821	44.5	LOS D	10.4	74.1	1.00	0.90	1.15	26.2
Approach		3526	5.0	3526	5.0	1.121	133.2	LOS F	130.1	943.9	0.94	1.42	1.60	13.5
West: The Horsely Drive														
10a	L1	119	1.6	119	1.6	1.107	173.2	LOS F	35.7	255.9	1.00	1.55	2.03	10.8
11	T1	436	3.3	436	3.3	* 1.107	178.9	LOS F	35.7	255.9	1.00	1.62	2.05	10.7
Approach		555	3.0	555	3.0	1.107	177.6	LOS F	35.7	255.9	1.00	1.61	2.05	10.7
SouthWest: Smithfield Road														
30b	L3	65	2.6	65	2.6	0.885	76.2	LOS F	35.1	255.3	1.00	1.08	1.17	11.9
31	T1	1549	5.0	1549	5.0	0.885	58.5	LOS E	42.8	312.3	0.99	1.01	1.14	28.3
32a	R1	131	1.7	131	1.7	* 0.691	73.6	LOS F	9.0	64.1	1.00	0.83	1.07	23.9
Approach		1745	4.7	1745	4.7	0.885	60.3	LOS E	42.8	312.3	0.99	1.00	1.13	27.4
All Vehicles		6618	5.4	6618	5.4	1.131	116.8	LOS F	130.1	943.9	0.97	1.30	1.52	15.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

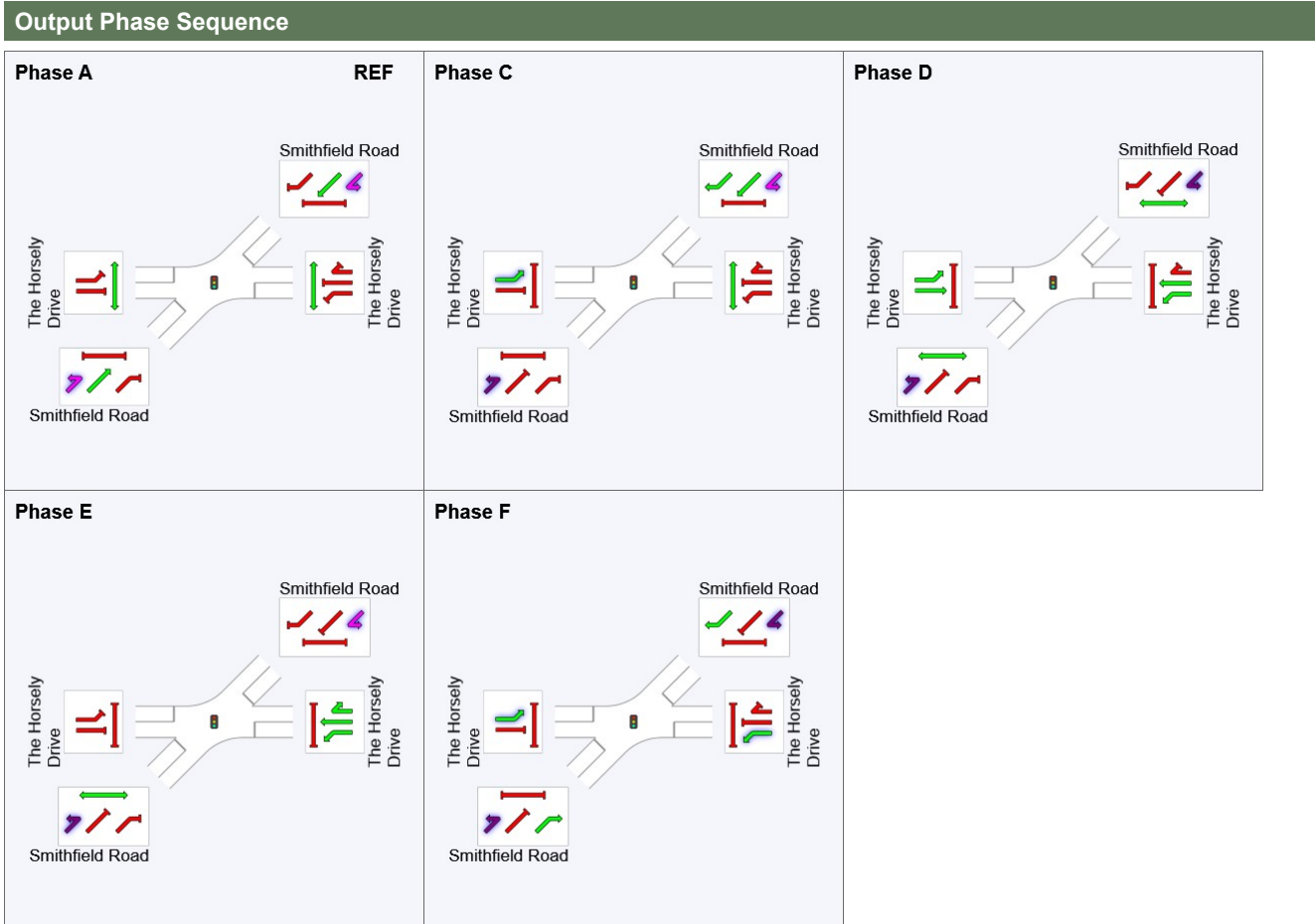
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance										
Mov	Dem.	Aver.	Level of	AVERAGE BACK OF		Prop.	Effective	Travel	Travel	Aver.

ID	Crossing	Flow	Delay	Service	QUEUE		Que	Stop	Time	Dist.	Speed
		ped/h	sec		[Ped	Dist]		Rate		m	m/sec
					ped	m			sec		
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	C	D	E	F
Phase Change Time (sec)	0	56	71	104	120
Green Time (sec)	50	9	27	10	14
Phase Time (sec)	56	15	33	16	20
Phase Split	40%	11%	24%	11%	14%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 5 [5. O'Connell Street/Neville Street_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]

 Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: O'Connell Street														
1	L2	76	0.0	76	0.0	0.404	6.1	LOS A	2.8	19.7	0.68	0.70	0.68	36.1
2	T1	128	0.9	128	0.9	0.404	5.9	LOS A	2.8	19.7	0.68	0.70	0.68	34.7
3	R2	99	0.0	99	0.0	0.404	9.0	LOS A	2.8	19.7	0.68	0.70	0.68	29.5
3u	U	8	0.0	8	0.0	0.404	10.2	LOS A	2.8	19.7	0.68	0.70	0.68	29.5
Approach		312	0.4	312	0.4	0.404	7.0	LOS A	2.8	19.7	0.68	0.70	0.68	34.2
East: Neville Street														
4	L2	162	0.9	156	0.9	0.431	6.0	LOS A	3.1	21.8	0.67	0.67	0.67	32.8
5	T1	168	1.9	163	2.0	0.431	5.7	LOS A	3.1	21.8	0.67	0.67	0.67	37.5
6	R2	23	9.1	22	9.3	0.431	9.1	LOS A	3.1	21.8	0.67	0.67	0.67	36.1
6u	U	1	0.0	1	0.0	0.431	12.8	LOS A	3.1	21.8	0.67	0.67	0.67	32.8
Approach		355	1.9	342 ^{N1}	2.0	0.431	6.1	LOS A	3.1	21.8	0.67	0.67	0.67	36.1
North: O'Connell Street														
7	L2	23	0.0	23	0.0	0.223	5.9	LOS A	1.4	9.7	0.63	0.69	0.63	30.3
8	T1	67	0.0	67	0.0	0.223	5.6	LOS A	1.4	9.7	0.63	0.69	0.63	30.3
9	R2	40	2.6	40	2.6	0.223	8.9	LOS A	1.4	9.7	0.63	0.69	0.63	37.0
9u	U	33	3.2	33	3.2	0.223	13.0	LOS A	1.4	9.7	0.63	0.69	0.63	38.6
Approach		163	1.3	163	1.3	0.223	7.9	LOS A	1.4	9.7	0.63	0.69	0.63	34.8
West: Neville Street														
10	L2	51	4.2	51	4.2	0.378	7.2	LOS A	2.6	18.7	0.68	0.74	0.68	42.7
11	T1	94	2.6	94	2.6	0.378	7.1	LOS A	2.6	18.7	0.68	0.74	0.68	41.3
12	R2	86	0.0	86	0.0	0.378	10.2	LOS A	2.6	18.7	0.68	0.74	0.68	41.3
12u	U	53	0.0	53	0.0	0.378	12.9	LOS A	2.6	18.7	0.68	0.74	0.68	48.4
Approach		283	1.6	283	1.6	0.378	9.2	LOS A	2.6	18.7	0.68	0.74	0.68	43.4
All Vehicles		1113	1.3	1100 ^N ₁	1.3	0.431	7.4	LOS A	3.1	21.8	0.67	0.70	0.67	37.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: 4 [4. Neville Street/Justin Street_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]

Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
East: Neville Street														
5	T1	61	2.6	61	2.6	0.135	3.5	LOS A	0.5	3.7	0.40	0.61	0.40	21.5
6	R2	65	2.1	65	2.1	0.135	5.3	LOS A	0.5	3.7	0.40	0.61	0.40	21.5
Approach		126	2.3	126	2.3	0.135	4.4	LOS A	0.5	3.7	0.40	0.61	0.40	21.5
North: Justin Street														
9	R2	320	1.5	307	1.6	0.167	3.6	LOS A	0.0	0.0	0.00	0.49	0.00	33.7
Approach		320	1.5	307 ^{N1}	1.6	0.167	3.6	NA	0.0	0.0	0.00	0.49	0.00	33.7
West: Neville Street														
10	L2	116	1.0	116	1.0	0.063	3.4	LOS A	0.0	0.0	0.00	0.45	0.00	35.6
Approach		116	1.0	116	1.0	0.063	3.4	NA	0.0	0.0	0.00	0.45	0.00	35.6
All Vehicles		562	1.6	549 ^{N1}	1.7	0.167	3.7	NA	0.5	3.7	0.09	0.51	0.09	33.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

▼ Site: 3 [3. Smithfield Road/Neville Street_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]

■ Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]

New Site

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
NorthEast: Smithfield Road														
25	T1	1368	10.3	1368	10.3	0.250	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		1368	10.3	1368	10.3	0.250	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.8
SouthWest: Smithfield Road														
30b	L3	126	2.3	126	2.3	0.447	7.4	LOS A	31.0	227.9	0.00	0.11	0.00	64.2
31	T1	2361	6.5	2361	6.5	0.447	0.1	LOS A	50.5	373.3	0.00	0.03	0.00	67.9
Approach		2487	6.3	2487	6.3	0.447	0.5	NA	50.5	373.3	0.00	0.04	0.00	67.7
All Vehicles		3856	7.7	3855 ^N ₁	7.7	0.447	0.3	NA	50.5	373.3	0.00	0.02	0.00	68.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 2 [2. Brenan Street/O'Connell Street_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]**

 **Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	340	2.8	340	2.8	0.715	7.6	LOS A	7.2	51.6	0.53	0.68	0.58	42.0
6	R2	237	0.5	237	0.5	0.715	10.6	LOS A	7.2	51.6	0.53	0.68	0.58	28.2
6u	U	14	8.3	14	8.3	0.715	12.2	LOS A	7.2	51.6	0.53	0.68	0.58	28.2
Approach		591	2.0	591	2.0	0.715	8.9	LOS A	7.2	51.6	0.53	0.68	0.58	39.1
North: O'Connell Street														
7	L2	184	0.7	181	0.7	0.755	15.4	LOS B	6.3	44.4	0.80	0.99	1.16	24.1
9	R2	178	0.0	175	0.0	0.755	18.1	LOS B	6.3	44.4	0.80	0.99	1.16	37.5
9u	U	1	0.0	1	0.0	0.755	19.5	LOS B	6.3	44.4	0.80	0.99	1.16	24.1
Approach		363	0.3	357 ^{N1}	0.3	0.755	16.8	LOS B	6.3	44.4	0.80	0.99	1.16	33.1
West: Brenan Street														
10	L2	97	0.0	97	0.0	0.801	14.8	LOS B	7.1	50.6	0.73	0.85	1.02	35.9
11	T1	294	2.5	294	2.5	0.801	14.6	LOS B	7.1	50.6	0.73	0.85	1.02	35.9
12u	U	1	0.0	1	0.0	0.801	18.9	LOS B	7.1	50.6	0.73	0.85	1.02	41.8
Approach		392	1.9	392	1.9	0.801	14.6	LOS B	7.1	50.6	0.73	0.85	1.02	35.9
All Vehicles		1345	1.5	1340 ^{N1}	1.5	0.801	12.7	LOS A	7.2	51.6	0.66	0.82	0.86	36.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 1 [1. Smithfield Road/Brenan Street_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]**

 **Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	102	2.1	102	2.1	0.285	53.9	LOS D	6.1	43.7	0.89	0.76	0.89	30.6
5	T1	378	2.4	378	2.4	* 1.004	110.5	LOS F	36.5	260.9	1.00	1.31	1.56	12.6
Approach		480	2.3	480	2.3	1.004	98.4	LOS F	36.5	260.9	0.97	1.19	1.42	15.8
NorthEast: Smithfield Road														
24b	L3	71	4.5	71	4.5	0.401	20.0	LOS B	13.4	101.2	0.46	0.50	0.46	45.2
25	T1	1438	9.6	1438	9.6	0.401	10.4	LOS A	14.6	110.6	0.47	0.44	0.47	55.1
Approach		1508	9.4	1508	9.4	0.401	10.9	LOS A	14.6	110.6	0.47	0.45	0.47	54.5
West: Brenan Street														
10a	L1	71	0.0	70	0.0	0.275	52.9	LOS D	6.2	44.0	0.88	0.74	0.88	8.9
11	T1	405	2.2	403	2.2	0.981	92.5	LOS F	32.0	228.5	0.99	1.20	1.44	16.9
Approach		476	1.9	473 ^{N1}	1.9	0.981	86.6	LOS F	32.0	228.5	0.97	1.13	1.35	16.3
SouthWest: Smithfield Road														
30b	L3	195	1.7	195	1.7	1.008	79.3	LOS F	76.5	560.5	1.00	1.19	1.45	15.1
31	T1	2451	6.5	2451	6.5	* 1.008	84.3	LOS F	101.8	751.7	1.00	1.26	1.44	15.7
Approach		2645	6.1	2645	6.1	1.008	83.9	LOS F	101.8	751.7	1.00	1.26	1.44	15.7
All Vehicles		5109	6.3	5107 ^{N1}	6.3	1.008	64.0	LOS E	101.8	751.7	0.84	1.00	1.14	21.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

* Critical Movement (Signal Timing)

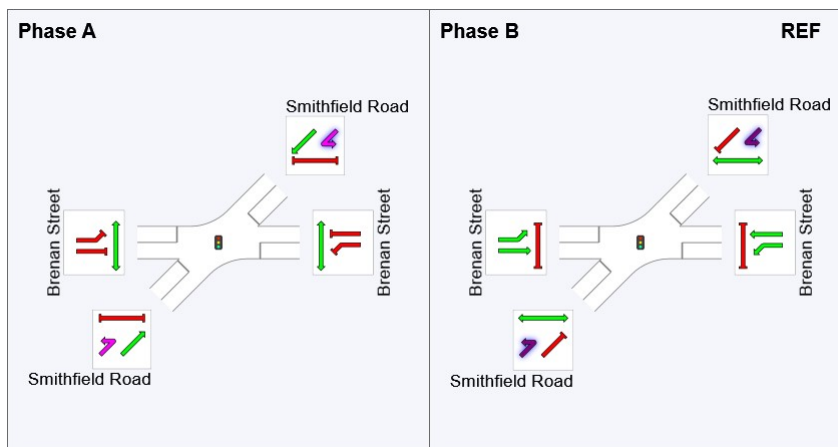
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec

East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95
West: Brenan Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
Phase Change Time (sec)	38	0
Green Time (sec)	96	32
Phase Time (sec)	102	38
Phase Split	73%	27%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time,

Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 7 [7. The Horsley Drive/Justin Street_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]**

 **Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 85 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Justin Street														
1	L2	29	0.0	29	0.0	0.106	31.1	LOS C	1.5	10.6	0.82	0.67	0.82	24.2
2	T1	68	6.3	68	6.3	* 0.426	30.5	LOS C	3.8	27.6	0.88	0.73	0.88	26.6
3	R2	51	0.0	51	0.0	0.426	34.7	LOS C	3.8	27.6	0.89	0.75	0.89	14.8
Approach		148	2.9	148	2.9	0.426	32.1	LOS C	3.8	27.6	0.87	0.73	0.87	23.4
East: The Horsley Drive														
4	L2	195	0.6	181	0.7	* 0.826	19.7	LOS B	26.3	188.5	0.74	0.75	0.81	21.2
5	T1	693	3.1	645	3.2	0.826	16.2	LOS B	26.3	188.5	0.74	0.76	0.81	29.0
6	R2	114	3.7	106	3.8	0.826	52.8	LOS D	5.2	37.9	1.00	1.03	1.45	22.0
Approach		1001	2.7	933 ^{N1}	2.8	0.826	21.1	LOS B	26.3	188.5	0.77	0.79	0.88	26.7
North: Justin Street														
7	L2	36	8.8	36	8.8	0.153	33.2	LOS C	1.2	9.4	0.84	0.71	0.84	23.3
8	T1	48	2.9	48	2.9	0.226	29.7	LOS C	2.8	20.3	0.86	0.70	0.86	24.0
9	R2	33	4.5	33	4.5	0.226	33.2	LOS C	2.8	20.3	0.86	0.70	0.86	28.1
Approach		117	5.2	117	5.2	0.226	31.8	LOS C	2.8	20.3	0.85	0.70	0.85	25.2
West: The Horsley Drive														
10	L2	78	4.2	78	4.2	0.815	23.6	LOS B	22.6	165.1	0.83	0.85	0.94	31.4
11	T1	586	5.4	586	5.4	0.815	23.0	LOS B	22.6	165.1	0.85	0.88	1.00	21.6
12	R2	42	5.0	42	5.0	0.815	51.9	LOS D	5.2	38.0	1.00	1.04	1.45	14.2
Approach		706	5.3	706	5.3	0.815	24.8	LOS B	22.6	165.1	0.85	0.88	1.02	22.7
All Vehicles		1973	3.8	1904 ^{N1}	3.9	0.826	24.0	LOS B	26.3	188.5	0.81	0.81	0.93	24.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

