

City of Canterbury Bankstown

Canterbury Road Corridor – Traffic and Transport Study

1 August 2017

This study and associated recommendations have not been reviewed and endorsed by members (including RMS & TfNSW) of the Steering Committee. However, Committee members will be afforded the opportunity to review and provide comment on the study during the public exhibition phase with any submission taken into consideration prior to the adoption of the review

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Executive summary

Background

Canterbury Road forms part of the A34 and is a key east-west arterial corridor in the south-west of Sydney that connects Enmore to Liverpool. Canterbury Road currently experiences significant levels of traffic congestion (particularly during peak morning and evening periods), leading to longer travel times along the corridor.

The overall trend of a growing Sydney has produced considerable pressure for recent development occurring within the corridor. Approvals have recently been issued for developments that exceed existing planning specifications and there have been a number of private-led proposals to intensify land uses on Canterbury Road, with Local Environmental Plan (LEP) amendments for a number of sites.

The Draft South District Plan was released by the Greater Sydney Commission (GSC) in November 2016, specifying an overall housing target (2016 – 2021) for Canterbury-Bankstown Council of 13,250 dwellings.

The Canterbury Road Corridor and the adjoining areas have potential to accommodate further development. However, to ensure that the Canterbury Road Corridor can be developed sustainably, an effective transport and traffic plan that integrates with land use, activity and sustainability is required.

This study provides an understanding of the current and future traffic and transport infrastructure and services within the study area. This will enable Canterbury Bankstown Council (CBC) to manage effectively the impacts associated with the planned development within and in proximity to the corridor.

In summary, the aims of the Canterbury Road Transport and Traffic Study include:

- Specifying the role of Canterbury Road in the context of a local and regional network.
- Identifying the current operation of the traffic and transport facilities within the corridor.
- Identifying the role and performance of the traffic and transport facilities accounting for the growth (residential and employment) within the corridor study area.
- Identifying opportunities to mitigate/alleviate the impacts of the forecast growth in demand on the traffic and transport facilities.
- Two other studies are currently being undertaken for the Canterbury Road Corridor:
- SGS has been commissioned to undertake an economic assessment of the provision/relocation of retail and commercial land use.
- Hill Thalis have been commissioned as urban designers to assess road hierarchies, active transport networks and residential densities.

Inputs from both these studies have been used to inform the analysis undertaken in the Canterbury Road Transport and Traffic Study.

The Existing Situation

Canterbury Road typically experiences congested conditions during peak periods of road network operation. During the morning peak, the eastbound direction was observed to be significantly more congested than when compared to the westbound direction.

The T3 Bankstown Line provides a train service between Liverpool and the Sydney CBD and runs in an east-west direction through the study area, crossing beneath Canterbury Road at

Canterbury Station. An uplift in demand on this line is expected when conversion to Sydney Metro is complete. In addition, the T2 Airport Lines located around 2 km to the south of Canterbury Road. A large number of bus services operate within the study area, which provide local and regional connectivity, generally in the north-south direction including train stations along the T3 and T2 Lines.

Canterbury Road currently functions as an arterial road with high traffic voulmes, which is a barrier for walking and bicycle access, that reduces amenity along the corridor. Additionally, the exiting footpaths along Canterbury Road are narrow in a number of locations. No formal bicycle riding infrastructure is currently provided on Canterbury Road, although there are a number of designated bicycle routes which cross Canterbury Road in a north/south alignment.

The Proposal

Hill Thalis was commissioned by CBC to provide advice on built form, land use, open space and urban design for the Canterbury Road Corridor.

Key features of the Hill Thalis recommendations include:

- Focusing intensified urban renewal to a series of urban centres (seven are proposed) along the corridor with limited footprints.
- The limited upgrade of Canterbury Road i.e. carriageway widening adjacent to the proposed urban centres on Canterbury Road.
- Provision of a new active transport network.
- The strengthening of north-south connections between the proposed urban centres on Canterbury Road and the rail corridor (Stage 2 Sydney & Southwest Metro).
- A network of new local parks and connecting streets.

Travel Demand Management

Travel demand management (TDM) is a term for strategies that encourage as shift from single occupant private vehicles trips. Some TDMs potentially applicable to the Canterbury Road Corridor include:

- Update the DCP to mandate green travel plans as part of the planning application for major new developments.
- Audit pedestrian and bicycle networks to major trips attractors (existing and proposed).
- Unbundle parking from housing and commercial developments, so residents and business only pay for the parking spaces they need.
- Build compact communities with sufficient density to support high-service standards of public transport.

Traffic Management Measures

Consideration has been given to reducing the number of right turns from Canterbury Road into the side streets along the corridor. This is expected to reduce delays and improve the overall flow of traffic along the corridor.

EMME Traffic Modelling

A strategic modelling task has been undertaken to explore the effect on Canterbury Road of the following:

- The expected impacts of the overall forecast growth in Sydney up to 2036; and

- The specific changes expected as a result of the proposed land use scenarios, travel demand measures and traffic management measures.

Five options were tested in 2021 and 2036 as part of the strategic traffic modelling analysis, including:

- Transport Performance and Analytics (TPA) data (base)
- Option 1 - Maximum yield scenario
- Option 2 - Hill Thalis scenario plus traffic management measures
- Option 3 - Hill Thalis scenario plus traffic management measures and travel demand measures
- Option 4 - Maximum yield scenario plus traffic management measures and travel demand measures

The EMME traffic modelling analysis indicates that the Option 3 scenario provides the best outcome for the Canterbury Road Corridor in terms of overall travel times and reduced congestion. Nevertheless, the modelling analysis for this option indicates that both travel times and congestion are expected to increase above current levels.

The modelling outputs show that to reduce the traffic impacts associated with the forecast changes in land use, the proposed travel demand measures are critical in managing the overall demand on the network.

However, even by implementing the proposed of TDMs and traffic management measures, a number of intersections are still expected to operate with a poor level of service. This is consistent with the analysis undertaken for the existing situation, which indicates that there are a number of intersections along Canterbury Road which operate with a poor level of service, including at:

- King Georges Road;
- Thorncraft Parade / Charlotte Street;
- Beamish Street / Bexley Road; and
- Charles Street.

SIDRA Traffic Modelling

Further intersection modelling has been undertaken to explore the issues identified in the EMME traffic modelling in further detail.

The SIDRA modelling results indicate that the Option 3 (Hill Thalis with traffic management and travel demand measure) scenario is expected to provide the best outcome for traffic operations along the Canterbury Road corridor. However, the following intersections are still expected to operate at an unacceptable level of service (LoS) in 2036:

- Belmore Road;
- Rossmore Avenue;
- King Georges Road;
- Haldon Street;
- Kingsgrove / Sharp Street;
- Thorncraft Parade / Sharp Street; and
- Beamish Street / Bexley Road.

Mitigation Measures

In order to mitigate the expected increase in traffic associated with the planned development along the corridor, the following physical traffic management measures could be considered to improve the performance of key intersections:

- Removal of kerbside parking on the side street approaches to intersections with Canterbury Road (at both the arrival and departure sides of the intersection).
- Duplication of designated right turn lanes (where feasible) in order to provide additional capacity for the right-turn vehicle movements.
- Additional through lanes at intersections (where feasible) to increase the capacity at the intersection and allow additional vehicles to travel through the intersection.

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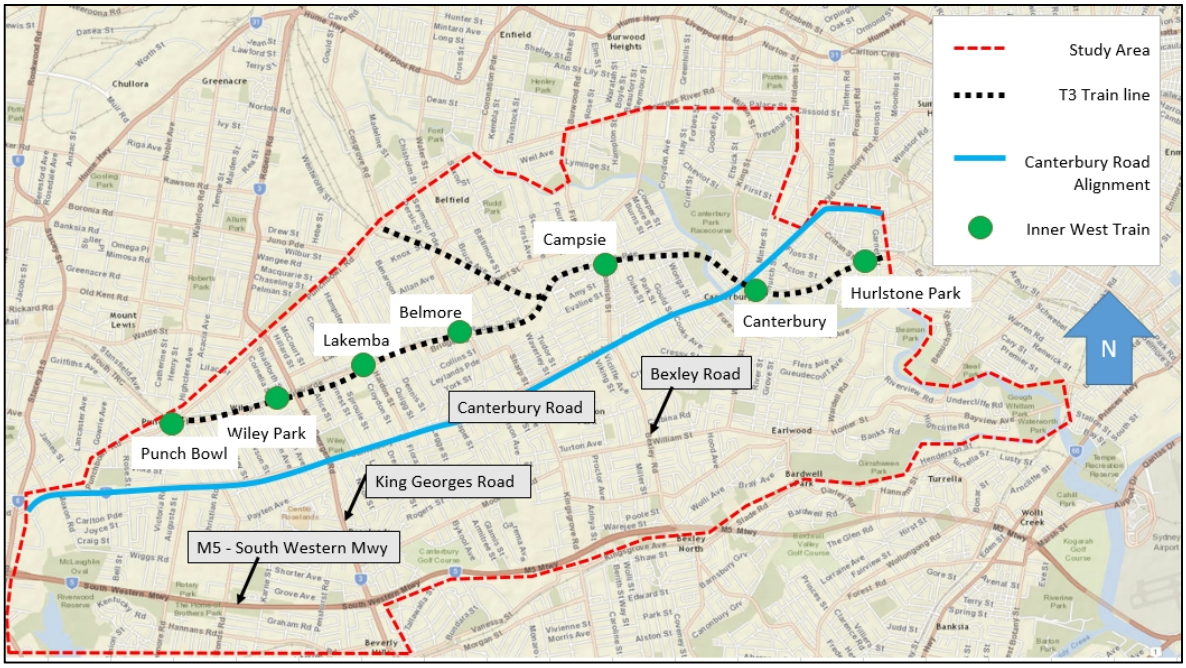
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1. Introduction

The Canterbury Road corridor (as shown in Figure 1-1) is a stretch of urban development between Punchbowl and Dulwich either side of Canterbury Road. It has been the subject of significant development in recent years that has happened as a result of ad-hoc rezoning of properties. To address this, the City of Canterbury Bankstown Council (CBC) is undertaking an Integrated Land Use, Development and Transport Plan to set the parameters for development for the period to 2036.

Figure 1-1 Canterbury Road corridor study area



This report forms the transport assessment of the existing conditions, proposed development, its impact on the traffic and transport performance of the corridor and associated mitigation measures to address the impacts of the proposed development scheme.

1.1 Background

Canterbury Road itself (the A34) is an arterial road that connects Enmore to Liverpool. Within the study area, the T3 Bankstown Line runs approximately parallel to the north of Canterbury Road at distances of 700 m - 900 m. The T2 East Hills line also parallels the corridor to the south of Canterbury Road at distances of 2 km – 2.5 km.

Canterbury Road currently experiences significant levels of traffic congestion (particularly during peak morning and evening periods), leading to longer travel times along the corridor. A number of bus services operate within the study area, which generally serve local centres and function as feeder services to the rail lines.

The M5 Motorway currently provides the main east-west arterial functionality in south-west Sydney and runs approximately parallel to the south of Canterbury Road. As part of the WestConnex project, the M5 will be upgraded to provide twin underground tunnels (of 9 kilometres in length) between Kingsgrove and St Peters and double the capacity of the motorway. Tunnelling commenced in February 2017 and the project is expected to be completed by 2020.

Approvals have recently been issued for developments that exceed existing planning specifications and there have been a number of private-led proposals to intensify land uses on Canterbury Road, with Local Environmental Plan (LEP) amendments for a number of sites.

The impact of these developments has not been included in Council's current planning strategies, raising concerns that the future transport infrastructure may not cater for a rise in demand on the adjoining transport and traffic networks.

The Draft South District Plan was released by the Greater Sydney Commission (GSC) in November 2016, specifies an overall housing target (2016 – 2021) for Canterbury-Bankstown Council of 13,250 dwellings.

Significant increases in development in the corridor without appropriate infrastructure changes may lead to a reduced functionality of the corridor (and adjoining roads) for all transport users.

1.2 Purpose of this report

The Canterbury Road Transport and Traffic Study forms part of a strategic review of the corridor, identifying constraints and assessing the impact of forecast traffic associated with the proposed land uses on and in proximity to Canterbury Road.

This study supports and assesses the two key studies that feed the strategy for the Canterbury Road Corridor:

- SGS has been commissioned to undertake an economic assessment of the provision/relocation of retail and commercial land use.
- Hill Thalis have been commissioned as urban designers to assess road hierarchies, active transport networks and residential densities.

Inputs from both these studies have been used to inform the analysis undertaken in the Canterbury Roads Transport and Traffic Study.

The study provides an understanding of the current and future traffic and transport infrastructure and services within the study area. This will enable Canterbury Bankstown Council (CBC) to manage effectively the impacts associated with the planned development within and in proximity to the corridor.

In summary, the aims of the Canterbury Road Transport and Traffic Study include:

- Specifying the role of Canterbury Road in the context of a local and regional network.
- Identifying the current operation of the traffic and transport facilities within the corridor.
- Identifying the role and performance of the traffic and transport facilities accounting for the growth (residential and employment) within the corridor study area.
- Identifying opportunities to mitigate/alleviate the impacts of the forecast growth in demand on the traffic and transport facilities.

1.3 Study Limitations

This study has been limited by the following:

- Land use assumptions provided by Hill Thalis and CBC and have not been reviewed except as part of the change analysis.
- Traffic modelling was limited to strategic traffic modelling for the study, using the EMME software and detailed SIDRA modelling, which utilised the strategic modelling outputs for traffic growth.

- Background traffic growth assumptions provided from Roads and Maritime Services' (Roads and Maritime) strategic model and have not been independently verified as part of this commission except aspects that have been explicitly mentioned in this document.
- Strategic traffic model provided by Roads and Maritime and has not been independently checked or verified except aspects that have been explicitly mentioned in this document.
- Site inspections were undertaken on a weekday only.
- Traffic count data and SCATS count data are assumed to be accurate and have not been verified beyond that explicitly mentioned in this report.
- SIDRA analysis is predicated on strategic modelling which is in turn predicated on the strategic land use forecasts. As such, SIDRA analysis should be considered as indicative only.

2. Policy Framework and Background Studies

A suite of policies, plans and strategies have been prepared or commissioned by CBC and the NSW Government that set out a vision for Canterbury Road and the surrounding area (the Canterbury Road corridor).

2.1 State Government Studies

2.1.1 A Plan for Growing Sydney (2014)

A Plan for Growing Sydney is the 20-year plan for the Sydney Metropolitan Area. It provides direction for the growth of Sydney including the location of housing, employment, infrastructure and open space.

The following three planning principles guide this growth:

- Increasing housing choice around all centres through urban renewal in established areas.
- Promoting stronger economic development in strategic centres and transport gateways.
- Connecting centres with a "networked' transport system.

Key priorities for the South Subregion which includes Canterbury, are:

- Protect corridors for future transport needs.
- Investigate pinch points associated with the growth in the vicinity of Sydney Airport and Port Botany.
- Work with Council's to identify locations for housing intensification and urban renewal along key public transport corridors.

2.1.2 NSW 2021(2011)

NSW 2021 is a 10-year plan to rebuild the economy, provide quality services, renovate infrastructure, restore government accountability, and strengthen the local environment and communities.

Key goals and priority actions of *NSW 2021* include:

- Improving housing affordability and availability, including facilitating the delivery of 25,000 new dwellings in Sydney per year.
- Encouraging job growth in centres close to where people live and to provide access to public transport.
- Increasing the share of commuter trips made by public transport.
- Improving the efficiency of the road network during peak times on Sydney's road corridors.
- Increasing walking and bicycle riding mode share.

2.1.3 NSW Long Term Master Plan (2012)

The *NSW Long Term Transport Master Plan* is the overarching document to guide the NSW Government's transport funding priorities over the next 20 years. The *Master Plan* has adopted

an integrated land use and transport planning approach to identify transport corridors which link the places where people want to travel.

The *Master Plan* identifies Canterbury Road between Newtown and Liverpool as a corridor that should be investigated for the implementation of congestion management measures.

2.1.4 Sydney's Rail Future (2012)

Sydney's Rail Future aims to accommodate population growth and demand for services, by improving the customer experience, network reliability and service frequencies across the network through investment in increased capacity and upgraded infrastructure.

The study specifies that the Bankstown Line will be converted to rapid transit trains, operating as a "turn up and go" facility for commuters. This is consistent with the works associated with Stage 2 of the Sydney Metro which include upgrading the T3 Bankstown Line (between Sydenham to Bankstown) to metro standard. Stage 2 rail services are expected to commence operation in 2024.

2.1.5 Draft South District Plan (2016)

The South District covers the Local Government Areas of Canterbury-Bankstown, Georges River and Sutherland.

The *Draft South District Plan* was released by the Greater Sydney Commission (GSC) in November 2016, with the aim of bridging the gap between Metropolitan and Local Planning. The *District Plan* is targeted to address a range of housing and employment issues that transcend local government boundaries, whilst accounting for the unique character of local regions.

The *District Plan* specifies an overall housing target (2016 – 2021) for Canterbury-Bankstown Council of 13,250 dwellings.

2.1.6 Draft Sydenham to Bankstown Urban Renewal Corridor Strategy (2017)

The *Draft Sydenham to Bankstown Urban Renewal Corridor Strategy* provides a framework to guide the development of "renewal areas" in proximity to Sydney Metro Stations. The Strategy proposes changes to land use and built form controls that would provide over 35,000 dwellings to be constructed across the 11 Station Precincts.

Recommendations/opportunities for some station precincts within the study area include:

- Canterbury - Allowing additional height on Canterbury Road and in proximity to Canterbury Station.
- Campsie – Allowing height increase in proximity to the station, provide new pedestrian links and transform the car parks along the rail line into green corridors.
- Lakemba – Allowing additional height near the station, providing new pedestrian links as the site develops and new open space above the railway corridor.
- Punchbowl - Allowing additional height near the station, providing new pedestrian links as the site develops and new "pocket parks" set back from Punchbowl Road.

2.2 Local Government and Other Studies

2.2.1 Canterbury Road Master Plan (2010)

The *Canterbury Road Master Plan* was commissioned by Canterbury Council to provide a basis for the coordination of land use and transport and was intended to inform an improved zoning and development control system.

Some of the key points of the master plan include:

- Active transport facilities along Canterbury Road are of a poor quality.
- The Local Environmental Plan (LEP) is overly complex with no coordinated vision for Canterbury Road and the zoning is working against the creation of walkable local centres.
- The *Master Plan* recommends a "people first" approach to Canterbury Road which would create a high intensity mixed use precinct at Canterbury, lower level pedestrian oriented mixed use areas along the road and pedestrian friendly "green breaks" along the corridor.
- The absence of a network of rear lanes for commercial and retail uses on Canterbury Road has impacted local businesses due to heavy traffic and a high demand for on-street parking as well as detracting from the pedestrian environment due to multiple driveway crossings.
- The most significant missing element of the bus services on Canterbury Road is the absence of an east-west link to employment areas along Milperra Road and Liverpool.

2.2.2 Canterbury Development Control Plan (2012)

The *Canterbury Development Control Plan* (DCP) Part D Business Centres includes a structure plan for Canterbury Road with the following objectives:

- To create attractive and vibrant mixed use environments via the provision of a rich network of publically accessible spaces, walkable streets and places.
- To provide improved open space/public domain to serve the local community.

An impression of the public domain improvements from the DCP which includes tree plantings and 3 m footpaths is displayed in Figure 2-1.

Figure 2-1 Canterbury Road Public Domain Improvements



Source: Canterbury Development Control Plan 2012

2.2.3 Canterbury Local Environment Plan (2012)

The Canterbury LEP identifies the zoning specifications that regulate development within the study area. The key objectives of the LEP include:

- Promote a variety of housing types.
- Create vibrant town centres by focusing employment and residential land uses in proximity to public transport hubs.
- Revitalise Canterbury Road by encouraging a mix of land uses.
- Promote healthy lifestyles by encouraging an increase in the use of public transport, walking and bicycle riding.

The current zoning along Canterbury Road includes the following:

Table 2-1 Land Use Zoning along Canterbury Road

Zone	Objective
R3 Medium Density Residential	To provide a variety of housing types within a medium density residential development
R4 High Density Residential	To provide a variety of housing types within a high density residential development
B2 Local Business Centre	To provide a range of retail, business and community uses To encourage employment in accessible areas To maximise public transport patronage and encourage walking/bicycle riding
B5 Business Development	To enable a mix of business, warehouse and bulky goods premises in locations close to centres To provide for residential uses in conjunction with mixed use development To support urban renewal which supports increased use of public transport, walking and bicycle riding
B6 Enterprise Corridor	To promote businesses/employment uses along main roads To provide for residential land uses as part of mixed use developments To facilitate the revitalisation of Canterbury Road
SP2 Infrastructure	To provide for infrastructure To prevent development that is not compatible with the provision of infrastructure.

The LEP Land Zoning Maps for Canterbury Road are included in Appendix A.

2.2.4 Canterbury Residential Development Strategy Final Report (2013)

The *Residential Development Strategy* (*RDS*) was prepared to ensure that the appropriate development controls and frameworks are in place to accommodate expected residential growth.

Key points of the study include:

- The predominant housing form in Canterbury is single detached dwellings, with medium and high density dwellings predominantly located in the rail corridor north of Canterbury Road.
- Areas zoned for high density residential (in proximity to public transport.) provide the best opportunity to increase dwelling densities
- The State Government through the *South Subregional Strategy* has set a housing target for the Canterbury LGA that equates to an average of an additional 263 dwellings per year.
- A broad analysis of recent approvals and current planning controls indicates that there are opportunities for 28,800 new dwellings within Canterbury, with 8,000 of these being "development ready" opportunities.
- High density housing should be located adjacent to centres and within walking distances to transport nodes.
- The railway station walk catchments should be the subject to a detailed housing opportunity and planning assessment.

2.2.5 Traffic Impact Assessment Canterbury Residential Development Strategy Planning Proposal (updated January 2016)

The report (prepared by Traffix) undertakes a traffic impact assessment in support of the *RDS* and the cumulative impacts associated with the changes in planning control (height and density) of a number of sites along Canterbury Road.

Key points of the study include:

- Canterbury Road currently operates at or near capacity.
- Relatively high volumes of crashes have been recorded on Canterbury Road.
- To address safety and congestion issues, it was recommended that right turns be banned at priority controlled intersections along Canterbury Road.
- Traffic modelling indicates that unsignalised intersections will operate with an acceptable level of service following the implementation of right turn restrictions.
- New laneways are considered appropriate to facilitate positive urban design outcomes and to limit direct access to/from Canterbury Road.
- The 2021 horizon year analysis (including the right turn restrictions) indicates that all intersections (with the exception of Canterbury Road and Kingsgrove Road) operate with an acceptable level of service

2.2.6 Canterbury Residential Development Strategy Planning Proposal Audit of Traffic Modelling (2016)

This report was commissioned by Road and Maritime to peer review the modelling undertaken in the Traffix Report. The audit specified that:

- The 2021 analysis was undertaken in accordance with the banning of right turn movements at priority controlled intersections rather than the existing road geometry.
- Therefore the analysis indicates that the *RDS* land uses cannot be constructed until after right turn bans are implemented.

- There are large discrepancies between the observed and modelled queue lengths on Canterbury Road.

2.2.7 Advice on the provision of laneways in town centres (2015)

The letter (prepared by GLN Planning) provides advice on options for providing vehicular access to land zoned as “business” within town centres on Canterbury Road. The key “driver’ of this assessment was the identification of mechanisms to minimise interactions of pedestrian and vehicles along Canterbury Road.

The identified strategies for the provision of laneways included:

- Developers provide a laneway as part of their development application.
- Council includes the provision of a laneway as a condition of consent.
- The council includes a condition of consent for the dedication of land or a S94 contribution.
- Council acquires land at market value and constructs the laneway.

The letter concludes that public laneways are preferable to private laneways and Council needs to establish adequate funding mechanisms such as S94 contributions.

2.2.8 Transport Access Program (2013)

The Transport Access Program is a NSW Government initiative that aims to improve the existing public transport infrastructure at key stops and stations around NSW. Campsie Station is a key public transport interchange hub for train and bus services, and was identified as requiring the following upgrades:

- Seating at the eastbound bus stops on South Parade.
- Improving bus stops on South Parade for customer safety and comfort.
- Improving footpath pavements.
- Installing wayfinding signage.
- Installing disabled car parking and lighting upgrades on North Parade.

The works recommended in the Transport Access Program were completed in May 2013.

3. Living and Working in Canterbury

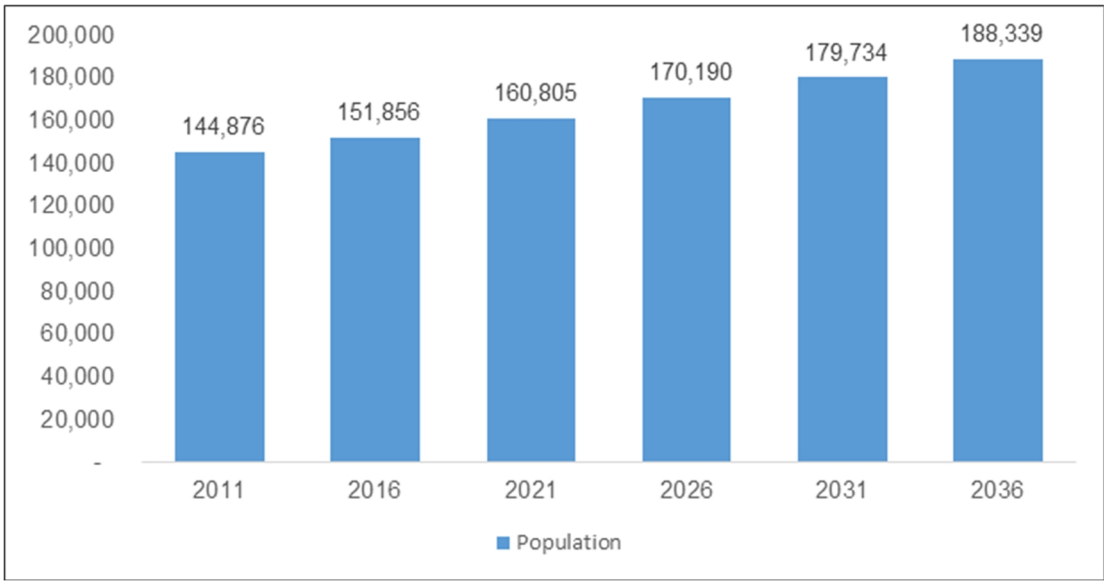
3.1 Population

3.1.1 Existing and Projected Populations

The community profile for Canterbury (*.idcommunity)* indicates that in 2015 the Canterbury Council LGA had a population of 151,746 residents.

Population projections for the Canterbury LGA (between 2011 and 2036) from the Bureau of Transport Statistics (BTS) are presented in Figure 3-1.

Figure 3-1 Population Projections for Canterbury



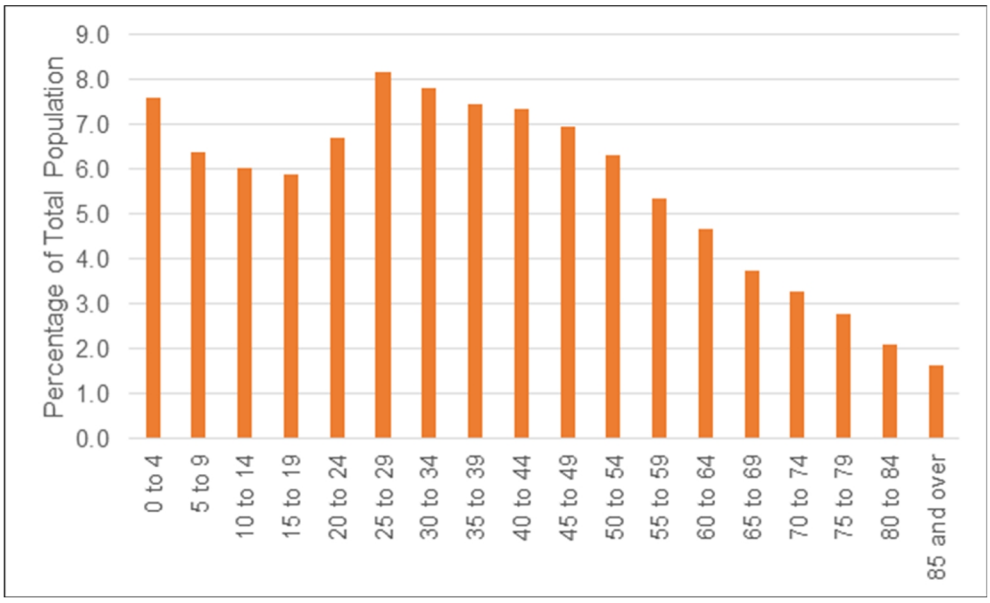
Source: http://visual.bts.nsw.gov.au

The data in Figure 3-1 indicates that the study area is expected to have a population of approximately 161,000 residents by 2021 and 188,000 residents by 2036. The centres expected to accommodate large population increases include Earlwood, Kingsgrove, Campsie, Roselands, Wiley Park and Canterbury.

3.1.2 Age Profile

The 2011 census data for the age distribution of Canterbury (using 4 year age groups) is presented in Figure 3-2.

Figure 3-2 Age Distribution in Canterbury (2011 Census Data)



Source: http://profile.id.com.au/canterbury/five-year-age-groups

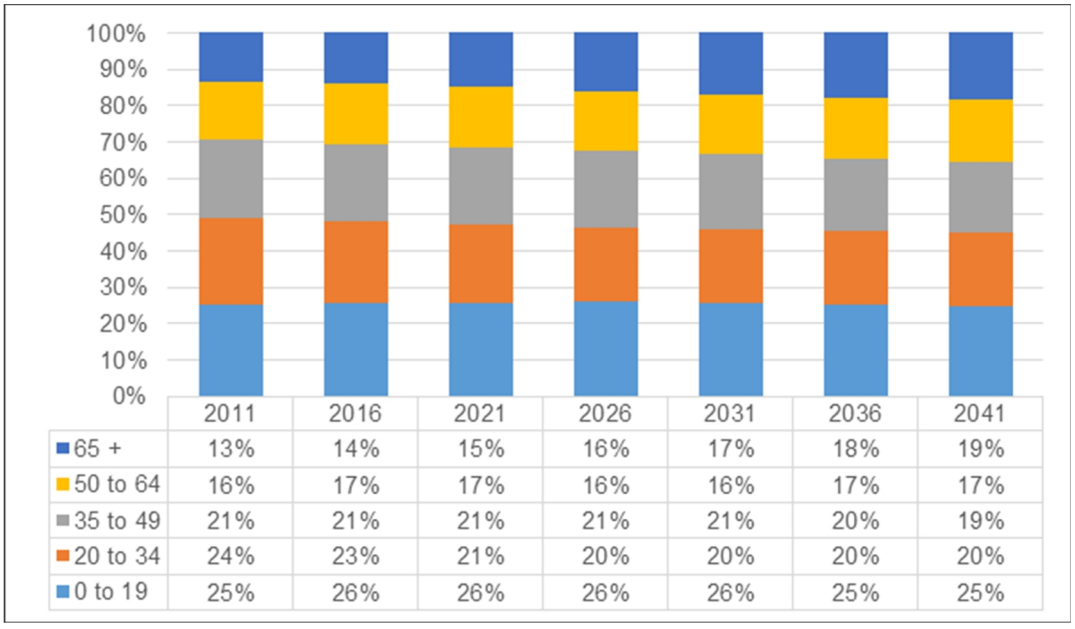
The data in Figure 3-2 indicates that:

- Approximately 26 percent of Canterbury's population are aged 0 – 19.
- Approximately 56 percent of Canterbury's population are aged 20 – 59.
- Approximately 18 percent of Canterbury's population are aged 60 or over.

These portions are generally consistent with the age profile of greater Sydney.

Age forecasts (provided by the Transport Performance and Analytics (TPA)) for the Canterbury LGA between 2011 and 2041 is presented in Figure 3-3.

Figure 3-3 Canterbury Age Forecast



	2011	2016	2021	2026	2031	2036	2041
65 +	13%	14%	15%	16%	17%	18%	19%
50 to 64	16%	17%	17%	16%	16%	17%	17%
35 to 49	21%	21%	21%	21%	21%	20%	19%
20 to 34	24%	23%	21%	20%	20%	20%	20%
0 to 19	25%	26%	26%	26%	26%	25%	25%

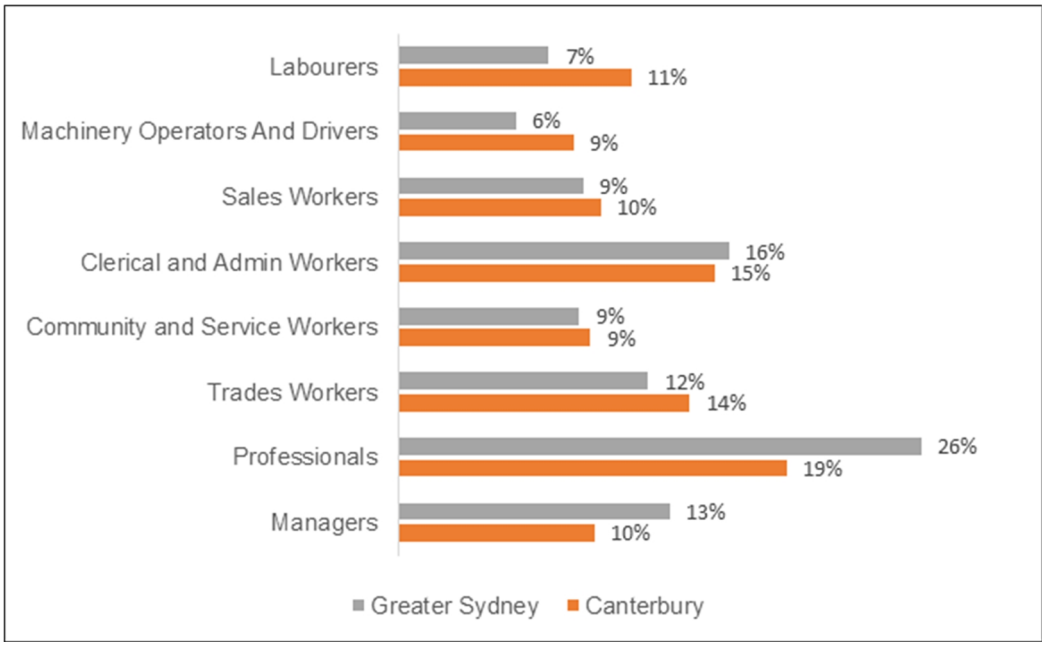
The data in Figure 3-3 indicates that portion of older residents (aged 65 or more) is expected to increase from 13 percent in 2011 to 19 percent in 2041, while the portion of younger adults (aged 20 – 34) is expected to decrease from 24 percent to 20 percent. The portions of the other age groups are expected to have only minor fluctuations.

3.2 Employment

Census data (2011) indicates that 54,658 residents living within the study area are employed, of which approximately 65 percent worked full time and 35 percent worked part time.

The main occupations of the employed residents of the former Canterbury LGA and Greater Sydney are shown in Figure 3-4.

Figure 3-4 Canterbury and Greater Sydney Occupational Data (2011)



The data in Figure 3-4 indicates that for employed residents, the most common occupations were professionals (19 percent), clerical and administration workers (15 percent), technicians and trade workers (14 percent), labourers (11 percent), managers (10 percent) and sales workers (10 percent).

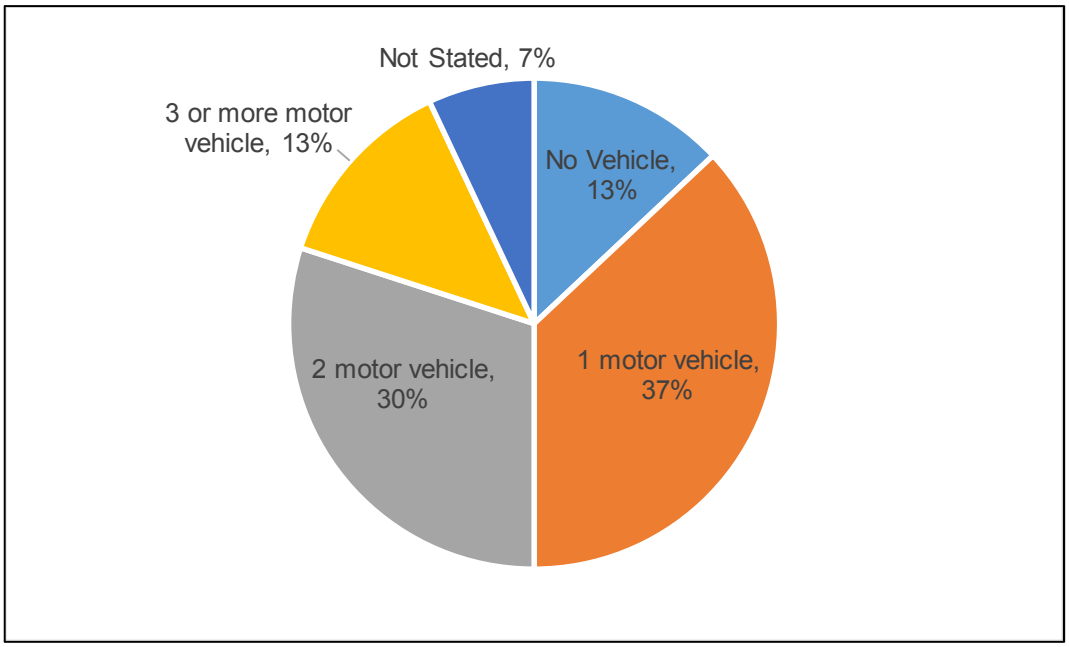
A comparison with the data for greater Sydney indicate:

- The portion of professionals and managers residing in Canterbury (29 percent) is less than Greater Sydney (39 percent).
- The portion of labourers, machinery operators and trades workers residing in Canterbury (34 percent) is higher than Greater Sydney (25 percent).

3.3 Car Ownership

Car ownership on a household basis in Canterbury id presented in Figure 3-5.

Figure 3-5 Car Ownership in Canterbury



The data in Figure 3-5 indicates that:

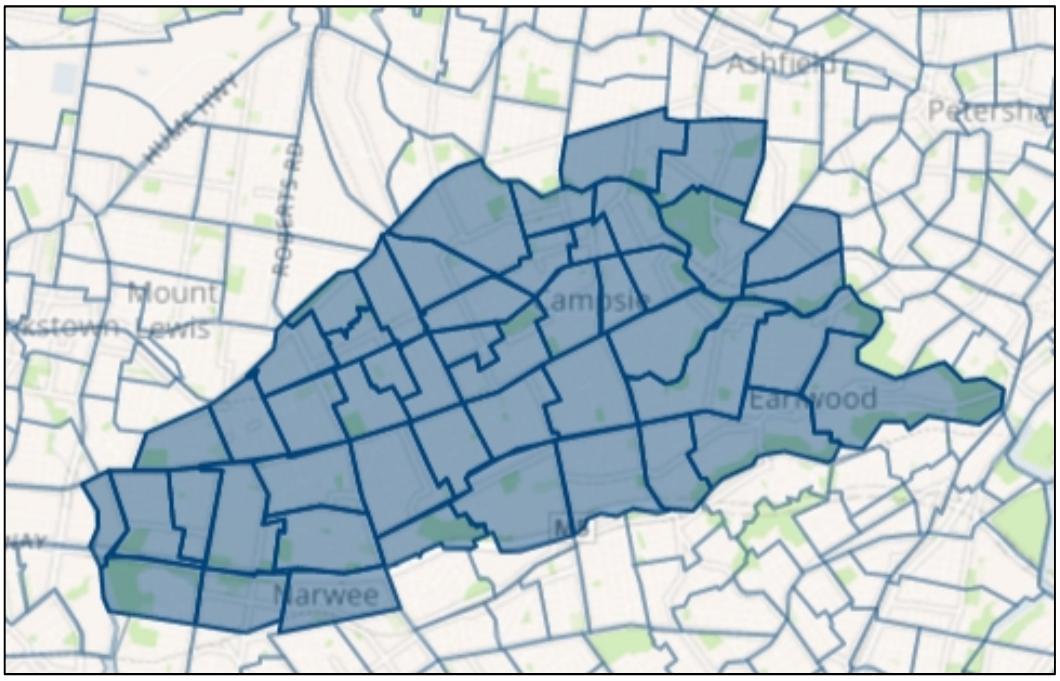
- Approximately 80 percent of households in the Canterbury Road study area own at least one car.
- Approximately 43 percent of households in the Canterbury Road study areaown two or more cars.

This is generally higher than Greater Sydney where approximately 81 percent of households own at least one car and 44 percent of households own two or more cars.

3.4 Journey to Work Data

Journey to work (JTW) data has been assessed for the transport zones contained within the study areas that are displayed in Figure 3-6.

Figure 3-6 Travel Analysis Zones



Source: http://visual.bts.nsw.gov.au

The 2011 JTW data indicates that:

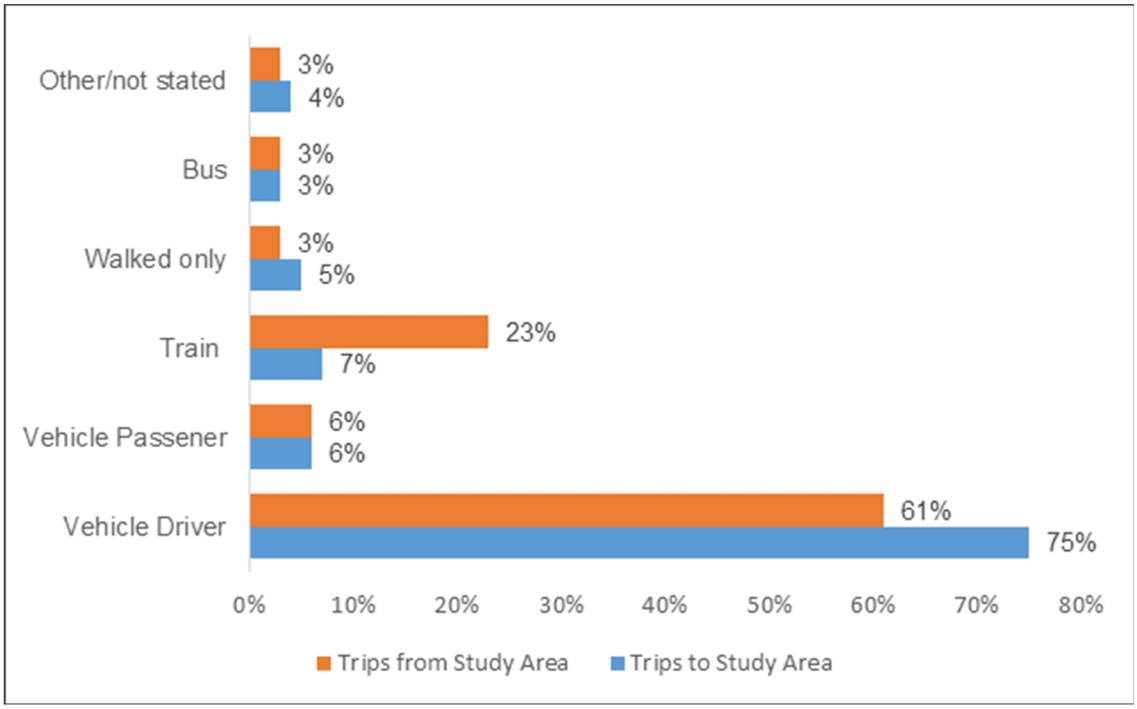
- 80 percent of Canterbury's residents travel outside the study area to access their places of employment.
- 15 percent of Canterbury's employed residents work within the study area.
- The work locations of 5 percent of employed residents are unknown.

For Canterbury residents who work outside the LGA, the key employment locations include:

- Sydney Inner City – 23 percent of employed residents.
- Strathfield/Ashfield/Burwood – 8 percent of employed residents.
- Bankstown – 6 percent of employed residents.
- Botany – 5 percent of employed residents.

The JTW data for the study area is displayed below in Figure 3-7.

Figure 3-7 Journey to Work Data



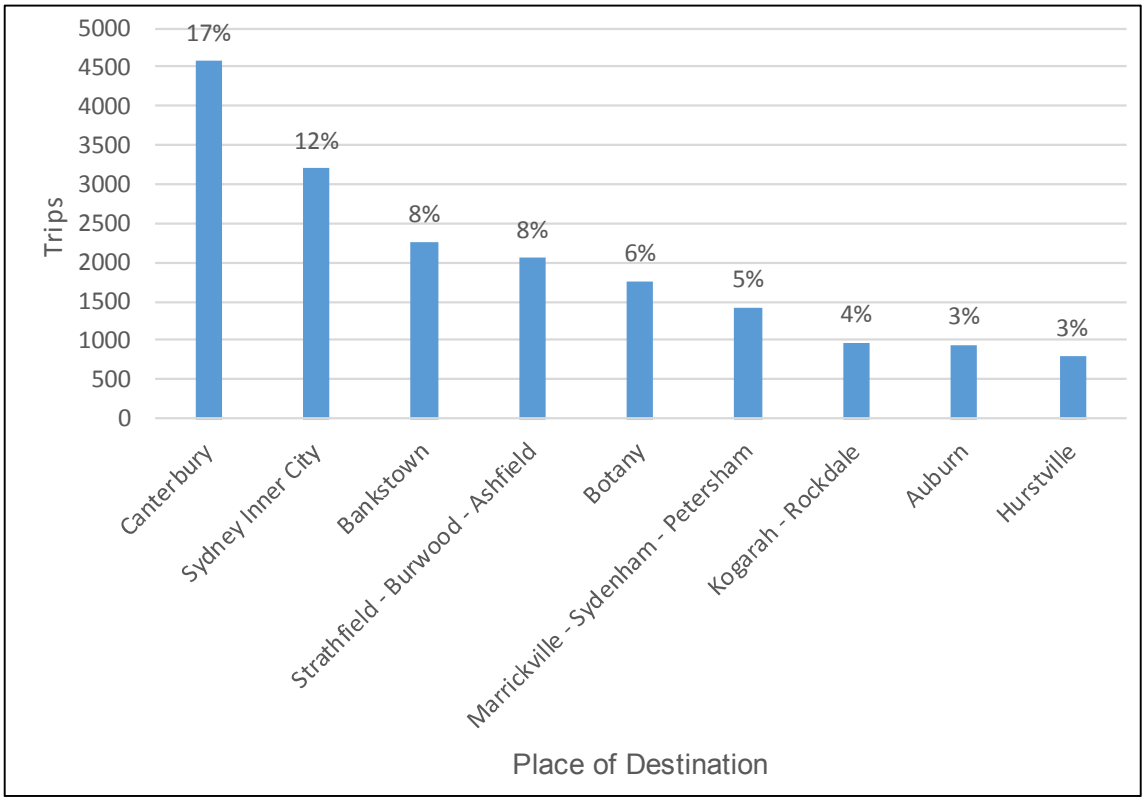
The data in Figure 3-7 indicates that:

- Private vehicle (as driver and passenger) is the predominant mode of travel for work trips to Canterbury (81 percent) and work trips from Canterbury (69 percent).
- Significantly higher portions of residents employed outside Canterbury used the train for work trips (23 percent) compared to trips to jobs within the Canterbury (7 percent). This is consistent with approximately 85 percent of employed residents working outside the local area. Additionally, some of the key commercial centres where employed residents work (such as Sydney Inner City and Bankstown) are located on the T3 Line.
- Approximately 3 percent of residents utilise the bus network to access their places of employment (both to and from the study area).
- Walking as a mode of transport was higher for individuals accessing jobs within the study area (5 percent) than for residents accessing jobs external to the study area (3 percent).

3.4.1 Private Vehicle

Analysis has been undertaken to identify the locations where employed residents of Canterbury drive to (Figure 3-8) and where individuals employed within Canterbury drive from (Figure 3-9), to access their workplaces.

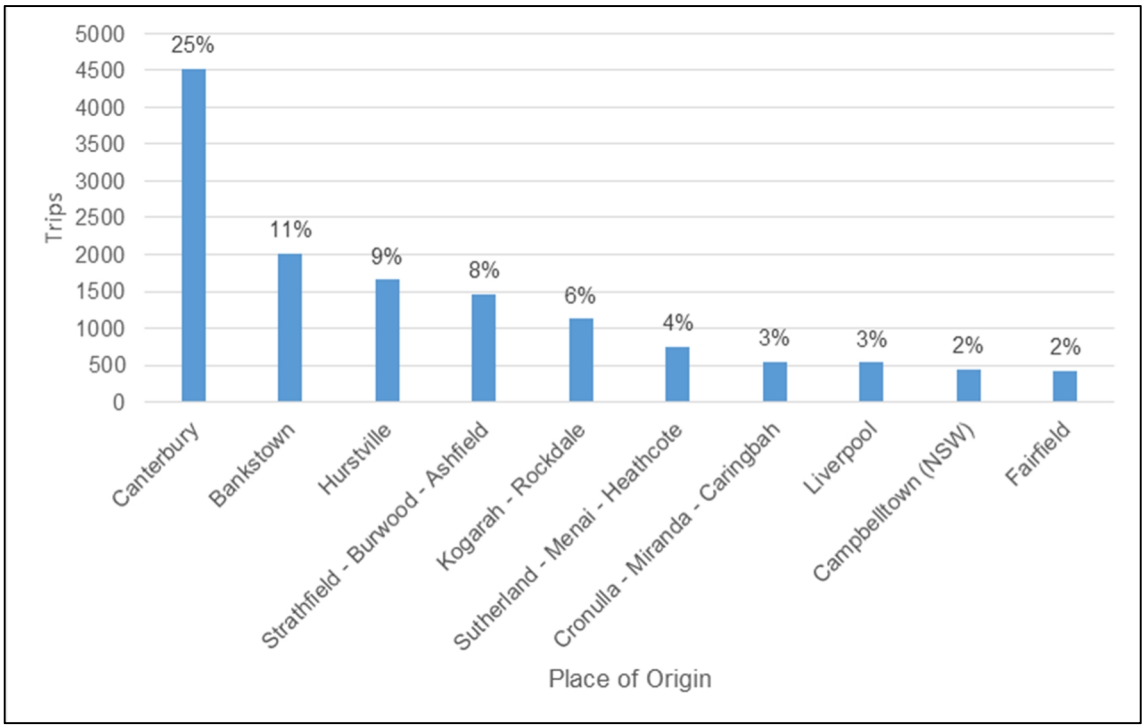
Figure 3-8 Private vehicle work trips by destination from the study area



The data in Figure 3-8 indicates that:

- A relatively large percentage of individuals residing and working within the study area (17 percent) use private vehicles to access their places of employment.
- Other population centres Canterbury residents drive to include Sydney Inner City, Bankstown, Strathfield, Burwood and Ashfield. The Sydney Inner City and Bankstown are located on the T3 Line, potentially providing a viable alternative to private vehicles.

Figure 3-9 Private vehicle work trips by origin to the study area



The data in Figure 3-9 indicates:

- A relatively large volume of individuals residing and working within the study area use private vehicles to access their places of employment.
- Other population centres people drive from in order to access their places of employment within the study areas include Bankstown, Hurstville, Strathfield, Burwood, Ashfield and Kogarah. Again the T3 Line potentially provides a viable alternative to private vehicles for some of these locations.

3.4.2 Buses

Analysis has been undertaken to identify the main locations where employed residents of Canterbury take a bus to (Figure 3-10) and where individuals employed within Canterbury take a bus from (Figure 3-11) to access their workplaces.

Figure 3-10 Bus work trips by destination from the study area

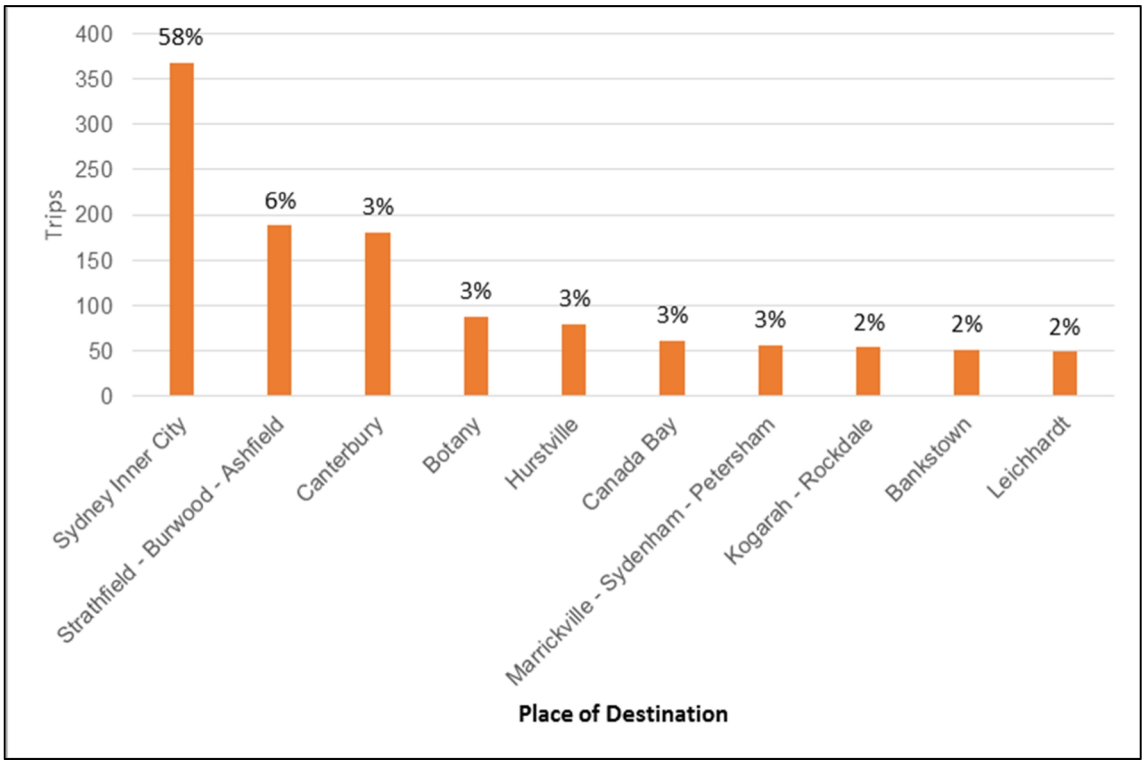
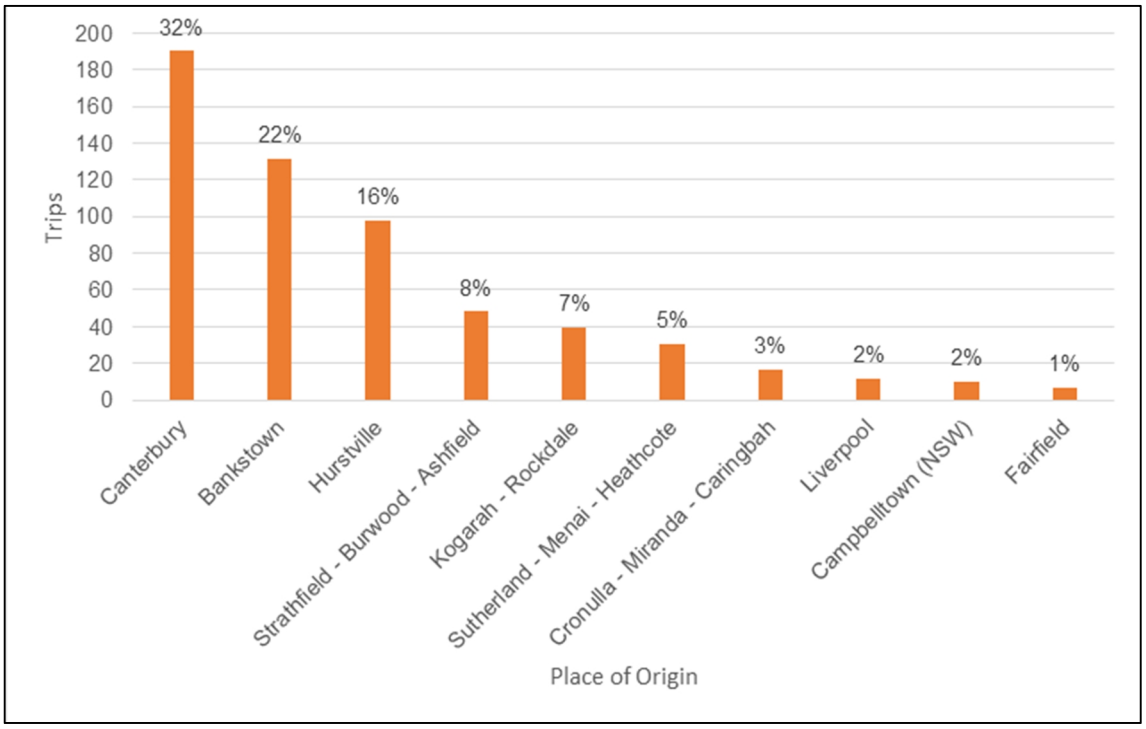


Figure 3-10 indicates that:

- A large majority of residents who use buses to access their places of work are employed in the Sydney Inner City (58 percent).

Figure 3-11 Bus work trips by origin to the study area



The data in Figure 3-11 indicates that

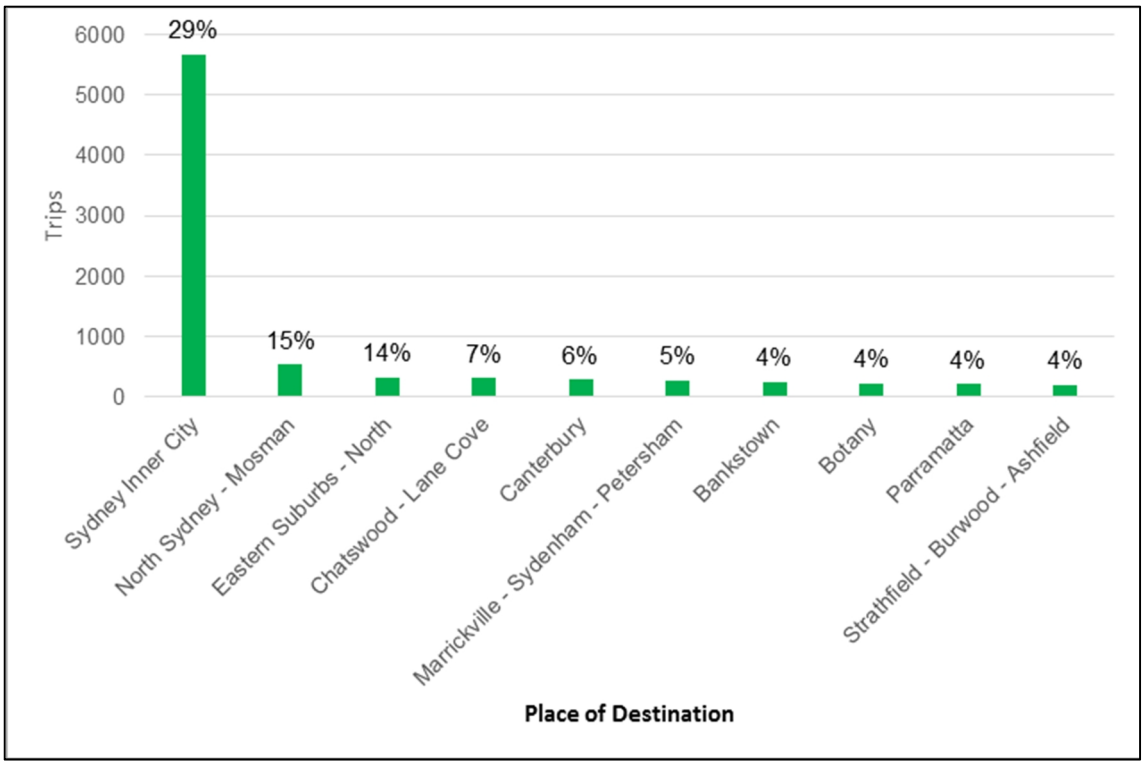
- The most common use of buses to jobs within the study area are associated with the movement of local residents (32 percent).

- Other key population centres people take a bus from in order to access their places of employment within the study areas include Bankstown, Hurstville, Strathfield, Burwood, Ashfield, Kogarah and Rockdale.

3.4.3 Trains

Analysis has been undertaken to identify the locations where employed residents of Canterbury take a train to (Figure 3-12) and where individuals employed within Canterbury take a train from (Figure 3-13) to access their workplaces.

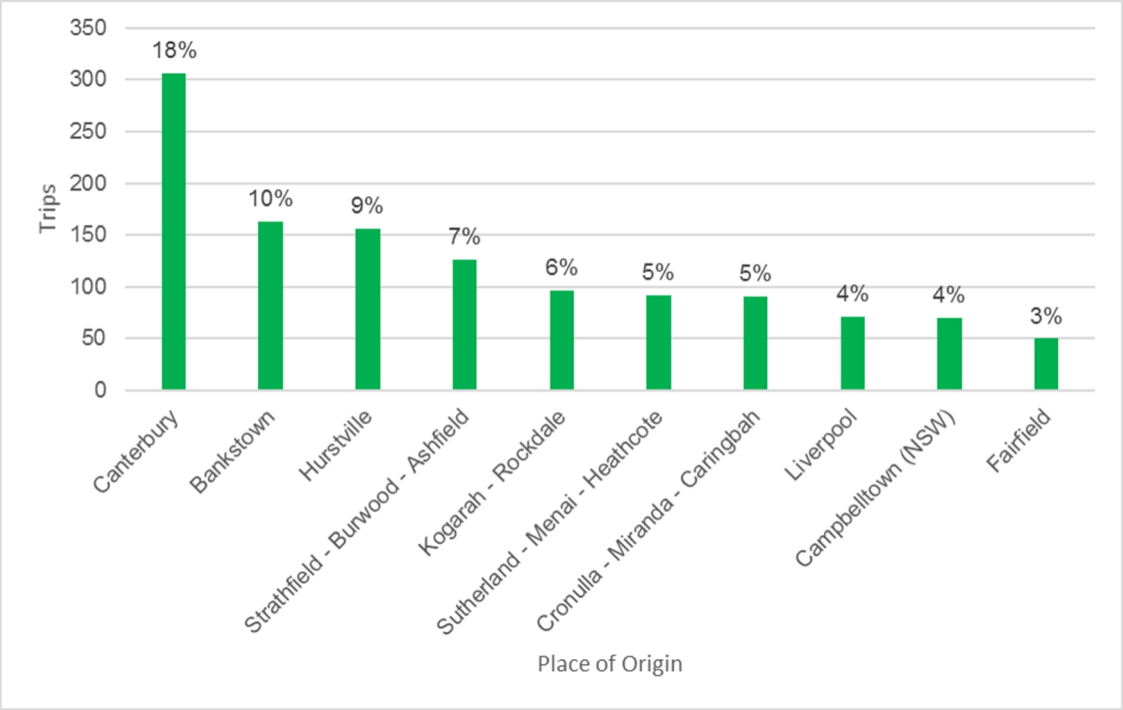
Figure 3-12 Train journey work trips by destination from the study area



The data in Figure 3-12 indicates:

- Rail services are primarily utilised to by residents to access places of employment within or in proximity to the Sydney CBD and North Sydney.
- A much larger volume of individuals utilise trains compared to buses to access their workplaces This could be attributed to faster travels times, higher carriage capacities and the relatively large volumes of residents who live within a comfortable walking distance to a train station.

Figure 3-13 Train journey work trips by origin to the study area



The data in Figure 3-13 indicates:

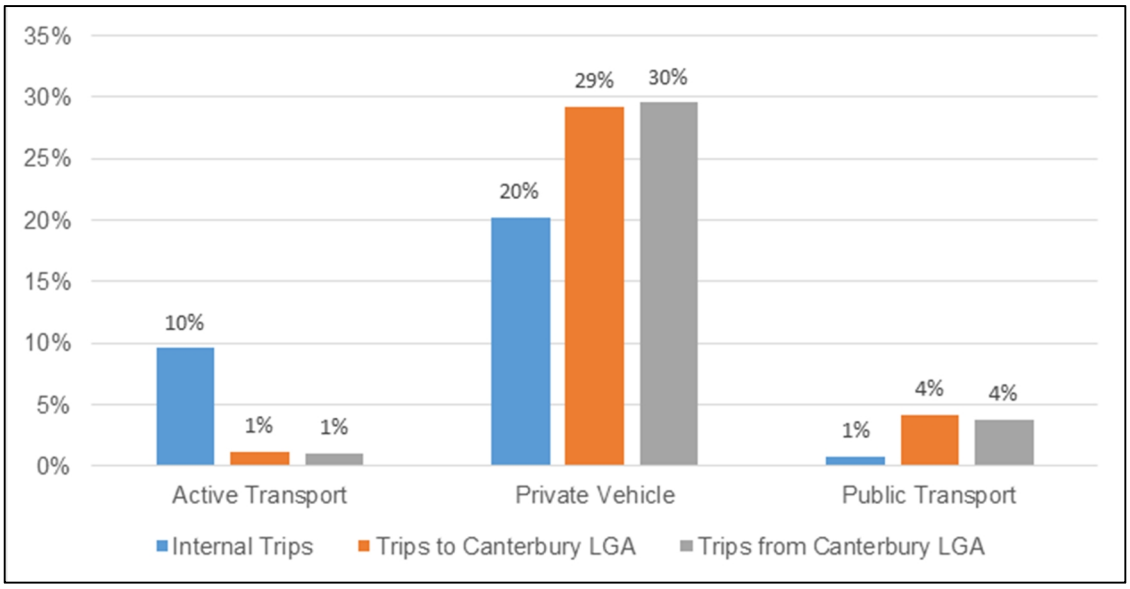
- The use of rail services to access places of employment within the study area is significantly less than for jobs outside the area (refer to the y-axis of Figure 3-12).
- The most common use of rail services to access jobs within the study area is associated with the movement of local residents (18 percent).
- Other key population centres people take a train from in order to access their places of employment within the study areas include Bankstown, Hurstville, Strathfield, Burwood, Ashfield, Kogarah and Rockdale.

3.5 Household Travel Survey

Household Travel Survey (HTS) data has been assessed in order to determine travel behaviour of residents to, from and within the Canterbury LGA. The data has been analysed for non-discretionary trips (work and education) and discretionary trips (all other purposes including shopping, recreation, personal business etc.). The modes of travel have been categorised as private vehicle (passengers or driver), active transport (walking and bicycle riding) and public transport (buses and trains).

The modes of travel used for trips within, to and from the study area are displayed are displayed in Figure 3-14.

Figure 3-14 Household trips by type and mode

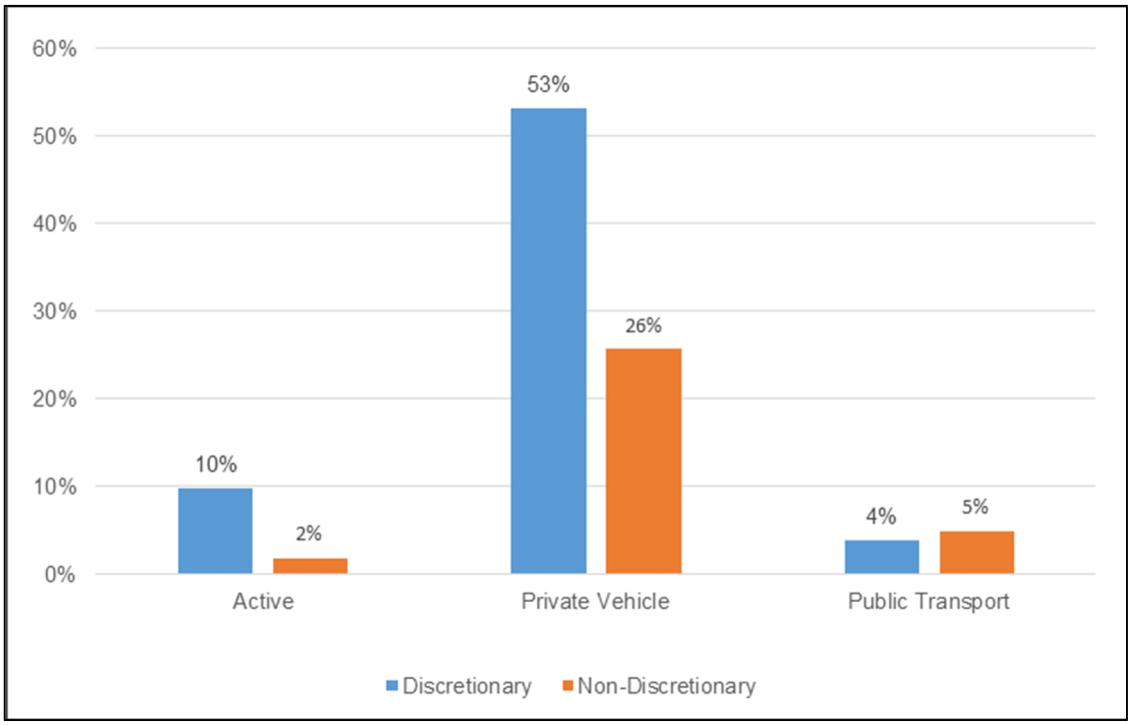


The data in Figure 3-14 indicates that:

- Active transport constitutes 12 percent of all trips, with the majority (10 percent) associated with internal movement of residents, with only 2 percent of active transport trips associated with the movement of residents to and from the study area.
- Private vehicles constitute 79 percent of all trips, with a relatively high portion (20 percent) associated with internal movements. Thus the majority of short trips (within the study area) are undertaken using private motor vehicles.
- Public transport constitutes only 9 percent of all trips within the study area, with only 1 percent of public transport trips associated with the internal movement of residents.

A similar analysis has been undertaken for non-discretionary and discretionary trips.as displayed in Figure 3-15.

Figure 3-15 Discretionary/non-discretionary trip analysis



The data in Figure 3-15 indicates that:

- Approximately 33 percent of trips are non-discretionary and 67 percent are discretionary.
- The majority of trips (53 percent) are associated with the discretionary private vehicle activity.
- The use of active transport within the study area is primarily associated with discretionary trips (10 percent of trips).
- The use of public transport is approximately the same for discretionary and non-discretionary trips (4 – 5 percent).

4. Existing Transport Network

This section presents a summary of the existing traffic and transport networks in the Canterbury LGA, and how they influence travel choices.

4.1 The Road Network

4.1.1 Existing Road Network

Functional road classification involves the relative balance of the mobility and access functions. Roads and Maritime define 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 – generally controlled by Roads and Maritime, typically no limit in flow and designed to carry vehicles long distance between regional centres.
- Sub-Arterial Roads – can be managed by either Roads and Maritime or local council. 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 roads and arterial road networks 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.

The arterial roads within the Canterbury LGA are as follows:

- Canterbury Road;
- M5 East Motorway;
- King Georges Road;
- Bexley Road; and
- Punchbowl Road.

4.1.2 Canterbury Road

Canterbury Road forms part of the (A34) is a key arterial road within the Canterbury LGA and is the main focus for this study. It has a posted speed limit of 60 km/h and typically provides two travel lanes in either direction. Canterbury Road has an east-west alignment through the middle of the Canterbury LGA, intersecting a number of other arterial roads including King Georges Road and Bexley Road.

Canterbury Road crosses over the T3 Bankstown Rail Line near Canterbury Station before linking with the New Canterbury and Old Canterbury Road intersection at Dulwich Hill.

Data from Roads and Maritime Count Stations indicate that Canterbury Road carries approximately 45,000 vehicles per day.

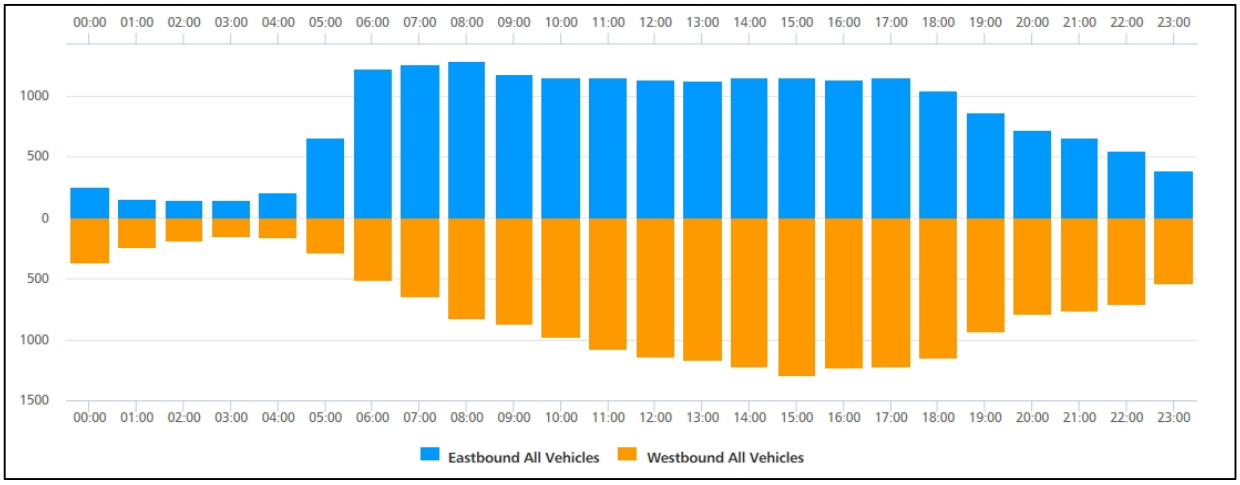
GHD has undertaken an assessment of the current turning restrictions for intersections along Canterbury Road (see Appendix B). The analysis indicates that in order to facilitate a more efficient road network operation, right turns from and onto Canterbury Road are currently banned at a significant number of locations along the corridor.

4.1.3 Roads and Maritime Traffic Volumes

Canterbury Road

Average annual daily traffic volume data from a Roads and Maritime Count Station on Canterbury Road (500 m east of King Georges Road) is presented in Figure 4-1.

Figure 4-1 Average Annual Hourly Traffic Volumes for Canterbury Road (500 m east of King Georges Road)



Source: ww.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map

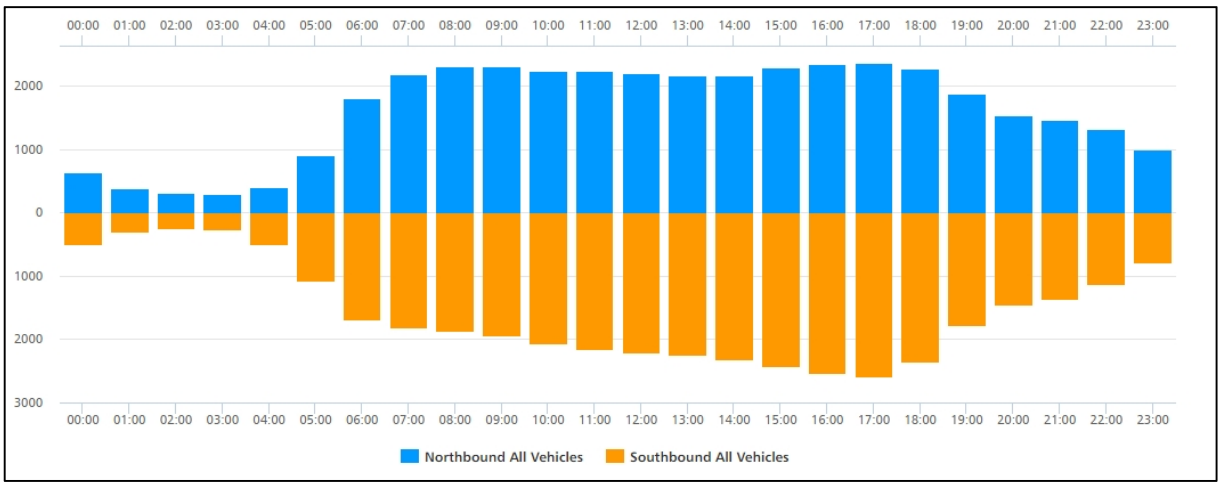
Figure 4-1 indicates that:

- During peak periods of road network activity (6:00 am – 6:00 pm) Canterbury Road experiences volumes in excess of 1,000 vehicle/h/direction.
- In AM peak periods (approximately 8:00 am – 9:00 am) there are typically higher volumes of eastbound than westbound traffic. in PM peak periods (approximately 5:00 pm – 6:00 pm) eastbound and westbound traffic volumes are approximately equal.
- Inter-peak traffic volumes are also relatively high, with only minor variations in vehicle activity.

King Georges Road

Kings Georges Road is an arterial road which intersects Canterbury Road at a major signalised intersection. Traffic data obtained from A Roads and Maritime Count Station on Kings Georges Road is displayed Figure 4-2.

Figure 4-2 Average Annual Hourly Traffic Volumes on King Georges Road



The data in Figure 4-2 indicates that during peak periods, King Georges Road experiences volumes of approximately 2,500 vehicles/h/direction, with only minor variations in peak and inter-peak traffic volumes.

Google traffic outputs indicate that significant peak hour delays occur on Canterbury Road at its intersection with King Georges Road, particularly for eastbound traffic in morning peaks and westbound traffic in evening peaks.

Bexley Road

Bexley Road is another arterial road which intersects Canterbury Road at a major signalised intersection. Traffic data obtained from Roads and Maritime Count Station on Bexley Road is displayed Figure 4-3.

Figure 4-3 Average Annual Hourly Traffic Volumes on Bexley Road

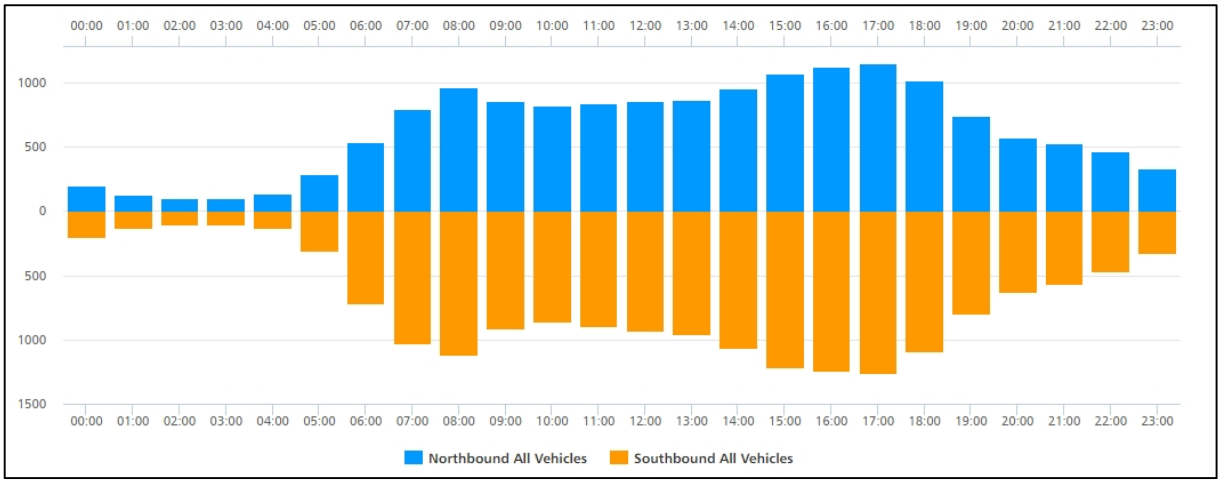


Figure 4-3 indicates that Bexley Road has more distinct morning and evening traffic peaks compared to King Georges Road and Canterbury Road. In AM peak periods Bexley Road experiences approximately 1,000 vehicles/h/direction and in the PM peak approximately 1,300 vehicles/h/direction.

4.1.4 Congestion

A site survey was undertaken on 28th February 2017 during peak morning periods (7:00 am to 9:00 am) and evening periods (4:00 pm – 6:00 pm) to assess general traffic conditions and key congestion points along the Canterbury Road Corridor.

The locations of observed congestion points along the corridor in are displayed in Table 4-1.

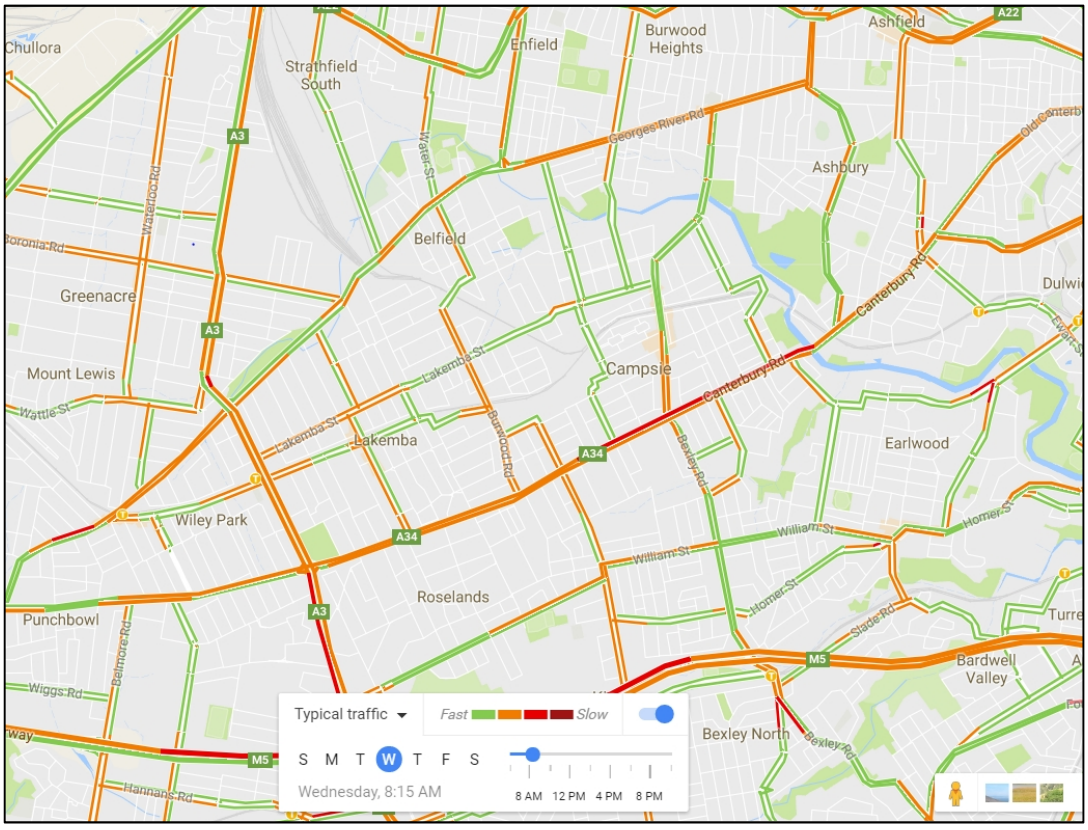
Table 4-1 Morning peak congestion Points

Direction	Location	Traffic Observations
Eastbound	King Georges Road	Significant delays up to 5-6 minutes with queues extending to Rawson Street
	Haldon Street	Delays up to 1-2 minutes, queues reaching King Georges Road
	Kingsgrove Road	Significant right turn queue into Kingsgrove Road from Canterbury Road
	Wonga Street	Queues reaching back to Northcote Street

Direction	Location	Traffic Observations
	Jeffrey Street	Queues reaching back to Wonga Street
	Crinan Street	Moderate traffic queues
	New Canterbury Road	Delays for right turning vehicles onto New Canterbury Road with queues extending past Princess Street
Westbound	Punchbowl Road	Heavy right turning traffic from Punchbowl Road onto Canterbury Road blocked through traffic on Canterbury Road.
	King Georges Road	Heavy right turn traffic onto King Georges Road
	Wonga Street	Moderate right turn traffic into Wonga from Canterbury Road
	Crinan Street	Moderate traffic queues
	Burwood Road	Moderate traffic queues building for the right turn movement into Burwood Road

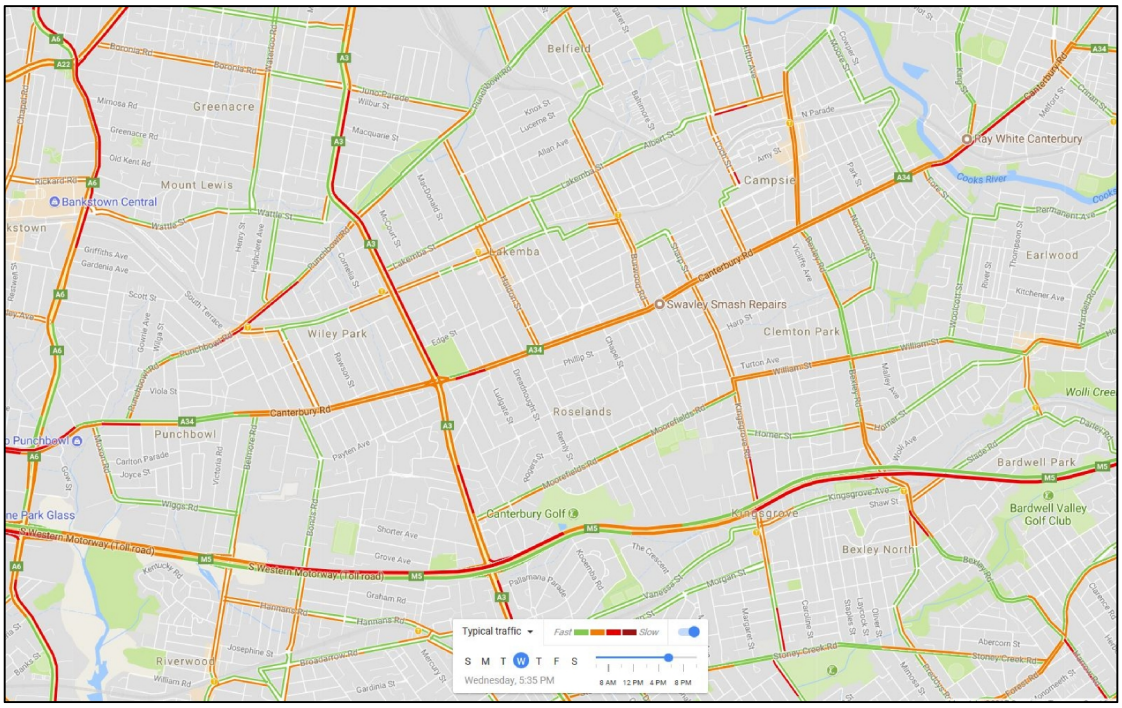
During the morning peak, the eastbound direction was observed to be significantly more congested when compared to the westbound direction which is consistent with the traffic data from the Roads and Maritime count station (see Figure 4-1) and Google Traffic outputs, as displayed in Figure 4-4 (data is for a “typical” Wednesday at 8:15 am).

Figure 4-4 Google Traffic Outputs (a typical Wednesday at 8:15 am)



Google Traffic outputs for the PM peak (for a “typical” Wednesday at 4:45 pm) indicates similar levels of congestion for eastbound and westbound traffic volumes and high levels of congestion in proximity to Punchbowl Road. This is also consistent onsite observations.

Figure 4-5 Google Traffic Outputs (a typical Wednesday at 4:45 pm)



Google travel time estimates for journey times on Canterbury Road between Punchbowl Road range between 14 – 35 minutes in AM peak periods (Eastbound Morning Peak Travel Times on Canterbury Road

Figure 4-6 Eastbound Morning Peak Travel Times on Canterbury Road

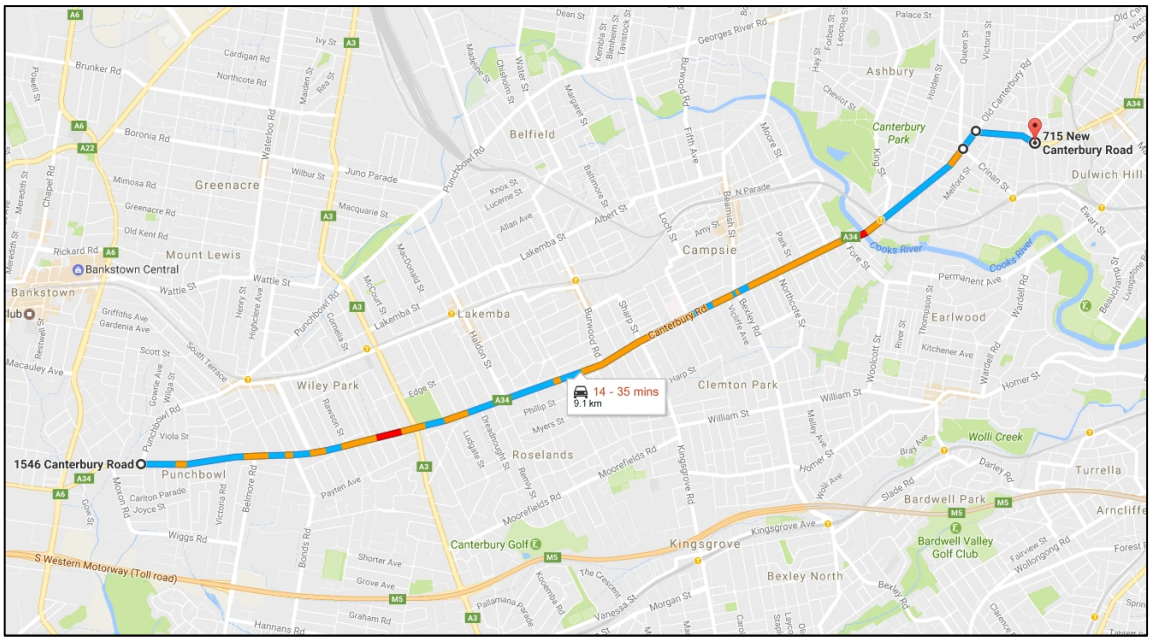
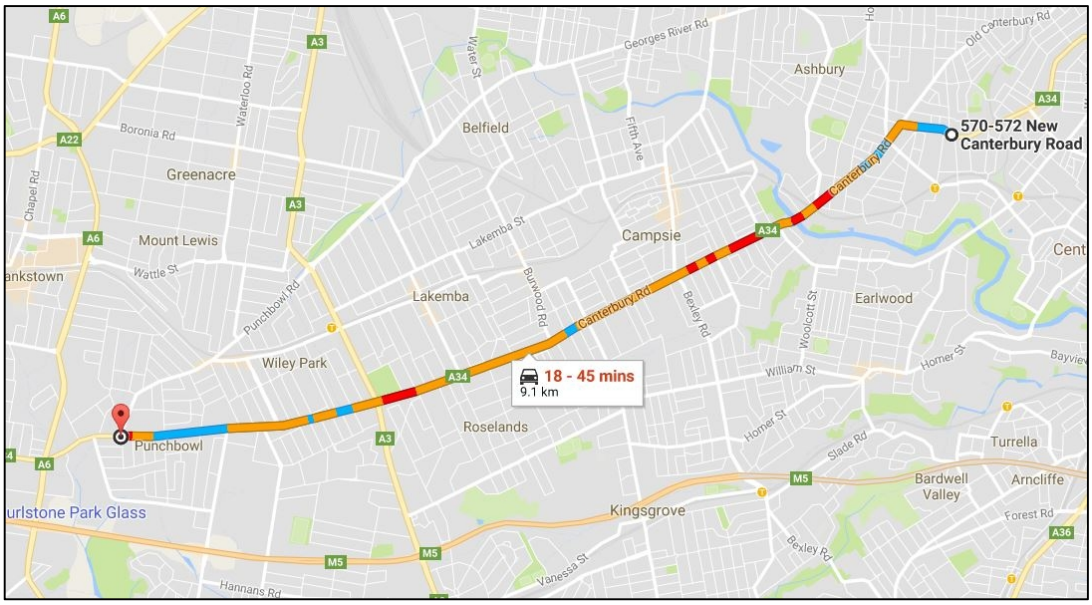


Figure 4-7 Westbound Evening Peak Travel Times on Canterbury Road



Travel times analysis undertaken by GHD staff indicates that in the AM peak this journey took approximately 35 minutes and in the PM peak approximately 40 minutes. These figures also show that travel times are highly variable and cannot be consistently relied upon. As a result, travellers within the corridor are required to leave earlier than they would with a less variable travel time.

4.2 Intersection Operation

4.2.1 Intersections of Interest

The intersections originally intended to be included in the modelling for the Canterbury Road Transport and Traffic Study consisted of the following:

- Canterbury Road and Belmore Road
- Canterbury Road and Bonds Road
- Canterbury Road and King Georges Road
- Canterbury Road and Haldon Street
- Canterbury Road / Kingsgrove Road / Sharp Street
- Canterbury Road and Old Canterbury Road
- Canterbury Road and Beamish Street/Bexley Road
- Canterbury Road and Jeffrey Street/ Broughton Street/ Tincombe Street.

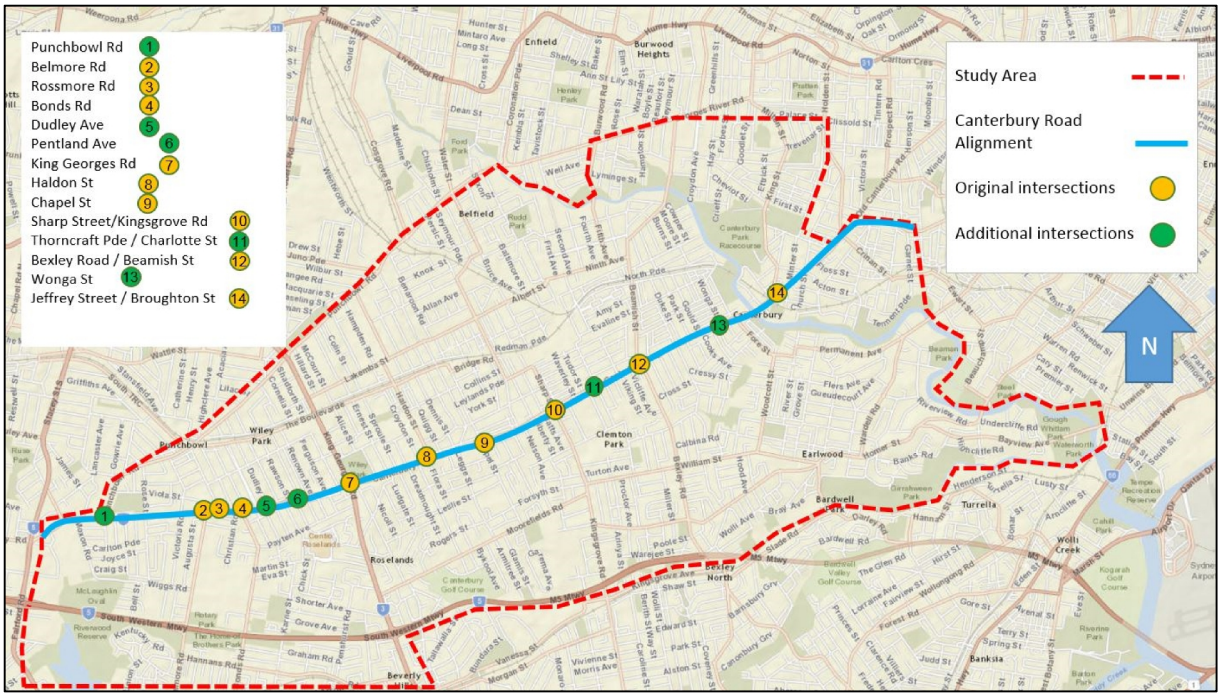
At a meeting with Roads and Maritime Officers (5th June 2017) it was agreed to remove the Canterbury Road and Old Canterbury Road junction from the analysis and include the following additional intersections:

- Canterbury Road and Punchbowl Road
- Canterbury Road and Dudley Street
- Canterbury Road and Rossmore Avenue
- Canterbury Road and Pentland Avenue
- Canterbury Road / Thorncraft Parade / Charlotte Street

- Canterbury Road and Wonga Street

The locations of the intersections of interest are displayed below in Figure 4-8.

Figure 4-8 SIDRA Intersection Location



4.2.2 Background Traffic Volumes

A review of the traffic data provided for this study indicates that current traffic surveys (less than two years old) at the key intersections along Canterbury Road are not typically available.

The following data has been made available for the study:

- CBC has provided 2012 traffic survey data at intersections along Canterbury Road (Belmore Road, Rossmore Road, Bonds Road, Haldon Road and Kingsgrove Road).
- Roads and Maritime provided current SCATS outputs for all the signalised intersections on Canterbury Road within the study area.
- Roads and Maritime also provided traffic survey data (from 2015) for the intersection of Canterbury Road with Beamish Street and King Georges Road.

SCATS data outputs do not provide pedestrian volumes or portions of heavy vehicles. Additionally, for shared lanes SCATS is unable to distinguish between volumes of through and turning vehicles.

As discussed and agreed with Roads and Maritime, the SCATS data was used to identify current peak hour vehicle activity on Canterbury Road, with the following additional activities:

- Pedestrian volumes and portions of through and turning vehicles at shared lanes were identified (where possible) from existing traffic survey data.
- Where traffic survey data was not available, GHD staff undertook 15 minute AM and PM peak hour surveys to determine pedestrian activity and turning portions.
- The portions of heavy vehicles on Canterbury Road were identified from the traffic surveys and from Roads and Maritime Count Stations.

The availability of traffic data to identify the current traffic volumes on Canterbury Road is displayed in Table 4-2.

Table 4-2 Traffic Survey Availability

Intersections	Available Traffic Surveys	15 Minute Traffic Surveys
Canterbury Road/Broughton Street/Jeffrey Street/Tincombe Street		x
Canterbury Road/Wonga Street		x
Canterbury Road/Bexley Road/Beamish Street	x	
Canterbury Road/Charlotte Street/Thorncraft Parade		x
Canterbury Road/Kingsgrove Road/Sharp Street	x	
Canterbury Road/Burwood Road	x	
Canterbury Road/Haldon Street	x	
Canterbury Road/King Georges Road	x	
Canterbury Road/Pentland Avenue		x
Canterbury Road/Dudley Street		x
Canterbury Road/Bonds Road	x	
Canterbury Road/Rossmore Avenue	x	
Canterbury Road/Belmore Road North	x	
Canterbury Road/Punchbowl Road		x

The base year traffic volumes on Canterbury Road (identified from the above processes) are displayed in Appendix C.

4.2.3 SIDRA Analysis

The current peak hour operation of the intersections of interest (based on the current traffic volumes, geometry and phasing) has been assessed using SIDRA 7.0 software.

SIDRA calculates the amount of delay to vehicles using an intersection and, amongst other performance measures, gives a Level of Service (LoS) rating which indicates the relative performance of traffic movements within the intersection.

Table 4-3 presents the criteria generally applied to intersection performance. The Level of Service is determined from the calculated delay to traffic movements, which is a representation of driver frustration, fuel consumption and increased travel time. There are six LoS measures ranging from A (very low delay and very good operating conditions) to F (over saturation where arrival rates exceed intersection capacity.

Typically a level of service (LoS) D or better is considered to be acceptable, however a LoS E may be acceptable if it also operates with a lower degree of saturation (which is a measure of demand to capacity). Degree of saturation (DoS), values of 0.85 or greater are typically consistent with congested conditions.

Table 4-3 Intersection Level of Service Criteria

Level of Service	Average Delay per vehicle (sec)	Expected Delay
A	0-14	Little or no delay
B	15-28	Minimal delay
C	29-42	Satisfactory delays with spare capacity
D	43-56	Satisfactory but near capacity
E	57-70	At capacity
F	>70	Extreme delay, unsatisfactory

A summary of the SIDRA modelling results for the existing AM and PM peak operation at the intersections of interest are is provided in Table 4-4, with the SIDRA outputs provided at Appendix D.

Table 4-4 Existing Situation SIDRA Results

Intersection on Canterbury Road	AM Peak				PM			
	Delay (sec)	LoS	DoS	Queue 95th % (m)	Delay (sec)	LoS	DoS	Queue 95th % (m)
Punchbowl Road	14	A	0.67	108 (W)	12	A	0.46	91 (W)
Belmore Road	30	C	1.01	203 (S)	30	C	1.03	173 (S)
Rossmore Road	11	A	0.70	163(W)	39	C	1.18	252 (N)
Bonds Road	20	B	1.0	162(W)	14	A	0.75	105 (E)
Dudley Street	7	A	0.47	88(W)	12	A	0.54	150 (W)
Pentland Avenue	5	A	0.49	53 (E)	18	B	1.06	100 (E)
King Georges Road	140+	F	1.29	500+ (S)	140+	F	1.37	500+ (N)
Haldon Street	33	C	0.92	329 (W)	24	B	0.75	219(W)
Kingsgrove Road / Sharp Street	140+	F	1.32	500+ (N+S)	140+	F	1.33	500+ (N+S)

Intersection on Canterbury Road	AM Peak				PM			
	Delay (sec)	LoS	DoS	Queue 95th % (m)	Delay (sec)	LoS	DoS	Queue 95th % (m)
Thorncraft Parade / Charlotte Street	140+	F	1.59	500+ (N+S)	140+	F	2.57	500+ (N)
Beamish Street/Bexley Road	53	D	1.03	305 (W)	140+	F	1.40	500+
Wonga Street	24	B	0.99	234 (E)	18	B	0.84	202 (W)
Charles Street	85	F	2.16	428 (W)	32	C	2.17	500+ (N)
Jeffrey Street / Broughton Street	57	E	1.39	257 (N)	40	C	0.92	250(E)

The data in Table 4-4 indicate that the following intersections on Canterbury Road operate with a poor LoS in at least one peak hour:

- Rossmore Road
- King Georges Road
- Kings Grove Road / Sharp Street
- Thorncraft Parade / Charlotte Street
- Charles Street
- Close Street
- Jeffery Street / Broughton Street.

An analysis of the SIDRA outputs for these intersections indicate:

- At the intersection with Rossmore Road:
  - The intersection operates at LoS F during the weekday PM peak (average delay of 84 seconds) with long delays and queues at the Rossmore Road approach.
  - All other approaches operate satisfactorily.
- At the intersection with King Georges Road:
  - During both the weekday AM and PM peak hours, the intersection operates at LoS F during (average delay of 140+ seconds in both peak periods).
  - Long delays and queues occur at the King Georges Road (north and south) approaches during both the AM and PM peak periods.
  - During the PM peak, long delays and queues occur at the Canterbury Road (east) approach, with the 95th percentile queue length for the right turn bay exceeding the available storage length.
  - During the PM peak, long delays and queues occur at the Canterbury Road (east) approach, with the 95th percentile queue length for the right turn bay exceeding the available storage length.