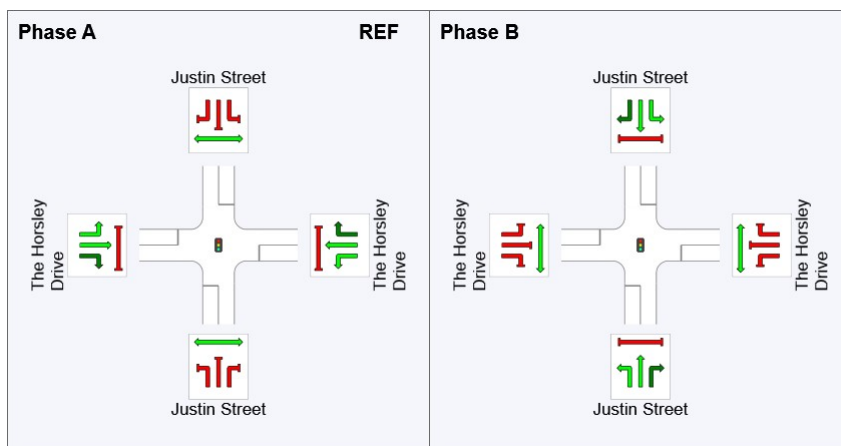
* Critical Movement (Signal Timing)

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Justin Street											
P1	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
East: The Horsley Drive											
P2	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
North: Justin Street											
P3	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
West: The Horsley Drive											
P4	Full	53	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06
All Pedestrians		211	36.8	LOS D	0.1	0.1	0.93	0.93	202.3	215.2	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
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Phase Change Time (sec)	0	59
Green Time (sec)	53	20
Phase Time (sec)	59	26
Phase Split	69%	31%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 8 [8. Smithfield Road/The Horsely Drive_2033_w_AM_sc2 (Site Folder: 2033_with_dev_AM)]**

 **Network: 11 [2033_withDev_AM-Scenario 2 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C*, D, E, F, F1*, F2*

Output Phase Sequence: A, D, E, F, F2*

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: The Horsely Drive														
4a	L1	40	2.6	40	2.6	0.601	35.2	LOS C	25.4	185.0	0.81	0.79	0.81	28.9
5	T1	742	5.0	742	5.0	* 1.137	100.7	LOS F	50.3	383.9	0.88	1.10	1.31	14.0
6b	R3	325	28.5	325	28.5	1.137	215.8	LOS F	50.3	383.9	1.00	1.43	2.18	12.8
Approach		1107	11.8	1107	11.8	1.137	132.1	LOS F	50.3	383.9	0.91	1.19	1.55	13.6
NorthEast: Smithfield Road														
24b	L3	542	23.9	542	23.9	0.541	16.2	LOS B	15.1	127.5	0.51	0.76	0.51	49.9
25	T1	1328	10.5	1328	10.5	0.789	44.1	LOS D	31.4	239.3	0.92	0.84	0.96	26.2
26a	R1	194	1.3	194	1.3	* 1.198	257.8	LOS F	28.2	199.9	1.00	1.45	2.42	6.3
Approach		2064	13.2	2064	13.2	1.198	56.8	LOS E	31.4	239.3	0.82	0.88	0.98	25.3
West: The Horsely Drive														
10a	L1	239	7.4	239	7.4	1.100	153.9	LOS F	38.4	285.7	1.00	1.47	1.95	11.1
11	T1	515	6.8	515	6.8	1.100	167.7	LOS F	42.9	318.2	1.00	1.57	1.96	11.2
Approach		754	7.0	754	7.0	1.100	163.3	LOS F	42.9	318.2	1.00	1.54	1.96	11.2
SouthWest: Smithfield Road														
30b	L3	117	0.8	117	0.8	1.170	204.7	LOS F	58.2	424.3	1.00	1.42	2.19	3.9
31	T1	1980	5.9	1980	5.9	* 1.170	216.2	LOS F	58.2	424.3	1.00	1.72	2.17	10.2
32a	R1	121	2.7	121	2.7	0.821	81.2	LOS F	8.9	63.8	1.00	0.90	1.25	22.6
Approach		2218	5.4	2218	5.4	1.170	208.2	LOS F	58.2	424.3	1.00	1.66	2.12	10.2
All Vehicles		6143	9.4	6143	9.4	1.198	138.1	LOS F	58.2	424.3	0.93	1.30	1.62	13.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

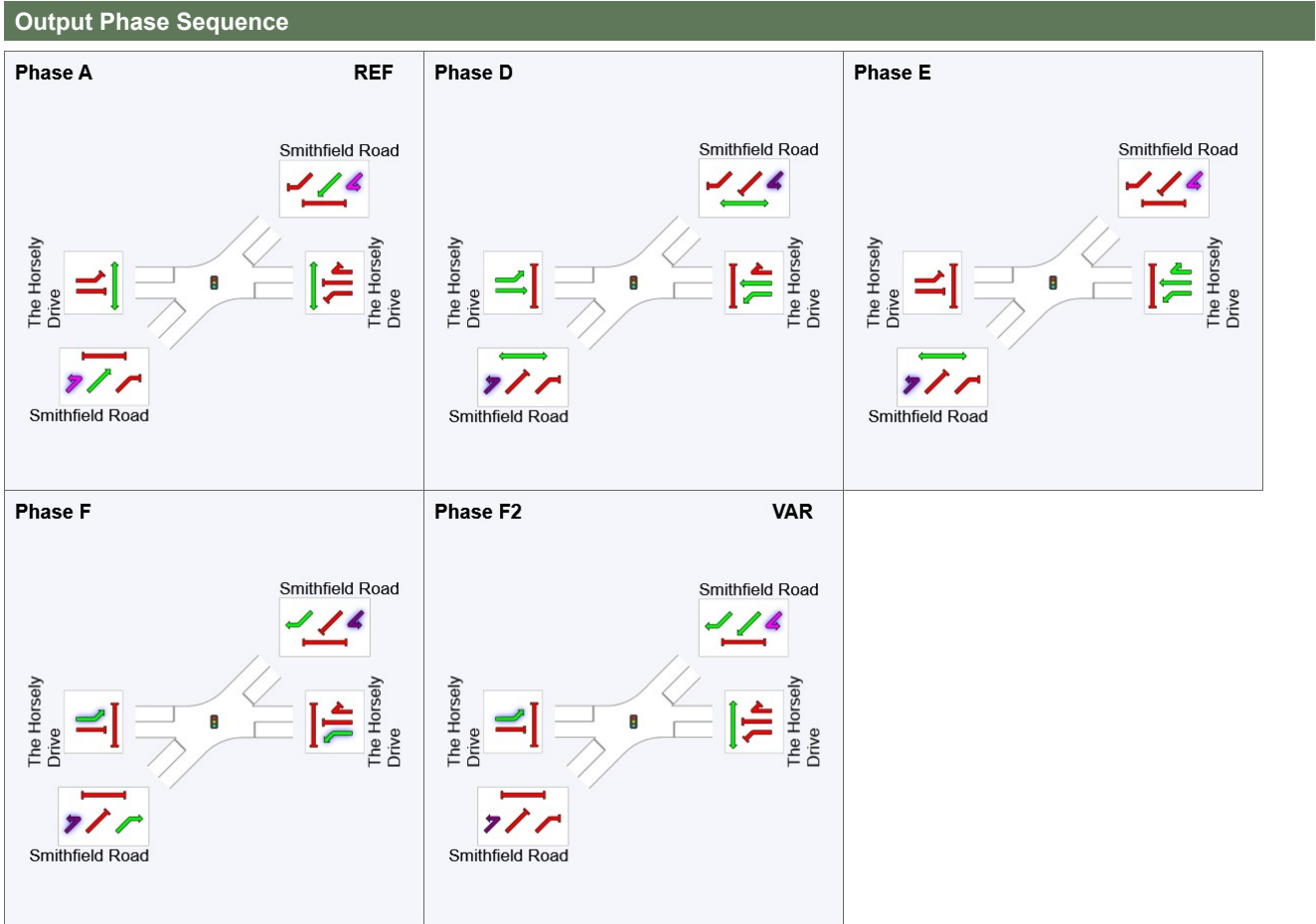
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance										
Mov	Dem.	Aver.	Level of	AVERAGE BACK OF		Prop.	Effective	Travel	Travel	Aver.

ID	Crossing	Flow	Delay	Service	QUEUE		Que	Stop	Time	Dist.	Speed
		ped/h	sec		[Ped	Dist]		Rate			
					ped	m			sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	D	E	F	F2
Phase Change Time (sec)	0	54	85	122	139
Green Time (sec)	48	25	31	11	***
Phase Time (sec)	54	31	37	17	1
Phase Split	39%	22%	26%	12%	1%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

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Organisation: STANTEC NEW ZEALAND | Licence: NETWORK / Enterprise | Created: Wednesday, 13 March 2024 11:34:26 AM
Project: \\au2012-pfss01\shared_projects\300304533\technical\modelling\240220_88-102 Smithfield Rd, Smithfield.sip9

USER REPORT FOR NETWORK SITE

All Movement Classes

 Project: 240220_88-102 Smithfield Rd, Smithfield

Template: movement and phasing

 Site: 1 [1. Smithfield Road/Brenan Street_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]

 Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase B

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
4a	L1	79	1.1	79	1.1	0.247	52.6	LOS D	5.5	39.0	0.87	0.74	0.87	31.2
5	T1	359	1.8	359	1.8	0.869	63.1	LOS E	24.4	173.1	0.99	0.99	1.17	18.5
Approach		438	1.7	438	1.7	0.869	61.2	LOS E	24.4	173.1	0.97	0.95	1.12	21.1
NorthEast: Smithfield Road														
24b	L3	177	4.6	157	4.7	0.640	23.0	LOS B	19.4	140.8	0.59	0.67	0.59	42.5
25	T1	2301	4.4	2048	4.4	* 0.640	13.6	LOS A	31.2	226.6	0.61	0.59	0.61	51.7
Approach		2478	4.4	2205 ^N ₁	4.4	0.640	14.3	LOS A	31.2	226.6	0.61	0.60	0.61	50.9
West: Brenan Street														
10a	L1	62	4.1	62	4.1	0.285	52.3	LOS D	6.2	47.4	0.87	0.74	0.87	9.0
11	T1	396	18.6	396	18.6	* 1.017	111.7	LOS F	28.1	228.5	0.99	1.29	1.55	14.8
Approach		458	16.7	458	16.7	1.017	103.7	LOS F	28.1	228.5	0.97	1.22	1.46	14.4
SouthWest: Smithfield Road														
30b	L3	109	2.7	109	2.7	0.589	20.6	LOS B	15.8	115.0	0.55	0.62	0.55	45.5
31	T1	1905	5.2	1905	5.2	0.589	12.7	LOS A	26.9	196.9	0.58	0.55	0.58	46.9
Approach		2015	5.0	2015	5.0	0.589	13.1	LOS A	26.9	196.9	0.57	0.56	0.57	46.8
All Vehicles		5388	5.5	5116 ^N ₁	5.8	1.017	25.8	LOS B	31.2	228.5	0.66	0.67	0.72	37.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

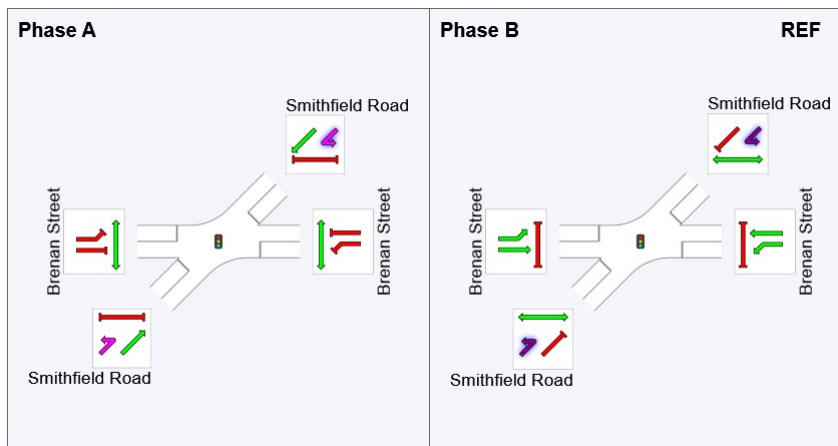
* Critical Movement (Signal Timing)

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
East: Brenan Street											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.4	223.8	0.95
West: Brenan Street											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	228.9	214.0	0.93
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	236.2	223.5	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	232.6	218.8	0.94

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
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Phase Change Time (sec)	39	0
Green Time (sec)	95	33
Phase Time (sec)	101	39
Phase Split	72%	28%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 2 [2. Brenan Street/O'Connell Street_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]**

 **Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: Brenan Street														
5	T1	321	2.1	321	2.1	0.670	8.8	LOS A	5.6	40.0	0.56	0.74	0.64	41.8
6	R2	126	2.0	126	2.0	0.670	12.2	LOS A	5.6	40.0	0.56	0.74	0.64	27.3
6u	U	23	0.0	23	0.0	0.670	13.0	LOS A	5.6	40.0	0.56	0.74	0.64	27.3
Approach		471	2.0	471	2.0	0.670	9.9	LOS A	5.6	40.0	0.56	0.74	0.64	39.7
North: O'Connell Street														
7	L2	166	0.5	166	0.5	0.817	18.6	LOS B	8.1	57.5	0.80	1.03	1.29	22.6
9	R2	234	1.9	233	1.9	0.817	21.8	LOS B	8.1	57.5	0.80	1.03	1.29	38.0
9u	U	1	0.0	1	0.0	0.817	22.4	LOS B	8.1	57.5	0.80	1.03	1.29	22.6
Approach		401	1.3	401	1.3	0.817	20.5	LOS B	8.1	57.5	0.80	1.03	1.29	33.8
West: Brenan Street														
10	L2	96	5.9	96	5.9	0.703	6.4	LOS A	6.6	48.2	0.55	0.58	0.55	43.9
11	T1	265	4.1	265	4.1	0.703	5.6	LOS A	6.6	48.2	0.55	0.58	0.55	43.9
12u	U	2	0.0	2	0.0	0.703	9.9	LOS A	6.6	48.2	0.55	0.58	0.55	46.8
Approach		363	4.5	363	4.5	0.703	5.9	LOS A	6.6	48.2	0.55	0.58	0.55	43.9
All Vehicles		1235	2.5	1234 ^N ₁	2.5	0.817	12.1	LOS A	8.1	57.5	0.64	0.79	0.83	38.6

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Site: 3 [3. Smithfield Road/Neville Street_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]

Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
NorthEast: Smithfield Road														
25	T1	2452	4.3	2179	4.2	0.383	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.7
Approach		2452	4.3	2179 ^N ₁	4.2	0.383	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.7
SouthWest: Smithfield Road														
30b	L3	83	0.0	83	0.0	0.408	7.4	LOS A	0.0	0.0	0.00	0.08	0.00	65.1
31	T1	1860	4.6	1860	4.6	0.408	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	67.8
Approach		1943	4.4	1943	4.4	0.408	0.4	NA	0.0	0.0	0.00	0.03	0.00	67.6
All Vehicles		4395	4.3	4122 ^N ₁	4.6	0.408	0.2	NA	0.0	0.0	0.00	0.01	0.00	68.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

▼ Site: 4 [4. Neville Street/Justin Street_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]

■ Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist m				km/h
East: Neville Street														
5	T1	36	0.0	36	0.0	0.082	2.9	LOS A	0.3	2.1	0.33	0.57	0.33	22.7
6	R2	47	0.0	47	0.0	0.082	4.8	LOS A	0.3	2.1	0.33	0.57	0.33	22.7
Approach		83	0.0	83	0.0	0.082	4.0	LOS A	0.3	2.1	0.33	0.57	0.33	22.7
North: Justin Street														
9	R2	222	2.3	221	2.3	0.121	3.9	LOS A	0.0	0.0	0.00	0.52	0.00	35.4
Approach		222	2.3	221 ^{N1}	2.3	0.121	3.9	NA	0.0	0.0	0.00	0.52	0.00	35.4
West: Neville Street														
10	L2	122	1.5	122	1.5	0.066	3.5	LOS A	0.0	0.0	0.00	0.46	0.00	35.9
Approach		122	1.5	122	1.5	0.066	3.5	NA	0.0	0.0	0.00	0.46	0.00	35.9
All Vehicles		427	1.6	427	1.6	0.121	3.8	NA	0.3	2.1	0.06	0.51	0.06	34.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 5 [5. O'Connell Street/Neville Street_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]**