  - During the PM peak, the queue length for the right turn bay at the Canterbury Road (west) approach exceeds the available storage length.
- At the intersection with Kingsgrove Road and Sharp Street:
  - During both the weekday AM and PM peak hours, the intersection operates at LoS F during (average delay of 140+ seconds in both peak periods).
  - Long delays and queues at both the Kingsgrove Road and Sharp Street approaches during both the AM and PM peak hours.
- At the intersection with Thorncraft Parade and Charlotte Street:
  - During both the weekday AM and PM peak hours, the intersection operates at LoS F during (average delay of 140+ seconds in both peak periods).
  - Long delays and queues at both the Thorncraft Parade and Charlotte Street approaches during both the AM and PM peak hours.
  - During both the AM and PM peak, the 95th percentile queue in the right turn bay at Canterbury Road (east) is longer than the storage capacity (although only by around five metres in each peak period).
- At the intersection with Beamish Street and Bexley Road:
  - During the AM peak, the 95th percentile queue length at the right turn bay at Canterbury Road (west) exceeds the turn bay length by around 30 m. The 95 percentile queue length for the Bexley Road right turn also exceed the turn bay lengths by approximately 120 m.
  - During the PM peak hour, the intersection operates at LoS F during (average delay of 140+ seconds).
  - During the PM peak the 95th percentile queue length at the right turn bay at Canterbury Road (west) exceeds the turn bay length by around 10 m. The 95th percentile queue length for the Bexley Road right turn also exceed the turn bay lengths by approximately 700 m.
- At the intersection with Wonga Street:
  - The 95th percentile queue length at the right turn bay at Canterbury Road (east) exceeds the turn bay length by approximately 160 m and 65 m during the AM peak and PM peak respectively.
- At the intersection with Charles Street:
  - During the AM peak, the right turn into Charles Street from Canterbury Road operates at LoS F (85 seconds average delay). On site observations at this intersection indicates that drivers allow vehicles to turn into and out of Charles Street, under congested traffic operations along Canterbury Road.
  - Long queue lengths at the Canterbury Road (west) approach during the AM peak associated with queues at upstream signal controlled intersection at Broughton Street.
  - Long delays and queue lengths for the Charles Street approach during both the AM and PM peak periods.
- At the intersection with Close Street:
  - The right turn into Close Street from Canterbury Road operates at LoS F (140+ seconds) and LoS D (47 seconds) during the AM and PM peak periods respectively. On site observations at this intersection indicates that drivers allow vehicles to turn into and out of Close Street, under congested traffic operations along Canterbury Road.

  - Long delays and queue lengths for the Close Street approach during both the AM and PM peak periods.
- At the intersection with Broughton Street and Jeffery Street:
  - The intersection is expected to operate at LoSE (57 seconds) during the AM peak.
  - The 95th percentile queue length at Canterbury Road (west) approach extends back through the intersection with Charles Street during both the AM and PM peak periods.

4.3 Mid-Block Capacity Analysis

A midblock link capacity analysis of Canterbury Road was undertaken using the Austroads Guide to Traffic Management Part 3 – Traffic Studies and Analysis, Section 5.2.1 and explanatory notes.

Volume to capacity ratio (v/c) for the peak direction traffic volumes on Canterbury Road was calculated by adopting a capacity of up to 1,400 vehicles per lane per hour where such road networks exhibit:

- Flaring at intersection approaches
- major road priority control evident at minor roads
- The absence of parking
- Good co-ordination of signals.

It is considered that Canterbury Road exhibits such conditions.

The peak hour directional traffic flows and associated volume/capacity ratios for 2016 base case is presented in Table 4-5.

Table 4-5 Canterbury Road Volume to Capacity Ratios

Location	Direction	AM Peak Hour		PM Peak Hour	
		No. of vehicles	V/C*	No. of vehicles	V/C*
East of Punchbowl Road	Eastbound	1,294	0.46	1,159	0.41
	Westbound	914	0.33	1,255	0.45
East of Bonds Road	Eastbound	1,190	0.43	1,087	0.39
	Westbound	714	0.26	1,163	0.42
East of King Georges Road	Eastbound	1,487	0.53	1,158	0.41
	Westbound	826	0.30	1,060	0.38
East of Beamish Street	Eastbound	1,545	0.55	1,345	0.48
	Westbound	892	0.32	1,274	0.46
West of Old Canterbury Road	Eastbound	1,632	0.58	1,018	0.36
	Westbound	749	0.27	1,363	0.49

The data in Table 4-5 indicates that Canterbury Road currently operates with acceptable mid-block capacity ratios. This suggests congestion on Canterbury Road is predominantly associated with the operation of key intersections.

4.4 Parking Demand

In accordance with its arterial function, parking is currently not permitted on Canterbury Road, however it is typically permitted on intersecting roads.

In order to quantify current on-street parking demand in proximity to Canterbury Road, GHD staff undertook site observation surveys on the 28th February 2017. This was done by through video based analysis of general parking availability in term of capacity (the number of parking spaces provided) and demand (the number of parking spaces occupied).

The results of the site observations indicate that:

- Typically there is spare parking capacity on the road network in proximity to Canterbury Road.
- A number of roads were observed to be at or near capacity including, Ferguson Avenue, Croydon Street, Burwood Road, Anderson Road, Waverly Street, Tudor Street, Elizabeth Street, Charlotte Street and Troy Street.
- The majority of these roads are located adjacent to retail and commercial precincts and Canterbury Hospital, suggesting individuals are choosing to park on-street, rather than the designated car parks.

The results of the parking demand surveys are included in Appendix E.

4.5 Train Network

4.5.1 Stations

The T3 Bankstown Line provides a train service between Liverpool and the Sydney CBD and runs in an east-west direction through the study area, crossing beneath Canterbury Road at Canterbury Station.

There are currently seven stations on the T3 Bankstown Line that are located within the study area:

- Hurlstone Park
- Canterbury
- Campsie
- Belmore
- Lakemba
- Wiley Park
- Punchbowl.

The (approximate) train service frequencies at the stations listed above are displayed in Table 4-6.

Table 4-6 T3 Bankstown Line: City via Bankstown Service Headway

Station	Service Headway (minutes)		
	AM Peak	PM Peak	Off Peak
Hurlstone Park	15	15	30
Canterbury	15	15	30
Campsie	6-9	5-9	30
Belmore	6-9	5-9	30
Lakemba	6-9	5-10	30
Wiley Park	15	15	30
Punchbowl	5-10	4-15	30

Peak hour express services on the T3 line do not stop at Hurlstone Park Station, Canterbury Station or Wiley Park Station, facilitating faster travel times.

The T3 Bankstown Line from Bankstown to Sydenham will be upgraded and converted to metro standard (as part of Stage 2 City & Southwest Metro), increasing peak hour services from 8 direction/hour to 15 direction/hour. Services on the City & Southwest Metro are expected to commence operation in 2024. All metro stations are intended to be fully accessible and provide improved interchange facilities with bus, light rail, pedestrian and bicycle riding networks. Increased residential densities are planned in proximity to the stations to encourage the use of sustainable modes of transport.

The T2 Airport Line operates adjacent to the south of the subject site, at a distance of approximately 2 km from Canterbury Road. The stations located in proximity to the subject site include Riverwood, Narwee, Beverly Hills, Kingsgrove, Bexley North, Turrella and Wolli Creek. The rail services stopping at these stations operate between Revesby and the Sydney CBD and typically operate with 15 minute frequencies.

Disability Access

The following stations located on the T3 Line (within the study area) are wheelchair accessible:

- Belmore Station
- Campsie Station
- Lakemba Station.

The following stations located on the T2 Line (within the study area) are wheelchair accessible:

- Riverwood Station
- Beverly Hills Station
- Kingsgrove Station
- Wolli Creek Station.

4.5.2 Opal data

TfNSW has provided Opal Data detailing levels of public transport utilisation within the study area for a typical weekday (20th February 2017).

A 24 hour profile of train boardings and alightings for the stations on the T3 Line (within the study area) are displayed below in Figure 4-9 and Figure 4-10 respectively.

Figure 4-9 Train Boarding Data

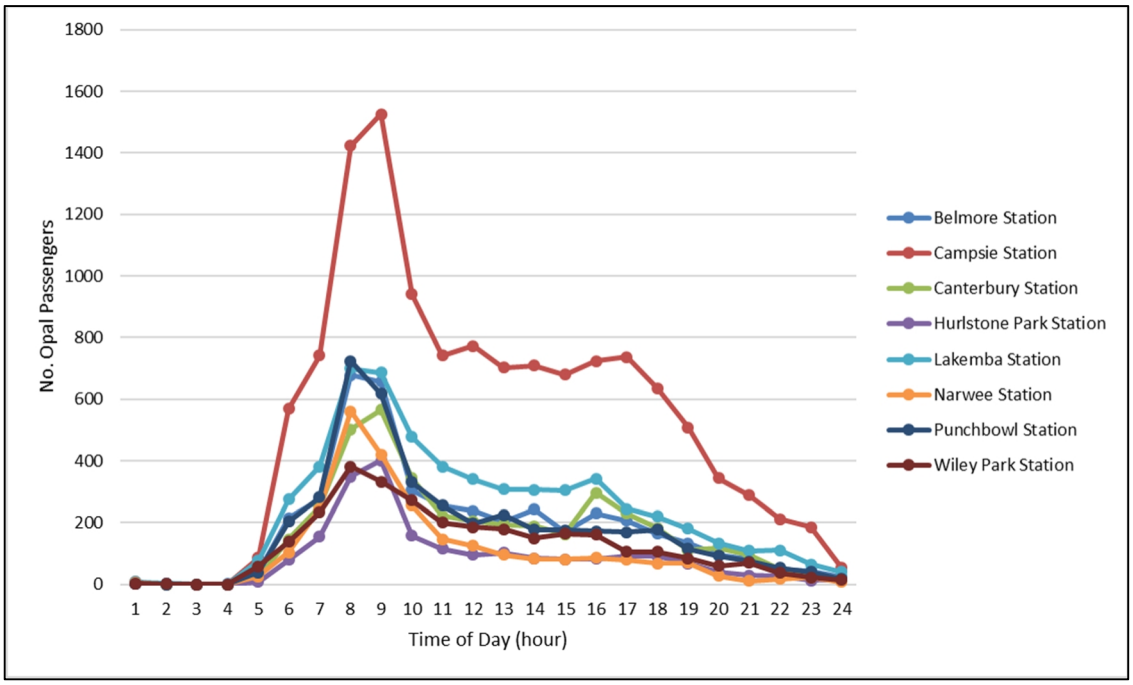
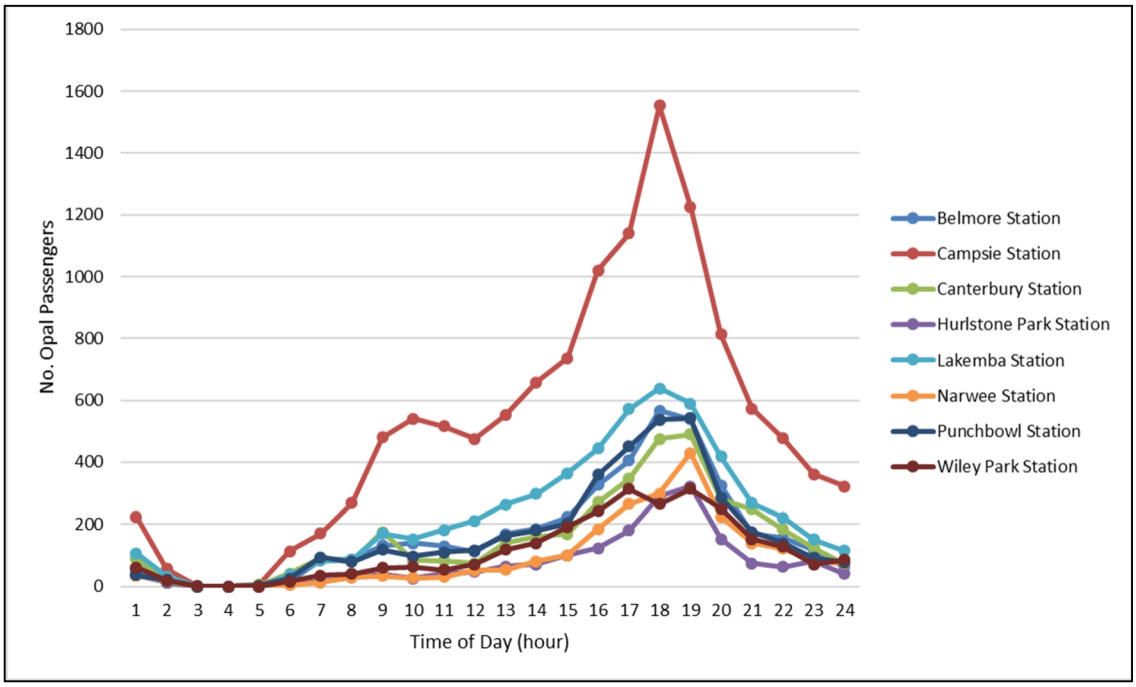


Figure 4-10 Train Alighting Data



The above figures indicate that that the highest volumes of train boardings at all stations occurs during the morning peak (8:00 am – 9:00 am) and the highest volumes of alighting occurs in the afternoon peak (5:00 pm – 6:00 pm).

These patterns are consistent with residents undertaking non-discretionary trips utilising the rail service to access their places of work/education in the morning and returning to their places of residence in the afternoon/evening.

Campsie Station has significantly higher volumes of activity compared to the other stations, with approximately 1,500 passengers in the peak periods.

Higher passenger activity levels at Campsie station could be attributed to its inclusion on express services, and its proximity to a large number of bus services that facilitate a multi-modal functionality.

4.6 Bus Network

There are a large number of bus services operating within the study area that provide local and regional connectivity (Table 4-7). The bus services are predominantly operated by Sydney Buses with some additional services operated by the Punchbowl Bus Company.

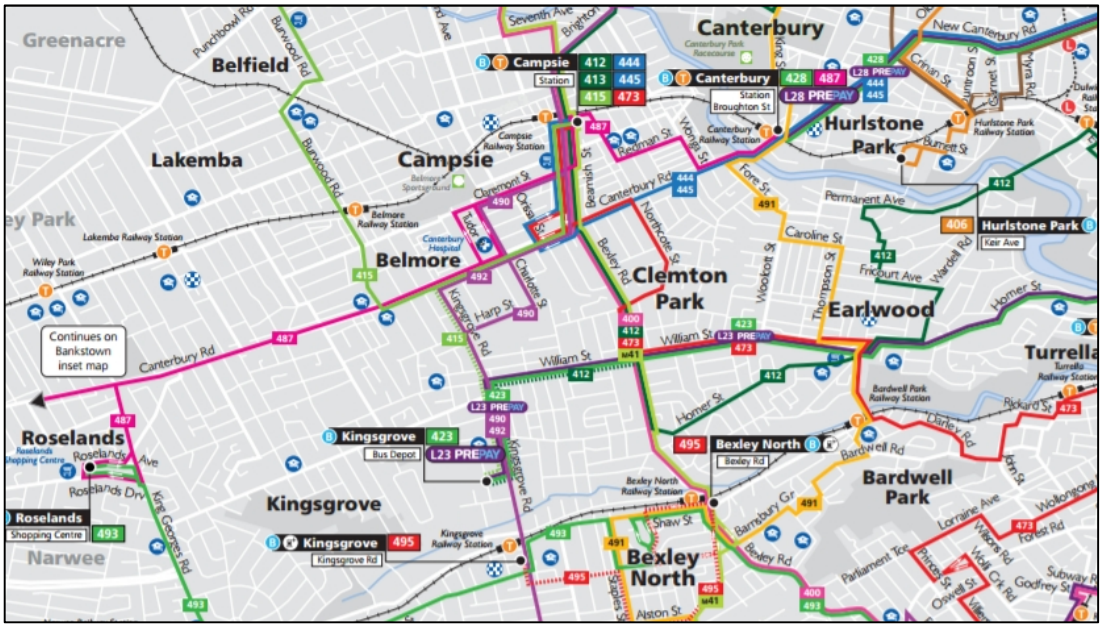
Table 4-7 Bus routes operating within the study area.

Bus Route	Origin – Destination
400	Bondi Junction to Burwood via Eastgardens (Limited Stops)
412	Campsie to City Martin Place via Earlwood
413	Campsie to City Martin Place via Canterbury
415	Chiswick to Campsie
444	Campsie to Balmain East Wharf
446	St George Hospital to Roselands
445	Campsie to Balmain East Wharf via Lilyfield Road
450	Burwood to Hurstville
473	Campsie to Rockdale
487	Canterbury to Bankstown Central
490	Hurstville to Drummoyne
491	Hurstville to Five Dock
492	Rockdale to Drummoyne
940	Bankstown to Hurstville via Riverwood
941	Bankstown to Hurstville via Greenacre
942	Campsie to Lugarno
944	Bankstown to Hurstville via Peakhurst Heights
945	Bankstown to Hurstville via Mortdale
946	Bankstown to Hurstville via Lakemba
L23	Kingsgrove to City Martin Place (Limited Stops)
M41	Hurstville to Macquarie Park
S14	Lakemba to Mount Lewis via Roselands
S109	Beverly Hills Girls HS to Lakemba

Bus Route	Origin – Destination
S114	Wiley Park Girls HS to Greenacre
S118	Penshurst to Rose St & Punchbowl Rd
S119	Beverly Hills Girls HS to Campsie
S123	St George Hospital to All Saints Grammar School
S126	Greenacre to Wiley Park Girls HS
S127	Lakemba to Kingsgrove North HS
S131	Malek Fahd Islamic School to Roselands

The Sydney Buses services which operate within the study area are displayed in Figure 4-11

Figure 4-11 Sydney Bus Services within the Subject Site



Source: http://www.sydneybuses.info/routes/Region_guide_South-2015.pdf

Figure 4-11 indicates that:

- The majority of bus services operate in a north-south direction on Bexley Road and Beamish Street. This is consistent with the T3 Line providing east-west transport within the study area.
- Large volumes of bus services operate adjacent to Campsie Station.
- Only a single bus service (487) operates on Canterbury Road (west of Burwood Road). A bus passenger can traverse the corridor with one change of bus (from the 487 to 444/445 route group).
- Larger volumes of bus services operate on Canterbury Road, to the east of Canterbury, including the L28 which provides an express peak hour service to the Sydney CBD via Newtown and the Sydney University.

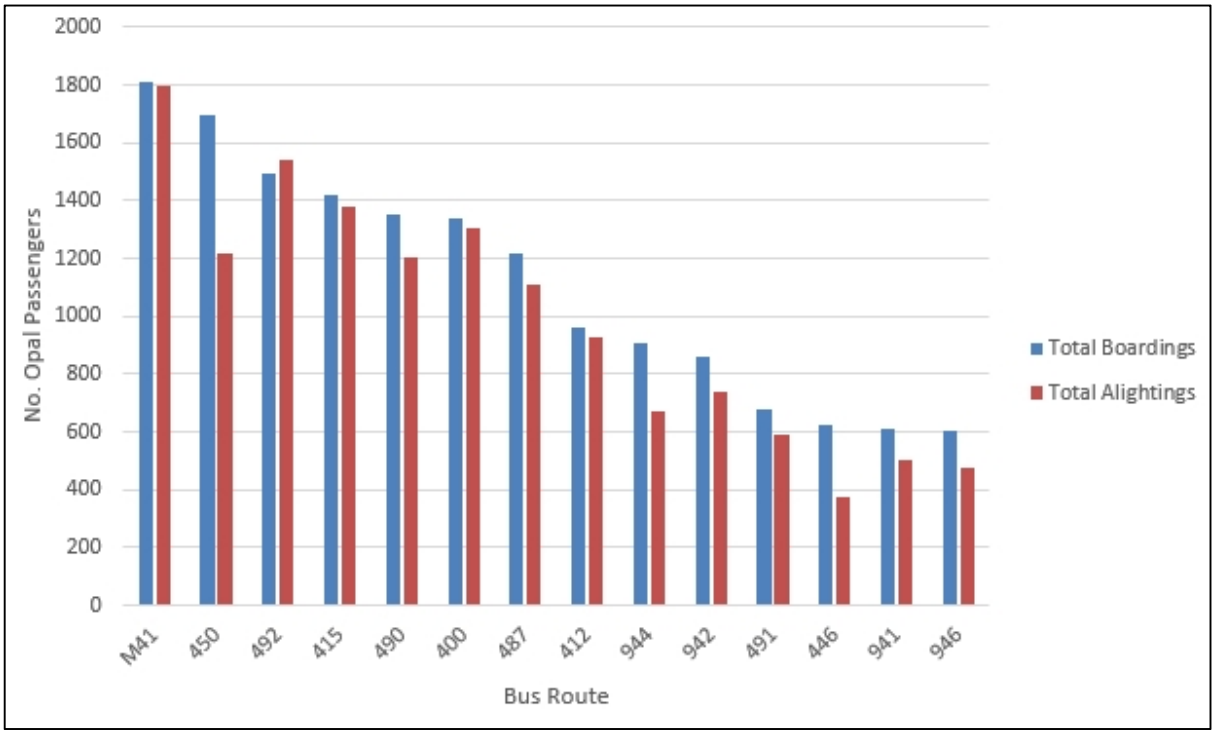
4.6.1 Opal data

Bus Routes

An analysis of opal data was undertaken for bus services operating within the study area. The opal data provides information relating to the number of passengers boarding and alighting at stops, by route and time of day.

Daily passenger data for key bus services operating within the study area is presented in Figure 4-12.

Figure 4-12 Opal boarding and alighting data for key bus routes



The M41 metro bus which operates between Hurstville and Macquarie Park with 10 minute peak hour frequencies has the highest patronage levels. Other bus services with high levels of patronage include

- 450 – Hurstville to Burwood via Beverly Hills, Roselands, Lakemba, Belfield & Strathfield.
- 492 - Drummoyne to Rockdale via Five Dock, Burwood, Croydon Park, Campsie and Kingsgrove.
- 415 – Chiswick to Campsie via Five Dock, Croydon, Burwood, Strathfield, Enfield, Belfield, Belmore and Belmore South.
- 490 - Drummoyne to Hurstville via Rodd Point, Five Dock, Burwood, Croydon Park, Campsie and Kingsgrove.
- 400 - Burwood to Bondi Junction (limited stops) via Croydon Park, Campsie, Bexley North, Bexley, Rockdale, Banksia, Arncliffe, Sydney Airport, Mascot, Eastgardens, Maroubra Junction, Kingsford, University of NSW, Prince of Wales Hospital, Randwick and Waverley.

The bus services with the highest patronage typically operate in a north-south direction across Canterbury Road. This highlights that passengers that travel north and south from the region are more dependent on buses as the rail services provide limited north/south functionality.

Passengers that travel in an east - west direction from Canterbury Road primarily rely on rail services as their choice of public transport.

This may be explained by the limited bus services that currently operate on Canterbury Road, with routes 428, 444/ 445 and 487 being the only key bus routes. Of these available bus services, route 487 is the only route that operates through the majority of the road corridor.

Route 487 also leaves the road corridor to make drop offs/ pickups at Bankstown, Roselands Shopping Centre and Campsie, which may reduce the bus speed efficiency (see 4.6.2) and attractiveness of this service for east –west movements. The remaining bus services that operate on the eastern end of Canterbury Road near Campsie and Canterbury Station can only provide public transport east of this location, which limits the bus passenger catchment of the Canterbury LGA to key destinations such as the Sydney CBD and Inner West Suburbs.

Bus Stops

Bus boarding activity for the ten bus stops within the study area with the highest passenger demand is displayed in Figure 4-13.

Figure 4-13 Bus Boarding Data by Bus Stop Location

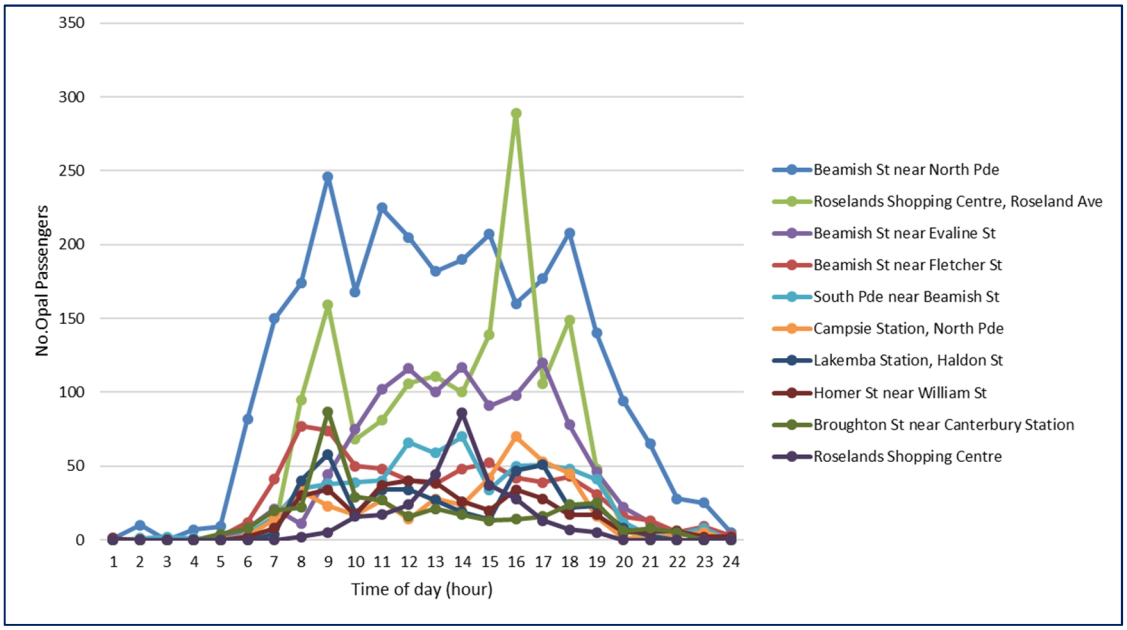
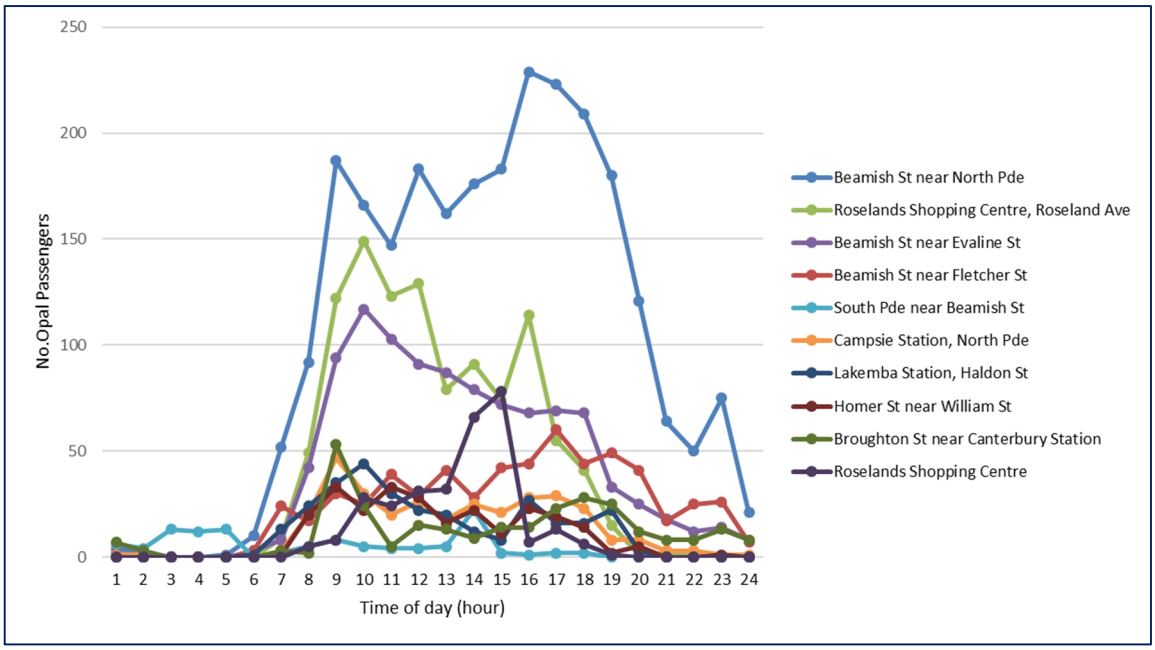


Figure 4-13 that key bus boarding locations are located at:

- Beamish Street near North Parade (up to approximately 250 passengers in an hour) which is located adjacent to Campsie Station, highlighting the importance of the intermodal functionality at this location. Bus services operating on Beamish Street at this location include the 400, 490, 492 and M41.
- Beamish Street near Evaline Street (up to approximately 125 passengers per hour), which is located within Campsie's commercial centre approximately 250 m south of Campsie Station.
- At Roselands Shopping Centre on Roseland Avenue (up to approximately 300 passengers per hour). Bus services operating at the shopping centre includes the 450, 487 and 944.
- Other bus stops had less than 100 passenger boarding during peak periods of operation.

Bus alighting activity for the ten bus stops within the study area with the highest passenger demand is displayed in Figure 4-14.

Figure 4-14 Bus Alighting Data by Bus Stop Location



The data in Figure 4-14 indicates that the bus stops that experience the highest volume of alighting activity are:

- Beamish Street near North Parade (up to approximately 225 passengers)
- Roselands Shopping Centre, Roselands Avenue (up to approximately 150 passengers)
- Beamish Street near Evaline Street (up to approximately 120 passengers)

A figure displaying the location of the bus stops within the study area and their levels of utilisation is included in Appendix F.

4.6.2 Performance of Canterbury Road bus services

Bus speed analysis

Speed and travel time analysis has been undertaken for bus services 444, 445 and 487 which traverse the Canterbury Road corridor. This analysis has been undertaken using data from the Public Transport Information and Priority System (PTIPS).

PTIPS consists of a global positioning system and radio data communication systems that provides data about buses and their locations. This data can be used to alter the timing of traffic signals for late running buses.

TfNSW sets a target for buses to operate with an average speed of 20 – 25 km/h.

Within the study area, the 444 and 445 bus services operate between Campsie Station on Beamish Street and New Canterbury Road, near Milford Street. Observed eastbound and westbound directional bus speeds for these bus routes, based on the PTIPS data, is shown in Figure 4-15 to Figure 4-18 for the morning and evening periods.

Similarly, bus speeds for the 487 bus service, which operates within the study area between Tudor Street and Punchbowl Road, have been identified from the PTIPS data. The weekday morning and evening peak bus speeds for the 487 bus service shown in Figure 4-19 and Figure 4-20 for the eastbound and westbound directions respectively.

Figure 4-15 Weekday actual bus speed of 444 bus route - Westbound

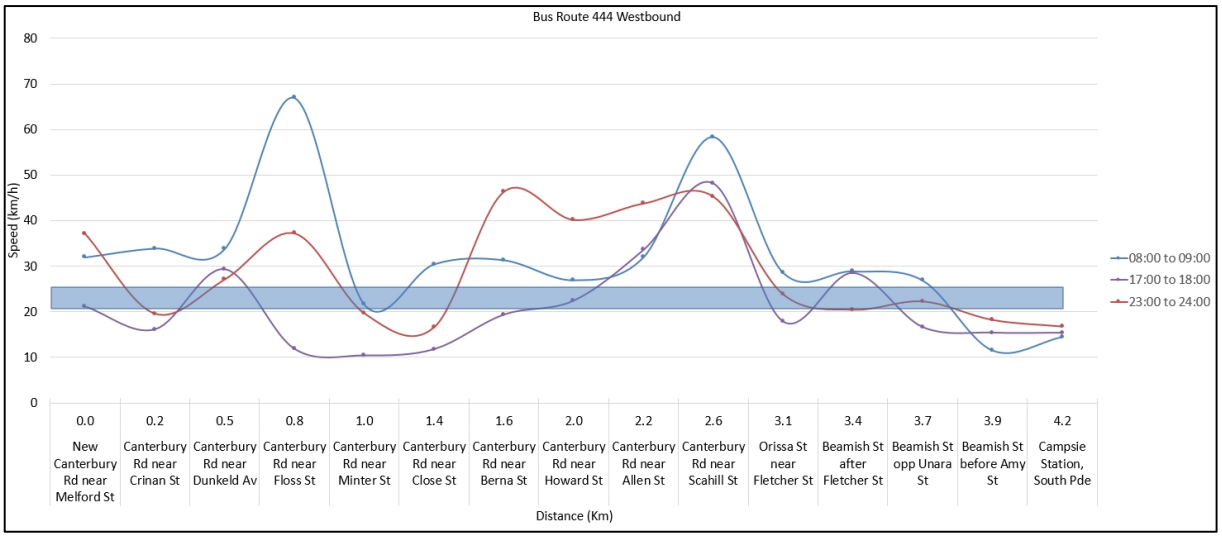
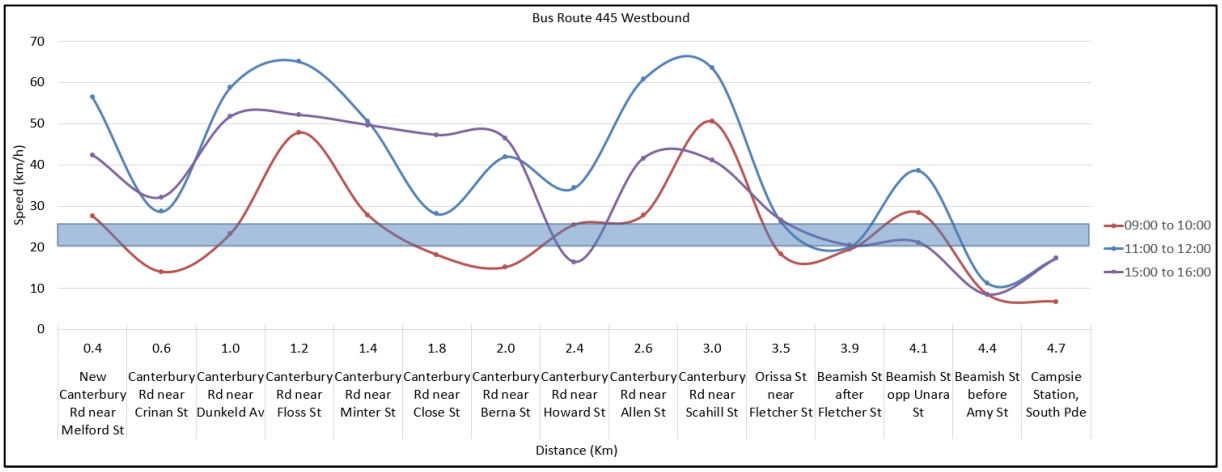


Figure 4-16 Weekday actual bus speed of the 445 bus route - Westbound



The PITIPs data indicates that in the westbound direction, the 444 and 445 bus routes show similar patterns in bus speeds along the Canterbury Road corridor.

The PITIPs data indicates that bus speeds drop below the TfNSW target for bus speeds at the following locations:

- Canterbury Road, near Crinan Street;
- Between Floss, Street and Berna Street on Canterbury Road;
- Orissa Street, near Fletcher Street; and
- Beamish Street, between Unara Street and Campsie Station.

Figure 4-17 Weekday actual bus speed of 444 bus route - Eastbound

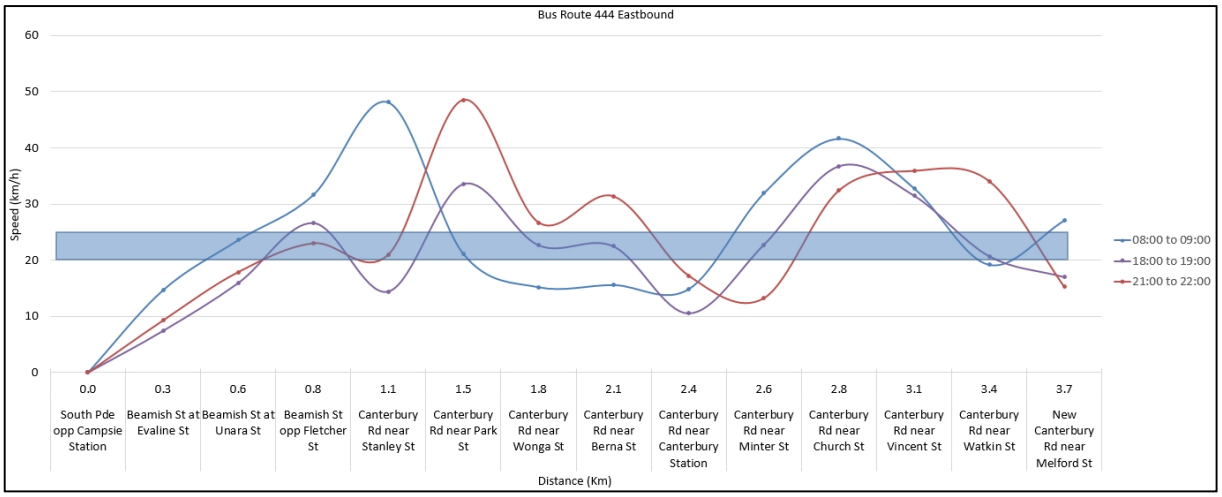
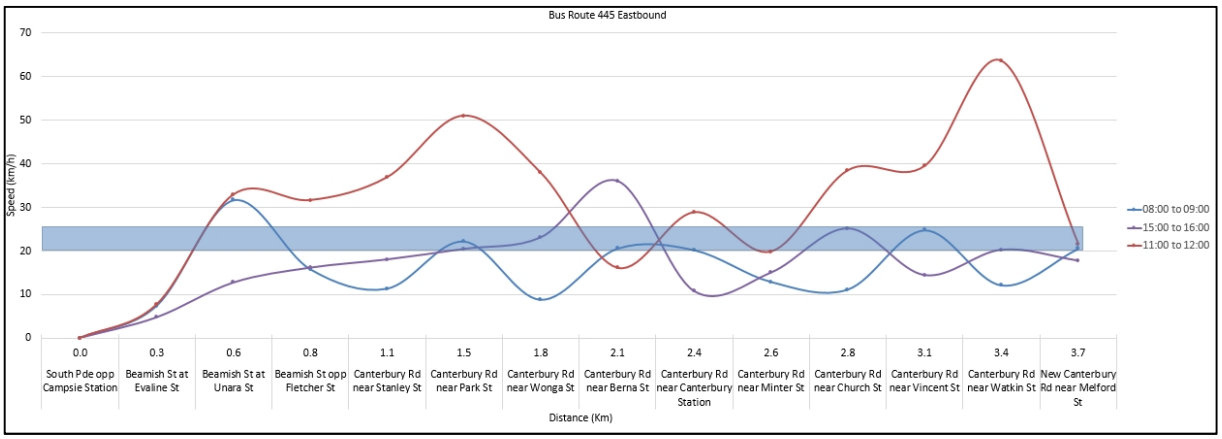


Figure 4-18 Weekday actual bus speed of 445 bus route - Eastbound



In the eastbound direction, the 444 and 445 bus routes show similar patterns in bus speeds along the Canterbury Road corridor.

The PITIPs data indicates that bus speeds drop below the TfNSW target for bus speeds at the following locations:

- Beamish Street, between Campsie Station and Canterbury Road;
- Canterbury Road, between Wonga Street and Minter Street, for bus route 444; and
- The majority of Canterbury Road, between Stanley Street and Watkin Street during the morning and afternoon periods for route 445.

Figure 4-19 Weekday actual bus speed of the 487 bus route - Eastbound

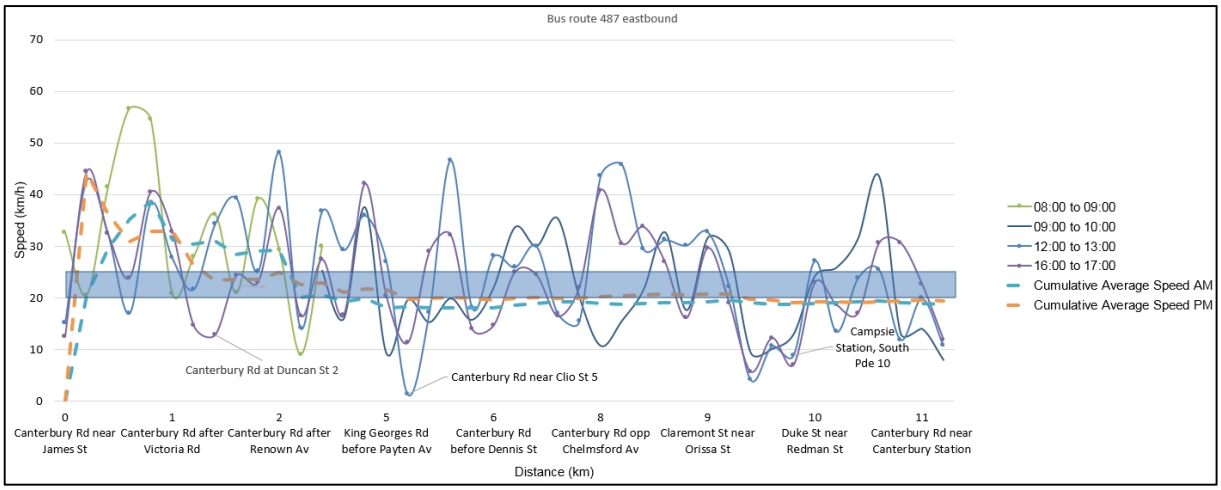
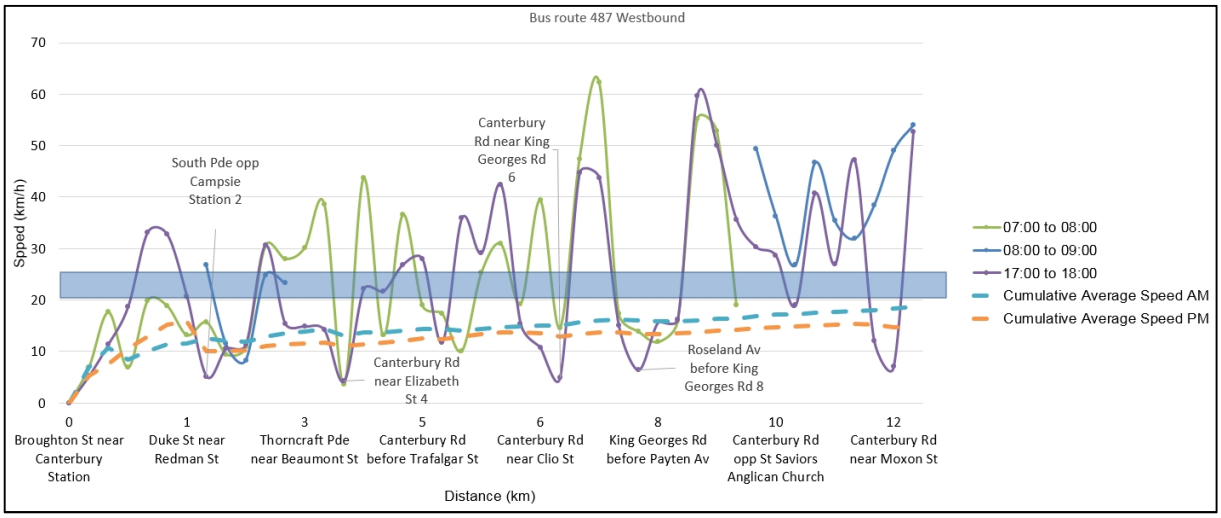


Figure 4-20 Weekday actual bus speed of the 487 bus route - Westbound



The PTIPS data indicates that average bus speeds on Canterbury Road are:

- 19 km/h in the eastbound direction during the morning peak period (8:00 am – 9:00 am); and
- 15 km/h in the westbound during the afternoon peak period (4:00 pm – 5:00 pm).

Based on the above, the average bus speeds do not meet TfNSW targets for bus speeds during both the AM and PM peak hours.

The PITIPs data indicates that bus speeds drop below the TfNSW target for bus speeds at the following locations:

- Eldridge Road, near Northam Avenue;
- Claribel Street, near Canterbury Road;
- Canterbury Road, near Warren Avenue;
- King Georges Road, near Payten Avenue;
- Canterbury Road, near Clio Street;
- Beamish Street, near Amy Street; and
- Canterbury Road, near Berna Street.

Bus travel time analysis

Bus travel time analysis was undertaken on Canterbury Road for the morning (8:00 am – 10:00 am) and afternoon (4:00 pm – 5:00 pm) peak periods.

Figure 4-21 (eastbound) and Figure 4-22 (westbound) provides a graphical representation of the cumulative travel time for the morning and afternoon peaks along Canterbury Road, compared to the scheduled travel time. The steepness of the line indicates the speed at which the bus is travelling along the corridor. The steeper the line, the slower the bus is traversing along its route.

Figure 4-21 Weekday bus travel time for Route 487 along Canterbury Road - Eastbound

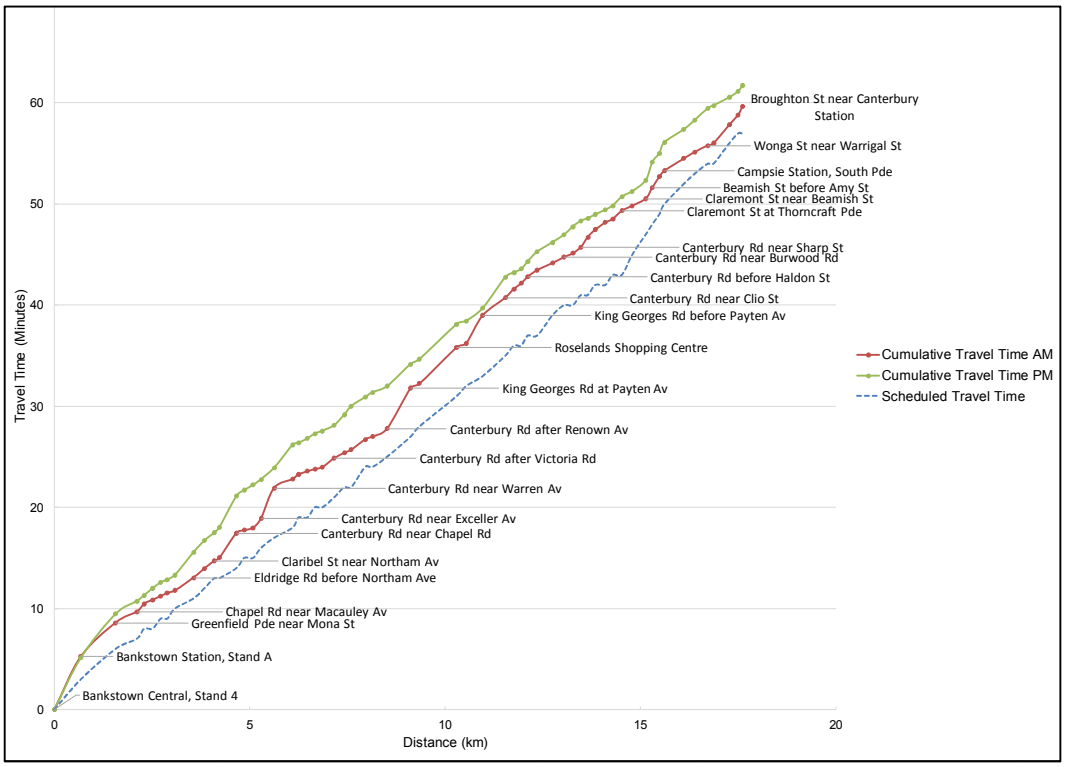
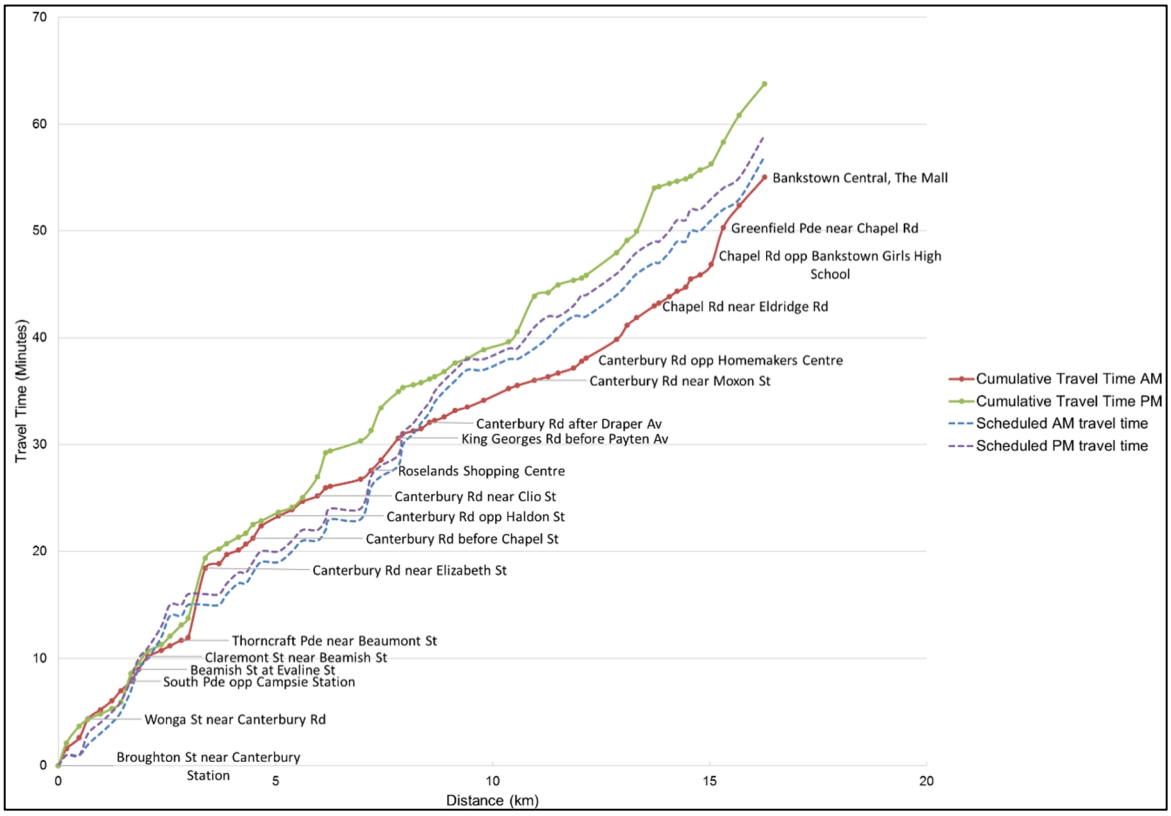


Figure 4-22 Weekday bus travel time for Route 487 along Canterbury Road-Westbound



The bus travel time data shown in Figure 4-21 indicates that it takes approximately two minutes longer for the 487 bus services to travel eastbound along Canterbury during the morning peak compared to the afternoon peak.

For both the morning and afternoon peaks, the actual travel time is greater than the scheduled travel time. The greatest variance in travel time between the scheduled and actual travel times occurs between King Georges Road and Tudor Street in Belmore.

The PTIPS data shows increases in travel time during the morning and afternoon peaks along the route at:

- Claribel Street, near Canterbury Road;
- Canterbury Road, near Exceller Avenue;
- Canterbury Road, near Renown Avenue;
- Roseland Avenue, near King Georges Road; and
- Claremont Street, near Beamish Street.

Increases in travel time along the route are largely associated with increases in traffic congestion, particularly at intersections with other arterial roads such as King Georges Road and Punchbowl Road.

4.6.3 Future Bus Network

TfNSW has provided data re the expected bus frequencies within the study area in the 2036 horizon year.

The data indicates that while changes to the existing routes are expected to be negligible, there will be a significant increase in service frequencies, particularly on Burwood Road and Beamish Street.

Figures showing the current and expected (2036) bus routes and frequencies are displayed in Appendix G.

4.7 Bicycle riding

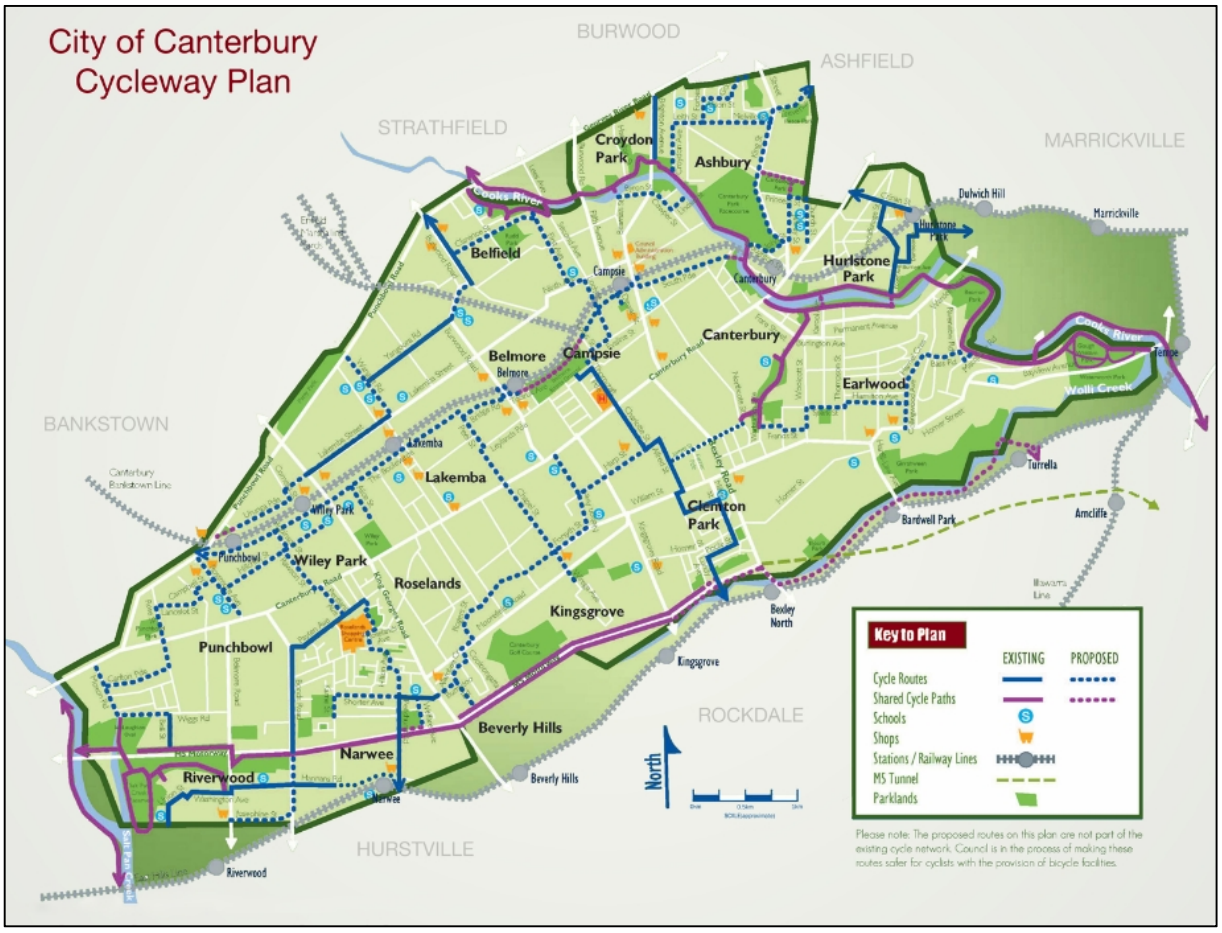
No formal bicycle riding infrastructure is currently provided on Canterbury Road.

The main bicycle riding routes located within the study area, are:

- Shared paths adjacent to the M5 East Motorway, between Fairford Road and Bexley Road.
- The Tempe to Strathfield Cooks River Cycleway.
- Off-road shared path facilities on adjacent to the M5 between King Georges Road and Bexley Road.

The existing and proposed cycle paths within the study area are presented in Figure 4-23.

Figure 4-23 City of Canterbury Cycleway Plan



Source: https://www.cbcity.nsw.gov.au/explore/getting-around/walking-bicycle riding

A review of the existing cycle paths within the study area indicates the following:

- The Cooks River Cycleway operates with a commuter and recreational functionality, providing connectivity to adjoining local government areas.
- There is limited north/south connectivity through the subject site.
- The shared paths in proximity to the M5 provide some east-west connectivity towards the southern periphery of the subject site approximately 2 km to the south of Canterbury Road.

- The majority of the study area has limited and disconnect bicycle riding routes. This may be a key factor in discouraging residents to ride internally to key land use attractors such as schools, shops or commuting to work.

A review if the proposed cycle routes indicate the following:

- The cycle path along the train corridor will significantly improve east-west connectivity through the study area.
- A number of additional north-south connections across Canterbury Road are proposed i.e. at Wiley Park and Lakemba, facilitating accessibility to the existing/proposed land uses along the corridor.

4.8 Walking

Walking for transport is a viable mode (particularly for short trips up to 20 minutes walking) can reduce the dependency on motor vehicles within the study area and provide environmental and health benefits. Connecting transport interchanges and commercial centres with good walking routes that are safe, attractive and with direct connections to destinations is critical in the provision of a pedestrian friendly environment.

Canterbury Road currently functions as a busy arterial road, which is a key barrier to walking with reducing the amenity through this corridor. Additionally, the footpaths on Canterbury Road are often narrow

JTW data indicates that only 3 percent - 5 percent of work trips within Canterbury LGA are undertaken by walking (Figure 3-7). HTS data indicates that 20 percent of trips within the study area are undertaken by private vehicles.

This data indicates that walking is not the preferred mode of choice within Canterbury and there is a potential over reliance on private motor vehicles for short trips.

Currently, concrete footpaths are provided along Canterbury Road with signalised pedestrian crossings at intersecting collector and arterial roads. Pedestrian crossings are typically located on road at the frontage of train stations or commercial and shopping precincts.

Public transport pedestrian catchments are generally determined by walking distance. Typically individuals are prepared to walk further for public transport services that provide regional connectivity. In general, passengers are prepared to walk up to 800 m to access train stations and 400 m to access bus stops.

A figure displaying the pedestrian catchment at the train stations within and adjacent to the study area is displayed in Appendix H. The figure indicates that there is a large passenger catchment for rail services within the study area. However, the properties on Canterbury Road are typically in excess of 800 m walking distance to a station.

4.9 Crash Data

Crash data was obtained from Roads and Maritime for Canterbury Road and 200 metres from key arterial intersections, for a five year period between 2011 and 2015. The data indicates that:

- A total of 923 crashes were recorded.
- 58 percent of crashes caused injuries, 11 percent of crashes caused serious injuries
- 2 fatal crashes occurred:
  - Car collision with a semi-trailer on Canterbury Road at Drummond Street
  - Car collision with utility pole due to excessive speed on Canterbury Road west of Victory Street

- Common locations for crashes within the study area include:
  - Canterbury Road at or near Chapel Street
  - Canterbury Road at or near Bonds Street
  - Canterbury Road at/near King Georges Road
  - Canterbury Road at/near Punchbowl Road
- The majority of crashes involved rear-end collisions (33 percent), vehicles impacting at right angles (20 percent) and vehicles impacting at other angles (34 percent).

A summary of the recorded crash type is displayed in Figure 4-24 and degree of injury in Figure 4-25.

Figure 4-24 Crash by Type

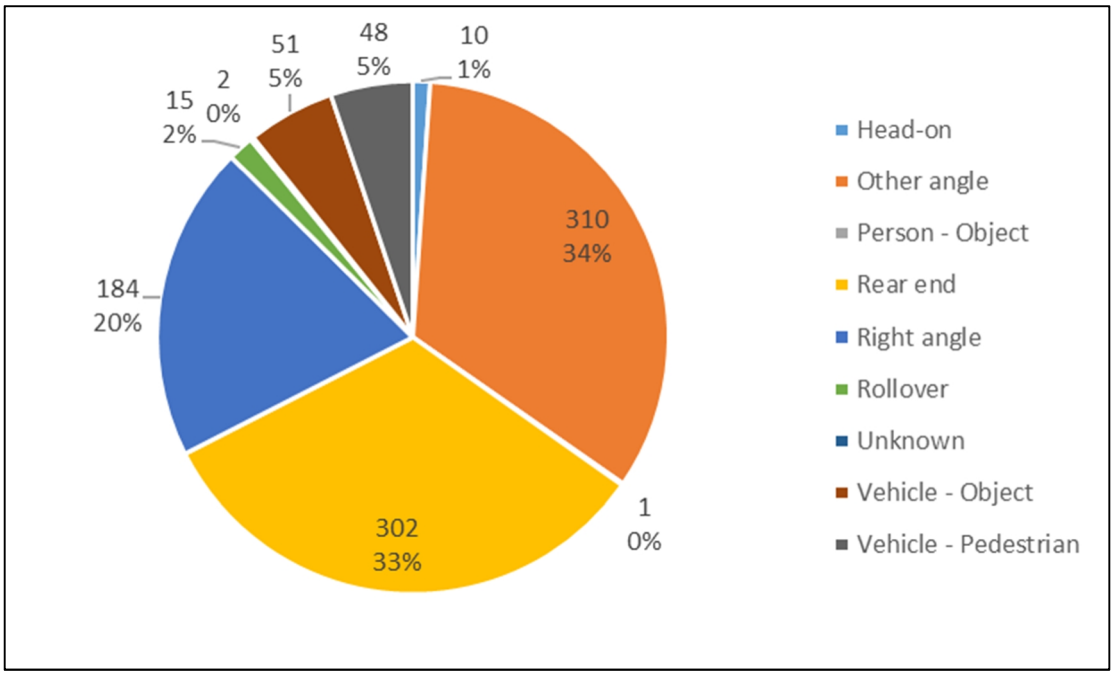
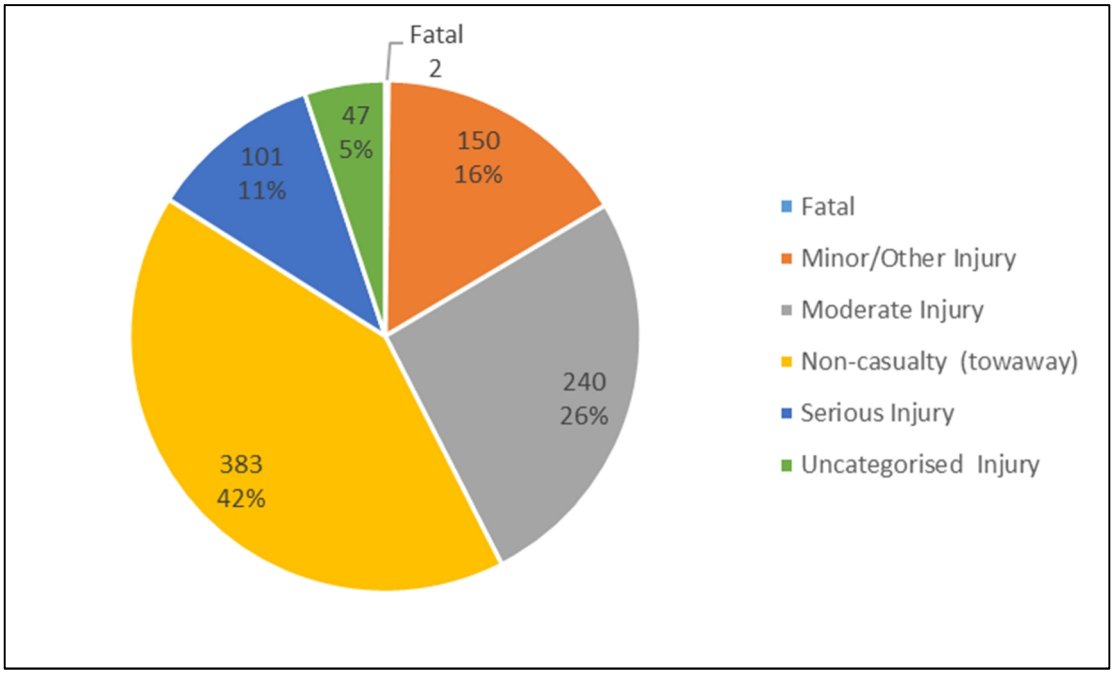


Figure 4-25 Crashes by Degree



Figures displaying the locations of crashes on Canterbury and their severity (in terms of fatalities and injuries are included in Appendix I.

The high proportion of the opposed right turn crashes can possibly be attributed to congestion, sight distance issues (such as speed perception) and the lack of controlled right turns.
The rear end crashes are generally attributed to congestion and vehicles hitting the rear of a vehicle slowing down or waiting to turn from behind.

5. Travel Demand Management

5.1 "Best Practice" Research

Research has been undertaken to identify the "best practice" with respect to the integration of land use and transportation networks. The assessment focused on locations in Australia that experience large volumes of pedestrian and motor vehicle traffic along arterial road corridors within developed urban centres, namely Parramatta Road, Sydney (New South Wales), Guildford Road, Perth (Western Australia) and City Road, Melbourne (Victoria).

Brisbane City Council's *Transport Plan for Brisbane* was also studied to provide innovative strategies for integrated transport planning. A number of state government transport guidelines were also reviewed for their relevance in integrating land use, transport activity and sustainability for the Canterbury Road Transport and Traffic Study.

The TDM research is located in Appendix J.

5.2 Travel Demand Management

Travel demand management (TDM) is a term for strategies that encourage as shift from single occupant private vehicles trips. TDM improve transport efficiencies while reducing the negative impacts associated with the use of private motor vehicles. Given the congested nature of Canterbury Road (particularly during peak periods of road network activity), the implementation of TDM has the potential to provide significant utility to residents and visitors to Canterbury.

The following sets out two key approaches which can be used by Canterbury-Bankstown Council to manage travel, as follows:

a) The first aim is to negate the need for privately owned cars.

b) Where a privately owned car is needed, its use should be limited.

The most effective TDM strategies focus on both incentives for non-car use (e.g.: provision of high quality bicycle riding routes) and disincentives for car use (e.g.: parking fees). The following sub-sections discuss commonly used approaches which could be adopted. They are based on either employer based schemes or area-wide schemes.

5.2.1 Employer-Based Schemes

A key element of TDMs is the development of Green Travel Plans (GTP), which is a package of initiatives aimed at reducing car travel, particularly single occupant trips. A GTP encourages greater use of public transport, walking and bicycle riding by employees and visitors to a work site, with the aim of reducing traffic and parking impacts within communities.

Actions CBC can undertake to encourage organisations to implement GTPs and promote sustainable modes of travel include:

- Update the DCP to mandate GTPs as part of the planning application for major new developments.
- Develop a standard GTP template for developers and other organisations.
- Designate a staff member to monitor the application of GTP and provide advice to the public on an ad-hoc basis.
- Some of the actions which GTPs often focus on are as follows:
- Reduced parking for employees/visitors.

- Parking fees for employees/visitors (and possibility reduced fees for employees involved in carpooling).
- Flexible work schedules including, compacted work weeks (five days of work in four days); early/late start schedules, telecommuting and working from home.
- Carpooling vehicles rather than company fleet vehicles.
- Paying employees to commute via bike or foot through a per km reimbursement (note some companies are using smartphone apps to institute this but this technology is emerging).
- Provision of bicycle riding end-of-trip facilities that are located in a prominent location at places of work (refer to Figure 5-1 for an example of bicycle riding end-of-trip facilities located at the entrance of City of Sydney's administrative offices).
- Salary packaging of public transport passes.

CBC has an opportunity to provide an example of best practice with respect to travel demand management by preparing and regularly updating a GTP for its staff.

Figure 5-1 City of Sydney Offices, Prominent Bicycle Riding Parking



5.2.2 Area based travel demand management

There are a variety of approaches that can be adopted to limit the use of private cars in and around Canterbury Road. Plentiful road space, free/cheap parking and direct roads with limited congestion are an invitation for private car use. Low cost parking supports high vehicle ownership. Conversely, comfortable, safe and direct walking and bicycle riding routes, as well as frequent, reliable and comfortable public transport services are an invitation for people to leave their car at home (or event better- sell their car, or second car) and use non-car modes.

A transport efficient environment is characterised by land uses that provide opportunities for active transport and public transport trips. Mixing housing and employment with other services and retail opportunities allows residents to undertake some of their necessary trips i.e. journey to works and shops without using a car.

By ensuring that new development is compact, offers a mix of uses, and is accessible to pedestrians, cyclists, and public transport services (which is consistent with key objectives of the LEP), CBC can work toward the goal of creating the fewest possible private vehicle trips. Nearly all strategies to promote transport trips, walking, and bicycle riding are more effective when applied to households living in compact, mixed-use communities.

Measures that support this approach and are within the control of governments include:

- Supporting Public transport and urban density by:
  - Prioritising on-road public transport though enhanced signal and road space priority.
  - Designing compact communities with sufficient density to support high-service standards of public transport (frequency, span of services and better stop and road space priority infrastructure standards).
  - Get more people using Opal cards- this may be a targeted program focussed on communities where the take-up of Opal cards has been low.
- Managing parking and traffic management by :
  - Promoting and providing parking spaces for car sharing in neighbourhoods- car-sharing providers generally need density and mixed uses to be viable.
  - Supporting “car-lite” and “car-free” developments, tied with time controlled and permit parking and untying car parking supply from residential and commercial development where active and public transport services and infrastructure are good (e.g. within five minutes walk of the railway stations).
  - Instituting a resident parking permit scheme which accurately reflects the value of Council’s public space used for parking.
  - Pricing and time limiting on-street car parking in commercial (shopping) areas and within 5 minutes walk of the railway stations to support short-stay trips, discourage driving as a mode to access public transport and enable easier enforcement.
- Providing better active transport infrastructure by:
  - Work with schools, pre-schools and day-care centres to provide information and incentives for non-car use (such as walking or riding school buses), and safe routes to school which allow parents and caregivers comfort to allow children to get to school safely by foot or bike.
  - Provide bike parking in convenient locations at public facilities, public transport nodes and stations and in shopping areas.
  - Provide direct and separated walking and bicycle riding routes to public facilities, public transport nodes and stations and shopping areas.

5.2.3 Car Parking

Parking rates should be responsive to location, with lower parking rates being appropriate in areas with good public transport which can encourage non-private vehicle trips.

The provision of parking has a direct correlation with the volumes of traffic an urban area is likely to generate, namely if individuals are unable to locate a parking bay or the cost of parking is too high, the less likely they will be to travel by car and utilise alternative modes of transport. When parking demand exceeds supply this can cause “circling” namely vehicles driving around looking for parking spaces, leading to more congestion and delay.

Strategies to manage parking and encourage the use of sustainable modes of transport include unbundling parking, which requires that car parks are sold separately to apartments to encourage individuals to drive less or own fewer cars.

Parking rates for some councils in Sydney, including the City of Sydney, have decreased for residential uses. Additionally, the City of Sydney have introduced maximum rather than minimum parking rates whereby developers are required to justify a provision above these prescribed levels.

Given the extensive nature of the public transport facilities including within the study area including the T3 Line (and its future upgrade to metro standard) and large volumes of buses

(Table 4-7), the application of maximum parking rates within the proposed development may be appropriate as a measure promote sustainable forms of travel.

5.2.4 Car Sharing

Provision for car share spaces and encouraging the development of a car share scheme within the development would reduce the reliance for parking spaces. Car shares schemes, such as GoGet, which enables individuals to hire a vehicle for short periods of time are increasing in popularity. Participating in a car share scheme is a much cheaper alternative to owning and maintaining a car while providing the same convenience of owning a car.

Many councils are allocating on-street parking spaces in residential locations for car share parking. Additionally, the provision of a car sharing scheme within large developments is a potential measure for reducing the required volumes of parking spaces

Residents who participate in a car share scheme are less likely to own a car and may not want to pay additional costs for a property that has a parking space. The provision of car share scheme/spaces can therefore reduce traffic generation as well as the demand for parking spaces.

Car schemes are typically most prevalent in inner-city type areas where higher population densities in combination with extensive public transport networks and active transport discourage car ownership.

The higher residential densities associated with the land use scenarios analysed in this report will enhance the viability of introducing car sharing schemes within the study area.

Roads and Maritime have indicated that they will support the provision of car sharing spaces for new developments within the study area, as part of their overall car parking provision.

5.2.5 Active Transport

The following sections discuss the principals and approaches adopted in the study area to enhance the walking and bicycle riding networks. These have been developed to provide a viable, comfortable and convenient alternative to local walking and bicycle riding trips, including those connecting to public transport nodes and the broader bicycle riding network.

Hill Thalis have undertaken an urban design assessment for the Canterbury Road Corridor. As part of this assessment, they have reviewed the road hierarchy and the provision of walking and bicycle riding facilities. GHD have worked with Hill Thalis to provide positive outcomes in accordance with the following key principles:

- **Connectivity:** Connecting key destinations
- **Convenience:** Density of routes
- **Safety and Comfort:** Quality routes

This section discusses how the principles of connectivity, convenience, safety and comfort are adopted in developing the bicycle riding and walking networks:

- **Connecting Key Destinations:** Ensuring networks are planned that connect to key destinations. In this case, destinations include:
  - Educational facilities.
  - Local parks and other recreational facilities.
  - Rail stations (this will be of heightened significance once these stations are upgraded to Metro stations with higher service frequencies).

- Key development intensification sites (encompassing employment, shopping and denser residential intensities).

- **The Density of Routes:** Providing a network of cycle routes (C2 street types from the road hierarchy proposed by Hill Thalis) which are regularly spaced ensures cyclists the most direct and convenient route to their destination. In this case, the grid-like street network affords the opportunity for regularly spaced north/south routes of between 300 m and 1,200 m and east/west routes which take advantage of the rail corridor, the residential streets of Moorefield Road/William Street (south of Canterbury Road). A third east/west corridor is also planned for cyclists taking advantage of a number of smaller residential streets between the rail corridor and Canterbury Road (these include Hillcrest Street, Edge Street, Leylands Parade and Palmer Street, eventually connecting into the Cooks River and Rail Corridor pathways).

Pedestrian networks (C3 street types) are provided in a more 'fine grain' network of routes between Canterbury Road and the rail corridor. These are particularly targeted at connecting into and utilising the many proposed pocket parks in between these corridors.

- **The quality of route:** It is intended that the cycle network (C2 street type) is designed to attract a broad market of potential cyclists, including inexperienced (new) cyclists, children and women. Research has shown that separated bicycle riding facilities (either on-road separated facilities or facilities utilising parks) are also much more likely to attract female cyclists than on-road bike lanes[1]. The proposal is for a network of on-road separated bi-directional bicycle paths which are separated from moving traffic by a 500 m kerb and alternating landscaping and parallel parked cars. This bike path type is considered to be best practice in existing urban areas in Sydney as it allows for a reconfigured roadway in which cyclists are safer as they are buffered from moving traffic.

The pedestrian network (C3 street type) will provide a higher quality pedestrian environment with a reduced roadway width, wider footpaths and a greater amount of landscaping including street trees for shade. Utilising bioswales for the planting of street trees will formalise the space used for parking. These will also allow for a greater buffer between moving traffic and pedestrians, increasing safety and pedestrian comfort.

The suite of infrastructure introduced through the introduction of the green grid (street type C2 and street type C3) is anticipated to make active transport for attractive in the study area. As population increases and intensifies in the study area it will be important to continue to encourage walking bicycle riding and public transport through such initiatives but also to complement these measures with a full suite of TDM tools.

A summary of the TDMs applicable to the study area and the corresponding trip reduction for the proposed commercial and residential land uses are presented in Table 5-1.

Table 5-1 Proposed TDMs and Trip Reductions

Travel Demand Measure	Description	Trip Reduction Commercial	Trip Reduction Residential
Employer Based Scheme	Update the DCP to mandate GTPs as part of the planning application for major new developments.	13 percent reduction in single occupancy	NA

[1] For example see: Transport and Main Roads, 2014, *Separated Cycleways Guideline*, Queensland Government, (*https://www.bicyclenetwork.com.au/media/.../SeparatedCyclewaysGuidelinesQLD.pdf*) Australia

Travel Demand Measure	Description	Trip Reduction Commercial	Trip Reduction Residential
	Develop a standard GTP template for developers and other organisations. Designate a staff member to monitor the application of GTP and provide advice to the public on an ad-hoc basis.	vehicle trips by 2021 15 percent in single occupancy vehicle trips by 2036	
Active Transport	Ensure all new major road infrastructure includes a provision for cyclists and pedestrians (via DCP specifications). Review and updated wayfinding and signage within the study area, including to adjoining local government areas. Provide guidance and advice for the provision of end of trips facilities for new developments. Audit pedestrian and cycle networks to major trips attractors (existing and proposed). Integrate bus stops and train stations with well-connected networks and provide bicycle parking at major stops and stations. Monitor and analyse bicycle riding demand to assist in planning and prioritising bicycle riding network upgrades and development.	<u>Pedestrians</u> 10 percent of trips by 2021 15 percent of trips by 2036 <u>Cyclists</u> 3 percent of trips by 2021 5 percent of trips by 2036	<u>Pedestrians</u> 15 percent of trips by 2021 20 percent of trips by 2036 <u>Cyclists</u> 3 percent of trips by 2021 5 percent of trips by 2036
Parking Schemes	Promote and provide on-street car parking spaces for car sharing in neighbourhoods- carsharing providers generally need density and mixed uses to be viable. Institute a resident parking permit scheme which accurately reflects the value of Council's public space used for parking. Price on-street car parking in commercial (shopping) areas to support short-stay trips and increase parking turnover.	5 percent reduction in vehicle trips (2021 and 2036)	5 percent reduction in vehicle trips (2021 and 2036)

Travel Demand Measure	Description	Trip Reduction Commercial	Trip Reduction Residential
	Unbundle parking from housing and commercial developments, so residents and business only pay for the parking spaces they need.		
Public Transport	Prioritise on-road public transport though enhance signal and road space priority. Build compact communities with sufficient density to support high-service standards of public transport (frequency, span of services and better stop and road space priority infrastructure standards).	10 percent reduction in vehicle trips by 2021 15 percent reduction in vehicle trips by 2036	10 percent reduction in vehicle trips by 2021 15 percent reduction in vehicle trips by 2036

5.3 Traffic Management Measures

As displayed in Appendix B, there are a large number of intersections along Canterbury Road (both priority and signal controlled) where right turns are permitted. Right turns (where storage lanes are not provided) can inhibit the through movement of vehicles reducing the speed efficiency of the road Roads and Maritime generally consider that right turns along arterial roads should be consolidated, where possible, in order to improve traffic operations for through traffic.

To improve the operation of Canterbury Road and support urban renewal along the corridor, a road management analysis has been completed. This is expected to have the following benefits to traffic operations along the corridor:

- At intersections where no right turn bay is provided, vehicles waiting in the traffic lane when making a right turn restrict through traffic to use the kerbside lane only. Banning the right turn at these locations would allow through traffic to travel in both lanes, reducing the likelihood of delays and improving the overall traffic flows.
- Removal of right turns at traffic signal controlled intersections (where they do not provide connectivity) would reduce delays and improve traffic signal operation.

There are a number of intersections along the Canterbury Road corridor, where the eastbound and westbound right turns are staggered (with either a westbound or eastbound right turn provision).

There is an opportunity to consolidate right turns at some intersections by reconfiguring the intersection to provide a diamond traffic signal phasing, thus providing both eastbound and westbound right turns. This would reduce the requirement for providing right turns at upstream or downstream intersections.

Three alternative options have been considered for restricting/amending right turn access from Canterbury Road into the side streets along the study area corridor, as follows:

- **Option 1 – maximum accessibility option**: this option provides the most opportunities for vehicles to turn right from Canterbury Road. However, the number of right turns along

the corridor have been consolidated compared to the existing arrangement. Option 1 proposes 45 right turn opportunities on Canterbury Road (within the study area).

- **Option 2 – minimum accessibility option**: this option provides the minimum number of right turns along the corridor, while still providing access to the existing and proposed new mixed use commercial centres along the corridor. This option limits the spacing of right turn access along the corridor to approximately 400-500 metres. Option 2 proposes 25 right turn opportunities on Canterbury Road (within the study area).
- **Option 3 – hybrid option of Options 1 and 2**: this option is a hybrid of Option 1 and 2 and provides 30 right turn opportunities on Canterbury Road (within the study area).

New traffic signals have been proposed at some intersections to facilitate right turns and provide pedestrian access across Canterbury Road (where it does not exist). In developing each of the above options, consideration has been given to providing access to the proposed new centres along the corridor and maintaining right turn access at major intersections, or at locations where there is a high demand for the right turn movement (based on traffic count data from 2012 intersection traffic survey and 2016 SCATS traffic survey data).

A key factor in the development of the three options for right turn access was the consideration of cross-corridor accessibility for both pedestrians and bicycle riders. When developing the right turn accessibility options, consideration was given to the following:

- Key pedestrian crossing locations, including at traffic signal controlled intersections or mid-block signal controlled pedestrian crossings. The accessibility options considered cross-corridor pedestrian access within the Urban Growth Precincts / existing local centres, to provide access to bus stops and to provide other key north-south pedestrian links (generally at major intersections).
- Cross corridor (north / south) access for bicycle riders, including current and planned bicycle routes. A review of bicycle routes identified in local council Bike Plane was undertaken to identify these bicycle routes.

Option 3 has been identified as the “preferred option” for right turn access along the corridor. This option has been adopted for the traffic modelling assessment of the future road network and land use development scenarios.

A summary of the proposed right turn locations for each of the above options is provided in Table 5-2, with figures showing the proposed right turn access arrangement for Options 1 - 3 provided in Appendix K.

Table 5-2 Proposed Right Turn Scenarios

ID	Cross Street	Option 1 – Maximum Accessibility	Option 2 - Minimum Accessibility	Option 3 - Hybrid
1	Stacy Street	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)
2	Moxton Road	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)
3	Punchbowl Road	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)
4	Septimua Avenue	Priority - proposed right turn bay in median		
5	Lyon Avenue			Priority - proposed right turn bay in median
6	Blenman Avenue	Priority - proposed right turn bay in median		
7	Rose Street & Cullen Road	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays
8	Victoria Road	Traffic Signals with proposed northbound and southbound right turn bays		
9	Belmore Road North	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)
10	Rossmore Avenue	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
11	Bonds Street	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
12	Broadway	Priority - proposed right turn bay in median		
13	Dudley Street	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
14	Mount Avenue	Priority - proposed right turn bay in median		
15	Pentland Avenue	Priority - proposed right turn bay in median	Priority - proposed right turn bay in median	Priority - proposed right turn bay in median
16	Campaspe Avenue	Priority - proposed right turn bay in median	Priority - proposed right turn bay in median	Priority - proposed right turn bay in median
17	Ferguson Avenue	Priority - proposed right turn bay in median		
18	King Georges Road	Traffic Signals with northbound and southbound right turn bays (existing)	Traffic Signals with northbound and southbound right turn bays (existing)	Traffic Signals with northbound and southbound right turn bays (existing)
19	Clio Street	Priority - proposed right turn bay in median		
20	Canarys Road	Traffic Signals with proposed right turn bay		
21	Ernest Street		Priority - proposed right turn bay in median	
22	Sproule Street	Priority - proposed right turn bay in median		Priority - proposed right turn bay in median
23	Dreadnought Street			Priority - proposed right turn bay in median
24	Remley Sreet	Priority - proposed right turn bay in median		

ID	Cross Street	Option 1 – Maximum Accessibility	Option 2 - Minimum Accessibility	Option 3 - Hybrid
25	Haldon Street	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
26	Denis Street	Priority - proposed right turn bay in median		
27	Chapel Street	Traffic Signals with proposed right turn bay - southbound only	Traffic Signals with northbound and southbound right turn bays (existing)	Traffic Signals with northbound and southbound right turn bays (existing)
28	Trafalgar Street	Priority - proposed right turn bay in median		
29	Burwood Road	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
30	Kingsgrove Road / Sharp Street	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays
31	Elizabeth Street	Priority - proposed right turn bay in median		
32	Thorncraft Parade / Charlotte Street	Traffic Signals with proposed right turn bay - northbound only	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays
33	Orissa Street	Priority - proposed right turn bay in median		Priority - proposed right turn bay in median
34	Bexley Road	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays	Traffic Signals with proposed northbound and southbound right turn bays
35	Duke Street	Traffic Signals with proposed right turn bay		Traffic Signals with proposed right turn bay
36	Cooks Avenue	Priority - proposed right turn bay in median		Priority - proposed right turn bay in median
37	Wonga Street	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)
38	Fore Street	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)	Traffic Signals with right turn bay (existing)
39	Broughton Street	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
40	Church Street	Priority - proposed right turn bay in median		
41	Floss Street	New traffic signals with proposed right turn bay	New traffic signals with proposed right turn bay	New traffic signals with proposed right turn bay
42	Vincent Street	Priority - proposed right turn bay in median		
43	Princess Street		Priority - proposed right turn bay in median	Priority - proposed right turn bay in median
44	Crinan Street	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
45	New Canterbury Road	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay	Traffic Signals with proposed right turn bay
Number of Right Turn Locations		**41**	**25**	**30**

6. Modelling Method

6.1 Introduction

The objective of the strategic traffic modelling is to provide a tool for calculating the impact on traffic volumes on Canterbury Road caused by future changes in land use. To this end, AM peak (07:00 – 09:00) and PM peak (16:00 – 18:00) models were developed for 2021 and 2036.

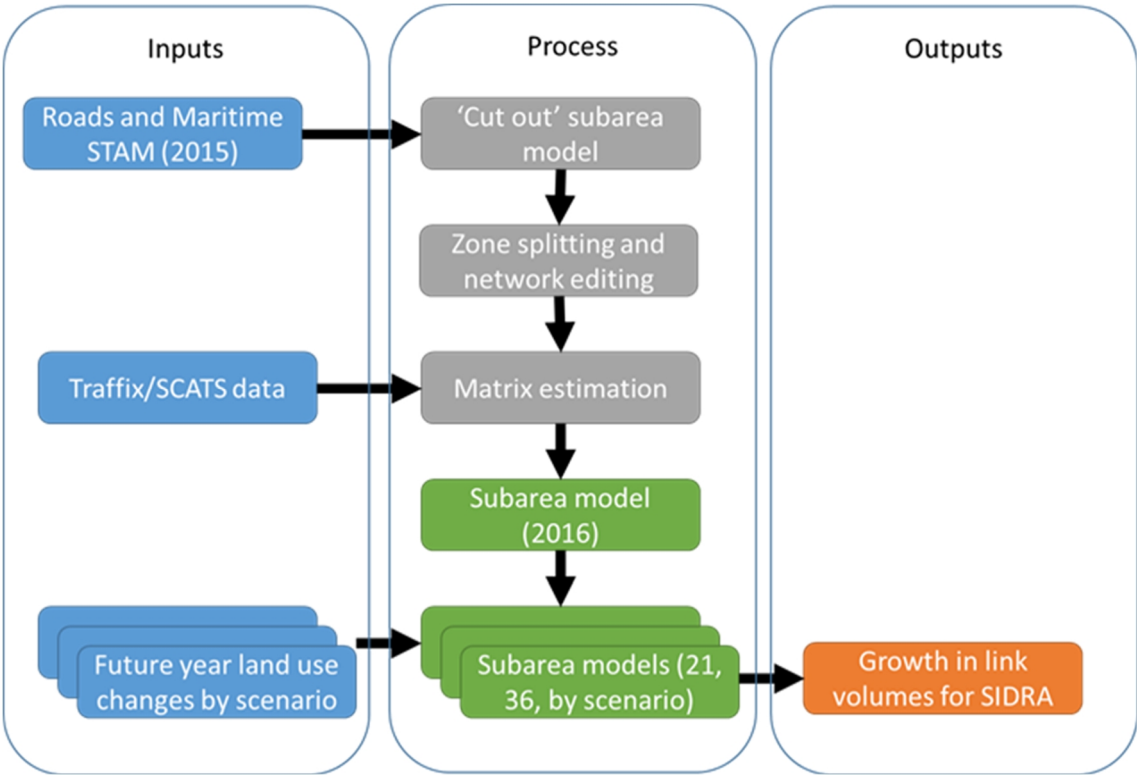
The Roads and Maritime Strategic Traffic Assignment Model (STAM) was used as the basis for the development of the strategic traffic model.

An advantage of using STAM for this purpose is that the model's zone structure is underpinned by a standard zoning system for which TfNSW publish expected changes in population and employment numbers (for each individual zone). By applying and adjusting these forecasts, the traffic model can reflect changes to land use in terms of traffic on Canterbury Road.

As a result, the growth in link volumes between the base and future model year and scenario can be applied to existing turning counts to allow detailed SIDRA analysis to be undertaken for each future year land use scenario.

An overview of the modelling method is presented in Figure 6-1.

Figure 6-1 Strategic Modelling Method



6.1.1 Base model development

A zone splitting and network update was carried out to provide more detail in the critical areas for this study. A matrix estimation approach was then employed to adjust the demands to better match observed volumes. This calibration process is detailed in Appendix L (Base Model Development Report).

6.1.2 Canterbury Road forecast demand modelling

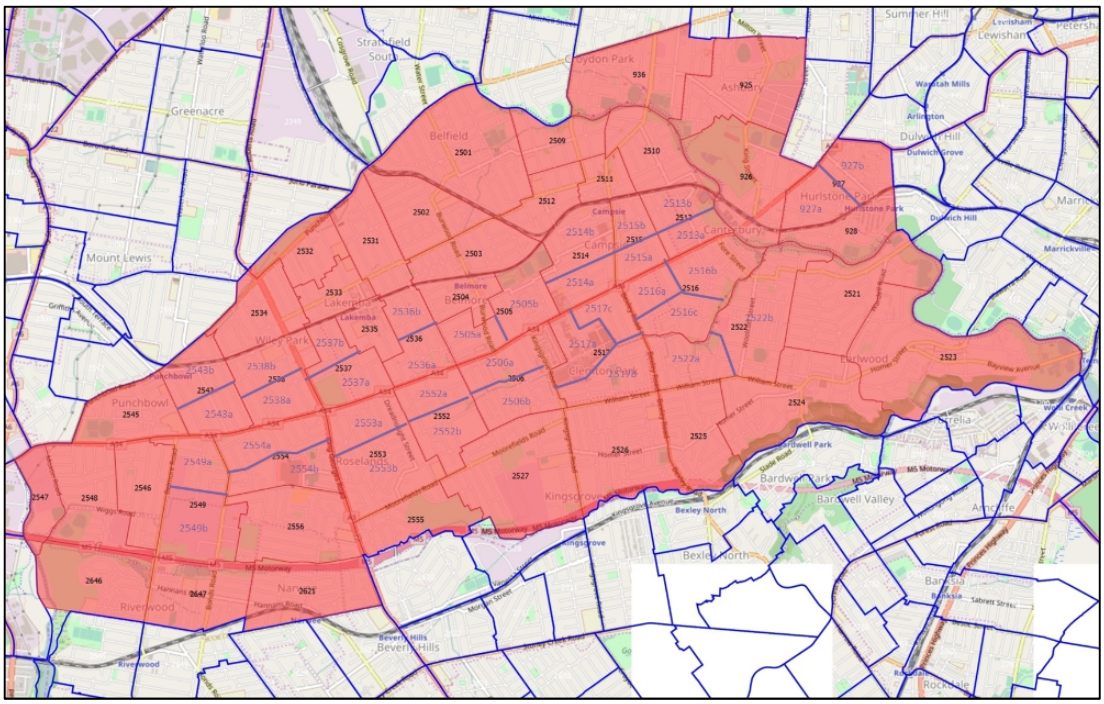
To provide 2021 and 2036 forecasts under the land use scenarios specified the road networks and demand matrices were updated to represent the changes in each future year. This was based upon the projected increases in residences and jobs within the study area on a per zone basis.

As STAM is a strategic traffic model, the zones can be too large for a detailed corridor study. As a result, and to ensure that the forecast changes in land use can be reflected in the strategic model to a reasonable level of accuracy a number of zone splits were required. This necessitates both:

- Splitting zones and reattaching these new zones to the road network in a realistic manner – so that the zones load onto the network at sensible locations.
- Splitting the traffic demand for each of the zones in a reasonable manner.

The zones (and sub-zones) used in the EMME modelling is displayed in Figure 6-2.

Figure 6-2 Proposed Zone Splits



6.1.3 Road networks

Road network changes are provided by the STAM model for future years 2021 and 2036. These changes are consistent with Roads and Maritime and Transport for NSW long term forecasts. In the area covered by the Canterbury Road subarea model (or significantly affecting travel patterns in the area) this includes the following:

- Westconnex (Stage 2 in 2021, Stage 3 in 2036)
- The Widening of King Georges Road.

Thus the future year analysis accounts for the expected layout of Sydney's arterial road network.

6.1.4 Demand Matrices

There are two sources of changes to the demand in the model. Firstly, background growth across the whole of the metropolitan area is included by using sub-area 'cuts' of the 2021 and 2036 STAM.

Specific changes to the land uses in the study area itself were superimposed on top of the patterns of movement in the 'base' model. The process used is as follows:

Future Year Base demand

The base year calibration consisted of a matrix estimation process on the base year demand. To incorporate these changes in the future year base, the following formula is applied for 2021, 2036 and am and pm peaks separately:

$$F_T_o = F_B_T_o + M_T_o - 2015_B_o$$

This effectively adjusts the future year demands to be in accordance with the base year matrix estimation.

Future Year Scenario demand (Maximum Yield or Hill Thalis)

For trips that do not start or end in the study area, the future year base demand remains unchanged.

For trips to, from and within the study area there is an additional change to reflect the land use scenario assumptions (for more detail about the land use scenarios, see section 7.2.1). This change (Δ), is calculated separately for trips to and from each travel zone, for each time period and forecast year. The change is based on the percentage difference in land use types between the future year base and future year 'scenario' and is applied to the total trips from and to that zone in the future year base.

In order to do this, the land use data, in terms of dwellings and employment by job sector are:

- Converted to a trip rate
- Split between arrivals and departures.

The assumed trip rates and splits adopted in the strategic modelling are shown in Table 6-1.

Table 6-1 Land Use trip generation rates (peak hour) and directional splits

Land Use Type	Units	AM peak				PM Peak			
		In	Out	Low density	High density	In	Out	Low density	High density
Residential	dwelling	20%	80%	1.90	0.38	70%	30%	1.98	0.30
Retail	job	90%	10%	1.1			3.69	3.69	
Bulky Goods	job	80%	20%	1.04			1.12	1.12	
Office	job	90%	10%	0.96			0.92	0.92	
Local Services / Industrial	job	50%	50%	1.04			1.12	1.12	
Other	job	80%	20%	1.04			1.71	1.71	

The data in Table 6-1 has been sourced from the *Roads and Maritime Guide to Traffic Generating Developments* update[2], professional judgement and data from the Environmental Protection Agency (EPA)[3] (where required). It should be noted that these figures are used only to produce the Δ value.

Table 6-2 shows the resulting trip rates by peak period by direction.

Table 6-2 Final Trip Rates

Land Use Type	Units	AM peak		PM Peak	
		In	Out	In	Out
Residential	dwelling	0.228	0.912	0.798	0.342
Retail	job	0.99	0.11	1.107	2.583
Bulky Goods	job	0.832	0.208	0.448	0.672
Office	job	0.864	0.096	0.092	0.828
Local Services / Industrial	job	0.52	0.52	0.56	0.56
Other	job	0.801	0.234	0.552	1.161

By undertaking this calculation for the future year base land use and future year scenario land use, a Δ is calculated in percentage terms for total trips to and from each travel zone (2021 and 2036, AM and PM peaks).

The Δ is then applied to the future year base demand matrices to produce row and column 'target' volumes. That is, target trips to and from each travel zone in the study area for 2021, 2036, AM and PM peaks.

Finally, a matrix balancing process is carried out to factor the matrices up based on the target totals.

6.1.5 Travel Demand Management

A range of travel demand measures are expected to reduce the vehicle trip rates in the Canterbury Road corridor (see Section 5.3). A number of assumptions or calculations have been made in order to implement the TDM reductions in the model, as detailed in this section.

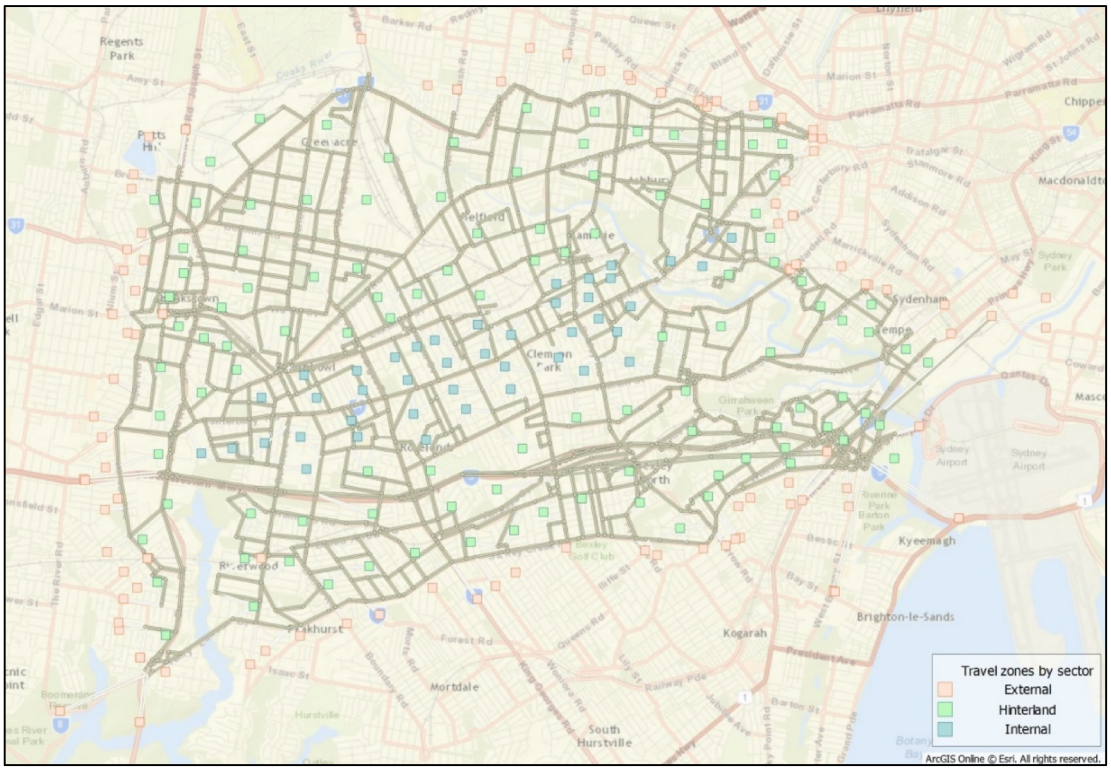
A reduction rate has been calculated for each origin-destination pair of zones. This produces a factor matrix, to be applied to the demand matrices.

To aid this process, three sectors have been defined:

- **External (E) –** zones that are on the edges of the model**.**
- **Hinterland (H)** – zones within the model, but are not part of the study area.
- **Study area (I)** – internal study area zones.

[2] http://www.rms.nsw.gov.au/trafficinformation/downloads/td13-04a.pdf
[3] https://www.epa.gov/sites/production/files/2014.../mxd_trip_generation_model.xlsx

Figure 6-3 Modelling Travel Demand Zones



A number of the sector combinations have no TDM reductions, as they do not have trip ends within the study area (E-E, E-H, H-E and H-H).

For Employed Based Schemes: the existing single occupancy vehicle (SOV) rate is 90 percent outbound and 92 percent inbound (derived from journey to work data). This means, for example, a 13% reduction in SOV trips equates to an 11.7 percent reduction in overall car trips outbound. This calculation has been carried out by peak period and direction of travel.

Public Transport TDM are applicable for trips over 5 km. Active TDM are applicable for trips under 5 km. Therefore the public transport and active transport reductions are not applied to the same zone pairs. Active transport reductions are not available for trips to external zones, as the external zones locations are indicative of a wider catchment, and thus can be considered to be outside the 5km threshold.

6.1.6 Assignment

In order to undertake the trip assignment, the demand matrices were assigned to the road network. Link volumes were extracted from the future year scenario models and the 2016 base year model. The differences in volumes were then applied to the observed turning counts used in SIDRA.

A copy of the Base Model Development Report (which has been issued to Roads and Maritime) provides a more detailed description of the modelling process and is included in Appendix L.

7. The Proposal

7.1 Hill Thalis Data

7.1.1 Vision

Hill Thalis was commissioned by CBC to develop a Vision for the Canterbury Road corridor incorporating advice on built form, land use, open space and urban design. Some of the key steps undertaken by Hill Thalis include:

- Identifying the spatial implications of NSW Government Housing Targets.
- Reviewing the traffic and transport networks with respect to walkability and access to public transport, commercial centres, community facilities and other key trip attractors.

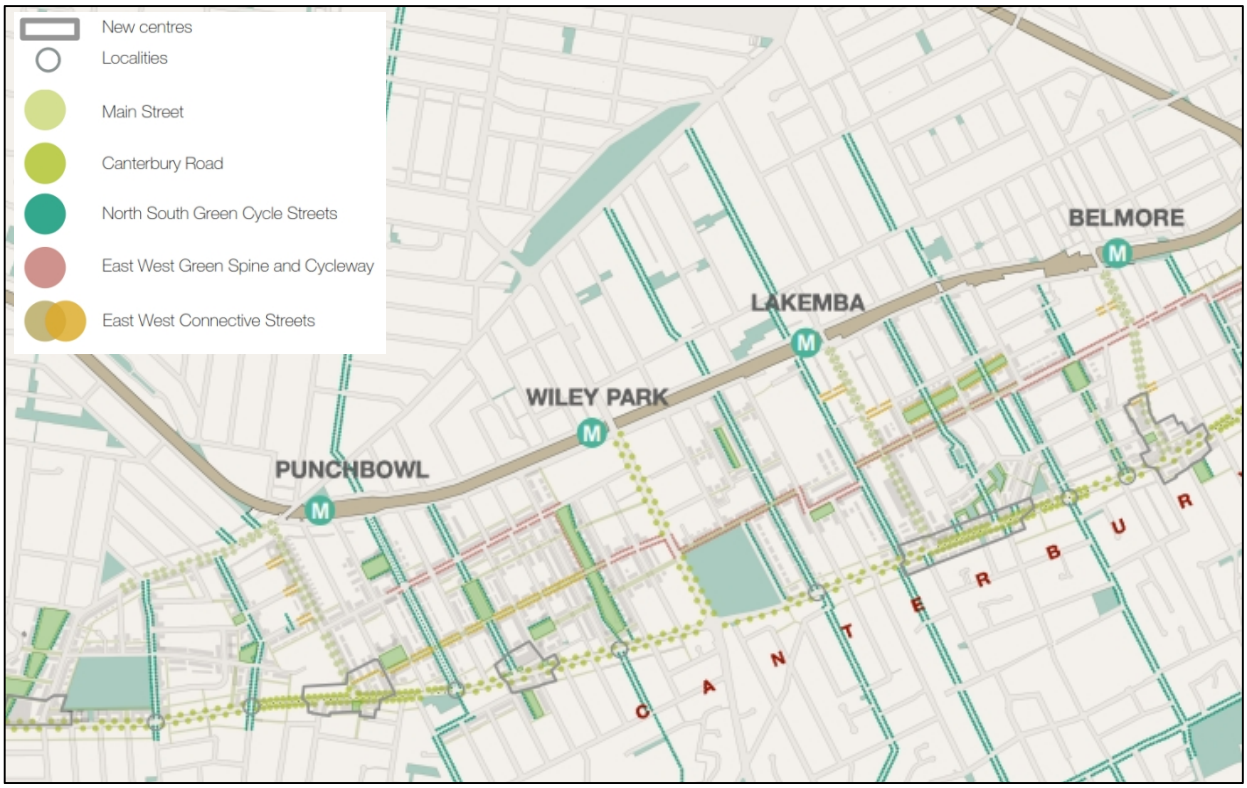
Key features of the Hill Thalis recommendations include:

- Focusing intensified urban renewal to a series of urban centres along the corridor (seven are proposed) with limited footprints.
- The limited upgrade of Canterbury Road i.e. carriageway widening adjacent to the proposed urban centres on Canterbury Road.
- Provision of a new active transport network.
- The strengthening of north-south connections between the proposed urban centres on Canterbury Road and the rail corridor (Stage 2 Sydney & Southwest Metro).
- A network of new local parks and connecting streets.
- The provision of higher density dwelling (6-9 storeys) in proximity to the parks away from Canterbury Road.
- Protecting existing employment precincts and ensure residential uses do not compromise future light industrial development.
- Concentrate office floor space within Canterbury Town Centre adjacent to the future metro stations.

The proposed new main urban centres include Campsie, Lakemba and Punchbowl (west), with smaller centres at Canterbury, Belmore, Wiley Park and Punchbowl (south).