 **Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]**

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
South: O'Connell Street														
1	L2	83	0.0	83	0.0	0.252	7.1	LOS A	1.6	11.4	0.62	0.69	0.62	45.7
2	T1	58	2.9	58	2.9	0.252	6.8	LOS A	1.6	11.4	0.62	0.69	0.62	41.0
3	R2	48	7.9	48	7.9	0.252	10.2	LOS A	1.6	11.4	0.62	0.69	0.62	34.7
3u	U	2	0.0	2	0.0	0.252	11.2	LOS A	1.6	11.4	0.62	0.69	0.62	34.7
Approach		192	2.9	192	2.9	0.252	7.8	LOS A	1.6	11.4	0.62	0.69	0.62	42.9
East: Neville Street														
4	L2	164	0.6	164	0.6	0.479	6.1	LOS A	3.7	26.0	0.65	0.63	0.65	34.5
5	T1	232	1.2	231	1.2	0.479	5.2	LOS A	3.7	26.0	0.65	0.63	0.65	38.3
6	R2	21	9.1	21	9.1	0.479	8.6	LOS A	3.7	26.0	0.65	0.63	0.65	37.3
6u	U	2	0.0	2	0.0	0.479	12.3	LOS A	3.7	26.0	0.65	0.63	0.65	34.5
Approach		419	1.4	418 ^{N1}	1.4	0.479	5.8	LOS A	3.7	26.0	0.65	0.63	0.65	37.4
North: O'Connell Street														
7	L2	26	0.0	26	0.0	0.195	4.6	LOS A	1.2	8.4	0.50	0.58	0.50	34.0
8	T1	104	1.9	104	1.9	0.195	5.6	LOS A	1.2	8.4	0.50	0.58	0.50	34.0
9	R2	31	3.0	31	3.0	0.195	7.5	LOS A	1.2	8.4	0.50	0.58	0.50	38.6
9u	U	6	12.5	6	12.5	0.195	11.9	LOS A	1.2	8.4	0.50	0.58	0.50	40.4
Approach		167	2.2	167	2.2	0.195	6.0	LOS A	1.2	8.4	0.50	0.58	0.50	36.0
West: Neville Street														
10	L2	12	0.0	12	0.0	0.177	5.0	LOS A	1.1	7.8	0.43	0.60	0.43	45.0
11	T1	58	2.0	58	2.0	0.177	5.0	LOS A	1.1	7.8	0.43	0.60	0.43	44.3
12	R2	84	0.0	84	0.0	0.177	9.0	LOS A	1.1	7.8	0.43	0.60	0.43	44.3
12u	U	8	0.0	8	0.0	0.177	10.9	LOS A	1.1	7.8	0.43	0.60	0.43	50.4
Approach		162	0.7	162	0.7	0.177	7.4	LOS A	1.1	7.8	0.43	0.60	0.43	44.9
All Vehicles		940	1.7	939 ^{N1}	1.7	0.479	6.5	LOS A	3.7	26.0	0.58	0.63	0.58	39.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

 **Site: 7 [7. The Horsley Drive/Justin Street_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]**

 **Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B

Output Phase Sequence: A, B

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total HV] veh/h	%				[Veh. veh	Dist] m				
South: Justin Street														
1	L2	42	2.1	42	2.1	0.115	40.7	LOS C	1.8	12.7	0.85	0.71	0.85	21.2
2	T1	74	0.0	74	0.0	0.439	41.7	LOS C	5.5	38.5	0.93	0.76	0.93	24.6
3	R2	43	2.1	43	2.1	0.439	45.2	LOS D	5.5	38.5	0.93	0.76	0.93	12.6
Approach		159	1.1	159	1.1	0.439	42.4	LOS C	5.5	38.5	0.91	0.75	0.91	21.4
East: The Horsley Drive														
4	L2	113	0.9	112	0.9	0.468	13.0	LOS A	13.9	99.7	0.51	0.51	0.51	27.7
5	T1	808	3.2	803	3.2	0.468	10.6	LOS A	13.9	99.7	0.56	0.54	0.56	32.7
6	R2	80	6.5	79	6.5	0.468	17.1	LOS B	12.1	87.2	0.62	0.58	0.62	33.4
Approach		1001	3.2	994 ^{N1}	3.2	0.468	11.4	LOS A	13.9	99.7	0.56	0.54	0.56	32.5
North: Justin Street														
7	L2	93	2.9	93	2.9	0.255	43.1	LOS D	4.1	29.1	0.88	0.75	0.88	21.0
8	T1	63	1.7	63	1.7	* 0.539	43.4	LOS D	7.2	50.9	0.96	0.79	0.96	20.7
9	R2	87	0.0	87	0.0	0.539	47.0	LOS D	7.2	50.9	0.96	0.79	0.96	25.3
Approach		243	1.6	243	1.6	0.539	44.6	LOS D	7.2	50.9	0.93	0.78	0.93	22.7
West: The Horsley Drive														
10	L2	106	1.6	106	1.6	0.109	10.8	LOS A	2.4	17.3	0.39	0.55	0.39	36.0
11	T1	458	3.8	458	3.8	* 0.537	10.1	LOS A	12.0	87.0	0.56	0.52	0.56	29.2
12	R2	12	7.7	12	7.7	0.537	13.7	LOS A	12.0	87.0	0.57	0.52	0.57	29.1
Approach		576	3.4	576	3.4	0.537	10.3	LOS A	12.0	87.0	0.53	0.53	0.53	31.4
All Vehicles		1979	2.9	1972 ^{N1}	2.9	0.539	17.7	LOS B	13.9	99.7	0.62	0.58	0.62	28.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

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

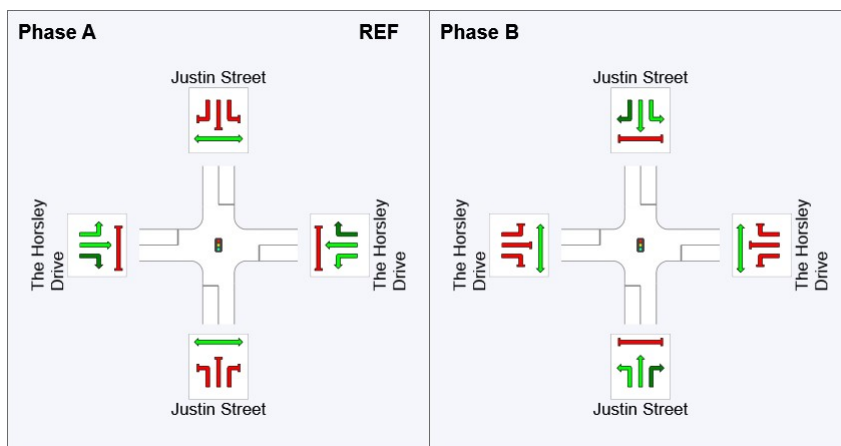
* Critical Movement (Signal Timing)

^{N1} Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Pedestrian Movement Performance											
Mov ID	Crossing	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Effective Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Justin Street											
P1	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
East: The Horsley Drive											
P2	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
North: Justin Street											
P3	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
West: The Horsley Drive											
P4	Full	53	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01
All Pedestrians		211	46.8	LOS E	0.1	0.1	0.94	0.94	212.3	215.2	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
 Pedestrian movement LOS values are based on average delay per pedestrian movement.
 Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

Output Phase Sequence



REF: Reference Phase
 VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	B
-------	---	---

Phase Change Time (sec)	0	77
Green Time (sec)	71	22
Phase Time (sec)	77	28
Phase Split	73%	27%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

 **Site: 8 [8. Smithfield Road/The Horsely Drive_2033_w_PM_sc2 (Site Folder: 2033_with_dev_PM)]**

 **Network: 6 [2033_withDev_PM-Scenario 2 (Network Folder: General)]**

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 140 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Downstream lane blockage effects included in determining phase times

Phase Sequence: Leading Right Turn

Reference Phase: Phase A

Input Phase Sequence: A, B*, C, D, E, F, F1*, F2*

Output Phase Sequence: A, C, D, E, F

(* Variable Phase)