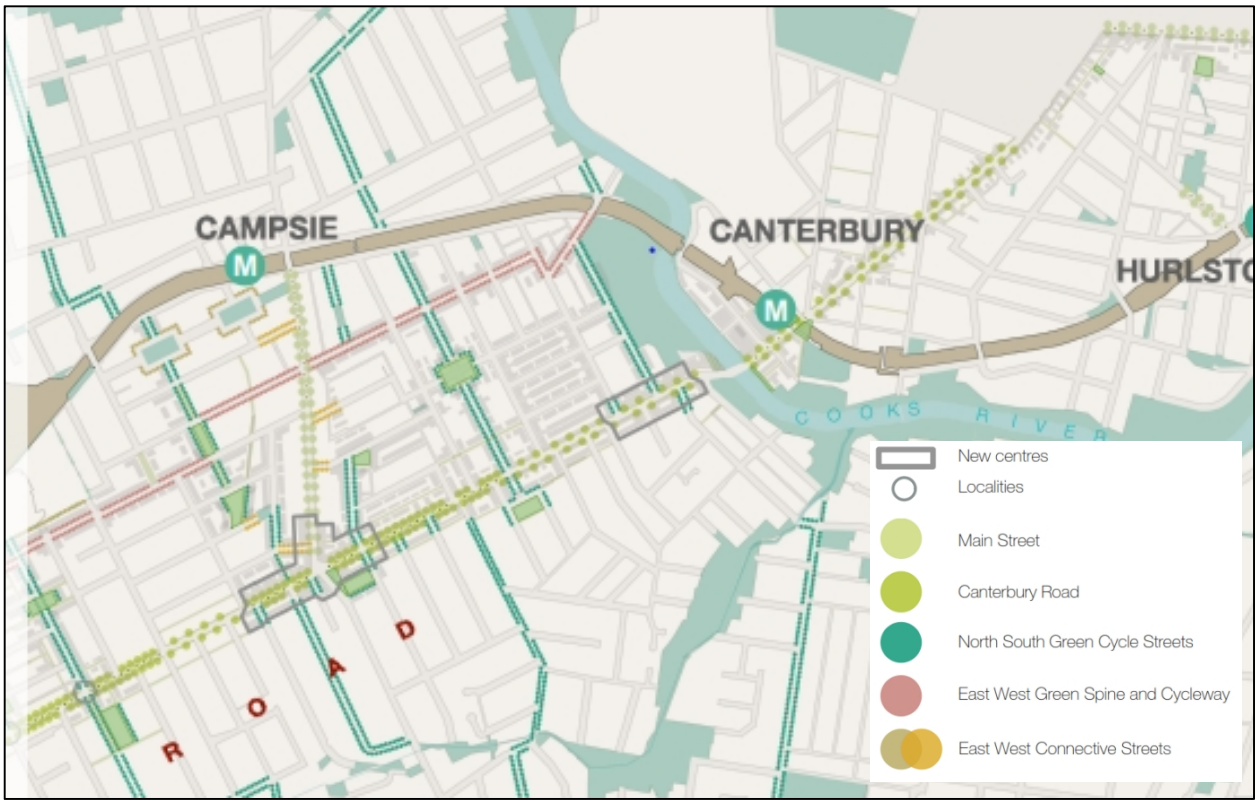
Figures showing the Hill Thalis “vision” for Canterbury Road, including the proposed locations of the proposed urban centres is displayed in Figure 7-1 and Figure 7-2.

Figure 7-1 Canterbury Road Vision (west)



Source: Re imagining Canterbury Corridor

Figure 7-2 Canterbury Road Vision (east)



Source: Re imagining Canterbury Corridor

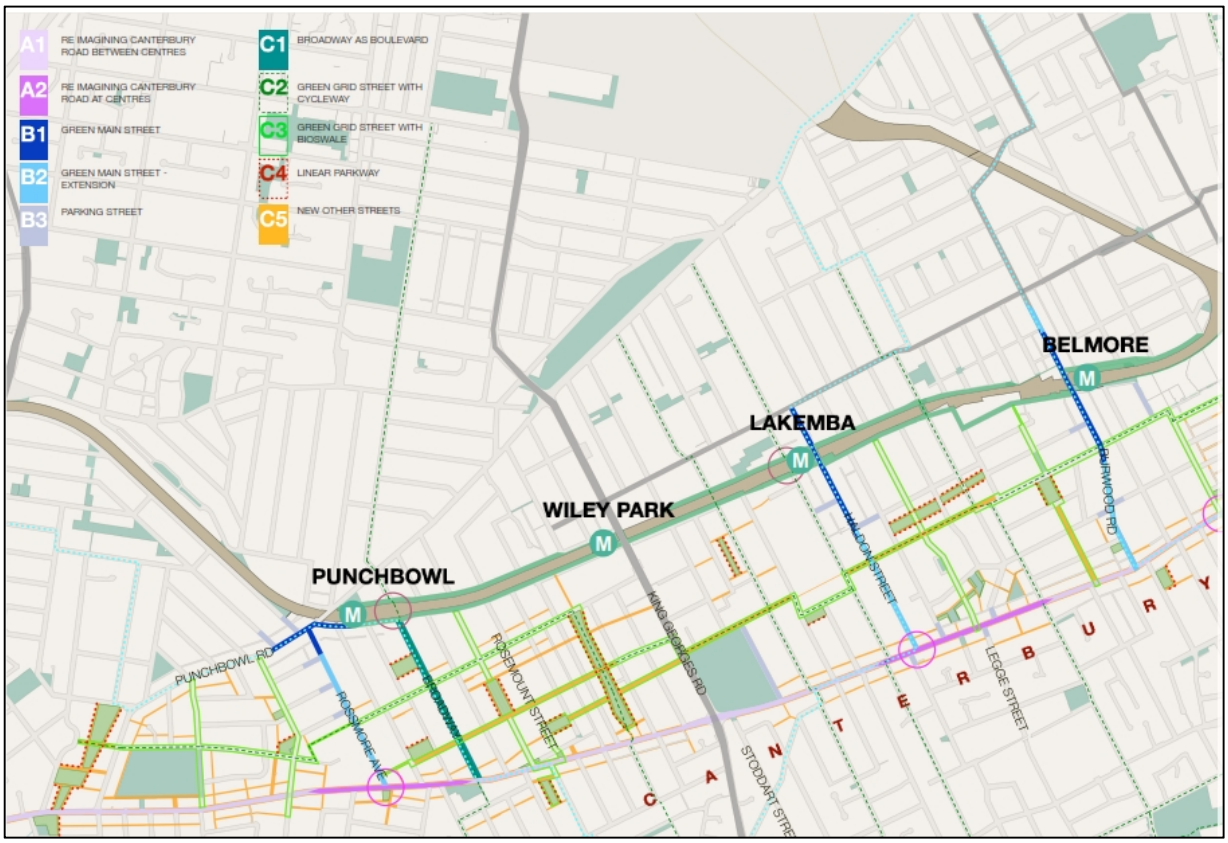
7.1.2 Road Hierarchy

Hill Thalis' proposed road hierarchy within the study area consists of the following:

- A1 – Reimagined Canterbury Road at major new centres;
- A2 – Reimagined Canterbury Road between major new centres;
- B1 / B2 – Green Main Street;
- B3 – Parking street;
- C1 – Broadway as a Boulevard; and
- C2 / C3 – Green Grid Street.

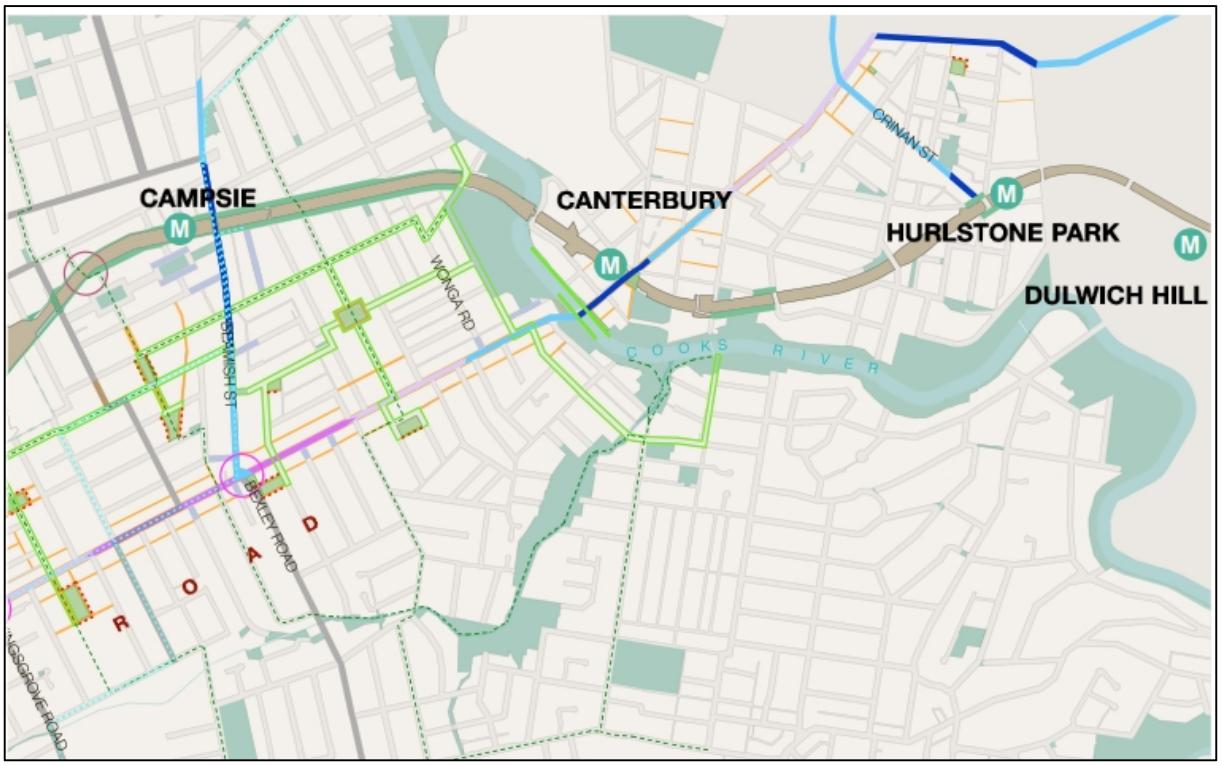
The proposed road hierarchy is displayed in Figure 7-3 and Figure 7-4.

Figure 7-3 Proposed Road Hierarchy (west)



Source: Re imagining Canterbury Corridor

Figure 7-4 Proposed Road Hierarchy (east)



Source: Re imagining Canterbury Corridor

The provision of and improved pedestrian and bicycle rider infrastructure proposed in the hierarchy is consistent with the active transport TDM, that will encourage the use of sustainable modes of travel.

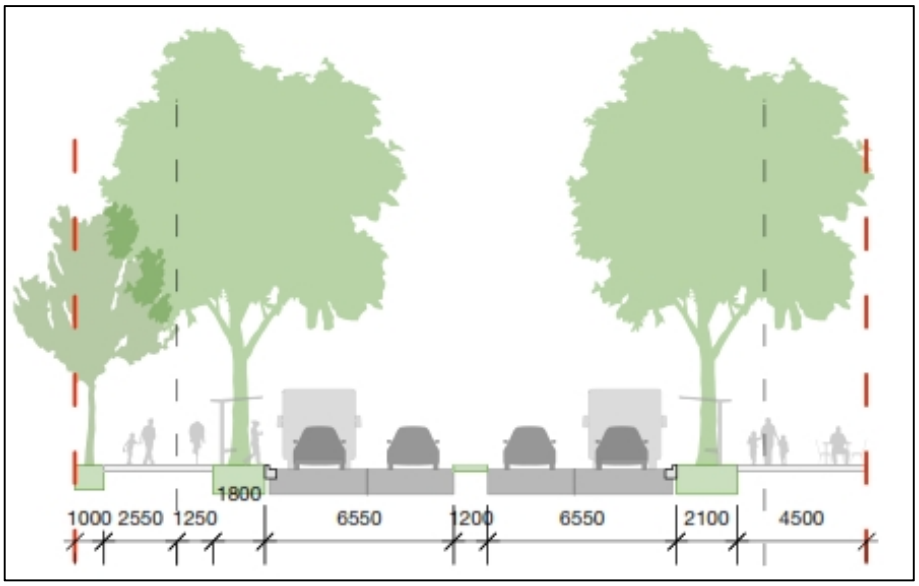
A brief description of the road types in the proposed hierarchy are described below.

A1 – Canterbury Road between Major Centres

The key characteristics of the proposed A1 corridor include:

- Retaining existing kerb lines;
- Public dedication by re-development sites to widen Canterbury Road; and
- Building setbacks to provide trees.

Figure 7-5 Proposed A1 Road Reserve



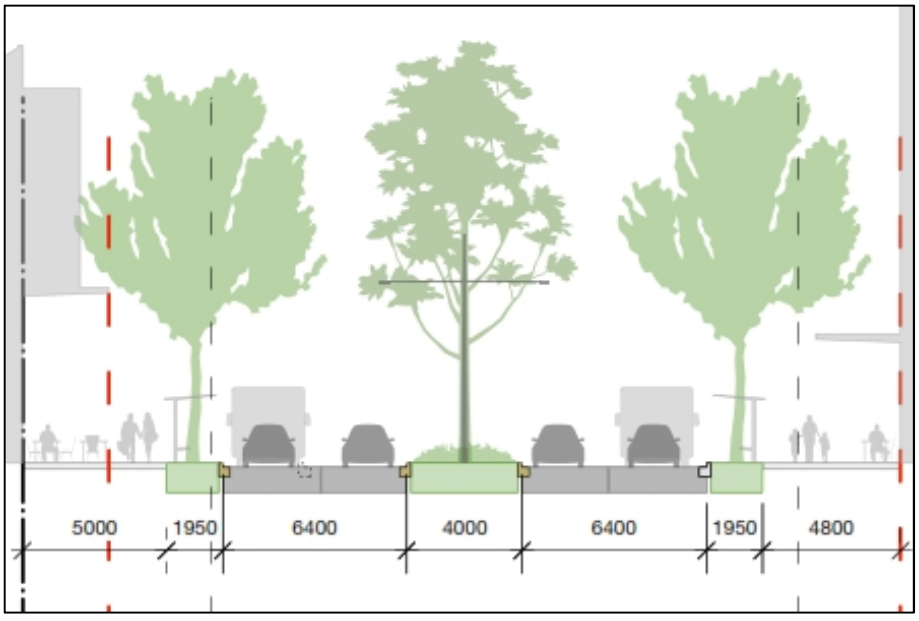
Source: Re imagining Canterbury Corridor

A2 – Canterbury Road at Major Centres

The key characteristics of the proposed A2 corridor include:

- Retaining existing northern kerb line;
- Introduce medians to accommodate turning lanes and trees; and
- Public dedication by re-development sites to widen Canterbury Road.

Figure 7-6 Proposed A2 Road Reserve



Source: Re imagining Canterbury Corridor

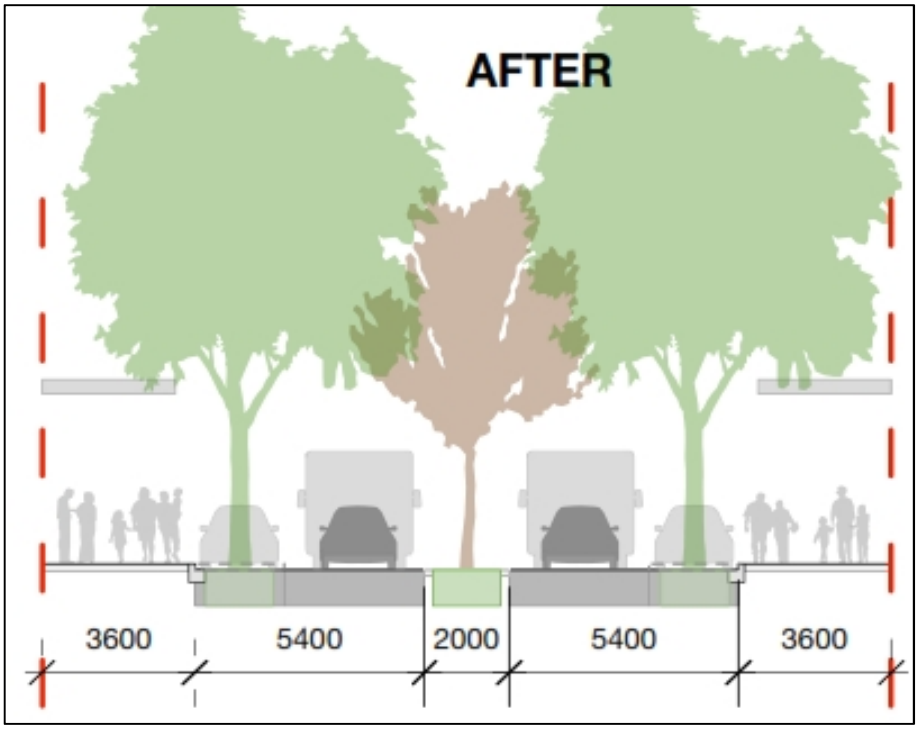
The A2 road reserve is generally consistent with the proposed public domain improvements displayed in the Canterbury DCP (see Figure 2-1). However as specified by Roads and Maritime, no on-street parking is proposed on Canterbury Road as this would inhibit its operation as a movement corridor.

B1 – Green Main Street

The key characteristics of the proposed B1 corridor include:

- Retaining existing kerb lines;
- Widen the pavement for bus stops, street furniture and alfresco dining without interrupting pedestrian flow; and
- Introduce medians to accommodate turning lanes and trees.

Figure 7-7 Proposed B1 Road Reserve



Source: Re imagining Canterbury Corridor

B2 – Green Main Street extension

The key characteristics of the proposed B2 corridor include:

- Retaining existing kerb lines;
- Widen the pavement for bus stops, street furniture and alfresco dining without interrupting pedestrian flow; and
- Introduce medians to accommodate turning lanes and trees.

Figure 7-8 Proposed B2 Road Reserve



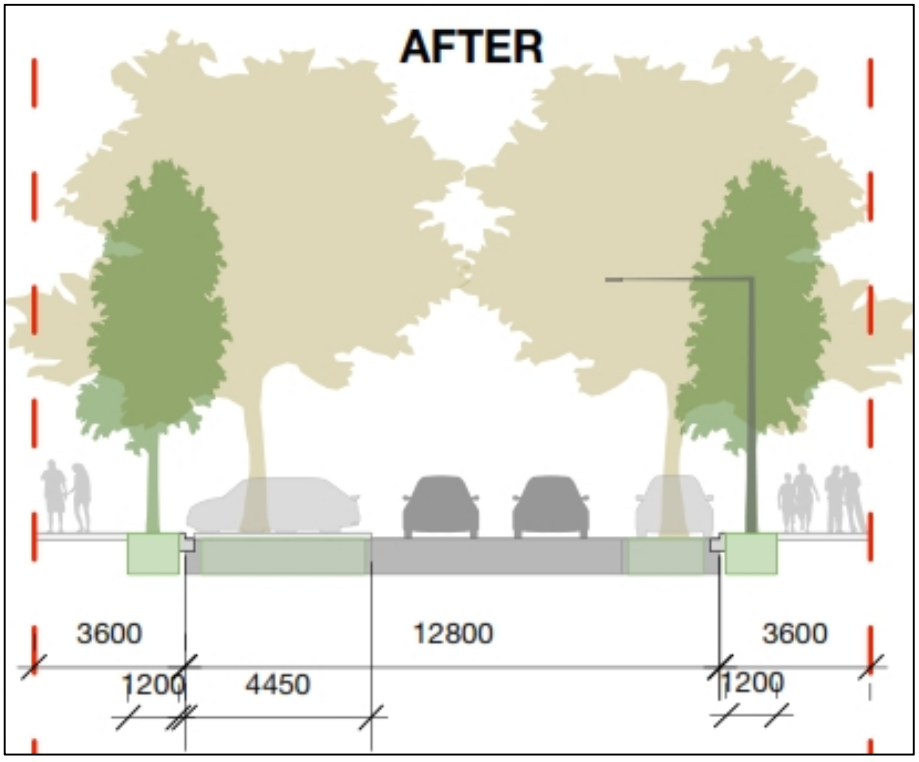
Source: Re imagining Canterbury Corridor

B3 – Parking Street

The key characteristics of the proposed B3 corridor include:

- Retaining existing kerb lines;
- Introduce 45-degree car parking; and
- Verge tree planting.

Figure 7-9 Proposed B3 Road Reserve



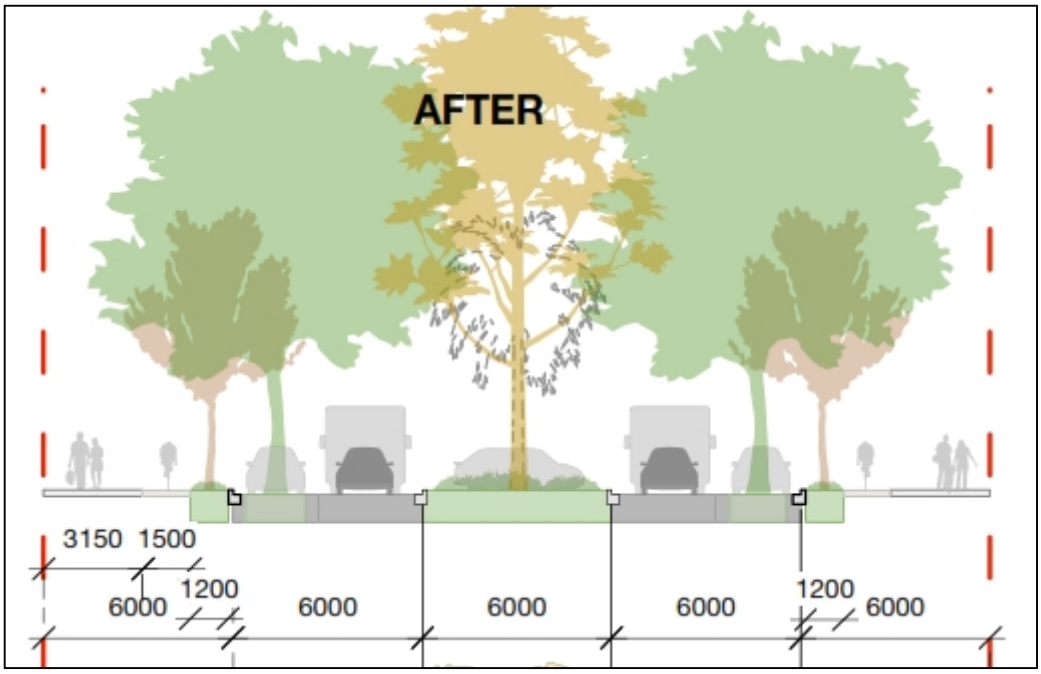
Source: Re imagining Canterbury Corridor

C1 – Broadway as Boulevard

The key characteristics of the proposed C1 corridor include:

- Retain existing kerb lines;
- Introduce more trees and intervals along parking lane; and
- Verge trees.

Figure 7-10 Proposed C1 Road Reserve



Source: Re imagining Canterbury Corridor

C2 – Green Grid with Cycleway

The key characteristics of the proposed C2 corridor include:

- Retain existing kerb lines;
- Introduce a two-way cycle way; and
- Verge and parking interval trees.

Figure 7-11 Proposed C2 Road Reserve



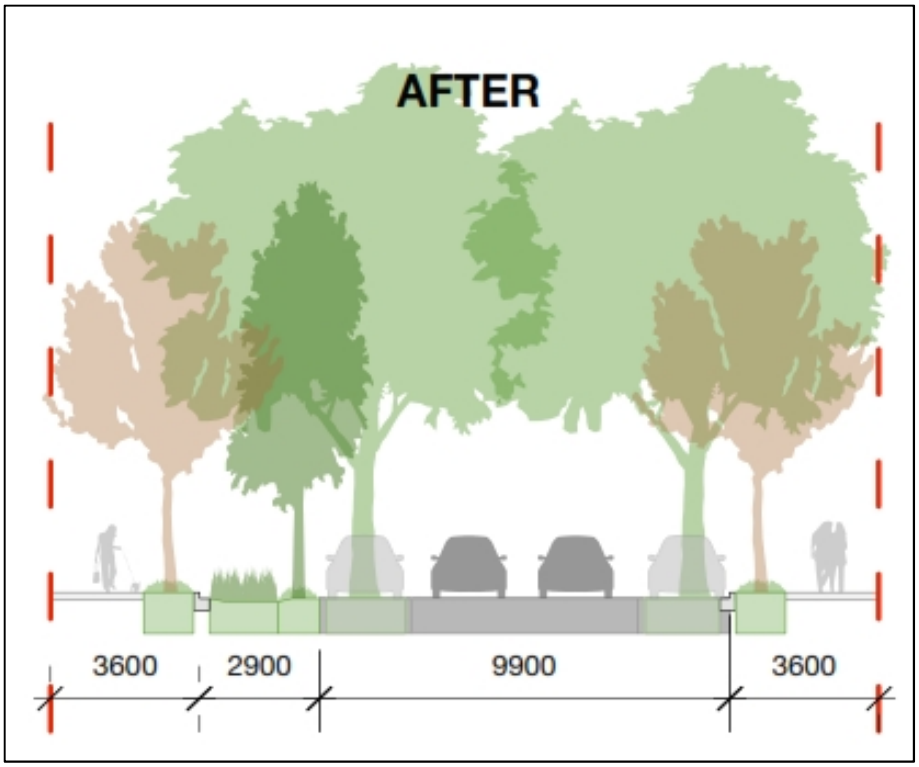
Source: Re imagining Canterbury Corridor

C3 – Green Grid with Bioswale

The key characteristics of the proposed C3 corridor include:

- Retain existing kerb lines;
- Introduce a bioswale within the existing carriageway; and
- Verge trees.

Figure 7-12 Proposed C3 Road Reserve



Source: Re imagining Canterbury Corridor

C4 – Linear Parkway

The key characteristics of the proposed C4 corridor include:

- New park edge streets;
- Introduce a bioswale replacing or in addition to the existing; and
- Parkway trees.

Figure 7-13 Proposed C4 Road Reserve



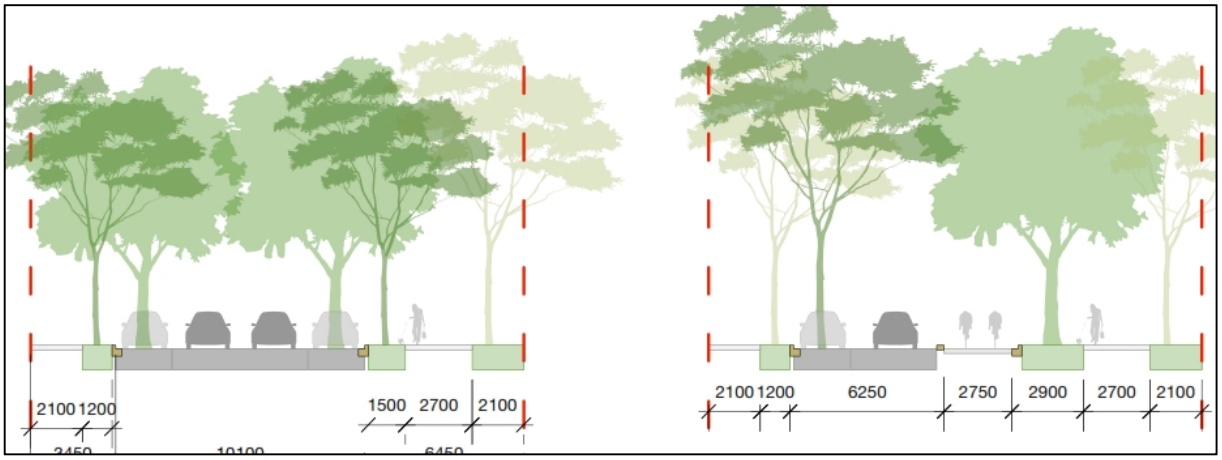
Source: Re imagining Canterbury Corridor

C5 – Other New Streets

The key characteristics of the proposed C5 corridor include:

- Retain existing kerbs;
- New two-way cycleway adjacent existing carriageway or new 45 degree parking adjacent a park; and
- Verge trees.

Figure 7-14 Proposed C5 (New Street) Road Reserve



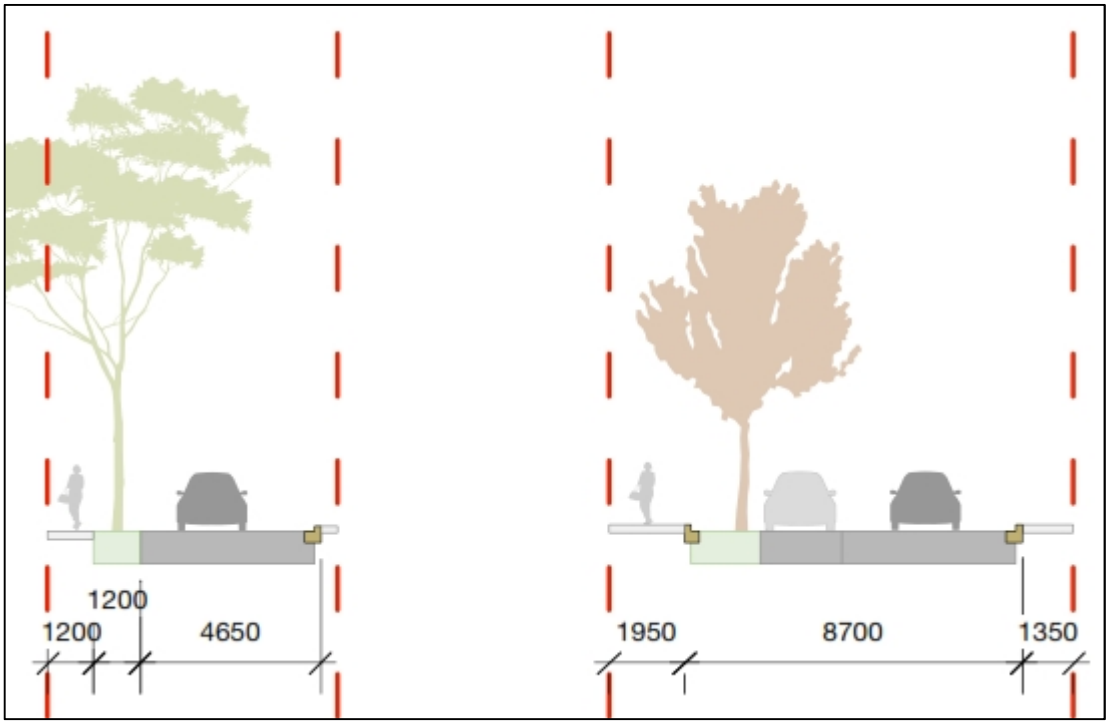
Source: Re imagining Canterbury Corridor

C5 – Lanes

The key characteristics of the proposed C5 corridor include:

- The potential for a network of lanes beside Canterbury Road.

Figure 7-15 Proposed C5 (Lanes) Road Reserve



Source: Re imagining Canterbury Corridor

7.2 Economic Vision

SGS were commissioned by CBC to analyse the economic issues associated with development along the Canterbury Road Corridor to assist in identifying:

- The expected demand for residential and commercial land uses within the Canterbury Road Corridor.
- The appropriate type, volume and location of residential and commercial land uses.
- Potential changes to planning controls required to implement the key recommendations.

The key recommendations of the study included:

- Establish an urban outcome based on "nodal intensification" that will provide focal points pedestrian activity. This is consistent with the proposal of Hill Thallis' to develop new "urban centres" of land use intensification on Canterbury Road.
- Encourage the development of bulky goods showrooms and stores on the ground floor levels of new residential developments.
- Encourage the development of supermarkets at key nodes along the corridor to operate as an "anchor" for other types of retail development.

7.2.1 Land Use Scenarios

SGS has consolidated the data provided by Hill Thalis on a per zone/subzone basis (see Figure 6-2) for 2021 and 2036 and has provided the expected volumes of new residences and jobs (retail, bulky goods, office, local services/industrial and others) for the following land use scenarios:

- **Base** - The base scenario, which is based upon the TfNSW (Transport Performance and Analytics) land use projections (LU16);
- **Maximum Yield** - The full development of the LEP (referred to henceforth as the maximum yield scenario); and
- **Hill Thalis** - The targeted intensification land use scenario proposed by Hill Thalis.

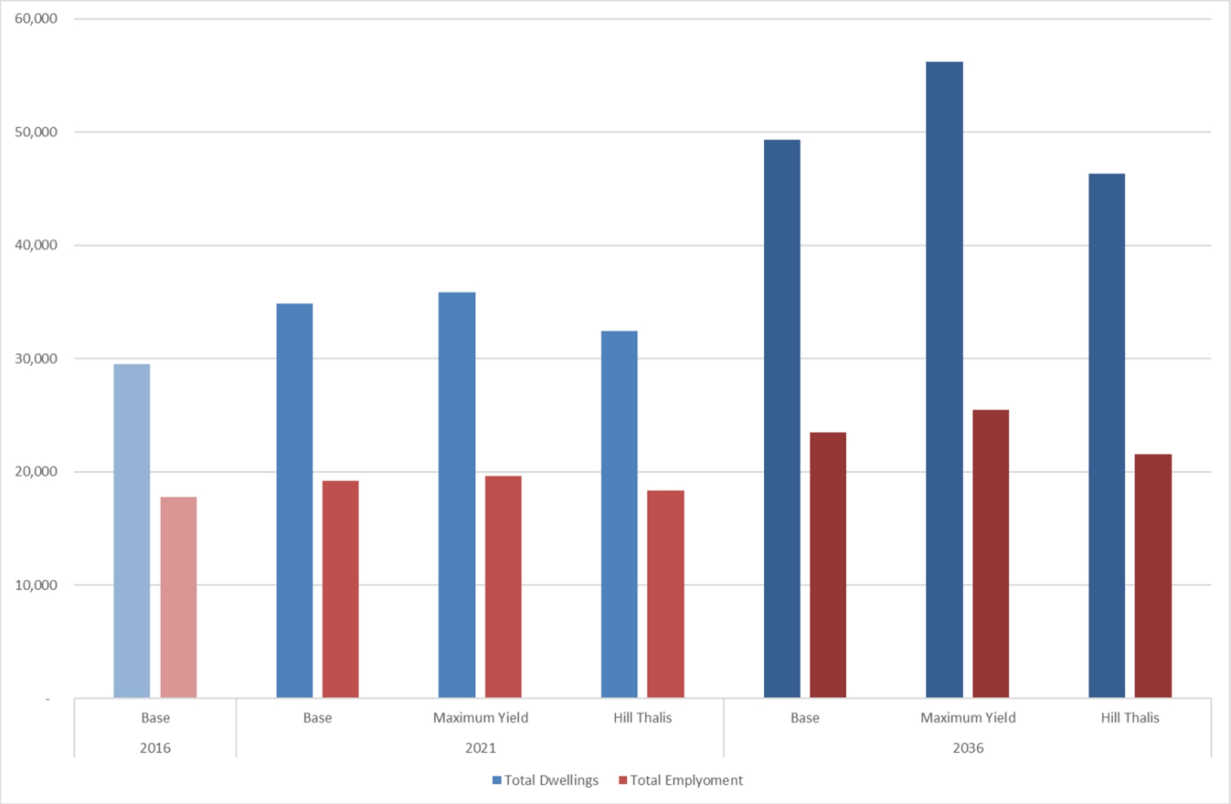
Images showing the residential and employment densities for the maximum yield and Hill Thalis land use scenarios (2021 and 2036) are included in Appendix M.

A summary of the proposed residential yields and employment populations for each of the land use scenarios is presented in Table 7-1 and shown graphically in Figure 7-1.

Table 7-1 Land Use Scenario Yields

Year	Scenario	Dwellings		Employment		Employment breakdown				
		Total Dwellings	%	Total Employment	%	Retail	Bulky Goods	Office	Local Service/ Industrial	Other
2016	Base	**29,519**	**-**	**17,748**		3755	2,651	1,140	4,168	6,034
2021	Base	**34,831**	**18%**	**19,157**	**8%**	4024	2,869	1,258	4,306	6,699
	Maximum Yield	**35,837**	**21%**	**19,594**	**10 %**	5016	2,905	1,179	4,349	6,146
	Hill Thalis	**32,438**	**10%**	**18,365**	**3%**	3567	2,997	1,395	4,261	6,146
2036	Base	**49,291**	**67%**	**23,484**	**32 %**	4847	3,458	1,559	4,670	8,951
	Maximum Yield	**56,185**	**90%**	**25,482**	**44 %**	8942	1,360	1,559	4,670	8,951
	Hill Thalis	**46,349**	**57%**	**21,516**	**21 %**	3679	3,832	1,700	5,007	7,297

Figure 7-16 Land Use Scenario Yields



The data in Table 7-1 indicates that:

- The Hill Thalis scenario provides the lowest overall increase in land use.
- The maximum yield scenario produces the greatest overall increase for both dwellings and employment.

It should be noted that the distribution of the forecast growth is not uniform across the study area. The forecasts show a reduction in some areas and an increase in others. These areas also vary by land use forecast. A breakdown of the land use forecasts are provided in Appendix M. These show changes in land use by colour, so that the greater changes are rendered in a darker colour (green for a reduction and red for an increase).

A summary of the forecast changes are as follows:

- For the Hill Thalis scenario;
  - An increase of around 3,000 dwellings by 2021 (ten percent increase to the 2016 base); and
  - An increase of around 17,000 dwellings by 2036 (50 percent increase to the 2016 base).
- For the maximum yield forecast,
  - An increase of around 6,000 dwellings (20 increase to the 2016 base); and
  - An increase of around 20,000 dwellings by 2036 (50 percent increase).
- The increases are spread across the study area but there are significant increases of more than 1,000 dwellings in a number of zones under both forecasts:
  - 2514b and 2534b (Hill Thalis)
  - 2545, 2547, 2548 (maximum yield) which are all to the west of the study area.

- The most significant increases in the maximum yield forecast are to the west of the study area.

Analysis of the proposed changes in employment densities indicate that:

- There are uneven forecast increases and decreases in employment in 2021 and 2036 across the zones.
- By 2036, the Hill Thalis scenario shows a slight reduction in retail jobs and a large increase (of over 1000 jobs for) "*bulky goods"* and "*other"* employment. The percentage increases for "bulky goods", "office", "local service/industrial" and "other" jobs are 45 percent, 49 percent, 20 percent and 21 percent respectively.
- By 2036, the maximum yield forecast has a similar increase to Hill Thalis for office and local service/industrial employment. However, the maximum yield scenario includes:
  - A significant increase in retail jobs, with an increase of over 5,000 jobs (approximately 140 percent), with the increase mostly focussed on the western end of the study area;
  - A reduction in bulky goods jobs (by 1,200 jobs); and
  - Approximately 3,000 additional "other" jobs.
- There are significant differences between the maximum yield and Hill Thalis scenarios, with each of these proposed scenarios having significant differences over the base scenario.

8. Traffic Modelling Analysis

This section of the report provides a summary of the traffic modelling results for each development option.

8.1 Modelling Scenarios

Traffic modelling has been undertaken for the following scenarios which have been discussed and agreed with CBC, Transport for NSW and Roads and Maritime for the 2021 and 2036 future horizon years.

1. **Base** – TPA land use scenario;
2. **Option 1** - Maximum yield scenario;
3. **Option 2** - Hill Thalis scenario plus traffic management measures;
4. **Option 3** - Hill Thalis scenario plus traffic management measures and travel demand measures; and
5. **Option 4** - Maximum yield scenario plus traffic management measures and travel demand measures.

Modelling Options 2 to 4 will quantify the impacts of the introduction of traffic management measures and travel demand measures on the operation the key intersections on Canterbury Road.

8.2 EMME Modelling Outputs

A summary of the model scenarios run in EMME is shown in Table 8-1. A full set of EMME outputs, including traffic volumes, volume to capacity analysis and volume difference plots are included in Appendix N.

This section of the report reproduces a key selection of these outputs to illustrate the analysis undertaken. The EMME modelling can provide insights into how the transport network can behave under future year scenarios. For detailed network modelling, it is recommended that SIDRA models are analysed. SIDRA analysis will be included in a later iteration of this document.

Table 8-1 EMME Modelling Scenarios

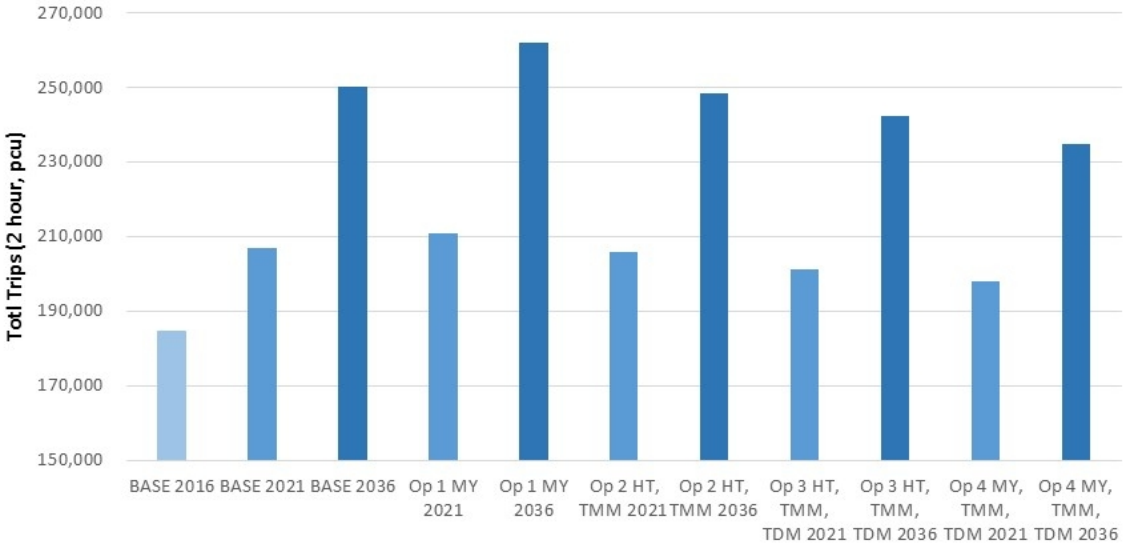
Scenario	Years	Land Use	Traffic Movement Measures (TMM)	Travel Demand Measures (TDM)
Base	2016, 2021, 2036	Base	×	×
Option 1	2021, 2036	Maximum Yield	×	×
Option 2	2021, 2036	Hill Thalis	✓	×
Option 3	2021, 2036	Hill Thalis	✓	✓
Option 4	2021, 2036	Maximum Yield	✓	✓

A summary of network statistics are provided in the following charts.

8.2.1 Total Number of Trips

The total number of trips in the study area network is shown in Figure 8-1. Comparison with the land use data shows that the total trips mirrors the relative increase or decrease in land use forecasts for population and employment. The maximum yield produces the most trips, followed by the base. The Hill Thalis land use is forecast to produce the lowest number of trips.

Figure 8-1 EMME Network Statistics – Total trips on network

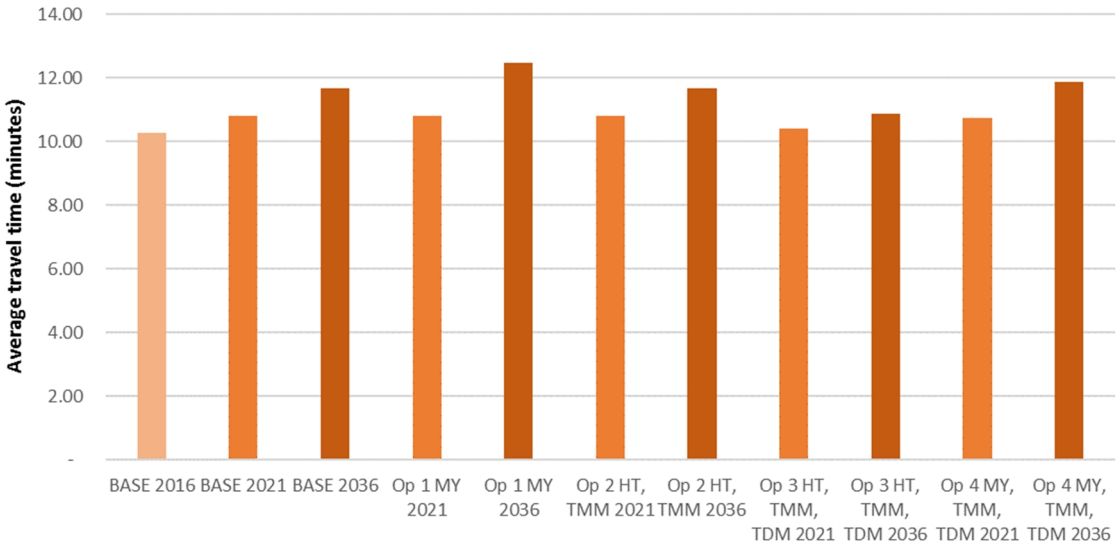


8.2.2 Average Travel Time

The forecast average travel time for a trip on the network is shown in Figure 8-2. The longer the travel time, the more the network is congested. Note that as the model is a subarea, all of the trips from and to external zones are curtailed at the model cordon point, which means that the time to the final destination is not included. This explains why average travel times range between approximately ten and 13 minutes.

The modelling results shown in Figure 8-2 for each scenario indicates that there is a correlation with the forecast total trips on the network. This indicates that with more trips on the network, there is a greater the overall level of congestion.

Figure 8-2 EMME Network Statistics – Average Travel Time

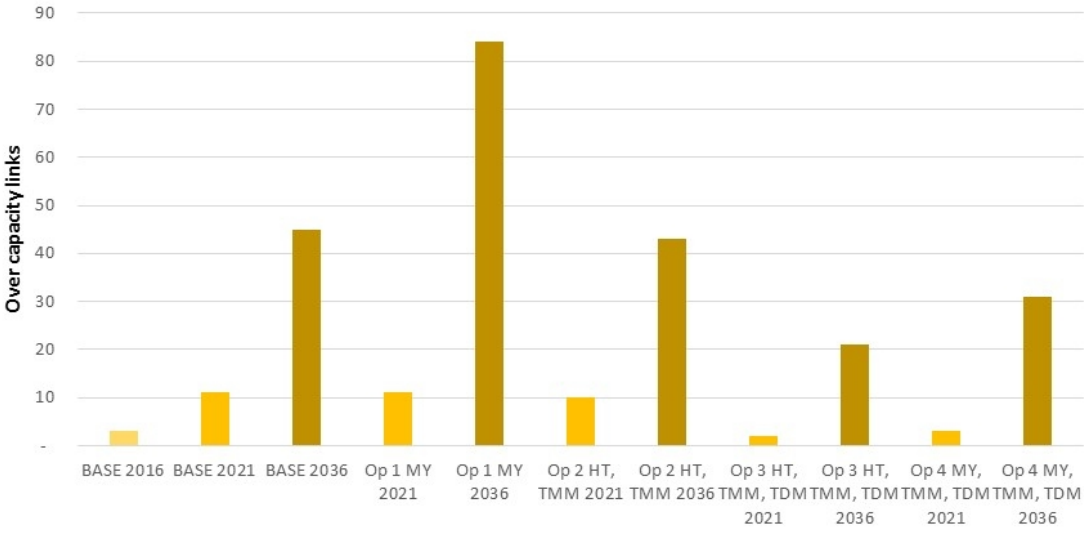


8.2.3 Over Capacity Links

A summary of the traffic volume/capacity ratio from the strategic model for each scenario is shown in Figure 8-3. It should be noted that this measure of volume/capacity is effectively a mid-block estimate, and as such, does not specifically take into account other constraints on the network including delays at intersections.

Nevertheless, Figure 8-3 clearly shows that the overall number of over-capacity links are expected to increases significantly in 2036 and, in particular, under the maximum yield land use scenario. The figure also indicates that the travel demand measures can have a significant role in reducing the number of forecast over-capacity links.

Figure 8-3 EMME Network Statistics – Over Capacity Links



8.2.4 Differences in Traffic volumes

In order to identify the changes in traffic volumes associated with each modelling scenario, “difference plots” have been prepared show the forecast differences in traffic for each scenario, during the AM and PM peak periods for the 2021 and 2036 horizon years.

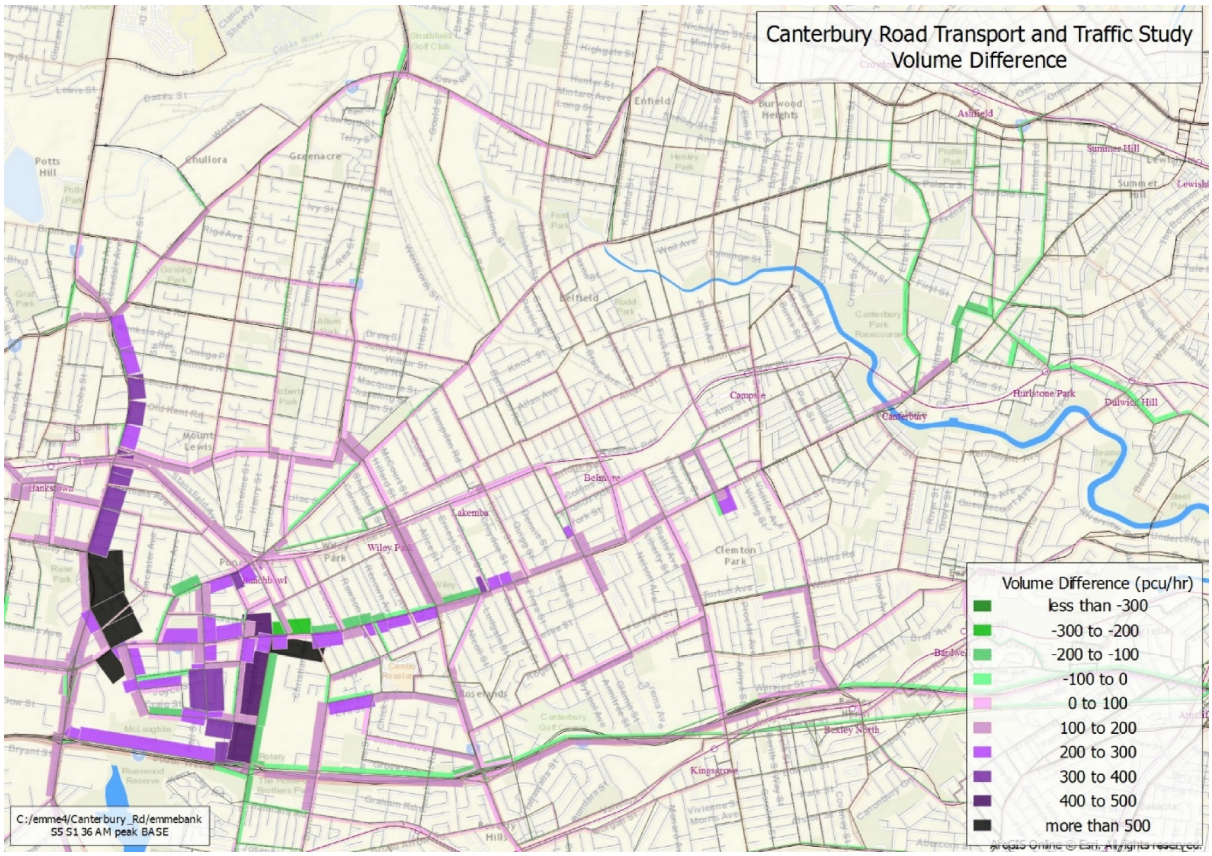
Traffic volume difference plots for all of the model scenarios are provided in Appendix N, with a summary of the key differences in traffic for the lend use scenarios outlined in the following sections:

Difference Traffic Volumes - Maximum Yield (Option 1) and Base Land Use Scenarios (AM Peak 2036)

The forecast volume difference between the maximum yield land use scenario and the base is shown in Figure 8-4. This indicated that significant additional trips on the network are associated with the increase in land use focussed on the west of the study area. In particular, the model forecasts more than 500 additional trips per hour along Stacey Street.

It should be noted that network capacity constraints that are not necessarily included in the model may ameliorate this increase if more detailed intersection modelling were included. Nevertheless, the results from the strategic model show that there will be a significant additional demand in this area under the maximum yield scenario.

Figure 8-4 Traffic volume Differences, 2036 AM Peak Hour, Maximum Yield Land Use Scenario (Option 1) - Base

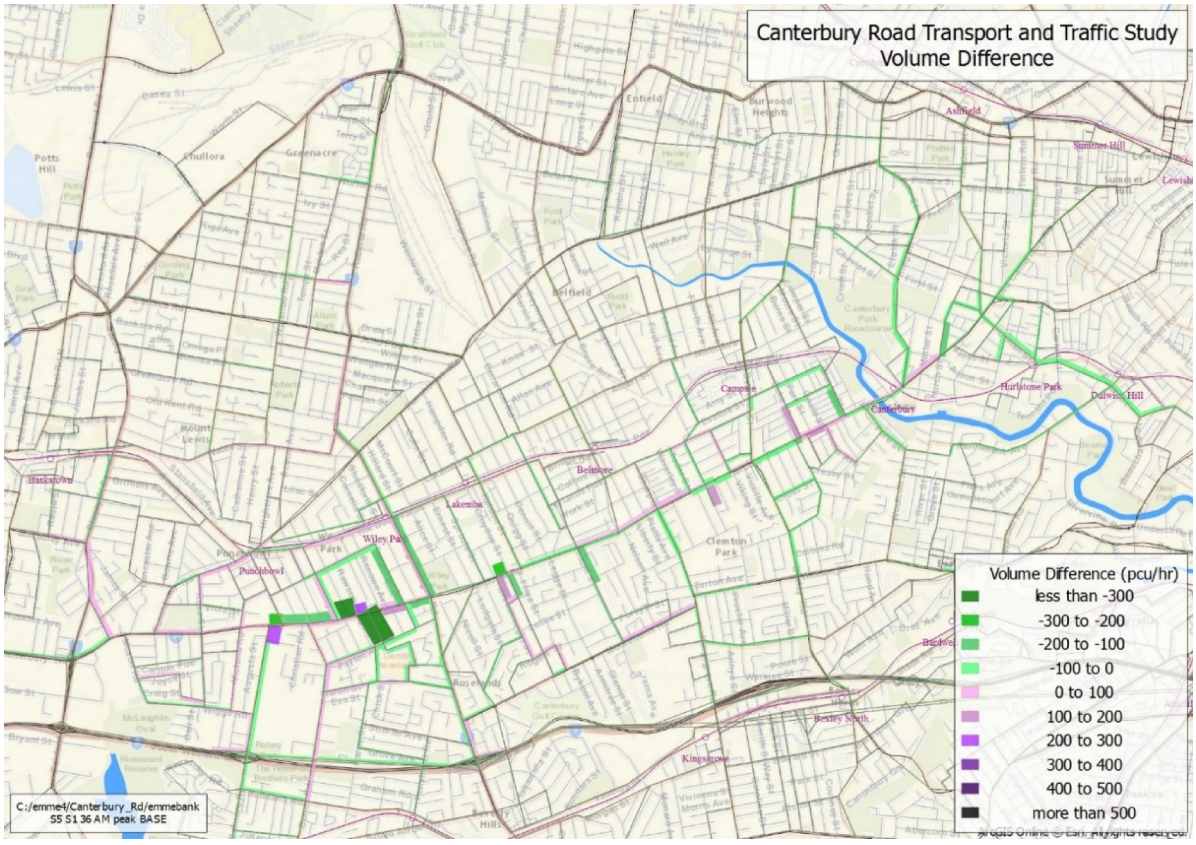


Difference Traffic Volumes – Hill Thalis (Option 2) and Base Land Use Scenarios (AM Peak 2036)

The forecast differences in traffic volumes associated with the Hill Thalis land use scenario (including traffic management measures) compared to the base scenario and the shown in Figure 8-5. This indicates that the Hill Thalis land use results in an overall reduction in trips to the east of the Georges River.

Changes in traffic volumes along Canterbury Road show that the traffic demand measures cause potentially significant changes in traffic volumes, of around 100 to 200 vehicles per hour. These changes in traffic demands are essentially localised effects only, as would be expected from changing the locations where right turns are permitted.

Figure 8-5 Traffic volume difference, 2036 am peak hour, Option 2 - Base

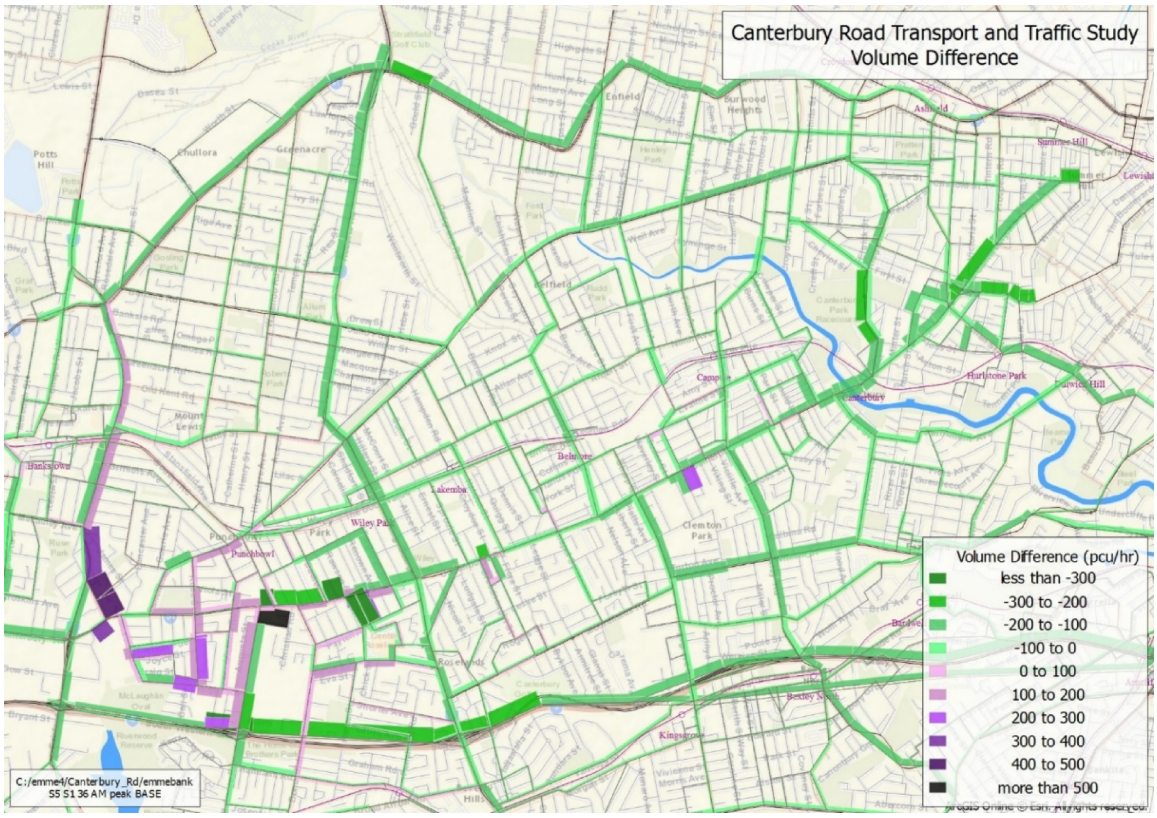


Difference Traffic Volumes – Maximum Yield with TMM and TDM (Option 3) and Base Land Use Scenarios (AM Peak 2036)

The forecast traffic volume difference associated with the maximum yield land (including traffic management measures and travel demand measures) compared with the base scenario is shown in Figure 8-6.

A comparison with the differences in traffic shown in Figure 8-4 (Option 1) indicates that the travel demand measures have a significant effect on the amount of traffic on the road network. This indicates that these measures would reduce the overall effects of the uplift and densification of land use. Nevertheless, the proposed increase in jobs and dwellings to the west of the study area is forecast to result in an increase in vehicles on the network in this area, even with the successful adoption of the range of travel demand measures.

Figure 8-6 Traffic Volume Differences 2036 AM Peak Hour, Maximum Yield with TMM and TDM - Base



A series of charts in Appendix N shows the difference in forecast traffic volumes for each modelling scenario on Canterbury Road for both eastbound and westbound directions. Figure 8-7 and Figure 8-8 show forecast 2036 volumes in the peak direction (eastbound in the AM peak and westbound in the PM peak respectively). This indicate the following:

- The highest traffic volumes in the Canterbury Road corridor is near Broughton Street in the AM peak and near Wonga Street in the PM peak.
- During the AM peak, the section of Canterbury Road between Rossmore Street and King Georges Road has lower traffic volumes for each scenario compared to the base scenario. This is due to the reduction in forecast land use for travel zones in this area. Furthermore, the proposed increase in land use to the west of this area generally does not travel along this section of Canterbury Road, but disperses into the wider road network without using Canterbury Road.

- Traffic management measures have a localised effect on the traffic volumes as shown at Pentland Avenue to the west of King Georges Road.

Figure 8-7 Forecast traffic volumes on Canterbury Road – 2036 am peak, eastbound

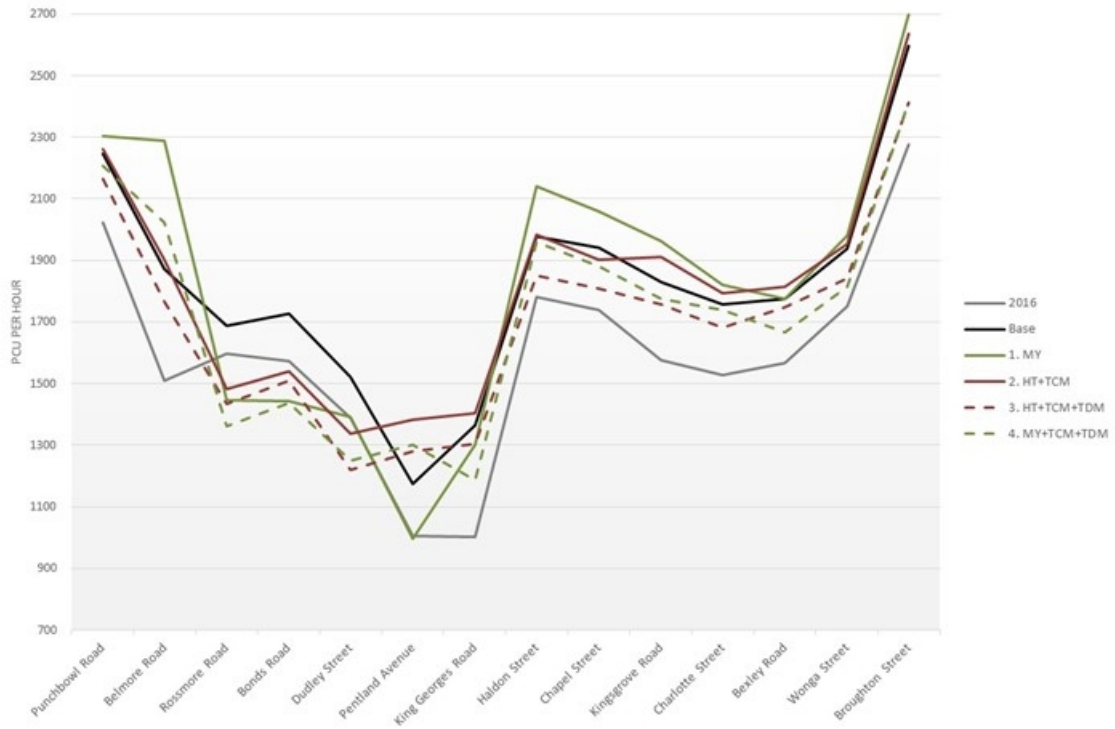
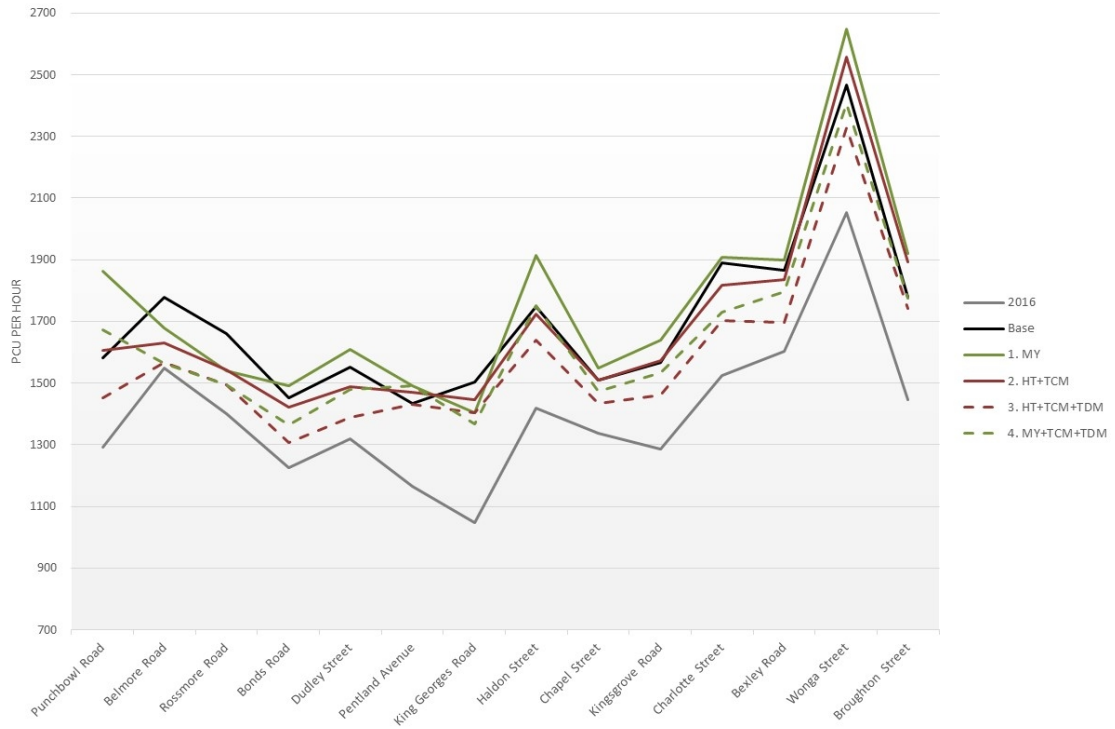


Figure 8-8 Forecast traffic volumes on Canterbury Road – 2036 pm peak, westbound



8.3 EMME modelling - Summary

In general the outputs from the EMME traffic modelling analysis indicates:

- The forecast changes in traffic volumes by 2021 are generally small, as the land use changes are not significant by 2021.
- Option 1 (maximum yield) is expected to result in a significant increase in traffic volumes in the western end of the study area, with a reduction in forecast volumes east of Georges River.
- Option 3 (Hill Thalis with traffic management measures) is expected to result in increases in traffic on some sections of the road network and decreases on others.
- Option 4 (Hill Thalis with traffic management measures and travel demand measures) is expected to result in an increase in trip generation due to the increase in jobs and dwellings is counteracted by the suppression of trips due to the travel demand measures.
- Option 5 (Maximum yield with traffic management measures and travel demand measures) also indicates there is expected to be a significant reduction in trips across much of the network, with the exception of the western part of the study area still shows a significant increase in trips.

In summary, the EMME modelling indicates that:

- The network is congested in the base year, with Canterbury Road eastbound in the weekday AM peak nearing or at capacity. In the weekday PM peak, the westbound traffic volumes are higher although Canterbury Road generally not as congested as it is during the AM peak. This is consistent with the observed current operation of Canterbury Road.
- The introduction of Westconnex Stage 2 (by 2021) and Stage 3 (by 2036) substantially relieves congestion on the M5, which may contribute to the easing of congestion on Canterbury Road.
- By 2021, the effects of the land use forecasts are relatively low, due to the proximity of this forecast year.
- Of the three land use scenarios assessed (Base, maximum yield and Hill Thalis), the maximum yield scenario is expected to result in the highest levels of congestion, followed by the Base scenario. The Hill Thalis scenario is expected to result in the lowest levels of additional traffic congestion. This is consistent with the forecast total volumes of traffic in the model which is directly related to the change in employment and dwellings from the land use data.
- There is a geographic component of the land use forecast, with the maximum yield scenario including a considerable amount of new retail and commercial land use in the west of the study area. This generates large volumes of trips (particularly in the PM peak in 2036) onto the road network in this area, predominantly around Moxon Road, Fairford Road, Stacey Street and Canterbury Road.
- The Hill Thalis land use scenario generally proposes to spread development across the corridor (to a greater extent than the other scenarios), and does not have significant retail and commercial development in the west of the study area. The overall quantum of development is significantly lower than the Maximum yield scenario, which leads to significantly less congestion.
- The traffic management measures do not appear to have a significant effect at a strategic level, with re-routeing of vehicles limited to within a one or two streets from the proposed changes.

- The TDM have a significant impact on forecast volumes and therefore on congestion and delay. Average speeds across the network improve by 1.3 km/h under the Hill Thalis land use scenario and by more than 2 km/h under the maximum yield land use scenario as a result of the TDM.

8.4 SIDRA Modelling Outputs

SIDRA analysis has been carried out to assess the expected locations of capacity constraint in each of the options.

Link-based growth factors from the EMME model have been applied to base year observed turning counts to produce forecast volumes for each SIDRA model. Although SIDRA renders each intersection operation in detail, as the forecast volumes are based on the strategic model and the strategic model is based on the strategic land use forecasts (which do not include planned access and egress locations for each zone), the outputs from SIDRA modelling assessment are indicative only.

It is recommended that, for a more accurate analysis, detailed site plans and block-level land uses should be used to determine more accurate local traffic forecasts.

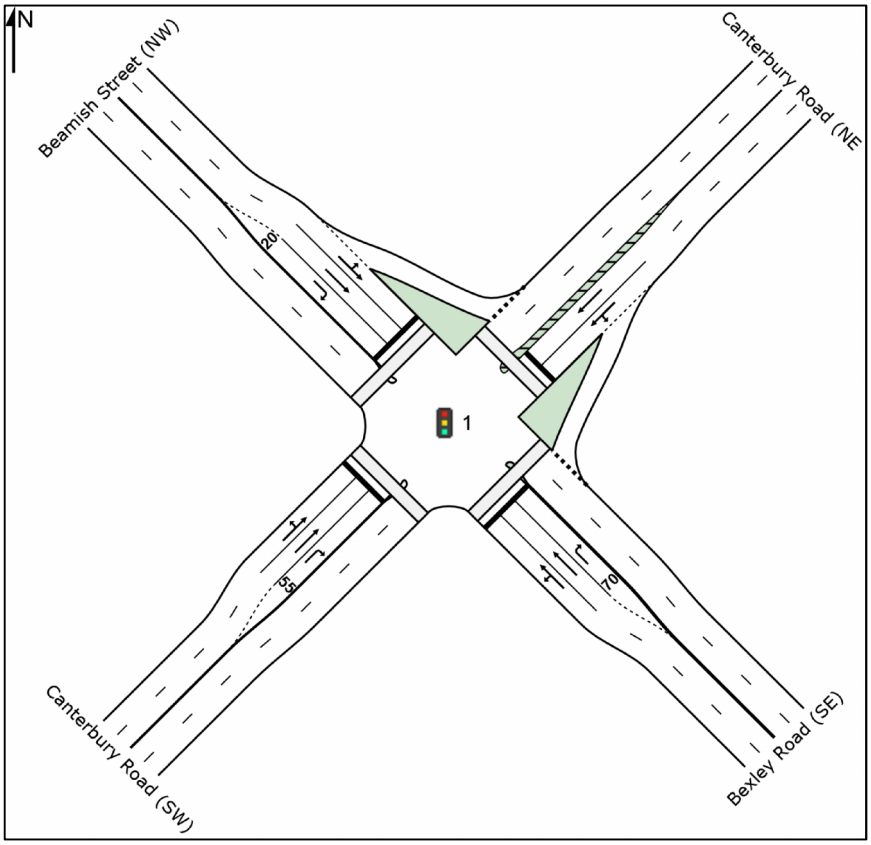
8.4.1 Pinch Point Data

Roads and Maritime have indicated that “pinch point” studies are currently being undertaken for the intersections of:

- Canterbury Road / Beamish Street and Bexley Road (Figure 8-9). The proposed upgrade identified for this intersection includes the following:
  - Extension of the right turn lane on Bexley Road from 40 m to 70 m.
- Canterbury Road and King Georges Road (Figure 8-10). The proposed upgrade identified for this intersection includes the following:
  - Provision of an additional right turn lane on Canterbury Road (east).
  - Removal of a short 40 m left turn slip lane on King Georges Road (north).
  - Provision of an additional right turn lane on Canterbury Road (west).

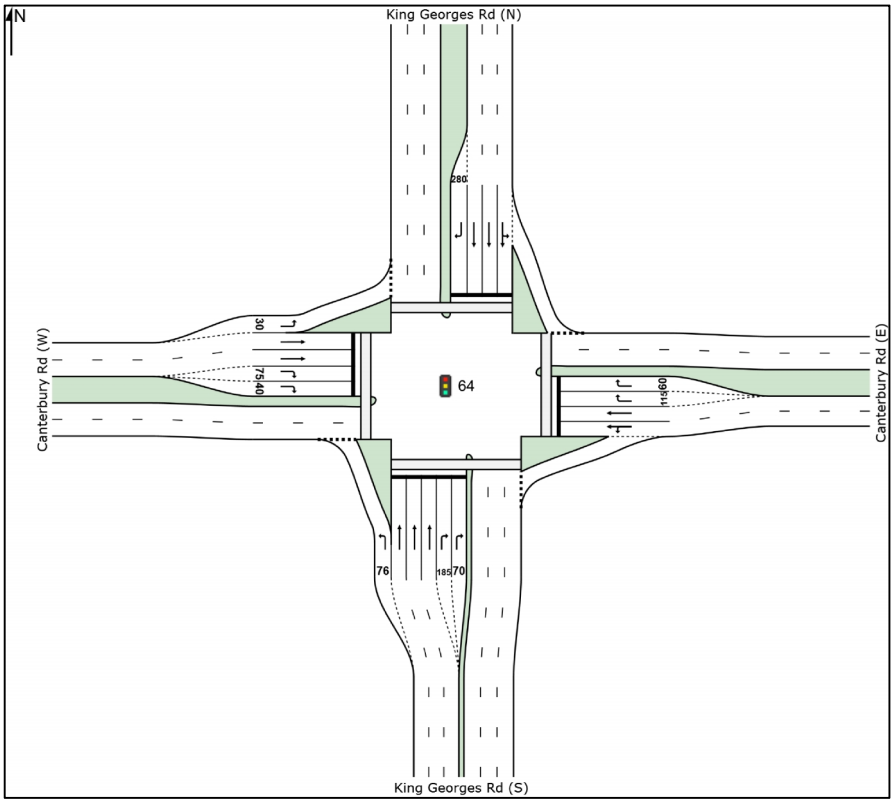
For the purposes of analysis it has been assumed that these proposed upgrades identified by Roads and Maritime will be constructed prior to 2021.

Figure 8-9 Proposed Layout of Canterbury Road, Beamish Street and Bexley Road (Roads and Maritime "Pinch Point" Intersection Upgrade)



Source: SIDRA 7

Figure 8-10 Proposed Layout of Canterbury Road and King Georges Road (Roads and Maritime "Pinch Point" Intersection Upgrade)



Source: SIDRA 7

8.4.2 SIDRA Modelling Results – 2021 and 2036 Future Horizon Years

The following sections provide a summary of the results of SIDRA modelling undertaken for key intersections within the study area for the 2021 and 2036 future horizon years. The key intersections were agreed in consultation with CBC and Roads and Maritime.

Intersection Performance Summary - 2021

The SIDRA modelling results for key intersections on Canterbury Road for the year 2021 for each land use and travel demand option is shown in Table 8-2. For detailed SIDRA outputs, refer to Appendix D.

The SIDRA modelling indicates that the following intersections are expected to operate at an unacceptable LoS in 2021, during one or both of the AM and PM peak periods:

- Belmore Road – for all scenarios, excluding Option 3 in the PM peak;
- Rossmore Avenue – for all scenarios during both the AM and PM peak periods;
- Bonds Road – for all scenarios during the PM peak only;
- King Georges Road – for all scenarios during both the AM and PM peak periods;
- Kingsgrove / Sharp Street – for all scenarios during both the AM and PM peak periods;
- Thorncraft Parade / Sharp Street – for all scenarios during both the AM and PM peak periods; and
- Beamish Street / Bexley Road – for all scenarios during both the AM and PM peak periods.

Further to the above, the following intersections at Canterbury Road are expected to operate at LoS E or F, for some options:

- Punchbowl Road – for Option 1 during the PM peak;
- Dudley Street – for Option 2 during the PM peak;
- Wonga Street – for the future base and Option 1 during the AM peak; and
- Jeffrey Street / Broughton Street - for the future base and Option 1 during the AM peak and Option 4 during the PM peak.

Table 8-2 SIDRA Modelling Results Summary (2021)

Intersection on Canterbury Road	Future Base		Option 1		Option 2		Option 3		Option 4	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Punchbowl Road	B	B	F	B	E	B	B	B	B	B
Belmore Road	F	F	F	F	F	F	F	E	F	F
Rossmore Avenue	F	F	F	F	F	F	E	F	F	F
Bonds Road	C	F	C	F	B	F	C	F	C	F
Dudley Street	A	C	B	B	A	F	B	B	B	B
Pentland Avenue	B	B	B	B	B	C	B	B	B	B
King Georges Road	F	F	F	F	F	F	F	F	F	F
Haldon Street	B	C	C	C	B	B	B	B	B	B
Kingsgrove Road / Sharp Street	F	F	F	F	F	F	E	F	F	F
Thorncraft Parade / Charlotte Street	F	F	F	F	F	F	F	F	F	F
Beamish Street/Bexley Road	F	F	F	F	F	F	F	F	F	F
Wonga Street	F	B	F	B	D	B	C	C	F	C
Jeffrey Street / Broughton Street	F	D	C	D	C	D	C	C	D	D

The SIDRA modelling for the existing traffic conditions (2017, as discussed in Section 4.2.3) indicates that the following intersections along Canterbury Road are currently operating at a LoS F:

- King Georges Road - during both the AM and PM peak periods;
- Kingsgrove Road / Sharp Street - during both the AM and PM peak periods;
- Thorncraft Parade / Charlotte Street - during both the AM and PM peak periods; and
- Beamish Street / Bexley Road during the weekday AM peak only.

With the additional traffic associated with background growth and development traffic, these intersections are expected to operate with additional delays and traffic congestion.This SIDRA analsysis indicates that the proposed traffic management and travel demand management measures are not expected to improve the operation of these intersections to a satisfactory level.

Kingsgrove Road / Sharp Street intersection in particular is expected to experience significant increases in delays as it has been assumed through strategic modelling that this road will be a key link to the significant increases in planned development for the areas accessed from Kingsgrove Road.

The intesections along Canterbury Road at Belmore Road and Rossmore Avenue currently operate with a satisfactory LoS. However, these intersections are expected to generally operate with higher delays under the future 2021 traffic conditions, which may be associated with increases traffic associated with proposed development along the western end of the Canterbury Road corridor.

The SIDRA analysis indicates that Option 3 generally provideds the best intersection performance along the corridor. However, there are some intersections where Option 3 provides higher delays than other options, which could be associated with the following:

- Change in arrival patterns from downstream intersections associated with congested traffic conditions;
- Change in land use assumptions along the corridor combined with the changes caused by the traffic management measures may result in localised in changes in travel demand; and
- Changes in optimised signal phase times (determined by SIDRA).

It should also be noted that a combination of traffic management measures and proposed land use changes in the 2021 PM peak period are causing the demand along Canterbury Road at Pentland Street (to the east of Dudley Street) to be highest in Option 2 (of all of the options). The SIDRA analysis indicates that the traffic volumes at this location may have reached a tipping point, which causes blocking back to Bonds Road and results in the intersections with Dudley Street and Bonds Road operating at an expected LoS F for this scenario.

Intersection Performance Summary - 2036

The SIDRA modelling results for key intersections on Canterbury Road for the year 2036 for each land use and travel demand option is shown in Table 8-3.

The SIDRA modelling indicates that the following intersections are expected to operate at an unacceptable LoS in 2036, during one or both of the AM and PM peak periods for each option:

- Belmore Road - – for all scenarios during both the AM and PM peak periods;
- Rossmore Avenue - for all scenarios during both the AM and PM peak periods, with the exeption of the future base scenario in the AM peak;
- King Georges Road- for all scenarios during both the AM and PM peak periods;
- Haldon Street - for all scenarios during both the AM and PM peak periods;
- Kingsgrove / Sharp Street - for all scenarios during both the AM and PM peak periods
- Thorncraft Parade / Sharp Street - for all scenarios during both the AM and PM peak periods; and
- Beamish Street / Bexley Road - for all scenarios during both the AM and PM peak periods.

Further to the above, the following intersections at Canterbury Road are expected to operate at LoS E or F, for some options:

- Punchbowl Road - in the future base scenario (AM peak), Option 1 (AM and PM peaks) and Option 4 (AM and PM peaks);
- Bonds Road in the future base scenario (AM and PM peaks) and the PM peak of Option 1, 2 and 4;
- Dudley Street in the PM peak in Option 1 and Option 4;
- Pentland Avenue in the PM peak in Option 1 and Option 4;
- Wonga Street - in the future base scenario (AM peak), Option 1 (AM peak), Option 2 (AM peak) and Option 4 (AM peak); and
- Jeffrey Street / Broughton Street - in the future base scenario (AM and PM peaks), Option 1 (AM and PM peaks), Option 2 (AM and PM peaks) and Option 4 (PM Peak).

Table 8-3 SIDRA Modelling Results Summary (2036)

Intersection on Canterbury Road	Future Base		Option 1		Option 2		Option 3		Option 4	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Punchbowl Road	F	B	F	F	F	B	B	B	F	F
Belmore Road	F	F	F	F	F	F	F	F	F	F
Rossmore Avenue	B	F	F	F	F	F	F	F	F	F
Bonds Road	E	F	C	F	C	F	C	D	C	F
Dudley Street	A	C	A	F	A	C	A	B	A	F
Pentland Avenue	B	D	B	F	D	F	B	C	B	F
King Georges Road	F	F	F	F	F	F	F	F	F	F
Haldon Street	F	F	F	F	F	F	E	F	F	F
Kingsgrove Road / Sharp Street	F	F	F	F	F	F	F	F	F	F
Thorncraft Parade / Charlotte Street	F	F	F	F	F	F	F	F	F	F
Beamish Street/Bexley Road	F	F	F	F	F	F	F	F	F	F
Wonga Street	F	B	F	D	F	B	B	B	F	B
Jeffrey Street / Broughton Street	F	F	F	F	F	E	D	D	D	E

Key Findings of the SIDRA Modelling

The SIDRA modelling results indicate that the Option 3 (Hill Thalis with traffic management and travel demand measures) scenario is expected to provide the best outcome for traffic operations along the Canterbury Road corridor. However, the following intersections along the Canterbury Road Corridor are still expected to operate at an unacceptable LoS in 2036 in this Option:

- Belmore Road;
- Rossmore Avenue;

- King Georges Road;
- Haldon Street;
- Kingsgrove / Sharp Street;
- Thorncraft Parade / Sharp Street; and
- Beamish Street / Bexley Road.

8.5 Mitigation Measures

Existing traffic congestions within the Canterbury Road corridor in primarily as a consequence of intersection capacity constraints rather than midblock capacity (as detailed in Sections 4.2 and 4.3). With the forecast increase in traffic along the Canterbury Road corridor and connecting side streets associated with the proposed future developments within the corridor and general background traffic growth, these intersections are expected to operate with increased delays and queuing.

In order to mitigate the expected increase in traffic associated with the planned development along the corridor, the following physical traffic management measures could be considered to improve the performance of key intersections:

- **Removal of kerbside parking:**
  - Clearways are currently in operation along Canterbury Road in both directions during both the weekday AM and PM peak periods. However, removal of some kerbside parking on the side street approaches to intersections with Canterbury Road (at both the arrival and departure sides of the intersection) will increase capacity at the side street approaches.
  - The SIDRA modelling indicates that there are a number of locations where right turning vehicles block the left-turn and through movements at the side street approaches. Removing some on-street car parking during peak periods on the side streets could improve the intersection performance at some locations.
- **Right lane duplication**
  - Duplication of designated right turn lane would provide additional capacity for the right-turn vehicle movement, when compared to a single designated right turn lane.
  - Where diamond traffic signal phases are proposed, a double right turn lane should only run with a single right turn lane in the opposite direction.
  - Additional land take would be required (for road widening) at intersections where a double right turn arrangement is proposed.
- **Additional through lanes (at intersections)**
  - The provision of an additional designated through traffic lane on the approach to an intersection would increase the capacity at the intersection and allow additional vehicles to travel through the intersection. However, an additional lane on the departure side would be required to support this arrangement.
  - Similar to the duplication of right turn lane, can reduce queue lengths and allows for additional through vehicle movements.
  - Additional land take would be required at both the approach and departure side of the intersection to implement an additional through traffic lane.

9. Summary and Recommendations

9.1 Introduction

The overall trend of a growing Sydney has produced considerable pressure for recent development occurring within the corridor. Approvals have recently been issued for developments that exceed existing planning specifications and there have been a number of private-led proposals to intensify land uses on Canterbury Road, with Local Environmental Plan (LEP) amendments for a number of sites.

To address this, the City of Canterbury Bankstown Council is undertaking an integrated Land Use, Development and Transport Plan to set the parameters for development for the period to 2036.

The aims of the Canterbury Road Transport and Traffic Study include:

- Specifying the role of Canterbury Road in the context of a local and regional network.
- Identifying the current operation of the traffic and transport facilities within the corridor.
- Identifying the role and performance of the traffic and transport facilities accounting for the growth (residential and employment) within the corridor study area.
- Identifying opportunities to mitigate/alleviate the impacts of the forecast growth in demand on the traffic and transport facilities.

9.2 Existing Transport Network

9.2.1 Canterbury Road

Canterbury Road forms part of the (A34) is a key arterial road within the Canterbury LGA and is the main focus for this study. It has a posted speed limit of 60 km/h and typically provides two travel lanes in either direction. Canterbury Road has an east-west alignment through the middle of the Canterbury LGA, intersecting a number of other arterial roads including King Georges Road and Bexley Road.

Canterbury Road typically experiences congested conditions during peak periods of road network operation. During the morning peak, the eastbound direction was observed to be significantly more congested when compared to the westbound direction which is consistent with the traffic data from the Roads and Maritime count station and Google Traffic outputs

9.2.2 Intersection Operation

SIDRA outputs for the existing situation indicates that the following intersections on Canterbury Road operate with a poor level of service in at least one peak hour:

- Rossmore Road
- King Georges Road
- Kings Grove Road / Sharp Street
- Thorncraft Parade / Charlotte Street
- Charles Street
- Close Street
- Jeffery Street / Broughton Street.

9.2.3 Parking Demand

Site observations indicate that typically there is spare parking capacity on the road network in proximity to Canterbury Road. However, roads located adjacent to retail and commercial precincts and Canterbury Hospital were observed to be at or near capacity.

9.2.4 Public Transport

The T3 Bankstown Line provides a train service between Liverpool and the Sydney CBD and runs in an east-west direction through the study area, crossing beneath Canterbury Road at Canterbury Station. The T2 Airport Line operates adjacent to the south of the subject site, at a distance of approximately 2 km. from Canterbury Road.

A large number of bus services operate within the study area that provide local and regional connectivity. The bus services are predominantly operated by Sydney Buses with some additional services operated by the Punchbowl Bus Company.

9.2.5 Active Transport

Canterbury Road currently functions as a busy arterial road, which is a key barrier to walking with reducing the amenity through this corridor. Additionally, the footpaths on Canterbury Road are often narrow

A review of the existing cycle paths within the study area indicates the following:

- There is limited north/south connectivity through the subject site.
- The shared paths in proximity to the M5 provide some east-west connectivity towards the southern periphery of the subject site approximately 2 km to the south of Canterbury Road.
- The majority of the study area has limited and disconnect bicycle riding routes.

9.3 Travel Demand Management

Travel demand management (TDM) is a term for strategies that encourage as shift from single occupant private vehicles trips. Some TDMs potentially applicable to the Canterbury Road Corridor include:

- Update the DCP to mandate green travel plans as part of the planning application for major new developments.
- Audit pedestrian and cycle networks to major trips attractors (existing and proposed).
- Unbundle parking from housing and commercial developments, so residents and business only pay for the parking spaces they need.
- Build compact communities with sufficient density to support high-service standards of public transport.

9.4 Traffic Management Measures

Consideration has been given for reducing the number of right turns from Canterbury Road into the side streets along the corridor, which is expected to reduce delays and improve the overall flow of traffic.

9.5 The Proposal

Hill Thalis was commissioned by CBC to provide advice on built form, land use, open space and urban design for the Canterbury Road Corridor.

Key features of the Hill Thalis recommendations include:

- Focusing intensified urban renewal to a series of urban centres (seven are proposed) along the corridor with limited footprints.
- The limited upgrade of Canterbury Road i.e. carriageway widening adjacent to the proposed urban centres on Canterbury Road.
- Provision of a new active transport network.
- The strengthening of north-south connections between the proposed urban centres on Canterbury Road and the rail corridor (Stage 2 Sydney & Southwest Metro).
- A network of new local parks and connecting streets.

SGS was commissioned by CBC to analyse the economic issues associated with development along the Canterbury Road Corridor to assist in identifying the expected demand for residential and commercial land uses within the Canterbury Road Corridor.

9.6 Land Use Scenarios

SGS has consolidated the data provided by Hill Thalis for 2021 and 2036 and has provided the expected volumes of new residences and jobs (retail, bulky goods, office, local services and others) for the following land use scenarios:

- The base scenario, which is based upon the TfNSW (Transport Performance and Analytics) land use projections (LU16).
- The full development of the LEP (maximum yield).
- The land uses scenarios proposed by Hill Thalis.

9.7 Modelling Scenarios

Modelling has been undertaken for the following modelling scenarios which have been discussed and agreed with CBC and Roads and Maritime.

- TPA data (base)
- Option 1 - Maximum yield scenario
- Option 2 - Hill Thalis scenario plus traffic management measures
- Option 3 - Hill Thalis scenario plus traffic management measures and travel demand measures
- Option 4 - Maximum yield scenario plus traffic management measures and travel demand measures

Modelling Options 2 to 4 has allowed quantification of the likely impacts of the introduction of traffic management measures and travel demand measures on the operation the key intersections on Canterbury Road, under the maximum yield and the Hill Thalis land use scenarios.

9.8 Modelling Outputs

9.8.1 EMME Modelling

The EMME traffic modelling analysis indicates that the Option 3 scenario provides the best outcome for the Canterbury Road Corridor in terms of overall travel times and reduced congestion. Nevertheless, the modelling analysis for this option indicates that both travel times and congestion are expected to increase above current levels.

The modelling outputs show that to reduce the traffic impacts associated with the forecast changes in land use, the proposed travel demand measures are critical in managing the overall demand on the network.

However, even by implementing the proposed of TDMs and traffic management measures, a number of intersections are still expected to operate with a poor level of service. This is consistent with the analysis undertaken for the existing situation, which indicates that there are a number of intersections along Canterbury Road which operate with a poor level of service, including at:

- King Georges Road;
- Thorncraft Parade / Charlotte Street;
- Beamish Street / Bexley Road; and
- Charles Street.

9.8.2 SIDRA Modelling

Intersection Performance Summary - 2017

The SIDRA modelling for the existing traffic conditions indicates that the following intersections along Canterbury Road are currently operating at LoS F:

- King Georges Road - during both the AM and PM peak periods;
- Kingsgrove Road / Sharp Street - during both the AM and PM peak periods;
- Thorncraft Parade / Charlotte Street - during both the AM and PM peak periods; and
- Beamish Street / Bexley Road during the weekday AM peak only.

Intersection Performance Summary - 2021

The SIDRA modelling indicates that the following intersections are expected to operate at an unacceptable LoS in 2021, during one or both of the AM and PM peak periods for each option:

- Belmore Road – for all scenarios, excluding Option 3 in the PM peak;
- Rossmore Avenue – for all scenarios during both the AM and PM peak periods;
- Bonds Road – for all scenarios during the PM peak only;
- King Georges Road – for all scenarios during both the AM and PM peak periods;
- Kingsgrove / Sharp Street – for all scenarios during both the AM and PM peak periods;
- Thorncraft Parade / Sharp Street – for all scenarios during both the AM and PM peak periods; and
- Beamish Street / Bexley Road – for all scenarios during both the AM and PM peak periods.

Further to the above, the following intersections at Canterbury Road are expected to operate at LoS E or F, for some options:

- Punchbowl Road – for Option 1 during the PM peak;
- Dudley Street – for Option 2 during the PM peak;
- Wonga Street – for the future base and Option 1 during the AM peak; and
- Jeffrey Street / Broughton Street - for the future base and Option 1 during the AM peak and Option 4 during the PM peak.

Intersection Performance Summary - 2036

The SIDRA modelling indicates that the following intersections are expected to operate at an unacceptable LoS in 2036, during one or both of the AM and PM peak periods for each option:

- Belmore Road - – for all scenarios during both the AM and PM peak periods;
- Rossmore Avenue - for all scenarios during both the AM and PM peak periods, with the exeption of the future base scenario in the AM peak;
- King Georges Road- for all scenarios during both the AM and PM peak periods;
- Haldon Street - for all scenarios during both the AM and PM peak periods;
- Kingsgrove / Sharp Street - for all scenarios during both the AM and PM peak periods
- Thorncraft Parade / Sharp Street - for all scenarios during both the AM and PM peak periods; and
- Beamish Street / Bexley Road - for all scenarios during both the AM and PM peak periods.

Further to the above, the following intersections along Canterbury Road are expected to operate at LoS E or F, for some options:

- Punchbowl Road - in the future base scenario (AM peak), Option 1 (AM and PM peaks) and Option 4 (AM and PM peaks);
- Bonds Road in the future base scenario (AM and PM peaks) and the PM peak of Option 1, 2 and 4;
- Dudley Street in the PM peak in Option 1 and Option 4;
- Pentland Avenue in the PM peak in Option 1 and Option 4;
- Wonga Street - in the future base scenario (AM peak), Option 1 (AM peak), Option 2 (AM peak) and Option 4 (AM peak); and
- Jeffrey Street / Broughton Street - in the future base scenario (AM and PM peaks), Option 1 (AM and PM peaks), Option 2 (AM and PM peaks) and Option 4 (PM Peak).

Key Findings of the SIDRA Modelling

The SIDRA modelling results indicate that the Option 3 (Hill Thalis with traffic management and travel demand measure) scenario is expected to provide the best outcome for traffic operations along the Canterbury Road corridor. However, the following intersections along the Canterbury Road Corridor are still expected to operate at an unacceptable LoS in 2036 and in some cases the intersections perform worse in Option 3 than in other options:

- Belmore Road;
- Rossmore Avenue;
- King Georges Road;
- Haldon Street;
- Kingsgrove / Sharp Street;
- Thorncraft Parade / Sharp Street; and
- Beamish Street / Bexley Road.

9.9 Mitigation Measures

In order to mitigate the expected increase in traffic associated with the planned development along the corridor, the following physical traffic management measures could be considered to improve the performance of key intersections:

- Removal of kerbside parking on the side street approaches to intersections with Canterbury Road (at both the arrival and departure sides of the intersection).
- Duplication of designated right turn lanes (where feasible) in order to provide additional capacity for the right-turn vehicle movements.
- Additional through lanes at intersections (where feasible) to increase the capacity at the intersection and allow additional vehicles to travel through the intersection.