Vehicle Movement Performance														
Mov ID	Turn	DEMAND FLOWS		ARRIVAL FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV %	[Total veh/h	HV %	v/c	sec		[Veh. veh	Dist] m				km/h
East: The Horsely Drive														
4a	L1	32	2.9	32	2.9	1.013	113.7	LOS F	58.9	427.8	1.00	1.27	1.52	13.1
5	T1	555	4.5	555	4.5	1.013	111.6	LOS F	58.9	427.8	1.00	1.27	1.52	13.1
6b	R3	225	25.4	225	25.4	* 1.131	208.8	LOS F	14.5	123.9	1.00	1.34	2.26	13.0
Approach		812	10.2	812	10.2	1.131	138.7	LOS F	58.9	427.8	1.00	1.29	1.73	13.0
NorthEast: Smithfield Road														
24b	L3	851	8.0	851	8.0	0.799	24.0	LOS B	29.4	220.2	0.77	0.90	0.77	45.6
25	T1	2421	4.3	2421	4.3	* 1.127	185.6	LOS F	132.2	959.2	1.00	1.67	1.97	8.5
26a	R1	280	1.8	280	1.8	* 0.902	56.6	LOS E	13.5	96.0	1.00	0.99	1.29	22.4
Approach		3552	5.0	3552	5.0	1.127	136.7	LOS F	132.2	959.2	0.95	1.43	1.63	13.2
West: The Horsely Drive														
10a	L1	119	1.6	119	1.6	1.107	173.1	LOS F	35.7	255.7	1.00	1.55	2.03	10.8
11	T1	436	3.3	436	3.3	* 1.107	178.8	LOS F	35.7	255.7	1.00	1.62	2.05	10.7
Approach		555	3.0	555	3.0	1.107	177.6	LOS F	35.7	255.7	1.00	1.61	2.05	10.7
SouthWest: Smithfield Road														
30b	L3	65	2.6	65	2.6	0.899	80.7	LOS F	36.8	267.8	1.00	1.10	1.20	11.3
31	T1	1572	5.0	1572	5.0	0.899	61.8	LOS E	44.8	327.3	0.99	1.04	1.17	27.3
32a	R1	142	1.7	142	1.7	0.752	75.4	LOS F	10.0	71.2	1.00	0.86	1.13	23.5
Approach		1779	4.7	1779	4.7	0.899	63.6	LOS E	44.8	327.3	0.99	1.02	1.16	26.5
All Vehicles		6697	5.4	6697	5.4	1.131	120.9	LOS F	132.2	959.2	0.97	1.32	1.55	15.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.

Delay Model: SIDRA Standard (Geometric Delay is included).

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

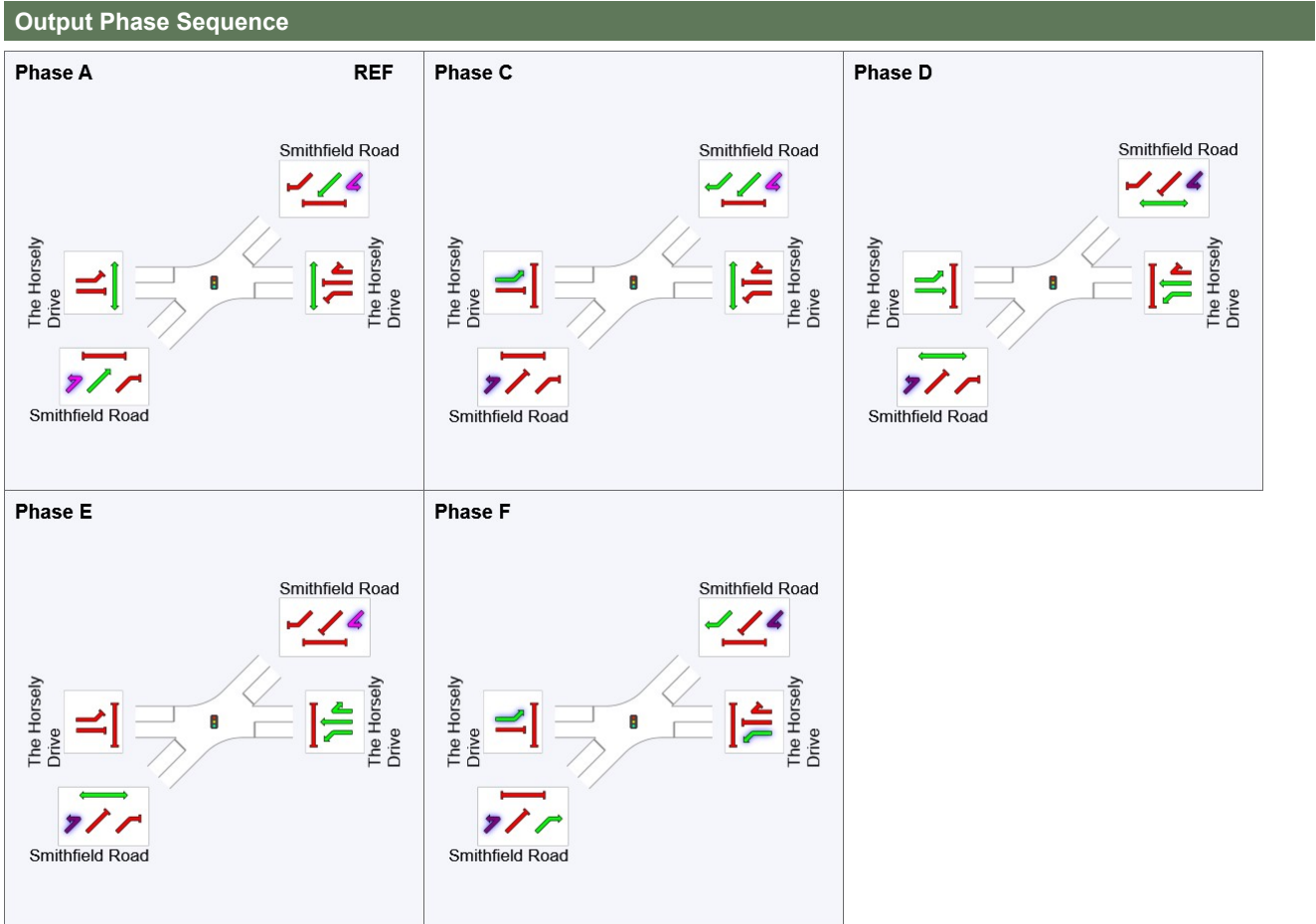
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance										
Mov	Dem.	Aver.	Level of	AVERAGE BACK OF		Prop.	Effective	Travel	Travel	Aver.

ID	Crossing	Flow	Delay	Service	QUEUE		Que	Stop	Time	Dist.	Speed
		ped/h	sec		[Ped	Dist]		Rate			
					ped	m			sec	m	m/sec
East: The Horsely Drive											
P2	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	234.3	221.0	0.94
NorthEast: Smithfield Road											
P6	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.6	226.6	0.95
West: The Horsely Drive											
P4	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	232.9	219.2	0.94
SouthWest: Smithfield Road											
P8	Full	53	64.3	LOS F	0.2	0.2	0.96	0.96	238.2	226.1	0.95
All Pedestrians		211	64.3	LOS F	0.2	0.2	0.96	0.96	236.0	223.2	0.95

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Phase Timing Summary

Phase	A	C	D	E	F
Phase Change Time (sec)	0	56	71	104	120
Green Time (sec)	50	9	27	10	14
Phase Time (sec)	56	15	33	16	20
Phase Split	40%	11%	24%	11%	14%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Appendix E. Community Consultation Report (TfNSW)

DRAFT



Cumberland Highway and The Horsley Drive intersection improvements, Smithfield

Community Consultation Report

Transport for NSW | December 2020

Executive summary

This report provides a summary of Transport for NSW's consultation with the community and key stakeholders on a proposal to improve the traffic flow, ease congestion and improve road user safety at the intersection of Cumberland Highway and The Horsley Drive, Smithfield.

The NSW Government is funding this project as part of the Urban Road Congestion Program to improve safety for road users.

The proposal aimed to improving the southbound traffic flows along Cumberland Highway by extending:

- the southbound right turn bay on Cumberland Highway into The Horsley Drive
- the southbound left turn bay on Cumberland Highway into The Horsley Drive.

Consultation was held between Saturday 20 June 2020 and Sunday 12 July 2020 to seek feedback from the community and stakeholders to consider when making a submission on the proposal.

Key engagement activities carried out during the consultation period included:

- A notification distributed from 20 June 2020 to local residents in the project area and Smithfield Town Centre businesses
- Stakeholder consultation session with Fairfield City Council on 2 July 2020
- Information available on the project webpage at <https://www.rms.nsw.gov.au/projects/cumberland-highway-the-horsley-drive-smithfield/index.html>
- Consultation with Cumberland Chamber of Commerce
- Consultation with Smithfield Public School.

We received feedback from three stakeholders. One stakeholder supported the proposal as presented, one stakeholder did not state a preference and one made a submission outside the scope of the project as part of the feedback.

Key matters raised included:

- Holistic approach for the intersection upgrade
- Existing alignment modification to facilitate westbound heavy vehicles on The Horsley Drive
- Improvement to The Horsley Drive right hand turn lane into the Cumberland Highway
- Consultation with the Cumberland Chamber of Commerce and Smithfield Town Centre businesses
- Traffic light phasing.

The decision

After considering all responses we have decided to extend only the left turn bay into The Horsley Drive by about 30 metres. This decision was based on feedback we received and aligned with the place value identified for the commercial area in the finalised Road Network Plan.

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1. Introduction

1.1. Background

Cumberland Highway and The Horsley Drive is the intersection of two major roads. It was proposed to carry out several changes at this intersection to improve traffic flow, ease congestion and improve pedestrian and road user safety.

The Cumberland Highway in this section has three through lanes, one left turn slip lane and one right hand turn lane.

Transport for NSW identified the following key issues at this intersection:

- high demand along Cumberland Highway southbound and northbound
- high demand for left turn movements from Cumberland Hwy southbound into The Horsley Drive eastbound

As a result of the above, traffic modelling shows that once queues on Cumberland Highway southbound extend beyond the existing left turn bay, the high volume of left turners further add to the queue length and block southbound through movements.

The proposed changes included improving the southbound traffic flows along Cumberland Highway by extending:

- the southbound right turn bay on Cumberland Highway into The Horsley Drive
- the southbound left turn bay on Cumberland Highway into The Horsley Drive.

1.2. The proposal

Transport for NSW issued a Have Your Say to coordinate community consultation on the proposal for improvements to increase the flow of traffic and reduce delays at the intersection of the Cumberland Highway and the Horsley Drive, Smithfield.

The new proposal included improving the southbound traffic flows along Cumberland Highway by extending

- the southbound right turn bay on Cumberland Highway into The Horsley Drive
- the southbound left turn bay on Cumberland Highway into The Horsley Drive.

We have included a map of the original proposal to show the location of the intersection improvements.



Figure 1 – proposed intersection improvements on Cumberland Highway, The Horsley Drive, Smithfield

2. Consultation approach

2.1. Consultation objectives

We consulted with the community and key stakeholders on the proposal to:

- seek comment, feedback, ideas, and suggestions for us to consider when making a decision
- build a database of interested and concerned community members we could continue to engage with during the proposal's further development and delivery.

2.2. Values

Our values underpin our decisions and behaviours when working with customers, colleagues, stakeholders and partners.

- **Customer focus** - We place the customer at the centre of everything we do
- **Collaboration** - We value each other and create better outcomes by working together
- **Solutions** - We deliver sustainable and innovative solutions to NSW's transport needs
- **Integrity** - We take responsibility and communicate openly
- **Safety** - We prioritise safety for our people and our customers.

2.3. How consultation was done

Community members and stakeholders were encouraged to provide their feedback and make comments via email, mail or phone contact with the project team.

We distributed 350 letters to local residents, businesses and key stakeholders, inviting feedback on the proposal. We also directly emailed copies of the letter to key stakeholders including Fairfield City Council, Smithfield Public School and the Chamber of Commerce. The following contact details were provided for feedback:

Phone: 1800 572 004

Email: pinchpoints@rms.nsw.gov.au

This part of the report only advises on consultation activity that we developed. It does not take into account other sources like word of mouth or stories published in the newspaper.

3. Consultation summary

3.1. Overview

Transport for NSW invited feedback in June 2020 about the improvements to the intersection of Cumberland Highway and The Horsley Drive, Smithfield.

We received feedback from three stakeholders, with one stakeholder supporting the proposal as presented. One stakeholder did not state a preference and one made a submission outside the scope of the project as part of the feedback.

Key matters raised included:

- Holistic approach for the intersection upgrade
- Existing alignment modification to facilitate westbound heavy vehicles on The Horsley Drive
- Improvement to The Horsley Drive right hand turn lane into the Cumberland Highway
- Consultation with the Cumberland Chamber of Commerce and Smithfield Town Centre businesses
- Traffic light phasing.

3.2. Feedback and Transport for NSW responses

Transport for NSW has provided responses to all feedback received on this proposal. The responses are provided directly to the person who commented, as well as in this report, which will be made available to the public.

All comments have been considered to help Transport make decisions on this proposal.

Table 1- Feedback summary and Transport for NSW responses

Category	Matter raised	Transport for NSW response
Approach for the upgrade	The proposal that was discussed at the meeting was different to the original proposal which was sent to various stakeholders seeking comments.	Transport for NSW acknowledges your feedback. As previously discussed the NSW Government has been investigating this proposal as part of its Urban Roads Pinch Points Program which aims to ease congestion and improve travel times on Sydney's busiest corridors.
	The original proposal was to improve the southbound traffic flows along Cumberland Highway by extending both southbound left and right turn bays on Cumberland Highway into The Horsley Drive. The revised proposal is to extend southbound traffic flows along Cumberland Highway by extending southbound left turn bay on Cumberland Highway into The Horsley Drive.	As part of the program Transport for NSW is proposing changes to the intersection of Cumberland Highway and The Horsley Drive, Smithfield, to improve traffic flow, ease congestion and improve road user safety. We consulted with the community on proposed changes that included extending both southbound left and right turn bays on Cumberland Highway into The Horsley Drive. However, we have now decided, at this stage, to extend only the left turn bay into The Horsley Drive. We reached this decision after carefully considering council's submission and other feedback received. We appreciated council's feedback. However, extending the right turn bay from Cumberland Highway into The Horsley Drive and increasing traffic flow, would not provide an outcome that aligned with the place value identified for this commercial area in the finalised Road Network Plan.
Existing alignment modification to facilitate westbound heavy vehicles on The Horsley Drive	The current alignment from The Horsley Drive to Victoria Street has a dog-leg approach. The existing alignment should be modified to facilitate heavy vehicles travelling westbound on The Horsley Drive to access Victoria Street without the need to traverse Cumberland Highway.	Transport for NSW acknowledges your feedback. This is outside the scope of the project.
Improvement to The Horsley Drive right hand turn lane into the Cumberland Highway	The existing exclusive right turn bay on The Horsley Drive for westbound vehicles at Cumberland Highway is blocked by vehicles using the middle lane (shared lane – through & right). It is recommended that the extent of the exclusive right turn bay be increased to improve traffic flow and reduce congestion.	Transport for NSW acknowledges your feedback. This is outside the scope of the project.

	The biggest problem is turning right from the Horsley Drive not the other way around as been preposed I am local and have complained for a long time to Fairfield council. The trucks turning right from the middle lane block the ability to use the right turning lane. If anything you should consider fixing the Horsley Drive to the Cumberland highway.	
Consultation with the Cumberland Chamber of Commerce and Smithfield Town Centre businesses	Consultation is required with the Cumberland Chamber of Commerce and Smithfield Town Centre businesses to ensure a transparent consultation process	Transport for NSW acknowledges your feedback. Notification about the consultation was provided to the local businesses and Chamber of Commerce.
Traffic light phasing	There is poor phasing of the pedestrian signals on Cumberland Highway and more green light time is required for cars turning .	Traffic lights in NSW are controlled by the Sydney Coordinated Adaptive Traffic System (SCATS), which allocates the length of green time based on real time traffic flow. Sensors beneath the road measure the flow and density of traffic approaching the lights in each direction and the green time is allocated accordingly. The length of time the light stays green varies in response to changing traffic conditions. This ensures that the traffic light phasing is operating at maximum efficiency. Vehicles travelling through this intersection are currently given priority in the traffic light phases due to the high volume of traffic on the road. Roads with higher traffic demands are given longer green time to reduce congestion along the network. Your concerns have been passed onto the relevant team.

3.3. Decision

We consulted with the community and stakeholders on proposed changes that included extending both southbound left and right turn bays on Cumberland Highway into The Horsley Drive. However, we have now decided, at this stage, to extend only the left turn bay into The Horsley Drive. Extending the right turn bay from Cumberland Highway into The Horsley Drive and increasing traffic flow, would not provide an outcome that aligned with the place value identified for this commercial area in the finalised Road Network Plan.

Further, the project team has investigated the Cumberland Highway median near the intersection with The Horsley Drive to assess the nature of pavement that would be required to extend the right turn bay. These investigations confirmed that a full depth concrete pavement would be required in order to tie into the existing pavement. As a result, due to budgetary constraints the right turn bay cannot be included at this time. We will continue to liaise with the council in any future intersection upgrades if additional funding becomes available.

This decision was reached after carefully considering the submissions and received.

We will continue to keep the community informed.

3.4. Next steps

Transport for NSW will continue to work with key stakeholders to consider the needs and expectations of the community and all road users who travel through this intersection.

A close of consultation letter with the outcome will be provided to the stakeholders and community.

We will also write to the community when the construction for the intersection improvement starts in the first quarter next year.