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2126234-20789/https://projects.ghd.com/oc/Sydney/canterburyroadtraffi/Delivery/Documents/2126234-REP-Traffic and Transport Study - EMME+SIDRA Modelling FINAL Report.docx

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
1	ML / SP / SQ	GM		GM		01/08/17

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Appendix A – LEP Land Zoning Maps

Canterbury Local Environmental Plan 2012

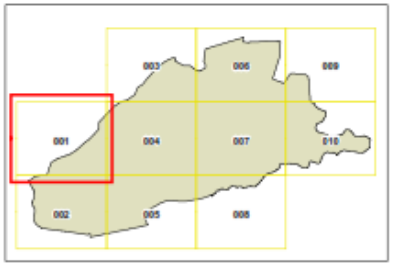
Land Zoning Map - Sheet LZN_001

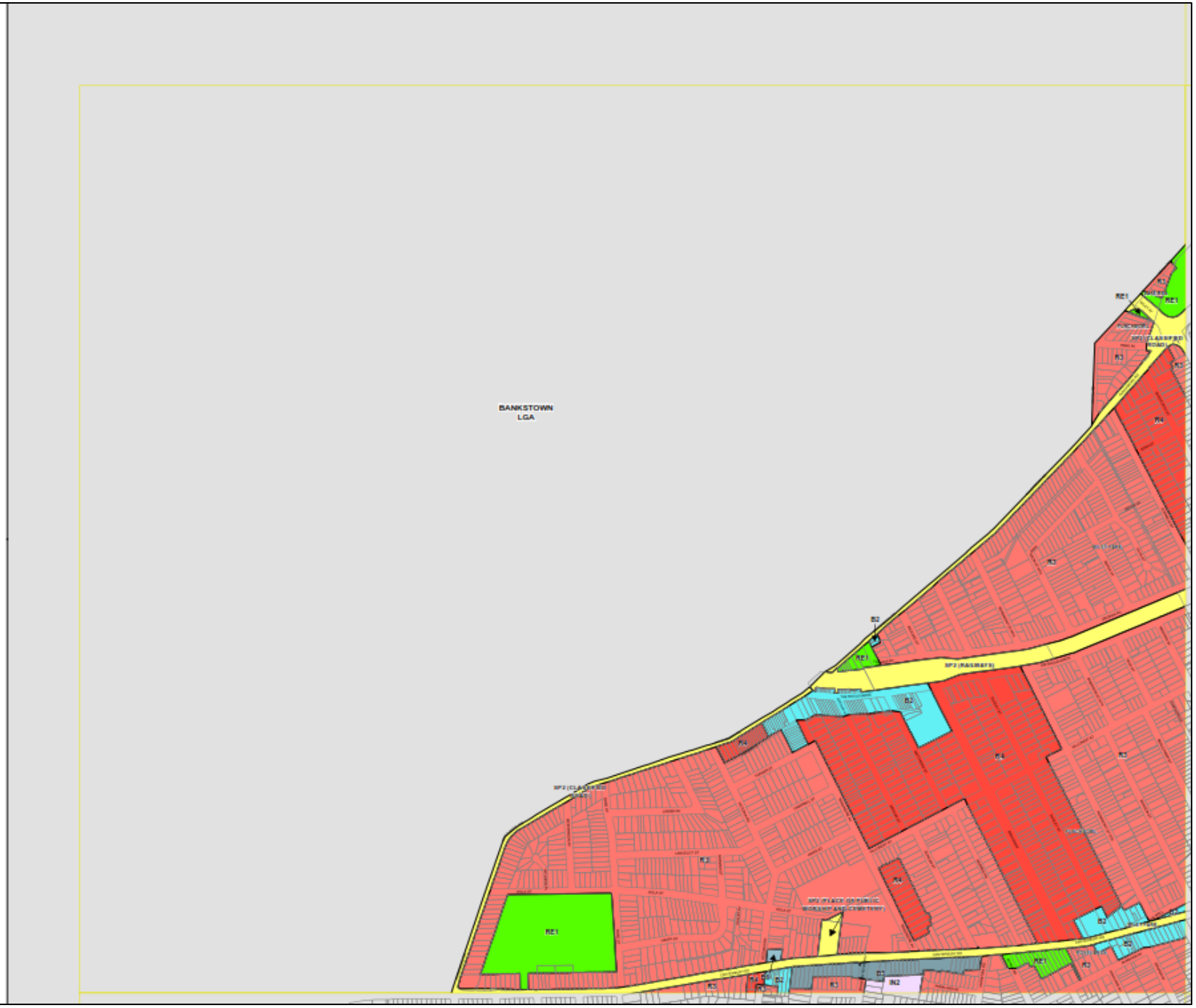
Zone

- B1 Neighbourhood Centre
- B2 Local Centre
- B5 Business Development
- B6 Enterprise Corridor
- E1 National Parks and Nature Reserves
- IN1 General Industrial
- IN2 Light Industrial
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP2 Infrastructure
- W1 Natural Waterways
- UL Unzoned Land

Cadastre

Cadastre 01/02/12 © Land & Property Information (LPI)





Canterbury Local Environmental Plan 2012

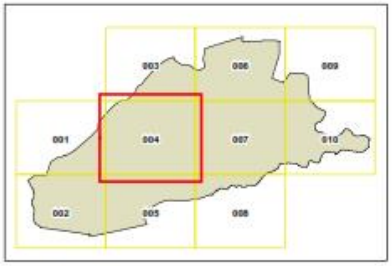
Land Zoning Map - Sheet LZN_004

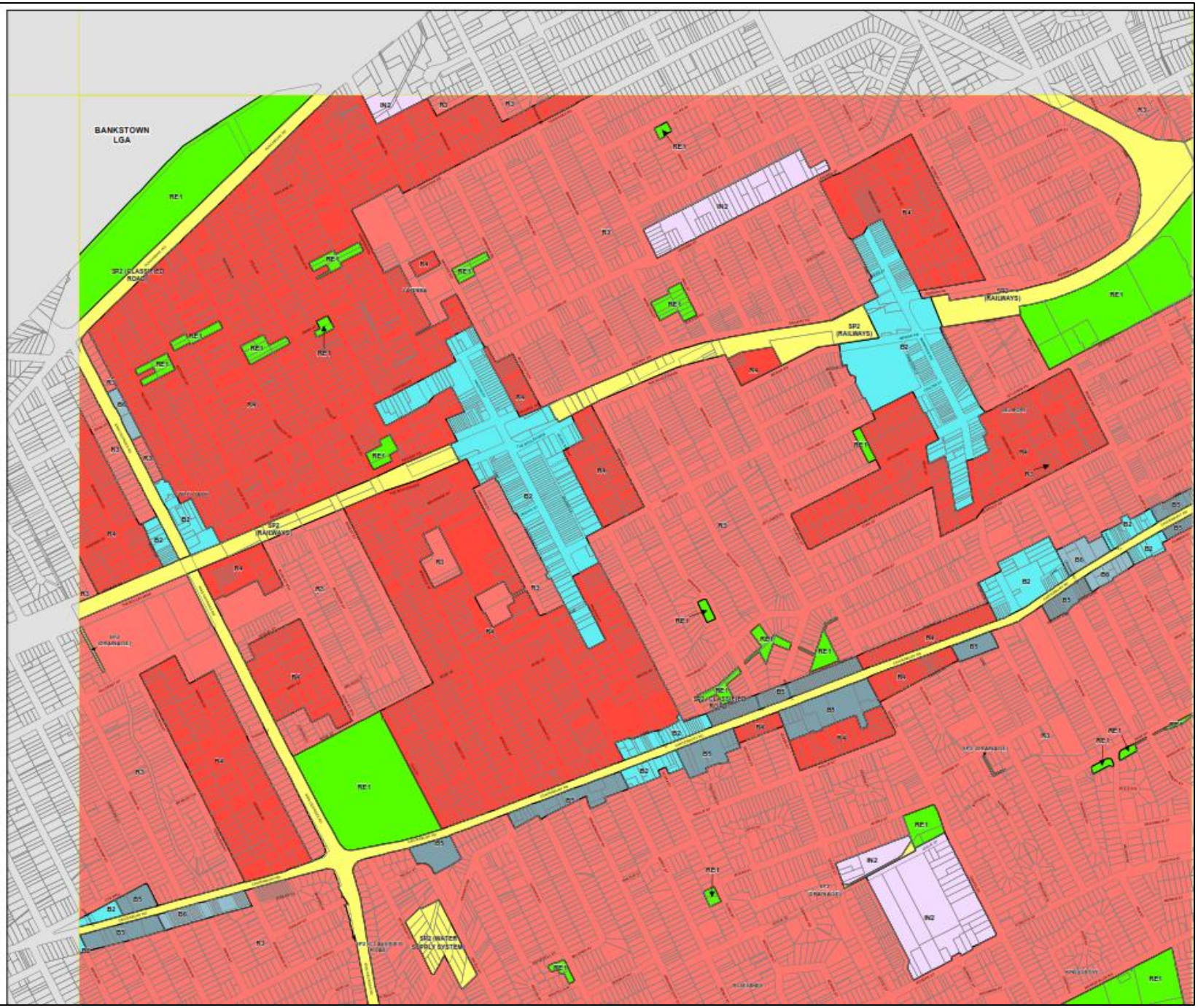
Zone

- B1 Neighbourhood Centre
- B2 Local Centre
- B5 Business Development
- B6 Enterprise Corridor
- E1 National Parks and Nature Reserves
- IN1 General Industrial
- IN2 Light Industrial
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP2 Infrastructure
- W1 Natural Waterways
- UL Unzoned Land

Cadastre

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Canterbury Local Environmental Plan 2012

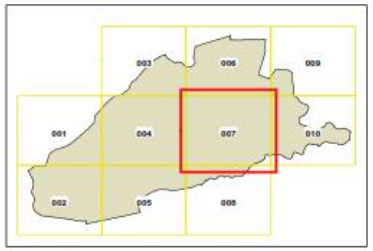
Land Zoning Map - Sheet LZN_007

Zone

- B1 Neighbourhood Centre
- B2 Local Centre
- B5 Business Development
- B6 Enterprise Corridor
- E1 National Parks and Nature Reserves
- IN1 General Industrial
- IN2 Light Industrial
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP2 Infrastructure
- W1 Natural Waterways
- UL Unzoned Land

Cadastre

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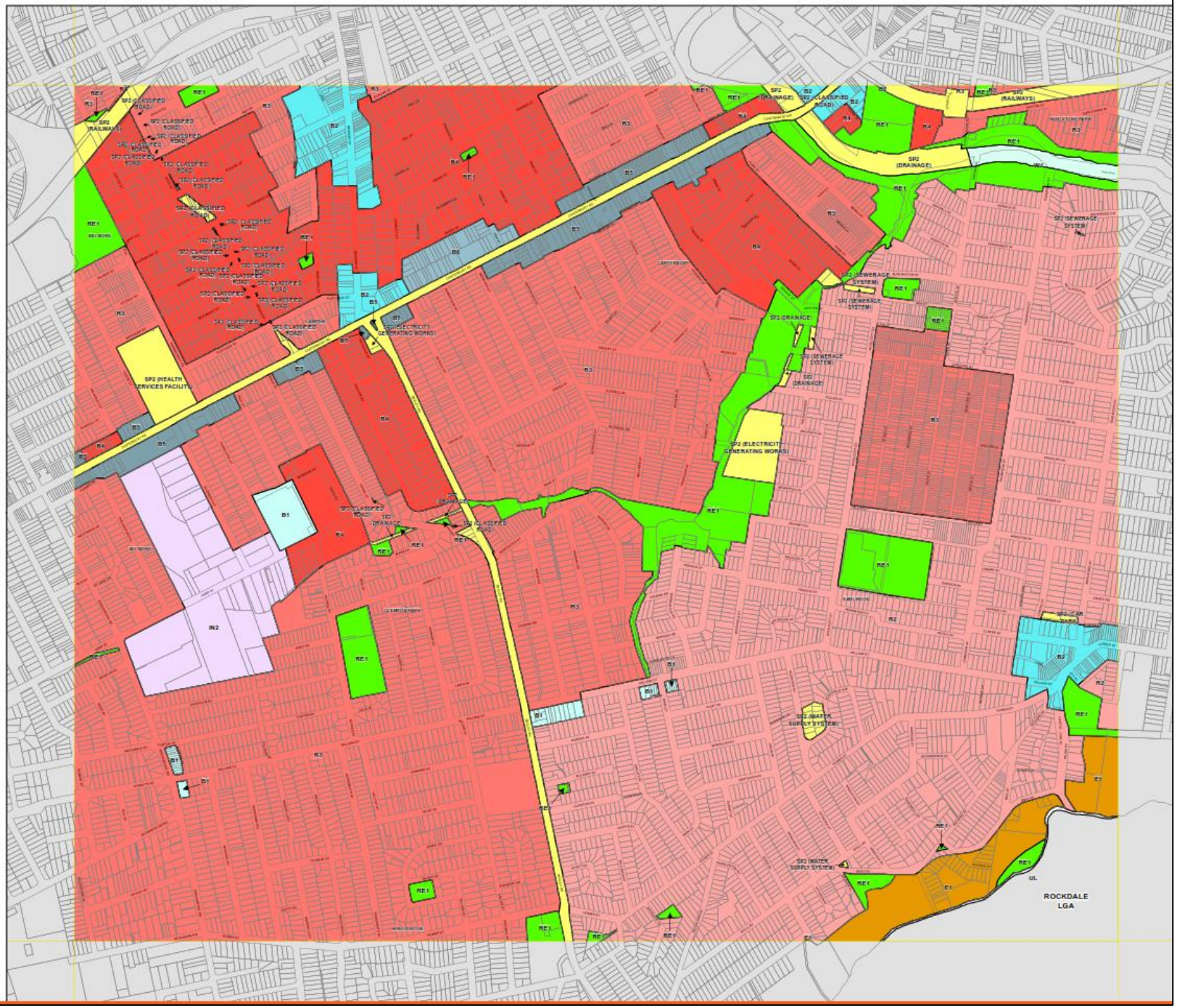




Projection: GDA 1994 Zone 56

0 200 Metres

Scale: 1:10,000 @ A3



Canterbury Local Environmental Plan 2012

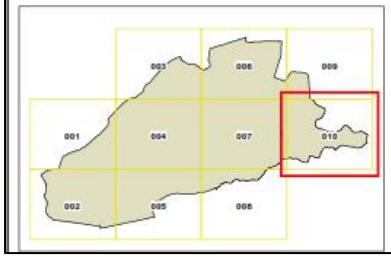
Land Zoning Map - Sheet LZN_010

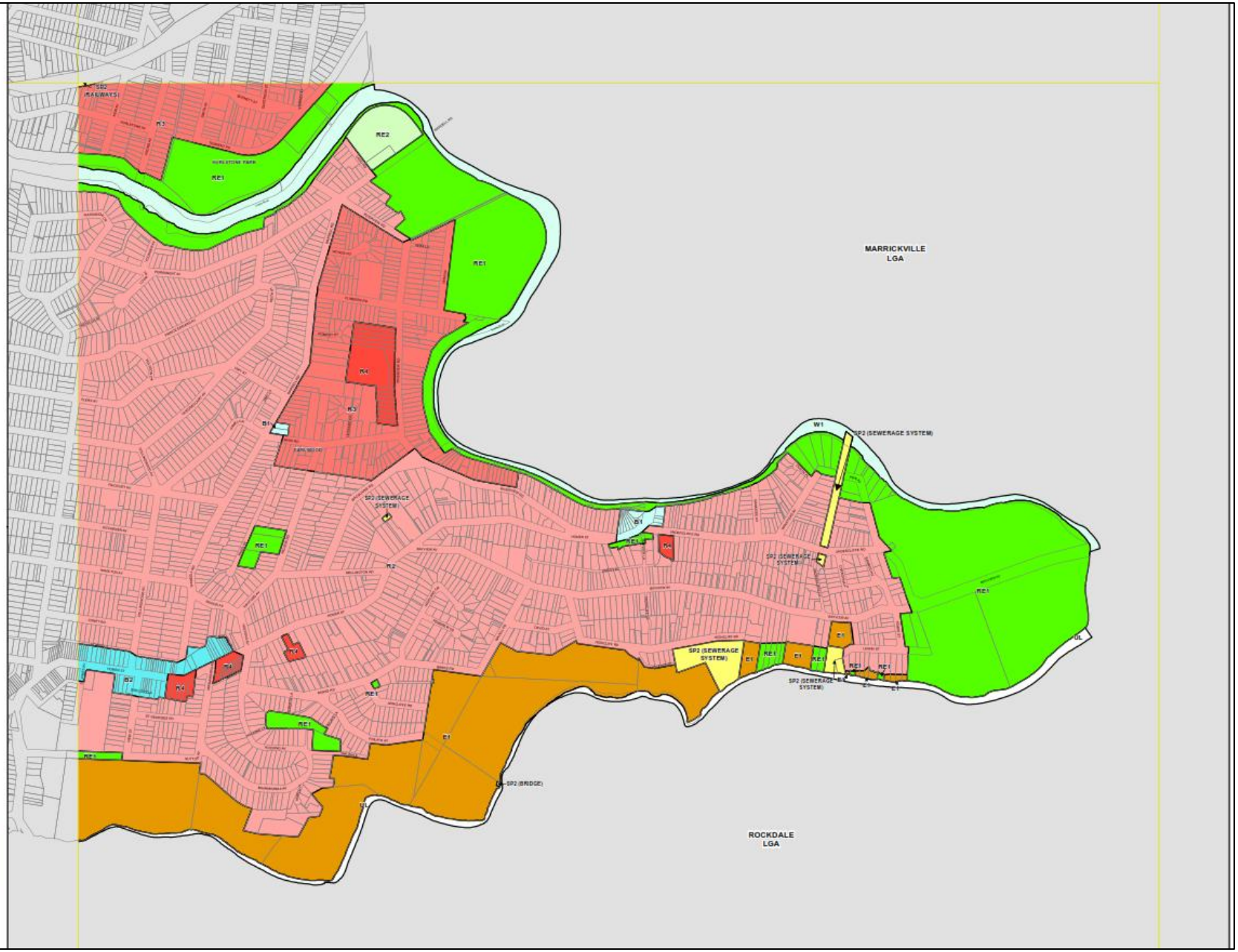
Zone

- B1 Neighbourhood Centre
- B2 Local Centre
- B5 Business Development
- B6 Enterprise Corridor
- E1 National Parks and Nature Reserves
- IN1 General Industrial
- IN2 Light Industrial
- R2 Low Density Residential
- R3 Medium Density Residential
- R4 High Density Residential
- RE1 Public Recreation
- RE2 Private Recreation
- SP2 Infrastructure
- W1 Natural Waterways
- UL Unzoned Land

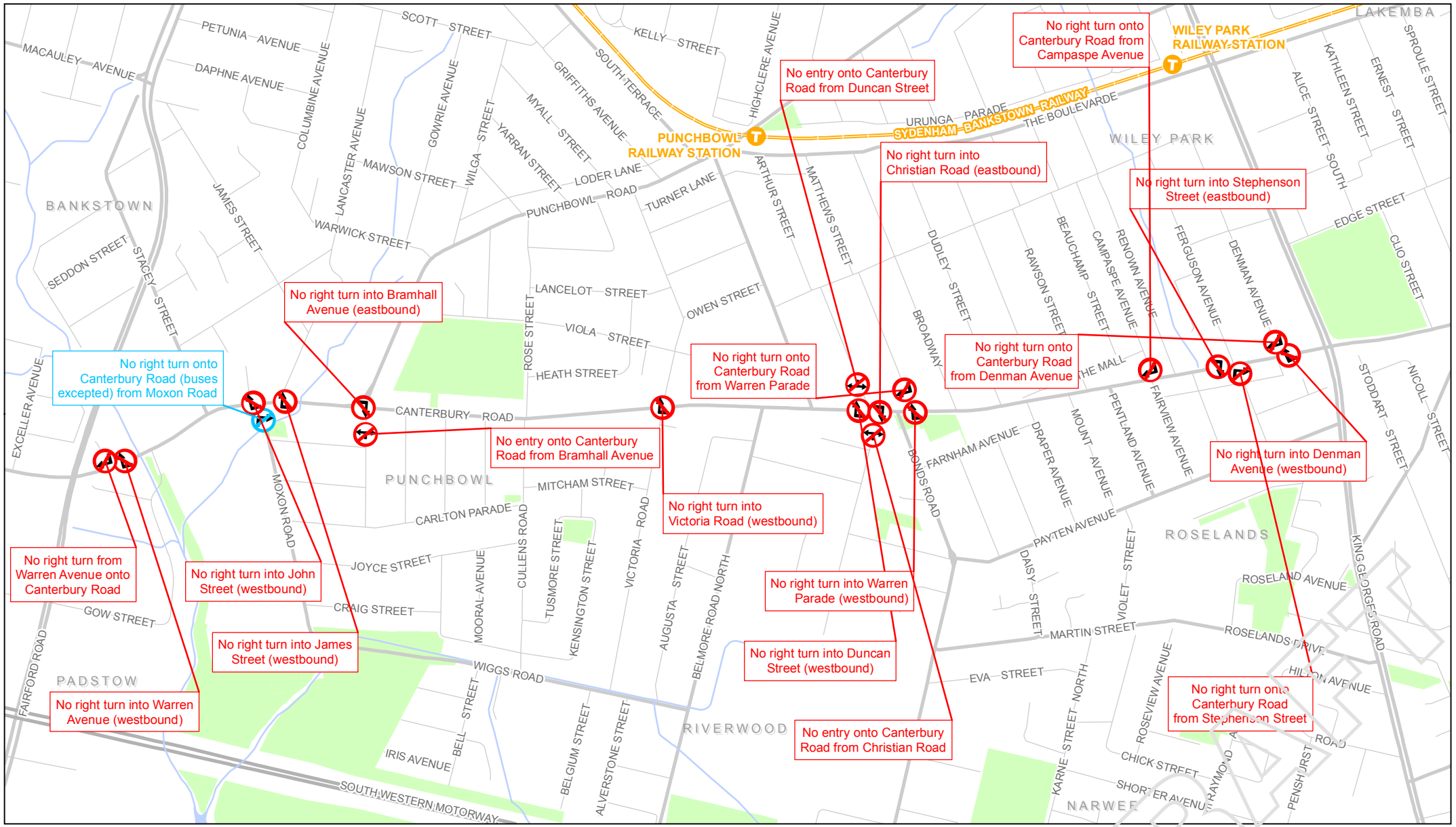
Cadastre

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Appendix B – Turn Ban Locations



Paper Size A4

0 100 200 400

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- No right turn onto Canterbury Road (from south) - buses excepted
- No right turn (eastbound)
- No right turn (westbound)
- No right turn onto Canterbury Road (from north)
- No right turn onto Canterbury Road (from south)
- No entry onto Canterbury Road

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 03 Apr 2017

Turning restrictions

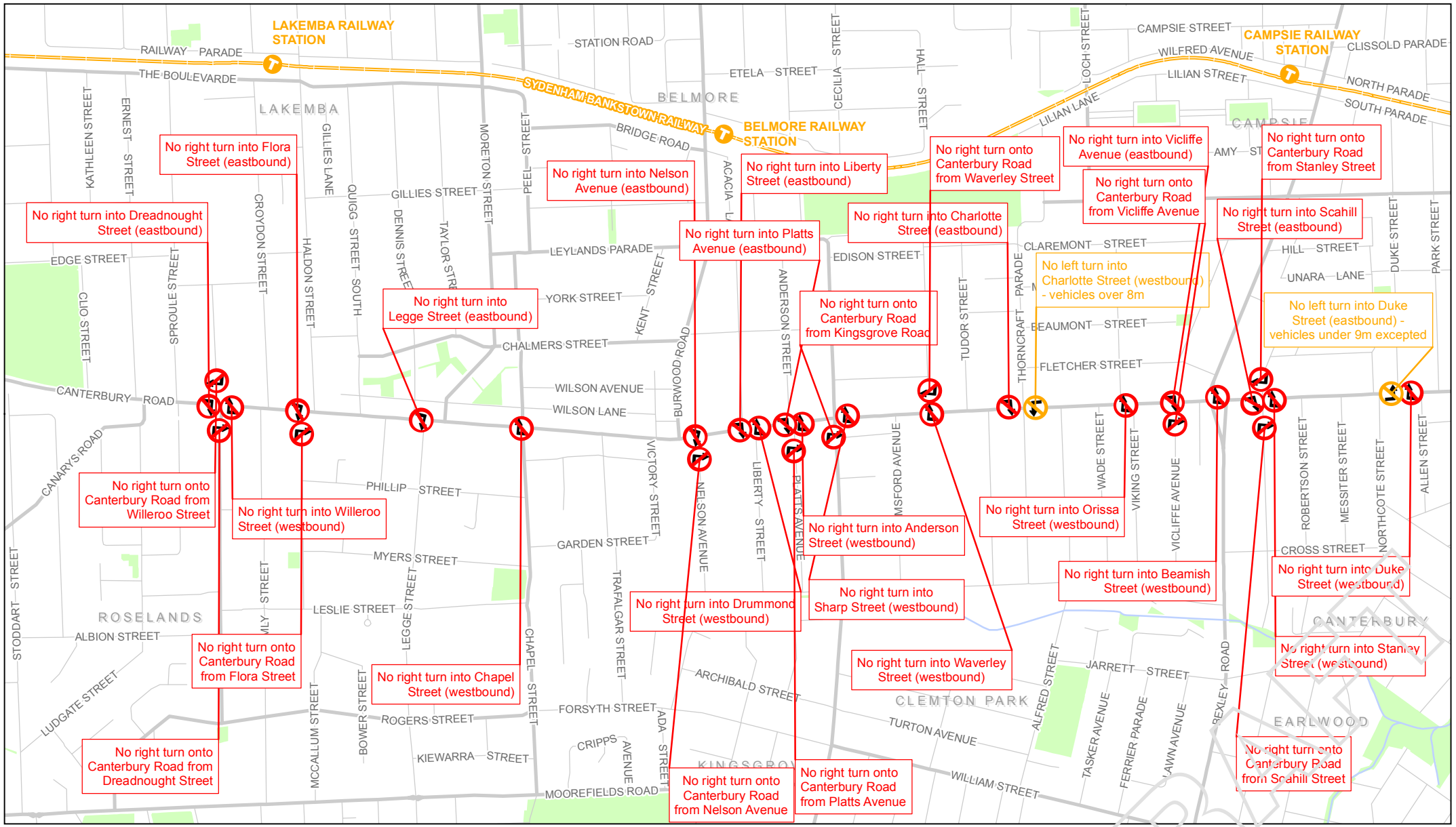
Figure 1-1

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Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:jrichardson



Paper Size A4

0 100 200 400

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- No left turn (eastbound) - vehicles under 9m excepted
- No left turn (westbound) - vehicles over 8m
- No right turn (eastbound)
- No right turn (westbound)
- No right turn onto Canterbury Road (from north)
- No right turn onto Canterbury Road (from south)

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 03 Apr 2017

Turning restrictions

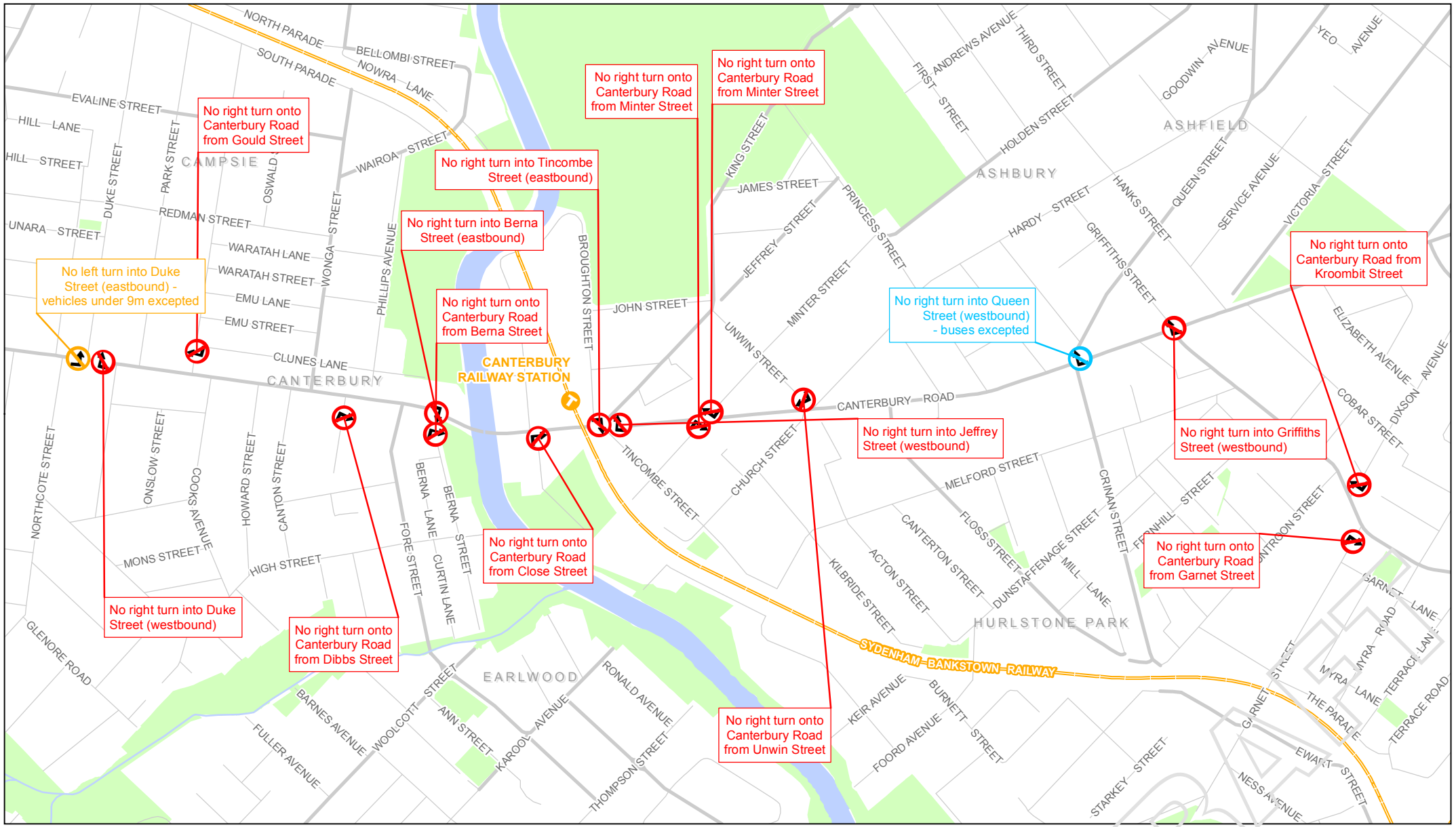
Figure 1-2

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:jrichardson



Paper Size A4

0 75 150 300

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

- No left turn (eastbound) - vehicles under 9m excepted
- No right turn (westbound) - buses excepted
- No right turn (eastbound)
- No right turn (westbound)
- No right turn onto Canterbury Road (from north)
- No right turn onto Canterbury Road (from south)

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 03 Apr 2017

Turning restrictions

Figure 1-3

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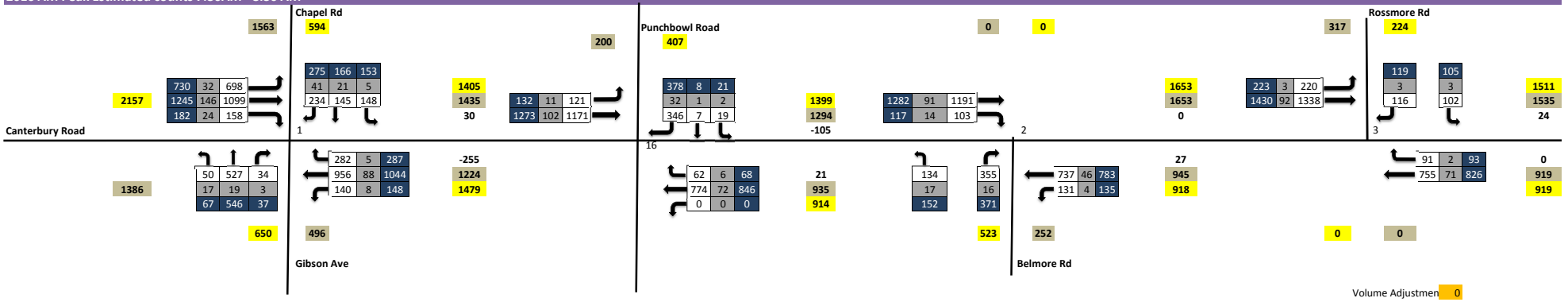
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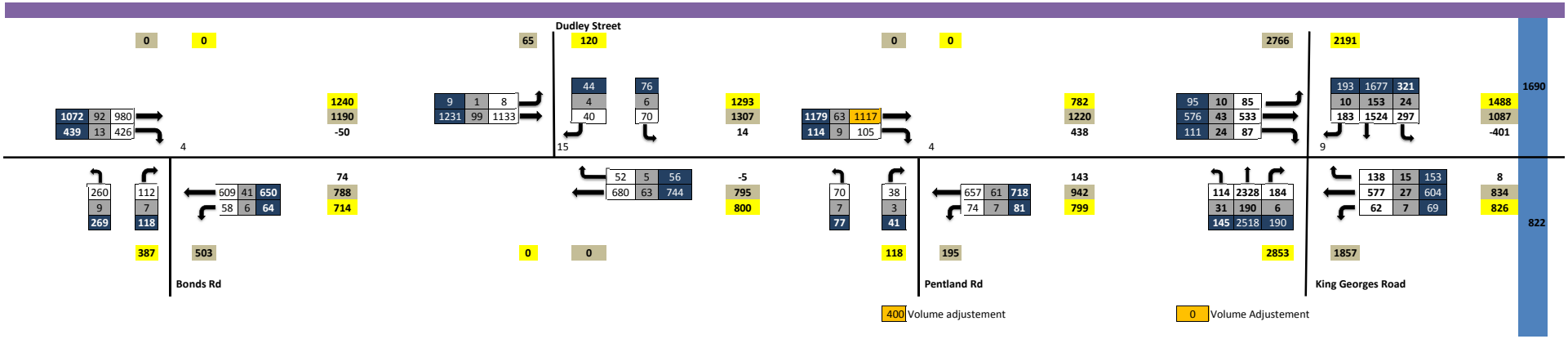
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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:jrichardson

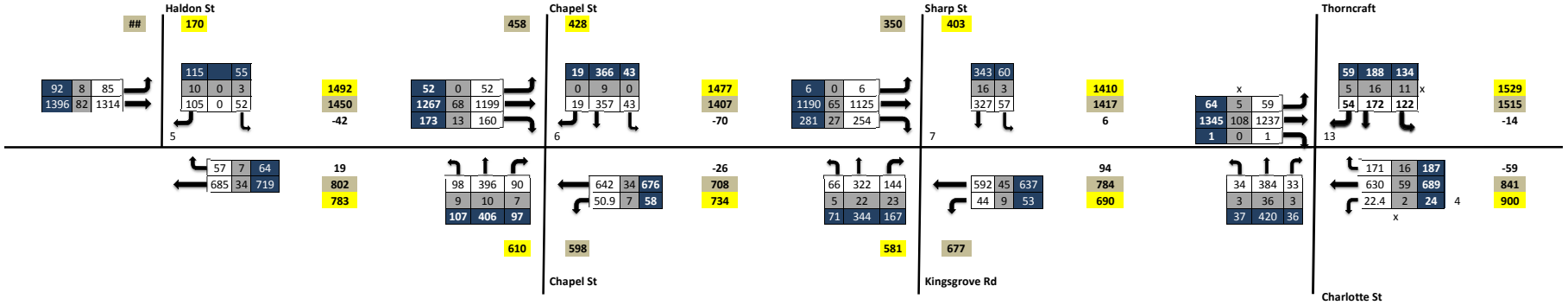
Appendix C – Baseline Traffic Data

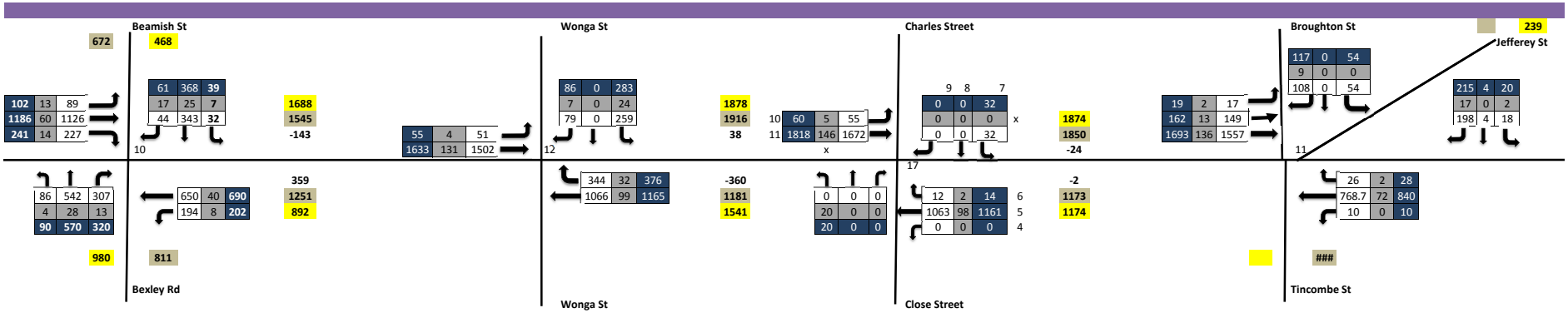
2016 AM Peak Estimated counts 7.30AM - 8.30 AM



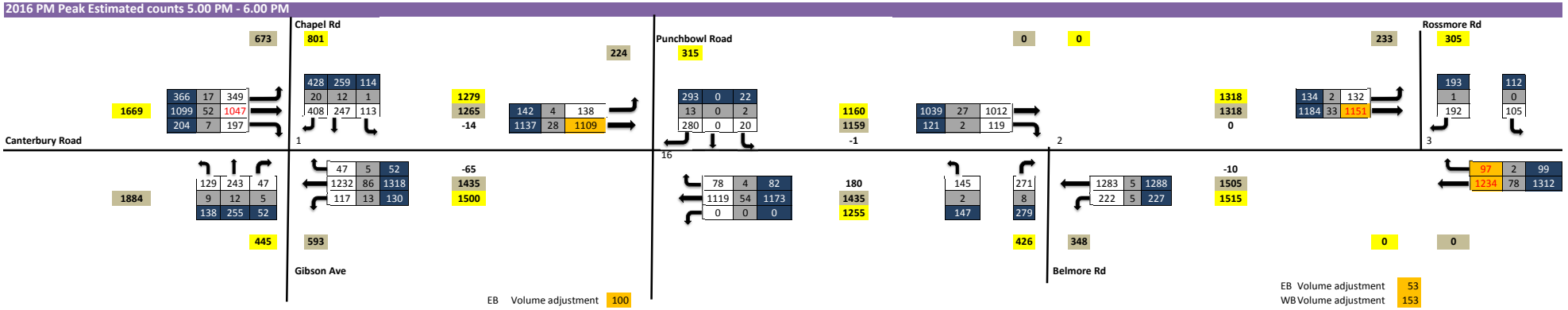

Dudley Street
Bonds Rd
Pentland Rd
King Georges Road
400 Volume adjustement
0 Volume Adjustement

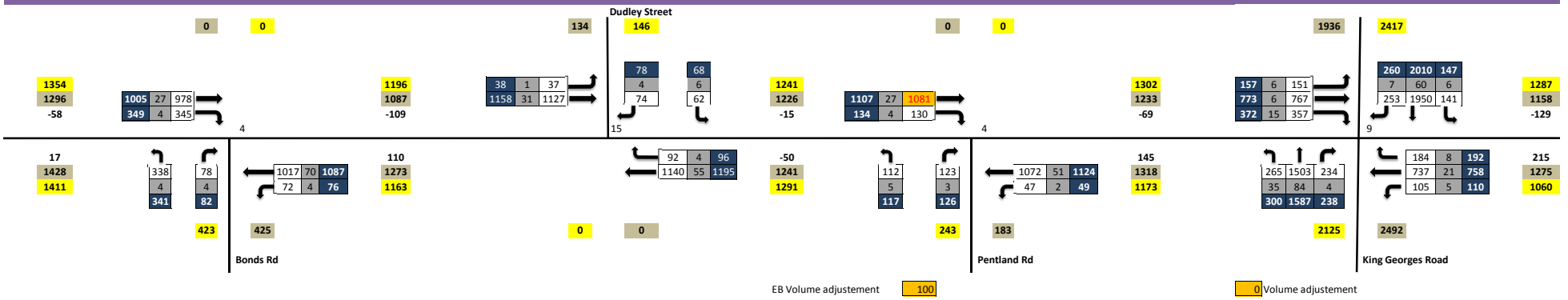
2016 Estimated counts



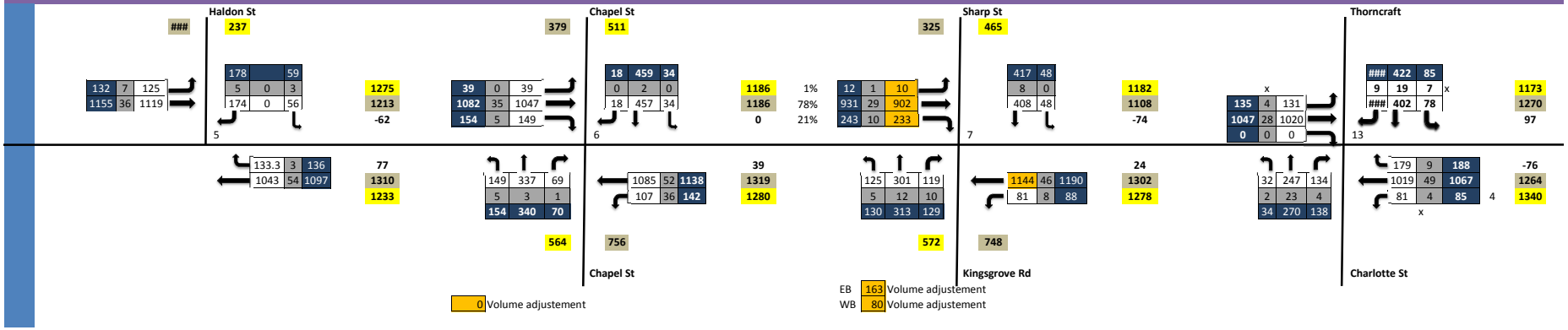

Beamish St
Wonga St
Charles Street
Broughton St
Jefferey St
672
468
239
102 13 89
1186 60 1126
241 14 227
61 368 39
17 25 7
44 343 32
1688
1545
-143
10
55 4 51
1633 131 1502
86 0 283
7 0 24
79 0 259
1878
1916
38
12
10 60 5 55
11 1818 146 1672
x
9 8 7
0 0 32
0 0 0
0 0 32
x
1874
1850
-24
17
19 2 17
162 13 149
1693 136 1557
117 0 54
9 0 0
108 0 54
11
215 4 20
17 0 2
198 4 18
86 542 307
4 28 13
90 570 320
980
650 40 690
194 8 202
359
1251
892
811
344 32 376
1066 99 1165
-360
1181
1541
0 0 0
20 0 0
20 0 0
12 2 14 6
1063 98 1161 5
0 0 0 4
-2
1173
1174
26 2 28
768.7 72 840
10 0 10
###
Bexley Rd
Wonga St
Close Street
Tincombe St

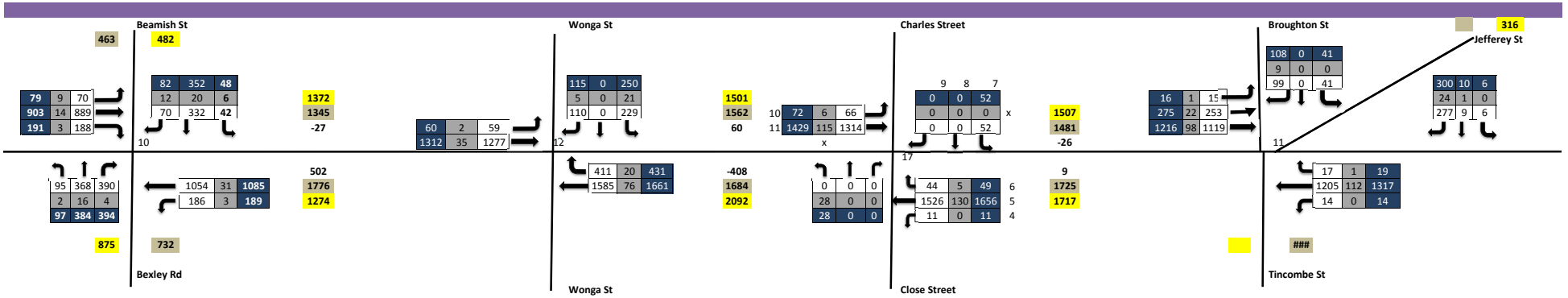
2016 PM Peak Estimated counts 5.00 PM - 6.00 PM




Dudley Street
Bonds Rd
Pentland Rd
King Georges Road
EB Volume adjustement
100
0 Volume adjustement

2016 Estimated counts




Beamish St
Wonga St
Charles Street
Broughton St
Jefferey St
463
482
316
79 9 70
903 14 889
191 3 188
82 352 48
12 20 6
70 332 42
10
1372
1345
-27
60 2 59
1312 35 1277
115 0 250
5 0 21
110 0 229
12
1501
1562
60
10 72 6 66
11 1429 115 1314
x
9 8 7
0 0 52
0 0 0 x
0 0 52
17
1507
1481
-26
16 1 15
275 22 253
1216 98 1119
108 0 41
9 0 0
99 0 41
11
300 10 6
24 1 0
277 9 6
95 368 390
2 16 4
97 384 394
1054 31 1085
186 3 189
502
1776
1274
411 20 431
1585 76 1661
-408
1684
2092
0 0 0
28 0 0
28 0 0
44 5 49 6
1526 130 1656 5
11 0 11 4
9
1725
1717
17 1 19
1205 112 1317
14 0 14
875
732
###
Bexley Rd
Wonga St
Close Street
Tincombe St

Appendix D – SIDRA Outputs

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.319	11.7	LOS A	7.1	53.5	0.34	0.30	53.2
5	T1	846	8.5	846	8.5	0.319	6.3	LOS A	9.0	67.9	0.38	0.34	54.4
6	R2	68	8.8	68	8.8	0.356	20.0	LOS B	2.0	15.1	0.54	0.72	44.0
Approach		915	8.5	915	8.5	0.356	7.3	LOS A	9.0	67.9	0.39	0.37	53.4
North: Punchbowl Road													
7	L2	21	9.5	21	9.5	0.673	54.4	LOS D	11.0	78.1	0.96	0.82	21.9
8	T1	8	12.5	8	12.5	0.673	48.8	LOS D	11.0	78.1	0.96	0.82	31.8
9	R2	378	8.5	378	8.5	0.673	54.6	LOS D	11.0	78.1	0.96	0.82	31.1
Approach		407	8.6	407	8.6	0.673	54.4	LOS D	11.0	79.8	0.96	0.82	30.8
West: Canterbury Road West													
10	L2	132	8.3	132	8.3	0.075	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1273	8.0	1273	8.0	0.478	7.3	LOS A	14.4	107.7	0.45	0.41	48.6
Approach		1405	8.0	1405	8.0	0.478	7.2	LOS A	14.4	107.7	0.41	0.42	49.5
All Vehicles		2727	8.3	2727	8.3	0.673	14.3	LOS A	14.4	107.7	0.49	0.46	45.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	49.2	LOS E	0.0	0.0	0.95	0.95
All Pedestrians		5	49.2	LOS E			0.95	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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	151	11.3	151	11.3	1.010	102.5	LOS F	27.2	202.7	1.00	1.16	13.3
3	R2	371	4.3	371	4.3	1.010	104.2	LOS F	27.2	202.7	1.00	1.17	13.1
Approach		522	6.3	522	6.3	1.010	103.7	LOS F	27.2	202.7	1.00	1.17	13.2
East: Canterbury Road E													
4	L2	135	3.0	135	3.0	0.434	21.0	LOS B	14.8	108.1	0.65	0.64	36.4
5	T1	783	5.9	783	5.9	0.434	15.2	LOS B	15.1	110.7	0.64	0.60	18.2
Approach		918	5.4	918	5.4	0.434	16.1	LOS B	15.1	110.7	0.65	0.60	23.9
West: Canterbury Road W													
11	T1	1282	7.1	1282	7.1	0.863	11.1	LOS A	26.1	193.9	0.65	0.61	44.1
12	R2	117	12.0	117	12.0	0.378	23.9	LOS B	3.9	30.1	0.68	0.76	39.8
Approach		1399	7.5	1399	7.5	0.863	12.2	LOS A	26.1	193.9	0.65	0.63	43.4
All Vehicles		2839	6.6	2839	6.6	1.010	30.3	LOS C	27.2	202.7	0.71	0.72	26.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	14.3	LOS B	0.0	0.0	0.51	0.51
P4	West Full Crossing	15	43.7	LOS E	0.0	0.0	0.89	0.89
All Pedestrians		18	38.8	LOS D			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	826	8.6	826	8.6	0.589	4.6	LOS A	15.6	117.5	0.39	0.39	43.4
6	R2	93	2.2	93	2.2	0.589	6.7	LOS A	0.6	4.4	0.07	0.38	47.6
Approach		919	7.9	919	7.9	0.589	4.8	LOS A	15.6	117.5	0.36	0.38	44.4
North: Rosmore Avenue													
7	L2	105	2.9	105	2.9	0.288	46.8	LOS D	4.8	34.8	0.87	0.76	22.1
9	R2	119	2.5	119	2.5	0.697	60.0	LOS E	6.5	46.5	0.99	0.79	19.1
Approach		224	2.7	224	2.7	0.697	53.8	LOS D	6.5	46.5	0.93	0.78	20.4
West: Canterbury West													
10	L2	223	1.3	223	1.3	0.641	13.3	LOS A	17.8	130.1	0.44	0.49	41.8
11	T1	1430	6.4	1430	6.4	0.641	8.6	LOS A	22.1	163.2	0.50	0.50	25.4
Approach		1653	5.7	1653	5.7	0.641	9.2	LOS A	22.1	163.2	0.49	0.50	31.0
All Vehicles		2796	6.2	2796	6.2	0.697	11.4	LOS A	22.1	163.2	0.48	0.48	31.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	49.2	LOS E	0.0	0.0	0.95	0.95
P3	North Full Crossing	1	7.6	LOS A	0.0	0.0	0.37	0.37
All Pedestrians		7	43.2	LOS E			0.86	0.86

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	269	3.3	269	3.3	0.423	22.6	LOS B	8.5	60.9	0.61	0.73	31.1
3	R2	119	5.9	119	5.9	1.000	87.7	LOS F	8.3	61.0	0.98	1.05	14.9
Approach		388	4.1	388	4.1	1.000	42.5	LOS D	8.5	61.0	0.73	0.83	23.3
East: Canterbury Road E													
4	L2	64	9.4	64	9.4	0.499	36.1	LOS C	15.7	116.4	0.86	0.76	34.4
5	T1	650	6.3	650	6.3	0.499	29.3	LOS C	15.7	116.4	0.83	0.73	20.9
Approach		714	6.6	714	6.6	0.499	29.9	LOS C	15.7	116.4	0.84	0.73	22.9
West: Canterbury Road w													
11	T1	1072	8.6	1072	8.6	0.783	6.0	LOS A	21.5	161.5	0.44	0.42	40.5
12	R2	439	3.0	439	3.0	0.783	19.0	LOS B	12.1	87.3	0.79	0.84	39.1
Approach		1511	6.9	1511	6.9	0.783	9.8	LOS A	21.5	161.5	0.55	0.54	39.7
All Vehicles		2613	6.4	2613	6.4	1.000	20.1	LOS B	21.5	161.5	0.65	0.64	30.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	27.0	LOS C	0.0	0.0	0.70	0.70
P2	East Full Crossing	19	46.4	LOS E	0.1	0.1	0.92	0.92
All Pedestrians		21	44.6	LOS E			0.90	0.90

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	743	8.5	743	8.5	0.357	3.8	LOS A	7.5	56.4	0.31	0.30	48.6
6	R2	57	8.8	57	8.8	0.357	11.3	LOS A	5.1	38.3	0.39	0.41	46.5
Approach		800	8.5	800	8.5	0.357	4.3	LOS A	7.5	56.4	0.32	0.31	48.2
North: Dudley Street													
7	L2	76	7.9	76	7.9	0.238	48.2	LOS D	3.5	26.5	0.87	0.75	21.8
9	R2	44	9.1	44	9.1	0.278	58.7	LOS E	2.3	17.4	0.94	0.73	19.3
Approach		120	8.3	120	8.3	0.278	52.0	LOS D	3.5	26.5	0.90	0.74	20.8
West: Canterbury West													
10	L2	9	11.1	9	11.1	0.472	6.7	LOS A	2.1	15.5	0.07	0.07	51.0
11	T1	1232	8.0	1232	8.0	0.472	4.0	LOS A	11.7	87.6	0.22	0.21	47.8
Approach		1241	8.1	1241	8.1	0.472	4.0	LOS A	11.7	87.6	0.22	0.21	47.8
All Vehicles		2161	8.2	2161	8.2	0.472	6.8	LOS A	11.7	87.6	0.30	0.27	42.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	49.2	LOS E	0.0	0.0	0.95	0.95
P3	North Full Crossing	12	6.9	LOS A	0.0	0.0	0.35	0.35
All Pedestrians		16	17.5	LOS B			0.50	0.50

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	77	9.1	77	9.1	0.122	6.0	LOS A	0.6	4.7	0.21	0.59	43.1
3	R2	41	7.3	41	7.3	0.319	61.3	LOS E	2.2	16.4	0.96	0.73	18.8
Approach		118	8.5	118	8.5	0.319	25.2	LOS B	2.2	16.4	0.47	0.64	29.8
East: Canterbury Raod East													
4	L2	81	8.6	81	8.6	0.295	11.0	LOS A	7.0	52.8	0.35	0.39	49.2
5	T1	718	8.5	718	8.5	0.295	5.3	LOS A	7.1	53.4	0.35	0.35	50.4
Approach		799	8.5	799	8.5	0.295	5.9	LOS A	7.1	53.4	0.35	0.35	50.2
West: Canterbury Road West													
11	T1	1180	5.3	1180	5.3	0.491	1.6	LOS A	5.7	42.1	0.16	0.18	53.7
12	R2	114	7.9	114	7.9	0.491	8.2	LOS A	5.7	42.1	0.24	0.31	48.9
Approach		1294	5.6	1294	5.6	0.491	2.2	LOS A	5.7	42.1	0.17	0.19	52.7
All Vehicles		2211	6.8	2211	6.8	0.491	4.8	LOS A	7.1	53.4	0.25	0.27	49.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	5.9	LOS A	0.0	0.0	0.33	0.33
P2	East Full Crossing	4	49.2	LOS E	0.0	0.0	0.95	0.95
All Pedestrians		5	40.5	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Existing AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Actuated Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	145	21.4	145	21.4	0.141	14.9	LOS B	3.7	30.9	0.39	0.65	40.8
2	T1	2518	7.5	2518	7.5	1.285	586.3	LOS F	235.0	1751.4	1.00	3.12	5.7
3	R2	190	3.2	190	3.2	0.294	36.8	LOS C	3.4	24.3	0.88	0.75	41.2
Approach		2853	8.0	2853	8.0	1.285	520.7	LOS F	235.0	1751.4	0.96	2.84	6.3
East: Canterbury Road E													
4	L2	69	10.1	69	10.1	0.047	21.5	LOS B	1.0	7.7	0.59	0.66	47.0
5	T1	604	4.5	604	4.5	0.867	65.5	LOS E	21.6	156.8	0.99	0.86	26.7
6	R2	153	9.8	153	9.8	0.672	76.5	LOS F	10.9	82.8	0.98	0.81	30.7
Approach		826	5.9	826	5.9	0.867	63.9	LOS E	21.6	156.8	0.95	0.83	29.1
North: King Georges Road													
7	L2	321	7.5	321	7.5	1.286	572.1	LOS F	165.8	1243.3	1.00	2.38	7.6
8	T1	1677	9.1	1677	9.1	1.286	583.8	LOS F	174.7	1318.3	1.00	2.96	5.7
9	R2	193	5.2	193	5.2	0.829	78.2	LOS F	14.1	103.1	1.00	0.83	17.2
Approach		2191	8.5	2191	8.5	1.286	537.5	LOS F	174.7	1318.3	1.00	2.69	6.2
West: Canterbury Road W													
10	L2	95	10.5	95	10.5	0.129	28.9	LOS C	3.9	29.8	0.59	0.69	40.2
11	T1	576	7.5	576	7.5	0.956	78.1	LOS F	24.2	180.2	1.00	0.98	30.9
12	R2	111	21.6	111	21.6	0.596	77.6	LOS F	7.9	65.9	0.97	0.79	26.3
Approach		782	9.8	782	9.8	0.956	72.1	LOS F	24.2	180.2	0.94	0.92	30.9
All Vehicles		6652	8.1	6652	8.1	1.286	416.8	LOS F	235.0	1751.4	0.97	2.31	7.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 1.7 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	7	66.3	LOS F	0.0	0.0	0.94	0.94
P2	East Full Crossing	4	47.2	LOS E	0.0	0.0	0.79	0.79
P2S	East Slip/Bypass Lane Crossing	4	19.4	LOS B	0.0	0.0	0.63	0.63
P3	North Full Crossing	3	64.4	LOS F	0.0	0.0	0.93	0.93
P4	West Full Crossing	3	37.5	LOS D	0.0	0.0	0.71	0.71
All Pedestrians		21	49.3	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ Existing AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Actuated Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	719	4.7	701	4.7	0.349	3.2	LOS A	5.0	36.1	0.19	0.21	53.9
6	R2	64	10.9	62	11.0	0.349	10.0	LOS A	2.0	15.0	0.21	0.32	49.5
Approach		783	5.2	763N1	5.2	0.349	3.7	LOS A	5.0	36.1	0.19	0.22	53.2
North: Haldon Street													
7	L2	55	5.5	55	5.5	0.399	58.3	LOS E	5.2	38.8	0.93	0.77	19.5
9	R2	115	8.7	115	8.7	0.399	60.8	LOS E	5.2	38.8	0.94	0.76	18.9
Approach		170	7.6	170	7.6	0.399	60.0	LOS E	5.2	38.8	0.94	0.77	19.1
West: Canterbury Road w													
10	L2	93	8.6	89	8.5	0.924	50.7	LOS D	44.4	326.9	1.00	0.99	36.5
11	T1	1396	5.9	1329	5.8	0.924	45.0	LOS D	44.7	328.8	1.00	0.99	31.9
Approach		1489	6.0	1418N1	6.0	0.924	45.4	LOS D	44.7	328.8	1.00	0.99	32.3
All Vehicles		2442	5.9	2351N1	6.1	0.924	32.9	LOS C	44.7	328.8	0.73	0.72	34.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	26.0	LOS C	0.0	0.0	0.66	0.66
P4	West Full Crossing	18	54.2	LOS E	0.1	0.1	0.95	0.95
All Pedestrians		20	51.4	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St Existing AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	107	8.4	107	8.4	0.846	54.1	LOS D	24.7	178.6	0.98	0.97	10.4
2	T1	406	2.5	406	2.5	0.846	52.8	LOS D	24.7	178.6	0.98	0.98	9.7
3	R2	97	7.2	97	7.2	0.846	67.3	LOS E	12.8	93.6	1.00	1.02	8.4
Approach		610	4.3	610	4.3	0.846	55.3	LOS D	24.7	178.6	0.98	0.98	9.6
East: Canterbury Rd													
4	L2	58	12.1	56	12.1	0.495	33.2	LOS C	13.4	99.0	0.70	0.64	34.0
5	T1	676	5.0	655	5.0	0.495	27.5	LOS B	13.7	99.7	0.70	0.62	31.6
Approach		734	5.6	711 N1	5.6	0.495	27.9	LOS B	13.7	99.7	0.70	0.62	31.8
North: Chapel St													
7	L2	43	0.0	43	0.0	0.319	40.5	LOS C	7.8	55.2	0.84	0.71	4.8
8	T1	366	2.5	366	2.5	0.535	40.0	LOS C	13.2	94.3	0.89	0.75	15.0
9	R2	19	0.0	19	0.0	0.535	44.8	LOS D	13.2	94.3	0.91	0.78	4.5
Approach		428	2.1	428	2.1	0.535	40.2	LOS C	13.2	94.3	0.89	0.75	13.7
West: Canterbury Rd													
10	L2	52	0.0	50	0.0	0.535	12.4	LOS A	10.9	79.5	0.33	0.33	27.4
11	T1	1267	5.4	1210	5.3	0.535	6.9	LOS A	10.9	79.9	0.33	0.31	48.8
12	R2	173	7.5	165	7.4	0.661	34.6	LOS C	5.5	40.6	0.97	0.81	31.3
Approach		1492	5.4	1425 N1	5.4	0.661	10.3	LOS A	10.9	79.9	0.40	0.37	44.0
All Vehicles		3264	4.8	3175 N1	4.9	0.846	26.9	LOS B	24.7	178.6	0.65	0.60	27.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	29.4	LOS C	0.0	0.0	0.70	0.70
P2	East Full Crossing	6	39.2	LOS D	0.0	0.0	0.81	0.81
P3	North Full Crossing	50	12.6	LOS B	0.1	0.1	0.46	0.46
All Pedestrians		67	17.8	LOS B			0.53	0.53

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_Existing AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	71	7.0	71	7.0	0.264	37.8	LOS C	6.5	48.1	0.76	0.69	25.6
2	T1	344	6.4	344	6.4	1.320	469.6	LOS F	110.6	835.2	0.94	2.19	6.7
3	R2	167	13.8	167	13.8	1.320	606.0	LOS F	110.6	835.2	1.00	2.64	2.9
Approach		582	8.6	582	8.6	1.320	456.1	LOS F	110.6	835.2	0.94	2.14	5.7
East: Canterbury Road E													
4	L2	53	17.0	51	17.0	0.619	49.9	LOS D	17.8	134.0	0.96	0.83	31.9
5	T1	637	7.1	613	7.1	0.619	44.6	LOS D	18.3	136.0	0.96	0.83	23.6
Approach		690	7.8	664 N1	7.9	0.619	45.0	LOS D	18.3	136.0	0.96	0.83	24.5
North: Sharp Street													
7	L2	60	5.0	60	5.0	0.273	56.0	LOS D	3.7	26.6	0.90	0.74	20.1
8	T1	343	4.7	343	4.7	1.286	573.1	LOS F	82.2	598.7	1.00	3.12	5.7
Approach		403	4.7	403	4.7	1.286	496.1	LOS F	82.2	598.7	0.98	2.77	6.1
West: Canterbury Road w													
10	L2	6	0.0	6	0.0	0.907	23.7	LOS B	44.8	327.8	0.77	0.76	42.6
11	T1	1190	5.5	1144	5.4	0.907	21.4	LOS B	44.8	327.8	0.80	0.80	35.1
12	R2	281	9.6	270	9.6	0.907	42.7	LOS D	20.6	154.0	0.98	1.00	33.8
Approach		1477	6.2	1420 N1	6.2	0.907	25.4	LOS B	44.8	327.8	0.84	0.84	34.7
All Vehicles		3152	6.8	3070 N1	7.0	1.320	173.1	LOS F	110.6	835.2	0.90	1.34	11.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	36.8	LOS D	0.0	0.0	0.78	0.78
P2	East Full Crossing	33	50.5	LOS E	0.1	0.1	0.92	0.92
P3	North Full Crossing	25	15.0	LOS B	0.0	0.0	0.50	0.50
P4	West Full Crossing	7	33.8	LOS D	0.0	0.0	0.75	0.75
All Pedestrians		82	35.4	LOS D			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_Existing AM-SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	37	8.1	37	8.1	0.630	48.7	LOS D	10.8	81.0	0.89	0.75	22.7
2	T1	420	8.6	420	8.6	1.395	476.1	LOS F	82.8	621.8	0.95	2.36	6.7
3	R2	36	8.3	36	8.3	1.395	791.9	LOS F	82.8	621.8	1.00	3.51	2.3
Approach		493	8.5	493	8.5	1.395	467.1	LOS F	82.8	621.8	0.95	2.32	6.4
East: Canterbury Road East													
4	L2	24	8.3	24	8.4	0.298	16.1	LOS B	8.0	60.0	0.41	0.39	46.1
5	T1	689	8.6	681	8.6	0.298	10.4	LOS A	9.0	67.4	0.44	0.40	43.8
6	R2	187	8.6	185	8.6	0.728	53.9	LOS D	10.1	75.8	0.97	0.96	29.4
Approach		900	8.6	890 N1	8.6	0.728	19.6	LOS B	10.1	75.8	0.55	0.51	37.6
North: Thorncraft Parade													
7	L2	133	8.3	133	8.3	0.361	41.5	LOS C	8.6	64.8	0.81	0.75	24.1
8	T1	188	8.5	188	8.5	1.596	819.1	LOS F	70.9	532.4	0.94	2.79	4.1
9	R2	59	8.5	59	8.5	1.596	1146.9	LOS F	70.9	532.4	1.00	3.63	1.6
Approach		380	8.4	380	8.4	1.596	597.8	LOS F	70.9	532.4	0.91	2.20	4.2
West: Canterbury Road West													
10	L2	59	0.0	56	0.0	0.700	21.6	LOS B	21.4	158.7	0.59	0.56	43.1
11	T1	1345	8.0	1264	7.9	0.700	20.4	LOS B	28.9	215.8	0.70	0.64	35.1
Approach		1404	7.7	1320 N1	7.6	0.700	20.5	LOS B	28.9	215.8	0.70	0.64	35.7
All Vehicles		3177	8.2	3082 N1	8.4	1.596	162.8	LOS F	82.8	621.8	0.72	1.07	11.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	11.7	LOS B	0.0	0.0	0.44	0.44
P2	East Full Crossing	32	43.4	LOS E	0.1	0.1	0.85	0.85
P3	North Full Crossing	8	19.8	LOS B	0.0	0.0	0.58	0.58
P4	West Full Crossing	32	40.9	LOS E	0.1	0.1	0.83	0.83
All Pedestrians		84	35.7	LOS D			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ Existing AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Actuated Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	90	4.4	90	4.4	0.433	43.6	LOS D	10.5	76.1	0.82	0.80	26.2
2	T1	570	4.9	570	4.9	1.028	117.1	LOS F	41.9	305.4	0.95	1.25	20.5
3	R2	320	4.1	320	4.1	1.018	88.0	LOS F	22.4	162.6	1.00	1.10	15.6
Approach		980	4.6	980	4.6	1.028	100.8	LOS F	41.9	305.4	0.96	1.16	19.5
East: Canterbury Road E													
4	L2	202	4.0	199	4.0	0.737	42.3	LOS C	21.3	155.6	0.91	0.86	35.8
5	T1	690	5.8	679	5.8	0.737	39.0	LOS C	23.1	169.5	0.93	0.84	26.3
Approach		892	5.4	878 N1	5.4	0.737	39.8	LOS C	23.1	169.5	0.93	0.84	29.1
North: Beamish Street													
7	L2	39	17.9	39	17.9	0.823	66.0	LOS E	12.7	95.9	1.00	0.88	20.3
8	T1	368	6.8	368	6.8	0.823	57.7	LOS E	12.7	95.9	0.98	0.83	30.7
9	R2	61	27.9	61	27.9	0.603	70.6	LOS F	3.7	32.4	0.99	0.76	18.4
Approach		468	10.5	468	10.5	0.823	60.1	LOS E	12.7	95.9	0.99	0.83	28.6
West: Canterbury Road w													
10	L2	102	12.7	96	12.5	0.815	28.6	LOS C	30.7	225.6	0.79	0.73	41.7
11	T1	1186	5.1	1118	5.0	0.815	18.3	LOS B	30.7	225.6	0.65	0.60	36.4
12	R2	241	5.8	227	5.7	0.813	60.1	LOS E	12.3	90.4	0.99	0.99	29.2
Approach		1529	5.7	1441 N1	5.6	0.815	25.5	LOS B	30.7	225.6	0.71	0.67	34.7
All Vehicles		3869	5.9	3766 N1	6.1	1.028	52.7	LOS D	41.9	305.4	0.86	0.86	26.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	6	36.8	LOS D	0.0	0.0	0.78	0.78
P2	East Full Crossing	22	51.4	LOS E	0.1	0.1	0.93	0.93
P3	North Full Crossing	13	23.5	LOS C	0.0	0.0	0.63	0.63
P4	West Full Crossing	52	37.7	LOS D	0.1	0.1	0.79	0.79
All Pedestrians		93	38.9	LOS D			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_Existing AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1165	8.5	1144	8.5	0.387	3.8	LOS A	9.5	71.1	0.31	0.28	52.5
6	R2	376	8.5	369	8.5	0.992	106.6	LOS F	31.1	233.7	1.00	1.29	20.0
Approach		1541	8.5	1513 N1	8.5	0.992	28.9	LOS C	31.1	233.7	0.48	0.52	31.6
North: Wonga Street													
7	L2	283	8.5	283	8.5	0.606	48.0	LOS D	14.6	109.7	0.91	0.82	21.8
9	R2	86	8.1	86	8.1	0.490	63.9	LOS E	5.0	37.2	0.96	0.77	18.3
Approach		369	8.4	369	8.4	0.606	51.7	LOS D	14.6	109.7	0.92	0.81	20.9
West: Canterbury Road West													
10	L2	55	7.3	53	7.3	0.737	13.6	LOS A	18.1	135.6	0.42	0.41	48.0
11	T1	1633	8.0	1561	8.1	0.737	12.5	LOS A	29.2	218.4	0.55	0.51	42.5
Approach		1688	8.0	1614 N1	8.1	0.737	12.6	LOS A	29.2	218.4	0.54	0.51	42.8
All Vehicles		3598	8.3	3496 N1	8.5	0.992	23.8	LOS B	31.1	233.7	0.55	0.55	33.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	13.1	LOS B	0.0	0.0	0.47	0.47
P4	West Full Crossing	20	54.2	LOS E	0.1	0.1	0.95	0.95
All Pedestrians		28	42.4	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: 101 [Canterbury Road - Charles St Existing AM]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1222	8.4	1193	8.5	0.445	11.1	LOS A	1.7	12.4	0.32	0.01	4.3
6	R2	15	14.3	14	14.3	0.445	85.1	LOS F	1.7	12.4	1.00	0.04	26.4
Approach		1237	8.5	1208 N1	8.5	0.445	12.0	NA	1.7	12.4	0.33	0.01	5.7
North: Charles St													
7	L2	34	0.0	34	0.0	2.158	1227.0	LOS F	14.4	100.9	1.00	2.50	1.2
9	R2	1	0.0	1	0.0	2.158	11425.9	LOS F	14.4	100.9	1.00	2.50	1.2
Approach		35	0.0	35	0.0	2.158	1536.1	LOS F	14.4	100.9	1.00	2.50	1.2
West: Canterbury Road W													
10	L2	63	8.3	61	8.4	1.043	87.9	LOS F	57.2	428.1	1.00	0.08	31.7
11	T1	1914	8.0	1844	8.1	1.043	32.5	LOS C	57.2	428.1	0.48	0.04	26.3
Approach		1977	8.0	1905 N1	8.1	1.043	34.3	NA	57.2	428.1	0.50	0.04	26.6
All Vehicles		3248	8.1	3148 N1	8.4	2.158	42.3	NA	57.2	428.1	0.44	0.06	17.5

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.

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

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

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

Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %

Number of Iterations: 10 (maximum specified: 10)

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

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MOVEMENT SUMMARY

Site: 101 [Canterbury Road - Close St - Existing AM]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road E
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: RoadName													
1	L2	21	0.0	21	0.0	0.565	102.2	LOS F	1.6	11.3	0.94	1.08	9.2
3	R2	1	0.0	1	0.0	0.565	1542.4	LOS F	1.6	11.3	0.94	1.08	9.2
Approach		22	0.0	22	0.0	0.565	170.8	LOS F	1.6	11.3	0.94	1.08	9.2
East: Canterbury Road E													
4	L2	1	0.0	1	0.0	0.437	5.5	LOS A	0.0	0.0	0.00	0.00	57.2
5	T1	1222	8.4	1192	8.5	0.437	0.0	LOS A	18.0	135.4	0.00	0.00	59.8
Approach		1223	8.4	1193 N1	8.5	0.437	0.0	NA	18.0	135.4	0.00	0.00	59.8
West: Canterbury Road W													
11	T1	1914	8.0	1831	8.2	1.007	6.0	LOS A	1.7	12.4	0.50	0.00	7.1
12	R2	1	0.0	1	0.0	1.007	1150.3	LOS F	1.7	12.4	1.00	0.00	40.3
Approach		1915	8.0	1832 N1	8.1	1.007	6.7	NA	1.7	12.4	0.50	0.00	7.2
All Vehicles		3160	8.1	3047 N1	8.4	1.007	5.3	NA	18.0	135.4	0.31	0.01	22.9

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.

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

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

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

Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %

Number of Iterations: 10 (maximum specified: 10)

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

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_Existing AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	10	0.0	10	0.0	0.653	18.4	LOS B	26.6	199.9	0.61	0.57	49.3
5	T1	841	8.6	841	8.6	0.653	14.6	LOS B	26.6	199.9	0.63	0.58	40.8
6	R2	28	7.1	28	7.1	0.653	70.6	LOS F	4.3	31.9	0.99	0.76	28.1
Approach		879	8.4	879	8.4	0.653	16.4	LOS B	26.6	199.9	0.64	0.58	39.8
NorthEast: Jeffrey Street													
24b	L3	20	10.0	20	10.0	0.868	82.3	LOS F	8.9	66.9	1.00	0.88	25.6
24	L2	4	0.0	4	0.0	0.868	81.2	LOS F	8.9	66.9	1.00	0.88	25.6
26a	R1	215	7.9	215	7.9	0.868	74.7	LOS F	8.9	66.9	1.00	0.84	17.6
26b	R3	1	0.0	1	0.0	0.868	71.1	LOS F	6.8	50.7	1.00	0.80	27.7
Approach		240	7.9	240	7.9	0.868	75.4	LOS F	8.9	66.9	1.00	0.84	18.7
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.371	66.8	LOS E	3.2	22.7	0.96	0.75	28.6
7	L2	54	0.0	54	0.0	0.371	65.9	LOS E	3.2	22.7	0.96	0.75	28.4
7a	L1	1	0.0	1	0.0	0.371	64.6	LOS E	3.2	22.7	0.96	0.75	28.8
9	R2	117	7.7	117	7.7	1.390	779.2	LOS F	34.5	257.3	1.00	2.37	2.3
Approach		173	5.2	173	5.2	1.390	548.3	LOS F	34.5	257.3	0.99	1.85	4.1
West: Canterbury Road w													
10	L2	19	10.5	18	10.7	0.874	32.4	LOS C	20.7	155.0	0.92	0.88	33.1
10a	L1	162	8.0	155	8.1	0.874	31.2	LOS C	20.7	155.0	0.92	0.88	33.7
11	T1	1693	8.0	1620	8.1	0.874	26.5	LOS B	20.7	155.0	0.91	0.87	34.7
Approach		1874	8.1	1794 N1	8.2	0.874	27.0	LOS B	20.7	155.0	0.91	0.87	34.6
All Vehicles		3166	8.0	3086 N1	8.2	1.390	57.0	LOS E	34.5	257.3	0.85	0.84	23.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	6.7	LOS A	0.1	0.1	0.33	0.33
P2	East Full Crossing	20	54.2	LOS E	0.1	0.1	0.95	0.95
P6	NorthEast Full Crossing	68	5.6	LOS A	0.1	0.1	0.43	0.43
P3	North Full Crossing	108	14.6	LOS B	0.2	0.2	0.49	0.49
P4	West Full Crossing	68	54.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		316	22.4	LOS C			0.58	0.58

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

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.418	13.2	LOS A	12.3	89.6	0.44	0.40	52.0
5	T1	1173	4.6	1106	4.9	0.418	5.4	LOS A	12.3	89.6	0.31	0.28	55.1
6	R2	82	4.9	77	5.2	0.315	18.9	LOS B	1.9	14.0	0.46	0.70	44.7
Approach		1256	4.6	1184 N1	4.9	0.418	6.3	LOS A	12.3	89.6	0.32	0.31	54.3
North: Punchbowl Road													
7	L2	22	9.1	22	9.1	0.461	50.5	LOS D	7.8	55.5	0.91	0.79	22.9
8	T1	1	0.0	1	0.0	0.461	44.9	LOS D	7.8	55.5	0.91	0.79	32.9
9	R2	293	4.4	293	4.4	0.461	50.5	LOS D	7.8	55.5	0.91	0.79	32.3
Approach		316	4.7	316	4.7	0.461	50.5	LOS D	7.8	56.2	0.91	0.79	31.8
West: Canterbury Road West													
10	L2	142	2.8	142	2.8	0.078	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1137	2.5	1137	2.5	0.423	7.7	LOS A	12.8	91.1	0.45	0.41	48.0
Approach		1279	2.5	1279	2.5	0.423	7.5	LOS A	12.8	91.1	0.40	0.42	49.3
All Vehicles		2851	3.7	2779 N1	3.8	0.461	11.9	LOS A	12.8	91.1	0.42	0.41	48.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	47.3	LOS E	0.0	0.0	0.93	0.93
All Pedestrians		5	47.3	LOS E			0.93	0.93

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	147	1.4	147	1.4	1.030	130.9	LOS F	24.3	173.0	1.00	1.26	11.0
3	R2	279	2.9	279	2.9	1.030	132.2	LOS F	24.3	173.0	1.00	1.26	11.0
Approach		426	2.3	426	2.3	1.030	131.8	LOS F	24.3	173.0	1.00	1.26	11.0
East: Canterbury Road E													
4	L2	227	2.2	211	2.3	0.609	14.4	LOS A	14.3	101.1	0.42	0.49	40.8
5	T1	1288	0.4	1199	0.4	0.609	11.8	LOS A	22.6	159.1	0.55	0.54	21.4
Approach		1515	0.7	1410 N1	0.7	0.609	12.2	LOS A	22.6	159.1	0.53	0.53	27.8
West: Canterbury Road W													
11	T1	1039	2.6	1039	2.6	0.780	11.5	LOS A	18.2	130.6	0.69	0.64	43.7
12	R2	121	1.7	121	1.7	0.532	33.1	LOS C	5.8	41.0	0.92	0.84	36.2
Approach		1160	2.5	1160	2.5	0.780	13.8	LOS A	18.2	130.6	0.71	0.66	42.1
All Vehicles		3101	1.6	2996 N1	1.6	1.030	29.8	LOS C	24.3	173.0	0.67	0.68	25.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	12.3	LOS B	0.0	0.0	0.47	0.47
P4	West Full Crossing	15	47.3	LOS E	0.0	0.0	0.93	0.93
All Pedestrians		18	41.5	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1312	5.9	1264	6.1	0.821	6.6	LOS A	21.1	155.5	0.52	0.49	38.9
6	R2	99	2.0	95	2.1	0.821	18.7	LOS B	9.5	69.1	0.83	0.76	40.0
Approach		1411	5.7	1360 N1	5.8	0.821	7.5	LOS A	21.1	155.5	0.54	0.51	39.1
North: Rosmore Avenue													
7	L2	105	0.0	105	0.0	0.164	32.2	LOS C	3.9	27.2	0.71	0.72	26.8
9	R2	193	0.5	193	0.5	1.181	393.2	LOS F	35.9	252.4	1.00	2.03	4.3
Approach		298	0.3	298	0.3	1.181	266.0	LOS F	35.9	252.4	0.90	1.57	6.1
West: Canterbury West													
10	L2	134	1.5	134	1.5	0.634	24.8	LOS B	22.8	163.2	0.73	0.70	34.5
11	T1	1184	2.8	1184	2.8	0.634	20.1	LOS B	22.8	163.2	0.77	0.71	14.9
Approach		1318	2.7	1318	2.7	0.634	20.5	LOS B	22.8	163.2	0.77	0.71	19.0
All Vehicles		3027	3.8	2976 N1	3.9	1.181	39.2	LOS C	35.9	252.4	0.68	0.70	15.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	49.2	LOS E	0.0	0.0	0.95	0.95
P3	North Full Crossing	1	14.8	LOS B	0.0	0.0	0.52	0.52
All Pedestrians		7	44.3	LOS E			0.88	0.88

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	342	1.2	342	1.2	0.643	35.5	LOS C	14.5	102.6	0.82	0.80	25.6
3	R2	82	4.9	82	4.9	0.752	65.0	LOS E	4.7	34.1	1.00	0.77	18.2
Approach		424	1.9	424	1.9	0.752	41.2	LOS C	14.5	102.6	0.86	0.80	23.7
East: Canterbury Road E													
4	L2	76	5.3	72	5.4	0.572	16.0	LOS B	11.6	86.0	0.42	0.42	46.4
5	T1	1087	6.4	1035	6.6	0.572	12.1	LOS A	14.2	105.1	0.47	0.44	33.6
Approach		1163	6.4	1107 N1	6.5	0.572	12.3	LOS A	14.2	105.1	0.46	0.44	35.2
West: Canterbury Road w													
11	T1	1005	2.7	1005	2.7	0.680	2.9	LOS A	11.1	79.8	0.24	0.23	48.7
12	R2	349	1.1	349	1.1	0.680	13.7	LOS A	7.2	51.3	0.41	0.78	42.4
Approach		1354	2.3	1354	2.3	0.680	5.7	LOS A	11.1	79.8	0.28	0.37	45.1
All Vehicles		2941	3.8	2885 N1	3.9	0.752	13.5	LOS A	14.5	105.1	0.44	0.46	35.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	17.5	LOS B	0.0	0.0	0.56	0.56
P2	East Full Crossing	19	49.2	LOS E	0.1	0.1	0.95	0.95
All Pedestrians		21	46.2	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1195	4.6	1133	4.7	0.538	5.0	LOS A	13.6	99.2	0.32	0.30	46.0
6	R2	96	4.2	91	4.3	0.538	19.0	LOS B	13.6	99.2	0.71	0.66	41.2
Approach		1291	4.6	1224 N1	4.7	0.538	6.0	LOS A	13.6	99.2	0.35	0.33	45.1
North: Dudley Street													
7	L2	68	8.8	68	8.8	0.225	49.0	LOS D	3.2	24.1	0.88	0.74	21.6
9	R2	78	5.1	78	5.1	0.479	60.1	LOS E	4.2	30.6	0.97	0.76	19.1
Approach		146	6.8	146	6.8	0.479	54.9	LOS D	4.2	30.6	0.92	0.75	20.2
West: Canterbury West													
10	L2	38	2.6	38	2.6	0.435	17.8	LOS B	21.0	150.3	0.71	0.65	42.2
11	T1	1158	2.7	1158	2.7	0.435	11.6	LOS A	21.0	150.3	0.68	0.62	34.4
Approach		1196	2.7	1196	2.7	0.435	11.8	LOS A	21.0	150.3	0.68	0.62	35.0
All Vehicles		2633	3.8	2566 N1	3.9	0.538	11.5	LOS A	21.0	150.3	0.54	0.49	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	49.2	LOS E	0.0	0.0	0.95	0.95
P3	North Full Crossing	12	6.6	LOS A	0.0	0.0	0.35	0.35
All Pedestrians		16	17.2	LOS B			0.50	0.50

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1195	4.6	1133	4.7	0.540	5.2	LOS A	14.0	101.9	0.33	0.30	45.6
6	R2	96	4.2	91	4.3	0.540	20.0	LOS B	14.0	101.9	0.74	0.68	40.6
Approach		1291	4.6	1224 N1	4.7	0.540	6.3	LOS A	14.0	101.9	0.36	0.33	44.6
North: Dudley Street													
7	L2	68	8.8	68	8.8	0.225	49.0	LOS D	3.2	24.1	0.88	0.74	21.6
9	R2	78	5.1	78	5.1	0.479	60.1	LOS E	4.2	30.6	0.97	0.76	19.1
Approach		146	6.8	146	6.8	0.479	54.9	LOS D	4.2	30.6	0.92	0.75	20.2
West: Canterbury West													
10	L2	38	2.6	38	2.6	0.435	18.3	LOS B	21.6	154.5	0.73	0.67	41.9
11	T1	1158	2.7	1158	2.7	0.435	11.6	LOS A	21.6	154.5	0.68	0.62	34.4
Approach		1196	2.7	1196	2.7	0.435	11.8	LOS A	21.6	154.5	0.68	0.62	35.0
All Vehicles		2633	3.8	2566 N1	3.9	0.540	11.6	LOS A	21.6	154.5	0.54	0.49	36.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	49.2	LOS E	0.0	0.0	0.95	0.95
P3	North Full Crossing	12	6.6	LOS A	0.0	0.0	0.35	0.35
All Pedestrians		16	17.2	LOS B			0.50	0.50

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Actuated Coordinated Cycle Time = 110 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	117	4.3	117	4.3	0.188	8.1	LOS A	1.8	12.9	0.34	0.64	41.0
3	R2	126	2.4	126	2.4	1.060	233.3	LOS F	13.8	98.4	1.00	1.35	6.8
Approach		243	3.3	243	3.3	1.060	124.9	LOS F	13.8	98.4	0.68	1.01	11.4
East: Canterbury Raod East													
4	L2	49	4.1	46	4.2	0.440	15.2	LOS B	13.8	100.2	0.50	0.48	46.9
5	T1	1123	4.5	1056	4.7	0.440	9.7	LOS A	13.8	100.6	0.50	0.46	45.4
Approach		1172	4.5	1102 N1	4.6	0.440	9.9	LOS A	13.8	100.6	0.50	0.46	45.5
West: Canterbury Road West													
11	T1	1108	2.4	1108	2.4	0.598	2.7	LOS A	7.2	51.8	0.18	0.19	50.8
12	R2	134	3.0	134	3.0	0.598	12.9	LOS A	7.2	51.8	0.41	0.49	44.8
Approach		1242	2.5	1242	2.5	0.598	3.8	LOS A	7.2	51.8	0.21	0.22	49.2
All Vehicles		2657	3.5	2587 N1	3.6	1.060	17.8	LOS B	13.8	100.6	0.38	0.40	35.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	8.8	LOS A	0.0	0.0	0.40	0.40
P2	East Full Crossing	4	49.2	LOS E	0.0	0.0	0.95	0.95
All Pedestrians		5	41.1	LOS E			0.84	0.84

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Existing PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Actuated Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	300	11.7	300	11.7	0.300	21.0	LOS B	10.2	78.7	0.53	0.71	36.0
2	T1	1587	5.3	1587	5.3	1.248	527.5	LOS F	140.2	1025.8	1.00	2.83	6.3
3	R2	238	1.7	238	1.7	0.655	80.4	LOS F	8.7	61.5	0.98	0.79	30.2
Approach		2125	5.8	2125	5.8	1.248	405.9	LOS F	140.2	1025.8	0.93	2.30	7.7
East: Canterbury Road E													
4	L2	110	4.5	110	4.5	0.101	28.9	LOS C	1.9	14.0	0.73	0.71	44.0
5	T1	758	2.8	758	2.8	1.079	232.5	LOS F	55.7	399.3	1.00	1.65	11.1
6	R2	192	4.2	192	4.2	0.811	77.9	LOS F	14.0	101.4	1.00	0.82	30.5
Approach		1060	3.2	1060	3.2	1.079	183.4	LOS F	55.7	399.3	0.97	1.40	15.0
North: King Georges Road													
7	L2	147	4.1	147	4.1	1.372	711.0	LOS F	201.1	1446.1	1.00	2.41	6.2
8	T1	2010	3.0	2010	3.0	1.372	733.0	LOS F	217.2	1559.4	1.00	3.24	4.6
9	R2	260	2.7	260	2.7	1.098	267.0	LOS F	40.3	288.9	1.00	1.41	6.3
Approach		2417	3.0	2417	3.0	1.372	681.5	LOS F	217.2	1559.4	1.00	2.99	4.8
West: Canterbury Road W													
10	L2	157	3.8	156	3.8	0.158	20.4	LOS B	5.2	37.4	0.49	0.68	44.5
11	T1	773	0.8	769	0.8	0.852	50.1	LOS D	26.3	185.1	0.90	0.79	37.4
12	R2	372	4.0	370	4.0	1.099	228.9	LOS F	47.2	341.6	1.00	1.43	12.7
Approach		1302	2.1	1295 N1	2.1	1.099	97.6	LOS F	47.2	341.6	0.88	0.96	25.8
All Vehicles		6904	3.7	6897 N1	3.7	1.372	410.4	LOS F	217.2	1559.4	0.95	2.15	7.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	7	65.4	LOS F	0.0	0.0	0.93	0.93
P2	East Full Crossing	4	48.0	LOS E	0.0	0.0	0.80	0.80
P2S	East Slip/Bypass Lane Crossing	4	10.9	LOS B	0.0	0.0	0.53	0.53
P3	North Full Crossing	3	48.0	LOS E	0.0	0.0	0.80	0.80
P4	West Full Crossing	3	52.1	LOS E	0.0	0.0	0.83	0.83
All Pedestrians		21	47.3	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ Existing PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1097	4.9	1018	5.1	0.597	9.9	LOS A	17.4	126.8	0.52	0.47	45.0
6	R2	136	2.2	126	2.3	0.597	23.4	LOS B	9.6	69.8	0.89	0.79	41.6
Approach		1233	4.6	1144 N1	4.8	0.597	11.4	LOS A	17.4	126.8	0.56	0.51	44.3
North: Haldon Street													
7	L2	59	5.1	59	5.1	0.352	50.4	LOS D	6.5	46.7	0.88	0.77	21.2
9	R2	179	2.8	179	2.8	0.352	52.6	LOS D	6.5	46.7	0.89	0.77	20.7
Approach		238	3.4	238	3.4	0.352	52.0	LOS D	6.5	46.7	0.89	0.77	20.8
West: Canterbury Road w													
10	L2	132	5.3	129	5.3	0.748	36.1	LOS C	30.1	216.8	0.88	0.80	40.8
11	T1	1155	3.1	1128	3.1	0.748	30.4	LOS C	30.5	218.9	0.88	0.80	37.5
Approach		1287	3.3	1257 N1	3.3	0.748	31.0	LOS C	30.5	218.9	0.88	0.80	38.0
All Vehicles		2758	3.9	2639 N1	4.1	0.748	24.4	LOS B	30.5	218.9	0.74	0.67	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	23.4	LOS C	0.0	0.0	0.63	0.63
P4	West Full Crossing	18	47.7	LOS E	0.1	0.1	0.89	0.89
All Pedestrians		20	45.3	LOS E			0.87	0.87

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St Existing PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	154	3.2	154	3.2	0.947	82.1	LOS F	32.5	230.6	1.00	1.22	7.1
2	T1	340	0.9	340	0.9	0.947	79.4	LOS F	32.5	230.6	1.00	1.22	7.3
3	R2	70	1.4	70	1.4	0.947	90.4	LOS F	11.0	77.9	1.00	1.23	6.5
Approach		564	1.6	564	1.6	0.947	81.5	LOS F	32.5	230.6	1.00	1.22	7.2
East: Canterbury Rd													
4	L2	143	25.2	132	25.9	0.706	29.6	LOS C	23.1	175.3	0.75	0.71	35.5
5	T1	1137	4.6	1042	4.8	0.706	23.8	LOS B	24.2	176.3	0.75	0.69	33.7
Approach		1280	6.9	1174 N1	7.1	0.706	24.4	LOS B	24.2	176.3	0.75	0.69	33.9
North: Chapel St													
7	L2	34	0.0	34	0.0	0.436	45.8	LOS D	9.9	69.2	0.90	0.76	4.4
8	T1	459	0.4	459	0.4	0.730	46.0	LOS D	17.6	123.4	0.96	0.83	13.5
9	R2	18	0.0	18	0.0	0.730	51.3	LOS D	17.6	123.4	0.99	0.87	4.0
Approach		511	0.4	511	0.4	0.730	46.2	LOS D	17.6	123.4	0.95	0.83	12.7
West: Canterbury Rd													
10	L2	39	0.0	38	0.0	0.431	9.3	LOS A	5.7	40.8	0.19	0.21	28.7
11	T1	1082	3.2	1059	3.2	0.431	3.8	LOS A	5.7	40.9	0.19	0.19	53.2
12	R2	154	3.2	151	3.2	0.712	38.1	LOS C	5.7	41.3	1.00	0.82	30.0
Approach		1275	3.1	1248 N1	3.1	0.712	8.1	LOS A	5.7	41.3	0.29	0.27	46.4
All Vehicles		3630	3.8	3498 N1	4.0	0.947	31.0	LOS C	32.5	230.6	0.66	0.64	26.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	24.1	LOS C	0.0	0.0	0.63	0.63
P2	East Full Crossing	6	43.4	LOS E	0.0	0.0	0.85	0.85
P3	North Full Crossing	50	10.4	LOS B	0.1	0.1	0.42	0.42
All Pedestrians		67	15.6	LOS B			0.49	0.49

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_Existing PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	130	3.8	130	3.8	0.266	37.8	LOS C	6.6	47.4	0.76	0.74	25.0
2	T1	313	3.8	313	3.8	1.332	585.2	LOS F	110.3	805.1	0.98	2.60	5.5
3	R2	129	7.8	129	7.8	1.332	631.8	LOS F	110.3	805.1	1.00	2.74	2.8
Approach		572	4.7	572	4.7	1.332	471.3	LOS F	110.3	805.1	0.94	2.21	5.4
East: Canterbury Road E													
4	L2	89	9.0	81	9.0	0.759	18.5	LOS B	18.4	133.8	0.58	0.55	44.5
5	T1	1190	3.9	1078	3.9	0.759	13.0	LOS A	18.7	135.2	0.58	0.54	41.2
Approach		1279	4.2	1158 N1	4.2	0.759	13.4	LOS A	18.7	135.2	0.58	0.54	41.6
North: Sharp Street													
7	L2	48	0.0	48	0.0	0.267	52.9	LOS D	4.4	30.7	0.88	0.73	21.1
8	T1	416	1.9	416	1.9	1.255	488.8	LOS F	87.6	623.6	0.99	2.91	6.6
Approach		464	1.7	464	1.7	1.255	443.7	LOS F	87.6	623.6	0.98	2.68	6.8
West: Canterbury Road w													
10	L2	11	9.1	11	9.1	0.821	28.3	LOS B	41.7	300.1	0.88	0.81	40.3
11	T1	931	3.1	913	3.1	0.821	23.9	LOS B	41.7	300.1	0.88	0.82	33.7
12	R2	243	4.1	238	4.1	0.821	51.1	LOS D	14.7	106.1	0.96	1.00	31.0
Approach		1185	3.4	1162 N1	3.4	0.821	29.5	LOS C	41.7	300.1	0.90	0.86	32.8
All Vehicles		3500	3.7	3357 N1	3.8	1.332	156.5	LOS F	110.3	805.1	0.81	1.23	12.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	26.7	LOS C	0.0	0.0	0.67	0.67
P2	East Full Crossing	33	47.8	LOS E	0.1	0.1	0.89	0.89
P3	North Full Crossing	25	15.0	LOS B	0.0	0.0	0.50	0.50
P4	West Full Crossing	7	33.8	LOS D	0.0	0.0	0.75	0.75
All Pedestrians		82	32.2	LOS D			0.71	0.71

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_Existing PM-SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	34	5.9	34	5.9	0.697	40.1	LOS C	13.5	101.4	0.82	0.71	25.5
2	T1	270	8.5	270	8.5	1.545	82.9	LOS F	53.2	383.3	0.83	0.83	23.4
3	R2	138	2.9	138	2.9	1.545	1056.2	LOS F	53.2	383.3	1.00	3.20	1.7
Approach		442	6.6	442	6.6	1.545	383.5	LOS F	53.2	383.3	0.88	1.56	6.7
East: Canterbury Road East													
4	L2	85	4.7	85	4.7	0.548	17.8	LOS B	14.1	102.8	0.45	0.45	44.8
5	T1	1068	4.6	1068	4.6	0.548	11.2	LOS A	14.1	102.8	0.42	0.40	42.7
6	R2	188	4.8	188	4.8	0.811	58.4	LOS E	10.7	77.9	1.00	0.96	28.4
Approach		1341	4.6	1341	4.6	0.811	18.2	LOS B	14.1	102.8	0.50	0.48	38.3
North: Thorncraft Parade													
7	L2	85	8.2	85	8.2	0.581	40.2	LOS C	17.8	130.7	0.85	0.76	25.3
8	T1	421	4.5	421	4.5	2.571	929.7	LOS F	187.3	1361.3	0.90	2.23	3.6
9	R2	201	4.5	201	4.5	2.571	2904.1	LOS F	187.3	1361.3	1.00	5.49	0.6
Approach		707	5.0	707	5.0	2.571	1384.1	LOS F	187.3	1361.3	0.92	2.98	2.0
West: Canterbury Road West													
10	L2	135	3.0	129	2.8	0.673	43.1	LOS D	29.7	212.4	0.96	0.86	33.9
11	T1	1048	2.7	1004	2.6	0.673	34.1	LOS C	29.7	212.4	0.92	0.82	27.4
Approach		1183	2.7	1134 N1	2.6	0.673	35.1	LOS C	29.7	212.4	0.92	0.83	28.6
All Vehicles		3673	4.3	3623 N1	4.4	2.571	334.6	LOS F	187.3	1361.3	0.76	1.21	6.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	16.5	LOS B	0.0	0.0	0.53	0.53
P2	East Full Crossing	32	35.3	LOS D	0.1	0.1	0.77	0.77
P3	North Full Crossing	8	24.7	LOS C	0.0	0.0	0.64	0.64
P4	West Full Crossing	32	33.0	LOS D	0.1	0.1	0.74	0.74
All Pedestrians		84	30.8	LOS D			0.71	0.71

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ Existing PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	97	2.1	97	2.1	0.506	49.5	LOS D	7.2	51.7	0.92	0.86	23.8
2	T1	384	4.2	384	4.2	1.199	362.9	LOS F	61.6	446.6	0.98	2.07	8.6
3	R2	394	1.0	394	1.0	1.404	778.1	LOS F	112.5	794.4	1.00	2.56	2.3
Approach		875	2.5	875	2.5	1.404	515.1	LOS F	112.5	794.4	0.98	2.16	4.7
East: Canterbury Road E													
4	L2	189	1.6	189	1.6	0.826	35.3	LOS C	29.7	212.5	0.86	0.83	38.9
5	T1	1085	2.9	1085	2.9	0.826	32.7	LOS C	31.9	228.5	0.89	0.82	29.0
Approach		1274	2.7	1274	2.7	0.826	33.0	LOS C	31.9	228.5	0.89	0.82	31.0
North: Beamish Street													
7	L2	48	12.5	48	12.5	1.192	391.6	LOS F	38.0	282.3	1.00	1.73	4.5
8	T1	352	5.7	352	5.7	1.192	407.6	LOS F	38.0	282.3	1.00	1.87	7.8
9	R2	82	14.6	82	14.6	0.428	62.6	LOS E	4.6	36.5	0.95	0.77	19.9
Approach		482	7.9	482	7.9	1.192	347.3	LOS F	38.0	282.3	0.99	1.67	7.9
West: Canterbury Road w													
10	L2	79	11.4	73	11.2	0.560	30.4	LOS C	26.3	188.5	0.83	0.76	40.8
11	T1	903	1.6	838	1.5	0.560	23.5	LOS B	26.3	188.5	0.81	0.72	32.8
12	R2	191	1.6	177	1.5	0.734	60.5	LOS E	9.6	68.0	0.95	0.95	29.2
Approach		1173	2.2	1088 N1	2.2	0.734	30.0	LOS C	26.3	188.5	0.83	0.76	32.4
All Vehicles		3804	3.2	3719 N1	3.2	1.404	186.3	LOS F	112.5	794.4	0.91	1.23	10.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	6	28.7	LOS C	0.0	0.0	0.69	0.69
P2	East Full Crossing	22	54.2	LOS E	0.1	0.1	0.95	0.95
P3	North Full Crossing	13	18.2	LOS B	0.0	0.0	0.55	0.55
P4	West Full Crossing	52	50.5	LOS E	0.2	0.2	0.92	0.92
All Pedestrians		93	45.5	LOS E			0.86	0.86

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_Existing PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Actuated Coordinated Cycle Time = 120 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1661	4.6	1661	4.6	0.702	5.2	LOS A	27.8	201.9	0.43	0.40	50.2
6	R2	431	4.6	431	4.6	0.844	22.1	LOS B	15.6	113.9	0.91	0.86	39.7
Approach		2092	4.6	2092	4.6	0.844	8.7	LOS A	27.8	201.9	0.53	0.49	45.9
North: Wonga Street													
7	L2	250	8.4	250	8.4	0.380	35.0	LOS C	10.6	79.6	0.76	0.77	25.8
9	R2	115	4.3	115	4.3	0.638	64.9	LOS E	6.8	49.1	0.98	0.79	18.1
Approach		365	7.1	365	7.1	0.638	44.5	LOS D	10.6	79.6	0.83	0.78	22.8
West: Canterbury Road West													
10	L2	61	3.3	53	3.4	0.643	34.3	LOS C	28.1	201.6	0.87	0.78	37.7
11	T1	1312	2.7	1134	2.8	0.643	25.4	LOS B	28.1	201.6	0.77	0.69	32.7
Approach		1373	2.7	1187 N1	2.8	0.643	25.8	LOS B	28.1	201.6	0.77	0.70	33.1
All Vehicles		3830	4.2	3643 N1	4.4	0.844	17.9	LOS B	28.1	201.9	0.64	0.59	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	19.8	LOS B	0.0	0.0	0.58	0.58
P4	West Full Crossing	20	54.2	LOS E	0.1	0.1	0.95	0.95
All Pedestrians		28	44.4	LOS E			0.84	0.84

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.

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MOVEMENT SUMMARY

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Site: 101 [Canterbury Road - Charles St Existing PM]

New Site
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1743	7.9	1743	7.9	0.588	3.9	LOS A	1.7	12.4	0.38	0.03	10.1
6	R2	52	10.2	52	10.2	0.588	31.5	LOS C	1.7	12.4	1.00	0.08	41.0
Approach		1795	7.9	1795	7.9	0.588	4.7	NA	1.7	12.4	0.40	0.03	16.3
North: Charles St													
7	L2	55	0.0	55	0.0	2.166	1198.0	LOS F	21.9	153.3	1.00	3.72	1.2
9	R2	1	0.0	1	0.0	2.166	15761.9	LOS F	21.9	153.3	1.00	3.72	1.2
Approach		56	0.0	56	0.0	2.166	1472.8	LOS F	21.9	153.3	1.00	3.72	1.2
West: Canterbury Road W													
10	L2	76	8.3	67	9.1	0.772	6.7	LOS A	27.8	209.0	0.05	0.06	56.7
11	T1	1504	8.0	1337	8.8	0.772	0.5	LOS A	32.1	241.8	0.03	0.03	58.3
Approach		1580	8.1	1405 N1	8.8	0.772	0.8	NA	32.1	241.8	0.03	0.03	58.1
All Vehicles		3431	7.9	3255 N1	8.3	2.166	28.2	NA	32.1	241.8	0.25	0.09	19.4

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.

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

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

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

Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %

Number of Iterations: 10 (maximum specified: 10)

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

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MOVEMENT SUMMARY

Site: 101 [Canterbury Road - Close St - Existing PM]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road E
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: RoadName													
1	L2	29	0.0	29	0.0	0.718	129.9	LOS F	2.3	16.4	0.96	1.13	8.4
3	R2	1	0.0	1	0.0	0.718	1862.1	LOS F	2.3	16.4	0.96	1.13	8.4
Approach		31	0.0	31	0.0	0.718	189.7	LOS F	2.3	16.4	0.96	1.13	8.4
East: Canterbury Road E													
4	L2	12	0.0	12	0.0	0.640	5.5	LOS A	0.0	0.0	0.00	0.01	57.0
5	T1	1743	7.9	1743	7.9	0.640	0.0	LOS A	11.3	84.4	0.00	0.00	59.2
Approach		1755	7.8	1755	7.8	0.640	0.1	NA	11.3	84.4	0.00	0.00	59.1
West: Canterbury Road W													
11	T1	1504	8.0	1320	8.9	0.734	0.3	LOS A	1.6	12.4	0.01	0.00	43.3
12	R2	1	0.0	1	0.0	0.734	47.3	LOS D	1.6	12.4	0.02	0.00	55.0
Approach		1505	8.0	1321 N1	8.9	0.734	0.3	NA	1.6	12.4	0.01	0.00	43.5
All Vehicles		3291	7.8	3106 N1	8.3	0.734	2.1	NA	11.3	84.4	0.01	0.01	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.

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.

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

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

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

Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %

Number of Iterations: 10 (maximum specified: 10)

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

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_Existing PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Actuated Coordinated Cycle Time = 120 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	14	0.0	14	0.0	0.740	26.2	LOS B	33.3	250.1	0.77	0.72	44.7
5	T1	1317	8.5	1317	8.5	0.740	24.8	LOS B	33.3	250.1	0.82	0.75	33.4
6	R2	18	5.6	18	5.6	0.740	37.9	LOS C	27.1	203.5	0.88	0.79	38.3
Approach		1349	8.4	1349	8.4	0.740	25.0	LOS B	33.3	250.1	0.82	0.75	33.7
NorthEast: Jeffrey Street													
24b	L3	6	0.0	6	0.0	0.756	75.1	LOS F	9.4	69.5	0.99	0.84	27.1
24	L2	9	0.0	9	0.0	0.756	74.2	LOS F	9.4	69.5	0.99	0.84	27.0
26a	R1	301	8.0	301	8.0	0.756	68.4	LOS E	9.4	69.5	0.99	0.82	18.8
26b	R3	1	0.0	1	0.0	0.756	65.7	LOS E	9.3	69.3	0.99	0.81	28.8
Approach		317	7.6	317	7.6	0.756	68.7	LOS E	9.4	69.5	0.99	0.82	19.3
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.204	61.1	LOS E	2.3	16.4	0.92	0.73	29.9
7	L2	41	0.0	41	0.0	0.204	60.2	LOS E	2.3	16.4	0.92	0.73	29.8
7a	L1	1	0.0	1	0.0	0.204	58.8	LOS E	2.3	16.4	0.92	0.73	30.1
9	R2	108	8.3	108	8.3	0.694	67.5	LOS E	6.5	48.4	0.99	0.79	18.8
Approach		151	6.0	151	6.0	0.694	65.4	LOS E	6.5	48.4	0.97	0.77	22.5
West: Canterbury Road w													
10	L2	16	6.3	14	6.9	0.922	51.4	LOS D	20.6	155.0	1.00	0.97	25.6
10a	L1	275	8.0	242	8.9	0.922	50.2	LOS D	20.6	155.0	1.00	0.97	25.8
11	T1	1217	8.1	1069	8.9	0.922	45.2	LOS D	20.6	155.0	1.00	0.98	26.8
Approach		1508	8.0	1325 N1	8.9	0.922	46.2	LOS D	20.6	155.0	1.00	0.98	26.6
All Vehicles		3325	8.0	3142 N1	8.5	0.922	40.3	LOS C	33.3	250.1	0.92	0.85	27.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 3.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	10.9	LOS B	0.1	0.1	0.43	0.43
P2	East Full Crossing	20	54.2	LOS E	0.1	0.1	0.95	0.95
P6	NorthEast Full Crossing	68	10.2	LOS B	0.1	0.1	0.58	0.58
P3	North Full Crossing	108	26.1	LOS C	0.2	0.2	0.66	0.66
P4	West Full Crossing	68	54.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		316	28.0	LOS C			0.69	0.69

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

2021 FUTURE BASE

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.325	8.9	LOS A	6.0	45.1	0.21	0.19	55.4
5	T1	1115	8.5	938	9.1	0.325	1.9	LOS A	6.0	45.1	0.12	0.11	58.2
6	R2	90	8.9	76	9.5	0.444	6.5	LOS A	0.2	1.5	0.04	0.59	52.5
Approach		1206	8.5	1015 N1	9.1	0.444	2.3	LOS A	6.0	45.1	0.11	0.14	57.7
North: Punchbowl Road													
7	L2	21	9.5	21	9.5	0.897	84.8	LOS F	16.6	117.3	1.00	0.99	16.1
8	T1	8	12.5	8	12.5	0.897	79.2	LOS F	16.6	117.3	1.00	0.99	25.2
9	R2	375	8.5	375	8.5	0.897	85.5	LOS F	16.6	117.3	1.00	1.00	24.7
Approach		404	8.7	404	8.7	0.897	85.3	LOS F	16.6	120.6	1.00	1.00	24.3
West: Canterbury Road West													
10	L2	142	8.5	142	8.5	0.081	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1368	8.0	1368	8.0	0.472	5.3	LOS A	15.6	116.4	0.37	0.34	51.2
Approach		1510	8.1	1510	8.1	0.472	5.4	LOS A	15.6	116.4	0.33	0.36	51.7
All Vehicles		3120	8.3	2929 N1	8.9	0.897	15.3	LOS B	16.6	120.6	0.35	0.37	44.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road 2021 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	128	11.7	128	11.7	4.056	5531.3	LOS F	195.9	1461.8	1.00	3.20	0.3
3	R2	312	4.5	312	4.5	4.056	5535.5	LOS F	195.9	1461.8	1.00	3.56	0.3
Approach		440	6.6	440	6.6	4.056	5534.3	LOS F	195.9	1461.8	1.00	3.45	0.3
East: Canterbury Road E													
4	L2	179	3.4	156	3.6	0.567	39.2	LOS C	22.3	163.2	0.90	0.85	28.0
5	T1	1037	5.9	908	6.4	0.567	37.5	LOS C	22.3	163.2	0.94	0.86	9.2
Approach		1216	5.5	1065 N1	6.0	0.567	37.8	LOS C	22.3	163.2	0.93	0.86	13.6
West: Canterbury Road W													
11	T1	1487	7.1	1487	7.1	0.977	85.4	LOS F	82.2	610.1	0.75	1.10	15.9
12	R2	135	11.9	135	11.9	0.228	17.1	LOS B	4.2	32.2	0.66	0.75	42.9
Approach		1622	7.5	1622	7.5	0.977	79.7	LOS F	82.2	610.1	0.74	1.07	17.6
All Vehicles		3278	6.6	3127 N1	6.9	4.056	833.1	LOS F	195.9	1461.8	0.84	1.34	1.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	21.7	LOS C	0.0	0.0	0.56	0.56
P4	West Full Crossing	15	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		18	57.1	LOS E			0.89	0.89

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021 Base AM - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h

East: Canterbury East													
5	T1	1127	8.6	1067	8.9	0.891	32.5	LOS C	36.8	276.8	0.75	0.83	16.8
6	R2	127	2.4	120	2.4	0.891	62.1	LOS E	31.2	232.0	1.00	1.16	23.9
Approach		1254	8.0	1187 N1	8.2	0.891	35.5	LOS C	36.8	276.8	0.78	0.87	18.3
North: Rosmore Avenue													
7	L2	123	3.3	123	3.3	0.148	24.6	LOS B	4.4	31.8	0.62	0.71	30.1
9	R2	140	2.9	140	2.9	3.590	4701.9	LOS F	93.6	671.6	1.00	3.80	0.4
Approach		263	3.0	263	3.0	3.590	2514.4	LOS F	93.6	671.6	0.82	2.35	0.7
West: Canterbury West													
10	L2	220	1.4	201	1.4	0.965	80.1	LOS F	22.3	163.2	1.00	1.12	18.5
11	T1	1412	6.4	1290	6.6	0.965	73.2	LOS F	22.3	163.2	1.00	1.14	5.1
Approach		1632	5.8	1491 N1	5.9	0.965	74.1	LOS F	22.3	163.2	1.00	1.14	7.6
All Vehicles		3149	6.4	2941 N1	6.9	3.590	276.8	LOS F	93.6	671.6	0.89	1.14	3.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	28.3	LOS C	0.0	0.0	0.64	0.64
All Pedestrians		7	59.0	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021 Base AM - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	348	3.4	348	3.4	0.420	16.4	LOS B	10.4	75.1	0.48	0.70	34.7
3	R2	154	5.8	154	5.8	0.916	87.0	LOS F	12.1	89.2	0.90	1.06	14.9
Approach		502	4.2	502	4.2	0.916	38.0	LOS C	12.1	89.2	0.61	0.81	24.7
East: Canterbury Road E													

4	L2	85	9.4	78	9.7	0.892	81.8	LOS F	31.6	235.1	1.00	0.96	21.9
5	T1	865	6.4	798	6.6	0.892	68.8	LOS E	32.2	238.1	1.00	0.96	11.2
Approach		950	6.6	876 N1	6.9	0.892	70.0	LOS E	32.2	238.1	1.00	0.96	12.6
West: Canterbury Road w													
11	T1	1110	8.6	1052	8.7	0.823	6.0	LOS A	24.5	177.2	0.35	0.34	40.1
12	R2	455	2.9	431	2.9	0.823	26.9	LOS B	24.5	177.2	0.80	0.90	35.3
Approach		1565	6.9	1483 N1	7.0	0.823	12.1	LOS A	24.5	177.2	0.48	0.50	37.2
All Vehicles		3017	6.4	2861 N1	6.7	0.916	34.4	LOS C	32.2	238.1	0.66	0.70	22.9

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	44.8	LOS E	0.0	0.0	0.80	0.80
P2	East Full Crossing	19	44.0	LOS E	0.1	0.1	0.79	0.79
All Pedestrians		21	44.1	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	972	8.5	892	8.8	0.379	1.6	LOS A	3.3	25.2	0.14	0.16	54.1
6	R2	73	8.2	67	8.5	0.379	8.4	LOS A	3.2	24.2	0.25	0.30	49.0
Approach		1045	8.5	959 N1	8.8	0.379	2.1	LOS A	3.3	25.2	0.15	0.17	53.1
North: Dudley Street													
7	L2	110	8.2	110	8.2	0.183	37.0	LOS C	5.2	39.2	0.73	0.72	25.0
9	R2	63	7.9	63	7.9	0.564	77.1	LOS F	4.4	33.1	1.00	0.77	16.2
Approach		173	8.1	173	8.1	0.564	51.6	LOS D	5.2	39.2	0.83	0.74	20.9
West: Canterbury West													
10	L2	9	11.1	9	11.2	0.607	19.4	LOS B	17.3	129.7	0.47	0.43	41.3
11	T1	1218	8.0	1178	8.1	0.607	16.0	LOS B	21.2	159.0	0.52	0.48	29.7
Approach		1227	8.1	1187 N1	8.2	0.607	16.1	LOS B	21.2	159.0	0.52	0.47	29.9
All Vehicles		2445	8.3	2319 N1	8.7	0.607	12.9	LOS A	21.2	159.0	0.39	0.37	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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	19.0	LOS B	0.0	0.0	0.52	0.52
All Pedestrians		16	30.3	LOS D			0.63	0.63

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	84	8.3	84	8.3	0.085	10.0	LOS A	1.7	12.6	0.34	0.63	39.4
3	R2	45	8.9	45	8.9	0.601	81.6	LOS F	3.3	24.7	1.00	0.77	15.6
Approach		129	8.5	129	8.5	0.601	35.0	LOS C	3.3	24.7	0.57	0.68	25.7
East: Canterbury Raod East													
4	L2	106	8.5	96	8.8	0.605	38.5	LOS C	24.6	185.2	0.83	0.76	35.9
5	T1	940	8.5	854	8.8	0.605	32.8	LOS C	24.9	187.3	0.83	0.75	28.8
Approach		1046	8.5	950 N1	8.8	0.605	33.4	LOS C	24.9	187.3	0.83	0.75	29.9
West: Canterbury Road West													
11	T1	1150	5.3	1146	5.3	0.457	2.2	LOS A	7.9	57.8	0.20	0.21	52.2
12	R2	111	8.1	111	8.1	0.457	10.2	LOS A	7.9	57.8	0.36	0.41	47.4
Approach		1261	5.6	1257 N1	5.6	0.457	2.9	LOS A	7.9	57.8	0.21	0.22	51.1
All Vehicles		2436	7.0	2336 N1	7.3	0.605	17.1	LOS B	24.9	187.3	0.48	0.46	35.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	27.0	LOS C	0.0	0.0	0.62	0.62
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	56.7	LOS E			0.89	0.89

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	159	21.4	159	21.4	0.161	17.2	LOS B	4.5	37.4	0.45	0.66	41.4
2	T1	2766	7.6	2766	7.6	1.120	289.1	LOS F	172.3	1284.3	1.00	2.23	13.6
3	R2	209	3.3	209	3.3	0.745	79.0	LOS F	7.5	54.0	1.00	0.86	26.2
Approach		3134	8.0	3134	8.0	1.120	261.3	LOS F	172.3	1284.3	0.97	2.05	14.2
East: Canterbury Road E													
4	L2	92	9.8	92	9.8	1.122	275.9	LOS F	70.0	513.3	1.00	1.63	9.6
5	T1	812	4.4	812	4.4	1.122	288.1	LOS F	78.4	570.0	1.00	1.94	4.5
6	R2	206	9.7	206	9.7	0.937	98.3	LOS F	8.5	64.7	1.00	1.10	25.4
Approach		1110	5.9	1110	5.9	1.122	251.9	LOS F	78.4	570.0	1.00	1.76	7.2
North: King Georges Road													
7	L2	332	7.5	332	7.5	0.762	36.8	LOS C	36.1	270.5	0.86	0.90	40.7
8	T1	1731	9.1	1731	9.1	0.762	30.7	LOS C	37.3	281.2	0.87	0.82	44.0
9	R2	199	5.0	199	5.0	1.110	289.5	LOS F	32.6	238.0	1.00	1.69	8.6
Approach		2262	8.5	2262	8.5	1.110	54.4	LOS D	37.3	281.2	0.88	0.91	35.7
West: Canterbury Road W													
10	L2	96	10.4	95	10.5	0.138	33.3	LOS C	4.1	31.5	0.67	0.70	41.8
11	T1	586	7.5	579	7.5	0.905	75.6	LOS F	24.2	180.3	1.00	1.08	25.5
12	R2	112	21.4	111	21.5	0.815	87.7	LOS F	4.2	35.1	1.00	0.90	26.0
Approach		794	9.8	785 N1	9.9	0.905	72.2	LOS F	24.2	180.3	0.96	1.01	27.3
All Vehicles		7300	8.0	7291 N1	8.0	1.122	175.3	LOS F	172.3	1284.3	0.95	1.54	17.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1596.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	56.7	LOS E	0.0	0.0	0.90	0.90
P2	East Full Crossing	2	27.0	LOS C	0.0	0.0	0.62	0.62
P3	North Full Crossing	1	58.5	LOS E	0.0	0.0	0.91	0.91
P4	West Full Crossing	1	29.6	LOS C	0.0	0.0	0.65	0.65
All Pedestrians		5	39.8	LOS D			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1004	4.8	936	4.9	0.530	4.1	LOS A	7.7	57.3	0.21	0.22	52.5
6	R2	89	11.2	83	11.4	0.530	18.1	LOS B	7.7	57.3	0.41	0.51	44.5
Approach		1093	5.3	1019 N1	5.4	0.530	5.2	LOS A	7.7	57.3	0.22	0.25	51.1
North: Haldon Street													
7	L2	61	4.9	61	4.9	0.938	98.4	LOS F	9.5	70.6	1.00	1.12	13.7
9	R2	127	8.7	127	8.7	0.938	99.5	LOS F	9.5	70.6	1.00	1.13	13.6
Approach		188	7.4	188	7.4	0.938	99.1	LOS F	9.5	70.6	1.00	1.13	13.6
West: Canterbury Road w													
10	L2	97	8.2	97	8.2	0.753	30.1	LOS C	39.6	292.1	0.82	0.77	37.9
11	T1	1468	5.9	1468	5.9	0.753	24.4	LOS B	40.0	293.9	0.82	0.76	30.1
Approach		1565	6.0	1565	6.0	0.753	24.8	LOS B	40.0	293.9	0.82	0.76	30.9
All Vehicles		2846	5.8	2772 N1	6.0	0.938	22.7	LOS B	40.0	293.9	0.61	0.60	33.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	17.5	LOS B	0.0	0.0	0.50	0.50
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	59.5	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2021 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	118	8.5	118	8.5	0.894	62.9	LOS E	32.8	237.7	0.93	0.98	9.1
2	T1	446	2.5	446	2.5	0.894	63.0	LOS E	32.8	237.7	0.94	1.00	8.6
3	R2	107	7.5	107	7.5	0.894	83.6	LOS F	16.7	122.0	1.00	1.09	7.0
Approach		671	4.3	671	4.3	0.894	66.3	LOS E	32.8	237.7	0.95	1.01	8.4
East: Canterbury Rd													
4	L2	83	12.0	77	12.2	0.865	65.3	LOS E	33.7	248.5	1.00	0.94	23.5
5	T1	969	5.0	894	5.0	0.865	66.7	LOS E	34.9	254.8	1.00	0.94	19.0
Approach		1052	5.5	970 N1	5.6	0.865	66.6	LOS E	34.9	254.8	1.00	0.94	19.3
North: Chapel St													
7	L2	41	0.0	41	0.0	0.297	39.1	LOS C	9.6	68.2	0.78	0.68	5.0
8	T1	351	2.6	351	2.6	0.497	43.4	LOS D	12.7	91.0	0.85	0.73	14.1
9	R2	18	0.0	18	0.0	0.497	52.6	LOS D	12.7	91.0	0.91	0.77	3.9
Approach		410	2.2	410	2.2	0.497	43.4	LOS D	12.7	91.0	0.85	0.73	13.0
West: Canterbury Rd													
10	L2	54	0.0	54	0.0	0.710	25.3	LOS B	31.6	231.0	0.67	0.63	23.3
11	T1	1317	5.4	1317	5.4	0.710	18.7	LOS B	31.6	231.0	0.62	0.58	37.3
12	R2	180	7.8	180	7.8	0.448	42.5	LOS C	8.7	64.8	0.74	0.76	28.4
Approach		1551	5.5	1551	5.5	0.710	21.7	LOS B	31.6	231.0	0.64	0.60	34.9
All Vehicles		3684	4.9	3602 N1	5.0	0.894	44.6	LOS D	34.9	254.8	0.82	0.78	21.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	41.7	LOS E	0.0	0.0	0.77	0.77
P2	East Full Crossing	6	37.2	LOS D	0.0	0.0	0.73	0.73
P3	North Full Crossing	50	17.5	LOS B	0.1	0.1	0.50	0.50
All Pedestrians		67	23.3	LOS C			0.57	0.57

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	73	6.8	73	6.8	0.371	52.9	LOS D	8.8	65.2	0.89	0.76	21.2
2	T1	357	6.4	357	6.4	1.854	1224.0	LOS F	200.9	1518.4	0.97	2.98	2.7
3	R2	173	13.9	173	13.9	1.854	1572.3	LOS F	200.9	1518.4	1.00	3.63	1.1
Approach		603	8.6	603	8.6	1.854	1182.1	LOS F	200.9	1518.4	0.97	2.90	2.3
East: Canterbury Road E													
4	L2	79	16.5	72	16.7	0.897	70.8	LOS F	35.0	263.0	1.00	1.04	26.8
5	T1	949	7.1	867	7.2	0.897	65.3	LOS E	36.2	269.0	1.00	1.05	18.5
Approach		1028	7.8	939 N1	7.9	0.897	65.7	LOS E	36.2	269.0	1.00	1.05	19.3
North: Sharp Street													
7	L2	71	5.6	71	5.6	0.442	69.8	LOS E	5.2	37.8	0.98	0.77	17.4
8	T1	404	4.7	404	4.7	2.079	1957.4	LOS F	197.9	1441.4	1.00	5.08	1.8
Approach		475	4.8	475	4.8	2.079	1675.3	LOS F	197.9	1441.4	1.00	4.43	1.9
West: Canterbury Road w													
10	L2	6	0.0	6	0.0	0.806	16.2	LOS B	35.3	258.4	0.57	0.54	46.7
11	T1	1266	5.5	1266	5.5	0.806	13.8	LOS A	35.3	258.4	0.62	0.63	40.9
12	R2	299	9.7	299	9.7	0.806	31.0	LOS C	24.0	179.3	0.79	0.96	38.0
Approach		1571	6.2	1571	6.2	0.806	17.1	LOS B	35.3	258.4	0.65	0.69	40.0
All Vehicles		3677	6.9	3588 N1	7.1	2.079	445.1	LOS F	200.9	1518.4	0.84	1.65	4.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	42.5	LOS E	0.1	0.1	0.78	0.78
P2	East Full Crossing	33	63.3	LOS F	0.1	0.1	0.95	0.95
P3	North Full Crossing	25	10.4	LOS B	0.0	0.0	0.39	0.39
P4	West Full Crossing	7	48.1	LOS E	0.0	0.0	0.83	0.83
All Pedestrians		82	41.5	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021 Base AM-SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	56	8.9	56	8.9	1.062	224.9	LOS F	42.6	320.2	1.00	1.86	7.1
2	T1	633	8.5	633	8.5	2.354	1651.4	LOS F	247.3	1855.6	1.00	4.28	2.1
3	R2	54	7.4	54	7.4	2.354	2487.8	LOS F	247.3	1855.6	1.00	5.69	0.7
Approach		743	8.5	743	8.5	2.354	1604.6	LOS F	247.3	1855.6	1.00	4.20	2.0
East: Canterbury Road East													
4	L2	36	8.3	34	8.5	0.434	12.0	LOS A	7.6	57.2	0.25	0.25	48.7
5	T1	1012	8.5	960	8.7	0.434	7.1	LOS A	9.2	69.3	0.27	0.26	47.8
6	R2	274	8.4	260	8.6	1.162	317.3	LOS F	47.5	357.0	1.00	1.51	8.3
Approach		1322	8.5	1254 N1	8.6	1.162	71.5	LOS F	47.5	357.0	0.42	0.52	18.2
North: Thorncraft Parade													
7	L2	173	8.7	173	8.7	0.576	53.0	LOS D	11.9	89.3	0.91	0.96	20.9
8	T1	243	8.6	243	8.6	2.548	2152.2	LOS F	147.9	1110.3	0.98	3.80	1.6
9	R2	75	8.0	75	8.0	2.548	2831.7	LOS F	147.9	1110.3	1.00	4.72	0.6
Approach		491	8.6	491	8.6	2.548	1516.3	LOS F	147.9	1110.3	0.96	2.94	1.7
West: Canterbury Road West													
10	L2	63	0.0	60	0.0	0.895	70.1	LOS E	47.5	352.4	1.00	1.00	27.1
11	T1	1452	8.1	1380	7.7	0.895	57.4	LOS E	57.3	427.5	1.00	0.99	20.2
Approach		1515	7.7	1440 N1	7.4	0.895	57.9	LOS E	57.3	427.5	1.00	0.99	20.6
All Vehicles		4071	8.2	3927 N1	8.5	2.548	537.2	LOS F	247.3	1855.6	0.81	1.69	4.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	14.2	LOS B	0.0	0.0	0.45	0.45
P2	East Full Crossing	32	44.9	LOS E	0.1	0.1	0.80	0.80
P3	North Full Crossing	8	24.0	LOS C	0.0	0.0	0.59	0.59
P4	West Full Crossing	32	42.5	LOS E	0.1	0.1	0.78	0.78
All Pedestrians		84	37.6	LOS D			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	106	4.7	106	4.7	2.615	2942.2	LOS F	217.4	1585.4	1.00	4.12	0.6
2	T1	671	4.9	671	4.9	2.615	2943.8	LOS F	221.2	1613.5	1.00	4.85	1.2
3	R2	376	4.0	376	4.0	2.290	2381.8	LOS F	202.5	1466.2	1.00	4.25	0.8
Approach		1153	4.6	1153	4.6	2.615	2760.4	LOS F	221.2	1613.5	1.00	4.59	1.0
East: Canterbury Road E													
4	L2	239	3.8	225	3.8	0.886	65.1	LOS E	35.9	261.5	1.00	1.03	28.5
5	T1	818	5.7	771	5.8	0.886	59.1	LOS E	35.9	261.5	1.00	1.01	20.5
Approach		1057	5.3	997 N1	5.3	0.886	60.5	LOS E	35.9	261.5	1.00	1.01	22.8
North: Beamish Street													
7	L2	48	18.8	48	18.8	2.027	1870.8	LOS F	124.6	940.5	1.00	2.12	0.9
8	T1	454	6.8	454	6.8	2.027	1882.9	LOS F	124.6	940.5	1.00	3.37	1.8
9	R2	75	28.0	75	28.0	0.347	58.0	LOS E	4.4	38.5	0.90	0.76	19.6
Approach		577	10.6	577	10.6	2.027	1644.7	LOS F	124.6	940.5	0.99	2.93	1.9
West: Canterbury Road w													
10	L2	108	13.0	101	12.5	1.179	401.3	LOS F	102.0	750.7	1.00	2.59	7.6
11	T1	1253	5.0	1175	4.8	1.179	401.1	LOS F	103.0	750.7	1.00	2.66	4.0
12	R2	255	5.9	239	5.7	0.447	67.4	LOS E	15.5	113.9	1.00	0.97	26.5
Approach		1616	5.7	1514 N1	5.5	1.179	348.5	LOS F	103.0	750.7	1.00	2.39	5.5
All Vehicles		4403	6.0	4241 N1	6.2	2.615	1112.8	LOS F	221.2	1613.5	1.00	2.74	2.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	43.2	LOS E	0.0	0.0	0.79	0.79
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	16.0	LOS B	0.0	0.0	0.48	0.48
P4	West Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		40	46.9	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1363	8.5	1299	8.5	0.407	2.1	LOS A	9.0	67.8	0.23	0.21	55.6
6	R2	439	8.4	418	8.4	1.001	86.9	LOS F	40.0	300.5	1.00	1.10	16.7
Approach		1802	8.5	1717 N1	8.5	1.001	22.7	LOS B	40.0	300.5	0.42	0.43	28.6
North: Wonga Street													
7	L2	310	8.4	310	8.4	1.137	340.7	LOS F	58.9	441.7	1.00	1.82	4.8
9	R2	94	8.5	94	8.5	1.253	531.4	LOS F	22.8	171.4	1.00	2.08	3.2
Approach		404	8.4	404	8.4	1.253	385.1	LOS F	58.9	441.7	1.00	1.88	4.3
West: Canterbury Road West													
10	L2	57	8.8	52	8.9	1.137	300.7	LOS F	109.0	816.0	1.00	2.31	10.0
11	T1	1686	8.0	1541	8.1	1.137	304.3	LOS F	109.0	816.0	1.00	2.33	5.5
Approach		1743	8.0	1593 N1	8.1	1.137	304.2	LOS F	109.0	816.0	1.00	2.33	5.6
All Vehicles		3949	8.3	3714 N1	8.8	1.253	182.8	LOS F	109.0	816.0	0.73	1.40	8.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	13.3	LOS B	0.0	0.0	0.44	0.44
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	49.6	LOS E			0.81	0.81

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\TPA Land Use - Base\Base Scenario 2021_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.667	18.4	LOS B	31.7	238.0	0.60	0.57	49.3
5	T1	1090	8.5	1090	8.5	0.667	16.1	LOS B	31.7	238.0	0.69	0.63	39.4
6	R2	36	8.3	36	8.3	0.667	36.0	LOS C	11.2	84.5	0.96	0.85	38.8
Approach		1139	8.4	1139	8.4	0.667	16.8	LOS B	31.7	238.0	0.69	0.64	39.5
NorthEast: Jeffrey Street													
24b	L3	22	9.1	22	9.1	1.691	1304.1	LOS F	54.9	410.6	1.00	2.88	2.6
24	L2	4	0.0	4	0.0	1.691	1303.0	LOS F	54.9	410.6	1.00	2.88	2.6
26a	R1	238	8.0	238	8.0	1.691	1301.5	LOS F	54.9	410.6	1.00	2.87	1.4
26b	R3	1	0.0	1	0.0	1.691	1302.8	LOS F	53.7	401.5	1.00	2.85	2.6
Approach		265	7.9	265	7.9	1.691	1301.7	LOS F	54.9	410.6	1.00	2.87	1.5
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.582	74.7	LOS F	6.4	45.9	1.00	0.78	26.9
7	L2	54	0.0	54	0.0	0.582	73.7	LOS F	6.4	45.9	1.00	0.78	26.8
7a	L1	1	0.0	1	0.0	0.582	72.4	LOS F	6.4	45.9	1.00	0.78	27.1
9	R2	117	7.7	117	7.7	0.582	75.3	LOS F	6.4	45.9	1.00	0.78	17.5
Approach		173	5.2	173	5.2	0.582	74.8	LOS F	6.4	45.9	1.00	0.78	21.0
West: Canterbury Road w													
10	L2	20	10.0	19	10.0	0.897	41.4	LOS C	20.7	155.0	0.95	0.95	29.2
10a	L1	169	8.3	161	8.2	0.897	40.2	LOS C	20.7	155.0	0.95	0.95	29.6
11	T1	1767	8.0	1688	8.0	0.897	35.2	LOS C	20.7	155.0	0.95	0.94	30.6
Approach		1956	8.1	1868 N1	8.0	0.897	35.7	LOS C	20.7	155.0	0.95	0.94	30.5
All Vehicles		3533	8.0	3445 N1	8.2	1.691	128.8	LOS F	54.9	410.6	0.87	0.98	12.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1050.7 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	6.6	LOS A	0.1	0.1	0.31	0.31
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	6.6	LOS A	0.1	0.1	0.31	0.31

P3	North Full Crossing	108	15.6	LOS B	0.2	0.2	0.47	0.47
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	25.8	LOS C			0.55	0.55

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.440	10.7	LOS A	14.2	103.7	0.36	0.33	53.9
5	T1	1316	4.6	1176	5.1	0.440	5.5	LOS A	14.2	103.7	0.39	0.35	55.0
6	R2	92	4.3	82	4.9	0.394	17.3	LOS B	2.8	20.8	0.52	0.73	45.6
Approach		1409	4.5	1259 N1	5.1	0.440	6.3	LOS A	14.2	103.7	0.40	0.38	54.3
North: Punchbowl Road													
7	L2	28	7.1	28	7.1	0.909	87.1	LOS F	17.1	120.8	1.00	1.01	15.8
8	T1	1	0.0	1	0.0	0.909	81.5	LOS F	17.1	120.8	1.00	1.01	24.7
9	R2	391	4.6	391	4.6	0.909	87.5	LOS F	17.1	120.8	1.00	1.01	24.4
Approach		420	4.8	420	4.8	0.909	87.4	LOS F	17.1	122.7	1.00	1.01	23.9
West: Canterbury Road West													
10	L2	164	3.0	164	3.0	0.090	5.7	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1311	2.4	1311	2.4	0.435	5.1	LOS A	14.2	101.3	0.35	0.32	51.5
Approach		1475	2.5	1475	2.5	0.435	5.2	LOS A	14.2	101.3	0.31	0.35	52.1
All Vehicles		3304	3.7	3154 N1	3.8	0.909	16.6	LOS B	17.1	122.7	0.44	0.45	44.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road 2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	161	1.2	161	1.2	1.205	416.0	LOS F	59.5	423.7	1.00	1.68	3.6
3	R2	305	3.0	305	3.0	1.205	439.5	LOS F	59.5	423.7	1.00	1.90	3.7
Approach		466	2.4	466	2.4	1.205	431.4	LOS F	59.5	423.7	1.00	1.83	3.7
East: Canterbury Road E													
4	L2	245	2.0	215	2.3	0.887	57.1	LOS E	23.1	163.2	1.00	1.00	22.9
5	T1	1392	0.4	1218	0.4	0.887	57.4	LOS E	23.2	163.2	1.00	0.98	6.4
Approach		1637	0.6	1433 N1	0.7	0.887	57.4	LOS E	23.2	163.2	1.00	0.99	9.8
West: Canterbury Road W													
11	T1	1245	2.6	1245	2.6	0.884	29.9	LOS C	37.0	264.7	0.69	0.76	30.5
12	R2	145	2.1	145	2.1	0.305	25.5	LOS B	5.0	35.4	0.83	0.78	39.1
Approach		1390	2.5	1390	2.5	0.884	29.5	LOS C	37.0	264.7	0.71	0.77	31.8
All Vehicles		3493	1.6	3289 N1	1.7	1.205	98.6	LOS F	59.5	423.7	0.88	1.01	11.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	28.9	LOS C	0.0	0.0	0.64	0.64
P4	West Full Crossing	15	59.5	LOS E	0.1	0.1	0.92	0.92
All Pedestrians		18	54.4	LOS E			0.88	0.88

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1477	6.0	1433	6.0	1.106	253.8	LOS F	44.6	326.4	1.00	2.04	2.7
6	R2	111	1.8	108	1.8	1.106	249.1	LOS F	44.6	326.4	1.00	1.78	7.8
Approach		1588	5.7	1540 N1	5.7	1.106	253.4	LOS F	44.6	326.4	1.00	2.02	3.2
North: Rosmore Avenue													
7	L2	113	0.0	113	0.0	0.148	21.9	LOS B	3.8	26.8	0.53	0.69	31.5
9	R2	207	0.5	207	0.5	5.219	7632.8	LOS F	153.1	1076.2	1.00	4.16	0.2
Approach		320	0.3	320	0.3	5.219	4945.2	LOS F	153.1	1076.2	0.84	2.94	0.4
West: Canterbury West													
10	L2	142	1.4	142	1.4	1.151	356.4	LOS F	22.8	163.2	1.00	2.32	5.5
11	T1	1258	2.8	1258	2.8	1.151	346.1	LOS F	22.8	163.2	1.00	2.41	1.1
Approach		1400	2.6	1400	2.6	1.151	347.1	LOS F	22.8	163.2	1.00	2.40	1.6
All Vehicles		3308	3.9	3260 N1	3.9	5.219	754.2	LOS F	153.1	1076.2	0.98	2.27	1.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	31.6	LOS D	0.0	0.0	0.67	0.67
All Pedestrians		7	59.5	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	378	1.1	378	1.1	2.177	2181.2	LOS F	196.9	1390.5	1.00	4.24	0.8
3	R2	90	4.4	90	4.4	1.782	1465.2	LOS F	39.3	285.5	1.00	2.88	1.2
Approach		468	1.7	468	1.7	2.177	2043.5	LOS F	196.9	1390.5	1.00	3.98	0.9
East: Canterbury Road E													
4	L2	81	4.9	78	5.0	0.900	42.2	LOS C	41.4	306.0	0.83	0.90	32.2
5	T1	1165	6.4	1117	6.6	0.900	33.2	LOS C	41.4	306.0	0.75	0.83	19.3
Approach		1246	6.3	1195 N1	6.5	0.900	33.8	LOS C	41.4	306.0	0.76	0.83	20.7
West: Canterbury Road w													
11	T1	1097	2.7	1091	2.7	0.835	8.6	LOS A	45.6	326.4	0.71	0.67	36.0
12	R2	381	1.3	379	1.3	1.357	689.8	LOS F	46.1	326.4	1.00	2.55	3.3
Approach		1478	2.4	1470 N1	2.4	1.357	184.2	LOS F	46.1	326.4	0.78	1.16	5.7
All Vehicles		3192	3.8	3133 N1	3.9	2.177	404.6	LOS F	196.9	1390.5	0.81	1.45	2.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	9.7	LOS A	0.0	0.0	0.37	0.37
P2	East Full Crossing	19	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		21	59.0	LOS E			0.90	0.90

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1326	4.6	1267	4.7	0.713	14.0	LOS A	23.4	170.6	0.55	0.53	33.1
6	R2	107	4.7	102	4.8	0.713	42.1	LOS C	23.4	170.6	0.99	0.98	31.0
Approach		1433	4.6	1369 N1	4.7	0.713	16.1	LOS B	23.4	170.6	0.58	0.56	32.7
North: Dudley Street													
7	L2	79	8.9	79	8.9	0.099	25.1	LOS B	2.9	21.5	0.57	0.68	29.9
9	R2	91	4.4	91	4.4	0.905	92.2	LOS F	7.4	53.4	1.00	1.06	14.3
Approach		170	6.5	170	6.5	0.905	61.0	LOS E	7.4	53.4	0.80	0.89	18.9
West: Canterbury West													
10	L2	40	2.5	40	2.5	0.806	64.5	LOS E	39.4	281.9	1.00	0.91	24.6
11	T1	1211	2.6	1211	2.6	0.806	55.7	LOS D	42.9	307.0	1.00	0.91	13.2
Approach		1251	2.6	1251	2.6	0.806	55.9	LOS D	42.9	307.0	1.00	0.91	13.8
All Vehicles		2854	3.9	2790 N1	3.9	0.905	36.7	LOS C	42.9	307.0	0.78	0.74	20.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	27.0	LOS C	0.0	0.0	0.62	0.62
All Pedestrians		16	36.3	LOS D			0.71	0.71

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	117	4.3	117	4.3	0.118	14.8	LOS B	3.4	24.7	0.46	0.67	35.7
3	R2	126	2.4	126	2.4	0.908	86.4	LOS F	9.8	69.7	0.94	1.04	15.0
Approach		243	3.3	243	3.3	0.908	52.0	LOS D	9.8	69.7	0.71	0.86	20.8
East: Canterbury Raod East													
4	L2	53	3.8	50	3.9	0.775	43.3	LOS D	35.3	256.9	0.93	0.84	34.5
5	T1	1227	4.6	1163	4.7	0.775	37.7	LOS C	35.4	258.0	0.93	0.84	26.9
Approach		1280	4.5	1213 N1	4.6	0.775	37.9	LOS C	35.4	258.0	0.93	0.84	27.4
West: Canterbury Road West													
11	T1	1159	2.4	1159	2.4	0.582	3.2	LOS A	7.2	51.5	0.16	0.22	49.6
12	R2	140	2.9	140	2.9	0.582	12.5	LOS A	7.2	51.5	0.27	0.50	45.3
Approach		1299	2.5	1299	2.5	0.582	4.2	LOS A	7.2	51.5	0.17	0.25	48.5
All Vehicles		2822	3.5	2755 N1	3.6	0.908	23.3	LOS B	35.4	258.0	0.55	0.56	31.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	28.3	LOS C	0.0	0.0	0.64	0.64
P2	East Full Crossing	4	57.6	LOS E	0.0	0.0	0.91	0.91
All Pedestrians		5	51.7	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	321	11.5	321	11.5	0.350	25.5	LOS B	11.4	87.7	0.61	0.80	36.0
2	T1	1699	5.2	1699	5.2	1.071	218.1	LOS F	89.7	655.9	1.00	1.89	16.8
3	R2	255	1.6	255	1.6	0.987	122.5	LOS F	12.1	85.9	1.00	1.23	20.0
Approach		2275	5.7	2275	5.7	1.071	180.2	LOS F	89.7	655.9	0.94	1.67	17.7
East: Canterbury Road E													
4	L2	130	4.6	130	4.6	1.064	168.9	LOS F	70.2	504.9	1.00	1.28	12.8
5	T1	897	2.7	897	2.7	1.064	188.7	LOS F	71.2	509.7	1.00	1.60	6.3
6	R2	228	4.4	228	4.4	0.900	90.0	LOS F	9.0	65.0	1.00	1.02	26.7
Approach		1255	3.2	1255	3.2	1.064	168.7	LOS F	71.2	509.7	1.00	1.46	9.7
North: King Georges Road													
7	L2	153	3.9	153	3.9	1.068	186.5	LOS F	90.3	649.3	1.00	1.48	14.7
8	T1	2093	3.0	2093	3.0	1.068	200.9	LOS F	109.3	784.4	1.00	1.75	17.1
9	R2	271	2.6	271	2.6	1.095	265.2	LOS F	42.3	302.9	1.00	1.62	9.3
Approach		2517	3.0	2517	3.0	1.095	207.0	LOS F	109.3	784.4	1.00	1.72	16.1
West: Canterbury Road W													
10	L2	165	3.6	165	3.6	0.164	20.4	LOS B	5.4	38.8	0.52	0.68	47.2
11	T1	815	0.7	815	0.7	0.850	53.0	LOS D	27.9	196.6	0.93	0.92	30.8
12	R2	393	4.1	393	4.1	1.061	215.9	LOS F	26.9	195.0	1.00	1.51	14.2
Approach		1373	2.0	1373	2.0	1.061	95.7	LOS F	27.9	196.6	0.90	1.06	23.4
All Vehicles		7420	3.7	7420	3.7	1.095	171.7	LOS F	109.3	784.4	0.96	1.54	16.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1328.8 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	55.8	LOS E	0.0	0.0	0.89	0.89
P2	East Full Crossing	2	38.6	LOS D	0.0	0.0	0.74	0.74
P3	North Full Crossing	7	47.2	LOS E	0.0	0.0	0.82	0.82
P4	West Full Crossing	1	46.4	LOS E	0.0	0.0	0.81	0.81
All Pedestrians		12	47.2	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1249	5.0	1083	5.2	0.555	13.4	LOS A	25.7	186.5	0.39	0.37	41.4
6	R2	155	1.9	134	2.0	0.555	55.8	LOS D	25.7	186.5	1.00	0.99	30.4
Approach		1404	4.6	1217 N1	4.9	0.555	18.1	LOS B	25.7	186.5	0.45	0.44	38.7
North: Haldon Street													
7	L2	69	4.3	69	4.3	0.868	82.6	LOS F	11.3	81.1	1.00	0.97	15.5
9	R2	212	2.4	212	2.4	0.868	83.3	LOS F	11.3	81.1	1.00	0.97	15.4
Approach		281	2.8	281	2.8	0.868	83.2	LOS F	11.3	81.1	1.00	0.97	15.4
West: Canterbury Road w													
10	L2	151	5.3	151	5.3	0.741	32.7	LOS C	37.9	273.1	0.84	0.79	36.6
11	T1	1317	3.1	1313	3.1	0.741	27.1	LOS B	38.4	275.8	0.84	0.78	28.5
Approach		1468	3.3	1464 N1	3.3	0.741	27.7	LOS B	38.4	275.8	0.84	0.78	29.8
All Vehicles		3153	3.9	2961 N1	4.1	0.868	29.0	LOS C	38.4	275.8	0.70	0.66	30.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	20.1	LOS C	0.0	0.0	0.54	0.54
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	59.8	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2021 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	177	3.4	177	3.4	0.881	63.8	LOS E	29.2	207.9	0.95	0.98	8.9
2	T1	389	0.8	389	0.8	0.881	65.4	LOS E	29.2	207.9	0.97	1.01	8.4
3	R2	80	1.3	80	1.3	0.881	79.6	LOS F	18.1	127.6	1.00	1.06	7.4
Approach		646	1.5	646	1.5	0.881	66.7	LOS E	29.2	207.9	0.97	1.01	8.4
East: Canterbury Rd													
4	L2	152	25.0	130	26.1	0.760	25.9	LOS B	25.1	190.7	0.71	0.67	37.6
5	T1	1221	4.6	1031	4.9	0.760	13.0	LOS A	25.1	190.7	0.53	0.49	41.8
Approach		1373	6.8	1161 N1	7.2	0.760	14.5	LOS A	25.1	190.7	0.55	0.51	41.2
North: Chapel St													
7	L2	33	0.0	33	0.0	0.351	45.8	LOS D	10.4	73.2	0.84	0.72	4.4
8	T1	448	0.4	448	0.4	0.588	45.7	LOS D	18.1	126.8	0.89	0.77	13.6
9	R2	18	0.0	18	0.0	0.588	50.8	LOS D	18.1	126.8	0.92	0.79	4.0
Approach		499	0.4	499	0.4	0.588	45.9	LOS D	18.1	126.8	0.89	0.76	12.8
West: Canterbury Rd													
10	L2	46	0.0	46	0.0	0.548	9.5	LOS A	7.3	52.1	0.18	0.20	28.6
11	T1	1269	3.2	1266	3.2	0.548	3.7	LOS A	7.3	52.1	0.17	0.17	53.2
12	R2	181	3.3	181	3.3	0.774	43.1	LOS D	7.8	55.9	1.00	0.86	28.2
Approach		1496	3.1	1492 N1	3.1	0.774	8.7	LOS A	7.8	55.9	0.27	0.26	45.8
All Vehicles		4014	3.8	3799 N1	4.0	0.881	25.2	LOS B	29.2	207.9	0.56	0.53	29.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	30.2	LOS D	0.0	0.0	0.66	0.66
P2	East Full Crossing	6	43.2	LOS E	0.0	0.0	0.79	0.79
P3	North Full Crossing	50	13.8	LOS B	0.1	0.1	0.44	0.44
All Pedestrians		67	19.1	LOS B			0.51	0.51

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	157	3.8	157	3.8	0.406	55.0	LOS D	9.2	66.6	0.90	0.79	20.2
2	T1	381	3.9	381	3.9	2.005	1839.6	LOS F	258.0	1886.5	1.00	4.03	1.9
3	R2	157	8.3	157	8.3	2.005	1844.2	LOS F	258.0	1886.5	1.00	4.03	1.0
Approach		695	4.9	695	4.9	2.005	1437.5	LOS F	258.0	1886.5	0.98	3.30	1.8
East: Canterbury Road E													
4	L2	101	8.9	86	8.9	0.892	30.3	LOS C	35.1	255.4	0.83	0.82	38.8
5	T1	1355	3.8	1151	3.8	0.892	27.4	LOS B	37.9	274.3	0.86	0.84	30.8
Approach		1456	4.2	1237 N1	4.2	0.892	27.6	LOS B	37.9	274.3	0.86	0.84	31.6
North: Sharp Street													
7	L2	55	0.0	55	0.0	0.540	72.3	LOS F	6.1	43.0	1.00	0.78	17.2
8	T1	475	1.9	475	1.9	2.543	2616.4	LOS F	250.6	1782.3	1.00	5.25	1.3
Approach		530	1.7	530	1.7	2.543	2352.4	LOS F	250.6	1782.3	1.00	4.78	1.4
West: Canterbury Road w													
10	L2	13	7.7	13	7.7	0.758	19.6	LOS B	41.2	296.5	0.69	0.65	44.6
11	T1	1128	3.1	1125	3.1	0.758	19.8	LOS B	41.2	296.5	0.73	0.71	36.2
12	R2	294	4.1	293	4.1	0.758	60.0	LOS E	25.6	184.6	1.00	1.08	29.0
Approach		1435	3.3	1432 N1	3.3	0.758	28.1	LOS B	41.2	296.5	0.79	0.78	33.5
All Vehicles		4116	3.7	3894 N1	3.9	2.543	595.8	LOS F	258.0	1886.5	0.87	1.79	3.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	33.6	LOS D	0.0	0.0	0.69	0.69
P2	East Full Crossing	33	64.2	LOS F	0.1	0.1	0.96	0.96
P3	North Full Crossing	25	9.7	LOS A	0.0	0.0	0.37	0.37
P4	West Full Crossing	7	49.7	LOS E	0.0	0.0	0.84	0.84
All Pedestrians		82	40.0	LOS E			0.71	0.71

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021 Base PM-SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	52	3.8	52	3.8	1.053	208.5	LOS F	61.2	458.1	1.00	1.79	7.7
2	T1	418	8.6	418	8.6	2.333	477.2	LOS F	144.0	1042.0	1.00	2.14	6.6
3	R2	214	2.8	214	2.8	2.333	2452.9	LOS F	144.0	1042.0	1.00	4.65	0.7
Approach		684	6.4	684	6.4	2.333	1074.9	LOS F	144.0	1042.0	1.00	2.90	2.6
East: Canterbury Road East													
4	L2	95	4.2	94	4.2	0.792	24.9	LOS B	33.3	241.8	0.70	0.66	41.2
5	T1	1210	4.5	1203	4.6	0.792	16.1	LOS B	33.3	241.8	0.57	0.54	38.1
6	R2	213	4.7	212	4.7	0.952	110.6	LOS F	18.7	136.5	1.00	1.27	20.0
Approach		1518	4.5	1510 N1	4.6	0.952	29.9	LOS C	33.3	241.8	0.64	0.65	31.5
North: Thorncraft Parade													
7	L2	117	8.5	117	8.5	0.986	118.4	LOS F	70.8	518.3	1.00	1.37	12.3
8	T1	581	4.6	581	4.6	4.362	120.8	LOS F	196.1	1428.2	1.00	1.38	18.8
9	R2	277	4.7	277	4.7	4.362	6083.0	LOS F	196.1	1428.2	1.00	4.78	0.3
Approach		975	5.1	975	5.1	4.362	1814.4	LOS F	196.1	1428.2	1.00	2.34	1.6
West: Canterbury Road West													
10	L2	158	2.5	149	2.3	0.893	49.1	LOS D	43.2	308.3	0.95	0.93	32.1
11	T1	1234	2.7	1164	2.4	0.893	45.8	LOS D	44.8	320.2	0.96	0.95	23.2
Approach		1392	2.7	1313 N1	2.4	0.893	46.2	LOS D	44.8	320.2	0.96	0.95	24.6
All Vehicles		4569	4.4	4482 N1	4.5	4.362	582.4	LOS F	196.1	1428.2	0.87	1.45	3.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	21.7	LOS C	0.0	0.0	0.56	0.56
P2	East Full Crossing	32	33.6	LOS D	0.1	0.1	0.69	0.69
P3	North Full Crossing	8	32.9	LOS D	0.0	0.0	0.69	0.69
P4	West Full Crossing	32	31.6	LOS D	0.1	0.1	0.67	0.67
All Pedestrians		84	31.1	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	117	1.7	117	1.7	0.528	52.4	LOS D	15.3	110.2	0.88	0.88	21.4
2	T1	464	4.1	464	4.1	0.528	45.7	LOS D	16.5	119.2	0.89	0.81	30.6
3	R2	477	1.0	477	1.0	1.321	620.8	LOS F	122.8	867.4	1.00	2.38	2.6
Approach		1058	2.5	1058	2.5	1.321	305.7	LOS F	122.8	867.4	0.94	1.53	7.0
East: Canterbury Road E													
4	L2	200	1.5	200	1.5	0.896	58.8	LOS E	48.3	345.3	1.00	1.03	30.1
5	T1	1150	2.9	1150	2.9	0.896	53.6	LOS D	49.7	356.5	1.00	1.02	21.9
Approach		1350	2.7	1350	2.7	0.896	54.3	LOS D	49.7	356.5	1.00	1.02	23.5
North: Beamish Street													
7	L2	53	13.2	53	13.2	1.316	622.4	LOS F	61.6	458.1	1.00	2.38	2.7
8	T1	386	5.7	386	5.7	1.316	627.9	LOS F	61.6	458.1	1.00	2.56	5.0
9	R2	90	14.4	90	14.4	1.261	546.1	LOS F	22.2	174.9	1.00	2.11	3.1
Approach		529	7.9	529	7.9	1.316	613.4	LOS F	61.6	458.1	1.00	2.47	4.5
West: Canterbury Road w													
10	L2	95	11.6	83	11.1	0.526	20.4	LOS B	15.1	108.4	0.47	0.47	43.4
11	T1	1088	1.6	955	1.5	0.526	13.3	LOS A	15.1	108.4	0.43	0.41	40.7
12	R2	231	1.7	203	1.7	0.887	90.7	LOS F	15.0	106.4	1.00	1.12	22.5
Approach		1414	2.3	1241 N1	2.2	0.887	26.4	LOS B	15.1	108.4	0.53	0.53	33.6
All Vehicles		4351	3.1	4177 N1	3.3	1.321	180.5	LOS F	122.8	867.4	0.84	1.19	10.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	32.9	LOS D	0.0	0.0	0.69	0.69
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	21.7	LOS C	0.0	0.0	0.56	0.56
P4	West Full Crossing	10	43.2	LOS E	0.0	0.0	0.79	0.79

All Pedestrians	40	40.5	LOS E		0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1800	4.6	1800	4.6	0.569	3.8	LOS A	18.7	136.2	0.34	0.32	52.6
6	R2	467	4.5	467	4.5	0.709	42.1	LOS C	20.9	152.3	0.92	0.99	32.2
Approach		2267	4.5	2267	4.5	0.709	11.7	LOS A	20.9	152.3	0.46	0.46	42.9
North: Wonga Street													
7	L2	270	8.5	270	8.5	0.479	38.1	LOS C	13.6	102.4	0.79	0.80	24.7
9	R2	124	4.8	124	4.8	0.967	108.2	LOS F	11.0	80.2	1.00	1.16	12.7
Approach		394	7.4	394	7.4	0.967	60.1	LOS E	13.6	102.4	0.86	0.91	19.1
West: Canterbury Road West													
10	L2	66	3.0	54	3.1	0.853	18.7	LOS B	25.5	182.5	0.60	0.59	44.9
11	T1	1424	2.7	1167	2.7	0.853	21.9	LOS B	33.2	237.8	0.72	0.70	34.9
Approach		1490	2.7	1222 N1	2.8	0.853	21.7	LOS B	33.2	237.8	0.72	0.70	35.6
All Vehicles		4151	4.1	3882 N1	4.4	0.967	19.7	LOS B	33.2	237.8	0.58	0.58	36.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	22.9	LOS C	0.0	0.0	0.57	0.57
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	52.4	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	16	0.0	16	0.0	0.792	25.7	LOS B	45.0	337.8	0.79	0.74	44.9
5	T1	1518	8.5	1518	8.5	0.792	21.3	LOS B	45.0	337.8	0.85	0.79	35.6
6	R2	22	9.1	22	9.1	0.792	30.2	LOS C	27.5	206.7	0.92	0.86	41.6
Approach		1556	8.4	1556	8.4	0.792	21.5	LOS B	45.0	337.8	0.85	0.79	35.9
NorthEast: Jeffrey Street													
24b	L3	7	0.0	7	0.0	0.939	98.3	LOS F	15.5	114.8	1.00	1.13	23.1
24	L2	10	0.0	10	0.0	0.939	97.3	LOS F	15.5	114.8	1.00	1.13	23.0
26a	R1	347	7.8	347	7.8	0.939	95.9	LOS F	15.5	114.8	1.00	1.13	14.7
26b	R3	1	0.0	1	0.0	0.939	97.3	LOS F	15.3	114.3	1.00	1.13	23.1
Approach		365	7.4	365	7.4	0.939	96.0	LOS F	15.5	114.8	1.00	1.13	15.2
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.515	74.2	LOS F	5.5	39.7	1.00	0.78	27.0
7	L2	41	0.0	41	0.0	0.515	73.3	LOS F	5.5	39.7	1.00	0.78	26.9
7a	L1	1	0.0	1	0.0	0.515	71.9	LOS F	5.5	39.7	1.00	0.78	27.2
9	R2	108	8.3	108	8.3	0.515	74.7	LOS F	5.5	39.7	1.00	0.77	17.6
Approach		151	6.0	151	6.0	0.515	74.3	LOS F	5.5	39.7	1.00	0.77	20.7
West: Canterbury Road w													
10	L2	18	5.6	16	6.2	0.903	54.8	LOS D	20.6	155.0	0.99	1.01	24.6
10a	L1	320	8.1	280	9.0	0.903	53.6	LOS D	20.6	155.0	0.99	1.01	24.8
11	T1	1416	8.1	1239	8.9	0.903	47.9	LOS D	20.6	155.0	0.99	1.01	25.9
Approach		1754	8.0	1534 N1	8.9	0.903	49.0	LOS D	20.6	155.0	0.99	1.01	25.7
All Vehicles		3826	8.1	3606 N1	8.5	0.939	43.0	LOS D	45.0	337.8	0.93	0.92	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 320.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	9.7	LOS A	0.1	0.1	0.37	0.37
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	11.6	LOS B	0.1	0.1	0.41	0.41
P3	North Full Crossing	108	23.0	LOS C	0.2	0.2	0.57	0.57
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	29.8	LOS C			0.61	0.61

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.

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2036 FUTURE BASE

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.333	7.7	LOS A	4.3	32.5	0.14	0.13	56.5
5	T1	1191	8.5	981	9.1	0.333	2.7	LOS A	7.6	57.0	0.20	0.18	57.4
6	R2	96	8.5	79	9.1	0.492	50.4	LOS D	4.7	35.2	0.86	0.79	32.2
Approach		1288	8.5	1061 N1	9.1	0.492	6.3	LOS A	7.6	57.0	0.25	0.22	54.3
North: Punchbowl Road													
7	L2	27	8.5	27	8.5	1.355	710.4	LOS F	73.5	520.0	1.00	2.45	2.5
8	T1	10	8.5	10	8.5	1.355	704.8	LOS F	73.5	520.0	1.00	2.45	4.6
9	R2	474	8.5	474	8.5	1.355	710.3	LOS F	75.4	598.2	1.00	2.42	4.6
Approach		511	8.5	511	8.5	1.355	710.2	LOS F	75.4	598.2	1.00	2.42	4.5
West: Canterbury Road West													
10	L2	146	8.3	146	8.3	0.084	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1413	8.0	1413	8.0	0.929	51.3	LOS D	66.6	498.3	0.88	1.02	22.6
Approach		1559	8.1	1559	8.1	0.929	47.0	LOS D	66.6	498.3	0.80	0.97	25.1
All Vehicles		3358	8.3	3131 N1	8.9	1.355	141.4	LOS F	75.4	598.2	0.65	0.96	14.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	142	11.5	142	11.5	2.120	2072.2	LOS F	146.7	1096.1	1.00	4.09	0.9
3	R2	347	4.3	347	4.3	2.120	2072.4	LOS F	146.7	1096.1	1.00	4.07	0.9
Approach		490	6.4	490	6.4	2.120	2072.4	LOS F	146.7	1096.1	1.00	4.08	0.9
East: Canterbury Road E													
4	L2	191	3.1	163	3.4	0.507	17.0	LOS B	13.6	99.8	0.40	0.47	39.0
5	T1	1106	5.9	944	6.3	0.507	12.5	LOS A	16.1	118.8	0.44	0.44	20.6
Approach		1297	5.5	1107 N1	5.9	0.507	13.2	LOS A	16.1	118.8	0.43	0.44	26.6
West: Canterbury Road W													
11	T1	1589	7.1	1589	7.1	1.117	285.1	LOS F	109.9	816.0	0.91	2.19	5.9
12	R2	145	12.0	145	12.0	0.306	17.3	LOS B	4.9	37.5	0.54	0.74	42.8
Approach		1734	7.5	1734	7.5	1.117	262.7	LOS F	109.9	816.0	0.88	2.07	6.7
All Vehicles		3521	6.6	3331 N1	7.0	2.120	445.8	LOS F	146.7	1096.1	0.75	1.83	3.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	15.6	LOS B	0.1	0.1	0.47	0.47
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	39.9	LOS D			0.72	0.72

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036 Base AM - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h

East: Canterbury East													
5	T1	1179	8.6	1029	9.1	0.588	5.7	LOS A	12.6	95.2	0.30	0.31	40.6
6	R2	133	2.2	115	2.3	0.588	22.3	LOS B	9.6	71.1	0.52	0.69	37.5
Approach		1312	7.9	1144 N1	8.5	0.588	7.4	LOS A	12.6	95.2	0.32	0.35	39.7
North: Rosmore Avenue													
7	L2	127	2.9	127	2.9	0.195	36.9	LOS C	5.8	41.9	0.72	0.74	25.1
9	R2	144	2.5	144	2.5	0.910	90.0	LOS F	11.6	82.7	1.00	1.04	14.6
Approach		271	2.7	271	2.7	0.910	65.1	LOS E	11.6	82.7	0.87	0.90	18.1
West: Canterbury West													
10	L2	236	1.3	214	1.4	0.797	32.9	LOS C	22.3	163.2	0.87	0.83	30.5
11	T1	1512	6.4	1376	6.6	0.797	27.0	LOS B	22.3	163.2	0.86	0.80	11.9
Approach		1748	5.7	1590 N1	5.9	0.797	27.8	LOS B	22.3	163.2	0.86	0.80	16.5
All Vehicles		3331	6.4	3005 N1	7.1	0.910	23.4	LOS B	22.3	163.2	0.66	0.64	22.2

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	17.5	LOS B	0.1	0.1	0.50	0.50
All Pedestrians		100	40.9	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_2036 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	366	3.4	366	3.4	0.603	21.1	LOS B	13.7	98.7	0.60	0.74	31.9
3	R2	161	5.6	161	5.6	1.215	475.4	LOS F	36.9	270.5	1.00	2.08	3.5
Approach		527	4.1	527	4.1	1.215	159.9	LOS F	36.9	270.5	0.72	1.15	9.3
East: Canterbury Road E													
4	L2	94	9.2	77	9.8	0.900	87.1	LOS F	25.8	192.4	1.00	1.00	21.0
5	T1	950	6.4	778	6.8	0.900	78.0	LOS F	38.3	283.9	1.00	0.98	10.1
Approach		1044	6.6	854 N1	7.1	0.900	78.8	LOS F	38.3	283.9	1.00	0.98	11.4
West: Canterbury Road w													
11	T1	1176	8.6	1082	8.9	0.823	6.9	LOS A	25.8	186.8	0.40	0.39	38.6
12	R2	482	2.9	442	3.0	0.823	32.4	LOS C	25.8	186.8	0.86	0.94	32.7
Approach		1658	6.9	1524 N1	7.2	0.823	14.3	LOS A	25.8	186.8	0.54	0.55	34.9
All Vehicles		3229	6.4	2906 N1	7.1	1.215	59.7	LOS E	38.3	283.9	0.71	0.79	15.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
P2	East Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
All Pedestrians		100	44.2	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1037	8.5	837	9.1	0.385	2.5	LOS A	6.6	50.1	0.22	0.21	51.6
6	R2	79	8.5	63	9.1	0.385	12.7	LOS A	6.6	50.1	0.63	0.60	45.5
Approach		1116	8.5	900 N1	9.1	0.385	3.3	LOS A	6.6	50.1	0.25	0.24	50.4
North: Dudley Street													
7	L2	130	8.5	130	8.5	0.230	37.8	LOS C	6.1	45.7	0.73	0.74	24.8
9	R2	75	8.5	75	8.5	0.479	72.1	LOS F	5.1	38.1	0.99	0.77	17.0
Approach		205	8.5	205	8.5	0.479	50.4	LOS D	6.1	45.7	0.83	0.75	21.2
West: Canterbury West													
10	L2	9	8.0	9	8.2	0.631	13.5	LOS A	13.9	104.1	0.35	0.33	45.3
11	T1	1349	8.0	1258	8.2	0.631	11.2	LOS A	19.8	148.7	0.43	0.39	35.1
Approach		1358	8.0	1267 N1	8.2	0.631	11.2	LOS A	19.8	148.7	0.43	0.39	35.3
All Vehicles		2679	8.3	2372 N1	9.3	0.631	11.6	LOS A	19.8	148.7	0.40	0.36	36.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	18.0	LOS B	0.1	0.1	0.51	0.51
All Pedestrians		100	41.2	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	121	8.5	121	8.5	0.113	10.9	LOS A	2.7	20.1	0.37	0.64	38.7
3	R2	64	8.0	64	8.0	0.471	74.1	LOS F	4.4	32.8	1.00	0.76	16.7
Approach		185	8.3	185	8.3	0.471	32.8	LOS C	4.4	32.8	0.59	0.68	26.5
East: Canterbury Raod East													
4	L2	117	8.5	92	9.2	0.670	45.6	LOS D	25.2	190.6	0.90	0.81	33.5
5	T1	1031	8.5	809	9.2	0.670	39.6	LOS C	25.9	196.0	0.90	0.80	26.1
Approach		1148	8.5	900 N1	9.2	0.670	40.2	LOS C	25.9	196.0	0.90	0.80	27.2
West: Canterbury Road West													
11	T1	1381	5.3	1293	5.4	0.550	4.1	LOS A	10.8	79.0	0.30	0.30	47.7
12	R2	133	8.0	125	8.2	0.550	12.7	LOS A	10.4	76.7	0.48	0.50	45.5
Approach		1514	5.5	1417 N1	5.7	0.550	4.9	LOS A	10.8	79.0	0.31	0.32	47.2
All Vehicles		2847	6.9	2502 N1	7.9	0.670	19.7	LOS B	25.9	196.0	0.55	0.52	33.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	32.3	LOS D	0.1	0.1	0.68	0.68
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	48.3	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_2036 Base AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	184	21.4	184	21.4	0.195	19.3	LOS B	5.7	47.5	0.49	0.67	39.9
2	T1	3196	7.5	3196	7.5	1.373	731.5	LOS F	339.4	2529.8	1.00	3.83	6.2
3	R2	241	3.2	241	3.2	1.049	193.5	LOS F	15.1	108.6	1.00	1.41	14.3
Approach		3621	8.0	3621	8.0	1.373	659.5	LOS F	339.4	2529.8	0.97	3.50	6.6
East: Canterbury Road E													
4	L2	117	10.1	117	10.1	1.339	642.8	LOS F	163.1	1196.9	1.00	1.98	4.8
5	T1	1026	4.5	1026	4.5	1.339	657.8	LOS F	163.1	1196.9	1.00	2.82	2.1
6	R2	260	9.8	260	9.8	1.183	412.1	LOS F	26.7	202.6	1.00	1.88	8.8
Approach		1403	5.9	1403	5.9	1.339	611.0	LOS F	163.1	1196.9	1.00	2.57	3.3
North: King Georges Road													
7	L2	442	7.5	442	7.5	1.017	105.7	LOS F	85.5	641.1	1.00	1.22	20.7
8	T1	2309	9.1	2309	9.1	1.017	123.8	LOS F	108.3	817.0	1.00	1.42	23.6
9	R2	266	5.2	266	5.2	1.298	611.5	LOS F	70.6	515.9	1.00	2.39	4.4
Approach		3017	8.5	3017	8.5	1.298	164.1	LOS F	108.3	817.0	1.00	1.47	18.8
West: Canterbury Road W													
10	L2	129	10.5	125	10.6	0.171	31.6	LOS C	5.3	40.6	0.66	0.70	42.4
11	T1	783	7.5	758	7.5	1.102	271.0	LOS F	65.1	485.4	1.00	2.01	10.1
12	R2	151	21.6	146	21.8	1.079	239.3	LOS F	10.5	87.1	1.00	1.42	13.0
Approach		1063	9.8	1029 N1	10.0	1.102	237.4	LOS F	65.1	485.4	0.96	1.77	12.0
All Vehicles		9104	8.1	9070 N1	8.1	1.373	439.3	LOS F	339.4	2529.8	0.98	2.49	8.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1702.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	55.0	LOS E	0.2	0.2	0.89	0.89
P2	East Full Crossing	50	27.1	LOS C	0.1	0.1	0.62	0.62
P3	North Full Crossing	50	56.8	LOS E	0.2	0.2	0.90	0.90
P4	West Full Crossing	50	32.3	LOS D	0.1	0.1	0.68	0.68
All Pedestrians		200	42.8	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_2036 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1186	4.8	1031	4.9	0.936	55.7	LOS D	54.3	395.8	0.88	1.04	21.3
6	R2	106	11.3	92	11.5	0.936	88.7	LOS F	33.5	247.2	1.00	1.22	24.0
Approach		1292	5.3	1123 N1	5.4	0.936	58.4	LOS E	54.3	395.8	0.89	1.05	21.7
North: Haldon Street													
7	L2	66	5.0	66	5.0	1.289	598.5	LOS F	34.8	257.9	1.00	2.34	2.8
9	R2	138	8.7	138	8.7	1.289	599.3	LOS F	34.8	257.9	1.00	2.20	2.8
Approach		203	7.5	203	7.5	1.289	599.0	LOS F	34.8	257.9	1.00	2.25	2.8
West: Canterbury Road w													
10	L2	103	8.2	93	8.0	0.898	54.9	LOS D	53.6	394.8	1.00	1.00	29.5
11	T1	1549	5.9	1412	5.7	0.898	48.9	LOS D	54.4	399.9	1.00	1.01	20.2
Approach		1652	6.0	1505 N1	5.9	0.898	49.3	LOS D	54.4	399.9	1.00	1.01	21.0
All Vehicles		3147	5.8	2831 N1	6.5	1.289	92.3	LOS F	54.4	399.9	0.95	1.11	14.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 235.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	25.9	LOS C	0.1	0.1	0.61	0.61
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	45.1	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	91	7.1	91	7.1	0.481	58.4	LOS E	10.0	74.2	0.94	0.79	19.8
2	T1	444	6.4	444	6.4	2.403	2145.8	LOS F	321.2	2422.3	0.99	3.78	1.6
3	R2	216	13.6	216	13.6	2.403	2559.2	LOS F	321.2	2422.3	1.00	4.36	0.7
Approach		751	8.6	751	8.6	2.403	2010.3	LOS F	321.2	2422.3	0.99	3.58	1.4
East: Canterbury Road E													
4	L2	92	16.7	77	17.0	0.895	65.7	LOS E	35.5	267.4	1.00	1.00	27.9
5	T1	1106	7.1	920	7.2	0.895	59.8	LOS E	36.6	272.3	1.00	1.00	19.6
Approach		1198	7.8	997 N1	8.0	0.895	60.2	LOS E	36.6	272.3	1.00	1.00	20.5
North: Sharp Street													
7	L2	80	5.3	80	5.3	0.645	77.0	LOS F	5.6	41.3	1.00	0.81	16.3
8	T1	459	4.6	459	4.6	2.859	3387.8	LOS F	277.6	2019.8	1.00	5.82	1.0
Approach		539	4.7	539	4.7	2.859	2896.3	LOS F	277.6	2019.8	1.00	5.08	1.1
West: Canterbury Road w													
10	L2	7	0.0	7	0.0	0.806	19.9	LOS B	43.3	317.2	0.68	0.64	44.6
11	T1	1381	5.5	1293	5.4	0.806	21.4	LOS B	43.3	317.2	0.75	0.73	35.0
12	R2	326	9.6	305	9.6	0.806	54.6	LOS D	30.6	228.3	1.00	1.08	30.5
Approach		1715	6.2	1605 N1	6.2	0.806	27.7	LOS B	43.3	317.2	0.80	0.80	33.5
All Vehicles		4203	6.9	3892 N1	7.4	2.859	815.8	LOS F	321.2	2422.3	0.91	1.98	2.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 235.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	9.3	LOS A	0.1	0.1	0.37	0.37
P4	West Full Crossing	50	50.7	LOS E	0.2	0.2	0.85	0.85
All Pedestrians		200	41.1	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036 Base AM-SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	152	8.5	152	8.5	1.970	1807.4	LOS F	168.7	1266.9	1.00	4.89	1.0
2	T1	1721	8.5	1721	8.5	4.364	5609.3	LOS F	1175.9	8829.2	1.00	8.16	0.6
3	R2	148	8.0	148	8.0	4.364	6114.9	LOS F	1175.9	8829.2	1.00	8.59	0.3
Approach		2022	8.5	2022	8.5	4.364	5360.0	LOS F	1175.9	8829.2	1.00	7.94	0.6
East: Canterbury Road East													
4	L2	40	8.5	36	8.8	0.425	13.2	LOS A	10.6	79.7	0.32	0.32	47.8
5	T1	1118	8.5	1023	8.8	0.425	8.6	LOS A	13.1	98.7	0.36	0.34	45.8
6	R2	304	8.5	278	8.8	0.733	51.9	LOS D	13.7	103.0	0.99	0.96	29.9
Approach		1461	8.5	1338 N1	8.8	0.733	17.8	LOS B	13.7	103.0	0.49	0.47	38.9
North: Thorncraft Parade													
7	L2	274	8.5	274	8.5	0.943	93.8	LOS F	30.2	227.0	1.00	1.12	14.3
8	T1	386	8.5	386	8.5	4.171	4800.9	LOS F	307.5	2309.9	1.00	5.00	0.7
9	R2	120	8.5	120	8.5	4.171	5747.5	LOS F	307.5	2309.9	1.00	5.78	0.3
Approach		781	8.5	781	8.5	4.171	3293.2	LOS F	307.5	2309.9	1.00	3.76	0.8
West: Canterbury Road West													
10	L2	68	0.0	59	0.0	0.901	48.6	LOS D	44.3	328.1	0.94	0.95	32.4
11	T1	1549	8.0	1354	7.6	0.901	41.5	LOS C	50.6	377.4	0.94	0.94	24.7
Approach		1616	7.7	1413 N1	7.2	0.901	41.8	LOS C	50.6	377.4	0.94	0.94	25.2
All Vehicles		5880	8.3	5553 N1	8.8	4.364	2429.3	LOS F	1175.9	8829.2	0.86	3.77	1.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 235.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	10.8	LOS B	0.1	0.1	0.39	0.39
P2	East Full Crossing	50	51.5	LOS E	0.2	0.2	0.86	0.86
P3	North Full Crossing	50	26.5	LOS C	0.1	0.1	0.62	0.62
P4	West Full Crossing	50	49.0	LOS E	0.2	0.2	0.84	0.84
All Pedestrians		200	34.5	LOS D			0.68	0.68

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_2036 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	123	4.4	123	4.4	0.990	125.1	LOS F	54.1	394.3	1.00	1.39	11.7
2	T1	778	4.9	778	4.9	0.990	119.0	LOS F	54.1	394.3	0.97	1.40	19.0
3	R2	437	4.1	437	4.1	1.236	472.0	LOS F	93.1	674.2	1.00	2.05	3.3
Approach		1338	4.6	1338	4.6	1.236	234.8	LOS F	93.1	674.2	0.99	1.61	9.4
East: Canterbury Road E													
4	L2	252	4.0	229	4.0	0.884	63.6	LOS E	35.9	262.3	1.00	1.03	28.8
5	T1	860	5.8	783	5.9	0.884	58.5	LOS E	36.4	267.7	1.00	1.00	20.6
Approach		1112	5.4	1012 N1	5.4	0.884	59.6	LOS E	36.4	267.7	1.00	1.01	23.0
North: Beamish Street													
7	L2	56	17.9	56	17.9	1.193	397.1	LOS F	64.1	482.2	1.00	1.91	3.8
8	T1	529	6.8	529	6.8	1.193	408.5	LOS F	64.1	482.2	1.00	2.19	7.1
9	R2	88	27.9	88	27.9	1.015	161.7	LOS F	9.9	86.2	1.00	1.40	9.3
Approach		673	10.5	673	10.5	1.193	375.4	LOS F	64.1	482.2	1.00	2.06	6.9
West: Canterbury Road w													
10	L2	115	12.7	97	12.2	0.820	34.8	LOS C	37.8	277.8	0.84	0.79	36.9
11	T1	1343	5.1	1138	4.8	0.820	30.2	LOS C	37.8	277.8	0.79	0.74	29.0
12	R2	273	5.8	231	5.5	0.775	71.4	LOS F	15.2	111.8	1.00	1.05	25.7
Approach		1731	5.7	1466 N1	5.4	0.820	37.0	LOS C	37.8	277.8	0.83	0.79	28.7
All Vehicles		4854	6.0	4490 N1	6.5	1.236	151.8	LOS F	93.1	674.2	0.94	1.27	12.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 235.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
P2	East Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
P3	North Full Crossing	50	25.9	LOS C	0.1	0.1	0.61	0.61
P4	West Full Crossing	50	43.3	LOS E	0.2	0.2	0.79	0.79
All Pedestrians		200	42.8	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1447	8.5	1311	8.6	0.440	4.2	LOS A	13.0	97.9	0.32	0.30	51.8
6	R2	467	8.5	423	8.6	2.198	2186.2	LOS F	93.4	701.7	1.00	3.22	1.5
Approach		1914	8.5	1734 N1	8.6	2.198	536.6	LOS F	93.4	701.7	0.49	1.01	3.5
North: Wonga Street													
7	L2	371	8.5	371	8.5	2.197	2214.6	LOS F	194.2	1458.9	1.00	4.26	0.8
9	R2	113	8.5	113	8.5	0.751	77.4	LOS F	8.1	60.6	1.00	0.86	16.2
Approach		484	8.5	484	8.5	2.197	1716.5	LOS F	194.2	1458.9	1.00	3.47	1.0
West: Canterbury Road West													
10	L2	61	8.0	47	8.8	1.122	284.9	LOS F	108.4	816.0	1.00	2.22	10.5
11	T1	1809	8.0	1391	8.8	1.122	279.9	LOS F	108.4	816.0	1.00	2.24	5.9
Approach		1870	8.0	1438 N1	8.8	1.122	280.1	LOS F	108.4	816.0	1.00	2.24	6.1
All Vehicles		4268	8.3	3655 N1	9.7	2.198	591.8	LOS F	194.2	1458.9	0.76	1.82	3.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 235.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	9.3	LOS A	0.1	0.1	0.37	0.37
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	36.8	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036 Base AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.688	20.8	LOS B	34.1	255.7	0.66	0.61	47.8
5	T1	1114	8.5	1114	8.5	0.688	18.6	LOS B	34.1	255.7	0.73	0.68	37.5
6	R2	37	8.1	37	8.1	0.688	37.0	LOS C	11.5	86.4	0.96	0.87	38.5
Approach		1164	8.4	1164	8.4	0.688	19.2	LOS B	34.1	255.7	0.74	0.68	37.7
NorthEast: Jeffrey Street													
24b	L3	29	6.9	29	6.9	1.380	756.0	LOS F	54.1	403.0	1.00	2.61	4.4
24	L2	5	0.0	5	0.0	1.380	755.0	LOS F	54.1	403.0	1.00	2.61	4.4
26a	R1	323	7.7	323	7.7	1.380	753.5	LOS F	54.1	403.0	1.00	2.61	2.3
26b	R3	1	0.0	1	0.0	1.380	754.9	LOS F	53.9	401.9	1.00	2.60	4.4
Approach		358	7.5	358	7.5	1.380	753.7	LOS F	54.1	403.0	1.00	2.61	2.5
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	26.4
7	L2	67	0.0	67	0.0	0.716	76.3	LOS F	8.1	58.5	1.00	0.84	26.3
7a	L1	1	0.0	1	0.0	0.716	75.0	LOS F	8.1	58.5	1.00	0.84	26.6
9	R2	144	7.6	144	7.6	0.716	77.7	LOS F	8.1	58.5	1.00	0.84	17.1
Approach		213	5.2	213	5.2	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	20.6
West: Canterbury Road w													
10	L2	22	9.1	18	9.4	0.900	46.9	LOS D	20.7	155.0	0.97	0.98	27.2
10a	L1	185	8.1	150	8.4	0.900	45.7	LOS D	20.7	155.0	0.97	0.98	27.6
11	T1	1931	8.0	1567	8.3	0.900	40.8	LOS C	20.7	155.0	0.97	0.97	28.4
Approach		2138	8.0	1735 N1	8.4	0.900	41.3	LOS C	20.7	155.0	0.97	0.97	28.3
All Vehicles		3873	8.0	3470 N1	8.9	1.380	109.6	LOS F	54.1	403.0	0.90	1.04	14.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 235.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	7.9	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	8.6	LOS A	0.1	0.1	0.35	0.35
P3	North Full Crossing	108	18.6	LOS B	0.2	0.2	0.52	0.52
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	27.4	LOS C			0.57	0.57

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.442	11.9	LOS A	12.1	88.7	0.32	0.29	53.0
5	T1	1437	4.6	1224	5.3	0.442	6.5	LOS A	12.8	93.5	0.33	0.30	54.2
6	R2	100	4.6	86	5.3	0.441	37.9	LOS C	4.3	31.4	0.74	0.77	36.3
Approach		1539	4.6	1311 N1	5.3	0.442	8.6	LOS A	12.8	93.5	0.36	0.33	52.5
North: Punchbowl Road													
7	L2	38	8.5	38	8.5	0.915	86.5	LOS F	22.2	156.7	1.00	1.02	15.9
8	T1	1	0.0	1	0.0	0.915	80.8	LOS F	22.2	156.7	1.00	1.02	24.9
9	R2	520	4.6	520	4.6	0.915	86.0	LOS F	23.2	173.8	1.00	1.02	24.6
Approach		559	4.8	559	4.8	0.915	86.1	LOS F	23.2	173.8	1.00	1.02	24.1
West: Canterbury Road West													
10	L2	181	2.8	181	2.8	0.099	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1447	2.4	1447	2.4	0.811	20.6	LOS B	43.2	308.5	0.78	0.73	36.0
Approach		1628	2.5	1628	2.5	0.811	18.9	LOS B	43.2	308.5	0.70	0.71	38.7
All Vehicles		3726	3.7	3497 N1	3.9	0.915	25.8	LOS B	43.2	308.5	0.62	0.62	39.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	58.6	LOS E	0.2	0.2	0.92	0.92
All Pedestrians		50	58.6	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	190	1.5	190	1.5	0.969	112.6	LOS F	32.1	228.9	1.00	1.18	12.4
3	R2	360	2.8	360	2.8	0.969	118.4	LOS F	32.1	228.9	1.00	1.20	11.9
Approach		550	2.4	550	2.4	0.969	116.4	LOS F	32.1	228.9	1.00	1.19	12.1
East: Canterbury Road E													
4	L2	260	2.1	212	2.4	0.897	57.8	LOS E	23.1	163.2	1.00	1.00	22.7
5	T1	1479	0.4	1202	0.4	0.897	52.0	LOS D	23.2	163.2	1.00	1.00	7.0
Approach		1740	0.6	1414 N1	0.7	0.897	52.9	LOS D	23.2	163.2	1.00	1.00	10.5
West: Canterbury Road W													
11	T1	1338	2.6	1338	2.6	1.135	299.5	LOS F	114.1	816.0	0.89	2.26	5.6
12	R2	156	2.1	156	2.1	0.379	55.9	LOS D	8.5	60.6	0.83	0.90	29.5
Approach		1493	2.5	1493	2.5	1.135	274.1	LOS F	114.1	816.0	0.89	2.12	6.6
All Vehicles		3783	1.6	3457 N1	1.8	1.135	158.5	LOS F	114.1	816.0	0.95	1.52	7.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P4	West Full Crossing	50	47.3	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		100	38.5	LOS D			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1558	5.9	1374	6.3	1.112	268.0	LOS F	44.5	326.4	1.00	2.07	2.7
6	R2	118	2.0	103	2.2	1.112	255.8	LOS F	44.5	326.4	1.00	1.80	8.0
Approach		1675	5.7	1478 N1	6.0	1.112	267.1	LOS F	44.5	326.4	1.00	2.05	3.1
North: Rosmore Avenue													
7	L2	115	0.0	115	0.0	0.108	18.9	LOS B	3.5	24.4	0.48	0.67	33.1
9	R2	211	0.5	211	0.5	2.454	2669.8	LOS F	118.4	832.7	1.00	4.29	0.7
Approach		326	0.3	326	0.3	2.454	1735.8	LOS F	118.4	832.7	0.82	3.02	1.0
West: Canterbury West													
10	L2	156	1.5	154	1.5	1.174	384.7	LOS F	22.8	163.2	1.00	2.42	5.1
11	T1	1376	2.8	1362	2.8	1.174	378.1	LOS F	22.8	163.2	1.00	2.51	1.0
Approach		1532	2.7	1516 N1	2.7	1.174	378.7	LOS F	22.8	163.2	1.00	2.50	1.5
All Vehicles		3533	3.9	3319 N1	4.1	2.454	462.2	LOS F	118.4	832.7	0.98	2.35	1.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
All Pedestrians		100	49.7	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	404	1.1	404	1.1	2.208	2237.9	LOS F	212.8	1503.5	1.00	4.28	0.8
3	R2	97	4.5	97	4.5	1.312	636.9	LOS F	26.4	192.0	1.00	2.26	2.7
Approach		501	1.8	501	1.8	2.208	1929.0	LOS F	212.8	1503.5	1.00	3.89	0.9
East: Canterbury Road E													
4	L2	90	5.5	76	6.0	0.899	52.4	LOS D	45.4	336.9	0.99	1.03	28.8
5	T1	1286	6.5	1086	7.1	0.899	42.9	LOS D	45.4	336.9	0.92	0.97	16.1
Approach		1376	6.4	1162 N1	7.0	0.899	43.5	LOS D	45.4	336.9	0.92	0.98	17.4
West: Canterbury Road w													
11	T1	1182	2.7	1104	2.7	0.932	20.3	LOS B	45.6	326.4	0.60	0.65	23.3
12	R2	411	1.2	384	1.2	1.886	1634.4	LOS F	46.1	326.4	1.00	3.67	1.5
Approach		1593	2.3	1488 N1	2.3	1.886	436.6	LOS F	46.1	326.4	0.70	1.43	2.6
All Vehicles		3470	3.9	3151 N1	4.3	2.208	529.0	LOS F	212.8	1503.5	0.83	1.65	2.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	10.4	LOS B	0.1	0.1	0.39	0.39
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	36.4	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1405	4.6	1165	5.0	0.724	15.5	LOS B	25.0	182.5	0.42	0.41	31.6
6	R2	113	4.6	94	5.0	0.724	47.9	LOS D	25.0	182.5	1.00	0.98	29.2
Approach		1518	4.6	1259 N1	5.0	0.724	17.9	LOS B	25.0	182.5	0.46	0.45	31.1
North: Dudley Street													
7	L2	96	8.5	96	8.5	0.113	25.2	LOS B	3.5	26.2	0.57	0.69	29.8
9	R2	110	4.6	110	4.6	0.930	98.1	LOS F	9.3	67.9	1.00	1.11	13.7
Approach		206	6.4	206	6.4	0.930	64.1	LOS E	9.3	67.9	0.80	0.92	18.3
West: Canterbury West													
10	L2	44	2.7	42	2.6	0.832	51.1	LOS D	42.5	304.1	1.00	0.92	27.9
11	T1	1352	2.7	1274	2.6	0.832	43.4	LOS D	42.5	304.1	0.99	0.92	16.0
Approach		1397	2.7	1316 N1	2.6	0.832	43.6	LOS D	42.5	304.1	0.99	0.92	16.6
All Vehicles		3121	3.8	2781 N1	4.3	0.930	33.5	LOS C	42.5	304.1	0.74	0.70	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
All Pedestrians		100	46.3	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	183	4.6	183	4.6	0.167	15.7	LOS B	5.4	39.1	0.46	0.66	35.1
3	R2	197	2.7	197	2.7	1.061	223.5	LOS F	28.3	202.9	1.00	1.48	7.0
Approach		380	3.6	380	3.6	1.061	123.4	LOS F	28.3	202.9	0.74	1.09	11.4
East: Canterbury Raod East													
4	L2	61	4.6	49	5.0	0.907	68.2	LOS E	44.5	325.1	1.00	1.05	27.9
5	T1	1385	4.6	1117	5.0	0.907	62.4	LOS E	45.1	329.0	1.00	1.05	19.8
Approach		1445	4.6	1166 N1	5.0	0.907	62.7	LOS E	45.1	329.0	1.00	1.05	20.2
West: Canterbury Road West													
11	T1	1329	2.4	1278	2.4	0.819	19.4	LOS B	31.5	224.7	0.68	0.65	28.2
12	R2	160	2.7	154	2.6	0.819	50.5	LOS D	29.8	212.9	1.00	0.99	28.3
Approach		1490	2.4	1432 N1	2.4	0.819	22.8	LOS B	31.5	224.7	0.72	0.69	28.2
All Vehicles		3315	3.5	2978 N1	3.9	1.061	51.2	LOS D	45.1	329.0	0.83	0.88	20.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P2	East Full Crossing	50	51.5	LOS E	0.2	0.2	0.86	0.86
All Pedestrians		100	43.3	LOS E			0.78	0.78

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\TPA Land Use - Base\Base Scenario 2036_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_2036 Base PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	406	11.7	406	11.7	0.443	27.3	LOS B	14.5	111.6	0.65	0.85	35.0
2	T1	2149	5.3	2149	5.3	1.355	702.1	LOS F	227.5	1664.6	1.00	3.70	6.4
3	R2	322	1.6	322	1.6	1.248	524.2	LOS F	38.7	274.7	1.00	2.15	6.2
Approach		2878	5.8	2878	5.8	1.355	586.9	LOS F	227.5	1664.6	0.95	3.13	6.8
East: Canterbury Road E													
4	L2	158	4.5	158	4.5	1.324	618.1	LOS F	173.3	1246.4	1.00	2.00	5.0
5	T1	1088	2.7	1088	2.7	1.324	633.1	LOS F	173.3	1246.4	1.00	2.84	2.2
6	R2	276	4.3	276	4.3	1.088	254.2	LOS F	20.6	149.7	1.00	1.55	13.1
Approach		1522	3.2	1522	3.2	1.324	562.9	LOS F	173.3	1246.4	1.00	2.52	3.6
North: King Georges Road													
7	L2	198	4.1	198	4.1	1.356	679.4	LOS F	272.2	1957.4	1.00	2.37	5.5
8	T1	2709	3.0	2709	3.0	1.356	694.2	LOS F	286.8	2058.8	1.00	3.34	6.4
9	R2	350	2.6	350	2.6	1.345	692.4	LOS F	100.6	719.9	1.00	2.55	3.9
Approach		3257	3.0	3257	3.0	1.356	693.1	LOS F	286.8	2058.8	1.00	3.20	6.1
West: Canterbury Road W													
10	L2	220	3.8	212	3.8	0.212	21.6	LOS B	7.2	51.9	0.54	0.69	46.7
11	T1	1081	0.8	1043	0.8	1.084	240.4	LOS F	82.1	578.1	1.00	1.99	11.2
12	R2	520	4.0	502	3.9	1.352	706.8	LOS F	72.8	526.9	1.00	2.59	5.2
Approach		1821	2.0	1756 N1	2.0	1.352	347.3	LOS F	82.1	578.1	0.94	2.01	9.0
All Vehicles		9479	3.7	9413 N1	3.7	1.356	575.1	LOS F	286.8	2058.8	0.97	2.84	6.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	56.8	LOS E	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	38.0	LOS D	0.1	0.1	0.74	0.74
P3	North Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
P4	West Full Crossing	50	46.5	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		200	47.4	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_2036 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1352	4.9	1033	5.5	0.936	44.3	LOS D	50.9	373.1	0.69	0.89	24.5
6	R2	168	2.1	128	2.3	0.936	39.4	LOS C	27.3	198.4	0.78	0.98	35.3
Approach		1519	4.6	1161 N1	5.1	0.936	43.7	LOS D	50.9	373.1	0.70	0.90	26.1
North: Haldon Street													
7	L2	76	4.7	76	4.7	2.063	1968.7	LOS F	93.4	673.3	1.00	3.96	0.9
9	R2	231	2.6	231	2.6	2.063	1968.2	LOS F	93.4	673.3	1.00	3.67	0.9
Approach		306	3.1	306	3.1	2.063	1968.3	LOS F	93.4	673.3	1.00	3.74	0.9
West: Canterbury Road w													
10	L2	168	5.6	141	6.1	0.896	59.0	LOS E	49.1	355.2	1.00	1.01	28.3
11	T1	1464	3.1	1229	3.4	0.896	52.7	LOS D	50.5	363.6	1.00	1.01	19.1
Approach		1632	3.3	1370 N1	3.7	0.896	53.4	LOS D	50.5	363.6	1.00	1.01	20.5
All Vehicles		3458	3.9	2838 N1	4.7	2.063	256.2	LOS F	93.4	673.3	0.88	1.26	6.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	46.9	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2036 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	197	3.2	197	3.2	0.891	61.8	LOS E	31.7	225.9	0.91	0.96	9.1
2	T1	436	0.9	436	0.9	0.891	64.4	LOS E	31.7	225.9	0.95	1.01	8.5
3	R2	90	1.4	90	1.4	0.891	79.2	LOS F	21.3	150.6	1.00	1.08	7.4
Approach		723	1.6	723	1.6	0.891	65.5	LOS E	31.7	225.9	0.95	1.01	8.5
East: Canterbury Rd													
4	L2	160	25.2	118	27.7	0.750	30.6	LOS C	24.0	182.9	0.76	0.71	35.0
5	T1	1282	4.6	916	5.2	0.750	15.9	LOS B	24.0	182.9	0.58	0.53	39.3
Approach		1442	6.9	1034 N1	7.8	0.750	17.6	LOS B	24.0	182.9	0.60	0.55	38.6
North: Chapel St													
7	L2	37	0.0	37	0.0	0.350	42.0	LOS C	11.2	78.8	0.81	0.70	4.7
8	T1	510	0.5	510	0.5	0.586	41.6	LOS C	20.0	140.8	0.87	0.75	14.6
9	R2	20	0.0	20	0.0	0.586	46.5	LOS D	20.0	140.8	0.90	0.78	4.4
Approach		568	0.5	568	0.5	0.586	41.8	LOS C	20.0	140.8	0.87	0.75	13.7
West: Canterbury Rd													
10	L2	53	0.0	45	0.0	0.636	15.6	LOS B	17.8	127.7	0.41	0.39	26.3
11	T1	1464	3.2	1247	3.5	0.636	9.7	LOS A	17.8	127.7	0.38	0.36	45.5
12	R2	208	3.1	177	3.4	0.806	43.4	LOS D	7.1	51.1	1.00	0.86	28.2
Approach		1725	3.1	1469 N1	3.4	0.806	14.0	LOS A	17.8	127.7	0.45	0.42	40.7
All Vehicles		4458	3.8	3794 N1	4.4	0.891	28.9	LOS C	31.7	225.9	0.65	0.62	26.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.7	LOS D	0.1	0.1	0.69	0.69
P2	East Full Crossing	50	38.7	LOS D	0.1	0.1	0.74	0.74
P3	North Full Crossing	50	16.5	LOS B	0.1	0.1	0.49	0.49
All Pedestrians		150	29.6	LOS C			0.64	0.64

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	187	4.0	187	4.0	0.519	58.1	LOS E	11.5	83.0	0.94	0.81	19.5
2	T1	452	3.9	452	3.9	2.257	2291.8	LOS F	334.4	2443.1	1.00	4.42	1.5
3	R2	186	8.1	186	8.1	2.257	2296.4	LOS F	334.4	2443.1	1.00	4.42	0.8
Approach		825	4.8	825	4.8	2.257	1785.9	LOS F	334.4	2443.1	0.99	3.60	1.5
East: Canterbury Road E													
4	L2	108	8.8	73	8.6	0.901	41.1	LOS C	33.7	245.0	0.93	0.91	34.7
5	T1	1450	3.9	980	3.8	0.901	35.4	LOS C	34.6	250.1	0.93	0.91	27.0
Approach		1557	4.2	1053 N1	4.1	0.901	35.8	LOS C	34.6	250.1	0.93	0.91	27.8
North: Sharp Street													
7	L2	64	0.0	64	0.0	0.589	72.7	LOS F	6.7	47.4	1.00	0.79	17.2
8	T1	548	2.0	548	2.0	2.773	3031.0	LOS F	305.6	2175.3	1.00	5.66	1.2
Approach		611	1.8	611	1.8	2.773	2723.1	LOS F	305.6	2175.3	1.00	5.16	1.2
West: Canterbury Road w													
10	L2	16	9.1	14	9.7	0.772	19.5	LOS B	38.0	273.8	0.64	0.60	44.7
11	T1	1352	3.1	1175	3.3	0.772	16.3	LOS B	38.0	273.8	0.67	0.67	38.7
12	R2	353	4.1	307	4.4	0.772	32.7	LOS C	21.3	154.5	0.79	0.96	37.2
Approach		1721	3.4	1496 N1	3.6	0.772	19.7	LOS B	38.0	273.8	0.69	0.73	38.3
All Vehicles		4715	3.7	3985 N1	4.4	2.773	804.4	LOS F	334.4	2443.1	0.86	2.05	2.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	39.5	LOS D	0.1	0.1	0.75	0.75
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	10.4	LOS B	0.1	0.1	0.39	0.39
P4	West Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
All Pedestrians		200	40.6	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036 Base PM-SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	115	4.6	115	4.6	1.895	1672.1	LOS F	483.2	3617.0	1.00	5.61	1.1
2	T1	924	8.5	924	8.5	1.895	1667.5	LOS F	483.2	3617.0	1.00	5.61	2.1
3	R2	472	2.7	472	2.7	8.419	13380.0	LOS F	375.1	2685.6	1.00	5.06	0.1
Approach		1511	6.4	1511	6.4	8.419	5326.1	LOS F	483.2	3617.0	1.00	5.44	0.5
East: Canterbury Road East													
4	L2	105	4.6	95	4.7	0.654	23.3	LOS B	23.3	169.4	0.58	0.57	41.9
5	T1	1322	4.6	1201	4.7	0.654	16.1	LOS B	23.3	169.4	0.55	0.51	38.1
6	R2	233	4.6	212	4.7	0.751	73.1	LOS F	14.2	103.3	1.00	1.04	25.4
Approach		1660	4.6	1508 N1	4.7	0.751	24.5	LOS B	23.3	169.4	0.61	0.59	34.3
North: Thorncraft Parade													
7	L2	205	8.5	205	8.5	2.056	1943.5	LOS F	578.1	4228.9	1.00	3.92	0.9
8	T1	1017	4.6	1017	4.6	9.095	2122.2	LOS F	578.1	4228.9	1.00	3.94	1.6
9	R2	486	4.6	486	4.6	9.095	14601.6	LOS F	401.7	2922.5	1.00	5.12	0.1
Approach		1708	5.1	1708	5.1	9.095	5648.8	LOS F	578.1	4228.9	1.00	4.27	0.5
West: Canterbury Road West													
10	L2	169	2.7	139	2.6	0.891	65.6	LOS E	44.6	318.9	1.00	1.00	27.9
11	T1	1313	2.7	1083	2.6	0.891	57.0	LOS E	45.2	323.6	1.00	1.01	20.2
Approach		1482	2.7	1222 N1	2.6	0.891	58.0	LOS E	45.2	323.6	1.00	1.00	21.4
All Vehicles		6361	4.7	5949 N1	5.0	9.095	2992.3	LOS F	578.1	4228.9	0.90	2.96	0.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	20.7	LOS C	0.1	0.1	0.54	0.54
P2	East Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P3	North Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P4	West Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
All Pedestrians		200	31.0	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_2036 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	143	2.1	143	2.1	0.752	55.2	LOS D	24.8	179.0	0.95	0.95	20.8
2	T1	566	4.2	566	4.2	0.752	47.3	LOS D	24.8	179.0	0.91	0.86	30.2
3	R2	581	1.0	581	1.0	1.453	857.0	LOS F	180.4	1273.5	1.00	2.78	2.0
Approach		1290	2.5	1290	2.5	1.453	412.8	LOS F	180.4	1273.5	0.95	1.73	5.4
East: Canterbury Road E													
4	L2	220	1.6	194	1.6	0.900	53.5	LOS D	44.3	316.9	0.97	0.99	31.5
5	T1	1263	2.9	1114	2.9	0.900	50.9	LOS D	46.2	331.1	0.99	0.99	22.6
Approach		1483	2.7	1308 N1	2.7	0.900	51.3	LOS D	46.2	331.1	0.98	0.99	24.3
North: Beamish Street													
7	L2	63	12.5	63	12.5	1.400	766.4	LOS F	84.2	625.1	1.00	2.60	2.2
8	T1	464	5.7	464	5.7	1.400	773.0	LOS F	84.2	625.1	1.00	2.87	4.1
9	R2	108	14.6	108	14.6	1.358	716.3	LOS F	31.6	249.0	1.00	2.48	2.4
Approach		635	7.9	635	7.9	1.400	762.7	LOS F	84.2	625.1	1.00	2.78	3.7
West: Canterbury Road w													
10	L2	99	11.4	63	11.0	0.509	38.9	LOS C	26.2	187.5	0.90	0.81	35.4
11	T1	1126	1.6	724	1.5	0.509	28.4	LOS B	26.2	187.5	0.76	0.67	30.0
12	R2	238	1.6	153	1.5	0.795	54.0	LOS D	9.5	67.6	0.93	0.96	29.5
Approach		1463	2.2	940 N1	2.1	0.795	33.3	LOS C	26.2	187.5	0.80	0.73	30.3
All Vehicles		4870	3.2	4173 N1	3.7	1.453	267.2	LOS F	180.4	1273.5	0.93	1.43	7.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	34.4	LOS D	0.1	0.1	0.70	0.70
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	24.7	LOS C	0.1	0.1	0.59	0.59
P4	West Full Crossing	50	41.0	LOS E	0.2	0.2	0.77	0.77
All Pedestrians		200	41.1	LOS E			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1994	4.6	1742	4.6	0.736	5.8	LOS A	35.5	258.6	0.45	0.42	49.3
6	R2	517	4.6	452	4.6	0.681	41.4	LOS C	20.1	146.6	0.90	0.97	32.4
Approach		2511	4.6	2193 N1	4.6	0.736	13.1	LOS A	35.5	258.6	0.54	0.53	41.6
North: Wonga Street													
7	L2	324	8.5	324	8.5	0.645	35.8	LOS C	16.2	122.0	0.79	0.80	25.5
9	R2	149	4.6	149	4.6	0.967	108.2	LOS F	13.3	96.9	1.00	1.15	12.7
Approach		473	7.3	473	7.3	0.967	58.7	LOS E	16.2	122.0	0.86	0.91	19.4
West: Canterbury Road West													
10	L2	72	2.7	45	3.0	0.796	32.7	LOS C	27.0	193.7	0.78	0.73	38.3
11	T1	1558	2.7	980	3.0	0.796	43.5	LOS D	33.7	242.0	0.89	0.83	24.8
Approach		1629	2.7	1025 N1	3.0	0.796	43.0	LOS D	33.7	242.0	0.88	0.82	25.5
All Vehicles		4614	4.2	3692 N1	5.2	0.967	27.3	LOS B	35.5	258.6	0.68	0.66	31.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	25.9	LOS C	0.1	0.1	0.61	0.61
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	45.1	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036 Base PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	17	0.0	17	0.0	0.836	25.7	LOS B	50.7	380.4	0.83	0.78	44.9
5	T1	1620	8.5	1620	8.5	0.836	23.1	LOS B	50.7	380.4	0.88	0.83	34.4
6	R2	24	8.3	24	8.3	0.836	34.7	LOS C	32.6	244.7	0.95	0.92	39.6
Approach		1661	8.4	1661	8.4	0.836	23.3	LOS B	50.7	380.4	0.88	0.84	34.7
NorthEast: Jeffrey Street													
24b	L3	9	0.0	9	0.0	1.491	950.0	LOS F	86.7	643.8	1.00	3.15	3.5
24	L2	14	0.0	14	0.0	1.491	949.1	LOS F	86.7	643.8	1.00	3.15	3.5
26a	R1	469	7.9	469	7.9	1.491	947.8	LOS F	86.7	643.8	1.00	3.14	1.9
26b	R3	1	0.0	1	0.0	1.491	949.4	LOS F	83.4	623.4	1.00	3.13	3.5
Approach		493	7.5	493	7.5	1.491	947.9	LOS F	86.7	643.8	1.00	3.14	1.9
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.661	76.1	LOS F	7.3	52.2	1.00	0.81	26.6
7	L2	53	0.0	53	0.0	0.661	75.2	LOS F	7.3	52.2	1.00	0.81	26.5
7a	L1	1	0.0	1	0.0	0.661	73.8	LOS F	7.3	52.2	1.00	0.81	26.8
9	R2	137	6.6	137	6.6	0.661	76.6	LOS F	7.3	52.2	1.00	0.81	17.3
Approach		192	4.7	192	4.7	0.661	76.2	LOS F	7.3	52.2	1.00	0.81	20.4
West: Canterbury Road w													
10	L2	22	9.1	16	11.5	0.902	55.6	LOS D	20.4	155.0	1.00	1.01	24.3
10a	L1	372	8.1	273	10.3	0.902	54.4	LOS D	20.4	155.0	1.00	1.01	24.6
11	T1	1644	8.0	1208	10.2	0.902	48.8	LOS D	20.4	155.0	0.99	1.01	25.7
Approach		2038	8.0	1498 N1	10.2	0.902	49.9	LOS D	20.4	155.0	0.99	1.01	25.5
All Vehicles		4384	8.0	3844 N1	9.1	1.491	154.9	LOS F	86.7	643.8	0.94	1.20	10.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 633.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	8.9	LOS A	0.1	0.1	0.36	0.36
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	12.0	LOS B	0.1	0.1	0.42	0.42
P3	North Full Crossing	108	23.5	LOS C	0.2	0.2	0.58	0.58
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	30.0	LOS D			0.61	0.61

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.