4. Appendix

4.1. Appendix A – ‘Have your say’ letter June 2020



June 2020

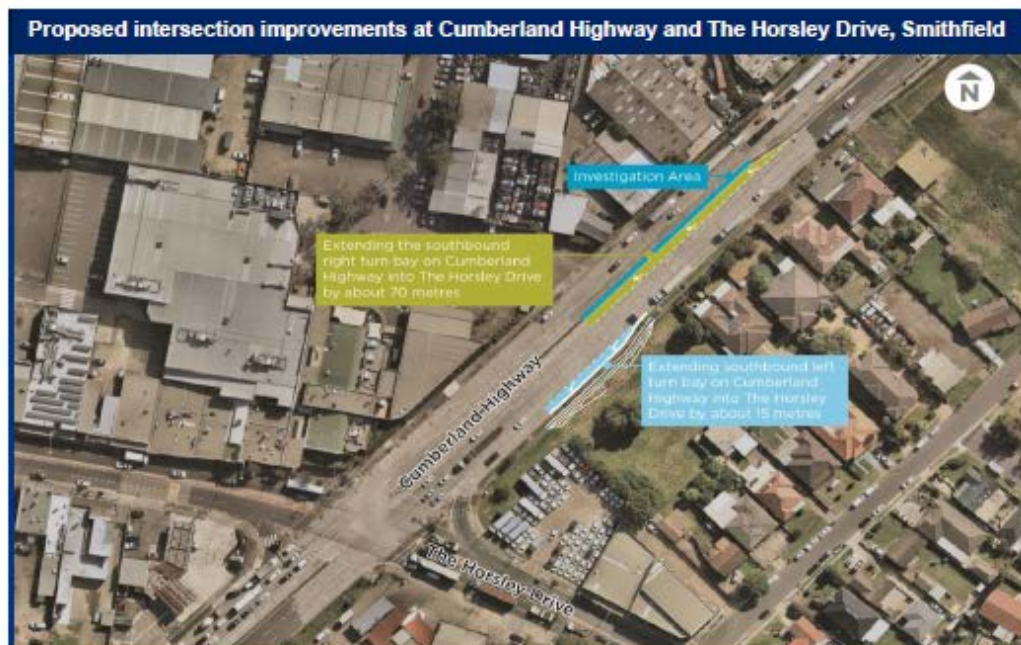
Investigation work and proposed intersection improvements on Cumberland Highway, The Horsley Drive, Smithfield

The NSW Government is funding this project as part of the Urban Road Congestion Program to improve safety for road users.

Transport for NSW is proposing changes to this intersection, to improve traffic flow, ease congestion and improve road user safety.

The proposed changes include improving the southbound traffic flows along Cumberland Highway by extending both southbound left and right turn bays on Cumberland Highway into The Horsley Drive.

Extending these turning bays would provide more room for turning vehicles to queue and would improve traffic flow by helping ensure through traffic lanes remain clear of queuing vehicles.



Have your say on the proposed improvement work

We are inviting your feedback on the proposed improvement work. These improvements will provide:

- southbound travel time savings along Cumberland Highway
- improved traffic flow and efficiency at the intersection by extending the southbound right turn bay into The Horsley Drive by about 70 metres and the left turn bay into The Horsley Drive by about 15 metres
- improved road safety by extending turn bays and removing queued vehicles from the through lanes.

How can you give feedback?

We will consider all feedback and continue to update you as the project progresses. Please provide your comments on the proposed intersection improvements by **Sunday 12 July**:

Phone: 1800 572 004

Email: pinchpoints@rms.nsw.gov.au

Investigation work from Thursday 25 June

To assist with planning the proposed intersection upgrade, Transport for NSW will carry out geotechnical investigations including potholing from Thursday 25 June along Cumberland Highway, Smithfield.

How will the work affect you?

The investigation work will be carried out at night along the Cumberland Highway near the intersection with The Horsley Drive. Our work may be noisy at times but we will do everything we can to minimise its impact and complete the noisier activities by midnight.

Traffic changes

There will be some temporary traffic changes to ensure the work zone is safe. Lane closures may be in place and will affect travel times. Please keep to speed limits and follow signs and traffic controllers' directions. For the latest traffic updates, you can call 132 701, visit livetraffic.com or download the Live Traffic NSW App.

Thank you for your patience during this investigation work.

Investigation work schedule

We will be on site for investigations between **Thursday 25 June and Wednesday 1 July 2020**, (weekdays only) weather permitting.

Our work hours will be between **8pm and 5am Thursday to Wednesday**.

Contact us

If you have any questions please contact the project team on 1800 572 004 or email pinchpoints@rms.nsw.gov.au.

To find out more go to:

<https://www.rms.nsw.gov.au/projects/cumberland-highway-the-horsley-drive-smithfield/index.html>



Translating and Interpreting Service

If you need an interpreter, please call the Translating and Interpreting Service (TIS National) on **131 450** and ask them to telephone Transport for NSW on 1800 572 004.

Arabic

إذا كنت بحاجة إلى مترجم، يرجى الاتصال بخدمة الترجمة الفورية الوطنية (TIS National) على الرقم 131 450، واطلب منهم الاتصال بـ Transport for NSW على الرقم 1800 572 004.

Cantonese

如果你需要口譯員，請致電 **131 450** 聯絡翻譯和口譯服務署 (TIS National)，要求他們致電 1800 572 004 聯絡 Transport for NSW。

Mandarin

如果你需要口譯員，請致電 **131 450** 聯絡翻譯和口譯服務署 (TIS National)，要求他們致電 1800 572 004 聯絡 Transport for NSW。

Greek

Αν χρειάζεστε διαμετρητή, παρακαλούμε να τηλεφωνήσετε στην Υπηρεσία Μετάφρασης και Διερμηνείας (ΕΡΜΕΚ) Υπηρεσία TIS στο **131 450** και ζητήστε να τηλεφωνήσει Transport for NSW στο 1800 572 004.

Italian

Se desiderate l'assistenza di un interprete, pregio telefonare al Servizio Interpreti e Traduttori (TIS National) al **131 450** chiedendo di contattare Transport for NSW al 1800 572 004.

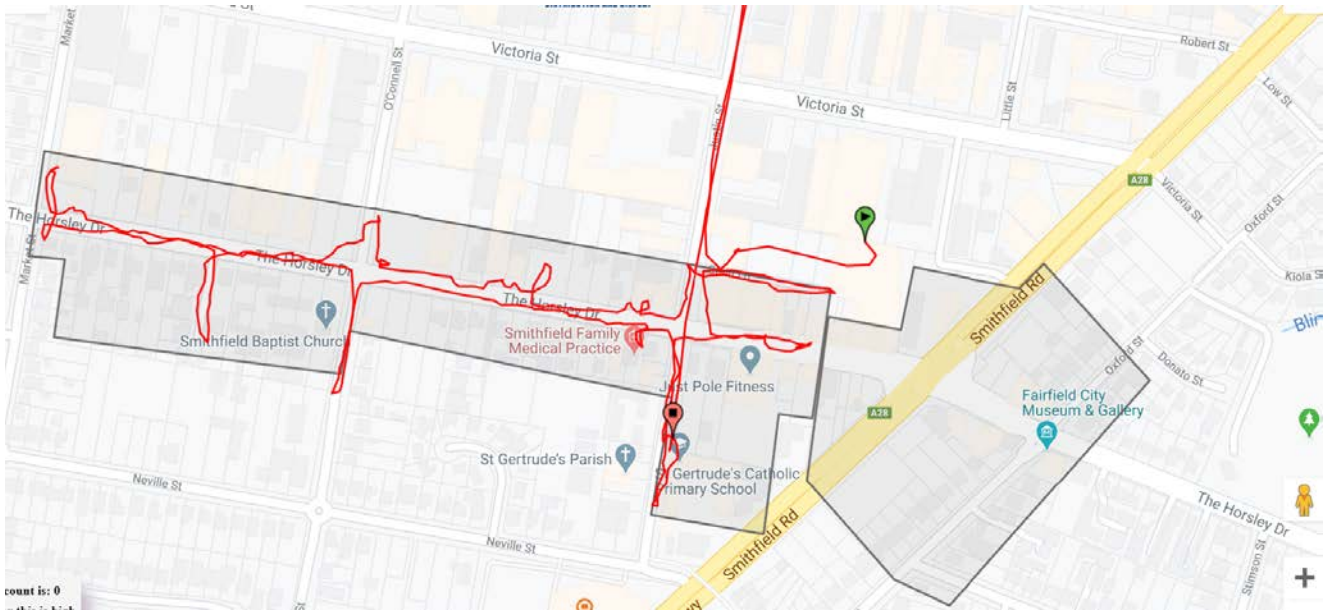
Korean

통역사가 필요하시면 번역통역서비스 (TIS National) 에 **131 450** 으로 연락하여 이들에게 1800 572 004 번호로 Transport for NSW 에 전화해도록 요청해 주시기요.

Vietnamese

Nếu cần thông ngôn viên, xin quý vị gọi cho Dịch Vụ Thông Phiên Dịch (TIS Toàn Quốc) qua số **131 450** và nhờ họ gọi cho Transport for NSW qua số 1800 572 004.

4.2. Appendix B – Distribution map





rms.nsw.gov.au/pinchpoints



13 22 13



Customer feedback
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