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2021 Option 1

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.316	5.9	LOS A	0.9	7.2	0.03	0.03	58.0
5	T1	1131	8.5	987	9.4	0.316	0.3	LOS A	0.9	7.2	0.03	0.03	59.7
6	R2	91	8.5	79	9.4	0.688	24.2	LOS B	3.1	23.5	0.54	0.74	41.9
Approach		1223	8.5	1067 N1	9.4	0.688	2.1	LOS A	3.1	23.5	0.07	0.08	57.8
North: Punchbowl Road													
7	L2	22	8.5	22	8.5	1.928	1724.7	LOS F	97.0	686.2	1.00	3.51	1.0
8	T1	8	8.5	8	8.5	1.928	1719.1	LOS F	97.0	686.2	1.00	3.51	2.0
9	R2	384	8.5	384	8.5	1.928	1724.8	LOS F	97.0	686.2	1.00	3.53	2.0
Approach		414	8.5	414	8.5	1.928	1724.7	LOS F	97.0	770.3	1.00	3.53	2.0
West: Canterbury Road West													
10	L2	143	8.3	143	8.3	0.081	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1377	8.0	1377	8.0	0.898	30.5	LOS C	43.3	324.1	0.64	0.73	30.2
Approach		1519	8.1	1519	8.1	0.898	28.2	LOS B	43.3	324.1	0.58	0.71	32.7
All Vehicles		3156	8.3	3000 N1	8.7	1.928	252.9	LOS F	97.0	770.3	0.46	0.88	9.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	130	11.5	130	11.5	1.001	147.0	LOS F	29.7	221.9	1.00	1.29	10.1
3	R2	318	4.3	318	4.3	1.001	150.5	LOS F	29.7	221.9	1.00	1.31	9.9
Approach		448	6.4	448	6.4	1.001	149.5	LOS F	29.7	221.9	1.00	1.31	9.9
East: Canterbury Road E													
4	L2	185	3.1	158	3.5	0.892	73.0	LOS F	22.3	163.2	1.00	0.98	19.6
5	T1	1074	5.9	920	6.5	0.892	65.2	LOS E	22.3	163.2	1.00	0.99	5.7
Approach		1260	5.5	1079 N1	6.0	0.892	66.3	LOS E	22.3	163.2	1.00	0.99	8.6
West: Canterbury Road W													
11	T1	1520	7.1	1520	7.1	1.216	442.7	LOS F	109.9	816.0	0.98	2.90	3.9
12	R2	139	12.0	139	12.0	0.227	39.2	LOS C	6.1	46.8	0.66	0.80	34.1
Approach		1659	7.5	1659	7.5	1.216	409.0	LOS F	109.9	816.0	0.96	2.73	4.5
All Vehicles		3367	6.6	3186 N1	7.0	1.216	256.4	LOS F	109.9	816.0	0.98	1.94	5.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	37.9	LOS D	0.0	0.0	0.74	0.74
P4	West Full Crossing	15	53.2	LOS E	0.1	0.1	0.87	0.87
All Pedestrians		18	50.6	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1160	8.6	1081	8.9	0.883	28.4	LOS B	29.2	217.5	0.54	0.64	18.4
6	R2	131	2.2	121	2.2	0.883	50.7	LOS D	29.2	217.5	0.93	1.07	26.7
Approach		1290	7.9	1203 N1	8.2	0.883	30.7	LOS C	29.2	217.5	0.58	0.68	20.1
North: Rosmore Avenue													
7	L2	129	2.9	129	2.9	0.134	22.2	LOS B	4.4	31.4	0.54	0.69	31.3
9	R2	147	2.5	147	2.5	3.750	4989.2	LOS F	99.5	711.3	1.00	3.85	0.4
Approach		276	2.7	276	2.7	3.750	2660.9	LOS F	99.5	711.3	0.78	2.37	0.7
West: Canterbury West													
10	L2	212	1.3	184	1.3	0.959	87.4	LOS F	22.4	163.2	1.00	1.16	17.4
11	T1	1360	6.4	1178	6.4	0.959	81.3	LOS F	22.4	163.2	1.00	1.18	4.6
Approach		1572	5.7	1362 N1	5.7	0.959	82.1	LOS F	22.4	163.2	1.00	1.17	6.9
All Vehicles		3139	6.4	2841 N1	7.0	3.750	310.8	LOS F	99.5	711.3	0.80	1.08	2.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	50	31.0	LOS D	0.1	0.1	0.67	0.67
All Pedestrians		56	34.5	LOS D			0.70	0.70

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	354	3.4	354	3.4	0.488	20.8	LOS B	12.9	93.0	0.63	0.74	32.0
3	R2	156	5.6	156	5.6	0.926	91.3	LOS F	12.6	92.5	0.88	1.08	14.4
Approach		509	4.1	509	4.1	0.926	42.4	LOS C	12.9	93.0	0.70	0.84	23.3
East: Canterbury Road E													
4	L2	88	9.2	79	9.6	0.905	81.7	LOS F	33.2	247.0	1.00	0.99	21.9
5	T1	892	6.4	804	6.6	0.905	74.7	LOS F	33.2	247.0	1.00	0.99	10.5
Approach		980	6.6	884 N1	6.9	0.905	75.4	LOS F	33.2	247.0	1.00	0.99	11.9
West: Canterbury Road w													
11	T1	1085	8.6	956	8.6	0.805	7.8	LOS A	22.9	171.8	0.43	0.41	37.0
12	R2	444	2.9	392	2.9	0.805	33.5	LOS C	21.3	153.7	0.87	0.92	32.1
Approach		1529	6.9	1348 N1	7.0	0.805	15.3	LOS B	22.9	171.8	0.56	0.56	34.0
All Vehicles		3018	6.4	2741 N1	7.0	0.926	39.7	LOS C	33.2	247.0	0.73	0.75	21.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	40.1	LOS E	0.0	0.0	0.76	0.76
P2	East Full Crossing	19	42.5	LOS E	0.1	0.1	0.78	0.78
All Pedestrians		21	42.2	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	999	8.5	896	8.9	0.395	6.8	LOS A	20.0	150.6	0.56	0.52	42.7
6	R2	76	8.5	68	8.9	0.395	12.4	LOS A	7.3	54.7	0.58	0.56	45.8
Approach		1075	8.5	964 N1	8.9	0.395	7.2	LOS A	20.0	150.6	0.56	0.52	43.2
North: Dudley Street													
7	L2	112	8.5	112	8.5	0.169	33.1	LOS C	5.0	37.3	0.70	0.71	26.4
9	R2	65	8.5	65	8.5	0.414	71.6	LOS F	4.3	32.6	0.98	0.76	17.0
Approach		177	8.5	177	8.5	0.414	47.2	LOS D	5.0	37.3	0.80	0.73	22.0
West: Canterbury West													
10	L2	8	8.0	7	8.0	0.602	28.9	LOS C	21.5	160.7	0.65	0.58	36.1
11	T1	1179	8.0	1060	8.0	0.602	25.1	LOS B	23.5	176.0	0.68	0.61	23.2
Approach		1187	8.0	1068 N1	8.0	0.602	25.1	LOS B	23.5	176.0	0.68	0.61	23.3
All Vehicles		2439	8.3	2208 N1	9.1	0.602	19.1	LOS B	23.5	176.0	0.63	0.58	29.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
All Pedestrians		100	43.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	93	8.5	93	8.5	0.113	26.4	LOS B	3.5	26.0	0.59	0.69	29.3
3	R2	50	8.0	50	8.0	0.359	73.2	LOS F	3.3	25.0	0.99	0.75	16.8
Approach		143	8.3	143	8.3	0.359	42.6	LOS D	3.5	26.0	0.73	0.71	23.3
East: Canterbury Raod East													
4	L2	110	8.5	97	9.0	0.594	37.6	LOS C	24.1	181.9	0.82	0.75	36.2
5	T1	969	8.5	857	9.0	0.594	31.6	LOS C	24.7	186.0	0.82	0.73	29.4
Approach		1078	8.5	955 N1	9.0	0.594	32.2	LOS C	24.7	186.0	0.82	0.74	30.4
West: Canterbury Road West													
11	T1	1100	5.3	1004	5.3	0.434	3.4	LOS A	7.1	52.1	0.25	0.25	49.3
12	R2	106	8.0	97	8.0	0.434	12.0	LOS A	7.1	52.1	0.44	0.47	46.0
Approach		1207	5.5	1101 N1	5.5	0.434	4.2	LOS A	7.1	52.1	0.27	0.27	48.6
All Vehicles		2427	7.0	2198 N1	7.8	0.594	18.8	LOS B	24.7	186.0	0.53	0.50	34.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	25.9	LOS C	0.1	0.1	0.61	0.61
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	45.1	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Option1_2021 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	159	21.4	159	21.4	0.162	17.6	LOS B	4.6	38.0	0.46	0.66	41.2
2	T1	2766	7.5	2766	7.5	1.153	345.9	LOS F	190.3	1418.3	1.00	2.47	11.8
3	R2	209	3.2	209	3.2	0.817	82.7	LOS F	7.7	55.6	1.00	0.92	25.5
Approach		3134	8.0	3134	8.0	1.153	311.7	LOS F	190.3	1418.3	0.97	2.27	12.4
East: Canterbury Road E													
4	L2	96	10.1	96	10.1	1.162	342.0	LOS F	83.2	610.4	1.00	1.77	8.2
5	T1	839	4.5	839	4.5	1.162	353.9	LOS F	91.5	665.3	1.00	2.14	3.8
6	R2	213	9.8	213	9.8	0.871	86.9	LOS F	8.2	61.9	1.00	0.98	27.2
Approach		1148	5.9	1148	5.9	1.162	303.5	LOS F	91.5	665.3	1.00	1.89	6.2
North: King Georges Road													
7	L2	335	7.5	335	7.5	0.782	37.8	LOS C	37.4	280.7	0.88	0.91	40.3
8	T1	1752	9.1	1752	9.1	0.782	31.8	LOS C	38.5	290.6	0.89	0.84	43.6
9	R2	202	5.2	202	5.2	1.126	315.9	LOS F	35.0	255.6	1.00	1.75	8.0
Approach		2289	8.5	2289	8.5	1.126	57.7	LOS E	38.5	290.6	0.90	0.93	34.8
West: Canterbury Road W													
10	L2	94	10.5	87	10.7	0.126	32.0	LOS C	3.7	28.1	0.67	0.70	42.3
11	T1	570	7.5	524	7.6	0.853	67.4	LOS E	20.4	152.1	1.00	0.98	27.2
12	R2	110	21.6	101	21.9	0.747	85.7	LOS F	3.8	31.6	1.00	0.85	26.4
Approach		774	9.8	712 N1	10.0	0.853	65.7	LOS E	20.4	152.1	0.96	0.93	28.7
All Vehicles		7345	8.0	7283 N1	8.1	1.162	206.5	LOS F	190.3	1418.3	0.95	1.66	15.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 622.0 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	56.8	LOS E	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	27.7	LOS C	0.1	0.1	0.63	0.63
P3	North Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
P4	West Full Crossing	50	31.0	LOS D	0.1	0.1	0.67	0.67
All Pedestrians		200	43.8	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.412	9.6	LOS A	9.4	68.6	0.25	0.23	54.9
5	T1	1378	4.6	1220	5.2	0.412	3.7	LOS A	9.4	68.6	0.23	0.21	56.6
6	R2	96	4.6	85	5.2	0.429	17.6	LOS B	2.8	20.6	0.49	0.72	45.5
Approach		1475	4.6	1306 N1	5.2	0.429	4.6	LOS A	9.4	68.6	0.25	0.25	55.7
North: Punchbowl Road													
7	L2	29	8.5	29	8.5	0.922	90.3	LOS F	17.8	125.5	1.00	1.03	15.4
8	T1	1	0.0	1	0.0	0.922	84.6	LOS F	17.8	125.5	1.00	1.03	24.2
9	R2	396	4.6	396	4.6	0.922	90.6	LOS F	17.8	125.5	1.00	1.03	23.9
Approach		426	4.8	426	4.8	0.922	90.6	LOS F	17.8	127.5	1.00	1.03	23.4
West: Canterbury Road West													
10	L2	167	2.8	167	2.8	0.092	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1340	2.4	1340	2.4	0.444	5.2	LOS A	14.7	104.7	0.36	0.33	51.4
Approach		1507	2.5	1507	2.5	0.444	5.2	LOS A	14.7	104.7	0.32	0.35	52.1
All Vehicles		3409	3.7	3240 N1	3.9	0.922	16.2	LOS B	17.8	127.5	0.38	0.40	44.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	194	1.5	194	1.5	1.179	401.5	LOS F	69.1	492.7	1.00	1.93	4.1
3	R2	367	2.8	367	2.8	1.179	408.7	LOS F	69.1	492.7	1.00	1.95	4.0
Approach		561	2.4	561	2.4	1.179	406.2	LOS F	69.1	492.7	1.00	1.94	4.1
East: Canterbury Road E													
4	L2	244	2.1	211	2.4	0.901	51.7	LOS D	23.1	163.2	0.95	0.96	24.2
5	T1	1384	0.4	1194	0.4	0.901	54.3	LOS D	23.2	163.2	0.98	0.99	6.7
Approach		1627	0.6	1405 N1	0.7	0.901	53.9	LOS D	23.2	163.2	0.98	0.99	10.3
West: Canterbury Road W													
11	T1	1282	2.6	1282	2.6	1.010	129.9	LOS F	82.0	586.4	1.00	1.47	11.5
12	R2	149	2.1	149	2.1	0.292	29.6	LOS C	5.5	38.9	0.87	0.80	37.5
Approach		1431	2.5	1431	2.5	1.010	119.4	LOS F	82.0	586.4	0.99	1.40	13.2
All Vehicles		3620	1.7	3397 N1	1.8	1.179	139.7	LOS F	82.0	586.4	0.98	1.32	8.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	30.2	LOS D	0.0	0.0	0.66	0.66
P4	West Full Crossing	15	53.2	LOS E	0.1	0.1	0.87	0.87
All Pedestrians		18	49.4	LOS E			0.84	0.84

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows	Arrival Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed

		Total veh/h	HV %	Total veh/h	HV %	v/c	sec		Vehicles veh	Distance m		per veh	km/h
East: Canterbury East													
5	T1	1452	5.9	1394	6.1	1.059	180.2	LOS F	44.6	326.4	1.00	1.73	3.8
6	R2	110	2.0	105	2.1	1.059	176.4	LOS F	44.6	326.4	1.00	1.55	10.2
Approach		1562	5.7	1499N1	5.8	1.059	179.9	LOS F	44.6	326.4	1.00	1.72	4.3
North: Rosmore Avenue													
7	L2	115	0.0	115	0.0	0.111	19.9	LOS B	3.6	25.3	0.50	0.67	32.6
9	R2	211	0.5	211	0.5	5.327	7827.3	LOS F	156.9	1103.2	1.00	4.18	0.2
Approach		326	0.3	326	0.3	5.327	5076.3	LOS F	156.9	1103.2	0.82	2.94	0.4
West: Canterbury West													
10	L2	149	1.5	149	1.5	1.090	250.5	LOS F	22.8	163.2	1.00	1.91	7.5
11	T1	1318	2.8	1318	2.8	1.090	244.6	LOS F	22.8	163.2	1.00	1.97	1.6
Approach		1468	2.7	1468	2.7	1.090	245.2	LOS F	22.8	163.2	1.00	1.97	2.3
All Vehicles		3356	3.8	3293N1	3.9	5.327	694.0	LOS F	156.9	1103.2	0.98	1.95	1.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	50	33.7	LOS D	0.1	0.1	0.69	0.69
All Pedestrians		56	36.9	LOS D			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	371	1.1	371	1.1	2.051	1954.9	LOS F	184.8	1305.9	1.00	4.07	0.9
3	R2	89	4.5	89	4.5	1.167	387.8	LOS F	17.5	127.5	1.00	1.82	4.3
Approach		460	1.8	460	1.8	2.051	1652.5	LOS F	184.8	1305.9	1.00	3.63	1.1
East: Canterbury Road E													
4	L2	82	5.5	78	5.7	0.904	32.1	LOS C	30.9	228.2	0.56	0.67	36.5
5	T1	1171	6.5	1108	6.7	0.904	30.9	LOS C	37.3	276.0	0.67	0.76	20.2
Approach		1253	6.4	1186 N1	6.6	0.904	31.0	LOS C	37.3	276.0	0.66	0.76	21.9
West: Canterbury Road w													
11	T1	1137	2.7	1105	2.7	0.746	1.3	LOS A	8.3	59.3	0.12	0.12	54.4
12	R2	395	1.2	384	1.2	1.699	1296.8	LOS F	46.1	326.4	1.00	3.38	1.9
Approach		1532	2.3	1488 N1	2.3	1.699	335.4	LOS F	46.1	326.4	0.35	0.96	3.4
All Vehicles		3245	3.8	3134 N1	4.0	2.051	413.5	LOS F	184.8	1305.9	0.56	1.28	2.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	10.1	LOS B	0.1	0.1	0.38	0.38
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	36.2	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1332	4.6	1254	4.7	0.746	3.3	LOS A	10.9	79.4	0.22	0.25	49.6
6	R2	107	4.6	101	4.7	0.746	13.2	LOS A	10.9	79.4	0.43	0.54	45.2
Approach		1439	4.6	1355 N1	4.7	0.746	4.1	LOS A	10.9	79.4	0.24	0.27	48.8
North: Dudley Street													
7	L2	82	8.5	82	8.5	0.102	25.5	LOS B	3.1	23.1	0.60	0.68	29.7
9	R2	94	4.6	94	4.6	0.818	81.8	LOS F	7.1	51.4	1.00	0.94	15.6
Approach		176	6.4	176	6.4	0.818	55.6	LOS D	7.1	51.4	0.81	0.82	20.0
West: Canterbury West													
10	L2	42	2.7	41	2.6	0.853	35.8	LOS C	37.7	269.9	0.88	0.83	33.1
11	T1	1278	2.7	1260	2.6	0.853	35.7	LOS C	40.2	287.5	0.90	0.86	18.3
Approach		1320	2.7	1301 N1	2.6	0.853	35.7	LOS C	40.2	287.5	0.90	0.85	19.1
All Vehicles		2935	3.8	2832 N1	4.0	0.853	21.8	LOS B	40.2	287.5	0.58	0.57	27.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
All Pedestrians		100	46.9	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	124	4.6	124	4.6	0.142	25.5	LOS B	4.6	33.2	0.58	0.70	29.6
3	R2	133	2.7	133	2.7	0.891	83.8	LOS F	10.1	72.6	1.00	1.01	15.3
Approach		257	3.6	257	3.6	0.891	55.8	LOS D	10.1	72.6	0.80	0.86	20.0
East: Canterbury Raod East													
4	L2	54	4.6	50	4.7	0.738	41.2	LOS C	33.3	242.7	0.90	0.82	35.2
5	T1	1223	4.6	1139	4.7	0.738	35.6	LOS C	33.7	245.7	0.90	0.81	27.8
Approach		1277	4.6	1189 N1	4.7	0.738	35.8	LOS C	33.7	245.7	0.90	0.81	28.2
West: Canterbury Road West													
11	T1	1217	2.4	1213	2.4	0.592	3.4	LOS A	9.2	65.6	0.17	0.19	49.1
12	R2	147	2.7	146	2.7	0.592	16.4	LOS B	9.2	65.6	0.50	0.58	42.7
Approach		1364	2.4	1359 N1	2.4	0.592	4.8	LOS A	9.2	65.6	0.21	0.23	47.4
All Vehicles		2897	3.5	2805 N1	3.6	0.891	22.6	LOS B	33.7	245.7	0.56	0.54	31.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	27.1	LOS C	0.1	0.1	0.62	0.62
P2	East Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	44.3	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Option1_2021 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	330	11.7	330	11.7	0.357	26.5	LOS B	12.5	96.2	0.61	0.80	35.4
2	T1	1746	5.3	1746	5.3	1.115	293.5	LOS F	110.7	809.6	1.00	2.14	13.4
3	R2	262	1.6	262	1.6	1.087	256.4	LOS F	20.1	142.6	1.00	1.52	11.4
Approach		2338	5.8	2338	5.8	1.115	251.6	LOS F	110.7	809.6	0.94	1.88	13.8
East: Canterbury Road E													
4	L2	129	4.5	129	4.5	1.102	230.6	LOS F	84.0	603.7	1.00	1.35	10.4
5	T1	888	2.7	888	2.7	1.102	251.7	LOS F	84.0	603.7	1.00	1.74	5.0
6	R2	225	4.3	225	4.3	0.865	90.9	LOS F	9.1	66.3	1.00	0.96	26.6
Approach		1242	3.2	1242	3.2	1.102	220.4	LOS F	84.0	603.7	1.00	1.56	7.9
North: King Georges Road													
7	L2	156	4.1	156	4.1	1.085	214.9	LOS F	103.5	744.0	1.00	1.51	13.2
8	T1	2137	3.0	2137	3.0	1.085	231.1	LOS F	123.5	886.5	1.00	1.80	15.5
9	R2	276	2.6	276	2.6	1.083	250.8	LOS F	42.7	305.5	1.00	1.53	9.7
Approach		2570	3.0	2570	3.0	1.085	232.2	LOS F	123.5	886.5	1.00	1.75	14.8
West: Canterbury Road W													
10	L2	177	3.8	177	3.8	0.175	21.0	LOS B	6.1	44.1	0.52	0.68	46.9
11	T1	873	0.8	873	0.8	0.919	71.7	LOS F	36.5	257.1	0.95	1.06	26.3
12	R2	420	4.0	420	4.0	1.101	283.5	LOS F	35.0	253.3	1.00	1.62	11.4
Approach		1470	2.0	1470	2.0	1.101	126.1	LOS F	36.5	257.1	0.91	1.17	19.6
All Vehicles		7621	3.7	7621	3.7	1.115	215.8	LOS F	123.5	886.5	0.97	1.65	13.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 264.6 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	60.0	LOS E	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	40.4	LOS E	0.2	0.2	0.73	0.73
P3	North Full Crossing	50	49.7	LOS E	0.2	0.2	0.82	0.82
P4	West Full Crossing	50	49.7	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		200	50.0	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_Option1_2021 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1021	4.8	954	4.8	0.674	21.0	LOS B	20.8	153.4	0.59	0.57	35.5
6	R2	91	11.3	85	11.3	0.674	70.9	LOS F	20.8	153.4	1.00	1.02	27.1
Approach		1112	5.3	1039 N1	5.3	0.674	25.0	LOS B	20.8	153.4	0.62	0.61	33.9
North: Haldon Street													
7	L2	63	5.0	63	5.0	0.887	87.7	LOS F	9.6	71.3	1.00	1.03	14.9
9	R2	133	8.7	133	8.7	0.887	90.1	LOS F	9.6	71.3	1.00	1.05	14.6
Approach		196	7.5	196	7.5	0.887	89.3	LOS F	9.6	71.3	1.00	1.04	14.7
West: Canterbury Road w													
10	L2	99	8.2	99	8.2	0.887	48.3	LOS D	53.9	397.4	0.98	0.96	31.4
11	T1	1501	5.9	1501	5.9	0.887	42.3	LOS C	54.7	402.1	0.98	0.96	22.1
Approach		1601	6.0	1601	6.0	0.887	42.7	LOS D	54.7	402.1	0.98	0.96	23.0
All Vehicles		2909	5.8	2836 N1	6.0	0.887	39.5	LOS C	54.7	402.1	0.85	0.84	25.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	43.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St Option1_2021 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	123	8.4	123	8.4	0.885	56.6	LOS E	34.4	248.8	0.90	0.93	10.0
2	T1	468	2.5	468	2.5	0.885	56.5	LOS E	34.4	248.8	0.92	0.96	9.3
3	R2	112	7.2	112	7.2	0.885	82.7	LOS F	15.5	113.5	1.00	1.07	7.0
Approach		703	4.3	703	4.3	0.885	60.7	LOS E	34.4	248.8	0.93	0.97	9.0
East: Canterbury Rd													
4	L2	82	12.5	76	12.6	0.819	54.7	LOS D	29.9	220.7	0.95	0.88	26.2
5	T1	958	5.0	888	5.0	0.819	49.0	LOS D	30.4	221.8	0.95	0.88	23.1
Approach		1040	5.6	964 N1	5.6	0.819	49.4	LOS D	30.4	221.8	0.95	0.88	23.4
North: Chapel St													
7	L2	48	0.0	48	0.0	0.317	35.3	LOS C	11.0	78.3	0.75	0.66	5.6
8	T1	410	2.4	410	2.4	0.532	40.8	LOS C	14.4	102.9	0.84	0.72	14.7
9	R2	21	0.0	21	0.0	0.532	51.6	LOS D	14.4	102.9	0.91	0.78	3.9
Approach		479	2.1	479	2.1	0.532	40.7	LOS C	14.4	102.9	0.83	0.72	13.6
West: Canterbury Rd													
10	L2	54	0.0	54	0.0	0.766	25.5	LOS B	32.9	239.9	0.70	0.65	23.3
11	T1	1320	5.4	1320	5.4	0.766	18.8	LOS B	32.9	239.9	0.63	0.58	37.1
12	R2	180	7.7	180	7.7	0.597	64.1	LOS E	11.2	83.3	0.94	0.81	22.7
Approach		1555	5.5	1555	5.5	0.766	24.3	LOS B	32.9	239.9	0.67	0.61	33.3
All Vehicles		3777	4.8	3701 N1	4.9	0.885	39.9	LOS C	34.4	248.8	0.81	0.76	22.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
P2	East Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
P3	North Full Crossing	50	20.7	LOS C	0.1	0.1	0.54	0.54
All Pedestrians		150	31.3	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_Option1_2021 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	76	7.1	76	7.1	0.375	54.6	LOS D	8.3	61.6	0.90	0.76	20.7
2	T1	370	6.4	370	6.4	1.877	1326.7	LOS F	218.2	1646.5	0.98	3.18	2.5
3	R2	180	13.6	180	13.6	1.877	1611.9	LOS F	218.2	1646.5	1.00	3.71	1.1
Approach		626	8.6	626	8.6	1.877	1253.7	LOS F	218.2	1646.5	0.98	3.04	2.2
East: Canterbury Road E													
4	L2	79	16.7	71	16.9	0.891	37.1	LOS C	27.7	208.2	0.91	0.86	36.0
5	T1	946	7.1	853	7.2	0.891	32.4	LOS C	29.2	216.7	0.92	0.86	28.3
Approach		1025	7.8	924 N1	7.9	0.891	32.8	LOS C	29.2	216.7	0.92	0.86	29.2
North: Sharp Street													
7	L2	71	5.3	71	5.3	0.479	73.0	LOS F	4.8	35.3	1.00	0.77	16.9
8	T1	409	4.6	409	4.6	2.237	2273.2	LOS F	214.9	1563.6	1.00	5.34	1.5
Approach		480	4.7	480	4.7	2.237	1946.6	LOS F	214.9	1563.6	1.00	4.66	1.7
West: Canterbury Road w													
10	L2	6	0.0	6	0.0	0.812	10.0	LOS A	20.1	147.5	0.33	0.31	50.7
11	T1	1277	5.5	1277	5.5	0.812	10.7	LOS A	28.2	210.6	0.45	0.44	43.9
12	R2	302	9.6	302	9.6	0.812	39.2	LOS C	28.2	210.6	0.91	0.92	35.0
Approach		1585	6.2	1585	6.2	0.812	16.1	LOS B	28.2	210.6	0.54	0.53	40.7
All Vehicles		3716	6.9	3615 N1	7.0	2.237	490.8	LOS F	218.2	1646.5	0.77	1.60	4.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	10.4	LOS B	0.1	0.1	0.39	0.39
P4	West Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
All Pedestrians		200	41.3	LOS E			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_Option1_2021 AM-SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	57	8.5	57	8.5	1.263	552.0	LOS F	62.3	468.1	1.00	2.79	3.1
2	T1	642	8.5	642	8.5	2.797	2462.6	LOS F	302.8	2273.7	1.00	5.11	1.4
3	R2	55	8.0	55	8.0	2.797	3282.1	LOS F	302.8	2273.7	1.00	6.09	0.6
Approach		754	8.5	754	8.5	2.797	2378.8	LOS F	302.8	2273.7	1.00	5.01	1.4
East: Canterbury Road East													
4	L2	37	8.5	35	8.7	0.394	12.9	LOS A	10.5	78.8	0.33	0.33	48.0
5	T1	1048	8.5	989	8.7	0.394	5.0	LOS A	10.5	78.8	0.23	0.22	50.8
6	R2	285	8.5	269	8.7	0.737	70.8	LOS F	17.5	131.4	1.00	1.05	25.8
Approach		1370	8.5	1293 N1	8.7	0.737	18.9	LOS B	17.5	131.4	0.40	0.40	38.1
North: Thorncraft Parade													
7	L2	241	8.5	241	8.5	0.830	65.0	LOS E	21.6	162.3	1.00	0.95	18.4
8	T1	339	8.5	339	8.5	3.670	3961.5	LOS F	255.8	1921.3	1.00	4.69	0.9
9	R2	106	8.5	106	8.5	3.670	4845.6	LOS F	255.8	1921.3	1.00	5.53	0.4
Approach		686	8.5	686	8.5	3.670	2728.9	LOS F	255.8	1921.3	1.00	3.50	1.0
West: Canterbury Road West													
10	L2	63	0.0	60	0.0	0.898	53.7	LOS D	46.1	342.0	1.00	1.01	31.0
11	T1	1452	8.0	1363	7.6	0.898	41.9	LOS C	51.2	381.8	0.96	0.96	24.6
Approach		1516	7.7	1423 N1	7.3	0.898	42.4	LOS C	51.2	381.8	0.96	0.96	25.0
All Vehicles		4325	8.2	4155 N1	8.6	3.670	902.4	LOS F	302.8	2273.7	0.80	1.94	2.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	9.3	LOS A	0.1	0.1	0.37	0.37
P2	East Full Crossing	50	55.0	LOS E	0.2	0.2	0.89	0.89
P3	North Full Crossing	50	23.5	LOS C	0.1	0.1	0.58	0.58
P4	West Full Crossing	50	52.4	LOS E	0.2	0.2	0.87	0.87
All Pedestrians		200	35.1	LOS D			0.67	0.67

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.

MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ Option1_2021 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	107	4.4	107	4.4	2.134	2077.6	LOS F	184.8	1346.7	1.00	3.84	0.9
2	T1	676	4.9	676	4.9	2.134	2081.5	LOS F	201.8	1472.1	1.00	4.64	1.7
3	R2	379	4.1	379	4.1	2.146	2124.0	LOS F	195.4	1415.1	1.00	4.08	0.8
Approach		1161	4.6	1161	4.6	2.146	2095.0	LOS F	201.8	1472.1	1.00	4.39	1.3
East: Canterbury Road E													
4	L2	242	4.0	235	4.0	0.880	61.4	LOS E	36.4	266.0	1.00	1.01	29.3
5	T1	828	5.8	801	5.8	0.880	58.2	LOS E	37.7	277.3	1.00	1.01	20.7
Approach		1071	5.4	1036 N1	5.4	0.880	58.9	LOS E	37.7	277.3	1.00	1.01	23.2
North: Beamish Street													
7	L2	49	17.9	49	17.9	1.639	1174.9	LOS F	103.1	776.5	1.00	1.93	1.4
8	T1	458	6.8	458	6.8	1.639	1190.3	LOS F	103.1	776.5	1.00	2.99	2.8
9	R2	76	27.9	76	27.9	0.317	56.0	LOS D	4.4	38.2	0.88	0.75	20.0
Approach		582	10.5	582	10.5	1.639	1041.2	LOS F	103.1	776.5	0.98	2.61	2.8
West: Canterbury Road w													
10	L2	108	12.7	101	12.3	1.258	536.7	LOS F	102.1	750.7	1.00	3.03	5.8
11	T1	1254	5.1	1177	4.9	1.258	542.1	LOS F	103.0	750.7	1.00	3.09	3.0
12	R2	255	5.8	239	5.6	0.534	72.2	LOS F	15.5	113.7	1.00	0.99	25.6
Approach		1617	5.7	1517 N1	5.5	1.258	467.7	LOS F	103.0	750.7	1.00	2.76	4.1
All Vehicles		4431	6.0	4297 N1	6.1	2.146	886.7	LOS F	201.8	1472.1	1.00	2.76	2.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	41.7	LOS E	0.2	0.2	0.77	0.77
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	18.6	LOS B	0.1	0.1	0.52	0.52
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96

All Pedestrians	200	47.2	LOS E		0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_Option1_2021 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1359	8.5	1299	8.5	0.436	4.2	LOS A	12.8	96.5	0.32	0.30	51.8
6	R2	439	8.5	419	8.5	1.035	128.4	LOS F	47.4	355.9	1.00	1.19	13.9
Approach		1798	8.5	1719 N1	8.5	1.035	34.5	LOS C	47.4	355.9	0.49	0.51	24.5
North: Wonga Street													
7	L2	343	8.5	343	8.5	1.045	199.7	LOS F	48.2	362.0	1.00	1.45	7.8
9	R2	104	8.5	104	8.5	0.695	75.8	LOS F	7.3	55.2	1.00	0.83	16.4
Approach		447	8.5	447	8.5	1.045	170.8	LOS F	48.2	362.0	1.00	1.31	8.8
West: Canterbury Road West													
10	L2	57	8.0	50	8.3	1.165	357.4	LOS F	108.8	816.0	1.00	2.50	8.6
11	T1	1679	8.0	1464	8.3	1.165	355.9	LOS F	108.8	816.0	1.00	2.53	4.7
Approach		1735	8.0	1514 N1	8.3	1.165	356.0	LOS F	108.8	816.0	1.00	2.53	4.9
All Vehicles		3980	8.3	3680 N1	9.0	1.165	183.3	LOS F	108.8	816.0	0.76	1.44	8.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	16.5	LOS B	0.1	0.1	0.49	0.49
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	40.4	LOS E			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_Option1_2021 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.684	21.2	LOS B	33.9	254.2	0.66	0.62	47.5
5	T1	1109	8.5	1109	8.5	0.684	18.9	LOS B	33.9	254.2	0.74	0.68	37.2
6	R2	37	8.1	37	8.1	0.684	36.6	LOS C	11.6	87.3	0.95	0.86	38.6
Approach		1159	8.4	1159	8.4	0.684	19.5	LOS B	33.9	254.2	0.74	0.69	37.5
NorthEast: Jeffrey Street													
24b	L3	22	9.1	22	9.1	0.932	97.6	LOS F	11.0	82.1	1.00	1.11	23.1
24	L2	4	0.0	4	0.0	0.932	96.5	LOS F	11.0	82.1	1.00	1.11	23.1
26a	R1	238	8.0	238	8.0	0.932	94.9	LOS F	11.0	82.1	1.00	1.11	14.8
26b	R3	1	0.0	1	0.0	0.932	96.2	LOS F	10.9	81.3	1.00	1.10	23.2
Approach		265	7.9	265	7.9	0.932	95.2	LOS F	11.0	82.1	1.00	1.11	15.8
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.681	76.4	LOS F	7.6	55.0	1.00	0.82	26.6
7	L2	63	0.0	63	0.0	0.681	75.5	LOS F	7.6	55.0	1.00	0.82	26.5
7a	L1	1	0.0	1	0.0	0.681	74.2	LOS F	7.6	55.0	1.00	0.82	26.7
9	R2	137	8.0	137	8.0	0.681	76.9	LOS F	7.6	55.0	1.00	0.82	17.2
Approach		202	5.4	202	5.4	0.681	76.5	LOS F	7.6	55.0	1.00	0.82	20.7
West: Canterbury Road w													
10	L2	20	10.0	17	10.1	0.904	48.8	LOS D	20.7	155.0	0.98	0.99	26.6
10a	L1	170	8.2	149	8.3	0.904	47.6	LOS D	20.7	155.0	0.98	0.99	26.9
11	T1	1779	8.0	1556	8.1	0.904	42.6	LOS D	20.7	155.0	0.98	0.99	27.7
Approach		1969	8.1	1722 N1	8.1	0.904	43.1	LOS D	20.7	155.0	0.98	0.99	27.7
All Vehicles		3595	8.0	3348 N1	8.6	0.932	41.1	LOS C	33.9	254.2	0.90	0.88	27.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 384.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	8.2	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	9.0	LOS A	0.1	0.1	0.36	0.36
P3	North Full Crossing	108	19.1	LOS B	0.2	0.2	0.52	0.52
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	27.7	LOS C			0.58	0.58

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	330	11.7	330	11.7	0.344	24.6	LOS B	12.0	92.2	0.58	0.79	43.5
2	T1	1746	5.3	1746	5.3	1.071	222.2	LOS F	95.0	694.7	1.00	1.84	16.6
3	R2	262	1.6	262	1.6	0.988	128.9	LOS F	13.2	93.6	1.00	1.21	13.6
Approach		2338	5.8	2338	5.8	1.071	183.9	LOS F	95.0	694.7	0.94	1.62	17.7
East: Canterbury Road E													
4	L2	129	4.5	110	4.8	1.037	129.2	LOS F	55.0	396.2	1.00	1.16	14.4
5	T1	888	2.7	754	2.9	1.037	153.0	LOS F	55.5	398.3	1.00	1.41	13.8
6	R2	225	4.3	191	4.6	0.900	96.1	LOS F	8.0	58.2	1.00	1.01	25.7
Approach		1242	3.2	1055 N1	3.4	1.037	140.2	LOS F	55.5	398.3	1.00	1.31	15.5
North: King Georges Road													
7	L2	156	4.1	156	4.1	1.048	156.5	LOS F	84.9	610.3	1.00	1.35	12.0
8	T1	2137	3.0	2137	3.0	1.048	173.2	LOS F	107.1	768.5	1.00	1.57	18.8
9	R2	276	2.6	276	2.6	1.034	179.1	LOS F	35.0	250.2	1.00	1.34	18.2
Approach		2570	3.0	2570	3.0	1.048	172.8	LOS F	107.1	768.5	1.00	1.53	18.4
West: Canterbury Road W													
10	L2	177	3.8	177	3.8	0.176	21.4	LOS B	6.1	44.5	0.52	0.68	46.8
11	T1	873	0.8	873	0.8	0.926	74.8	LOS F	36.9	259.9	0.96	1.08	17.9
12	R2	420	4.0	420	4.0	1.068	232.7	LOS F	31.0	224.7	1.00	1.50	13.4
Approach		1470	2.0	1470	2.0	1.068	113.5	LOS F	36.9	259.9	0.92	1.15	17.7
All Vehicles		7621	3.7	7433 N1	3.8	1.071	159.9	LOS F	107.1	768.5	0.96	1.45	17.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	63.6	LOS F	0.2	0.2	0.92	0.92
P2	East Full Crossing	50	39.0	LOS D	0.2	0.2	0.72	0.72
P3	North Full Crossing	50	50.5	LOS E	0.2	0.2	0.82	0.82
P4	West Full Crossing	50	48.1	LOS E	0.2	0.2	0.80	0.80
All Pedestrians		200	50.3	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1257	4.9	1036	5.3	0.590	17.5	LOS B	35.1	256.8	0.75	0.72	38.0
6	R2	156	2.1	128	2.3	0.590	50.3	LOS D	21.1	152.7	1.00	1.00	31.8
Approach		1413	4.6	1165 N1	5.0	0.590	21.1	LOS B	35.1	256.8	0.78	0.75	36.6
North: Haldon Street													
7	L2	69	4.7	69	4.7	0.885	84.9	LOS F	11.4	82.3	1.00	1.00	15.2
9	R2	209	2.6	209	2.6	0.885	85.6	LOS F	11.4	82.3	1.00	1.00	15.1
Approach		278	3.1	278	3.1	0.885	85.4	LOS F	11.4	82.3	1.00	1.00	15.1
West: Canterbury Road w													
10	L2	161	5.6	160	5.5	0.762	32.1	LOS C	40.1	289.5	0.85	0.80	36.9
11	T1	1401	3.1	1395	3.1	0.762	26.1	LOS B	41.0	294.8	0.84	0.78	29.0
Approach		1562	3.3	1555 N1	3.3	0.762	26.7	LOS B	41.0	294.8	0.84	0.78	30.3
All Vehicles		3252	3.9	2997 N1	4.2	0.885	30.0	LOS C	41.0	294.8	0.83	0.79	29.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	18.6	LOS B	0.1	0.1	0.52	0.52
P4	West Full Crossing	50	63.3	LOS F	0.2	0.2	0.95	0.95
All Pedestrians		100	40.9	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	182	3.2	182	3.2	0.884	57.7	LOS E	35.5	252.4	0.93	0.95	9.7
2	T1	402	0.9	402	0.9	0.884	57.8	LOS E	35.5	252.4	0.94	0.97	9.1
3	R2	83	1.4	83	1.4	0.884	85.5	LOS F	12.0	84.5	1.00	1.08	6.8
Approach		667	1.6	667	1.6	0.884	61.2	LOS E	35.5	252.4	0.94	0.98	8.9
East: Canterbury Rd													
4	L2	153	25.2	123	27.1	0.822	49.5	LOS D	32.1	244.3	0.93	0.86	27.6
5	T1	1222	4.6	960	5.1	0.822	43.4	LOS D	33.5	244.6	0.93	0.86	24.8
Approach		1375	6.9	1083 N1	7.5	0.822	44.1	LOS D	33.5	244.6	0.93	0.86	25.2
North: Chapel St													
7	L2	39	0.0	39	0.0	0.404	38.6	LOS C	14.3	100.4	0.79	0.70	5.2
8	T1	530	0.5	530	0.5	0.677	44.2	LOS D	19.0	133.5	0.89	0.77	13.9
9	R2	21	0.0	21	0.0	0.677	55.2	LOS D	19.0	133.5	0.96	0.83	3.7
Approach		590	0.5	590	0.5	0.677	44.2	LOS D	19.0	133.5	0.88	0.76	13.1
West: Canterbury Rd													
10	L2	47	0.0	47	0.0	0.716	22.4	LOS B	28.3	203.2	0.61	0.57	24.2
11	T1	1308	3.2	1303	3.2	0.716	15.9	LOS B	28.3	203.2	0.56	0.51	39.5
12	R2	186	3.1	185	3.1	0.681	67.8	LOS E	12.0	86.5	0.98	0.83	22.0
Approach		1542	3.1	1535 N1	3.1	0.716	22.4	LOS B	28.3	203.2	0.61	0.55	34.6
All Vehicles		4173	3.7	3875 N1	4.0	0.884	38.5	LOS C	35.5	252.4	0.80	0.74	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	35.8	LOS D	0.1	0.1	0.72	0.72
P2	East Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P3	North Full Crossing	50	19.1	LOS B	0.1	0.1	0.52	0.52
All Pedestrians		150	30.0	LOS C			0.65	0.65

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	160	4.0	160	4.0	0.443	57.1	LOS E	9.6	69.5	0.92	0.80	19.7
2	T1	386	3.9	386	3.9	1.926	1697.5	LOS F	252.0	1840.6	1.00	3.94	2.0
3	R2	159	8.1	159	8.1	1.926	1702.1	LOS F	252.0	1840.6	1.00	3.94	1.0
Approach		705	4.8	705	4.8	1.926	1326.3	LOS F	252.0	1840.6	0.98	3.23	2.0
East: Canterbury Road E													
4	L2	99	8.8	77	8.7	0.910	31.4	LOS C	32.6	237.3	0.89	0.85	38.3
5	T1	1335	3.9	1034	3.8	0.910	27.0	LOS B	34.4	248.3	0.90	0.85	31.0
Approach		1434	4.2	1111 N1	4.1	0.910	27.3	LOS B	34.4	248.3	0.90	0.85	31.8
North: Sharp Street													
7	L2	55	0.0	55	0.0	0.512	72.0	LOS F	5.8	40.8	1.00	0.78	17.3
8	T1	476	2.0	476	2.0	2.411	2422.2	LOS F	246.0	1750.9	1.00	5.26	1.4
Approach		531	1.8	531	1.8	2.411	2177.6	LOS F	246.0	1750.9	1.00	4.80	1.5
West: Canterbury Road w													
10	L2	14	9.1	14	9.1	0.787	33.4	LOS C	57.7	415.2	0.95	0.89	38.2
11	T1	1178	3.1	1173	3.1	0.787	30.0	LOS C	57.7	415.2	0.96	0.90	30.2
12	R2	307	4.1	306	4.1	0.787	46.8	LOS D	26.9	194.3	1.00	0.97	32.5
Approach		1499	3.4	1493 N1	3.4	0.787	33.5	LOS C	57.7	415.2	0.97	0.92	31.0
All Vehicles		4169	3.7	3840 N1	4.0	2.411	565.6	LOS F	252.0	1840.6	0.95	1.86	3.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	38.0	LOS D	0.1	0.1	0.74	0.74
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	10.4	LOS B	0.1	0.1	0.39	0.39
P4	West Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
All Pedestrians		200	40.2	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_Option1_2021 PM-SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	116	4.6	116	4.6	2.058	1964.5	LOS F	521.3	3902.0	1.00	6.01	0.9
2	T1	931	8.5	931	8.5	2.058	1959.9	LOS F	521.3	3902.0	1.00	6.01	1.8
3	R2	475	2.7	475	2.7	8.478	13486.0	LOS F	378.0	2706.6	1.00	5.07	0.1
Approach		1521	6.4	1521	6.4	8.478	5560.2	LOS F	521.3	3902.0	1.00	5.72	0.5
East: Canterbury Road East													
4	L2	96	4.6	95	4.4	0.618	22.0	LOS B	21.9	159.4	0.55	0.54	42.5
5	T1	1215	4.6	1198	4.4	0.618	11.7	LOS A	21.9	159.4	0.44	0.42	42.2
6	R2	214	4.6	211	4.4	0.707	69.8	LOS E	13.7	99.9	1.00	1.03	26.0
Approach		1525	4.6	1504 N1	4.4	0.707	20.5	LOS B	21.9	159.4	0.53	0.51	36.8
North: Thorncraft Parade													
7	L2	135	8.5	135	8.5	1.364	722.8	LOS F	237.7	1738.6	1.00	3.58	2.4
8	T1	669	4.6	669	4.6	6.032	867.8	LOS F	250.8	1824.3	1.00	3.60	3.8
9	R2	319	4.6	319	4.6	6.032	9088.5	LOS F	250.8	1824.3	1.00	4.83	0.2
Approach		1123	5.1	1123	5.1	6.032	3187.6	LOS F	250.8	1824.3	1.00	3.95	0.9
West: Canterbury Road West													
10	L2	157	2.7	148	2.5	0.895	57.6	LOS E	44.4	317.2	0.99	0.97	29.8
11	T1	1224	2.7	1154	2.5	0.895	47.6	LOS D	44.4	317.2	0.97	0.96	22.7
Approach		1381	2.7	1302 N1	2.5	0.895	48.7	LOS D	44.4	317.2	0.97	0.96	23.8
All Vehicles		5549	4.7	5449 N1	4.8	8.478	2226.1	LOS F	521.3	3902.0	0.86	2.78	1.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	18.6	LOS B	0.1	0.1	0.52	0.52
P2	East Full Crossing	50	38.0	LOS D	0.1	0.1	0.74	0.74
P3	North Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
P4	West Full Crossing	50	35.8	LOS D	0.1	0.1	0.72	0.72
All Pedestrians		200	31.3	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	124	2.1	124	2.1	0.615	53.7	LOS D	18.2	130.8	0.91	0.90	21.1
2	T1	489	4.2	489	4.2	0.615	45.7	LOS D	18.2	130.8	0.89	0.81	30.6
3	R2	502	1.0	502	1.0	1.343	660.0	LOS F	133.8	944.7	1.00	2.46	2.5
Approach		1115	2.5	1115	2.5	1.343	323.2	LOS F	133.8	944.7	0.94	1.56	6.7
East: Canterbury Road E													
4	L2	205	1.6	205	1.6	0.918	57.4	LOS E	49.4	353.3	0.99	1.03	30.5
5	T1	1179	2.9	1178	2.9	0.918	54.1	LOS D	50.9	364.9	0.99	1.03	21.7
Approach		1384	2.7	1384	2.7	0.918	54.6	LOS D	50.9	364.9	0.99	1.03	23.5
North: Beamish Street													
7	L2	56	12.5	56	12.5	1.320	624.2	LOS F	65.5	486.7	1.00	2.30	2.6
8	T1	412	5.7	412	5.7	1.320	631.9	LOS F	65.5	486.7	1.00	2.55	4.9
9	R2	96	14.6	96	14.6	1.274	569.3	LOS F	24.4	191.9	1.00	2.19	3.0
Approach		565	7.9	565	7.9	1.320	620.5	LOS F	65.5	486.7	1.00	2.47	4.4
West: Canterbury Road w													
10	L2	94	11.4	67	10.8	0.530	32.7	LOS C	25.7	184.1	0.81	0.74	37.7
11	T1	1079	1.6	771	1.5	0.530	26.7	LOS B	25.7	184.1	0.81	0.72	30.9
12	R2	228	1.6	163	1.5	0.808	68.4	LOS E	11.0	77.7	1.00	1.01	26.3
Approach		1401	2.2	1001 N1	2.1	0.808	33.9	LOS C	25.7	184.1	0.84	0.77	30.1
All Vehicles		4465	3.1	4064 N1	3.5	1.343	201.9	LOS F	133.8	944.7	0.94	1.31	9.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
P4	West Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
All Pedestrians		200	40.7	LOS E			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1879	4.6	1879	4.6	0.615	5.4	LOS A	23.9	174.0	0.42	0.39	49.8
6	R2	488	4.6	487	4.6	0.731	42.2	LOS C	22.7	164.9	0.93	0.99	32.2
Approach		2366	4.6	2366	4.6	0.731	13.0	LOS A	23.9	174.0	0.52	0.51	41.7
North: Wonga Street													
7	L2	281	8.5	281	8.5	0.453	34.3	LOS C	13.4	100.8	0.75	0.78	26.0
9	R2	129	4.6	129	4.6	0.839	81.3	LOS F	9.6	70.0	1.00	0.93	15.6
Approach		411	7.3	411	7.3	0.839	49.1	LOS D	13.4	100.8	0.83	0.83	21.5
West: Canterbury Road West													
10	L2	67	2.7	49	2.9	0.832	38.6	LOS C	32.7	234.3	0.86	0.81	36.1
11	T1	1449	2.7	1054	2.9	0.832	36.8	LOS C	33.4	239.7	0.90	0.86	27.2
Approach		1515	2.7	1103 N1	2.9	0.832	36.9	LOS C	33.4	239.7	0.90	0.85	27.8
All Vehicles		4292	4.2	3879 N1	4.6	0.839	23.6	LOS B	33.4	239.7	0.66	0.64	33.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	25.9	LOS C	0.1	0.1	0.61	0.61
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	45.1	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_Option1_2021 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	16	0.0	16	0.0	0.814	26.8	LOS B	47.5	356.1	0.82	0.77	44.3
5	T1	1582	8.5	1582	8.5	0.814	22.3	LOS B	47.5	356.1	0.87	0.81	34.9
6	R2	23	8.7	23	8.7	0.814	30.8	LOS C	31.6	237.3	0.93	0.87	41.3
Approach		1621	8.5	1621	8.5	0.814	22.5	LOS B	47.5	356.1	0.87	0.81	35.2
NorthEast: Jeffrey Street													
24b	L3	7	0.0	7	0.0	0.925	93.4	LOS F	15.8	117.2	1.00	1.09	23.8
24	L2	11	0.0	11	0.0	0.925	92.5	LOS F	15.8	117.2	1.00	1.09	23.8
26a	R1	364	8.0	364	8.0	0.925	91.1	LOS F	15.8	117.2	1.00	1.09	15.3
26b	R3	1	0.0	1	0.0	0.925	92.6	LOS F	15.6	116.8	1.00	1.09	23.8
Approach		383	7.6	383	7.6	0.925	91.2	LOS F	15.8	117.2	1.00	1.09	15.8
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.596	75.0	LOS F	6.4	46.5	1.00	0.79	26.8
7	L2	48	0.0	48	0.0	0.596	74.0	LOS F	6.4	46.5	1.00	0.79	26.7
7a	L1	1	0.0	1	0.0	0.596	72.7	LOS F	6.4	46.5	1.00	0.79	27.0
9	R2	125	8.0	125	8.0	0.596	75.4	LOS F	6.4	46.5	1.00	0.79	17.4
Approach		175	5.7	175	5.7	0.596	75.0	LOS F	6.4	46.5	1.00	0.79	20.6
West: Canterbury Road w													
10	L2	19	10.5	15	12.6	0.902	58.3	LOS E	20.5	155.0	1.00	1.01	23.6
10a	L1	326	8.0	257	9.6	0.902	57.1	LOS E	20.5	155.0	1.00	1.01	23.9
11	T1	1444	8.0	1140	9.6	0.902	51.4	LOS D	20.5	155.0	1.00	1.02	24.9
Approach		1789	8.0	1412 N1	9.7	0.902	52.5	LOS D	20.5	155.0	1.00	1.02	24.7
All Vehicles		3968	8.1	3591 N1	8.9	0.925	44.2	LOS D	47.5	356.1	0.94	0.92	26.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 85.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	10.1	LOS B	0.1	0.1	0.38	0.38
P2	East Full Crossing	20	63.2	LOS F	0.1	0.1	0.95	0.95
P6	NorthEast Full Crossing	68	13.8	LOS B	0.1	0.1	0.44	0.44
P3	North Full Crossing	108	25.9	LOS C	0.3	0.3	0.61	0.61
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96

All Pedestrians	316	31.3	LOS D	0.63	0.63

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.

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2036 Option 1

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	2	0.0	1	0.0	0.371	13.8	LOS A	19.7	148.9	0.59	0.53	51.5
5	T1	1312	8.5	1040	9.2	0.371	8.3	LOS A	19.7	148.9	0.59	0.54	52.8
6	R2	105	8.5	84	9.2	1.524	1002.4	LOS F	29.8	224.9	1.00	2.21	3.3
Approach		1419	8.5	1125 N1	9.2	1.524	82.2	LOS F	29.8	224.9	0.62	0.66	25.2
North: Punchbowl Road													
7	L2	30	8.5	30	8.5	1.544	1043.9	LOS F	104.7	740.5	1.00	2.94	1.7
8	T1	11	8.5	11	8.5	1.544	1038.3	LOS F	104.7	740.5	1.00	2.94	3.2
9	R2	541	8.5	541	8.5	1.544	1043.9	LOS F	107.3	851.9	1.00	2.90	3.2
Approach		582	8.5	582	8.5	1.544	1043.8	LOS F	107.3	851.9	1.00	2.91	3.2
West: Canterbury Road West													
10	L2	150	8.3	150	8.3	0.086	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1450	8.0	1450	8.0	1.014	135.7	LOS F	101.4	758.4	1.00	1.56	11.1
Approach		1600	8.1	1600	8.1	1.014	123.5	LOS F	101.4	758.4	0.91	1.46	12.9
All Vehicles		3601	8.3	3307 N1	9.0	1.544	271.5	LOS F	107.3	851.9	0.83	1.44	8.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	201	11.5	201	11.5	1.622	1181.0	LOS F	153.3	1146.5	1.00	3.19	1.5
3	R2	491	4.3	491	4.3	1.622	1185.0	LOS F	153.3	1146.5	1.00	3.22	1.5
Approach		692	6.4	692	6.4	1.622	1183.8	LOS F	153.3	1146.5	1.00	3.21	1.5
East: Canterbury Road E													
4	L2	225	3.1	184	3.4	0.905	64.2	LOS E	22.3	163.2	1.00	1.02	21.3
5	T1	1306	5.9	1068	6.4	0.905	58.4	LOS E	22.3	163.2	1.00	1.03	6.3
Approach		1531	5.5	1251 N1	6.0	0.905	59.2	LOS E	22.3	163.2	1.00	1.03	9.5
West: Canterbury Road W													
11	T1	1942	7.1	1933	7.1	1.497	959.5	LOS F	109.9	816.0	1.00	4.48	1.9
12	R2	177	12.0	176	12.0	0.327	29.9	LOS C	5.7	43.6	0.79	0.80	37.3
Approach		2120	7.5	2109 N1	7.5	1.497	881.8	LOS F	109.9	816.0	0.98	4.17	2.2
All Vehicles		4343	6.6	4053 N1	7.1	1.622	679.4	LOS F	153.3	1146.5	0.99	3.04	2.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
P4	West Full Crossing	50	54.1	LOS E	0.2	0.2	0.88	0.88
All Pedestrians		100	43.6	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1248	8.6	1057	9.2	0.865	22.3	LOS B	29.3	221.3	0.61	0.70	21.6
6	R2	141	2.2	118	2.3	0.865	32.7	LOS C	24.2	180.8	0.71	0.88	32.9
Approach		1388	7.9	1175 N1	8.6	0.865	23.3	LOS B	29.3	221.3	0.62	0.72	23.8
North: Rosmore Avenue													
7	L2	157	2.9	157	2.9	0.138	16.1	LOS B	4.3	30.9	0.44	0.66	34.9
9	R2	178	2.5	178	2.5	2.096	2028.3	LOS F	89.7	641.4	1.00	3.91	0.9
Approach		334	2.7	334	2.7	2.096	1085.1	LOS F	89.7	641.4	0.74	2.39	1.6
West: Canterbury West													
10	L2	202	1.3	135	1.4	0.930	79.5	LOS F	22.3	163.2	1.00	1.09	18.5
11	T1	1297	6.4	863	6.5	0.930	74.2	LOS F	22.3	163.2	1.00	1.11	5.0
Approach		1499	5.7	998 N1	5.8	0.930	74.9	LOS F	22.3	163.2	1.00	1.11	7.5
All Vehicles		3221	6.4	2507 N1	8.2	2.096	185.4	LOS F	89.7	641.4	0.79	1.10	4.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
All Pedestrians		100	52.2	LOS E			0.86	0.86

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	357	3.4	357	3.4	0.520	24.2	LOS B	13.9	100.1	0.62	0.74	30.3
3	R2	157	5.6	157	5.6	0.921	88.8	LOS F	12.5	91.9	0.89	1.06	14.7
Approach		514	4.1	514	4.1	0.921	43.9	LOS D	13.9	100.1	0.70	0.84	22.9
East: Canterbury Road E													
4	L2	116	9.2	93	10.0	0.787	65.5	LOS E	33.0	246.0	1.00	0.90	25.2
5	T1	1178	6.4	938	6.9	0.787	59.5	LOS E	35.6	264.1	1.00	0.90	12.6
Approach		1295	6.6	1031 N1	7.2	0.787	60.1	LOS E	35.6	264.1	1.00	0.90	14.1
West: Canterbury Road w													
11	T1	983	8.6	694	8.7	0.614	3.0	LOS A	6.5	48.8	0.15	0.14	48.6
12	R2	402	2.9	284	3.0	0.618	24.7	LOS B	8.9	63.7	0.71	0.82	35.6
Approach		1385	6.9	977 N1	7.1	0.618	9.3	LOS A	8.9	63.7	0.31	0.34	40.2
All Vehicles		3194	6.3	2522 N1	8.0	0.921	37.1	LOS C	35.6	264.1	0.67	0.67	21.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	34.4	LOS D	0.1	0.1	0.70	0.70
P2	East Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
All Pedestrians		100	38.4	LOS D			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1200	8.5	933	9.4	0.416	1.6	LOS A	3.1	23.3	0.13	0.14	54.0
6	R2	91	8.5	71	9.4	0.416	8.2	LOS A	3.1	23.3	0.22	0.27	49.2
Approach		1291	8.5	1004 N1	9.4	0.416	2.1	LOS A	3.1	23.3	0.13	0.15	53.1
North: Dudley Street													
7	L2	160	8.5	160	8.5	0.216	29.0	LOS C	6.6	49.9	0.66	0.71	28.1
9	R2	93	8.5	93	8.5	0.551	70.6	LOS F	6.2	46.6	0.99	0.78	17.2
Approach		253	8.5	253	8.5	0.551	44.3	LOS D	6.6	49.9	0.78	0.74	22.8
West: Canterbury West													
10	L2	9	8.0	7	8.0	0.602	16.9	LOS B	12.3	91.9	0.41	0.37	42.9
11	T1	1234	8.0	950	8.0	0.602	17.8	LOS B	19.2	143.7	0.53	0.47	28.1
Approach		1243	8.0	956 N1	8.0	0.602	17.8	LOS B	19.2	143.7	0.53	0.47	28.3
All Vehicles		2787	8.3	2213 N1	10.5	0.602	13.7	LOS A	19.2	143.7	0.38	0.36	34.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	27.1	LOS C	0.1	0.1	0.62	0.62
All Pedestrians		100	45.7	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	133	8.5	133	8.5	0.148	11.7	LOS A	3.3	25.0	0.41	0.66	38.1
3	R2	71	8.0	71	8.0	0.523	74.5	LOS F	4.9	36.5	1.00	0.77	16.6
Approach		204	8.3	204	8.3	0.523	33.5	LOS C	4.9	36.5	0.62	0.70	26.3
East: Canterbury Raod East													
4	L2	141	8.5	106	9.5	0.603	34.6	LOS C	25.6	193.9	0.80	0.74	37.3
5	T1	1245	8.5	939	9.5	0.603	28.6	LOS C	26.1	197.9	0.79	0.72	30.8
Approach		1386	8.5	1045 N1	9.5	0.603	29.3	LOS C	26.1	197.9	0.79	0.72	31.8
West: Canterbury Road West													
11	T1	1172	5.3	936	5.3	0.421	4.4	LOS A	8.9	65.1	0.30	0.30	47.1
12	R2	113	8.0	90	8.0	0.421	13.3	LOS A	7.3	53.4	0.49	0.51	45.0
Approach		1285	5.5	1026 N1	5.5	0.421	5.2	LOS A	8.9	65.1	0.32	0.31	46.7
All Vehicles		2875	7.2	2275 N1	9.1	0.603	18.8	LOS B	26.1	197.9	0.56	0.54	34.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	43.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Option1_2036 AM - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	184	21.4	184	21.4	0.202	21.7	LOS B	6.5	53.6	0.52	0.68	38.3
2	T1	3201	7.5	3201	7.5	1.417	813.3	LOS F	363.1	2706.0	1.00	3.85	5.7
3	R2	242	3.2	242	3.2	1.126	320.2	LOS F	21.4	153.8	1.00	1.62	9.5
Approach		3627	8.0	3627	8.0	1.417	740.2	LOS F	363.1	2706.0	0.98	3.54	5.9
East: Canterbury Road E													
4	L2	130	10.1	130	10.1	1.394	743.9	LOS F	199.7	1464.9	1.00	2.07	4.3
5	T1	1135	4.5	1135	4.5	1.394	758.6	LOS F	199.7	1464.9	1.00	2.97	1.9
6	R2	288	9.8	288	9.8	1.052	168.9	LOS F	16.3	123.5	1.00	1.28	15.4
Approach		1552	5.9	1552	5.9	1.394	648.1	LOS F	199.7	1464.9	1.00	2.59	3.1
North: King Georges Road													
7	L2	468	7.5	468	7.5	1.107	250.6	LOS F	150.6	1129.4	1.00	1.62	12.4
8	T1	2447	9.1	2447	9.1	1.107	264.1	LOS F	169.8	1281.3	1.00	1.96	14.3
9	R2	282	5.2	282	5.2	1.388	771.4	LOS F	87.3	638.5	1.00	2.56	3.5
Approach		3197	8.5	3197	8.5	1.388	306.8	LOS F	169.8	1281.3	1.00	1.96	12.1
West: Canterbury Road W													
10	L2	123	10.5	101	11.2	0.141	31.9	LOS C	4.3	33.0	0.67	0.72	42.3
11	T1	747	7.5	611	8.0	1.156	365.4	LOS F	65.6	490.5	1.00	2.15	7.8
12	R2	144	21.6	119	22.9	0.946	108.2	LOS F	5.3	44.6	1.00	1.07	23.0
Approach		1015	9.8	831 N1	10.5	1.156	288.0	LOS F	65.6	490.5	0.96	1.82	10.2
All Vehicles		9391	8.0	9207 N1	8.2	1.417	533.4	LOS F	363.1	2706.0	0.99	2.68	7.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 88.6 %
Number of Iterations: 20 (maximum specified: 20)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	55.6	LOS E	0.2	0.2	0.86	0.86
P2	East Full Crossing	50	29.5	LOS C	0.1	0.1	0.63	0.63
P3	North Full Crossing	50	66.4	LOS F	0.2	0.2	0.94	0.94
P4	West Full Crossing	50	35.4	LOS D	0.1	0.1	0.69	0.69
All Pedestrians		200	46.7	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ Option1_2036 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1218	4.8	1052	4.8	0.978	85.3	LOS F	82.5	601.4	0.99	1.32	15.9
6	R2	108	11.3	94	11.4	0.978	79.9	LOS F	34.7	256.0	1.00	1.29	25.4
Approach		1327	5.3	1146 N1	5.4	0.978	84.9	LOS F	82.5	601.4	0.99	1.32	16.8
North: Haldon Street													
7	L2	78	5.0	78	5.0	1.539	1038.5	LOS F	57.5	426.2	1.00	3.04	1.7
9	R2	164	8.7	164	8.7	1.539	1038.9	LOS F	57.5	426.2	1.00	2.83	1.7
Approach		243	7.5	243	7.5	1.539	1038.8	LOS F	57.5	426.2	1.00	2.90	1.7
West: Canterbury Road w													
10	L2	111	8.2	99	8.0	0.898	51.7	LOS D	56.0	412.1	0.99	0.99	30.4
11	T1	1677	5.9	1499	5.8	0.898	45.8	LOS D	56.8	417.0	0.99	0.99	21.1
Approach		1788	6.0	1599 N1	5.9	0.898	46.1	LOS D	56.8	417.0	0.99	0.99	21.9
All Vehicles		3357	5.8	2987 N1	6.6	1.539	141.6	LOS F	82.5	601.4	0.99	1.27	10.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	23.5	LOS C	0.1	0.1	0.58	0.58
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	43.9	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St Option1_2036 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	143	8.4	143	8.4	0.887	53.3	LOS D	32.4	235.1	0.83	0.89	10.5
2	T1	544	2.5	544	2.5	0.887	55.7	LOS D	32.4	235.1	0.89	0.95	9.4
3	R2	130	7.2	130	7.2	0.887	73.6	LOS F	25.0	181.7	1.00	1.06	7.8
Approach		818	4.3	818	4.3	0.887	58.1	LOS E	32.4	235.1	0.90	0.96	9.3
East: Canterbury Rd													
4	L2	93	12.5	77	12.3	0.891	65.7	LOS E	34.5	254.3	1.00	0.99	23.4
5	T1	1084	5.0	900	4.9	0.891	59.9	LOS E	35.0	255.6	1.00	0.99	20.4
Approach		1178	5.6	978 N1	5.5	0.891	60.3	LOS E	35.0	255.6	1.00	0.99	20.7
North: Chapel St													
7	L2	61	0.0	61	0.0	0.298	31.7	LOS C	10.6	75.5	0.70	0.64	6.1
8	T1	526	2.4	526	2.4	0.499	31.3	LOS C	18.9	134.6	0.77	0.68	17.9
9	R2	27	0.0	27	0.0	0.499	36.2	LOS C	18.9	134.6	0.80	0.71	5.6
Approach		615	2.1	615	2.1	0.499	31.6	LOS C	18.9	134.6	0.76	0.68	16.5
West: Canterbury Rd													
10	L2	61	0.0	55	0.0	0.830	31.3	LOS C	39.6	289.1	0.82	0.76	21.8
11	T1	1501	5.4	1338	5.3	0.830	25.3	LOS B	39.6	289.1	0.75	0.70	32.9
12	R2	205	7.7	183	7.5	0.906	52.8	LOS D	8.8	65.9	1.00	0.95	25.4
Approach		1767	5.5	1576 N1	5.4	0.906	28.7	LOS C	39.6	289.1	0.78	0.73	31.0
All Vehicles		4377	4.8	3985 N1	5.3	0.906	42.9	LOS D	39.6	289.1	0.85	0.83	21.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
P2	East Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P3	North Full Crossing	50	23.5	LOS C	0.1	0.1	0.58	0.58
All Pedestrians		150	31.9	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_Option1_2036 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	99	7.1	99	7.1	0.606	62.4	LOS E	12.1	89.6	0.97	0.81	19.1
2	T1	479	6.4	479	6.4	3.031	2995.5	LOS F	383.1	2891.0	1.00	3.99	1.2
3	R2	232	13.6	232	13.6	3.031	3689.1	LOS F	383.1	2891.0	1.00	4.73	0.5
Approach		810	8.6	810	8.6	3.031	2837.5	LOS F	383.1	2891.0	0.99	3.82	1.0
East: Canterbury Road E													
4	L2	95	16.7	79	16.7	0.898	63.6	LOS E	36.0	270.8	1.00	1.00	28.4
5	T1	1138	7.1	945	7.1	0.898	57.9	LOS E	37.4	277.8	1.00	1.00	20.0
Approach		1233	7.8	1024 N1	7.8	0.898	58.3	LOS E	37.4	277.8	1.00	1.00	20.9
North: Sharp Street													
7	L2	86	5.3	86	5.3	0.702	77.5	LOS F	6.3	45.7	1.00	0.84	16.2
8	T1	492	4.6	492	4.6	3.303	4170.2	LOS F	315.7	2297.0	1.00	5.99	0.9
Approach		578	4.7	578	4.7	3.303	3562.7	LOS F	315.7	2297.0	1.00	5.22	0.9
West: Canterbury Road w													
10	L2	7	0.0	7	0.0	0.805	7.1	LOS A	9.5	69.6	0.14	0.14	52.8
11	T1	1482	5.5	1354	5.5	0.805	9.0	LOS A	28.0	208.6	0.30	0.32	45.6
12	R2	350	9.6	320	9.6	0.805	42.4	LOS C	28.0	208.6	0.87	1.02	33.8
Approach		1839	6.2	1680 N1	6.2	0.805	15.3	LOS B	28.0	208.6	0.40	0.45	41.1
All Vehicles		4460	6.9	4092 N1	7.5	3.303	1085.9	LOS F	383.1	2891.0	0.75	1.93	2.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	39.5	LOS D	0.1	0.1	0.75	0.75
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	7.9	LOS A	0.1	0.1	0.34	0.34
P4	West Full Crossing	50	54.1	LOS E	0.2	0.2	0.88	0.88
All Pedestrians		200	41.4	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_Option1_2036 AM-SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	114	8.5	114	8.5	2.376	2536.8	LOS F	312.4	2346.3	1.00	6.19	0.7
2	T1	1286	8.5	1286	8.5	5.264	5885.3	LOS F	693.0	5202.5	1.00	6.99	0.6
3	R2	111	8.0	111	8.0	5.264	7723.9	LOS F	693.0	5202.5	1.00	7.42	0.2
Approach		1511	8.5	1511	8.5	5.264	5768.0	LOS F	693.0	5202.5	1.00	6.96	0.6
East: Canterbury Road East													
4	L2	44	8.5	42	8.7	0.618	16.9	LOS B	22.8	171.3	0.49	0.47	45.6
5	T1	1253	8.5	1189	8.7	0.618	10.6	LOS A	22.8	171.3	0.45	0.42	43.5
6	R2	340	8.5	323	8.7	0.764	48.1	LOS D	17.3	129.8	0.89	1.03	31.0
Approach		1637	8.5	1554 N1	8.7	0.764	18.6	LOS B	22.8	171.3	0.54	0.55	38.3
North: Thorncraft Parade													
7	L2	417	8.5	417	8.5	1.409	804.3	LOS F	186.4	1399.9	1.00	3.12	2.2
8	T1	587	8.5	587	8.5	6.231	6950.5	LOS F	456.6	3429.7	1.00	5.22	0.5
9	R2	183	8.5	183	8.5	6.231	9453.9	LOS F	456.6	3429.7	1.00	6.07	0.2
Approach		1187	8.5	1187	8.5	6.231	5177.2	LOS F	456.6	3429.7	1.00	4.62	0.5
West: Canterbury Road West													
10	L2	70	0.0	60	0.0	0.906	55.4	LOS D	50.5	373.8	0.97	1.00	30.5
11	T1	1603	8.0	1354	7.4	0.906	55.4	LOS D	54.2	403.6	0.99	1.01	20.7
Approach		1673	7.7	1414 N1	7.1	0.906	55.4	LOS D	54.2	403.6	0.98	1.01	21.2
All Vehicles		6009	8.3	5667 N1	8.8	6.231	2642.1	LOS F	693.0	5202.5	0.87	3.23	0.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	11.2	LOS B	0.1	0.1	0.40	0.40
P2	East Full Crossing	50	50.7	LOS E	0.2	0.2	0.85	0.85
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P4	West Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
All Pedestrians		200	34.9	LOS D			0.68	0.68

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ Option1_2036 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	131	4.4	131	4.4	0.977	111.4	LOS F	55.5	404.9	1.00	1.32	12.8
2	T1	831	4.9	831	4.9	0.977	105.5	LOS F	55.5	404.9	0.96	1.31	20.4
3	R2	466	4.1	466	4.1	1.274	541.9	LOS F	108.5	785.9	1.00	2.24	3.0
Approach		1429	4.6	1429	4.6	1.274	248.6	LOS F	108.5	785.9	0.98	1.61	9.1
East: Canterbury Road E													
4	L2	250	4.0	232	4.0	0.892	64.6	LOS E	37.0	270.0	1.00	1.03	28.6
5	T1	855	5.8	791	5.8	0.892	61.1	LOS E	38.3	281.3	1.00	1.03	20.1
Approach		1106	5.4	1023 N1	5.4	0.892	61.9	LOS E	38.3	281.3	1.00	1.03	22.5
North: Beamish Street													
7	L2	60	17.9	60	17.9	1.269	536.5	LOS F	78.9	593.8	1.00	2.38	3.0
8	T1	564	6.8	564	6.8	1.269	543.4	LOS F	78.9	593.8	1.00	2.62	5.6
9	R2	93	27.9	93	27.9	1.215	469.6	LOS F	21.0	181.8	1.00	2.08	3.6
Approach		717	10.5	717	10.5	1.269	533.2	LOS F	78.9	593.8	1.00	2.53	5.2
West: Canterbury Road w													
10	L2	116	12.7	78	12.1	0.579	19.4	LOS B	14.9	109.9	0.48	0.48	43.9
11	T1	1344	5.1	916	4.8	0.579	14.1	LOS A	15.7	114.3	0.49	0.46	39.9
12	R2	273	5.8	186	5.5	0.654	68.3	LOS E	12.2	89.1	1.00	0.98	26.3
Approach		1733	5.7	1181 N1	5.4	0.654	23.0	LOS B	15.7	114.3	0.57	0.55	35.5
All Vehicles		4985	6.0	4350 N1	6.9	1.274	190.4	LOS F	108.5	785.9	0.88	1.34	10.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
P2	East Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
P3	North Full Crossing	50	26.5	LOS C	0.1	0.1	0.62	0.62
P4	West Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
All Pedestrians		200	42.2	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_Option1_2036 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1429	8.5	1344	8.5	0.451	4.3	LOS A	13.5	101.8	0.33	0.30	51.7
6	R2	461	8.5	434	8.5	1.959	1779.0	LOS F	93.4	701.7	1.00	3.45	1.8
Approach		1890	8.5	1778 N1	8.5	1.959	437.3	LOS F	93.4	701.7	0.49	1.07	4.2
North: Wonga Street													
7	L2	393	8.5	393	8.5	1.883	1650.8	LOS F	181.1	1360.5	1.00	3.80	1.1
9	R2	119	8.5	119	8.5	0.734	75.9	LOS F	8.5	63.5	1.00	0.85	16.4
Approach		512	8.5	512	8.5	1.883	1283.7	LOS F	181.1	1360.5	1.00	3.11	1.4
West: Canterbury Road West													
10	L2	62	8.0	47	8.7	0.915	32.9	LOS C	42.0	316.0	0.67	0.75	38.3
11	T1	1846	8.0	1397	8.7	0.915	31.4	LOS C	46.7	350.9	0.74	0.82	29.6
Approach		1909	8.0	1444 N1	8.7	0.915	31.4	LOS C	46.7	350.9	0.74	0.82	30.1
All Vehicles		4310	8.3	3734 N1	9.6	1.959	396.4	LOS F	181.1	1360.5	0.66	1.25	4.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	9.3	LOS A	0.1	0.1	0.37	0.37
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	36.8	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_Option1_2036 AM - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	14	0.0	14	0.0	0.710	21.2	LOS B	36.2	271.8	0.68	0.63	47.6
5	T1	1136	8.5	1136	8.5	0.710	18.7	LOS B	36.2	271.8	0.75	0.69	37.3
6	R2	38	7.9	38	7.9	0.710	37.0	LOS C	11.6	86.8	0.97	0.87	38.5
Approach		1188	8.4	1188	8.4	0.710	19.3	LOS B	36.2	271.8	0.75	0.70	37.6
NorthEast: Jeffrey Street													
24b	L3	27	7.4	27	7.4	1.290	598.0	LOS F	43.7	326.0	1.00	2.33	5.4
24	L2	5	0.0	5	0.0	1.290	596.9	LOS F	43.7	326.0	1.00	2.33	5.4
26a	R1	301	8.0	301	8.0	1.290	595.4	LOS F	43.7	326.0	1.00	2.32	2.9
26b	R3	1	0.0	1	0.0	1.290	596.8	LOS F	43.5	324.9	1.00	2.32	5.4
Approach		334	7.8	334	7.8	1.290	595.7	LOS F	43.7	326.0	1.00	2.33	3.2
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	26.4
7	L2	67	0.0	67	0.0	0.716	76.3	LOS F	8.1	58.5	1.00	0.84	26.3
7a	L1	1	0.0	1	0.0	0.716	75.0	LOS F	8.1	58.5	1.00	0.84	26.6
9	R2	144	7.6	144	7.6	0.716	77.7	LOS F	8.1	58.5	1.00	0.84	17.1
Approach		213	5.2	213	5.2	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	20.6
West: Canterbury Road w													
10	L2	23	8.7	18	9.2	0.897	45.3	LOS D	20.7	155.0	0.97	0.97	27.8
10a	L1	191	7.9	150	8.3	0.897	44.2	LOS D	20.7	155.0	0.97	0.97	28.1
11	T1	2008	8.0	1582	8.5	0.897	39.2	LOS C	20.7	155.0	0.96	0.96	29.0
Approach		2222	8.0	1751 N1	8.5	0.897	39.7	LOS C	20.7	155.0	0.96	0.96	28.9
All Vehicles		3957	8.0	3486 N1	9.0	1.290	88.3	LOS F	43.7	326.0	0.90	0.99	16.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 295.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	7.9	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	8.3	LOS A	0.1	0.1	0.34	0.34
P3	North Full Crossing	108	18.1	LOS B	0.2	0.2	0.51	0.51
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	27.2	LOS C			0.57	0.57

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.430	6.9	LOS A	3.9	28.6	0.10	0.09	57.1
5	T1	1692	4.6	1291	5.8	0.430	1.6	LOS A	4.9	35.9	0.11	0.10	58.5
6	R2	118	4.6	90	5.8	1.598	1136.4	LOS F	34.5	253.3	1.00	2.40	3.0
Approach		1812	4.6	1382 N1	5.8	1.598	75.7	LOS F	34.5	253.3	0.17	0.25	26.4
North: Punchbowl Road													
7	L2	42	8.5	42	8.5	1.618	1176.1	LOS F	111.6	789.3	1.00	3.03	1.5
8	T1	1	0.0	1	0.0	1.618	1170.4	LOS F	111.6	789.3	1.00	3.03	2.9
9	R2	569	4.6	569	4.6	1.618	1175.5	LOS F	126.0	942.6	1.00	3.03	2.9
Approach		612	4.8	612	4.8	1.618	1175.6	LOS F	126.0	942.6	1.00	3.03	2.8
West: Canterbury Road West													
10	L2	182	2.8	182	2.8	0.100	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1461	2.4	1461	2.4	0.993	106.8	LOS F	92.3	659.4	0.91	1.33	13.5
Approach		1643	2.5	1643	2.5	0.993	95.6	LOS F	92.3	659.4	0.80	1.24	15.9
All Vehicles		4067	3.8	3637 N1	4.2	1.618	269.8	LOS F	126.0	942.6	0.60	1.17	9.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	341	1.5	341	1.5	3.963	5383.7	LOS F	416.6	2968.7	1.00	5.41	0.3
3	R2	646	2.8	646	2.8	3.963	5383.4	LOS F	416.6	2968.7	1.00	5.37	0.3
Approach		987	2.4	987	2.4	3.963	5383.5	LOS F	416.6	2968.7	1.00	5.38	0.3
East: Canterbury Road E													
4	L2	246	2.1	192	2.3	0.576	24.4	LOS B	23.1	163.2	0.63	0.64	34.5
5	T1	1396	0.4	1090	0.4	0.576	22.3	LOS B	23.2	163.2	0.75	0.71	13.9
Approach		1642	0.6	1282 N1	0.7	0.576	22.6	LOS B	23.2	163.2	0.73	0.70	19.6
West: Canterbury Road W													
11	T1	1618	2.6	1617	2.6	1.108	274.1	LOS F	114.1	816.0	1.00	2.21	6.1
12	R2	188	2.1	188	2.1	0.413	38.2	LOS C	12.1	86.3	1.00	0.90	34.4
Approach		1806	2.5	1806	2.5	1.108	249.5	LOS F	114.1	816.0	1.00	2.07	7.2
All Vehicles		4436	1.8	4075 N1	1.9	3.963	1422.0	LOS F	416.6	2968.7	0.91	2.44	1.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	16.1	LOS B	0.1	0.1	0.48	0.48
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	40.2	LOS E			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1444	5.9	1190	6.3	1.185	391.2	LOS F	44.6	326.4	1.00	2.52	1.8
6	R2	109	2.0	90	2.1	1.185	366.5	LOS F	44.6	326.4	1.00	1.76	5.5
Approach		1553	5.7	1279 N1	6.0	1.185	389.4	LOS F	44.6	326.4	1.00	2.47	2.1
North: Rosmore Avenue													
7	L2	106	0.0	106	0.0	0.324	41.6	LOS C	5.4	38.0	0.78	0.76	23.6
9	R2	195	0.5	195	0.5	2.271	2341.9	LOS F	104.4	734.0	1.00	4.11	0.8
Approach		301	0.3	301	0.3	2.271	1531.4	LOS F	104.4	734.0	0.92	2.93	1.2
West: Canterbury West													
10	L2	188	1.5	146	1.5	1.223	473.0	LOS F	22.8	163.2	1.00	2.80	4.3
11	T1	1660	2.8	1292	2.8	1.223	471.4	LOS F	22.8	163.2	1.00	2.91	0.8
Approach		1848	2.7	1438 N1	2.6	1.223	471.6	LOS F	22.8	163.2	1.00	2.90	1.2
All Vehicles		3702	3.7	3019 N1	4.6	2.271	542.5	LOS F	104.4	734.0	0.99	2.72	1.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	16.1	LOS B	0.1	0.1	0.48	0.48
All Pedestrians		100	40.2	LOS E			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	493	1.1	493	1.1	1.800	1510.0	LOS F	219.6	1551.5	1.00	3.68	1.2
3	R2	118	4.5	118	4.5	1.921	1715.9	LOS F	55.5	403.5	1.00	3.31	1.0
Approach		611	1.8	611	1.8	1.921	1549.8	LOS F	219.6	1551.5	1.00	3.61	1.2
East: Canterbury Road E													
4	L2	93	5.5	69	6.3	0.901	45.1	LOS D	34.0	252.9	0.84	0.92	31.1
5	T1	1321	6.5	988	7.4	0.901	38.8	LOS C	37.7	280.6	0.85	0.92	17.3
Approach		1413	6.4	1057 N1	7.3	0.901	39.3	LOS C	37.7	280.6	0.84	0.92	18.7
West: Canterbury Road w													
11	T1	1323	2.7	983	2.6	1.189	385.8	LOS F	46.0	326.4	1.00	2.66	1.9
12	R2	460	1.2	342	1.2	1.189	391.8	LOS F	46.0	326.4	1.00	2.02	5.4
Approach		1782	2.3	1324 N1	2.2	1.189	387.4	LOS F	46.0	326.4	1.00	2.49	2.9
All Vehicles		3806	3.7	2991 N1	4.8	1.921	501.7	LOS F	219.6	1551.5	0.95	2.16	2.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	17.5	LOS B	0.1	0.1	0.50	0.50
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	39.9	LOS D			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1458	4.6	1108	5.1	1.105	247.8	LOS F	62.5	456.9	1.00	1.98	3.8
6	R2	117	4.6	89	5.1	1.105	234.9	LOS F	51.2	373.9	1.00	1.49	8.5
Approach		1575	4.6	1197 N1	5.1	1.105	246.9	LOS F	62.5	456.9	1.00	1.95	4.2
North: Dudley Street													
7	L2	116	8.5	116	8.5	0.372	42.0	LOS C	6.0	45.0	0.79	0.77	23.5
9	R2	133	4.6	133	4.6	1.596	1140.0	LOS F	51.3	372.9	1.00	3.08	1.5
Approach		249	6.4	249	6.4	1.596	628.6	LOS F	51.3	372.9	0.90	2.01	2.7
West: Canterbury West													
10	L2	57	2.7	45	2.5	1.120	307.4	LOS F	57.0	408.0	1.00	2.27	7.7
11	T1	1741	2.7	1363	2.5	1.120	300.5	LOS F	57.0	408.0	1.00	2.27	3.0
Approach		1798	2.7	1408 N1	2.5	1.120	300.7	LOS F	57.0	408.0	1.00	2.27	3.1
All Vehicles		3623	3.8	2855 N1	4.8	1.596	306.8	LOS F	62.5	456.9	0.99	2.11	3.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	16.1	LOS B	0.1	0.1	0.48	0.48
All Pedestrians		100	40.2	LOS E			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	201	4.6	201	4.6	0.193	14.7	LOS B	5.3	38.4	0.42	0.67	35.9
3	R2	216	2.7	216	2.7	3.020	3683.0	LOS F	134.9	966.1	1.00	4.45	0.5
Approach		417	3.6	417	3.6	3.020	1916.8	LOS F	134.9	966.1	0.72	2.63	0.9
East: Canterbury Raod East													
4	L2	63	4.6	48	5.2	1.115	298.3	LOS F	89.1	651.4	1.00	2.19	10.0
5	T1	1439	4.6	1092	5.2	1.115	290.1	LOS F	109.0	797.5	1.00	2.20	5.7
Approach		1502	4.6	1140 N1	5.2	1.115	290.5	LOS F	109.0	797.5	1.00	2.20	5.9
West: Canterbury Road West													
11	T1	1651	2.4	1367	2.4	1.097	242.9	LOS F	64.0	456.9	1.00	1.96	3.9
12	R2	199	2.7	165	2.6	1.097	229.8	LOS F	63.9	456.9	1.00	1.68	9.4
Approach		1850	2.4	1532 N1	2.4	1.097	241.5	LOS F	64.0	456.9	1.00	1.93	4.6
All Vehicles		3768	3.4	3089 N1	4.2	3.020	485.7	LOS F	134.9	966.1	0.96	2.13	3.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	39.5	LOS D	0.1	0.1	0.75	0.75
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	51.9	LOS E			0.86	0.86

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ Option1_2036 PM - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	432	11.7	432	11.7	0.497	30.7	LOS C	16.9	130.4	0.69	0.89	33.3
2	T1	2283	5.3	2283	5.3	1.493	951.3	LOS F	288.1	2107.5	1.00	4.17	4.9
3	R2	342	1.6	342	1.6	1.421	829.2	LOS F	55.3	392.5	1.00	2.55	4.1
Approach		3057	5.8	3057	5.8	1.493	807.7	LOS F	288.1	2107.5	0.96	3.53	5.1
East: Canterbury Road E													
4	L2	148	4.5	148	4.5	1.442	830.0	LOS F	206.2	1482.1	1.00	2.12	3.9
5	T1	1018	2.7	1018	2.7	1.442	844.6	LOS F	206.2	1482.1	1.00	2.97	1.7
6	R2	258	4.3	258	4.3	1.212	465.7	LOS F	29.1	211.6	1.00	1.90	7.9
Approach		1423	3.2	1423	3.2	1.442	774.4	LOS F	206.2	1482.1	1.00	2.69	2.7
North: King Georges Road													
7	L2	211	4.1	211	4.1	1.391	742.6	LOS F	307.2	2209.4	1.00	2.40	5.1
8	T1	2884	3.0	2884	3.0	1.391	757.7	LOS F	326.1	2341.0	1.00	3.34	5.9
9	R2	373	2.6	373	2.6	1.451	884.5	LOS F	125.8	899.9	1.00	2.76	3.1
Approach		3468	3.0	3468	3.0	1.451	770.4	LOS F	326.1	2341.0	1.00	3.22	5.6
West: Canterbury Road W													
10	L2	276	3.8	229	3.6	0.219	20.8	LOS B	7.8	56.3	0.51	0.69	47.1
11	T1	1359	0.8	1128	0.7	1.183	408.2	LOS F	115.9	816.0	1.00	2.58	7.1
12	R2	654	4.0	542	3.7	1.463	905.9	LOS F	92.3	666.5	1.00	2.78	4.1
Approach		2289	2.0	1898 N1	1.9	1.463	503.6	LOS F	115.9	816.0	0.94	2.41	6.5
All Vehicles		10237	3.6	9846 N1	3.8	1.493	731.1	LOS F	326.1	2341.0	0.98	3.08	5.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 139.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	61.8	LOS F	0.2	0.2	0.91	0.91
P2	East Full Crossing	50	38.2	LOS D	0.2	0.2	0.71	0.71
P3	North Full Crossing	50	50.5	LOS E	0.2	0.2	0.82	0.82
P4	West Full Crossing	50	50.5	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		200	50.3	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ Option1_2036 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1480	4.9	1109	5.5	1.017	120.0	LOS F	105.9	775.7	1.00	1.47	12.0
6	R2	184	2.1	137	2.3	1.017	97.1	LOS F	40.2	292.1	1.00	1.25	21.3
Approach		1663	4.6	1246 N1	5.1	1.017	117.4	LOS F	105.9	775.7	1.00	1.45	13.1
North: Haldon Street													
7	L2	86	4.7	86	4.7	2.355	2490.9	LOS F	117.1	843.8	1.00	4.31	0.7
9	R2	263	2.6	263	2.6	2.355	2490.2	LOS F	117.1	843.8	1.00	3.98	0.7
Approach		350	3.1	350	3.1	2.355	2490.3	LOS F	117.1	843.8	1.00	4.06	0.7
West: Canterbury Road w													
10	L2	198	5.6	147	6.7	0.901	59.0	LOS E	51.4	373.6	1.00	1.01	28.3
11	T1	1729	3.1	1276	3.7	0.901	52.7	LOS D	52.9	382.0	1.00	1.02	19.2
Approach		1927	3.3	1423 N1	4.1	0.901	53.3	LOS D	52.9	382.0	1.00	1.01	20.5
All Vehicles		3940	3.9	3019 N1	5.0	2.355	362.2	LOS F	117.1	843.8	1.00	1.55	4.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	46.3	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St Option1_2036 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	218	3.2	218	3.2	0.921	63.6	LOS E	40.8	290.3	0.86	0.98	8.9
2	T1	482	0.9	482	0.9	0.921	66.9	LOS E	40.8	290.3	0.90	1.04	8.2
3	R2	99	1.4	99	1.4	0.921	90.6	LOS F	20.9	147.6	1.00	1.18	6.5
Approach		800	1.6	800	1.6	0.921	68.9	LOS E	40.8	290.3	0.90	1.04	8.2
East: Canterbury Rd													
4	L2	165	25.2	116	27.9	0.898	65.8	LOS E	35.8	273.3	1.00	1.00	23.3
5	T1	1315	4.6	899	5.2	0.898	59.5	LOS E	37.4	273.3	1.00	1.00	20.4
Approach		1480	6.9	1015 N1	7.8	0.898	60.3	LOS E	37.4	273.3	1.00	1.00	20.8
North: Chapel St													
7	L2	55	0.0	55	0.0	0.397	33.8	LOS C	15.0	105.1	0.75	0.67	5.8
8	T1	749	0.5	749	0.5	0.665	34.0	LOS C	28.3	199.1	0.83	0.74	16.9
9	R2	29	0.0	29	0.0	0.665	39.3	LOS C	28.3	199.1	0.87	0.78	5.2
Approach		833	0.5	833	0.5	0.665	34.2	LOS C	28.3	199.1	0.83	0.74	16.0
West: Canterbury Rd													
10	L2	58	0.0	42	0.0	0.712	27.6	LOS B	28.9	208.3	0.69	0.64	22.7
11	T1	1600	3.2	1177	3.8	0.712	21.1	LOS B	28.9	208.3	0.64	0.58	35.6
12	R2	228	3.1	167	3.7	0.864	47.9	LOS D	7.4	53.5	1.00	0.90	26.8
Approach		1886	3.1	1386 N1	3.7	0.864	24.5	LOS B	28.9	208.3	0.68	0.62	33.3
All Vehicles		4999	3.6	4034 N1	4.4	0.921	44.3	LOS D	40.8	290.3	0.84	0.82	20.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	41.0	LOS E	0.2	0.2	0.77	0.77
P2	East Full Crossing	50	30.3	LOS D	0.1	0.1	0.66	0.66
P3	North Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
All Pedestrians		150	31.4	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_Option1_2036 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	210	4.0	210	4.0	0.483	52.9	LOS D	12.3	88.9	0.90	0.81	20.6
2	T1	508	3.9	508	3.9	2.223	2231.6	LOS F	371.0	2710.1	1.00	4.48	1.5
3	R2	209	8.1	209	8.1	2.223	2236.2	LOS F	371.0	2710.1	1.00	4.48	0.8
Approach		927	4.8	927	4.8	2.223	1738.2	LOS F	371.0	2710.1	0.98	3.64	1.5
East: Canterbury Road E													
4	L2	113	8.8	71	8.6	0.884	31.8	LOS C	29.2	212.5	0.87	0.81	38.2
5	T1	1518	3.9	962	3.8	0.884	26.4	LOS B	30.2	218.5	0.87	0.81	31.3
Approach		1630	4.2	1034 N1	4.1	0.884	26.8	LOS B	30.2	218.5	0.87	0.81	32.0
North: Sharp Street													
7	L2	65	0.0	65	0.0	0.562	70.5	LOS E	7.3	51.3	1.00	0.79	17.5
8	T1	559	2.0	559	2.0	2.647	2777.5	LOS F	299.8	2134.2	1.00	5.57	1.3
Approach		624	1.8	624	1.8	2.647	2495.8	LOS F	299.8	2134.2	1.00	5.07	1.3
West: Canterbury Road w													
10	L2	17	9.1	13	10.5	0.759	20.3	LOS B	35.5	256.2	0.63	0.59	44.2
11	T1	1431	3.1	1097	3.6	0.759	16.5	LOS B	35.5	256.2	0.65	0.65	38.6
12	R2	373	4.1	287	4.8	0.759	30.4	LOS C	19.2	139.6	0.75	0.94	38.1
Approach		1821	3.4	1397 N1	3.9	0.759	19.4	LOS B	35.5	256.2	0.67	0.71	38.5
All Vehicles		5002	3.7	3981 N1	4.7	2.647	809.4	LOS F	371.0	2710.1	0.85	2.10	2.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	39.5	LOS D	0.1	0.1	0.75	0.75
P2	East Full Crossing	50	63.3	LOS F	0.2	0.2	0.95	0.95
P3	North Full Crossing	50	12.0	LOS B	0.1	0.1	0.42	0.42
P4	West Full Crossing	50	44.9	LOS E	0.2	0.2	0.80	0.80
All Pedestrians		200	39.9	LOS D			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_Option1_2036 PM-SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	267	4.6	267	4.6	3.915	5307.9	LOS F	1303.0	9743.7	1.00	8.17	0.3
2	T1	2150	8.5	2150	8.5	8.672	7337.9	LOS F	1303.0	9743.7	1.00	7.52	0.5
3	R2	1098	2.7	1098	2.7	8.672	13859.1	LOS F	1270.9	9241.0	1.00	5.45	0.1
Approach		3515	6.4	3515	6.4	8.672	9220.5	LOS F	1303.0	9743.7	1.00	6.92	0.3
East: Canterbury Road East													
4	L2	106	4.6	103	4.6	0.802	23.7	LOS B	33.8	246.1	0.69	0.66	41.7
5	T1	1337	4.6	1304	4.6	0.802	14.5	LOS A	33.8	246.1	0.56	0.53	39.5
6	R2	235	4.6	230	4.6	0.724	48.4	LOS D	10.8	78.7	0.97	0.88	30.9
Approach		1678	4.6	1637 N1	4.6	0.802	19.8	LOS B	33.8	246.1	0.62	0.58	37.2
North: Thorncraft Parade													
7	L2	202	8.5	202	8.5	1.727	1354.6	LOS F	180.3	1330.9	1.00	4.06	1.3
8	T1	1003	4.6	1003	4.6	7.641	9385.5	LOS F	948.5	6900.5	1.00	5.38	0.4
9	R2	479	4.6	479	4.6	7.641	12000.5	LOS F	948.5	6900.5	1.00	5.80	0.2
Approach		1684	5.1	1684	5.1	7.641	9164.3	LOS F	948.5	6900.5	1.00	5.34	0.3
West: Canterbury Road West													
10	L2	182	2.7	134	2.8	0.912	71.2	LOS F	44.0	315.1	1.00	1.01	26.7
11	T1	1414	2.7	1041	2.8	0.912	65.8	LOS E	45.6	326.9	1.00	1.02	18.3
Approach		1596	2.7	1175 N1	2.8	0.912	66.4	LOS E	45.6	326.9	1.00	1.02	19.6
All Vehicles		8473	5.1	8011 N1	5.4	8.672	5986.1	LOS F	1303.0	9743.7	0.92	4.43	0.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	20.7	LOS C	0.1	0.1	0.54	0.54
P2	East Full Crossing	50	38.1	LOS D	0.1	0.1	0.92	0.92
P3	North Full Crossing	50	37.2	LOS D	0.1	0.1	0.73	0.73
P4	West Full Crossing	50	44.1	LOS E	0.2	0.2	0.79	0.79
All Pedestrians		200	35.0	LOS D			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ Option1_2036 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	150	2.1	150	2.1	1.115	261.2	LOS F	61.4	442.6	1.00	1.59	5.4
2	T1	594	4.2	594	4.2	1.115	277.7	LOS F	61.4	442.6	1.00	1.93	9.7
3	R2	609	1.0	609	1.0	1.741	1394.8	LOS F	258.8	1827.4	1.00	3.45	1.3
Approach		1353	2.5	1353	2.5	1.741	778.9	LOS F	258.8	1827.4	1.00	2.58	3.1
East: Canterbury Road E													
4	L2	224	1.6	222	1.6	0.898	50.0	LOS D	49.5	353.6	0.96	0.97	32.5
5	T1	1285	2.9	1274	2.9	0.898	44.4	LOS D	50.3	361.0	0.96	0.96	24.5
Approach		1509	2.7	1496 N1	2.7	0.898	45.3	LOS D	50.3	361.0	0.96	0.96	26.1
North: Beamish Street													
7	L2	72	12.5	72	12.5	1.678	1262.7	LOS F	127.5	947.0	1.00	3.21	1.4
8	T1	525	5.7	525	5.7	1.678	1267.0	LOS F	127.5	947.0	1.00	3.58	2.6
9	R2	122	14.6	122	14.6	1.090	265.0	LOS F	19.0	150.0	1.00	1.65	6.0
Approach		719	7.9	719	7.9	1.678	1096.1	LOS F	127.5	947.0	1.00	3.21	2.7
West: Canterbury Road w													
10	L2	107	11.4	51	12.2	0.357	38.7	LOS C	20.5	147.8	0.92	0.82	35.4
11	T1	1223	1.6	583	1.7	0.357	32.9	LOS C	20.5	147.8	0.93	0.81	27.8
12	R2	259	1.6	123	1.7	0.678	80.2	LOS F	8.8	62.7	1.00	0.92	24.2
Approach		1588	2.2	758 N1	2.4	0.678	41.0	LOS C	20.5	147.8	0.94	0.83	27.3
All Vehicles		5170	3.2	4327 N1	3.8	1.741	448.7	LOS F	258.8	1827.4	0.98	1.82	4.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	29.0	LOS C	0.1	0.1	0.64	0.64
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	20.7	LOS C	0.1	0.1	0.54	0.54
P4	West Full Crossing	50	53.3	LOS E	0.2	0.2	0.87	0.87
All Pedestrians		200	41.8	LOS E			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_Option1_2036 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	2140	4.6	2135	4.6	0.778	6.5	LOS A	41.0	298.2	0.50	0.47	48.2
6	R2	555	4.6	554	4.6	0.900	66.8	LOS E	38.5	280.3	1.00	1.08	26.1
Approach		2696	4.6	2689 N1	4.6	0.900	18.9	LOS B	41.0	298.2	0.61	0.60	37.0
North: Wonga Street													
7	L2	323	8.5	323	8.5	0.931	88.6	LOS F	29.8	223.7	0.97	1.11	14.8
9	R2	149	4.6	149	4.6	0.891	85.8	LOS F	11.5	83.9	1.00	1.00	15.1
Approach		472	7.3	472	7.3	0.931	87.7	LOS F	29.8	223.7	0.98	1.07	14.9
West: Canterbury Road West													
10	L2	74	2.7	38	3.4	0.987	82.5	LOS F	45.0	324.2	0.99	1.34	25.2
11	T1	1599	2.7	824	3.4	0.987	94.8	LOS F	46.3	333.6	0.99	1.35	14.7
Approach		1672	2.7	861 N1	3.4	0.987	94.2	LOS F	46.3	333.6	0.99	1.35	15.2
All Vehicles		4840	4.2	4022 N1	5.0	0.987	43.1	LOS D	46.3	333.6	0.73	0.82	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	25.3	LOS C	0.1	0.1	0.60	0.60
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	44.8	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_Option1_2036 PM - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	18	0.0	18	0.0	0.966	72.4	LOS F	94.6	710.0	1.00	1.15	28.6
5	T1	1750	8.5	1750	8.5	0.966	71.6	LOS F	94.6	710.0	1.00	1.19	18.2
6	R2	25	8.0	25	8.0	0.966	85.5	LOS F	66.4	498.6	1.00	1.23	25.6
Approach		1793	8.4	1793	8.4	0.966	71.8	LOS F	94.6	710.0	1.00	1.19	18.5
NorthEast: Jeffrey Street													
24b	L3	10	0.0	10	0.0	0.980	118.8	LOS F	25.9	192.1	1.00	1.22	20.5
24	L2	15	0.0	15	0.0	0.980	117.9	LOS F	25.9	192.1	1.00	1.22	20.4
26a	R1	506	7.9	506	7.9	0.980	116.4	LOS F	25.9	192.1	1.00	1.22	12.7
26b	R3	1	0.0	1	0.0	0.980	117.7	LOS F	25.6	191.5	1.00	1.23	20.5
Approach		532	7.5	532	7.5	0.980	116.5	LOS F	25.9	192.1	1.00	1.22	13.1
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.649	75.9	LOS F	7.1	51.2	1.00	0.81	26.7
7	L2	53	0.0	53	0.0	0.649	74.9	LOS F	7.1	51.2	1.00	0.81	26.6
7a	L1	1	0.0	1	0.0	0.649	73.6	LOS F	7.1	51.2	1.00	0.81	26.9
9	R2	137	6.6	137	6.6	0.649	76.3	LOS F	7.1	51.2	1.00	0.81	17.3
Approach		192	4.7	192	4.7	0.649	75.9	LOS F	7.1	51.2	1.00	0.81	20.5
West: Canterbury Road w													
10	L2	22	9.1	15	12.7	0.961	89.9	LOS F	20.2	155.0	1.00	1.18	17.7
10a	L1	374	8.0	246	11.2	0.961	88.7	LOS F	20.2	155.0	1.00	1.18	17.8
11	T1	1656	8.0	1087	11.3	0.961	83.0	LOS F	20.2	155.0	1.00	1.19	18.4
Approach		2052	8.0	1347 N1	11.3	0.961	84.1	LOS F	20.2	155.0	1.00	1.19	18.3
All Vehicles		4569	8.0	3864 N1	9.4	0.980	82.5	LOS F	94.6	710.0	1.00	1.17	17.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 215.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	12.0	LOS B	0.1	0.1	0.42	0.42
P2	East Full Crossing	20	58.6	LOS E	0.1	0.1	0.92	0.92
P6	NorthEast Full Crossing	68	16.6	LOS B	0.1	0.1	0.49	0.49
P3	North Full Crossing	108	29.7	LOS C	0.3	0.3	0.65	0.65
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	33.2	LOS D			0.66	0.66

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.

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Option 2 - 2021

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.415	11.9	LOS A	18.3	138.3	0.48	0.44	53.0
5	T1	1100	8.5	982	9.2	0.415	6.4	LOS A	18.3	138.3	0.49	0.44	54.3
6	R2	89	9.0	80	9.6	0.774	85.8	LOS F	6.3	47.5	1.00	0.92	24.6
Approach		1190	8.6	1063 N1	9.2	0.774	12.3	LOS A	18.3	138.3	0.53	0.48	49.8
North: Punchbowl Road													
7	L2	21	9.5	21	9.5	1.125	315.0	LOS F	34.9	247.1	1.00	1.68	5.3
8	T1	8	12.5	8	12.5	1.125	309.4	LOS F	34.9	247.1	1.00	1.68	9.6
9	R2	373	8.6	373	8.6	1.125	315.0	LOS F	34.9	277.3	1.00	1.67	9.5
Approach		402	8.7	402	8.7	1.125	314.9	LOS F	34.9	277.3	1.00	1.67	9.3
West: Canterbury Road West													
10	L2	141	8.5	141	8.5	0.081	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1355	8.0	1355	8.0	0.903	35.1	LOS C	48.0	359.3	0.73	0.82	28.2
Approach		1496	8.1	1496	8.1	0.903	32.3	LOS C	48.0	359.3	0.66	0.79	30.7
All Vehicles		3088	8.4	2961 N1	8.7	1.125	63.5	LOS E	48.0	359.3	0.66	0.80	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	119	11.8	119	11.8	1.012	159.2	LOS F	28.2	211.1	1.00	1.34	9.4
3	R2	290	4.5	290	4.5	1.012	162.3	LOS F	28.2	211.1	1.00	1.35	9.3
Approach		409	6.6	409	6.6	1.012	161.4	LOS F	28.2	211.1	1.00	1.35	9.3
East: Canterbury Road E													
4	L2	182	3.3	161	3.6	0.905	70.9	LOS F	22.3	163.2	1.00	1.03	20.0
5	T1	1053	5.9	933	6.4	0.905	64.1	LOS E	22.3	163.2	1.00	1.04	5.8
Approach		1235	5.5	1094 N1	6.0	0.905	65.1	LOS E	22.3	163.2	1.00	1.04	8.8
West: Canterbury Road W													
11	T1	1489	7.1	1489	7.1	1.160	365.7	LOS F	109.9	816.0	1.00	2.59	4.6
12	R2	136	11.8	136	11.8	0.210	35.6	LOS C	6.2	47.8	0.69	0.79	35.3
Approach		1625	7.4	1625	7.4	1.160	338.1	LOS F	109.9	816.0	0.97	2.44	5.4
All Vehicles		3269	6.6	3128 N1	6.9	1.160	219.5	LOS F	109.9	816.0	0.99	1.81	6.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	37.9	LOS D	0.0	0.0	0.74	0.74
P4	West Full Crossing	15	55.8	LOS E	0.1	0.1	0.89	0.89
All Pedestrians		18	52.8	LOS E			0.87	0.87

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021_AM_Option 2 - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1157	8.6	1092	8.8	0.925	40.2	LOS C	43.3	326.4	0.75	0.91	14.4

6	R2	130	2.3	122	2.4	0.925	43.8	LOS D	29.2	217.1	0.88	1.08	28.7
Approach		1287	7.9	1214 N1	8.2	0.925	40.6	LOS C	43.3	326.4	0.76	0.93	16.6
North: Rosmore Avenue													
7	L2	119	2.5	119	2.5	0.134	25.4	LOS B	4.4	31.3	0.58	0.70	29.7
9	R2	135	2.2	135	2.2	3.446	4444.0	LOS F	89.0	635.0	1.00	3.75	0.4
Approach		254	2.4	254	2.4	3.446	2373.9	LOS F	89.0	635.0	0.80	2.32	0.8
West: Canterbury West													
10	L2	215	1.4	210	1.4	0.973	85.1	LOS F	22.3	163.2	1.00	1.15	17.7
11	T1	1380	6.4	1347	6.5	0.973	79.6	LOS F	22.3	163.2	1.00	1.17	4.7
Approach		1595	5.8	1557 N1	5.8	0.973	80.3	LOS F	22.3	163.2	1.00	1.16	7.1
All Vehicles		3136	6.4	3025 N1	6.6	3.446	256.9	LOS F	89.0	635.0	0.89	1.17	3.2

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	27.0	LOS C	0.0	0.0	0.62	0.62
All Pedestrians		7	58.8	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	376	3.5	376	3.5	0.460	16.6	LOS B	11.5	82.6	0.49	0.70	34.6
3	R2	165	5.5	165	5.5	1.024	179.0	LOS F	20.8	152.5	1.00	1.38	8.5
Approach		541	4.1	541	4.1	1.024	66.1	LOS E	20.8	152.5	0.65	0.91	17.9
East: Canterbury Road E													
4	L2	87	9.2	80	9.6	0.901	38.8	LOS C	27.9	207.0	0.93	0.87	33.3
5	T1	888	6.3	815	6.6	0.901	31.4	LOS C	27.9	207.0	0.92	0.86	20.0
Approach		975	6.6	894 N1	6.8	0.901	32.0	LOS C	27.9	207.0	0.92	0.86	21.9
West: Canterbury Road w													
11	T1	1084	8.6	1064	8.6	0.801	4.9	LOS A	22.1	160.5	0.29	0.29	42.3
12	R2	444	2.9	436	2.9	0.801	22.5	LOS B	22.1	160.5	0.73	0.86	37.6
Approach		1528	6.9	1500 N1	7.0	0.801	10.0	LOS A	22.1	160.5	0.42	0.46	39.5
All Vehicles		3044	6.3	2935 N1	6.5	1.024	27.1	LOS B	27.9	207.0	0.61	0.66	26.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	44.8	LOS E	0.0	0.0	0.80	0.80
P2	East Full Crossing	19	45.6	LOS E	0.1	0.1	0.81	0.81
All Pedestrians		21	45.6	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	999	8.5	914	8.9	0.366	1.9	LOS A	7.6	56.9	0.21	0.21	53.2
6	R2	75	8.0	69	8.3	0.366	10.5	LOS A	7.6	56.9	0.54	0.53	47.3
Approach		1074	8.5	982 N1	8.8	0.366	2.5	LOS A	7.6	56.9	0.24	0.23	52.1
North: Dudley Street													
7	L2	73	8.2	73	8.2	0.106	33.1	LOS C	3.1	23.2	0.67	0.70	26.5
9	R2	43	9.3	43	9.3	0.576	81.3	LOS F	3.1	23.6	1.00	0.76	15.6
Approach		116	8.6	116	8.6	0.576	51.0	LOS D	3.1	23.6	0.79	0.73	21.1
West: Canterbury West													
10	L2	8	12.5	8	12.5	0.576	18.7	LOS B	15.1	112.9	0.44	0.40	41.7
11	T1	1110	8.0	1104	8.0	0.576	15.4	LOS B	19.0	142.2	0.49	0.45	30.3
Approach		1118	8.1	1112 N1	8.1	0.576	15.4	LOS B	19.0	142.2	0.49	0.45	30.5
All Vehicles		2308	8.3	2210 N1	8.6	0.576	11.6	LOS A	19.0	142.2	0.39	0.36	36.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	19.6	LOS B	0.0	0.0	0.53	0.53
All Pedestrians		16	30.7	LOS D			0.64	0.64

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	92	8.7	92	8.7	0.091	12.2	LOS A	2.2	16.6	0.39	0.64	37.7
3	R2	49	8.2	49	8.2	0.651	82.1	LOS F	3.6	26.9	1.00	0.80	15.5
Approach		141	8.5	141	8.5	0.651	36.5	LOS C	3.6	26.9	0.60	0.70	25.2
East: Canterbury Raod East													
4	L2	117	8.5	106	8.9	0.725	44.1	LOS D	29.8	224.8	0.91	0.83	34.0
5	T1	1034	8.5	938	8.9	0.725	38.5	LOS C	30.2	227.3	0.91	0.82	26.5
Approach		1151	8.5	1044 N1	8.9	0.725	39.1	LOS C	30.2	227.3	0.91	0.82	27.6
West: Canterbury Road West													
11	T1	1527	5.3	1518	5.3	0.612	4.3	LOS A	12.4	90.5	0.29	0.31	47.4
12	R2	148	8.1	147	8.1	0.612	14.7	LOS B	12.1	89.3	0.46	0.55	44.1
Approach		1675	5.6	1665 N1	5.6	0.612	5.2	LOS A	12.4	90.5	0.30	0.33	46.6
All Vehicles		2967	6.8	2850 N1	7.1	0.725	19.2	LOS B	30.2	227.3	0.54	0.53	33.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	30.2	LOS D	0.0	0.0	0.66	0.66
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	57.4	LOS E			0.90	0.90

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	160	21.3	160	21.3	0.162	18.1	LOS B	4.9	40.5	0.46	0.66	40.7
2	T1	2775	7.5	2775	7.5	1.122	296.5	LOS F	180.0	1341.7	1.00	2.16	13.3
3	R2	210	3.3	210	3.3	0.735	83.3	LOS F	8.0	57.6	1.00	0.85	25.4
Approach		3145	7.9	3145	7.9	1.122	268.1	LOS F	180.0	1341.7	0.97	2.00	13.9
East: Canterbury Road E													
4	L2	92	9.8	92	9.8	1.129	288.8	LOS F	73.4	537.8	1.00	1.60	9.2
5	T1	808	4.5	808	4.5	1.129	302.2	LOS F	81.8	594.8	1.00	1.92	4.3
6	R2	205	9.8	205	9.8	0.999	139.6	LOS F	10.7	81.5	1.00	1.24	20.5
Approach		1105	5.9	1105	5.9	1.129	270.9	LOS F	81.8	594.8	1.00	1.76	6.7
North: King Georges Road													
7	L2	327	7.3	327	7.3	0.753	38.9	LOS C	37.8	283.6	0.85	0.90	39.9
8	T1	1711	9.1	1711	9.1	0.753	32.6	LOS C	39.1	295.0	0.87	0.82	43.3
9	R2	197	5.1	197	5.1	1.099	277.1	LOS F	32.0	234.0	1.00	1.60	8.9
Approach		2235	8.5	2235	8.5	1.099	55.1	LOS D	39.1	295.0	0.88	0.90	35.5
West: Canterbury Road W													
10	L2	97	10.3	96	10.3	0.141	35.0	LOS C	4.5	34.2	0.67	0.70	41.2
11	T1	590	7.5	587	7.5	0.933	88.4	LOS F	27.9	207.9	1.00	1.15	23.2
12	R2	114	21.9	113	21.9	0.897	99.0	LOS F	4.8	40.0	1.00	0.99	24.3
Approach		801	9.9	797 N1	9.9	0.933	83.5	LOS F	27.9	207.9	0.96	1.07	25.2
All Vehicles		7286	8.0	7282 N1	8.0	1.129	183.0	LOS F	180.0	1341.7	0.95	1.52	16.7

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1404.3 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	59.9	LOS E	0.0	0.0	0.89	0.89
P2	East Full Crossing	2	28.2	LOS C	0.0	0.0	0.61	0.61
P3	North Full Crossing	1	61.7	LOS F	0.0	0.0	0.91	0.91
P4	West Full Crossing	1	30.7	LOS D	0.0	0.0	0.64	0.64
All Pedestrians		5	41.7	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	997	4.7	957	4.7	0.611	8.5	LOS A	15.9	117.6	0.31	0.29	46.6
6	R2	89	11.2	85	11.1	0.611	43.8	LOS D	15.9	117.6	1.00	0.94	33.8
Approach		1086	5.2	1042 N1	5.2	0.611	11.4	LOS A	15.9	117.6	0.36	0.34	44.1
North: Haldon Street													
7	L2	60	5.0	60	5.0	0.886	87.6	LOS F	9.2	68.4	1.00	1.02	14.9
9	R2	126	8.7	126	8.7	0.886	89.8	LOS F	9.2	68.4	1.00	1.03	14.6
Approach		186	7.5	186	7.5	0.886	89.1	LOS F	9.2	68.4	1.00	1.03	14.7
West: Canterbury Road w													
10	L2	97	8.2	97	8.2	0.693	24.8	LOS B	35.1	258.8	0.73	0.69	40.4
11	T1	1471	5.8	1471	5.8	0.693	19.1	LOS B	35.4	260.4	0.73	0.68	33.7
Approach		1568	6.0	1568	6.0	0.693	19.5	LOS B	35.4	260.4	0.73	0.68	34.4
All Vehicles		2840	5.8	2796 N1	5.9	0.886	21.1	LOS B	35.4	260.4	0.61	0.58	34.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	14.2	LOS B	0.0	0.0	0.45	0.45
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	59.2	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2021_AM_Option 2 - SCATS (single diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	116	8.6	116	8.6	0.876	62.6	LOS E	28.5	206.6	0.94	0.97	9.1
2	T1	440	2.5	440	2.5	0.876	62.8	LOS E	28.5	206.6	0.96	0.99	8.7
3	R2	106	7.5	106	7.5	0.876	76.9	LOS F	19.6	142.5	1.00	1.05	7.6
Approach		662	4.4	662	4.4	0.876	65.0	LOS E	28.5	206.6	0.96	1.00	8.6
East: Canterbury Rd													
4	L2	83	12.0	79	11.8	0.768	46.7	LOS D	28.3	208.3	0.89	0.80	28.6
5	T1	973	4.9	929	4.8	0.768	40.9	LOS C	28.7	209.4	0.89	0.80	25.7
6	R2	22	0.0	21	0.0	0.132	65.6	LOS E	1.3	8.9	0.89	0.70	19.7
Approach		1078	5.4	1030 N1	5.3	0.768	41.9	LOS C	28.7	209.4	0.89	0.80	25.8
North: Chapel St													
7	L2	40	0.0	40	0.0	0.275	42.5	LOS C	8.2	58.1	0.80	0.69	4.6
8	T1	342	2.3	342	2.3	0.461	42.8	LOS D	13.5	96.5	0.85	0.73	14.2
9	R2	18	0.0	18	0.0	0.461	48.2	LOS D	13.5	96.5	0.88	0.75	4.2
Approach		400	2.0	400	2.0	0.461	43.0	LOS D	13.5	96.5	0.85	0.72	13.0
West: Canterbury Rd													
10	L2	53	0.0	53	0.0	0.819	31.4	LOS C	37.7	275.0	0.81	0.75	21.8
11	T1	1295	5.4	1295	5.4	0.819	25.3	LOS B	37.7	275.0	0.74	0.69	32.9
12	R2	177	7.9	177	7.9	0.564	35.4	LOS C	5.9	44.1	0.93	0.80	31.0
Approach		1525	5.5	1525	5.5	0.819	26.7	LOS B	37.7	275.0	0.77	0.70	32.0
All Vehicles		3665	4.9	3617 N1	4.9	0.876	39.8	LOS C	37.7	275.0	0.85	0.79	22.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	36.4	LOS D	0.0	0.0	0.72	0.72
P2	East Full Crossing	6	44.0	LOS E	0.0	0.0	0.79	0.79
P3	North Full Crossing	50	36.5	LOS D	0.1	0.1	0.72	0.72
All Pedestrians		67	37.2	LOS D			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021_AM - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St-SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	72	6.9	72	6.9	0.209	28.7	LOS C	6.7	49.7	0.64	0.62	29.4
2	T1	348	6.3	348	6.3	1.043	142.7	LOS F	58.0	437.8	0.90	1.37	16.7
3	R2	169	13.6	169	13.6	1.043	191.8	LOS F	58.0	437.8	1.00	1.65	8.2
Approach		589	8.5	589	8.5	1.043	142.8	LOS F	58.0	437.8	0.90	1.36	14.4
East: Canterbury Road E													
4	L2	79	16.5	54	17.1	0.869	70.2	LOS E	25.2	189.7	1.00	0.95	27.0
5	T1	958	7.1	655	7.4	0.869	69.4	LOS E	25.8	192.4	1.00	0.94	17.7
6	R2	52	0.0	35	0.0	0.459	82.9	LOS F	2.6	18.0	1.00	0.73	24.6
Approach		1089	7.4	744 N1	7.8	0.869	70.1	LOS E	25.8	192.4	1.00	0.93	19.0
North: Sharp Street													
7	L2	71	5.6	71	5.6	0.119	23.7	LOS B	3.4	24.6	0.60	0.64	31.1
8	T1	402	4.5	402	4.5	0.540	28.4	LOS B	17.8	129.2	0.74	0.66	38.6
Approach		473	4.7	473	4.7	0.540	27.7	LOS B	17.8	129.2	0.72	0.65	37.8
West: Canterbury Road w													
10	L2	6	0.0	6	0.0	0.935	68.7	LOS E	52.1	381.6	1.00	1.07	27.9
11	T1	1263	5.5	1263	5.5	0.935	63.1	LOS E	52.1	381.6	0.99	1.06	19.8
12	R2	298	9.7	298	9.7	0.880	75.8	LOS F	22.4	169.5	1.00	0.94	25.4
Approach		1567	6.3	1567	6.3	0.935	65.5	LOS E	52.1	381.6	0.99	1.04	21.3
All Vehicles		3718	6.8	3373 N1	7.4	1.043	74.7	LOS F	58.0	437.8	0.94	1.02	20.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	49.8	LOS E	0.1	0.1	0.84	0.84
P2	East Full Crossing	33	29.0	LOS C	0.1	0.1	0.64	0.64
P3	North Full Crossing	25	48.9	LOS E	0.1	0.1	0.84	0.84
P4	West Full Crossing	7	28.9	LOS C	0.0	0.0	0.64	0.64
All Pedestrians		82	39.4	LOS D			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021_AM_Option 2 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	56	8.9	56	8.9	1.087	260.0	LOS F	48.0	360.3	1.00	2.01	6.3
2	T1	627	8.5	627	8.5	2.407	1678.2	LOS F	241.8	1813.1	1.00	4.24	2.1
3	R2	54	7.4	54	7.4	2.407	2583.0	LOS F	241.8	1813.1	1.00	5.64	0.7
Approach		737	8.4	737	8.4	2.407	1636.7	LOS F	241.8	1813.1	1.00	4.17	2.0
East: Canterbury Road East													
4	L2	33	6.1	32	5.9	0.771	49.4	LOS D	33.2	244.5	0.99	0.88	32.1
5	T1	941	6.3	909	6.1	0.771	48.7	LOS D	33.2	244.5	0.99	0.88	22.2
6	R2	255	6.3	246	6.1	0.881	59.7	LOS E	16.8	123.7	1.00	0.87	28.1
Approach		1229	6.3	1187 N1	6.1	0.881	51.0	LOS D	33.2	244.5	0.99	0.88	24.2
North: Thorncraft Parade													
7	L2	140	8.6	140	8.6	0.467	43.9	LOS D	10.6	79.6	0.90	0.78	23.4
8	T1	197	8.6	197	8.6	2.066	1348.4	LOS F	96.9	727.4	0.97	3.00	2.5
9	R2	61	8.2	61	8.2	2.066	1969.6	LOS F	96.9	727.4	1.00	4.04	0.9
Approach		398	8.5	398	8.5	2.066	984.8	LOS F	96.9	727.4	0.95	2.38	2.6
West: Canterbury Road West													
10	L2	64	0.0	63	0.0	0.906	45.2	LOS D	51.0	379.5	0.94	0.94	33.5
11	T1	1473	8.0	1449	7.9	0.906	41.2	LOS C	51.0	379.5	0.93	0.93	24.8
12	R2	62	0.0	61	0.0	0.164	32.3	LOS C	2.2	15.5	0.89	0.74	38.1
Approach		1599	7.4	1574 N1	7.3	0.906	41.0	LOS C	51.0	379.5	0.93	0.93	26.0
All Vehicles		3963	7.3	3896 N1	7.5	2.407	442.3	LOS F	241.8	1813.1	0.96	1.67	4.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	34.3	LOS D	0.0	0.0	0.70	0.70
P2	East Full Crossing	32	49.0	LOS E	0.1	0.1	0.84	0.84
P3	North Full Crossing	8	26.4	LOS C	0.0	0.0	0.61	0.61
P4	West Full Crossing	32	49.0	LOS E	0.1	0.1	0.84	0.84
All Pedestrians		84	44.7	LOS E			0.80	0.80

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\Option 2 - Hill Thalis + TM\Option 2 - 2021_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021_AM_Option 2 - SCATS (Double Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	106	4.7	106	4.7	2.605	2935.9	LOS F	227.2	1656.6	1.00	5.45	0.6
2	T1	668	4.9	668	4.9	2.605	2930.8	LOS F	227.2	1656.6	1.00	5.41	1.2
3	R2	375	4.0	375	4.0	1.888	1656.2	LOS F	172.8	1251.0	1.00	3.85	1.1
Approach		1149	4.6	1149	4.6	2.605	2515.3	LOS F	227.2	1656.6	1.00	4.91	1.1
East: Canterbury Road E													
4	L2	233	3.9	230	3.9	0.890	69.3	LOS E	36.7	267.6	1.00	1.08	27.6
5	T1	796	5.8	786	5.8	0.890	61.1	LOS E	36.7	267.6	1.00	1.03	20.1
6	R2	1	0.0	1	0.0	0.013	76.6	LOS F	0.1	0.5	0.98	0.59	26.3
Approach		1030	5.3	1017 N1	5.3	0.890	63.0	LOS E	36.7	267.6	1.00	1.04	22.3
North: Beamish Street													
7	L2	46	17.4	46	17.4	1.832	1525.6	LOS F	117.0	879.6	1.00	2.39	1.1
8	T1	442	6.8	442	6.8	1.832	1535.0	LOS F	117.0	879.6	1.00	3.22	2.2
9	R2	73	27.4	73	27.4	0.410	63.2	LOS E	4.5	39.3	0.93	0.76	18.6
Approach		561	10.3	561	10.3	1.832	1342.7	LOS F	117.0	879.6	0.99	2.83	2.2
West: Canterbury Road w													
10	L2	110	12.7	106	12.6	0.959	81.7	LOS F	70.4	518.6	1.00	1.19	24.7
11	T1	1285	5.1	1243	5.0	0.959	76.6	LOS F	70.4	518.6	0.90	1.12	16.3
12	R2	261	5.7	253	5.7	0.918	83.7	LOS F	20.1	147.2	1.00	0.95	23.6
Approach		1656	5.7	1602 N1	5.6	0.959	78.1	LOS F	70.4	518.6	0.92	1.10	18.5
All Vehicles		4396	5.9	4329 N1	6.0	2.605	885.3	LOS F	227.2	1656.6	0.97	2.32	2.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	43.2	LOS E	0.0	0.0	0.79	0.79
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	19.6	LOS B	0.0	0.0	0.53	0.53
P4	West Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		40	47.8	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1357	8.5	1357	8.5	0.425	2.1	LOS A	9.7	72.6	0.23	0.21	55.5
6	R2	437	8.5	437	8.5	0.831	61.6	LOS E	25.9	194.7	1.00	1.07	27.2
Approach		1794	8.5	1794	8.5	0.831	16.6	LOS B	25.9	194.7	0.42	0.42	39.0
North: Wonga Street													
7	L2	310	8.4	310	8.4	0.775	53.2	LOS D	19.6	147.2	0.94	0.88	20.6
9	R2	94	8.5	94	8.5	1.253	531.4	LOS F	22.8	171.4	1.00	2.08	3.2
Approach		404	8.4	404	8.4	1.253	164.5	LOS F	22.8	171.4	0.95	1.16	9.0
West: Canterbury Road West													
10	L2	57	8.8	50	9.1	0.956	59.6	LOS E	64.9	486.9	0.97	1.10	29.9
11	T1	1669	8.0	1475	8.3	0.956	54.1	LOS D	64.9	486.9	0.96	1.10	21.7
Approach		1726	8.1	1525 N1	8.3	0.956	54.3	LOS D	64.9	486.9	0.96	1.10	22.1
All Vehicles		3924	8.3	3723 N1	8.8	1.253	48.1	LOS D	64.9	486.9	0.70	0.78	23.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	17.0	LOS B	0.0	0.0	0.49	0.49
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	50.7	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021_AM_Option 2 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.834	24.6	LOS B	50.9	381.6	0.82	0.77	45.5
5	T1	1103	8.5	1103	8.5	0.834	23.3	LOS B	50.9	381.6	0.83	0.78	34.2
6	R2	37	8.1	37	8.1	0.834	81.5	LOS F	10.1	75.9	1.00	0.95	26.1
Approach		1153	8.4	1153	8.4	0.834	25.2	LOS B	50.9	381.6	0.84	0.79	33.8
NorthEast: Jeffrey Street													
24b	L3	22	9.1	22	9.1	0.929	96.7	LOS F	10.9	81.3	1.00	1.10	23.3
24	L2	4	0.0	4	0.0	0.929	95.6	LOS F	10.9	81.3	1.00	1.10	23.3
26a	R1	237	8.0	237	8.0	0.929	94.0	LOS F	10.9	81.3	1.00	1.10	14.9
26b	R3	1	0.0	1	0.0	0.929	95.4	LOS F	10.8	80.5	1.00	1.10	23.4
Approach		264	8.0	264	8.0	0.929	94.3	LOS F	10.9	81.3	1.00	1.10	16.0
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.681	76.4	LOS F	7.6	55.0	1.00	0.82	26.6
7	L2	63	0.0	63	0.0	0.681	75.5	LOS F	7.6	55.0	1.00	0.82	26.5
7a	L1	1	0.0	1	0.0	0.681	74.2	LOS F	7.6	55.0	1.00	0.82	26.7
9	R2	137	8.0	137	8.0	0.681	76.9	LOS F	7.6	55.0	1.00	0.82	17.2
Approach		202	5.4	202	5.4	0.681	76.5	LOS F	7.6	55.0	1.00	0.82	20.7
West: Canterbury Road w													
10	L2	20	10.0	18	10.3	0.874	38.5	LOS C	20.7	155.0	0.93	0.91	30.3
10a	L1	168	7.7	152	7.9	0.874	37.3	LOS C	20.7	155.0	0.93	0.91	30.8
11	T1	1755	7.7	1585	8.0	0.874	32.4	LOS C	20.7	155.0	0.93	0.90	31.8
Approach		1943	7.8	1755N1	8.0	0.874	32.9	LOS C	20.7	155.0	0.93	0.90	31.7
All Vehicles		3562	7.9	3374N1	8.3	0.929	37.7	LOS C	50.9	381.6	0.91	0.87	29.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 338.8 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	8.2	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	7.6	LOS A	0.1	0.1	0.33	0.33
P3	North Full Crossing	108	17.1	LOS B	0.2	0.2	0.50	0.50
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	26.7	LOS C			0.56	0.56

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.396	9.6	LOS A	10.3	75.1	0.29	0.26	54.8
5	T1	1304	4.6	1172	5.1	0.396	3.2	LOS A	10.3	75.1	0.22	0.20	57.0
6	R2	91	4.4	82	4.9	0.406	16.6	LOS B	2.3	16.5	0.41	0.70	46.0
Approach		1396	4.6	1255 N1	5.1	0.406	4.1	LOS A	10.3	75.1	0.23	0.23	56.1
North: Punchbowl Road													
7	L2	28	7.1	28	7.1	0.897	84.7	LOS F	16.6	116.8	1.00	0.99	16.1
8	T1	1	0.0	1	0.0	0.897	79.1	LOS F	16.6	116.8	1.00	0.99	25.2
9	R2	385	4.7	385	4.7	0.897	85.0	LOS F	16.6	116.8	1.00	0.99	24.8
Approach		414	4.8	414	4.8	0.897	85.0	LOS F	16.6	118.7	1.00	0.99	24.3
West: Canterbury Road West													
10	L2	166	2.4	166	2.4	0.091	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1334	2.4	1334	2.4	0.442	5.2	LOS A	14.6	104.0	0.36	0.33	51.4
Approach		1500	2.4	1500	2.4	0.442	5.2	LOS A	14.6	104.0	0.32	0.35	52.1
All Vehicles		3310	3.6	3169 N1	3.8	0.897	15.2	LOS B	16.6	118.7	0.37	0.39	45.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	161	1.2	161	1.2	1.086	250.1	LOS F	43.0	306.1	1.00	1.58	6.2
3	R2	306	2.9	306	2.9	1.086	258.5	LOS F	43.0	306.1	1.00	1.61	6.1
Approach		467	2.4	467	2.4	1.086	255.6	LOS F	43.0	306.1	1.00	1.60	6.1
East: Canterbury Road E													
4	L2	241	2.1	213	2.3	0.895	54.1	LOS D	23.1	163.2	0.99	0.98	23.6
5	T1	1371	0.4	1208	0.4	0.895	40.0	LOS C	23.2	163.2	0.95	0.94	8.7
Approach		1612	0.6	1421 N1	0.7	0.895	42.1	LOS C	23.2	163.2	0.96	0.94	12.6
West: Canterbury Road W													
11	T1	1248	2.6	1248	2.6	0.964	78.1	LOS F	64.6	462.3	0.97	1.20	17.0
12	R2	145	2.1	145	2.1	0.268	27.3	LOS B	5.5	39.5	0.87	0.79	38.4
Approach		1393	2.5	1393	2.5	0.964	72.8	LOS F	64.6	462.3	0.96	1.16	19.0
All Vehicles		3472	1.6	3281 N1	1.7	1.086	85.5	LOS F	64.6	462.3	0.96	1.13	12.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	29.6	LOS C	0.0	0.0	0.65	0.65
P4	West Full Crossing	15	55.8	LOS E	0.1	0.1	0.89	0.89
All Pedestrians		18	51.5	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1454	5.9	1418	6.0	1.026	122.9	LOS F	44.6	326.4	1.00	1.49	5.4
6	R2	110	1.8	107	1.8	1.026	108.3	LOS F	44.6	326.4	1.00	1.31	15.4
Approach		1564	5.6	1525 N1	5.7	1.026	121.9	LOS F	44.6	326.4	1.00	1.47	6.2
North: Rosmore Avenue													
7	L2	111	0.0	111	0.0	0.116	21.8	LOS B	3.9	27.2	0.54	0.66	31.5
9	R2	203	0.5	203	0.5	4.718	6730.3	LOS F	146.7	1030.9	1.00	4.19	0.3
Approach		314	0.3	314	0.3	4.718	4358.9	LOS F	146.7	1030.9	0.84	2.95	0.4
West: Canterbury West													
10	L2	142	1.4	142	1.4	1.025	153.6	LOS F	22.8	163.2	1.00	1.49	11.4
11	T1	1254	2.8	1254	2.8	1.025	147.9	LOS F	22.8	163.2	1.00	1.53	2.6
Approach		1396	2.7	1396	2.7	1.025	148.5	LOS F	22.8	163.2	1.00	1.52	3.7
All Vehicles		3274	3.8	3235 N1	3.9	4.718	544.6	LOS F	146.7	1030.9	0.98	1.64	1.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	33.6	LOS D	0.0	0.0	0.69	0.69
All Pedestrians		7	59.8	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	372	1.1	372	1.1	1.628	1200.7	LOS F	147.9	1044.8	1.00	3.33	1.5
3	R2	89	4.5	89	4.5	1.736	1383.1	LOS F	37.8	274.5	1.00	2.83	1.3
Approach		461	1.7	461	1.7	1.736	1235.9	LOS F	147.9	1044.8	1.00	3.23	1.4
East: Canterbury Road E													
4	L2	81	4.9	78	5.0	1.007	114.1	LOS F	55.3	408.0	1.00	1.42	17.5
5	T1	1162	6.5	1123	6.6	1.007	107.8	LOS F	55.3	408.0	1.00	1.45	7.7
Approach		1243	6.4	1201 N1	6.5	1.007	108.2	LOS F	55.3	408.0	1.00	1.44	8.5
West: Canterbury Road w													
11	T1	1075	2.7	1075	2.7	0.786	8.0	LOS A	43.3	310.0	0.66	0.63	37.0
12	R2	374	1.3	374	1.3	1.309	593.0	LOS F	46.1	326.4	1.00	2.30	3.8
Approach		1449	2.3	1449	2.3	1.309	159.0	LOS F	46.1	326.4	0.75	1.06	6.5
All Vehicles		3153	3.8	3111 N1	3.9	1.736	299.0	LOS F	147.9	1044.8	0.88	1.53	3.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	13.7	LOS B	0.0	0.0	0.44	0.44
P2	East Full Crossing	19	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		21	59.4	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1305	4.6	1258	4.7	0.974	63.1	LOS E	61.4	447.2	0.49	0.81	13.0
6	R2	105	4.8	101	4.8	0.974	50.8	LOS D	31.5	229.6	0.47	0.79	28.4
Approach		1410	4.6	1359 N1	4.7	0.974	62.2	LOS E	61.4	447.2	0.49	0.81	14.4
North: Dudley Street													
7	L2	68	8.8	68	8.8	0.078	19.2	LOS B	2.1	15.6	0.48	0.66	33.0
9	R2	78	5.1	78	5.1	2.032	1911.8	LOS F	38.6	282.3	1.00	2.94	0.9
Approach		146	6.8	146	6.8	2.032	1030.3	LOS F	38.6	282.3	0.76	1.88	1.7
West: Canterbury West													
10	L2	39	2.6	38	2.5	0.984	110.6	LOS F	52.7	376.8	1.00	1.28	17.4
11	T1	1181	2.6	1152	2.6	0.984	101.1	LOS F	57.0	408.0	1.00	1.26	8.1
Approach		1220	2.6	1191 N1	2.6	0.984	101.4	LOS F	57.0	408.0	1.00	1.26	8.5
All Vehicles		2776	3.9	2696 N1	4.0	2.032	132.0	LOS F	61.4	447.2	0.73	1.07	7.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	34.3	LOS D	0.0	0.0	0.70	0.70
All Pedestrians		16	41.8	LOS E			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	122	4.9	122	4.9	0.123	16.5	LOS B	3.8	27.6	0.48	0.67	34.6
3	R2	131	2.3	131	2.3	0.940	98.6	LOS F	11.0	78.4	0.96	1.11	13.6
Approach		253	3.6	253	3.6	0.940	59.0	LOS E	11.0	78.4	0.73	0.90	19.3
East: Canterbury Raod East													
4	L2	56	5.4	54	5.5	0.827	47.6	LOS D	39.8	289.7	0.96	0.90	33.1
5	T1	1269	4.6	1218	4.7	0.827	42.0	LOS C	39.9	290.7	0.96	0.90	25.3
Approach		1325	4.6	1272 N1	4.7	0.827	42.2	LOS C	39.9	290.7	0.96	0.90	25.8
West: Canterbury Road West													
11	T1	1347	2.4	1321	2.4	0.660	26.1	LOS B	46.5	332.3	0.85	0.83	23.9
12	R2	162	2.5	159	2.4	0.660	58.9	LOS E	29.8	212.7	1.00	1.05	26.1
Approach		1509	2.5	1480 N1	2.4	0.660	29.6	LOS C	46.5	332.3	0.87	0.85	24.4
All Vehicles		3087	3.5	3005 N1	3.6	0.940	37.4	LOS C	46.5	332.3	0.90	0.88	24.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	28.9	LOS C	0.0	0.0	0.64	0.64
P2	East Full Crossing	4	58.5	LOS E	0.0	0.0	0.91	0.91
All Pedestrians		5	52.6	LOS E			0.86	0.86

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	314	11.8	314	11.8	0.349	27.6	LOS B	12.2	94.2	0.62	0.81	34.8
2	T1	1657	5.3	1657	5.3	1.059	205.5	LOS F	85.9	628.1	1.00	1.76	17.5
3	R2	249	1.6	249	1.6	1.033	177.1	LOS F	15.1	107.5	1.00	1.34	15.3
Approach		2220	5.8	2220	5.8	1.059	177.2	LOS F	85.9	628.1	0.95	1.58	17.9
East: Canterbury Road E													
4	L2	126	4.8	126	4.8	1.047	144.1	LOS F	65.4	470.2	1.00	1.20	13.7
5	T1	864	2.7	864	2.7	1.047	166.3	LOS F	66.2	473.9	1.00	1.48	6.9
6	R2	220	4.5	220	4.5	0.847	89.4	LOS F	8.8	64.1	1.00	0.94	26.8
Approach		1210	3.2	1210	3.2	1.047	150.0	LOS F	66.2	473.9	1.00	1.35	10.5
North: King Georges Road													
7	L2	155	3.9	155	3.9	1.061	178.2	LOS F	90.8	653.0	1.00	1.42	15.0
8	T1	2128	3.0	2128	3.0	1.061	193.8	LOS F	112.4	806.4	1.00	1.65	17.5
9	R2	275	2.5	275	2.5	1.028	171.9	LOS F	34.0	243.0	1.00	1.32	13.3
Approach		2558	3.0	2558	3.0	1.061	190.5	LOS F	112.4	806.4	1.00	1.60	17.0
West: Canterbury Road W													
10	L2	165	3.6	162	3.6	0.159	20.8	LOS B	5.5	39.7	0.51	0.68	47.0
11	T1	815	0.7	801	0.7	0.857	57.7	LOS E	29.3	206.2	0.93	0.92	29.5
12	R2	393	4.1	386	4.0	1.079	248.5	LOS F	29.5	213.7	1.00	1.54	12.7
Approach		1373	2.0	1349 N1	2.0	1.079	107.9	LOS F	29.5	213.7	0.90	1.07	21.7
All Vehicles		7361	3.7	7337 N1	3.7	1.079	164.6	LOS F	112.4	806.4	0.97	1.46	16.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 394.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	59.0	LOS E	0.0	0.0	0.89	0.89
P2	East Full Crossing	2	39.6	LOS D	0.0	0.0	0.73	0.73
P3	North Full Crossing	7	50.4	LOS E	0.0	0.0	0.82	0.82
P4	West Full Crossing	1	49.6	LOS E	0.0	0.0	0.81	0.81
All Pedestrians		12	50.0	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1210	5.0	1081	5.2	0.578	6.1	LOS A	14.6	105.9	0.38	0.36	49.5
6	R2	150	2.0	134	2.1	0.578	24.1	LOS B	14.6	105.9	0.88	0.84	41.2
Approach		1360	4.6	1215 N1	4.8	0.578	8.1	LOS A	14.6	105.9	0.43	0.41	47.6
North: Haldon Street													
7	L2	66	4.5	66	4.5	0.863	82.5	LOS F	11.0	79.3	1.00	0.97	15.5
9	R2	201	2.5	201	2.5	0.863	83.4	LOS F	11.0	79.3	1.00	0.97	15.4
Approach		267	3.0	267	3.0	0.863	83.2	LOS F	11.0	79.3	1.00	0.97	15.4
West: Canterbury Road w													
10	L2	151	5.3	150	5.3	0.660	25.8	LOS B	32.5	234.5	0.73	0.70	39.7
11	T1	1325	3.1	1312	3.1	0.660	20.1	LOS B	33.0	236.8	0.73	0.68	32.8
Approach		1476	3.3	1462 N1	3.3	0.660	20.7	LOS B	33.0	236.8	0.73	0.68	34.0
All Vehicles		3103	3.9	2944 N1	4.1	0.863	21.2	LOS B	33.0	236.8	0.63	0.60	34.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 225.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	15.6	LOS B	0.0	0.0	0.47	0.47
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	59.3	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021_PM - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	157	3.8	157	3.8	0.301	37.7	LOS C	9.3	67.1	0.75	0.74	25.1
2	T1	379	4.0	379	4.0	1.503	848.2	LOS F	171.0	1251.4	0.98	2.88	3.8
3	R2	156	8.3	156	8.3	1.503	941.2	LOS F	171.0	1251.4	1.00	3.11	1.8
Approach		692	4.9	692	4.9	1.503	685.3	LOS F	171.0	1251.4	0.93	2.45	3.7
East: Canterbury Road E													
4	L2	99	9.1	86	9.0	0.892	33.0	LOS C	35.8	260.4	0.85	0.86	37.7
5	T1	1330	3.8	1156	3.8	0.892	24.7	LOS B	35.8	260.4	0.82	0.81	32.3
6	R2	74	0.0	64	0.0	0.192	65.7	LOS E	4.2	29.4	1.00	0.78	28.0
Approach		1503	4.0	1306 N1	3.9	0.892	27.2	LOS B	35.8	260.4	0.83	0.81	32.4
North: Sharp Street													
7	L2	56	0.0	56	0.0	0.388	41.6	LOS C	5.3	37.1	0.94	0.76	24.3
8	T1	483	2.1	483	2.1	1.753	1251.4	LOS F	182.2	1298.1	0.99	4.33	2.7
Approach		539	1.9	539	1.9	1.753	1125.7	LOS F	182.2	1298.1	0.99	3.96	2.9
West: Canterbury Road w													
10	L2	13	7.7	13	7.7	0.808	70.2	LOS E	38.6	277.9	1.00	0.91	27.6
11	T1	1133	3.1	1126	3.1	0.808	62.5	LOS E	38.6	277.9	1.00	0.91	19.9
12	R2	296	4.1	294	4.1	0.900	62.9	LOS E	21.1	152.7	1.00	0.92	27.9
Approach		1442	3.3	1433 N1	3.3	0.900	62.6	LOS E	38.6	277.9	1.00	0.91	22.1
All Vehicles		4176	3.6	3970 N1	3.8	1.753	303.9	LOS F	182.2	1298.1	0.93	1.56	6.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 225.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	33.6	LOS D	0.0	0.0	0.69	0.69
P2	East Full Crossing	33	61.4	LOS F	0.1	0.1	0.94	0.94
P3	North Full Crossing	25	32.9	LOS D	0.1	0.1	0.69	0.69
P4	West Full Crossing	7	61.3	LOS F	0.0	0.0	0.94	0.94
All Pedestrians		82	46.9	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021_PM_Option 2 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	62	4.8	62	4.8	1.084	254.9	LOS F	68.8	514.4	1.00	1.99	6.4
2	T1	496	8.5	496	8.5	2.402	894.0	LOS F	216.9	1580.3	1.00	2.93	3.7
3	R2	254	2.8	254	2.8	2.402	2582.2	LOS F	216.9	1580.3	1.00	5.40	0.7
Approach		812	6.4	812	6.4	2.402	1373.3	LOS F	216.9	1580.3	1.00	3.63	2.0
East: Canterbury Road East													
4	L2	91	4.4	90	4.4	0.795	24.9	LOS B	28.1	204.2	0.72	0.68	41.1
5	T1	1158	4.6	1151	4.5	0.795	13.1	LOS A	28.1	204.2	0.56	0.52	40.8
6	R2	204	4.4	203	4.4	1.313	634.1	LOS F	54.9	398.4	1.00	2.16	4.9
Approach		1453	4.5	1444 N1	4.5	1.313	101.0	LOS F	54.9	398.4	0.63	0.76	14.9
North: Thorncraft Parade													
7	L2	104	8.7	104	8.7	0.820	46.8	LOS D	34.4	251.8	0.95	0.91	23.3
8	T1	516	4.7	516	4.7	3.627	600.4	LOS F	205.5	1494.1	0.96	1.40	5.4
9	R2	246	4.5	246	4.5	3.627	4762.7	LOS F	205.5	1494.1	1.00	5.04	0.4
Approach		866	5.1	866	5.1	3.627	1716.3	LOS F	205.5	1494.1	0.97	2.37	1.6
West: Canterbury Road West													
10	L2	155	2.6	149	2.4	0.902	76.9	LOS F	47.8	341.8	1.00	0.96	25.6
11	T1	1203	2.7	1154	2.5	0.902	68.4	LOS E	47.8	341.8	1.00	0.97	17.8
12	R2	88	0.0	85	0.0	0.797	85.5	LOS F	6.3	43.8	1.00	0.86	24.2
Approach		1446	2.5	1388 N1	2.4	0.902	70.4	LOS E	47.8	341.8	1.00	0.96	19.5
All Vehicles		4577	4.3	4510 N1	4.4	3.627	630.8	LOS F	216.9	1580.3	0.88	1.65	3.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 225.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	30.2	LOS D	0.0	0.0	0.66	0.66
P2	East Full Crossing	32	33.6	LOS D	0.1	0.1	0.69	0.69
P3	North Full Crossing	8	32.9	LOS D	0.0	0.0	0.69	0.69
P4	West Full Crossing	32	33.6	LOS D	0.1	0.1	0.69	0.69
All Pedestrians		84	33.1	LOS D			0.69	0.69

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021_PM_Option 2 - SCATS (Double Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	121	4.1	121	4.1	1.183	378.3	LOS F	52.9	383.7	1.00	1.89	4.0
2	T1	467	4.1	467	4.1	1.183	396.3	LOS F	68.2	493.8	1.00	2.37	7.5
3	R2	480	1.0	480	1.0	1.959	1781.6	LOS F	228.0	1609.9	1.00	3.96	1.0
Approach		1068	2.7	1068	2.7	1.959	1016.8	LOS F	228.0	1609.9	1.00	3.03	2.4
East: Canterbury Road E													
4	L2	208	4.3	208	4.3	0.893	57.7	LOS E	42.5	306.1	0.93	1.02	30.4
5	T1	1159	2.8	1159	2.8	0.893	46.2	LOS D	50.6	362.8	0.95	0.98	24.0
6	R2	1	0.0	1	0.0	0.013	76.7	LOS F	0.1	0.5	0.99	0.59	26.3
Approach		1368	3.1	1368	3.1	0.893	48.0	LOS D	50.6	362.8	0.95	0.98	25.4
North: Beamish Street													
7	L2	55	12.7	55	12.7	1.945	1738.9	LOS F	95.0	707.4	1.00	3.00	1.0
8	T1	405	5.7	405	5.7	1.945	1744.1	LOS F	116.3	853.5	1.00	3.76	2.0
9	R2	95	14.7	95	14.7	1.497	960.8	LOS F	33.2	261.7	1.00	2.66	1.8
Approach		555	7.9	555	7.9	1.945	1609.5	LOS F	116.3	853.5	1.00	3.49	1.9
West: Canterbury Road w													
10	L2	93	11.8	81	11.6	0.541	32.4	LOS C	29.9	214.9	0.85	0.78	37.8
11	T1	1061	1.5	932	1.5	0.541	28.7	LOS C	29.9	214.9	0.87	0.78	29.8
12	R2	225	1.8	198	1.7	0.915	89.4	LOS F	15.0	106.8	1.00	0.93	22.7
Approach		1379	2.2	1211 N1	2.2	0.915	38.8	LOS C	29.9	214.9	0.89	0.81	28.1
All Vehicles		4370	3.3	4201 N1	3.5	1.959	497.9	LOS F	228.0	1609.9	0.95	1.78	4.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 225.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	25.2	LOS C	0.0	0.0	0.60	0.60
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	19.0	LOS B	0.0	0.0	0.52	0.52
P4	West Full Crossing	10	57.6	LOS E	0.0	0.0	0.91	0.91
All Pedestrians		40	41.5	LOS E			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021_PM _Option 2 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1842	4.6	1842	4.6	0.577	3.5	LOS A	18.7	136.2	0.33	0.31	53.0
6	R2	478	4.6	478	4.6	0.677	38.4	LOS C	20.0	145.5	0.89	0.98	33.4
Approach		2320	4.6	2320	4.6	0.677	10.7	LOS A	20.0	145.5	0.45	0.45	43.8
North: Wonga Street													
7	L2	239	8.4	239	8.4	0.395	35.3	LOS C	11.4	85.2	0.75	0.78	25.7
9	R2	110	4.5	110	4.5	0.951	101.0	LOS F	9.3	67.8	1.00	1.13	13.4
Approach		349	7.2	349	7.2	0.951	56.0	LOS D	11.4	85.2	0.83	0.89	19.9
West: Canterbury Road West													
10	L2	66	3.0	51	3.2	0.803	37.4	LOS C	32.5	232.8	0.85	0.79	36.5
11	T1	1426	2.7	1100	2.8	0.803	31.4	LOS C	32.5	232.8	0.84	0.78	29.6
Approach		1492	2.7	1151 N1	2.8	0.803	31.6	LOS C	32.5	232.8	0.84	0.78	30.1
All Vehicles		4161	4.1	3820 N1	4.5	0.951	21.2	LOS B	32.5	232.8	0.60	0.59	35.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 225.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	24.0	LOS C	0.0	0.0	0.59	0.59
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	52.7	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021_PM_Option 2 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	16	0.0	16	0.0	0.849	27.8	LOS B	52.0	389.9	0.86	0.81	43.8
5	T1	1536	8.5	1536	8.5	0.849	31.0	LOS C	52.0	389.9	0.91	0.86	30.1
6	R2	22	9.1	22	9.1	0.849	53.1	LOS D	39.6	297.8	0.98	0.94	33.1
Approach		1574	8.4	1574	8.4	0.849	31.3	LOS C	52.0	389.9	0.91	0.86	30.3
NorthEast: Jeffrey Street													
24b	L3	7	0.0	7	0.0	0.901	87.7	LOS F	14.7	109.4	1.00	1.04	24.8
24	L2	11	0.0	11	0.0	0.901	86.8	LOS F	14.7	109.4	1.00	1.04	24.7
26a	R1	354	7.9	354	7.9	0.901	85.6	LOS F	14.7	109.4	1.00	1.04	16.0
26b	R3	1	0.0	1	0.0	0.901	87.3	LOS F	14.6	109.3	1.00	1.04	24.6
Approach		373	7.5	373	7.5	0.901	85.7	LOS F	14.7	109.4	1.00	1.04	16.5
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.515	74.2	LOS F	5.5	39.7	1.00	0.78	27.0
7	L2	41	0.0	41	0.0	0.515	73.3	LOS F	5.5	39.7	1.00	0.78	26.9
7a	L1	1	0.0	1	0.0	0.515	71.9	LOS F	5.5	39.7	1.00	0.78	27.2
9	R2	108	8.3	108	8.3	0.515	74.7	LOS F	5.5	39.7	1.00	0.77	17.6
Approach		151	6.0	151	6.0	0.515	74.3	LOS F	5.5	39.7	1.00	0.77	20.7
West: Canterbury Road w													
10	L2	18	5.6	15	6.3	0.896	54.4	LOS D	20.6	155.0	0.99	1.00	24.7
10a	L1	319	8.2	270	9.2	0.896	53.2	LOS D	20.6	155.0	0.99	1.00	24.9
11	T1	1410	8.0	1191	9.1	0.896	47.6	LOS D	20.6	155.0	0.99	1.00	26.0
Approach		1747	8.0	1476 N1	9.1	0.896	48.7	LOS D	20.6	155.0	0.99	1.00	25.8
All Vehicles		3845	8.1	3574 N1	8.7	0.901	46.0	LOS D	52.0	389.9	0.96	0.93	25.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 225.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	10.1	LOS B	0.1	0.1	0.38	0.38
P2	East Full Crossing	20	63.2	LOS F	0.1	0.1	0.95	0.95
P6	NorthEast Full Crossing	68	12.5	LOS B	0.1	0.1	0.42	0.42
P3	North Full Crossing	108	24.1	LOS C	0.3	0.3	0.59	0.59
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	30.4	LOS D			0.62	0.62

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.

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Option 2 - 2036

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.324	5.8	LOS A	1.0	7.6	0.03	0.03	58.1
5	T1	1217	8.5	1037	9.5	0.324	0.3	LOS A	1.0	7.6	0.03	0.03	59.7
6	R2	97	8.2	83	9.2	0.724	21.4	LOS B	3.0	22.6	0.49	0.74	43.3
Approach		1315	8.5	1121 N1	9.5	0.724	1.9	LOS A	3.0	22.6	0.07	0.08	58.1
North: Punchbowl Road													
7	L2	28	7.1	28	7.1	3.796	5071.4	LOS F	184.5	1303.9	1.00	4.23	0.4
8	T1	11	9.1	11	9.1	3.796	5065.7	LOS F	184.5	1303.9	1.00	4.23	0.7
9	R2	505	8.5	505	8.5	3.796	5071.4	LOS F	184.5	1303.9	1.00	4.32	0.7
Approach		544	8.5	544	8.5	3.796	5071.3	LOS F	184.5	1461.8	1.00	4.31	0.7
West: Canterbury Road West													
10	L2	147	8.2	147	8.2	0.084	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1422	8.0	1422	8.0	0.904	31.5	LOS C	44.5	332.8	0.61	0.71	29.7
Approach		1569	8.0	1569	8.0	0.904	29.1	LOS C	44.5	332.8	0.55	0.69	32.3
All Vehicles		3428	8.3	3234 N1	8.8	3.796	867.9	LOS F	184.5	1461.8	0.46	1.09	3.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	145	11.7	145	11.7	1.016	162.7	LOS F	35.2	263.5	1.00	1.34	9.2
3	R2	354	4.2	354	4.2	1.016	166.4	LOS F	35.2	263.5	1.00	1.36	9.1
Approach		499	6.4	499	6.4	1.016	165.3	LOS F	35.2	263.5	1.00	1.35	9.1
East: Canterbury Road E													
4	L2	195	3.1	160	3.4	0.902	65.9	LOS E	22.2	163.2	0.97	1.00	20.9
5	T1	1132	5.8	930	6.5	0.902	63.9	LOS E	22.2	163.2	0.99	1.03	5.8
Approach		1327	5.4	1090 N1	6.1	0.902	64.2	LOS E	22.2	163.2	0.99	1.02	8.9
West: Canterbury Road W													
11	T1	1614	7.1	1614	7.1	1.331	645.2	LOS F	109.9	816.0	0.98	3.60	2.7
12	R2	148	12.2	148	12.2	0.258	42.3	LOS C	7.4	57.1	0.76	0.84	33.1
Approach		1762	7.5	1762	7.5	1.331	594.5	LOS F	109.9	816.0	0.96	3.37	3.2
All Vehicles		3588	6.6	3351 N1	7.0	1.331	358.1	LOS F	109.9	816.0	0.98	2.30	4.0

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	37.9	LOS D	0.0	0.0	0.74	0.74
P4	West Full Crossing	15	50.6	LOS E	0.1	0.1	0.85	0.85
All Pedestrians		18	48.5	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1215	8.6	1057	9.2	0.864	30.4	LOS C	29.9	223.1	0.68	0.73	17.6
6	R2	137	2.2	119	2.4	0.864	68.9	LOS E	29.9	223.1	1.00	1.11	22.5
Approach		1352	7.9	1176 N1	8.5	0.864	34.2	LOS C	29.9	223.1	0.71	0.77	18.7
North: Rosmore Avenue													
7	L2	132	3.0	132	3.0	0.139	22.8	LOS B	4.5	32.6	0.55	0.69	31.0
9	R2	150	2.7	150	2.7	3.841	5153.3	LOS F	102.6	734.3	1.00	3.88	0.4
Approach		282	2.8	282	2.8	3.841	2751.8	LOS F	102.6	734.3	0.79	2.39	0.7
West: Canterbury West													
10	L2	207	1.4	185	1.4	0.934	71.1	LOS F	22.4	163.2	1.00	1.07	20.0
11	T1	1326	6.4	1185	6.4	0.934	66.3	LOS E	22.4	163.2	1.00	1.09	5.5
Approach		1533	5.7	1370 N1	5.7	0.934	66.9	LOS E	22.4	163.2	1.00	1.09	8.3
All Vehicles		3167	6.4	2828 N1	7.2	3.841	321.0	LOS F	102.6	734.3	0.86	1.08	2.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	30.2	LOS D	0.0	0.0	0.66	0.66
All Pedestrians		7	59.3	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	380	3.4	380	3.4	0.487	17.8	LOS B	12.3	88.6	0.52	0.71	33.8
3	R2	167	5.4	167	5.4	0.929	91.6	LOS F	13.6	99.6	0.87	1.08	14.4
Approach		547	4.0	547	4.0	0.929	40.4	LOS C	13.6	99.6	0.63	0.82	24.0
East: Canterbury Road E													
4	L2	98	8.2	80	8.9	0.910	83.0	LOS F	35.3	262.8	1.00	0.98	21.7
5	T1	1007	6.4	822	6.9	0.910	76.6	LOS F	35.3	262.8	1.00	0.99	10.3
Approach		1105	6.5	902 N1	7.1	0.910	77.1	LOS F	35.3	262.8	1.00	0.99	11.6
West: Canterbury Road w													
11	T1	1048	8.6	972	8.6	0.821	7.8	LOS A	23.6	177.3	0.45	0.43	36.9
12	R2	430	3.0	399	3.0	0.821	25.9	LOS B	20.7	149.9	0.78	0.88	35.6
Approach		1478	7.0	1371 N1	7.0	0.821	13.1	LOS A	23.6	177.3	0.54	0.56	36.1
All Vehicles		3130	6.3	2821 N1	7.0	0.929	38.9	LOS C	35.3	262.8	0.71	0.75	21.3

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	43.2	LOS E	0.0	0.0	0.79	0.79
P2	East Full Crossing	19	40.9	LOS E	0.1	0.1	0.76	0.76
All Pedestrians		21	41.1	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1091	8.5	882	9.3	0.375	4.8	LOS A	17.7	133.5	0.49	0.46	46.5
6	R2	83	8.4	67	9.2	0.375	10.1	LOS A	6.1	45.8	0.48	0.48	47.6
Approach		1174	8.5	950 N1	9.3	0.375	5.1	LOS A	17.7	133.5	0.49	0.46	46.7
North: Dudley Street													
7	L2	98	8.2	98	8.2	0.160	36.3	LOS C	4.6	34.5	0.72	0.71	25.3
9	R2	57	8.8	57	8.8	0.591	78.8	LOS F	4.1	30.6	1.00	0.78	16.0
Approach		155	8.4	155	8.4	0.591	51.9	LOS D	4.6	34.5	0.82	0.73	20.8
West: Canterbury West													
10	L2	9	11.1	9	11.1	0.589	14.5	LOS B	12.9	96.6	0.37	0.33	44.5
11	T1	1185	8.0	1130	8.0	0.589	13.0	LOS A	19.0	142.1	0.45	0.41	32.9
Approach		1194	8.0	1138 N1	8.0	0.589	13.0	LOS A	19.0	142.1	0.45	0.41	33.1
All Vehicles		2523	8.3	2243 N1	9.3	0.591	12.3	LOS A	19.0	142.1	0.49	0.45	35.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	19.6	LOS B	0.0	0.0	0.53	0.53
All Pedestrians		16	30.7	LOS D			0.64	0.64

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	123	8.1	123	8.1	0.111	13.8	LOS A	3.2	24.0	0.41	0.64	36.5
3	R2	65	7.7	65	7.7	1.370	739.2	LOS F	19.6	145.9	1.00	2.15	2.3
Approach		188	8.0	188	8.0	1.370	264.6	LOS F	19.6	145.9	0.61	1.16	6.0
East: Canterbury Raod East													
4	L2	136	8.8	107	9.8	0.897	68.1	LOS E	39.7	300.3	1.00	1.03	27.8
5	T1	1199	8.5	946	9.4	0.897	62.4	LOS E	40.1	303.1	1.00	1.04	19.7
Approach		1335	8.5	1054 N1	9.5	0.897	63.0	LOS E	40.1	303.1	1.00	1.03	20.8
West: Canterbury Road West													
11	T1	1623	5.3	1578	5.3	0.853	7.7	LOS A	26.9	197.8	0.45	0.47	41.1
12	R2	157	8.3	153	8.3	0.853	24.1	LOS B	26.9	197.8	0.65	0.75	38.5
Approach		1780	5.6	1730 N1	5.6	0.853	9.1	LOS A	26.9	197.8	0.47	0.50	40.5
All Vehicles		3303	6.9	2972 N1	7.7	1.370	44.4	LOS D	40.1	303.1	0.67	0.73	21.6

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	37.2	LOS D	0.0	0.0	0.73	0.73
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	58.7	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	182	21.4	182	21.4	0.193	20.2	LOS B	6.1	50.3	0.49	0.67	39.3
2	T1	3149	7.6	3149	7.6	1.347	687.5	LOS F	329.2	2453.4	1.00	3.50	6.6
3	R2	238	3.4	238	3.4	1.000	139.6	LOS F	12.5	90.1	1.00	1.24	19.5
Approach		3569	8.0	3569	8.0	1.347	617.0	LOS F	329.2	2453.4	0.97	3.21	7.0
East: Canterbury Road E													
4	L2	117	10.3	117	10.3	1.321	613.1	LOS F	161.1	1182.0	1.00	1.90	5.5
5	T1	1023	4.5	1023	4.5	1.321	629.2	LOS F	161.1	1182.0	1.00	2.68	2.7
6	R2	259	9.7	259	9.7	1.136	337.3	LOS F	23.8	180.1	1.00	1.67	11.1
Approach		1399	5.9	1399	5.9	1.321	573.8	LOS F	161.1	1182.0	1.00	2.43	4.0
North: King Georges Road													
7	L2	424	7.5	424	7.5	0.989	109.3	LOS F	96.4	723.2	1.00	1.29	25.5
8	T1	2216	9.1	2216	9.1	0.989	101.3	LOS F	96.4	723.2	1.00	1.28	27.5
9	R2	255	5.1	255	5.1	1.334	677.7	LOS F	73.1	534.4	1.00	2.40	4.0
Approach		2895	8.5	2895	8.5	1.334	153.3	LOS F	96.4	723.2	1.00	1.38	20.7
West: Canterbury Road W													
10	L2	133	10.5	131	10.5	0.183	34.0	LOS C	6.0	46.1	0.67	0.70	41.6
11	T1	806	7.4	796	7.5	1.197	434.1	LOS F	95.4	710.7	1.00	2.49	7.3
12	R2	156	21.8	154	21.8	1.218	477.6	LOS F	17.8	147.5	1.00	1.75	7.3
Approach		1095	9.9	1081 N1	9.9	1.218	391.7	LOS F	95.4	710.7	0.96	2.17	8.3
All Vehicles		8958	8.1	8944 N1	8.1	1.347	432.9	LOS F	329.2	2453.4	0.98	2.37	8.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1026.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	57.2	LOS E	0.0	0.0	0.87	0.87
P2	East Full Crossing	2	28.8	LOS C	0.0	0.0	0.62	0.62
P3	North Full Crossing	1	59.9	LOS E	0.0	0.0	0.89	0.89
P4	West Full Crossing	1	33.3	LOS D	0.0	0.0	0.67	0.67
All Pedestrians		5	41.6	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1156	4.8	971	4.7	0.817	17.7	LOS B	25.2	183.9	0.69	0.69	37.9
6	R2	103	11.7	86	11.6	0.817	44.6	LOS D	21.7	159.8	0.88	0.95	33.8
Approach		1259	5.3	1057 N1	5.3	0.817	19.9	LOS B	25.2	183.9	0.70	0.72	37.2
North: Haldon Street													
7	L2	66	4.5	66	4.5	2.216	2239.6	LOS F	72.0	532.8	1.00	3.66	0.8
9	R2	139	8.6	139	8.6	2.216	2239.8	LOS F	72.0	532.8	1.00	3.29	0.8
Approach		205	7.3	205	7.3	2.216	2239.7	LOS F	72.0	532.8	1.00	3.41	0.8
West: Canterbury Road w													
10	L2	102	7.8	91	7.6	0.904	57.7	LOS E	54.2	398.4	1.00	1.02	30.3
11	T1	1554	5.9	1386	5.7	0.904	51.9	LOS D	54.5	400.1	1.00	1.02	22.3
Approach		1656	6.0	1477 N1	5.8	0.904	52.3	LOS D	54.5	400.1	1.00	1.02	23.0
All Vehicles		3120	5.8	2739 N1	6.6	2.216	203.5	LOS F	72.0	532.8	0.88	1.08	8.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 174.4 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	27.0	LOS C	0.0	0.0	0.62	0.62
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	60.5	LOS F			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036_AM - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St-SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	85	7.1	85	7.1	0.280	36.7	LOS C	8.7	64.5	0.74	0.68	26.1
2	T1	414	6.3	414	6.3	1.402	579.1	LOS F	156.4	1179.6	0.94	2.25	5.3
3	R2	201	13.4	201	13.4	1.402	759.8	LOS F	156.4	1179.6	1.00	2.75	2.2
Approach		700	8.4	700	8.4	1.402	565.1	LOS F	156.4	1179.6	0.93	2.20	4.4
East: Canterbury Road E													
4	L2	92	16.3	73	16.0	0.886	72.3	LOS F	34.8	260.7	1.00	1.01	26.5
5	T1	1109	7.0	883	6.9	0.886	65.5	LOS E	35.5	263.2	1.00	1.00	18.4
6	R2	125	0.0	100	0.0	0.468	33.6	LOS C	3.8	26.5	0.97	0.80	37.5
Approach		1326	7.0	1056 N1	6.9	0.886	63.0	LOS E	35.5	263.2	1.00	0.98	20.9
North: Sharp Street													
7	L2	79	5.1	79	5.1	0.346	36.4	LOS C	4.9	35.6	0.91	0.76	25.8
8	T1	454	4.6	454	4.6	1.561	986.7	LOS F	154.8	1126.3	0.99	4.07	3.4
Approach		533	4.7	533	4.7	1.561	845.8	LOS F	154.8	1126.3	0.98	3.58	3.7
West: Canterbury Road w													
10	L2	7	0.0	6	0.0	0.818	21.6	LOS B	28.7	210.0	0.68	0.63	43.7
11	T1	1443	5.5	1323	5.4	0.818	17.6	LOS B	31.1	228.0	0.71	0.65	38.3
12	R2	341	9.7	313	9.6	0.756	47.5	LOS D	15.9	120.4	0.97	0.91	31.7
Approach		1791	6.3	1642 N1	6.2	0.818	23.3	LOS B	31.1	228.0	0.76	0.70	35.9
All Vehicles		4350	6.6	3931 N1	7.4	1.561	242.0	LOS F	156.4	1179.6	0.88	1.43	8.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 174.4 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	41.7	LOS E	0.1	0.1	0.77	0.77
P2	East Full Crossing	33	58.6	LOS E	0.1	0.1	0.92	0.92
P3	North Full Crossing	25	40.9	LOS E	0.1	0.1	0.77	0.77
P4	West Full Crossing	7	58.5	LOS E	0.0	0.0	0.91	0.91
All Pedestrians		82	49.7	LOS E			0.84	0.84

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\Option 2 - Hill Thalis + TM\Option 2 - 2036_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036_AM_Option 2 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	143	8.4	143	8.4	2.787	3276.8	LOS F	469.1	3523.4	1.00	7.04	0.6
2	T1	1618	8.5	1618	8.5	6.173	6954.9	LOS F	847.4	6361.3	1.00	7.43	0.5
3	R2	139	7.9	139	7.9	6.173	9362.7	LOS F	847.4	6361.3	1.00	7.68	0.2
Approach		1900	8.5	1900	8.5	6.173	6854.2	LOS F	847.4	6361.3	1.00	7.41	0.5
East: Canterbury Road East													
4	L2	38	7.9	35	7.7	0.873	61.0	LOS E	40.6	304.3	1.00	0.97	29.0
5	T1	1066	8.5	972	8.4	0.873	58.9	LOS E	40.6	304.3	1.00	0.97	19.6
6	R2	290	8.6	264	8.5	0.817	56.1	LOS D	17.2	129.4	0.97	0.87	28.9
Approach		1394	8.5	1271 N1	8.4	0.873	58.4	LOS E	40.6	304.3	0.99	0.95	22.4
North: Thorncraft Parade													
7	L2	262	8.4	262	8.4	0.885	63.0	LOS E	25.5	191.3	1.00	0.99	18.8
8	T1	369	8.4	369	8.4	3.915	3785.2	LOS F	258.4	1940.2	1.00	4.19	0.9
9	R2	115	8.7	115	8.7	3.915	5284.7	LOS F	258.4	1940.2	1.00	5.48	0.3
Approach		746	8.4	746	8.4	3.915	2709.1	LOS F	258.4	1940.2	1.00	3.27	1.0
West: Canterbury Road West													
10	L2	69	0.0	62	0.0	0.931	32.6	LOS C	48.4	359.8	0.87	0.89	38.0
11	T1	1580	8.0	1429	7.9	0.931	29.0	LOS C	48.4	359.8	0.85	0.87	30.0
12	R2	124	0.0	112	0.0	0.265	37.0	LOS C	4.6	32.0	1.00	0.79	36.3
Approach		1773	7.2	1604 N1	7.0	0.931	29.7	LOS C	48.4	359.8	0.86	0.86	31.1
All Vehicles		5813	8.1	5521 N1	8.5	6.173	2747.0	LOS F	847.4	6361.3	0.96	3.46	0.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 174.4 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	35.7	LOS D	0.0	0.0	0.71	0.71
P2	East Full Crossing	32	50.6	LOS E	0.1	0.1	0.85	0.85
P3	North Full Crossing	8	27.7	LOS C	0.0	0.0	0.63	0.63
P4	West Full Crossing	32	50.6	LOS E	0.1	0.1	0.85	0.85
All Pedestrians		84	46.3	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2036_AM_Option 2 - SCATS (Double Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	127	4.1	127	4.1	1.345	379.8	LOS F	95.6	696.0	1.00	2.21	4.3
2	T1	812	4.9	812	4.9	1.345	376.0	LOS F	95.6	696.0	1.00	2.26	7.9
3	R2	456	4.2	456	4.2	2.125	1046.6	LOS F	125.9	912.7	1.00	2.40	1.6
Approach		1395	4.6	1395	4.6	2.125	595.5	LOS F	125.9	912.7	1.00	2.30	4.3
East: Canterbury Road E													
4	L2	247	3.8	232	3.8	0.899	68.0	LOS E	37.2	271.5	1.00	1.06	27.8
5	T1	847	5.8	793	5.9	0.899	61.3	LOS E	37.2	271.5	1.00	1.02	20.0
6	R2	1	0.0	1	0.0	0.013	76.6	LOS F	0.1	0.5	0.98	0.59	26.3
Approach		1096	5.4	1026 N1	5.4	0.899	62.9	LOS E	37.2	271.5	1.00	1.03	22.3
North: Beamish Street													
7	L2	59	17.9	59	17.9	2.117	1043.5	LOS F	88.7	667.0	1.00	2.30	1.6
8	T1	559	6.8	559	6.8	2.117	1045.6	LOS F	88.7	667.0	1.00	2.53	3.1
9	R2	93	28.4	93	28.4	1.523	535.6	LOS F	20.2	175.7	1.00	1.82	3.1
Approach		711	10.5	711	10.5	2.117	978.9	LOS F	88.7	667.0	1.00	2.42	3.0
West: Canterbury Road w													
10	L2	124	12.7	108	12.6	0.697	23.2	LOS B	25.8	189.8	0.61	0.59	41.9
11	T1	1444	5.0	1258	5.0	0.697	11.4	LOS A	25.8	189.8	0.45	0.43	42.6
12	R2	294	5.7	256	5.7	0.912	75.6	LOS F	18.8	138.2	0.89	0.96	24.9
Approach		1862	5.7	1622 N1	5.6	0.912	22.3	LOS B	25.8	189.8	0.53	0.53	35.9
All Vehicles		5063	6.0	4753 N1	6.4	2.125	342.2	LOS F	125.9	912.7	0.84	1.44	6.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 174.4 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	43.2	LOS E	0.0	0.0	0.79	0.79
P2	East Full Crossing	11	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	11	21.2	LOS C	0.0	0.0	0.55	0.55

P4	West Full Crossing	11	53.2	LOS E	0.0	0.0	0.87	0.87
All Pedestrians		42	45.4	LOS E			0.79	0.79

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\Option 2 - Hill Thalis + TM\Option 2 - 2036_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1394	8.5	1303	8.6	0.408	2.1	LOS A	9.1	68.2	0.23	0.21	55.6
6	R2	449	8.5	420	8.5	1.012	126.7	LOS F	49.2	369.4	1.00	1.28	15.1
Approach		1843	8.5	1723 N1	8.6	1.012	32.5	LOS C	49.2	369.4	0.42	0.47	26.6
North: Wonga Street													
7	L2	368	8.4	368	8.4	1.315	643.2	LOS F	102.5	769.6	1.00	2.46	2.7
9	R2	112	8.9	112	8.9	1.497	958.8	LOS F	39.0	293.6	1.00	2.74	1.8
Approach		480	8.5	480	8.5	1.497	716.8	LOS F	102.5	769.6	1.00	2.53	2.4
West: Canterbury Road West													
10	L2	62	8.1	47	8.7	0.902	31.9	LOS C	42.1	316.7	0.74	0.78	38.7
11	T1	1820	8.0	1389	8.6	0.902	26.2	LOS B	42.1	316.7	0.72	0.77	32.3
Approach		1882	8.0	1436 N1	8.7	0.902	26.4	LOS B	42.1	316.7	0.72	0.77	32.7
All Vehicles		4205	8.3	3639 N1	9.6	1.497	120.3	LOS F	102.5	769.6	0.61	0.86	12.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 174.4 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	12.0	LOS B	0.0	0.0	0.41	0.41
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	49.3	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036_AM_Option 2 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.742	21.8	LOS B	39.6	297.0	0.71	0.66	47.2
5	T1	1115	8.5	1115	8.5	0.742	23.9	LOS B	39.6	297.0	0.76	0.70	33.9
6	R2	37	8.1	37	8.1	0.742	65.4	LOS E	16.8	125.8	1.00	0.88	29.6
Approach		1165	8.4	1165	8.4	0.742	25.2	LOS B	39.6	297.0	0.77	0.71	33.8
NorthEast: Jeffrey Street													
24b	L3	27	7.4	27	7.4	1.265	517.5	LOS F	39.2	292.2	1.00	1.55	5.6
24	L2	5	0.0	5	0.0	1.265	516.4	LOS F	39.2	292.2	1.00	1.55	5.6
26a	R1	295	7.8	295	7.8	1.265	535.8	LOS F	40.7	304.0	1.00	1.93	3.1
26b	R3	1	0.0	1	0.0	1.265	554.1	LOS F	40.7	304.0	1.00	2.24	5.8
Approach		328	7.6	328	7.6	1.265	534.0	LOS F	40.7	304.0	1.00	1.89	3.3
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.717	77.3	LOS F	8.1	58.4	1.00	0.84	26.4
7	L2	67	0.0	67	0.0	0.717	76.4	LOS F	8.1	58.4	1.00	0.84	26.3
7a	L1	1	0.0	1	0.0	0.717	75.0	LOS F	8.1	58.4	1.00	0.84	26.6
9	R2	144	7.6	144	7.6	0.717	77.8	LOS F	8.1	58.4	1.00	0.84	17.1
Approach		213	5.2	213	5.2	0.717	77.3	LOS F	8.1	58.4	1.00	0.84	20.6
West: Canterbury Road w													
10	L2	22	9.1	17	9.7	0.906	51.7	LOS D	20.6	155.0	0.99	1.00	25.7
10a	L1	187	8.0	142	8.6	0.906	50.5	LOS D	20.6	155.0	0.99	1.00	26.0
11	T1	1962	8.1	1493	8.6	0.906	45.5	LOS D	20.6	155.0	0.99	1.00	26.8
Approach		2171	8.1	1652 N1	8.6	0.906	46.0	LOS D	20.6	155.0	0.99	1.00	26.7
All Vehicles		3877	8.0	3358 N1	9.2	1.265	88.5	LOS F	40.7	304.0	0.91	0.98	16.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 174.4 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	7.9	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	8.1	LOS A	0.1	0.1	0.48	0.48
P3	North Full Crossing	108	20.7	LOS C	0.2	0.2	0.55	0.55
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	28.0	LOS C			0.61	0.61

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.432	7.2	LOS A	3.3	24.4	0.09	0.08	56.9
5	T1	1458	4.6	1196	5.6	0.432	1.9	LOS A	4.3	31.8	0.10	0.10	58.2
6	R2	102	4.9	84	5.9	0.554	27.7	LOS B	4.1	29.9	0.71	0.78	40.4
Approach		1561	4.6	1281 N1	5.6	0.554	3.6	LOS A	4.3	31.8	0.14	0.14	56.6
North: Punchbowl Road													
7	L2	39	7.7	39	7.7	0.890	79.4	LOS F	22.5	158.8	1.00	0.97	16.9
8	T1	1	0.0	1	0.0	0.890	73.7	LOS F	22.5	158.8	1.00	0.97	26.1
9	R2	531	4.5	531	4.5	0.890	79.7	LOS F	22.5	158.8	1.00	0.97	25.7
Approach		571	4.7	571	4.7	0.890	79.7	LOS F	22.5	161.4	1.00	0.97	25.2
West: Canterbury Road West													
10	L2	180	2.8	180	2.8	0.099	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1441	2.4	1441	2.4	0.526	8.2	LOS A	21.4	152.6	0.46	0.42	47.4
Approach		1621	2.5	1621	2.5	0.526	7.9	LOS A	21.4	152.6	0.41	0.43	48.7
All Vehicles		3753	3.7	3473 N1	4.0	0.890	18.1	LOS B	22.5	161.4	0.41	0.41	43.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	58.5	LOS E	0.0	0.0	0.91	0.91
All Pedestrians		5	58.5	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	208	1.4	208	1.4	1.019	164.1	LOS F	43.6	310.6	1.00	1.34	9.2
3	R2	394	2.8	394	2.8	1.019	168.8	LOS F	43.6	310.6	1.00	1.36	9.0
Approach		602	2.3	602	2.3	1.019	167.2	LOS F	43.6	310.6	1.00	1.35	9.0
East: Canterbury Road E													
4	L2	239	2.1	191	2.4	0.901	54.9	LOS D	23.1	163.2	0.97	0.95	23.4
5	T1	1355	0.4	1081	0.4	0.901	36.7	LOS C	23.2	163.2	0.92	0.89	9.4
Approach		1594	0.6	1272 N1	0.7	0.901	39.4	LOS C	23.2	163.2	0.92	0.90	13.2
West: Canterbury Road W													
11	T1	1362	2.6	1362	2.6	1.181	385.3	LOS F	114.1	816.0	1.00	2.68	4.4
12	R2	158	1.9	158	1.9	0.337	50.9	LOS D	8.6	61.3	0.83	0.89	30.8
Approach		1520	2.5	1520	2.5	1.181	350.6	LOS F	114.1	816.0	0.98	2.49	5.3
All Vehicles		3716	1.7	3394 N1	1.8	1.181	201.4	LOS F	114.1	816.0	0.96	1.69	6.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	33.6	LOS D	0.0	0.0	0.69	0.69
P4	West Full Crossing	15	45.6	LOS E	0.0	0.0	0.81	0.81
All Pedestrians		18	43.6	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1447	5.9	1276	6.3	1.024	122.4	LOS F	44.5	326.4	1.00	1.48	5.5
6	R2	109	1.8	96	2.0	1.024	105.3	LOS F	44.5	326.4	1.00	1.28	15.6
Approach		1556	5.7	1372 N1	6.0	1.024	121.2	LOS F	44.5	326.4	1.00	1.47	6.3
North: Rosmore Avenue													
7	L2	110	0.0	110	0.0	0.126	25.3	LOS B	4.2	29.6	0.59	0.68	29.7
9	R2	202	0.5	202	0.5	5.094	7406.7	LOS F	148.6	1044.8	1.00	4.14	0.2
Approach		312	0.3	312	0.3	5.094	4804.3	LOS F	148.6	1044.8	0.85	2.92	0.4
West: Canterbury West													
10	L2	155	1.3	152	1.3	1.048	185.2	LOS F	22.8	163.2	1.00	1.62	9.8
11	T1	1373	2.8	1343	2.8	1.048	180.9	LOS F	22.8	163.2	1.00	1.68	2.1
Approach		1528	2.6	1495 N1	2.6	1.048	181.4	LOS F	22.8	163.2	1.00	1.67	3.0
All Vehicles		3396	3.8	3179 N1	4.1	5.094	609.1	LOS F	148.6	1044.8	0.99	1.71	1.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	29.6	LOS C	0.0	0.0	0.65	0.65
All Pedestrians		7	59.2	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	384	1.0	384	1.0	1.298	618.0	LOS F	105.7	746.7	1.00	2.42	2.8
3	R2	92	4.3	92	4.3	1.958	1777.1	LOS F	44.0	319.2	1.00	3.04	1.0
Approach		476	1.7	476	1.7	1.958	842.0	LOS F	105.7	746.7	1.00	2.54	2.1
East: Canterbury Road E													
4	L2	88	5.7	74	6.3	0.896	34.4	LOS C	28.3	209.6	0.65	0.76	35.3
5	T1	1259	6.4	1064	7.1	0.896	32.0	LOS C	40.3	299.3	0.76	0.83	19.8
Approach		1347	6.4	1139 N1	7.0	0.896	32.1	LOS C	40.3	299.3	0.76	0.82	21.4
West: Canterbury Road w													
11	T1	1173	2.7	1143	2.7	0.874	3.1	LOS A	24.4	173.0	0.21	0.21	48.0
12	R2	407	1.2	397	1.2	0.874	79.6	LOS F	24.4	173.0	1.00	1.10	20.3
Approach		1580	2.3	1539 N1	2.3	0.874	22.8	LOS B	24.4	173.0	0.42	0.44	27.8
All Vehicles		3403	3.8	3154 N1	4.2	1.958	149.8	LOS F	105.7	746.7	0.63	0.89	7.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	17.0	LOS B	0.0	0.0	0.49	0.49
P2	East Full Crossing	19	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		21	59.7	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1348	4.6	1121	5.0	0.624	15.6	LOS B	25.0	182.7	0.37	0.36	31.5
6	R2	109	4.6	91	5.0	0.624	57.5	LOS E	25.0	182.7	1.00	1.01	26.5
Approach		1457	4.6	1212 N1	5.0	0.624	18.7	LOS B	25.0	182.7	0.41	0.41	30.5
North: Dudley Street													
7	L2	84	8.3	84	8.3	0.134	31.0	LOS C	3.5	26.0	0.65	0.71	27.3
9	R2	96	4.2	96	4.2	0.897	89.9	LOS F	7.6	55.3	1.00	1.05	14.6
Approach		180	6.1	180	6.1	0.897	62.4	LOS E	7.6	55.3	0.84	0.89	18.6
West: Canterbury West													
10	L2	45	2.2	45	2.2	0.863	41.4	LOS C	37.3	267.1	0.89	0.87	30.9
11	T1	1384	2.7	1379	2.7	0.863	36.1	LOS C	49.4	353.4	0.91	0.88	18.2
Approach		1429	2.7	1424 N1	2.7	0.863	36.2	LOS C	49.4	353.4	0.91	0.88	18.9
All Vehicles		3066	3.8	2815 N1	4.1	0.897	30.4	LOS C	49.4	353.4	0.69	0.68	22.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	21.7	LOS C	0.0	0.0	0.56	0.56
All Pedestrians		16	32.3	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	169	4.7	169	4.7	0.158	16.2	LOS B	5.1	37.1	0.47	0.66	34.8
3	R2	182	2.7	182	2.7	1.544	1045.2	LOS F	66.4	475.6	1.00	2.95	1.7
Approach		351	3.7	351	3.7	1.544	549.7	LOS F	66.4	475.6	0.74	1.85	3.1
East: Canterbury Raod East													
4	L2	62	4.8	50	5.3	0.892	62.9	LOS E	44.1	321.9	1.00	1.01	29.1
5	T1	1418	4.6	1151	5.0	0.892	57.2	LOS E	44.2	323.0	1.00	1.02	20.9
Approach		1480	4.6	1201 N1	5.0	0.892	57.5	LOS E	44.2	323.0	1.00	1.02	21.4
West: Canterbury Road West													
11	T1	1502	2.4	1502	2.4	0.827	18.9	LOS B	49.6	354.5	0.82	0.80	28.6
12	R2	181	2.8	181	2.8	0.827	40.1	LOS C	33.5	239.7	0.91	0.95	31.6
Approach		1683	2.4	1683	2.4	0.827	21.1	LOS B	49.6	354.5	0.83	0.82	29.3
All Vehicles		3514	3.5	3235 N1	3.8	1.544	92.0	LOS F	66.4	475.6	0.88	1.00	13.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	33.6	LOS D	0.0	0.0	0.69	0.69
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	58.0	LOS E			0.90	0.90

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	386	11.7	386	11.7	0.423	28.5	LOS C	14.9	114.5	0.64	0.85	34.3
2	T1	2045	5.3	2045	5.3	1.308	622.9	LOS F	202.9	1484.8	1.00	3.29	7.2
3	R2	307	1.6	307	1.6	1.274	573.4	LOS F	39.6	281.3	1.00	2.14	6.2
Approach		2738	5.8	2738	5.8	1.308	533.6	LOS F	202.9	1484.8	0.95	2.82	7.4
East: Canterbury Road E													
4	L2	152	4.6	152	4.6	1.331	630.3	LOS F	172.1	1237.1	1.00	1.92	5.3
5	T1	1047	2.7	1047	2.7	1.331	647.0	LOS F	172.1	1237.1	1.00	2.74	2.7
6	R2	266	4.5	266	4.5	1.024	166.1	LOS F	15.6	113.4	1.00	1.30	19.1
Approach		1465	3.2	1465	3.2	1.331	557.9	LOS F	172.1	1237.1	1.00	2.39	4.2
North: King Georges Road													
7	L2	202	4.0	202	4.0	1.355	678.6	LOS F	280.1	2014.0	1.00	2.29	5.9
8	T1	2763	3.0	2763	3.0	1.355	694.6	LOS F	297.5	2135.5	1.00	3.18	6.4
9	R2	357	2.5	357	2.5	1.276	576.4	LOS F	93.1	665.8	1.00	2.23	4.6
Approach		3322	3.0	3322	3.0	1.355	680.9	LOS F	297.5	2135.5	1.00	3.03	6.2
West: Canterbury Road W													
10	L2	214	3.7	206	3.7	0.205	22.1	LOS B	7.3	53.0	0.53	0.68	46.5
11	T1	1052	0.8	1014	0.8	1.085	247.4	LOS F	82.7	582.5	1.00	1.95	11.8
12	R2	506	4.0	488	3.9	1.319	652.6	LOS F	68.5	495.6	1.00	2.37	5.5
Approach		1772	2.0	1708 N1	2.0	1.319	335.9	LOS F	82.7	582.5	0.94	1.92	9.6
All Vehicles		9297	3.7	9233 N1	3.7	1.355	553.9	LOS F	297.5	2135.5	0.97	2.66	6.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 688.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	60.8	LOS F	0.0	0.0	0.90	0.90
P2	East Full Crossing	2	38.9	LOS D	0.0	0.0	0.72	0.72
P3	North Full Crossing	7	51.3	LOS E	0.0	0.0	0.83	0.83
P4	West Full Crossing	1	49.6	LOS E	0.0	0.0	0.81	0.81
All Pedestrians		12	50.6	LOS E			0.82	0.82

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\Option 2 - Hill Thalis + TM\Option 2 - 2036_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1332	5.0	1000	5.7	0.825	7.1	LOS A	18.6	136.4	0.34	0.41	48.1
6	R2	165	1.8	123	2.1	0.825	12.3	LOS A	7.4	54.2	0.23	0.45	48.0
Approach		1497	4.6	1123 N1	5.3	0.825	7.7	LOS A	18.6	136.4	0.33	0.42	48.1
North: Haldon Street													
7	L2	73	4.1	73	4.1	2.869	3410.9	LOS F	111.0	798.4	1.00	4.18	0.5
9	R2	225	2.7	225	2.7	2.869	3409.9	LOS F	111.0	798.4	1.00	3.86	0.5
Approach		298	3.0	298	3.0	2.869	3410.2	LOS F	111.0	798.4	1.00	3.94	0.5
West: Canterbury Road w													
10	L2	166	5.4	138	6.0	0.899	60.4	LOS E	49.0	355.0	1.00	1.01	29.6
11	T1	1450	3.1	1202	3.5	0.899	54.6	LOS D	49.6	357.5	1.00	1.02	21.6
Approach		1616	3.3	1340 N1	3.7	0.899	55.2	LOS D	49.6	357.5	1.00	1.02	22.7
All Vehicles		3411	3.9	2761 N1	4.8	2.869	397.9	LOS F	111.0	798.4	0.73	1.09	4.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	30.9	LOS D	0.0	0.0	0.66	0.66
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	60.8	LOS F			0.93	0.93

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2036_PM_Option 2 - SCATS (single diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	181	2.8	181	2.8	0.885	62.4	LOS E	30.5	216.1	0.93	0.97	9.1
2	T1	402	0.7	402	0.7	0.885	64.4	LOS E	30.5	216.1	0.96	1.01	7.1
3	R2	83	1.2	83	1.2	0.885	80.1	LOS F	18.2	128.5	1.00	1.08	7.3
Approach		666	1.4	666	1.4	0.885	65.8	LOS E	30.5	216.1	0.96	1.01	7.5
East: Canterbury Rd													
4	L2	160	25.0	115	28.6	0.704	41.1	LOS C	25.1	192.0	0.82	0.75	35.8
5	T1	1283	4.6	883	5.5	0.704	35.2	LOS C	26.3	193.1	0.82	0.74	34.7
6	R2	59	0.0	40	0.0	0.337	79.5	LOS F	2.8	19.9	1.00	0.74	23.1
Approach		1502	6.6	1038 N1	7.8	0.704	37.6	LOS C	26.3	193.1	0.83	0.74	34.2
North: Chapel St													
7	L2	37	0.0	37	0.0	0.361	42.9	LOS D	11.3	79.3	0.82	0.71	4.6
8	T1	500	0.6	500	0.6	0.604	43.0	LOS D	19.9	139.7	0.88	0.76	14.2
9	R2	20	0.0	20	0.0	0.604	48.3	LOS D	19.9	139.7	0.91	0.79	4.2
Approach		557	0.5	557	0.5	0.604	43.2	LOS D	19.9	139.7	0.88	0.76	13.4
West: Canterbury Rd													
10	L2	51	0.0	44	0.0	0.740	28.1	LOS B	31.1	224.1	0.71	0.66	18.8
11	T1	1422	3.2	1225	3.5	0.740	21.5	LOS B	31.1	224.1	0.66	0.60	35.3
12	R2	202	3.0	174	3.2	0.706	39.8	LOS C	6.6	47.4	0.99	0.82	29.4
Approach		1675	3.1	1443 N1	3.3	0.740	23.9	LOS B	31.1	224.1	0.70	0.63	33.4
All Vehicles		4400	3.7	3704 N1	4.4	0.885	38.2	LOS C	31.1	224.1	0.81	0.75	25.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	32.9	LOS D	0.0	0.0	0.69	0.69
P2	East Full Crossing	6	43.2	LOS E	0.0	0.0	0.79	0.79
P3	North Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
All Pedestrians		67	33.9	LOS D			0.70	0.70

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036_PM - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	181	3.9	181	3.9	0.348	35.7	LOS C	11.5	83.2	0.74	0.74	25.9
2	T1	437	3.9	437	3.9	1.738	1166.1	LOS F	229.6	1678.2	0.96	3.15	2.8
3	R2	179	7.8	179	7.8	1.738	1364.3	LOS F	229.6	1678.2	1.00	3.56	1.3
Approach		797	4.8	797	4.8	1.738	953.9	LOS F	229.6	1678.2	0.92	2.69	2.7
East: Canterbury Road E													
4	L2	108	8.3	74	8.4	0.904	43.6	LOS D	34.6	251.2	0.93	0.94	33.9
5	T1	1451	3.5	995	3.6	0.904	34.9	LOS C	34.6	251.2	0.92	0.92	27.2
6	R2	91	0.0	62	0.0	0.365	30.0	LOS C	1.9	13.3	0.81	0.74	39.0
Approach		1650	3.6	1132 N1	3.7	0.904	35.2	LOS C	34.6	251.2	0.91	0.91	28.7
North: Sharp Street													
7	L2	71	0.0	71	0.0	0.435	46.3	LOS D	7.1	50.0	0.94	0.79	22.9
8	T1	612	2.0	612	2.0	1.965	1588.6	LOS F	258.2	1837.5	0.99	5.02	2.2
Approach		683	1.8	683	1.8	1.965	1428.3	LOS F	258.2	1837.5	0.99	4.58	2.3
West: Canterbury Road w													
10	L2	15	6.7	13	7.1	0.830	38.9	LOS C	40.8	293.9	0.89	0.82	36.1
11	T1	1316	3.1	1166	3.3	0.830	35.6	LOS C	40.8	293.9	0.89	0.84	27.9
12	R2	343	4.1	304	4.4	0.740	45.2	LOS D	15.1	109.7	1.00	0.91	32.3
Approach		1674	3.3	1484 N1	3.6	0.830	37.6	LOS C	40.8	293.9	0.91	0.85	29.3
All Vehicles		4804	3.5	4096 N1	4.1	1.965	447.1	LOS F	258.2	1837.5	0.93	1.85	4.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	39.4	LOS D	0.1	0.1	0.75	0.75
P2	East Full Crossing	33	58.6	LOS E	0.1	0.1	0.92	0.92
P3	North Full Crossing	25	38.7	LOS D	0.1	0.1	0.74	0.74
P4	West Full Crossing	7	58.5	LOS E	0.0	0.0	0.91	0.91
All Pedestrians		82	48.5	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036_PM_Option 2 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	152	4.6	152	4.6	2.540	2834.2	LOS F	786.8	5889.2	1.00	6.91	0.6
2	T1	1220	8.5	1220	8.5	2.540	2829.6	LOS F	786.8	5889.2	1.00	6.91	1.3
3	R2	623	2.7	623	2.7	11.118	18240.7	LOS F	509.9	3652.9	1.00	5.21	0.1
Approach		1995	6.4	1995	6.4	11.118	7642.5	LOS F	786.8	5889.2	1.00	6.38	0.4
East: Canterbury Road East													
4	L2	101	5.0	95	5.1	0.884	39.8	LOS C	43.1	314.3	0.90	0.87	35.0
5	T1	1272	4.6	1195	4.7	0.884	28.8	LOS C	43.1	314.3	0.76	0.74	29.7
6	R2	224	4.5	210	4.6	1.490	944.8	LOS F	72.0	524.2	1.00	2.59	3.4
Approach		1597	4.6	1501 N1	4.7	1.490	157.9	LOS F	72.0	524.2	0.80	1.01	10.5
North: Thorncraft Parade													
7	L2	181	8.3	181	8.3	1.868	1620.2	LOS F	480.4	3512.5	1.00	5.12	1.1
8	T1	901	4.6	901	4.6	8.264	1884.9	LOS F	480.4	3512.5	1.00	5.12	1.8
9	R2	431	4.6	431	4.6	8.264	13106.5	LOS F	358.9	2612.5	1.00	5.05	0.1
Approach		1513	5.0	1513	5.0	8.264	5049.9	LOS F	480.4	3512.5	1.00	5.10	0.6
West: Canterbury Road West													
10	L2	180	2.8	160	2.7	0.899	56.7	LOS E	52.8	377.7	1.00	1.00	30.0
11	T1	1398	2.6	1239	2.6	0.899	51.4	LOS D	52.8	377.7	0.99	1.00	21.6
12	R2	273	0.0	242	0.0	1.659	1234.9	LOS F	96.1	672.4	1.00	2.92	2.7
Approach		1851	2.3	1641 N1	2.2	1.659	226.5	LOS F	96.1	672.4	0.99	1.28	8.2
All Vehicles		6956	4.6	6649 N1	4.8	11.118	3533.6	LOS F	786.8	5889.2	0.95	3.62	0.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	28.9	LOS C	0.0	0.0	0.64	0.64
P2	East Full Crossing	32	37.2	LOS D	0.1	0.1	0.73	0.73
P3	North Full Crossing	8	28.9	LOS C	0.0	0.0	0.64	0.64
P4	West Full Crossing	32	37.2	LOS D	0.1	0.1	0.73	0.73
All Pedestrians		84	35.2	LOS D			0.71	0.71

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.

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Project: G:\21\26234\Tech\SIDRA\GHD SIDRAs\Option 2 - Hill Thalis + TM\Option 2 - 2036_Rev A.sip7

MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2036_PM_Option 2 - SCATS (Double Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	135	2.2	135	2.2	1.184	412.7	LOS F	74.5	536.8	1.00	2.44	4.1
2	T1	535	4.1	535	4.1	1.184	408.3	LOS F	74.5	536.8	1.00	2.50	7.4
3	R2	549	1.1	549	1.1	1.949	1764.7	LOS F	259.8	1835.4	1.00	3.95	1.0
Approach		1219	2.5	1219	2.5	1.949	1019.6	LOS F	259.8	1835.4	1.00	3.15	2.4
East: Canterbury Road E													
4	L2	216	1.4	212	1.4	0.890	61.0	LOS E	53.6	382.7	1.00	1.03	29.6
5	T1	1241	2.8	1216	2.8	0.890	52.2	LOS D	53.6	382.7	1.00	1.02	22.2
6	R2	1	0.0	1	0.0	0.013	76.6	LOS F	0.1	0.5	0.97	0.59	26.3
Approach		1458	2.6	1429 N1	2.6	0.890	53.5	LOS D	53.6	382.7	1.00	1.02	23.7
North: Beamish Street													
7	L2	70	12.9	70	12.9	1.933	1721.9	LOS F	126.2	939.3	1.00	3.53	1.0
8	T1	515	5.6	515	5.6	1.933	1724.4	LOS F	141.5	1038.3	1.00	4.12	2.0
9	R2	120	15.0	120	15.0	1.199	444.1	LOS F	26.1	205.9	1.00	2.07	3.8
Approach		705	7.9	705	7.9	1.933	1506.2	LOS F	141.5	1038.3	1.00	3.72	2.0
West: Canterbury Road w													
10	L2	95	11.6	60	11.0	0.391	13.4	LOS A	6.4	46.1	0.27	0.31	47.5
11	T1	1088	1.6	691	1.5	0.391	4.9	LOS A	6.4	46.1	0.18	0.19	50.7
12	R2	230	1.7	146	1.6	0.885	86.8	LOS F	10.9	77.3	1.00	0.90	23.1
Approach		1413	2.3	898 N1	2.1	0.885	18.8	LOS B	10.9	77.3	0.32	0.31	38.2
All Vehicles		4795	3.3	4250 N1	3.7	1.949	564.3	LOS F	259.8	1835.4	0.86	1.93	4.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	27.0	LOS C	0.0	0.0	0.62	0.62
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	22.9	LOS C	0.0	0.0	0.57	0.57
P4	West Full Crossing	10	59.5	LOS E	0.0	0.0	0.92	0.92
All Pedestrians		40	43.4	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036_PM _Option 2 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	2067	4.6	2025	4.6	0.645	4.6	LOS A	24.8	180.5	0.40	0.38	51.1
6	R2	537	4.7	526	4.7	0.663	32.9	LOS C	20.5	149.1	0.85	0.94	35.3
Approach		2604	4.6	2551 N1	4.6	0.663	10.5	LOS A	24.8	180.5	0.49	0.50	44.1
North: Wonga Street													
7	L2	260	8.5	260	8.5	0.387	30.1	LOS C	11.4	85.4	0.69	0.76	27.6
9	R2	119	4.2	119	4.2	0.840	82.1	LOS F	8.9	64.4	1.00	0.93	15.5
Approach		379	7.1	379	7.1	0.840	46.5	LOS D	11.4	85.4	0.79	0.82	22.2
West: Canterbury Road West													
10	L2	69	2.9	42	3.3	0.779	40.6	LOS C	27.2	195.3	0.85	0.78	35.4
11	T1	1493	2.7	907	3.0	0.779	32.9	LOS C	27.2	195.3	0.83	0.76	28.9
Approach		1562	2.7	949 N1	3.0	0.779	33.2	LOS C	27.2	195.3	0.83	0.76	29.4
All Vehicles		4545	4.2	3879 N1	4.9	0.840	19.5	LOS B	27.2	195.3	0.61	0.59	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	28.9	LOS C	0.0	0.0	0.64	0.64
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	54.1	LOS E			0.87	0.87

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036_PM_Option 2 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	18	0.0	18	0.0	0.938	51.7	LOS D	81.9	614.3	0.99	1.05	34.1
5	T1	1725	8.5	1725	8.5	0.938	54.1	LOS D	81.9	614.3	0.99	1.07	21.9
6	R2	25	8.0	25	8.0	0.938	73.7	LOS F	58.7	440.6	1.00	1.11	27.9
Approach		1768	8.4	1768	8.4	0.938	54.4	LOS D	81.9	614.3	0.99	1.07	22.2
NorthEast: Jeffrey Street													
24b	L3	9	0.0	9	0.0	1.038	141.8	LOS F	24.4	181.4	1.00	1.17	14.0
24	L2	13	0.0	13	0.0	1.038	140.8	LOS F	24.4	181.4	1.00	1.17	14.0
26a	R1	434	7.8	434	7.8	1.038	160.4	LOS F	28.0	209.0	1.00	1.32	8.4
26b	R3	1	0.0	1	0.0	1.038	180.8	LOS F	28.0	209.0	1.00	1.46	15.0
Approach		457	7.4	457	7.4	1.038	159.5	LOS F	28.0	209.0	1.00	1.32	8.8
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.650	75.9	LOS F	7.1	51.2	1.00	0.81	26.7
7	L2	53	0.0	53	0.0	0.650	74.9	LOS F	7.1	51.2	1.00	0.81	26.6
7a	L1	1	0.0	1	0.0	0.650	73.6	LOS F	7.1	51.2	1.00	0.81	26.9
9	R2	137	6.6	137	6.6	0.650	76.3	LOS F	7.1	51.2	1.00	0.81	17.3
Approach		192	4.7	192	4.7	0.650	75.9	LOS F	7.1	51.2	1.00	0.81	20.5
West: Canterbury Road w													
10	L2	21	9.5	15	12.4	0.899	59.2	LOS E	20.3	155.0	1.00	1.01	23.4
10a	L1	351	8.0	247	10.5	0.899	58.0	LOS E	20.3	155.0	1.00	1.01	23.7
11	T1	1554	8.0	1094	10.6	0.899	52.4	LOS D	20.3	155.0	1.00	1.02	24.6
Approach		1926	8.0	1356 N1	10.6	0.899	53.5	LOS D	20.3	155.0	1.00	1.02	24.4
All Vehicles		4343	8.0	3773 N1	9.2	1.038	67.9	LOS E	81.9	614.3	1.00	1.07	19.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 434.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	10.4	LOS B	0.1	0.1	0.39	0.39
P2	East Full Crossing	20	62.3	LOS F	0.1	0.1	0.94	0.94
P6	NorthEast Full Crossing	68	10.9	LOS B	0.1	0.1	0.56	0.56
P3	North Full Crossing	108	27.2	LOS C	0.3	0.3	0.62	0.62
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	31.1	LOS D			0.66	0.66

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.

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Option 3 - 2021

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.354	6.9	LOS A	2.8	20.9	0.09	0.08	57.1
5	T1	1038	8.5	1016	8.6	0.354	1.1	LOS A	2.8	20.9	0.07	0.06	58.9
6	R2	83	8.5	82	8.6	0.740	63.5	LOS E	5.7	42.8	0.92	0.90	28.9
Approach		1122	8.5	1099 N1	8.6	0.740	5.7	LOS A	5.7	42.8	0.13	0.13	54.7
North: Punchbowl Road													
7	L2	21	8.5	21	8.5	0.903	86.9	LOS F	16.0	112.9	1.00	1.01	15.8
8	T1	8	8.5	8	8.5	0.903	81.3	LOS F	16.0	112.9	1.00	1.01	24.8
9	R2	376	8.5	376	8.5	0.903	86.8	LOS F	16.3	129.2	1.00	1.01	24.5
Approach		405	8.5	405	8.5	0.903	86.7	LOS F	16.3	129.2	1.00	1.01	24.1
West: Canterbury Road West													
10	L2	137	8.3	137	8.3	0.078	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1318	8.0	1318	8.0	0.874	25.6	LOS B	41.4	309.7	0.72	0.76	32.9
Approach		1455	8.1	1455	8.1	0.874	23.7	LOS B	41.4	309.7	0.65	0.74	35.3
All Vehicles		2982	8.3	2959 N1	8.4	0.903	25.7	LOS B	41.4	309.7	0.51	0.55	38.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	110	11.5	110	11.5	1.010	148.7	LOS F	23.8	178.4	1.00	1.32	9.5
3	R2	268	4.3	268	4.3	1.010	156.9	LOS F	23.8	178.4	1.00	1.34	9.4
Approach		377	6.4	377	6.4	1.010	154.5	LOS F	23.8	178.4	1.00	1.33	9.4
East: Canterbury Road E													
4	L2	175	3.1	171	3.2	0.651	24.2	LOS B	20.7	151.0	0.60	0.62	34.6
5	T1	1013	5.9	989	5.9	0.651	24.7	LOS B	22.2	163.2	0.73	0.69	12.9
Approach		1188	5.5	1160 N1	5.5	0.651	24.6	LOS B	22.2	163.2	0.71	0.68	18.4
West: Canterbury Road W													
11	T1	1403	7.1	1403	7.1	1.117	294.8	LOS F	109.9	816.0	1.00	2.29	5.7
12	R2	128	12.0	128	12.0	0.284	19.1	LOS B	3.0	23.1	0.59	0.73	41.9
Approach		1531	7.5	1531	7.5	1.117	271.8	LOS F	109.9	816.0	0.97	2.16	6.5
All Vehicles		3096	6.6	3068 N1	6.6	1.117	163.9	LOS F	109.9	816.0	0.87	1.50	7.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	23.5	LOS C	0.1	0.1	0.58	0.58
P4	West Full Crossing	50	56.8	LOS E	0.2	0.2	0.90	0.90
All Pedestrians		100	40.1	LOS E			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1115	8.6	1086	8.7	0.912	40.4	LOS C	43.4	326.4	0.82	0.88	14.3
6	R2	126	2.2	122	2.2	0.912	82.8	LOS F	24.1	178.2	1.00	1.05	19.9
Approach		1240	7.9	1208 N1	8.1	0.912	44.6	LOS D	43.4	326.4	0.84	0.90	15.5
North: Rosmore Avenue													
7	L2	114	2.9	114	2.9	0.148	28.3	LOS B	4.5	32.4	0.65	0.70	28.4
9	R2	129	2.5	129	2.5	0.741	70.6	LOS F	9.1	65.1	1.00	0.89	17.2
Approach		242	2.7	242	2.7	0.741	50.8	LOS D	9.1	65.1	0.84	0.80	21.1
West: Canterbury West													
10	L2	206	1.3	206	1.3	0.975	93.9	LOS F	22.3	163.2	1.00	1.21	16.6
11	T1	1319	6.4	1319	6.4	0.975	89.2	LOS F	22.3	163.2	1.00	1.23	4.2
Approach		1524	5.7	1524	5.7	0.975	89.8	LOS F	22.3	163.2	1.00	1.23	6.4
All Vehicles		3007	6.4	2974 N1	6.5	0.975	68.3	LOS E	43.4	326.4	0.92	1.06	10.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	57.7	LOS E	0.2	0.2	0.91	0.91
P3	North Full Crossing	50	27.7	LOS C	0.1	0.1	0.63	0.63
All Pedestrians		100	42.7	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	340	3.4	340	3.4	0.408	16.7	LOS B	10.3	74.0	0.49	0.70	34.5
3	R2	149	5.6	149	5.6	0.905	83.4	LOS F	11.5	84.1	0.90	1.04	15.4
Approach		489	4.1	489	4.1	0.905	37.1	LOS C	11.5	84.1	0.61	0.80	25.0
East: Canterbury Road E													
4	L2	84	9.2	81	9.4	0.894	76.3	LOS F	32.1	238.4	1.00	0.96	22.9
5	T1	851	6.4	819	6.5	0.894	73.9	LOS F	33.7	248.8	1.00	0.97	10.6
Approach		935	6.6	899 N1	6.7	0.894	74.1	LOS F	33.7	248.8	1.00	0.96	12.0
West: Canterbury Road w													
11	T1	1038	8.6	1038	8.6	0.814	8.4	LOS A	24.8	179.4	0.43	0.42	35.7
12	R2	425	2.9	425	2.9	0.814	36.0	LOS C	24.8	179.4	0.84	1.03	31.4
Approach		1463	6.9	1463	6.9	0.814	16.4	LOS B	24.8	179.4	0.55	0.60	33.1
All Vehicles		2887	6.3	2851 N1	6.4	0.905	38.2	LOS C	33.7	248.8	0.70	0.75	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	44.1	LOS E	0.2	0.2	0.79	0.79
P2	East Full Crossing	50	44.1	LOS E	0.2	0.2	0.79	0.79
All Pedestrians		100	44.1	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	951	8.5	914	8.7	0.403	2.9	LOS A	6.0	45.3	0.21	0.21	50.7
6	R2	72	8.5	69	8.7	0.403	11.9	LOS A	6.0	45.3	0.45	0.45	46.2
Approach		1023	8.5	983 N1	8.7	0.403	3.5	LOS A	6.0	45.3	0.23	0.23	49.8
North: Dudley Street													
7	L2	60	8.5	60	8.5	0.090	32.0	LOS C	2.5	19.1	0.67	0.68	26.9
9	R2	35	8.5	35	8.5	0.218	69.9	LOS E	2.3	16.9	0.96	0.73	17.3
Approach		94	8.5	94	8.5	0.218	45.9	LOS D	2.5	19.1	0.78	0.70	22.3
West: Canterbury West													
10	L2	7	8.0	7	8.0	0.605	31.4	LOS C	23.0	172.0	0.69	0.62	35.0
11	T1	1064	8.0	1064	8.0	0.605	27.1	LOS B	25.5	190.8	0.73	0.65	22.1
Approach		1072	8.0	1072	8.0	0.605	27.1	LOS B	25.5	190.8	0.72	0.65	22.2
All Vehicles		2188	8.3	2149 N1	8.4	0.605	17.1	LOS B	25.5	190.8	0.50	0.46	30.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
All Pedestrians		100	43.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	75	8.5	75	8.5	0.073	12.2	LOS A	1.8	13.4	0.38	0.63	37.6
3	R2	40	8.0	40	8.0	0.319	74.1	LOS F	2.7	20.3	0.99	0.74	16.7
Approach		115	8.3	115	8.3	0.319	33.7	LOS C	2.7	20.3	0.59	0.67	26.2
East: Canterbury Raod East													
4	L2	110	8.5	106	8.7	0.756	46.7	LOS D	30.3	227.7	0.94	0.84	33.2
5	T1	974	8.5	933	8.7	0.756	40.7	LOS C	31.1	234.2	0.94	0.84	25.7
Approach		1084	8.5	1039 N1	8.7	0.756	41.3	LOS C	31.1	234.2	0.94	0.84	26.8
West: Canterbury Road West													
11	T1	1469	5.3	1469	5.3	0.636	11.1	LOS A	31.0	227.0	0.63	0.61	36.3
12	R2	142	8.0	142	8.0	0.636	26.5	LOS B	22.0	161.9	0.86	0.86	37.3
Approach		1610	5.5	1610	5.5	0.636	12.4	LOS A	31.0	227.0	0.65	0.63	36.5
All Vehicles		2810	6.8	2765 N1	6.9	0.756	24.2	LOS B	31.1	234.2	0.76	0.71	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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	31.6	LOS D	0.1	0.1	0.67	0.67
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	47.9	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	156	21.4	156	21.4	0.158	18.1	LOS B	4.8	39.4	0.45	0.66	40.8
2	T1	2708	7.5	2708	7.5	1.095	251.9	LOS F	160.6	1197.0	1.00	1.97	15.1
3	R2	204	3.2	204	3.2	0.714	82.8	LOS F	7.7	55.6	1.00	0.84	25.5
Approach		3068	8.0	3068	8.0	1.095	228.8	LOS F	160.6	1197.0	0.97	1.83	15.7
East: Canterbury Road E													
4	L2	86	10.1	86	10.1	1.058	176.5	LOS F	49.6	364.2	1.00	1.38	13.0
5	T1	756	4.5	756	4.5	1.058	189.8	LOS F	59.4	431.5	1.00	1.57	6.4
6	R2	192	9.8	192	9.8	0.935	103.2	LOS F	8.4	63.7	1.00	1.08	24.7
Approach		1035	5.9	1035	5.9	1.058	172.6	LOS F	59.4	431.5	1.00	1.47	9.7
North: King Georges Road													
7	L2	307	7.5	307	7.5	0.706	37.5	LOS C	34.0	254.6	0.82	0.87	40.4
8	T1	1605	9.1	1605	9.1	0.706	31.4	LOS C	35.4	266.9	0.84	0.79	43.8
9	R2	185	5.2	185	5.2	1.031	175.9	LOS F	22.7	165.8	1.00	1.35	13.1
Approach		2096	8.5	2096	8.5	1.031	45.0	LOS D	35.4	266.9	0.85	0.85	38.5
West: Canterbury Road W													
10	L2	94	10.5	94	10.5	0.137	34.8	LOS C	4.3	33.1	0.67	0.70	41.2
11	T1	569	7.5	569	7.5	0.903	79.3	LOS F	25.3	188.6	1.00	1.07	24.8
12	R2	110	21.6	110	21.6	0.865	96.2	LOS F	4.6	37.9	1.00	0.95	24.7
Approach		773	9.8	773	9.8	0.903	76.3	LOS F	25.3	188.6	0.96	1.01	26.5
All Vehicles		6972	8.0	6972	8.0	1.095	148.3	LOS F	160.6	1197.0	0.94	1.39	19.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 66.3 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	60.0	LOS E	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	28.3	LOS C	0.1	0.1	0.61	0.61
P3	North Full Crossing	50	61.8	LOS F	0.2	0.2	0.91	0.91
P4	West Full Crossing	50	30.8	LOS D	0.1	0.1	0.64	0.64
All Pedestrians		200	45.2	LOS E			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	965	4.8	951	4.8	0.509	7.8	LOS A	16.9	125.0	0.33	0.30	47.6
6	R2	86	11.3	85	11.3	0.509	36.8	LOS C	16.9	125.0	1.00	0.89	36.2
Approach		1051	5.3	1036 N1	5.3	0.509	10.1	LOS A	16.9	125.0	0.38	0.35	45.4
North: Haldon Street													
7	L2	57	5.0	57	5.0	0.709	74.9	LOS F	7.8	57.5	1.00	0.85	16.6
9	R2	119	8.7	119	8.7	0.709	78.0	LOS F	7.8	57.5	1.00	0.85	16.1
Approach		176	7.5	176	7.5	0.709	77.0	LOS F	7.8	57.5	1.00	0.85	16.3
West: Canterbury Road w													
10	L2	92	8.2	92	8.2	0.701	27.8	LOS B	35.0	258.2	0.77	0.72	38.9
11	T1	1394	5.9	1394	5.9	0.701	22.1	LOS B	35.6	262.0	0.77	0.71	31.6
Approach		1486	6.0	1486	6.0	0.701	22.5	LOS B	35.6	262.0	0.77	0.71	32.4
All Vehicles		2713	5.8	2697 N1	5.9	0.709	21.3	LOS B	35.6	262.0	0.64	0.58	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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	16.5	LOS B	0.1	0.1	0.49	0.49
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	40.4	LOS E			0.72	0.72

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Site: TCS 505 [Canterbury Road - Chapel St_2021_AM_Option 3 - SCATS (single diamond)]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	105	8.4	105	8.4	0.886	66.0	LOS E	29.4	212.9	0.96	1.00	8.7
2	T1	400	2.5	400	2.5	0.886	65.5	LOS E	29.4	212.9	0.97	1.02	8.4
3	R2	95	7.2	95	7.2	0.886	83.0	LOS F	15.1	109.8	1.00	1.08	7.1
Approach		600	4.3	600	4.3	0.886	68.4	LOS E	29.4	212.9	0.97	1.02	8.3
East: Canterbury Rd													
4	L2	79	12.5	77	12.5	0.617	61.3	LOS E	32.0	236.1	1.00	0.89	24.5
5	T1	920	5.0	898	5.0	0.617	56.4	LOS D	32.9	240.1	1.00	0.89	21.2
6	R2	16	0.0	16	0.0	0.195	81.1	LOS F	1.1	7.7	1.00	0.69	17.1
Approach		1015	5.5	990 N1	5.5	0.617	57.1	LOS E	32.9	240.1	1.00	0.89	21.4
North: Chapel St													
7	L2	37	0.0	37	0.0	0.314	40.9	LOS C	8.6	61.5	0.83	0.70	4.8
8	T1	317	2.4	317	2.4	0.525	46.7	LOS D	12.1	86.5	0.89	0.75	13.3
9	R2	16	0.0	16	0.0	0.525	56.9	LOS E	12.1	86.5	0.94	0.79	3.6
Approach		370	2.1	370	2.1	0.525	46.6	LOS D	12.1	86.5	0.89	0.75	12.2
West: Canterbury Rd													
10	L2	51	0.0	51	0.0	0.720	25.9	LOS B	30.3	220.8	0.68	0.63	23.1
11	T1	1254	5.4	1254	5.4	0.720	19.1	LOS B	30.3	220.8	0.62	0.57	36.9
12	R2	171	7.7	171	7.7	0.619	54.6	LOS D	10.1	75.5	0.90	0.80	24.9
Approach		1477	5.5	1477	5.5	0.720	23.5	LOS B	30.3	220.8	0.65	0.60	33.8
All Vehicles		3462	4.9	3438 N1	4.9	0.886	43.5	LOS D	32.9	240.1	0.83	0.77	21.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P2	East Full Crossing	50	44.9	LOS E	0.2	0.2	0.80	0.80
P3	North Full Crossing	50	20.1	LOS C	0.1	0.1	0.54	0.54
All Pedestrians		150	31.6	LOS D			0.66	0.66

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021_AM_Option 3 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	62	7.1	62	7.1	0.212	35.8	LOS C	6.4	47.1	0.72	0.66	26.4
2	T1	302	6.4	302	6.4	1.062	166.7	LOS F	53.9	407.3	0.93	1.48	15.0
3	R2	146	13.6	146	13.6	1.062	218.3	LOS F	53.9	407.3	1.00	1.76	7.3
Approach		510	8.6	510	8.6	1.062	165.5	LOS F	53.9	407.3	0.92	1.46	12.9
East: Canterbury Road E													
4	L2	77	16.7	75	16.7	0.899	67.8	LOS E	35.8	268.8	1.00	1.02	27.5
5	T1	927	7.1	905	7.1	0.899	61.5	LOS E	36.4	269.9	1.00	1.01	19.2
6	R2	71	0.0	69	0.0	0.767	80.3	LOS F	5.0	35.1	1.00	0.81	25.1
Approach		1075	7.3	1049 N1	7.3	0.899	63.2	LOS E	36.4	269.9	1.00	1.00	20.6
North: Sharp Street													
7	L2	62	5.3	62	5.3	0.123	29.6	LOS C	3.3	24.3	0.67	0.67	28.3
8	T1	356	4.6	356	4.6	0.557	34.6	LOS C	17.2	125.2	0.80	0.70	36.2
Approach		418	4.7	418	4.7	0.557	33.9	LOS C	17.2	125.2	0.78	0.70	35.4
West: Canterbury Road w													
10	L2	6	0.0	6	0.0	0.740	39.8	LOS C	33.6	245.8	0.89	0.81	35.9
11	T1	1196	5.5	1196	5.5	0.740	34.3	LOS C	33.6	246.4	0.89	0.81	28.5
12	R2	282	9.6	282	9.6	0.898	64.4	LOS E	20.3	154.0	1.00	0.92	27.6
Approach		1485	6.2	1485	6.2	0.898	40.0	LOS C	33.6	246.4	0.91	0.83	28.2
All Vehicles		3488	6.7	3462 N1	6.8	1.062	64.8	LOS E	53.9	407.3	0.93	0.96	22.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	41.0	LOS E	0.2	0.2	0.77	0.77
P2	East Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P3	North Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
P4	West Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
All Pedestrians		200	37.8	LOS D			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021_AM_Option 3 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	44	8.5	44	8.5	0.742	53.2	LOS D	13.3	99.8	0.89	0.80	21.5
2	T1	494	8.5	494	8.5	1.643	789.8	LOS F	141.2	1059.8	0.96	3.07	4.2
3	R2	43	8.0	43	8.0	1.643	1219.9	LOS F	141.2	1059.8	1.00	4.37	1.5
Approach		580	8.5	580	8.5	1.643	765.9	LOS F	141.2	1059.8	0.96	3.00	4.0
East: Canterbury Road East													
4	L2	34	8.5	33	8.5	0.603	41.0	LOS C	30.9	232.4	0.92	0.83	34.7
5	T1	945	8.5	939	8.5	0.603	39.5	LOS C	30.9	232.4	0.96	0.86	25.1
6	R2	257	8.5	255	8.5	0.922	86.0	LOS F	19.5	146.3	1.00	0.94	23.2
Approach		1235	8.5	1227 N1	8.5	0.922	49.2	LOS D	30.9	232.4	0.97	0.87	24.7
North: Thorncraft Parade													
7	L2	186	8.5	186	8.5	0.316	34.6	LOS C	8.5	63.5	0.79	0.77	25.9
8	T1	262	8.5	262	8.5	1.352	699.7	LOS F	99.7	748.5	1.00	3.44	4.6
9	R2	82	8.5	82	8.5	1.352	704.3	LOS F	99.7	748.5	1.00	3.44	2.5
Approach		529	8.5	529	8.5	1.352	466.8	LOS F	99.7	748.5	0.93	2.50	5.2
West: Canterbury Road West													
10	L2	60	0.0	60	0.0	0.902	56.4	LOS D	52.7	392.1	1.00	1.02	30.3
11	T1	1383	8.0	1375	8.0	0.902	51.8	LOS D	52.7	392.1	1.00	1.02	21.6
12	R2	45	0.3	45	0.3	0.282	42.4	LOS C	1.9	13.3	0.95	0.73	34.4
Approach		1489	7.5	1480 N1	7.4	0.902	51.7	LOS D	52.7	392.9	1.00	1.01	22.5
All Vehicles		3833	8.1	3816 N1	8.1	1.643	217.0	LOS F	141.2	1059.8	0.97	1.47	8.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	24.1	LOS C	0.1	0.1	0.59	0.59
P2	East Full Crossing	50	49.0	LOS E	0.2	0.2	0.84	0.84
P3	North Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P4	West Full Crossing	50	49.0	LOS E	0.2	0.2	0.84	0.84
All Pedestrians		200	37.6	LOS D			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021_AM_Option 3 - SCATS (Double Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	96	4.4	96	4.4	0.919	80.9	LOS F	31.6	230.5	1.00	1.10	16.2
2	T1	610	4.9	610	4.9	0.919	76.3	LOS F	31.6	230.5	0.99	1.12	24.4
3	R2	343	4.1	343	4.1	1.208	455.5	LOS F	76.4	553.3	1.00	2.08	3.7
Approach		1050	4.6	1050	4.6	1.208	200.5	LOS F	76.4	553.3	0.99	1.44	11.1
East: Canterbury Road E													
4	L2	227	4.0	227	4.0	0.841	61.2	LOS E	33.3	243.0	0.99	1.03	29.4
5	T1	776	5.8	776	5.8	0.841	54.2	LOS D	33.3	244.8	1.00	0.98	21.7
6	R2	1	0.0	1	0.0	0.013	76.7	LOS F	0.1	0.5	0.99	0.59	26.3
Approach		1004	5.4	1004	5.4	0.841	55.8	LOS D	33.3	244.8	0.99	0.99	24.0
North: Beamish Street													
7	L2	44	17.9	44	17.9	1.208	414.0	LOS F	56.0	421.4	1.00	1.66	3.6
8	T1	418	6.8	418	6.8	1.208	429.3	LOS F	56.0	421.4	1.00	2.02	6.7
9	R2	69	27.9	69	27.9	0.982	122.9	LOS F	6.5	56.5	1.00	1.26	11.6
Approach		532	10.5	532	10.5	1.208	388.1	LOS F	56.0	421.4	1.00	1.89	6.6
West: Canterbury Road w													
10	L2	107	12.7	106	12.7	0.895	52.8	LOS D	52.9	389.9	1.00	0.99	31.0
11	T1	1249	5.1	1231	5.0	0.895	48.2	LOS D	52.9	389.9	0.97	0.97	22.3
12	R2	254	5.8	250	5.8	0.852	48.5	LOS D	14.4	106.0	0.86	0.83	30.9
Approach		1610	5.7	1587 N1	5.7	0.895	48.5	LOS D	52.9	389.9	0.96	0.95	24.9
All Vehicles		4196	5.9	4173 N1	6.0	1.208	131.8	LOS F	76.4	553.3	0.98	1.20	13.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	41.7	LOS E	0.2	0.2	0.77	0.77
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	25.3	LOS C	0.1	0.1	0.60	0.60
P4	West Full Crossing	50	49.8	LOS E	0.2	0.2	0.84	0.84
All Pedestrians		200	45.3	LOS E			0.79	0.79

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.

MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021_AM_Option 3 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1307	8.5	1307	8.5	0.438	4.2	LOS A	13.0	97.3	0.32	0.30	51.8
6	R2	422	8.5	422	8.5	0.816	58.1	LOS E	24.3	182.2	0.99	1.05	28.0
Approach		1728	8.5	1728	8.5	0.816	17.4	LOS B	24.3	182.2	0.49	0.48	38.4
North: Wonga Street													
7	L2	273	8.5	273	8.5	0.462	40.4	LOS C	14.1	105.6	0.81	0.80	24.0
9	R2	83	8.5	83	8.5	0.553	73.6	LOS F	5.7	42.6	1.00	0.78	16.7
Approach		356	8.5	356	8.5	0.553	48.1	LOS D	14.1	105.6	0.85	0.79	21.8
West: Canterbury Road West													
10	L2	54	8.0	50	8.2	0.920	43.6	LOS D	53.4	400.3	0.91	0.95	34.4
11	T1	1612	8.0	1494	8.2	0.920	36.5	LOS C	53.4	400.3	0.89	0.93	27.4
Approach		1667	8.0	1544 N1	8.2	0.920	36.7	LOS C	53.4	400.3	0.89	0.93	27.7
All Vehicles		3751	8.3	3628 N1	8.6	0.920	28.6	LOS C	53.4	400.3	0.70	0.70	31.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	20.7	LOS C	0.1	0.1	0.54	0.54
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	42.5	LOS E			0.75	0.75

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.

MOVEMENT SUMMARY

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021_AM_Option 3 - SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.811	24.0	LOS B	47.7	358.2	0.79	0.74	45.9
5	T1	1052	8.6	1052	8.6	0.811	21.8	LOS B	47.7	358.2	0.80	0.75	35.2
6	R2	35	8.6	35	8.6	0.811	81.8	LOS F	8.3	62.0	1.00	0.92	26.0
Approach		1100	8.5	1100	8.5	0.811	23.7	LOS B	47.7	358.2	0.81	0.76	34.7
NorthEast: Jeffrey Street													
24b	L3	20	10.0	20	10.0	0.851	85.0	LOS F	9.1	68.3	1.00	0.97	25.1
24	L2	4	0.0	4	0.0	0.851	83.8	LOS F	9.1	68.3	1.00	0.97	25.1
26a	R1	217	7.8	217	7.8	0.851	82.8	LOS F	9.1	68.3	1.00	0.96	16.4
26b	R3	1	0.0	1	0.0	0.851	84.5	LOS F	9.1	67.9	1.00	0.96	25.1
Approach		242	7.9	242	7.9	0.851	83.0	LOS F	9.1	68.3	1.00	0.96	17.5
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.681	76.4	LOS F	7.6	55.0	1.00	0.82	26.6
7	L2	63	0.0	63	0.0	0.681	75.5	LOS F	7.6	55.0	1.00	0.82	26.5
7a	L1	1	0.0	1	0.0	0.681	74.2	LOS F	7.6	55.0	1.00	0.82	26.7
9	R2	137	8.0	137	8.0	0.681	76.9	LOS F	7.6	55.0	1.00	0.82	17.2
Approach		202	5.4	202	5.4	0.681	76.5	LOS F	7.6	55.0	1.00	0.82	20.7
West: Canterbury Road w													
10	L2	18	5.6	17	5.6	0.860	35.4	LOS C	20.7	155.0	0.92	0.88	31.8
10a	L1	158	8.2	151	8.3	0.860	34.2	LOS C	20.7	155.0	0.92	0.88	32.2
11	T1	1655	8.0	1580	8.1	0.860	29.2	LOS C	20.7	155.0	0.91	0.87	33.3
Approach		1831	8.0	1748 N1	8.1	0.860	29.7	LOS C	20.7	155.0	0.91	0.87	33.2
All Vehicles		3375	8.0	3292 N1	8.2	0.860	34.5	LOS C	47.7	358.2	0.89	0.84	30.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 298.5 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	8.2	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	7.3	LOS A	0.1	0.1	0.32	0.32
P3	North Full Crossing	108	16.6	LOS B	0.2	0.2	0.49	0.49
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	26.5	LOS C			0.56	0.56

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.387	10.1	LOS A	11.5	84.0	0.32	0.30	54.4
5	T1	1237	4.6	1160	4.9	0.387	3.2	LOS A	11.5	84.0	0.22	0.20	57.0
6	R2	87	4.6	81	4.9	0.365	15.1	LOS B	2.3	16.7	0.42	0.70	46.9
Approach		1325	4.6	1242 N1	4.9	0.387	4.0	LOS A	11.5	84.0	0.24	0.24	56.2
North: Punchbowl Road													
7	L2	27	8.5	27	8.5	0.918	89.9	LOS F	16.1	113.8	1.00	1.03	15.4
8	T1	1	0.0	1	0.0	0.918	84.3	LOS F	16.1	113.8	1.00	1.03	24.3
9	R2	366	4.6	366	4.6	0.918	90.0	LOS F	16.1	113.8	1.00	1.03	24.0
Approach		394	4.8	394	4.8	0.918	90.0	LOS F	16.1	118.5	1.00	1.03	23.5
West: Canterbury Road West													
10	L2	160	2.8	160	2.8	0.088	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1278	2.4	1278	2.4	0.420	4.7	LOS A	13.2	94.2	0.34	0.31	52.1
Approach		1438	2.5	1438	2.5	0.420	4.8	LOS A	13.2	94.2	0.30	0.33	52.6
All Vehicles		3157	3.7	3074 N1	3.7	0.918	15.4	LOS B	16.1	118.5	0.36	0.38	45.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	144	1.5	144	1.5	1.167	388.8	LOS F	51.1	364.0	1.00	1.91	4.3
3	R2	273	2.8	273	2.8	1.167	391.6	LOS F	51.1	364.0	1.00	1.92	4.2
Approach		417	2.4	417	2.4	1.167	390.6	LOS F	51.1	364.0	1.00	1.92	4.2
East: Canterbury Road E													
4	L2	229	2.1	211	2.3	0.623	24.7	LOS B	23.1	163.2	0.65	0.66	34.3
5	T1	1301	0.4	1195	0.4	0.623	14.1	LOS A	23.1	163.2	0.52	0.50	19.1
Approach		1530	0.6	1406 N1	0.7	0.623	15.7	LOS B	23.1	163.2	0.54	0.52	24.3
West: Canterbury Road W													
11	T1	1192	2.6	1192	2.6	0.838	19.7	LOS B	31.0	221.6	0.72	0.72	36.7
12	R2	139	2.1	139	2.1	0.401	34.3	LOS C	7.9	56.2	0.87	0.84	35.7
Approach		1331	2.5	1331	2.5	0.838	21.2	LOS B	31.0	221.6	0.73	0.73	36.5
All Vehicles		3277	1.6	3153 N1	1.7	1.167	67.6	LOS E	51.1	364.0	0.68	0.80	15.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	15.6	LOS B	0.1	0.1	0.47	0.47
P4	West Full Crossing	50	60.5	LOS F	0.2	0.2	0.93	0.93
All Pedestrians		100	38.0	LOS D			0.70	0.70

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1394	5.9	1384	6.0	1.109	257.0	LOS F	44.6	326.4	1.00	2.05	2.8
6	R2	105	2.0	104	2.0	1.109	243.4	LOS F	44.6	326.4	1.00	1.80	8.5
Approach		1499	5.7	1488 N1	5.7	1.109	256.1	LOS F	44.6	326.4	1.00	2.04	3.2
North: Rosmore Avenue													
7	L2	110	0.0	110	0.0	0.114	19.3	LOS B	3.5	24.5	0.51	0.66	32.9
9	R2	202	0.5	202	0.5	2.355	2492.5	LOS F	110.8	779.4	1.00	4.20	0.7
Approach		312	0.3	312	0.3	2.355	1621.1	LOS F	110.8	779.4	0.83	2.95	1.1
West: Canterbury West													
10	L2	134	1.5	134	1.5	1.153	353.8	LOS F	22.8	163.2	1.00	2.27	5.5
11	T1	1183	2.8	1183	2.8	1.153	349.5	LOS F	22.8	163.2	1.00	2.39	1.1
Approach		1317	2.7	1317	2.7	1.153	350.0	LOS F	22.8	163.2	1.00	2.38	1.6
All Vehicles		3129	3.9	3118 N1	3.9	2.355	432.5	LOS F	110.8	779.4	0.98	2.27	1.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	38.7	LOS D	0.1	0.1	0.74	0.74
All Pedestrians		100	51.5	LOS E			0.85	0.85

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	360	1.1	360	1.1	1.925	1730.6	LOS F	170.2	1202.3	1.00	3.88	1.0
3	R2	86	4.5	86	4.5	1.128	321.6	LOS F	15.0	109.3	1.00	1.69	5.0
Approach		446	1.8	446	1.8	1.925	1458.7	LOS F	170.2	1202.3	1.00	3.46	1.2
East: Canterbury Road E													
4	L2	77	5.5	76	5.5	0.901	31.0	LOS C	28.9	213.3	0.53	0.64	37.1
5	T1	1103	6.5	1092	6.5	0.901	27.0	LOS B	30.5	225.4	0.57	0.67	22.1
Approach		1180	6.4	1168 N1	6.4	0.901	27.2	LOS B	30.5	225.4	0.56	0.66	23.7
West: Canterbury Road w													
11	T1	1040	2.7	998	2.7	0.674	11.5	LOS A	43.4	310.7	0.71	0.67	31.7
12	R2	361	1.2	347	1.2	1.286	578.2	LOS F	46.1	326.4	1.00	2.32	3.9
Approach		1401	2.3	1345 N1	2.3	1.286	157.7	LOS F	46.1	326.4	0.79	1.10	6.6
All Vehicles		3027	3.8	2959 N1	3.9	1.925	302.3	LOS F	170.2	1202.3	0.73	1.28	3.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	10.4	LOS B	0.1	0.1	0.39	0.39
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	36.4	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1237	4.6	1224	4.6	0.527	1.7	LOS A	5.3	38.8	0.14	0.16	53.7
6	R2	100	4.6	99	4.6	0.527	8.1	LOS A	4.3	31.6	0.20	0.28	49.2
Approach		1337	4.6	1323 N1	4.6	0.527	2.2	LOS A	5.3	38.8	0.14	0.17	52.9
North: Dudley Street													
7	L2	61	8.5	61	8.5	0.082	28.2	LOS B	2.4	18.1	0.62	0.67	28.4
9	R2	70	4.6	70	4.6	0.417	71.3	LOS F	4.6	33.8	0.99	0.77	17.1
Approach		130	6.4	130	6.4	0.417	51.2	LOS D	4.6	33.8	0.82	0.72	21.0
West: Canterbury West													
10	L2	36	2.7	36	2.7	0.680	42.5	LOS C	32.7	233.8	0.93	0.84	30.6
11	T1	1098	2.7	1094	2.7	0.680	37.6	LOS C	33.5	239.6	0.94	0.84	17.7
Approach		1134	2.7	1130 N1	2.7	0.680	37.8	LOS C	33.5	239.6	0.94	0.84	18.4
All Vehicles		2602	3.8	2583 N1	3.9	0.680	20.2	LOS B	33.5	239.6	0.52	0.49	28.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	26.5	LOS C	0.1	0.1	0.62	0.62
All Pedestrians		100	45.4	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	87	4.6	87	4.6	0.092	14.9	LOS B	2.5	18.0	0.45	0.66	35.7
3	R2	93	2.7	93	2.7	0.895	86.7	LOS F	7.1	51.1	0.99	1.04	14.9
Approach		180	3.6	180	3.6	0.895	52.1	LOS D	7.1	51.1	0.73	0.86	20.8
East: Canterbury Raod East													
4	L2	54	4.6	53	4.6	0.763	40.5	LOS C	35.9	261.3	0.91	0.83	35.4
5	T1	1233	4.6	1219	4.6	0.763	34.9	LOS C	36.3	264.5	0.91	0.82	28.0
Approach		1287	4.6	1272 N1	4.6	0.763	35.1	LOS C	36.3	264.5	0.91	0.82	28.5
West: Canterbury Road West													
11	T1	1250	2.4	1250	2.4	0.615	3.9	LOS A	8.9	63.4	0.23	0.26	48.0
12	R2	151	2.7	151	2.7	0.615	14.7	LOS B	8.5	60.5	0.46	0.57	43.7
Approach		1400	2.4	1400	2.4	0.615	5.1	LOS A	8.9	63.4	0.26	0.29	46.9
All Vehicles		2868	3.5	2853 N1	3.5	0.895	21.5	LOS B	36.3	264.5	0.58	0.56	32.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	25.9	LOS C	0.1	0.1	0.61	0.61
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	44.1	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	305	11.7	305	11.7	0.338	27.4	LOS B	11.9	91.4	0.61	0.80	34.9
2	T1	1613	5.3	1613	5.3	1.031	166.3	LOS F	74.6	545.6	1.00	1.59	20.3
3	R2	242	1.6	242	1.6	1.004	143.3	LOS F	12.9	91.7	1.00	1.26	18.0
Approach		2160	5.8	2160	5.8	1.031	144.1	LOS F	74.6	545.6	0.95	1.44	20.7
East: Canterbury Road E													
4	L2	124	4.5	124	4.5	1.014	99.7	LOS F	55.8	401.2	1.00	1.12	16.5
5	T1	857	2.7	857	2.7	1.014	122.7	LOS F	57.2	409.6	1.00	1.33	8.6
6	R2	217	4.3	217	4.3	0.765	84.3	LOS F	8.4	60.7	1.00	0.87	27.7
Approach		1198	3.2	1198	3.2	1.014	113.4	LOS F	57.2	409.6	1.00	1.22	12.7
North: King Georges Road													
7	L2	147	4.1	147	4.1	1.023	122.9	LOS F	70.1	504.2	1.00	1.27	18.5
8	T1	2014	3.0	2014	3.0	1.023	139.3	LOS F	90.5	650.0	1.00	1.43	21.6
9	R2	260	2.6	260	2.6	1.020	162.6	LOS F	31.1	222.2	1.00	1.30	13.9
Approach		2421	3.0	2421	3.0	1.023	140.8	LOS F	90.5	650.0	1.00	1.41	20.6
West: Canterbury Road W													
10	L2	152	3.8	152	3.8	0.151	20.5	LOS B	5.1	37.1	0.51	0.68	47.2
11	T1	750	0.8	750	0.8	0.820	53.1	LOS D	26.7	187.9	0.92	0.87	30.8
12	R2	361	4.0	361	4.0	1.009	154.6	LOS F	20.7	150.0	1.00	1.29	18.3
Approach		1264	2.0	1264	2.0	1.009	78.2	LOS F	26.7	187.9	0.89	0.97	26.5
All Vehicles		7044	3.7	7044	3.7	1.031	125.9	LOS F	90.5	650.0	0.96	1.31	20.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 216.9 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	58.2	LOS E	0.2	0.2	0.88	0.88
P2	East Full Crossing	50	40.4	LOS E	0.2	0.2	0.73	0.73
P3	North Full Crossing	50	50.5	LOS E	0.2	0.2	0.82	0.82
P4	West Full Crossing	50	49.7	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		200	49.7	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1153	4.9	1153	4.9	0.629	10.9	LOS A	31.0	225.9	0.63	0.60	43.9
6	R2	143	2.1	143	2.1	0.629	29.7	LOS C	15.2	110.3	0.85	0.86	38.8
Approach		1297	4.6	1297	4.6	0.629	13.0	LOS A	31.0	225.9	0.65	0.63	42.8
North: Haldon Street													
7	L2	60	4.7	60	4.7	0.876	84.7	LOS F	10.6	76.4	1.00	1.00	15.2
9	R2	182	2.6	182	2.6	0.876	85.8	LOS F	10.6	76.4	1.00	0.99	15.1
Approach		241	3.1	241	3.1	0.876	85.5	LOS F	10.6	76.4	1.00	0.99	15.1
West: Canterbury Road w													
10	L2	145	5.6	144	5.6	0.706	31.9	LOS C	34.9	251.7	0.81	0.77	37.0
11	T1	1261	3.1	1258	3.1	0.706	25.9	LOS B	35.7	256.2	0.81	0.75	29.1
Approach		1406	3.3	1402 N1	3.3	0.706	26.5	LOS B	35.7	256.2	0.81	0.75	30.4
All Vehicles		2944	3.9	2940 N1	3.9	0.876	25.4	LOS B	35.7	256.2	0.76	0.72	32.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	19.6	LOS B	0.1	0.1	0.53	0.53
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	41.9	LOS E			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2021_PM_Option 3 - SCATS (single diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	151	3.2	151	3.2	0.877	66.4	LOS E	27.9	198.3	0.98	0.99	8.6
2	T1	334	0.9	334	0.9	0.877	66.7	LOS E	27.9	198.3	0.98	1.01	8.3
3	R2	69	1.4	69	1.4	0.877	83.1	LOS F	12.9	90.9	1.00	1.06	7.1
Approach		554	1.6	554	1.6	0.877	68.6	LOS E	27.9	198.3	0.98	1.01	8.2
East: Canterbury Rd													
4	L2	147	25.2	147	25.2	0.738	52.7	LOS D	40.7	307.6	1.00	0.91	26.6
5	T1	1177	4.6	1177	4.6	0.738	51.8	LOS D	44.8	326.2	1.00	0.91	22.4
6	R2	26	0.0	26	0.0	0.329	76.6	LOS F	1.8	12.5	0.97	0.71	17.8
Approach		1350	6.8	1350	6.8	0.738	52.3	LOS D	44.8	326.2	1.00	0.90	22.7
North: Chapel St													
7	L2	28	0.0	28	0.0	0.373	45.8	LOS D	10.1	70.9	0.86	0.73	4.4
8	T1	376	0.5	376	0.5	0.625	50.0	LOS D	14.5	102.2	0.92	0.78	12.6
9	R2	15	0.0	15	0.0	0.625	58.9	LOS E	14.5	102.2	0.97	0.81	3.5
Approach		418	0.5	418	0.5	0.625	50.1	LOS D	14.5	102.2	0.92	0.78	11.9
West: Canterbury Rd													
10	L2	43	0.0	43	0.0	0.646	27.6	LOS B	30.4	218.6	0.71	0.66	22.7
11	T1	1206	3.2	1202	3.2	0.646	21.0	LOS B	30.4	218.6	0.69	0.63	35.6
12	R2	172	3.1	171	3.1	0.824	64.6	LOS E	11.6	83.4	1.00	0.84	22.6
Approach		1421	3.1	1417 N1	3.1	0.824	26.5	LOS B	30.4	218.6	0.73	0.66	32.2
All Vehicles		3743	3.9	3739 N1	3.9	0.877	44.7	LOS D	44.8	326.2	0.89	0.81	22.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	23.5	LOS C	0.1	0.1	0.58	0.58
P2	East Full Crossing	50	48.2	LOS E	0.2	0.2	0.83	0.83
P3	North Full Crossing	50	18.0	LOS B	0.1	0.1	0.51	0.51
All Pedestrians		150	29.9	LOS C			0.64	0.64

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021_PM_Option 3 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	145	4.0	145	4.0	0.314	42.1	LOS C	9.0	65.5	0.79	0.75	23.7
2	T1	350	3.9	350	3.9	1.572	965.2	LOS F	169.9	1241.7	0.98	3.01	3.4
3	R2	144	8.1	144	8.1	1.572	1066.2	LOS F	169.9	1241.7	1.00	3.24	1.6
Approach		640	4.8	640	4.8	1.572	778.5	LOS F	169.9	1241.7	0.94	2.55	3.3
East: Canterbury Road E													
4	L2	93	8.8	93	8.8	0.899	73.3	LOS F	48.1	349.9	1.00	0.99	26.4
5	T1	1257	3.9	1256	3.9	0.899	66.8	LOS E	48.6	351.4	1.00	0.98	18.2
6	R2	40	0.0	40	0.0	0.520	78.6	LOS F	2.8	19.8	1.00	0.73	25.4
Approach		1391	4.1	1389 N1	4.1	0.899	67.6	LOS E	48.6	351.4	1.00	0.97	19.2
North: Sharp Street													
7	L2	58	0.0	58	0.0	0.403	43.9	LOS D	5.3	37.3	0.95	0.76	23.5
8	T1	496	2.0	496	2.0	1.818	1377.3	LOS F	197.6	1406.5	0.99	4.56	2.5
Approach		553	1.8	553	1.8	1.818	1238.6	LOS F	197.6	1406.5	0.99	4.17	2.6
West: Canterbury Road w													
10	L2	12	9.1	12	9.1	0.521	20.3	LOS B	15.4	110.8	0.47	0.43	44.2
11	T1	1043	3.1	1041	3.1	0.521	16.2	LOS B	17.8	128.3	0.51	0.46	39.3
12	R2	272	4.1	272	4.1	0.901	87.0	LOS F	21.0	151.9	1.00	0.95	23.6
Approach		1328	3.4	1325 N1	3.4	0.901	30.8	LOS C	21.0	151.9	0.61	0.56	32.2
All Vehicles		3912	3.6	3907 N1	3.6	1.818	337.4	LOS F	197.6	1406.5	0.86	1.54	6.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	30.3	LOS D	0.1	0.1	0.66	0.66
P2	East Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P4	West Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		200	45.7	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021_PM_Option 3 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	48	4.6	48	4.6	0.774	44.3	LOS D	14.5	108.1	0.79	0.76	24.0
2	T1	390	8.5	390	8.5	1.714	614.8	LOS F	155.2	1136.3	0.88	2.36	5.2
3	R2	199	2.7	199	2.7	1.714	1349.1	LOS F	155.2	1136.3	1.00	4.40	1.3
Approach		637	6.4	637	6.4	1.714	800.8	LOS F	155.2	1136.3	0.91	2.88	3.4
East: Canterbury Road East													
4	L2	88	4.6	88	4.6	0.786	50.1	LOS D	40.7	296.4	1.00	0.91	31.8
5	T1	1107	4.6	1107	4.6	0.786	49.5	LOS D	40.7	296.4	1.00	0.90	21.9
6	R2	195	4.6	195	4.6	0.893	84.8	LOS F	15.1	110.1	1.00	0.98	23.4
Approach		1389	4.6	1389	4.6	0.893	54.5	LOS D	40.7	296.4	1.00	0.91	23.0
North: Thorncraft Parade													
7	L2	76	8.5	76	8.5	0.218	30.9	LOS C	5.7	42.1	0.74	0.68	28.2
8	T1	375	4.6	375	4.6	0.962	81.0	LOS F	45.7	332.2	0.96	1.13	23.5
9	R2	179	4.6	179	4.6	0.962	96.5	LOS F	45.7	332.2	1.00	1.22	14.3
Approach		629	5.1	629	5.1	0.962	79.4	LOS F	45.7	332.2	0.94	1.10	21.3
West: Canterbury Road West													
10	L2	145	2.7	140	2.5	0.903	78.8	LOS F	44.6	318.6	1.00	0.96	25.3
11	T1	1129	2.7	1086	2.5	0.903	69.2	LOS E	44.6	318.7	1.00	0.97	17.7
12	R2	68	0.0	66	0.0	0.825	86.6	LOS F	5.0	34.9	1.00	0.90	24.1
Approach		1342	2.5	1291 N1	2.4	0.903	71.2	LOS F	44.6	318.7	1.00	0.96	19.2
All Vehicles		3998	4.3	3947 N1	4.3	1.714	184.5	LOS F	155.2	1136.3	0.98	1.28	10.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	27.7	LOS C	0.1	0.1	0.63	0.63
P2	East Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P3	North Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P4	West Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
All Pedestrians		200	33.2	LOS D			0.69	0.69

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021_PM_Option 3 - SCATS (Double Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	111	2.1	111	2.1	0.679	58.7	LOS E	17.0	122.5	0.97	0.83	20.0
2	T1	440	4.2	440	4.2	0.679	54.1	LOS D	17.7	128.2	0.97	0.83	28.6
3	R2	451	1.0	451	1.0	1.301	615.8	LOS F	121.7	859.1	1.00	2.42	2.8
Approach		1002	2.5	1002	2.5	1.301	307.6	LOS F	121.7	859.1	0.99	1.55	7.2
East: Canterbury Road E													
4	L2	192	1.6	192	1.6	0.899	70.4	LOS E	47.6	340.3	1.00	1.08	27.5
5	T1	1102	2.9	1102	2.9	0.899	60.0	LOS E	47.9	343.5	1.00	1.05	20.3
6	R2	1	0.0	1	0.0	0.005	63.1	LOS E	0.1	0.4	0.91	0.60	29.1
Approach		1295	2.7	1295	2.7	0.899	61.6	LOS E	47.9	343.5	1.00	1.05	21.8
North: Beamish Street													
7	L2	52	12.5	52	12.5	1.189	387.0	LOS F	47.9	356.0	1.00	1.74	3.9
8	T1	378	5.7	378	5.7	1.189	399.5	LOS F	47.9	356.0	1.00	1.99	7.2
9	R2	88	14.6	88	14.6	0.710	72.5	LOS F	6.0	47.4	0.99	0.85	17.0
Approach		517	7.9	517	7.9	1.189	342.7	LOS F	47.9	356.0	1.00	1.77	7.2
West: Canterbury Road w													
10	L2	86	11.4	78	11.1	0.775	27.0	LOS B	24.9	178.5	0.73	0.68	40.1
11	T1	983	1.6	896	1.5	0.775	17.7	LOS B	24.9	178.5	0.59	0.54	36.8
12	R2	208	1.6	189	1.5	0.877	85.5	LOS F	14.0	99.2	1.00	0.90	23.3
Approach		1277	2.2	1163 N1	2.1	0.877	29.3	LOS C	24.9	178.5	0.67	0.61	32.1
All Vehicles		4092	3.1	3977 N1	3.2	1.301	150.7	LOS F	121.7	859.1	0.90	1.14	12.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	35.1	LOS D	0.1	0.1	0.71	0.71
P4	West Full Crossing	50	51.5	LOS E	0.2	0.2	0.86	0.86
All Pedestrians		200	46.5	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021_PM _Option 3 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1721	4.6	1721	4.6	0.662	5.2	LOS A	27.9	203.2	0.40	0.38	50.1
6	R2	447	4.6	447	4.6	0.909	52.4	LOS D	25.9	188.7	0.93	0.96	29.4
Approach		2168	4.6	2168	4.6	0.909	15.0	LOS B	27.9	203.2	0.51	0.50	40.0
North: Wonga Street													
7	L2	205	8.5	205	8.5	0.235	25.6	LOS B	7.8	58.5	0.60	0.72	29.6
9	R2	94	4.6	94	4.6	0.613	74.2	LOS F	6.5	47.4	1.00	0.79	16.6
Approach		300	7.3	300	7.3	0.613	40.9	LOS C	7.8	58.5	0.73	0.74	23.8
West: Canterbury Road West													
10	L2	64	2.7	55	2.8	0.869	55.9	LOS D	42.8	306.8	1.00	0.97	30.8
11	T1	1383	2.7	1196	2.8	0.869	50.3	LOS D	43.0	307.9	0.99	0.97	22.7
Approach		1446	2.7	1251 N1	2.8	0.869	50.5	LOS D	43.0	307.9	0.99	0.97	23.2
All Vehicles		3914	4.1	3718 N1	4.3	0.909	29.0	LOS C	43.0	307.9	0.69	0.68	31.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	31.6	LOS D	0.1	0.1	0.67	0.67
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	47.9	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021_PM_Option 3 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	15	0.0	15	0.0	0.806	25.5	LOS B	46.8	351.4	0.80	0.75	45.0
5	T1	1443	8.5	1443	8.5	0.806	28.2	LOS B	46.8	351.4	0.86	0.80	31.5
6	R2	21	9.5	21	9.5	0.806	50.8	LOS D	33.4	250.6	0.97	0.89	33.7
Approach		1479	8.5	1479	8.5	0.806	28.5	LOS B	46.8	351.4	0.86	0.80	31.7
NorthEast: Jeffrey Street													
24b	L3	6	0.0	6	0.0	0.922	93.3	LOS F	13.6	101.2	1.00	1.09	23.9
24	L2	10	0.0	10	0.0	0.922	92.3	LOS F	13.6	101.2	1.00	1.09	23.8
26a	R1	317	7.9	317	7.9	0.922	91.0	LOS F	13.6	101.2	1.00	1.09	15.3
26b	R3	1	0.0	1	0.0	0.922	92.5	LOS F	13.5	100.8	1.00	1.09	23.8
Approach		334	7.5	334	7.5	0.922	91.1	LOS F	13.6	101.2	1.00	1.09	15.8
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.596	75.0	LOS F	6.4	46.5	1.00	0.79	26.8
7	L2	48	0.0	48	0.0	0.596	74.0	LOS F	6.4	46.5	1.00	0.79	26.7
7a	L1	1	0.0	1	0.0	0.596	72.7	LOS F	6.4	46.5	1.00	0.79	27.0
9	R2	125	8.0	125	8.0	0.596	75.4	LOS F	6.4	46.5	1.00	0.79	17.4
Approach		175	5.7	175	5.7	0.596	75.0	LOS F	6.4	46.5	1.00	0.79	20.6
West: Canterbury Road w													
10	L2	17	5.9	15	6.5	0.795	36.4	LOS C	20.6	155.0	0.90	0.84	30.9
10a	L1	291	7.9	257	8.7	0.795	35.2	LOS C	20.6	155.0	0.90	0.84	31.3
11	T1	1291	8.1	1140	8.9	0.795	30.1	LOS C	20.6	155.0	0.89	0.82	32.8
Approach		1599	8.0	1412 N1	8.8	0.795	31.1	LOS C	20.6	155.0	0.89	0.83	32.5
All Vehicles		3587	8.0	3400 N1	8.5	0.922	38.1	LOS C	46.8	351.4	0.90	0.84	28.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 461.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	9.3	LOS A	0.1	0.1	0.37	0.37
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	10.4	LOS B	0.1	0.1	0.39	0.39
P3	North Full Crossing	108	21.3	LOS C	0.2	0.2	0.55	0.55
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	29.0	LOS C			0.60	0.60

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.

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Option 3 - 2036

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.420	12.6	LOS A	14.3	107.9	0.40	0.37	52.5
5	T1	1110	8.5	969	8.9	0.420	9.1	LOS A	16.4	123.9	0.51	0.46	52.2
6	R2	89	8.5	78	8.9	0.616	66.8	LOS E	5.7	43.2	1.00	0.87	28.2
Approach		1201	8.5	1048 N1	8.9	0.616	13.4	LOS A	16.4	123.9	0.55	0.49	49.1
North: Punchbowl Road													
7	L2	27	8.5	27	8.5	0.896	81.8	LOS F	21.0	148.2	1.00	0.99	16.6
8	T1	10	8.5	10	8.5	0.896	76.1	LOS F	21.0	148.2	1.00	0.99	25.7
9	R2	487	8.5	487	8.5	0.896	82.2	LOS F	21.0	148.2	1.00	0.99	25.2
Approach		524	8.5	524	8.5	0.896	82.0	LOS F	21.0	159.9	1.00	0.99	24.9
West: Canterbury Road West													
10	L2	141	8.3	141	8.3	0.081	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1362	8.0	1362	8.0	0.730	10.5	LOS A	29.2	218.4	0.60	0.56	44.9
Approach		1503	8.1	1503	8.1	0.730	10.0	LOS A	29.2	218.4	0.54	0.55	46.3
All Vehicles		3228	8.3	3075 N1	8.7	0.896	23.4	LOS B	29.2	218.4	0.62	0.61	39.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
All Pedestrians		50	59.6	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	123	11.5	123	11.5	1.354	706.2	LOS F	70.2	524.9	1.00	2.50	2.4
3	R2	299	4.3	299	4.3	1.354	711.6	LOS F	70.2	524.9	1.00	2.53	2.4
Approach		422	6.4	422	6.4	1.354	710.0	LOS F	70.2	524.9	1.00	2.52	2.4
East: Canterbury Road E													
4	L2	187	3.1	168	3.3	0.901	64.0	LOS E	22.3	163.2	1.00	1.02	21.3
5	T1	1081	5.9	973	6.2	0.901	60.3	LOS E	22.3	163.2	1.00	1.03	6.1
Approach		1268	5.5	1141 N1	5.8	0.901	60.9	LOS E	22.3	163.2	1.00	1.03	9.3
West: Canterbury Road W													
11	T1	1498	7.1	1498	7.1	1.105	272.1	LOS F	109.9	816.0	1.00	2.20	6.1
12	R2	137	12.0	137	12.0	0.197	23.9	LOS B	4.9	38.1	0.83	0.77	39.7
Approach		1635	7.5	1635	7.5	1.105	251.4	LOS F	109.9	816.0	0.99	2.08	7.0
All Vehicles		3325	6.6	3198 N1	6.8	1.354	243.9	LOS F	109.9	816.0	0.99	1.76	5.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	36.5	LOS D	0.1	0.1	0.72	0.72
P4	West Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	49.0	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1193	8.6	1062	9.1	0.938	61.9	LOS E	43.2	326.4	0.94	1.12	10.2
6	R2	134	2.2	119	2.3	0.938	95.6	LOS F	40.3	299.8	1.00	1.29	18.2
Approach		1328	7.9	1181 N1	8.5	0.938	65.3	LOS E	43.2	326.4	0.94	1.14	11.6
North: Rosmore Avenue													
7	L2	122	2.9	122	2.9	0.125	21.6	LOS B	4.1	29.1	0.53	0.68	31.6
9	R2	139	2.5	139	2.5	1.636	1209.7	LOS F	55.0	393.0	1.00	3.16	1.4
Approach		261	2.7	261	2.7	1.636	652.8	LOS F	55.0	393.0	0.78	2.00	2.6
West: Canterbury West													
10	L2	200	1.3	187	1.4	0.983	95.5	LOS F	22.3	163.2	1.00	1.20	16.4
11	T1	1285	6.4	1202	6.6	0.983	91.1	LOS F	22.3	163.2	1.00	1.22	4.1
Approach		1486	5.7	1389 N1	5.9	0.983	91.7	LOS F	22.3	163.2	1.00	1.22	6.3
All Vehicles		3074	6.4	2830 N1	7.0	1.636	132.4	LOS F	55.0	393.0	0.96	1.26	5.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	31.6	LOS D	0.1	0.1	0.67	0.67
All Pedestrians		100	47.9	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	370	3.4	370	3.4	0.561	19.5	LOS B	13.0	93.9	0.56	0.73	32.8
3	R2	163	5.6	163	5.6	1.071	243.8	LOS F	24.8	181.7	1.00	1.56	6.5
Approach		533	4.1	533	4.1	1.071	88.1	LOS F	24.8	181.7	0.70	0.98	14.7
East: Canterbury Road E													
4	L2	91	9.2	76	9.9	0.897	67.5	LOS E	26.0	193.3	1.00	1.00	24.7
5	T1	920	6.4	773	6.8	0.897	49.1	LOS D	33.1	245.3	0.98	0.96	14.6
Approach		1011	6.6	850 N1	7.1	0.897	50.7	LOS D	33.1	245.3	0.98	0.96	16.0
West: Canterbury Road w													
11	T1	1028	8.6	1004	8.7	0.803	7.1	LOS A	22.6	163.3	0.39	0.38	38.0
12	R2	421	2.9	411	3.0	0.803	30.4	LOS C	22.6	163.3	0.84	0.91	33.5
Approach		1449	6.9	1414 N1	7.0	0.803	13.9	LOS A	22.6	163.3	0.52	0.53	35.3
All Vehicles		2993	6.3	2797 N1	6.8	1.071	39.2	LOS C	33.1	245.3	0.70	0.75	21.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	41.7	LOS E	0.2	0.2	0.77	0.77
P2	East Full Crossing	50	44.1	LOS E	0.2	0.2	0.79	0.79
All Pedestrians		100	42.9	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1011	8.5	845	9.2	0.365	0.9	LOS A	1.7	12.8	0.07	0.10	56.1
6	R2	77	8.5	64	9.2	0.365	6.9	LOS A	1.5	11.4	0.12	0.20	50.2
Approach		1088	8.5	909 N1	9.2	0.365	1.3	LOS A	1.7	12.8	0.08	0.11	55.0
North: Dudley Street													
7	L2	71	8.5	71	8.5	0.109	32.9	LOS C	3.1	23.2	0.68	0.69	26.5
9	R2	41	8.5	41	8.5	0.262	70.3	LOS E	2.7	20.2	0.97	0.74	17.2
Approach		112	8.5	112	8.5	0.262	46.6	LOS D	3.1	23.2	0.79	0.71	22.2
West: Canterbury West													
10	L2	7	8.0	7	8.1	0.591	13.8	LOS A	10.9	81.9	0.33	0.30	45.1
11	T1	1081	8.0	1056	8.1	0.591	10.9	LOS A	16.3	122.1	0.41	0.37	35.4
Approach		1088	8.0	1063 N1	8.1	0.591	11.0	LOS A	16.3	122.1	0.41	0.37	35.5
All Vehicles		2288	8.3	2084 N1	9.1	0.591	8.7	LOS A	16.3	122.1	0.29	0.27	40.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	22.3	LOS C	0.1	0.1	0.57	0.57
All Pedestrians		100	43.3	LOS E			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	89	8.5	89	8.5	0.084	12.4	LOS A	2.1	16.0	0.39	0.64	37.5
3	R2	47	8.0	47	8.0	0.362	73.4	LOS F	3.2	23.9	0.99	0.75	16.7
Approach		136	8.3	136	8.3	0.362	33.6	LOS C	3.2	23.9	0.60	0.68	26.2
East: Canterbury Raod East													
4	L2	126	8.5	104	9.2	0.773	48.9	LOS D	30.4	229.8	0.95	0.86	32.5
5	T1	1113	8.5	915	9.2	0.773	42.7	LOS D	31.2	235.9	0.95	0.85	25.0
Approach		1239	8.5	1019 N1	9.2	0.773	43.3	LOS D	31.2	235.9	0.95	0.85	26.1
West: Canterbury Road West													
11	T1	1503	5.3	1488	5.3	0.665	5.9	LOS A	17.1	124.9	0.35	0.36	44.2
12	R2	145	8.0	144	8.0	0.665	17.3	LOS B	13.9	102.4	0.52	0.61	42.3
Approach		1649	5.5	1632 N1	5.5	0.665	6.9	LOS A	17.1	124.9	0.36	0.39	43.8
All Vehicles		3024	6.9	2786 N1	7.5	0.773	21.5	LOS B	31.2	235.9	0.59	0.57	32.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	48.6	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	175	21.4	175	21.4	0.183	19.6	LOS B	5.7	47.1	0.48	0.67	39.7
2	T1	3038	7.5	3038	7.5	1.280	570.5	LOS F	285.7	2129.1	1.00	3.15	7.8
3	R2	229	3.2	229	3.2	0.962	112.1	LOS F	10.6	76.2	1.00	1.14	21.2
Approach		3442	8.0	3442	8.0	1.280	512.0	LOS F	285.7	2129.1	0.97	2.89	8.2
East: Canterbury Road E													
4	L2	109	10.1	109	10.1	1.260	507.9	LOS F	130.8	959.7	1.00	1.85	5.9
5	T1	951	4.5	951	4.5	1.260	523.2	LOS F	132.7	964.5	1.00	2.47	2.6
6	R2	241	9.8	241	9.8	1.175	403.3	LOS F	24.8	188.3	1.00	1.79	9.0
Approach		1301	5.9	1301	5.9	1.260	499.7	LOS F	132.7	964.5	1.00	2.29	3.9
North: King Georges Road													
7	L2	402	7.5	402	7.5	0.924	62.7	LOS E	66.8	501.2	1.00	1.10	32.8
8	T1	2098	9.1	2098	9.1	0.924	55.5	LOS D	66.9	504.8	1.00	1.05	36.3
9	R2	241	5.2	241	5.2	1.264	555.6	LOS F	61.3	448.0	1.00	2.18	4.8
Approach		2741	8.5	2741	8.5	1.264	100.6	LOS F	66.9	504.8	1.00	1.16	26.5
West: Canterbury Road W													
10	L2	124	10.5	123	10.5	0.171	33.8	LOS C	5.6	42.8	0.66	0.70	41.6
11	T1	749	7.5	744	7.5	1.118	302.1	LOS F	71.5	532.2	1.00	2.05	9.2
12	R2	144	21.6	143	21.6	1.131	330.9	LOS F	13.0	107.7	1.00	1.52	10.0
Approach		1017	9.8	1010 N1	9.9	1.131	273.6	LOS F	71.5	532.2	0.96	1.81	10.7
All Vehicles		8501	8.1	8493 N1	8.1	1.280	349.0	LOS F	285.7	2129.1	0.98	2.11	10.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1671.2 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	58.2	LOS E	0.2	0.2	0.88	0.88
P2	East Full Crossing	50	28.3	LOS C	0.1	0.1	0.61	0.61
P3	North Full Crossing	50	60.0	LOS E	0.2	0.2	0.90	0.90
P4	West Full Crossing	50	32.7	LOS D	0.1	0.1	0.66	0.66
All Pedestrians		200	44.8	LOS E			0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1079	4.8	978	4.8	0.868	15.7	LOS B	15.7	115.6	0.28	0.38	39.4
6	R2	96	11.3	87	11.3	0.868	23.5	LOS B	15.7	115.6	0.57	0.73	41.9
Approach		1175	5.3	1065 N1	5.3	0.868	16.4	LOS B	15.7	115.6	0.31	0.41	39.8
North: Haldon Street													
7	L2	59	5.0	59	5.0	1.153	366.6	LOS F	22.8	168.7	1.00	1.88	4.5
9	R2	123	8.7	123	8.7	1.153	367.3	LOS F	22.8	168.7	1.00	1.78	4.5
Approach		182	7.5	182	7.5	1.153	367.0	LOS F	22.8	168.7	1.00	1.81	4.5
West: Canterbury Road w													
10	L2	96	8.2	88	8.0	0.900	58.0	LOS E	51.6	379.7	1.00	1.01	28.7
11	T1	1449	5.9	1330	5.7	0.900	52.2	LOS D	52.1	382.5	1.00	1.02	19.3
Approach		1545	6.0	1418 N1	5.9	0.900	52.6	LOS D	52.1	382.5	1.00	1.02	20.1
All Vehicles		2902	5.8	2665 N1	6.3	1.153	59.5	LOS E	52.1	382.5	0.72	0.83	19.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 528.2 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	46.3	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036_AM_Option 3 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	71	7.1	71	7.1	0.240	36.2	LOS C	7.2	53.5	0.72	0.67	26.3
2	T1	344	6.4	344	6.4	1.202	309.7	LOS F	90.0	679.6	0.93	1.70	8.6
3	R2	167	13.6	167	13.6	1.202	406.6	LOS F	90.0	679.6	1.00	2.05	3.8
Approach		582	8.6	582	8.6	1.202	304.2	LOS F	90.0	679.6	0.93	1.68	7.3
East: Canterbury Road E													
4	L2	86	16.7	76	16.4	0.880	82.1	LOS F	35.2	264.2	1.00	0.98	24.7
5	T1	1040	7.1	916	6.9	0.880	73.9	LOS F	36.0	267.1	1.00	0.96	16.9
6	R2	68	0.0	60	0.0	0.778	85.8	LOS F	4.5	31.3	1.00	0.81	24.1
Approach		1194	7.4	1052 N1	7.2	0.880	75.2	LOS F	36.0	267.1	1.00	0.96	18.2
North: Sharp Street													
7	L2	71	5.3	71	5.3	0.300	35.9	LOS C	4.3	31.2	0.89	0.75	25.9
8	T1	409	4.6	409	4.6	1.357	658.1	LOS F	111.0	807.4	0.99	3.32	5.0
Approach		480	4.7	480	4.7	1.357	565.7	LOS F	111.0	807.4	0.98	2.94	5.3
West: Canterbury Road w													
10	L2	7	0.0	6	0.0	0.740	17.4	LOS B	20.5	150.1	0.52	0.47	46.0
11	T1	1327	5.5	1255	5.4	0.740	12.2	LOS A	21.3	155.7	0.53	0.48	43.1
12	R2	313	9.6	296	9.6	0.907	82.9	LOS F	23.7	179.5	1.00	0.99	24.2
Approach		1647	6.2	1558 N1	6.2	0.907	25.6	LOS B	23.7	179.5	0.62	0.58	34.6
All Vehicles		3903	6.7	3672 N1	7.2	1.357	154.6	LOS F	111.0	807.4	0.82	1.17	11.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 528.2 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
P2	East Full Crossing	50	57.7	LOS E	0.2	0.2	0.91	0.91
P3	North Full Crossing	50	25.3	LOS C	0.1	0.1	0.60	0.60
P4	West Full Crossing	50	36.5	LOS D	0.1	0.1	0.72	0.72
All Pedestrians		200	39.9	LOS D			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036_AM_Option 3 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	102	8.5	102	8.5	2.470	2700.5	LOS F	269.1	2021.2	1.00	5.87	0.7
2	T1	1149	8.5	1149	8.5	5.471	6315.1	LOS F	644.9	4841.7	1.00	6.73	0.6
3	R2	99	8.0	99	8.0	5.471	8093.6	LOS F	644.9	4841.7	1.00	7.15	0.2
Approach		1350	8.5	1350	8.5	5.471	6173.3	LOS F	644.9	4841.7	1.00	6.70	0.5
East: Canterbury Road East													
4	L2	36	8.5	35	8.7	0.570	30.3	LOS C	30.1	226.4	0.81	0.74	38.9
5	T1	1020	8.5	978	8.7	0.570	24.2	LOS B	30.1	226.4	0.80	0.72	32.4
6	R2	277	8.5	266	8.7	1.007	96.3	LOS F	23.5	177.1	1.00	1.04	21.7
Approach		1333	8.5	1278 N1	8.7	1.007	39.3	LOS C	30.1	226.4	0.84	0.79	27.9
North: Thorncraft Parade													
7	L2	198	8.5	198	8.5	0.672	59.7	LOS E	13.7	102.6	1.00	0.94	19.3
8	T1	278	8.5	278	8.5	2.971	3255.7	LOS F	208.8	1568.3	1.00	4.88	1.1
9	R2	87	8.5	87	8.5	2.971	3590.4	LOS F	208.8	1568.3	1.00	5.29	0.5
Approach		562	8.5	562	8.5	2.971	2184.5	LOS F	208.8	1568.3	1.00	3.56	1.2
West: Canterbury Road West													
10	L2	65	0.0	61	0.0	0.884	23.1	LOS B	28.0	207.7	0.65	0.67	42.2
11	T1	1483	8.0	1395	8.0	0.884	14.8	LOS B	37.4	279.5	0.65	0.65	39.6
12	R2	86	0.1	81	0.1	0.438	50.0	LOS D	4.2	29.7	1.00	0.77	32.0
Approach		1634	7.3	1537 N1	7.2	0.884	17.0	LOS B	37.4	279.5	0.67	0.65	38.9
All Vehicles		4879	8.1	4727 N1	8.4	5.471	2038.5	LOS F	644.9	4841.7	0.85	2.76	1.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 528.2 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	17.5	LOS B	0.1	0.1	0.50	0.50
P2	East Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
P3	North Full Crossing	50	19.6	LOS B	0.1	0.1	0.53	0.53
P4	West Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		200	40.0	LOS D			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2036_AM_Option 3 - SCATS (Double Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	109	4.4	109	4.4	2.011	1874.2	LOS F	194.6	1418.4	1.00	5.10	1.0
2	T1	692	4.9	692	4.9	2.011	1869.2	LOS F	194.6	1418.4	1.00	5.10	1.9
3	R2	389	4.1	389	4.1	2.032	1919.3	LOS F	191.8	1389.3	1.00	4.10	0.9
Approach		1190	4.6	1190	4.6	2.032	1886.0	LOS F	194.6	1419.1	1.00	4.77	1.5
East: Canterbury Road E													
4	L2	225	4.0	224	4.0	0.889	70.1	LOS E	34.5	251.8	0.99	1.08	27.4
5	T1	767	5.8	766	5.8	0.889	60.3	LOS E	34.5	251.8	0.99	1.03	20.2
6	R2	1	0.0	1	0.0	0.013	76.7	LOS F	0.1	0.5	0.98	0.59	26.3
Approach		993	5.4	991 N1	5.4	0.889	62.5	LOS E	34.5	251.8	0.99	1.04	22.4
North: Beamish Street													
7	L2	51	17.9	51	17.9	1.561	1035.3	LOS F	104.0	783.4	1.00	1.92	1.6
8	T1	477	6.8	477	6.8	1.561	1050.7	LOS F	104.0	783.4	1.00	2.86	3.1
9	R2	79	27.9	79	27.9	0.376	57.1	LOS E	4.7	40.3	0.89	0.76	19.8
Approach		607	10.5	607	10.5	1.561	919.9	LOS F	104.0	783.4	0.99	2.51	3.2
West: Canterbury Road w													
10	L2	114	12.7	103	12.7	1.347	663.2	LOS F	101.9	750.7	1.00	3.46	4.8
11	T1	1323	5.1	1200	5.0	1.347	658.2	LOS F	102.8	750.7	0.93	3.46	2.5
12	R2	269	5.8	244	5.8	1.038	180.3	LOS F	30.5	224.4	1.00	1.29	14.2
Approach		1705	5.7	1547 N1	5.7	1.347	583.2	LOS F	102.8	750.7	0.94	3.12	3.4
All Vehicles		4495	6.0	4335 N1	6.2	2.032	869.1	LOS F	194.6	1419.1	0.98	3.01	2.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 528.2 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	44.1	LOS E	0.2	0.2	0.79	0.79
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	25.3	LOS C	0.1	0.1	0.60	0.60
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		200	49.5	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1324	8.5	1324	8.5	0.444	4.2	LOS A	13.2	99.3	0.33	0.30	51.7
6	R2	427	8.5	427	8.5	0.748	47.8	LOS D	21.3	159.8	0.96	1.00	30.5
Approach		1751	8.5	1751	8.5	0.748	14.9	LOS B	21.3	159.8	0.48	0.47	40.3
North: Wonga Street													
7	L2	317	8.5	317	8.5	0.553	37.8	LOS C	15.9	119.6	0.79	0.80	24.8
9	R2	96	8.5	96	8.5	0.593	73.0	LOS F	6.6	49.5	1.00	0.79	16.8
Approach		414	8.5	414	8.5	0.593	46.0	LOS D	15.9	119.6	0.84	0.79	22.3
West: Canterbury Road West													
10	L2	58	8.0	48	8.6	0.867	41.8	LOS C	44.8	337.1	0.91	0.88	35.0
11	T1	1717	8.0	1405	8.6	0.867	35.4	LOS C	44.8	337.1	0.90	0.87	27.9
Approach		1775	8.0	1453 N1	8.6	0.867	35.6	LOS C	44.8	337.1	0.90	0.87	28.2
All Vehicles		3941	8.3	3618 N1	9.0	0.867	26.8	LOS B	44.8	337.1	0.69	0.67	32.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 528.2 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	22.9	LOS C	0.1	0.1	0.57	0.57
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	43.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036_AM_Option 3 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.643	21.0	LOS B	30.4	227.7	0.64	0.59	47.7
5	T1	1047	8.5	1047	8.5	0.643	18.3	LOS B	30.4	227.7	0.72	0.66	37.7
6	R2	35	8.6	35	8.6	0.643	34.0	LOS C	10.8	81.0	0.94	0.84	39.7
Approach		1095	8.4	1095	8.4	0.643	18.8	LOS B	30.4	227.7	0.72	0.66	38.0
NorthEast: Jeffrey Street													
24b	L3	24	8.3	24	8.3	0.931	96.9	LOS F	12.0	89.1	1.00	1.11	23.2
24	L2	4	0.0	4	0.0	0.931	95.8	LOS F	12.0	89.1	1.00	1.11	23.2
26a	R1	260	7.7	260	7.7	0.931	94.3	LOS F	12.0	89.1	1.00	1.11	14.9
26b	R3	1	0.0	1	0.0	0.931	95.6	LOS F	11.9	88.5	1.00	1.11	23.3
Approach		289	7.6	289	7.6	0.931	94.5	LOS F	12.0	89.1	1.00	1.11	15.9
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	26.4
7	L2	67	0.0	67	0.0	0.716	76.3	LOS F	8.1	58.5	1.00	0.84	26.3
7a	L1	1	0.0	1	0.0	0.716	75.0	LOS F	8.1	58.5	1.00	0.84	26.6
9	R2	144	7.6	144	7.6	0.716	77.7	LOS F	8.1	58.5	1.00	0.84	17.1
Approach		213	5.2	213	5.2	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	20.6
West: Canterbury Road w													
10	L2	21	9.5	17	10.0	0.902	50.6	LOS D	20.6	155.0	0.98	0.99	26.0
10a	L1	171	8.2	142	8.6	0.902	49.5	LOS D	20.6	155.0	0.98	0.99	26.4
11	T1	1793	8.0	1487	8.4	0.902	44.5	LOS D	20.7	155.0	0.98	0.99	27.1
Approach		1985	8.1	1647 N1	8.5	0.902	45.0	LOS D	20.7	155.0	0.98	0.99	27.0
All Vehicles		3582	8.0	3244 N1	8.8	0.931	42.7	LOS D	30.4	227.7	0.90	0.88	27.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 528.2 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	8.6	LOS A	0.1	0.1	0.35	0.35
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	10.1	LOS B	0.1	0.1	0.38	0.38
P3	North Full Crossing	108	20.7	LOS C	0.2	0.2	0.55	0.55
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	28.6	LOS C			0.59	0.59

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.400	11.1	LOS A	10.4	75.7	0.30	0.27	53.6
5	T1	1317	4.6	1130	5.3	0.400	5.2	LOS A	10.4	75.7	0.28	0.25	55.3
6	R2	92	4.6	79	5.3	0.481	26.3	LOS B	3.7	27.1	0.69	0.78	41.0
Approach		1410	4.6	1210 N1	5.3	0.481	6.5	LOS A	10.4	75.7	0.30	0.29	54.1
North: Punchbowl Road													
7	L2	37	8.5	37	8.5	0.917	86.6	LOS F	21.9	155.2	1.00	1.01	15.9
8	T1	1	0.0	1	0.0	0.917	81.0	LOS F	21.9	155.2	1.00	1.01	24.8
9	R2	497	4.6	497	4.6	0.917	86.9	LOS F	21.9	155.2	1.00	1.02	24.5
Approach		535	4.8	535	4.8	0.917	86.8	LOS F	21.9	160.5	1.00	1.02	24.0
West: Canterbury Road West													
10	L2	174	2.8	174	2.8	0.095	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1390	2.4	1390	2.4	0.520	7.5	LOS A	20.4	145.8	0.44	0.41	48.4
Approach		1564	2.5	1564	2.5	0.520	7.3	LOS A	20.4	145.8	0.39	0.42	49.5
All Vehicles		3509	3.7	3309 N1	3.9	0.917	19.9	LOS B	21.9	160.5	0.46	0.47	42.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	60.5	LOS F	0.2	0.2	0.93	0.93
All Pedestrians		50	60.5	LOS F			0.93	0.93

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	168	1.5	168	1.5	1.335	671.2	LOS F	81.7	582.1	1.00	2.45	2.5
3	R2	318	2.8	318	2.8	1.335	677.9	LOS F	81.7	582.1	1.00	2.48	2.5
Approach		486	2.4	486	2.4	1.335	675.6	LOS F	81.7	582.1	1.00	2.47	2.5
East: Canterbury Road E													
4	L2	230	2.1	191	2.4	0.900	59.3	LOS E	23.1	163.2	1.00	1.00	22.3
5	T1	1304	0.4	1083	0.4	0.900	43.3	LOS D	23.2	163.2	0.96	0.96	8.2
Approach		1533	0.6	1275 N1	0.7	0.900	45.7	LOS D	23.2	163.2	0.96	0.96	11.8
West: Canterbury Road W													
11	T1	1287	2.6	1287	2.6	0.952	65.1	LOS E	61.8	442.0	0.95	1.14	19.3
12	R2	150	2.1	150	2.1	0.224	23.0	LOS B	5.1	36.0	0.78	0.77	40.2
Approach		1437	2.5	1437	2.5	0.952	60.7	LOS E	61.8	442.0	0.93	1.10	21.4
All Vehicles		3457	1.7	3198 N1	1.8	1.335	148.3	LOS F	81.7	582.1	0.96	1.25	8.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.7	LOS D	0.1	0.1	0.69	0.69
P4	West Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
All Pedestrians		100	46.6	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1401	5.9	1238	6.3	0.980	74.9	LOS F	44.5	326.4	0.88	1.20	8.7
6	R2	106	2.0	93	2.2	0.980	67.0	LOS E	44.5	326.4	1.00	1.25	23.0
Approach		1507	5.7	1331 N1	6.0	0.980	74.3	LOS F	44.5	326.4	0.89	1.20	10.0
North: Rosmore Avenue													
7	L2	109	0.0	109	0.0	0.126	24.0	LOS B	4.0	27.9	0.58	0.68	30.4
9	R2	201	0.5	201	0.5	2.146	2117.2	LOS F	103.3	726.4	1.00	3.97	0.8
Approach		311	0.3	311	0.3	2.146	1379.6	LOS F	103.3	726.4	0.85	2.81	1.3
West: Canterbury West													
10	L2	145	1.5	145	1.5	1.010	129.7	LOS F	22.8	163.2	1.00	1.37	12.7
11	T1	1280	2.8	1280	2.8	1.010	125.8	LOS F	22.8	163.2	1.00	1.41	3.0
Approach		1425	2.7	1425	2.7	1.010	126.2	LOS F	22.8	163.2	1.00	1.41	4.2
All Vehicles		3242	3.8	3066 N1	4.1	2.146	230.6	LOS F	103.3	726.4	0.94	1.46	3.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	31.6	LOS D	0.1	0.1	0.67	0.67
All Pedestrians		100	47.9	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	367	1.1	367	1.1	1.030	182.0	LOS F	50.2	354.9	1.00	1.40	8.4
3	R2	88	4.5	88	4.5	1.149	356.6	LOS F	16.4	119.4	1.00	1.76	4.6
Approach		455	1.8	455	1.8	1.149	215.7	LOS F	50.2	354.9	1.00	1.47	7.3
East: Canterbury Road E													
4	L2	81	5.5	69	6.1	0.899	26.5	LOS B	22.0	163.2	0.59	0.68	39.3
5	T1	1159	6.5	980	7.1	0.899	25.5	LOS B	35.0	259.8	0.73	0.77	22.8
Approach		1240	6.4	1048 N1	7.0	0.899	25.6	LOS B	35.0	259.8	0.72	0.76	24.6
West: Canterbury Road w													
11	T1	1122	2.7	1122	2.7	0.765	9.5	LOS A	44.2	316.5	0.65	0.62	34.6
12	R2	390	1.2	390	1.2	0.765	45.2	LOS D	17.3	122.1	0.94	1.00	27.8
Approach		1512	2.3	1512	2.3	0.765	18.7	LOS B	44.2	316.5	0.73	0.72	30.6
All Vehicles		3206	3.8	3015 N1	4.1	1.149	50.8	LOS D	50.2	354.9	0.77	0.85	17.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	21.2	LOS C	0.1	0.1	0.55	0.55
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	41.8	LOS E			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1257	4.6	1048	5.0	0.508	4.1	LOS A	8.6	63.1	0.26	0.25	47.8
6	R2	101	4.6	84	5.0	0.508	16.0	LOS B	8.6	63.1	0.53	0.54	43.2
Approach		1358	4.6	1132 N1	5.0	0.508	5.0	LOS A	8.6	63.1	0.28	0.27	46.9
North: Dudley Street													
7	L2	66	8.5	66	8.5	0.133	38.3	LOS C	3.2	23.7	0.74	0.71	24.6
9	R2	76	4.6	76	4.6	0.481	72.1	LOS F	5.1	37.1	0.99	0.77	17.0
Approach		142	6.4	142	6.4	0.481	56.3	LOS D	5.1	37.1	0.87	0.74	19.8
West: Canterbury West													
10	L2	41	2.7	41	2.7	0.695	37.4	LOS C	32.4	232.1	0.91	0.83	32.4
11	T1	1242	2.7	1242	2.7	0.695	31.4	LOS C	40.0	286.7	0.91	0.83	20.0
Approach		1283	2.7	1283	2.7	0.695	31.6	LOS C	40.0	286.7	0.91	0.83	20.7
All Vehicles		2783	3.8	2556 N1	4.1	0.695	21.2	LOS B	40.0	286.7	0.63	0.58	27.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	18.6	LOS B	0.1	0.1	0.52	0.52
All Pedestrians		100	41.4	LOS E			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	118	4.6	118	4.6	0.113	15.1	LOS B	3.4	24.5	0.45	0.66	35.5
3	R2	127	2.7	127	2.7	0.913	88.4	LOS F	9.9	71.1	0.97	1.05	14.7
Approach		244	3.6	244	3.6	0.913	53.1	LOS D	9.9	71.1	0.72	0.86	20.5
East: Canterbury Raod East													
4	L2	61	4.6	50	5.0	0.832	51.3	LOS D	37.9	277.0	0.98	0.92	32.1
5	T1	1382	4.6	1132	5.0	0.832	45.6	LOS D	38.4	280.2	0.98	0.92	24.1
Approach		1443	4.6	1182 N1	5.0	0.832	45.9	LOS D	38.4	280.2	0.98	0.92	24.6
West: Canterbury Road West													
11	T1	1377	2.4	1377	2.4	0.672	21.0	LOS B	47.3	337.7	0.82	0.81	27.0
12	R2	166	2.7	166	2.7	0.672	39.5	LOS C	26.9	192.3	0.90	0.98	31.8
Approach		1543	2.4	1543	2.4	0.672	23.0	LOS B	47.3	337.7	0.83	0.83	28.0
All Vehicles		3230	3.5	2969 N1	3.8	0.913	34.6	LOS C	47.3	337.7	0.88	0.87	25.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	31.6	LOS D	0.1	0.1	0.67	0.67
P2	East Full Crossing	50	58.6	LOS E	0.2	0.2	0.92	0.92
All Pedestrians		100	45.1	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 150 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	379	11.7	379	11.7	0.404	24.7	LOS B	15.1	116.6	0.62	0.74	36.4
2	T1	2006	5.3	2006	5.3	1.299	608.2	LOS F	198.8	1454.2	1.00	3.24	7.3
3	R2	301	1.6	301	1.6	1.248	528.5	LOS F	36.9	261.7	1.00	2.06	6.1
Approach		2686	5.8	2686	5.8	1.299	516.9	LOS F	198.8	1454.2	0.95	2.76	7.6
East: Canterbury Road E													
4	L2	148	4.5	148	4.5	1.304	591.7	LOS F	150.0	1078.3	1.00	2.13	5.3
5	T1	1017	2.7	1017	2.7	1.304	604.0	LOS F	158.2	1133.5	1.00	2.76	2.3
6	R2	258	4.3	258	4.3	0.991	131.7	LOS F	13.1	95.4	1.00	1.20	21.3
Approach		1423	3.2	1423	3.2	1.304	517.2	LOS F	158.2	1133.5	1.00	2.41	3.9
North: King Georges Road													
7	L2	186	4.1	186	4.1	1.295	571.0	LOS F	234.8	1688.9	1.00	2.09	6.3
8	T1	2550	3.0	2550	3.0	1.295	588.6	LOS F	249.7	1792.6	1.00	2.90	7.4
9	R2	330	2.6	330	2.6	1.292	603.8	LOS F	88.4	632.4	1.00	2.28	4.4
Approach		3066	3.0	3066	3.0	1.295	589.1	LOS F	249.7	1792.6	1.00	2.79	7.0
West: Canterbury Road W													
10	L2	192	3.8	192	3.8	0.191	21.7	LOS B	6.8	49.0	0.53	0.68	46.7
11	T1	945	0.8	945	0.8	1.003	136.5	LOS F	57.9	408.2	1.00	1.44	17.4
12	R2	455	4.0	455	4.0	1.279	551.9	LOS F	53.1	384.1	1.00	1.98	6.1
Approach		1592	2.0	1592	2.0	1.279	241.3	LOS F	57.9	408.2	0.94	1.50	11.7
All Vehicles		8766	3.7	8766	3.7	1.304	492.2	LOS F	249.7	1792.6	0.97	2.48	7.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 99.4 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	60.9	LOS F	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	40.4	LOS E	0.2	0.2	0.73	0.73
P3	North Full Crossing	50	49.7	LOS E	0.2	0.2	0.82	0.82
P4	West Full Crossing	50	49.7	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		200	50.2	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1268	4.9	1065	5.3	0.964	65.1	LOS E	62.6	457.9	0.78	1.05	19.2
6	R2	157	2.1	132	2.3	0.964	61.7	LOS E	37.0	268.6	0.98	1.20	29.1
Approach		1425	4.6	1197 N1	5.0	0.964	64.7	LOS E	62.6	457.9	0.80	1.06	20.6
North: Haldon Street													
7	L2	67	4.7	67	4.7	1.815	1527.3	LOS F	73.4	528.8	1.00	3.58	1.2
9	R2	203	2.6	203	2.6	1.815	1527.1	LOS F	73.4	528.8	1.00	3.32	1.2
Approach		270	3.1	270	3.1	1.815	1527.2	LOS F	73.4	528.8	1.00	3.39	1.2
West: Canterbury Road w													
10	L2	152	5.6	142	5.7	0.897	58.6	LOS E	50.0	360.6	1.00	1.01	28.4
11	T1	1329	3.1	1241	3.1	0.897	52.7	LOS D	50.8	365.1	1.00	1.01	19.1
Approach		1481	3.3	1384 N1	3.4	0.897	53.3	LOS D	50.8	365.1	1.00	1.01	20.5
All Vehicles		3176	3.9	2851 N1	4.3	1.815	197.5	LOS F	73.4	528.8	0.92	1.26	8.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 214.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	46.9	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036_PM_Option 3 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	159	4.0	159	4.0	0.282	34.7	LOS C	8.9	64.4	0.72	0.73	26.2
2	T1	383	3.9	383	3.9	1.409	698.3	LOS F	155.1	1133.8	0.97	2.66	4.5
3	R2	158	8.1	158	8.1	1.409	772.9	LOS F	155.1	1133.8	1.00	2.86	2.2
Approach		700	4.8	700	4.8	1.409	564.5	LOS F	155.1	1133.8	0.92	2.27	4.3
East: Canterbury Road E													
4	L2	101	8.8	79	8.9	0.910	36.8	LOS C	35.3	257.0	0.89	0.91	36.2
5	T1	1353	3.9	1065	3.9	0.910	28.7	LOS C	35.3	257.0	0.89	0.88	30.1
6	R2	70	0.0	55	0.0	0.304	39.3	LOS C	2.0	13.9	0.97	0.74	35.3
Approach		1524	4.0	1199 N1	4.0	0.910	29.8	LOS C	35.3	257.0	0.90	0.87	31.1
North: Sharp Street													
7	L2	60	0.0	60	0.0	0.365	43.7	LOS D	6.3	44.6	0.91	0.77	23.7
8	T1	517	2.0	517	2.0	1.648	1062.6	LOS F	177.6	1264.4	0.99	4.12	3.2
Approach		577	1.8	577	1.8	1.648	956.6	LOS F	177.6	1264.4	0.98	3.77	3.3
West: Canterbury Road w													
10	L2	14	9.1	13	9.3	0.798	66.7	LOS E	38.2	275.2	1.00	0.90	28.3
11	T1	1194	3.1	1118	3.2	0.798	60.5	LOS E	38.2	275.2	1.00	0.90	20.3
12	R2	312	4.1	292	4.2	0.895	84.5	LOS F	21.7	157.4	1.00	0.92	24.0
Approach		1520	3.4	1423 N1	3.4	0.895	65.5	LOS E	38.2	275.2	1.00	0.91	21.5
All Vehicles		4321	3.6	3900 N1	4.0	1.648	276.0	LOS F	177.6	1264.4	0.95	1.56	7.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 214.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	37.2	LOS D	0.1	0.1	0.73	0.73
P2	East Full Crossing	50	58.6	LOS E	0.2	0.2	0.92	0.92
P3	North Full Crossing	50	32.3	LOS D	0.1	0.1	0.68	0.68
P4	West Full Crossing	50	38.7	LOS D	0.1	0.1	0.74	0.74
All Pedestrians		200	41.7	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036_PM_Option 3 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	111	4.6	111	4.6	2.087	2016.9	LOS F	505.4	3783.0	1.00	6.08	0.9
2	T1	893	8.5	893	8.5	2.087	2012.3	LOS F	505.4	3783.0	1.00	6.08	1.7
3	R2	456	2.7	456	2.7	8.132	12864.6	LOS F	360.8	2583.1	1.00	5.04	0.1
Approach		1459	6.4	1459	6.4	8.132	5402.2	LOS F	505.4	3783.0	1.00	5.75	0.5
East: Canterbury Road East													
4	L2	94	4.6	94	4.6	0.784	19.8	LOS B	24.5	178.5	0.61	0.59	43.7
5	T1	1191	4.6	1191	4.6	0.784	12.2	LOS A	24.5	178.5	0.56	0.52	41.7
6	R2	210	4.6	210	4.6	0.907	88.2	LOS F	15.8	115.1	1.00	0.92	22.9
Approach		1496	4.6	1495 N1	4.6	0.907	23.3	LOS B	24.5	178.5	0.63	0.58	35.0
North: Thorncraft Parade													
7	L2	125	8.5	125	8.5	1.380	747.6	LOS F	213.5	1562.4	1.00	3.46	2.3
8	T1	620	4.6	620	4.6	6.104	1204.6	LOS F	250.2	1820.0	1.00	3.54	2.8
9	R2	296	4.6	296	4.6	6.104	9217.6	LOS F	250.2	1820.0	1.00	4.81	0.2
Approach		1040	5.1	1040	5.1	6.104	3427.9	LOS F	250.2	1820.0	1.00	3.89	0.8
West: Canterbury Road West													
10	L2	165	2.7	154	2.6	0.892	56.8	LOS E	50.0	357.8	1.00	0.99	30.0
11	T1	1285	2.7	1200	2.6	0.892	50.8	LOS D	50.0	357.8	0.99	0.99	21.7
12	R2	188	0.0	176	0.0	0.884	87.4	LOS F	13.3	93.2	1.00	0.93	23.9
Approach		1639	2.4	1530 N1	2.3	0.892	55.6	LOS D	50.0	357.8	0.99	0.98	23.2
All Vehicles		5634	4.5	5525 N1	4.6	8.132	2093.9	LOS F	505.4	3783.0	0.90	2.68	1.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 214.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P2	East Full Crossing	50	41.0	LOS E	0.2	0.2	0.77	0.77
P3	North Full Crossing	50	30.3	LOS D	0.1	0.1	0.66	0.66
P4	West Full Crossing	50	41.0	LOS E	0.2	0.2	0.77	0.77
All Pedestrians		200	35.1	LOS D			0.71	0.71

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2036_PM_Option 3 - SCATS (Double Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	126	2.1	126	2.1	0.866	72.2	LOS F	22.3	160.3	1.00	1.18	17.5
2	T1	499	4.2	499	4.2	0.866	65.9	LOS E	22.3	160.3	0.99	1.08	26.2
3	R2	512	1.0	512	1.0	1.438	856.4	LOS F	167.8	1184.9	1.00	2.86	2.0
Approach		1137	2.5	1137	2.5	1.438	422.5	LOS F	167.8	1184.9	0.99	1.89	5.5
East: Canterbury Road E													
4	L2	200	1.6	200	1.6	0.903	63.5	LOS E	46.8	334.5	0.98	1.05	29.0
5	T1	1148	2.9	1148	2.9	0.903	53.5	LOS D	46.8	334.5	0.98	1.01	21.9
6	R2	1	0.0	1	0.0	0.013	76.7	LOS F	0.1	0.5	0.99	0.59	26.3
Approach		1350	2.7	1349 N1	2.7	0.903	55.0	LOS D	46.8	335.4	0.98	1.02	23.4
North: Beamish Street													
7	L2	59	12.5	59	12.5	1.356	681.8	LOS F	77.3	573.8	1.00	2.22	2.4
8	T1	431	5.7	431	5.7	1.356	691.8	LOS F	77.3	573.8	1.00	2.57	4.5
9	R2	100	14.6	100	14.6	0.927	95.1	LOS F	8.2	64.4	1.00	1.13	14.1
Approach		590	7.9	590	7.9	1.356	589.3	LOS F	77.3	573.8	1.00	2.29	4.6
West: Canterbury Road w													
10	L2	90	11.4	65	11.0	0.523	52.4	LOS D	27.7	198.9	1.00	0.89	31.1
11	T1	1028	1.6	742	1.5	0.523	46.3	LOS D	27.7	198.9	1.00	0.88	22.9
12	R2	217	1.6	157	1.5	0.882	82.7	LOS F	11.9	84.1	1.00	0.93	23.8
Approach		1335	2.2	963 N1	2.1	0.882	52.6	LOS D	27.7	198.9	1.00	0.89	23.8
All Vehicles		4412	3.2	4040 N1	3.5	1.438	235.9	LOS F	167.8	1184.9	0.99	1.42	8.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 214.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.7	LOS D	0.1	0.1	0.69	0.69
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P4	West Full Crossing	50	50.7	LOS E	0.2	0.2	0.85	0.85
All Pedestrians		200	44.2	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036_PM _Option 3 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1881	4.6	1881	4.6	0.615	5.4	LOS A	24.0	174.4	0.42	0.39	49.8
6	R2	488	4.6	488	4.6	0.643	32.0	LOS C	18.4	133.6	0.85	0.93	35.6
Approach		2369	4.6	2369	4.6	0.643	10.9	LOS A	24.0	174.4	0.51	0.50	43.6
North: Wonga Street													
7	L2	221	8.5	221	8.5	0.303	28.9	LOS C	9.2	69.0	0.66	0.74	28.2
9	R2	102	4.6	102	4.6	0.609	73.1	LOS F	7.0	50.6	1.00	0.79	16.8
Approach		323	7.3	323	7.3	0.609	42.8	LOS D	9.2	69.0	0.77	0.76	23.2
West: Canterbury Road West													
10	L2	65	2.7	46	3.0	0.760	29.6	LOS C	26.2	187.8	0.77	0.70	39.6
11	T1	1413	2.7	998	3.0	0.760	22.7	LOS B	26.2	187.8	0.75	0.67	34.4
Approach		1478	2.7	1044 N1	3.0	0.760	23.0	LOS B	26.2	187.8	0.75	0.68	34.8
All Vehicles		4170	4.1	3736 N1	4.6	0.760	17.0	LOS B	26.2	187.8	0.60	0.57	38.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 214.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	29.0	LOS C	0.1	0.1	0.64	0.64
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	46.6	LOS E			0.80	0.80

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036_PM_Option 3 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	16	0.0	16	0.0	0.810	26.7	LOS B	47.0	352.4	0.82	0.77	44.4
5	T1	1585	8.5	1585	8.5	0.810	22.1	LOS B	47.0	352.4	0.86	0.81	35.1
6	R2	23	8.7	23	8.7	0.810	30.4	LOS C	32.1	240.8	0.92	0.86	41.5
Approach		1624	8.4	1624	8.4	0.810	22.3	LOS B	47.0	352.4	0.86	0.81	35.4
NorthEast: Jeffrey Street													
24b	L3	7	0.0	7	0.0	0.941	98.6	LOS F	16.6	123.4	1.00	1.13	23.1
24	L2	11	0.0	11	0.0	0.941	97.7	LOS F	16.6	123.4	1.00	1.13	23.0
26a	R1	371	7.8	371	7.8	0.941	96.2	LOS F	16.6	123.4	1.00	1.13	14.7
26b	R3	1	0.0	1	0.0	0.941	97.6	LOS F	16.5	122.9	1.00	1.13	23.0
Approach		390	7.4	390	7.4	0.941	96.3	LOS F	16.6	123.4	1.00	1.13	15.2
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.649	75.8	LOS F	7.1	51.2	1.00	0.81	26.7
7	L2	53	0.0	53	0.0	0.649	74.9	LOS F	7.1	51.2	1.00	0.81	26.6
7a	L1	1	0.0	1	0.0	0.649	73.6	LOS F	7.1	51.2	1.00	0.81	26.9
9	R2	137	6.6	137	6.6	0.649	76.2	LOS F	7.1	51.2	1.00	0.81	17.3
Approach		192	4.7	192	4.7	0.649	75.9	LOS F	7.1	51.2	1.00	0.81	20.5
West: Canterbury Road w													
10	L2	18	5.6	14	6.8	0.896	58.9	LOS E	20.4	155.0	1.00	1.01	23.5
10a	L1	314	8.0	243	9.7	0.896	57.7	LOS E	20.4	155.0	1.00	1.01	23.7
11	T1	1390	8.1	1078	9.8	0.896	52.1	LOS D	20.4	155.0	1.00	1.01	24.7
Approach		1722	8.0	1335 N1	9.8	0.896	53.2	LOS D	20.4	155.0	1.00	1.01	24.5
All Vehicles		3928	8.0	3541 N1	8.8	0.941	45.0	LOS D	47.0	352.4	0.94	0.92	25.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 214.1 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	10.1	LOS B	0.1	0.1	0.38	0.38
P2	East Full Crossing	20	63.2	LOS F	0.1	0.1	0.95	0.95
P6	NorthEast Full Crossing	68	15.1	LOS B	0.1	0.1	0.47	0.47
P3	North Full Crossing	108	27.8	LOS C	0.3	0.3	0.63	0.63
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	32.2	LOS D			0.65	0.65

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.337	11.6	LOS A	12.5	93.8	0.42	0.38	53.2
5	T1	1052	8.5	967	8.9	0.337	3.6	LOS A	12.5	93.8	0.25	0.22	56.6
6	R2	85	8.5	78	8.9	0.435	9.8	LOS A	0.9	6.5	0.16	0.62	50.2
Approach		1137	8.5	1046 N1	8.8	0.435	4.1	LOS A	12.5	93.8	0.24	0.25	56.1
North: Punchbowl Road													
7	L2	22	8.5	22	8.5	0.892	83.6	LOS F	17.0	120.1	1.00	0.99	16.3
8	T1	8	8.5	8	8.5	0.892	77.9	LOS F	17.0	120.1	1.00	0.99	25.4
9	R2	390	8.5	390	8.5	0.892	84.1	LOS F	17.0	120.1	1.00	0.99	24.9
Approach		420	8.5	420	8.5	0.892	84.0	LOS F	17.0	125.6	1.00	0.99	24.5
West: Canterbury Road West													
10	L2	138	8.3	138	8.3	0.079	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1335	8.0	1335	8.0	0.464	5.6	LOS A	15.5	115.7	0.38	0.34	50.8
Approach		1474	8.1	1474	8.1	0.464	5.6	LOS A	15.5	115.7	0.34	0.36	51.4
All Vehicles		3032	8.3	2940 N1	8.5	0.892	16.3	LOS B	17.0	125.6	0.40	0.41	44.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	119	11.5	119	11.5	1.361	717.3	LOS F	67.2	503.0	1.00	2.52	2.4
3	R2	291	4.3	291	4.3	1.361	723.0	LOS F	67.2	503.0	1.00	2.55	2.4
Approach		410	6.4	410	6.4	1.361	721.4	LOS F	67.2	503.0	1.00	2.54	2.4
East: Canterbury Road E													
4	L2	179	3.1	165	3.3	0.897	63.2	LOS E	22.3	163.2	1.00	1.01	21.5
5	T1	1035	5.9	959	6.1	0.897	59.2	LOS E	22.3	163.2	1.00	1.02	6.2
Approach		1213	5.5	1124 N1	5.7	0.897	59.8	LOS E	22.3	163.2	1.00	1.02	9.4
West: Canterbury Road W													
11	T1	1441	7.1	1441	7.1	1.062	205.1	LOS F	109.9	816.0	1.00	1.89	7.8
12	R2	132	12.0	132	12.0	0.189	23.5	LOS B	4.7	35.9	0.82	0.77	39.9
Approach		1572	7.5	1572	7.5	1.062	189.9	LOS F	109.9	816.0	0.98	1.80	8.9
All Vehicles		3196	6.6	3107 N1	6.8	1.361	213.0	LOS F	109.9	816.0	0.99	1.61	6.2

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	36.5	LOS D	0.1	0.1	0.72	0.72
P4	West Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	49.0	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021_AM_Option 4 - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1143	8.6	1084	8.9	0.882	22.2	LOS B	38.2	287.5	0.67	0.72	21.7
6	R2	129	2.2	122	2.2	0.882	36.7	LOS C	22.8	168.9	0.84	0.95	31.1
Approach		1272	7.9	1206 N1	8.2	0.882	23.6	LOS B	38.2	287.5	0.68	0.74	23.7
North: Rosmore Avenue													
7	L2	120	2.9	120	2.9	0.151	27.7	LOS B	4.8	34.4	0.63	0.70	28.6
9	R2	136	2.5	136	2.5	1.468	913.0	LOS F	46.2	330.2	1.00	2.79	1.9
Approach		256	2.7	256	2.7	1.468	498.1	LOS F	46.2	330.2	0.83	1.81	3.4
West: Canterbury West													
10	L2	206	1.3	200	1.4	0.953	72.9	LOS F	22.3	163.2	1.00	1.09	19.6
11	T1	1320	6.4	1280	6.5	0.953	67.4	LOS E	22.3	163.2	1.00	1.10	5.5
Approach		1526	5.7	1480 N1	5.8	0.953	68.1	LOS E	22.3	163.2	1.00	1.10	8.2
All Vehicles		3053	6.4	2942 N1	6.6	1.468	87.2	LOS F	46.2	330.2	0.86	1.01	8.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	27.7	LOS C	0.1	0.1	0.63	0.63
All Pedestrians		100	46.0	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	361	3.4	361	3.4	0.573	20.7	LOS B	13.2	94.8	0.58	0.74	32.1
3	R2	159	5.6	159	5.6	1.149	365.2	LOS F	30.8	225.7	1.00	1.85	4.5
Approach		519	4.1	519	4.1	1.149	126.0	LOS F	30.8	225.7	0.71	1.08	11.2
East: Canterbury Road E													
4	L2	85	9.2	79	9.5	0.903	47.5	LOS D	24.2	180.0	0.97	0.93	30.0
5	T1	866	6.4	801	6.6	0.903	35.4	LOS C	33.0	244.2	0.92	0.90	18.4
Approach		952	6.6	880 N1	6.9	0.903	36.5	LOS C	33.0	244.2	0.93	0.91	20.2
West: Canterbury Road w													
11	T1	1051	8.6	1051	8.6	0.804	5.7	LOS A	23.1	166.8	0.33	0.32	40.9
12	R2	431	2.9	431	2.9	0.804	28.9	LOS C	23.1	166.8	0.82	0.91	34.2
Approach		1482	6.9	1482	6.9	0.804	12.4	LOS A	23.1	166.8	0.47	0.49	36.8
All Vehicles		2953	6.3	2881 N1	6.5	1.149	40.2	LOS C	33.0	244.2	0.66	0.72	20.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	40.2	LOS E	0.2	0.2	0.76	0.76
P2	East Full Crossing	50	47.3	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		100	43.8	LOS E			0.79	0.79

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h

East: Canterbury East													
5	T1	964	8.5	889	8.8	0.369	13.2	LOS A	22.8	171.4	0.75	0.67	33.9
6	R2	73	8.5	67	8.8	0.369	26.4	LOS B	21.9	164.9	0.90	0.79	37.4
Approach		1037	8.5	956 N1	8.8	0.369	14.1	LOS A	22.8	171.4	0.76	0.68	34.4
North: Dudley Street													
7	L2	64	8.5	64	8.5	0.092	27.6	LOS B	2.4	18.3	0.65	0.69	28.7
9	R2	37	8.5	37	8.5	0.229	69.9	LOS E	2.4	18.2	0.96	0.73	17.3
Approach		102	8.5	102	8.5	0.229	43.1	LOS D	2.4	18.3	0.77	0.71	23.1
West: Canterbury West													
10	L2	7	8.0	7	8.0	0.629	26.2	LOS B	19.8	148.3	0.60	0.54	37.5
11	T1	1057	8.0	1057	8.0	0.629	22.5	LOS B	22.2	165.9	0.63	0.57	24.7
Approach		1064	8.0	1064	8.0	0.629	22.5	LOS B	22.2	165.9	0.63	0.57	24.9
All Vehicles		2203	8.3	2122 N1	8.6	0.629	19.7	LOS B	22.8	171.4	0.70	0.62	28.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	24.7	LOS C	0.1	0.1	0.59	0.59
All Pedestrians		100	44.5	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	74	8.5	74	8.5	0.071	12.2	LOS A	1.7	13.0	0.38	0.63	37.7
3	R2	39	8.0	39	8.0	0.314	74.0	LOS F	2.7	20.0	0.99	0.74	16.7

Approach		113	8.3	113	8.3	0.314	33.7	LOS C	2.7	20.0	0.59	0.67	26.2
East: Canterbury Raod East													
4	L2	112	8.5	103	8.9	0.752	47.3	LOS D	29.6	222.8	0.94	0.84	33.0
5	T1	993	8.5	910	8.9	0.752	41.3	LOS C	30.4	229.3	0.94	0.84	25.5
Approach		1105	8.5	1013 N1	8.9	0.752	41.9	LOS C	30.4	229.3	0.94	0.84	26.6
West: Canterbury Road West													
11	T1	1457	5.3	1457	5.3	0.627	5.2	LOS A	14.8	108.3	0.32	0.34	45.5
12	R2	141	8.0	141	8.0	0.627	15.0	LOS B	11.5	84.7	0.46	0.54	43.9
Approach		1597	5.5	1597	5.5	0.627	6.0	LOS A	14.8	108.3	0.33	0.36	45.2
All Vehicles		2816	6.8	2724 N1	7.1	0.752	20.5	LOS B	30.4	229.3	0.57	0.55	32.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	32.3	LOS D	0.1	0.1	0.68	0.68
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	48.3	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021_AM_Option 4 - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	157	21.4	157	21.4	0.158	17.1	LOS B	4.4	36.7	0.46	0.66	41.5
2	T1	2720	7.5	2720	7.5	1.117	285.1	LOS F	167.8	1250.7	1.00	2.21	13.8
3	R2	205	3.2	205	3.2	0.670	76.2	LOS F	7.2	51.6	1.00	0.82	26.7
Approach		3082	8.0	3082	8.0	1.117	257.6	LOS F	167.8	1250.7	0.97	2.04	14.3
East: Canterbury Road E													
4	L2	90	10.1	90	10.1	1.123	277.5	LOS F	67.5	495.0	1.00	1.64	9.6
5	T1	785	4.5	785	4.5	1.123	289.5	LOS F	75.9	551.8	1.00	1.94	4.5

6	R2	199	9.8	199	9.8	0.905	91.6	LOS F	7.9	59.8	1.00	1.03	26.4
Approach		1073	5.9	1073	5.9	1.123	251.8	LOS F	75.9	551.8	1.00	1.74	7.2
North: King Georges Road													
7	L2	314	7.5	314	7.5	0.743	37.4	LOS C	34.0	254.9	0.86	0.89	40.4
8	T1	1641	9.1	1641	9.1	0.743	31.4	LOS C	35.2	265.4	0.87	0.81	43.7
9	R2	189	5.2	189	5.2	1.054	202.4	LOS F	24.6	180.1	1.00	1.47	11.6
Approach		2143	8.5	2143	8.5	1.054	47.4	LOS D	35.2	265.4	0.88	0.88	37.7
West: Canterbury Road W													
10	L2	90	10.5	90	10.5	0.131	32.6	LOS C	3.9	29.4	0.67	0.70	42.1
11	T1	545	7.5	545	7.5	0.888	72.6	LOS F	22.3	166.3	1.00	1.05	26.1
12	R2	105	21.6	105	21.6	0.774	86.3	LOS F	4.0	32.9	1.00	0.86	26.3
Approach		740	9.8	740	9.8	0.888	69.7	LOS E	22.3	166.3	0.96	0.98	27.8
All Vehicles		7038	8.0	7038	8.0	1.123	172.9	LOS F	167.8	1250.7	0.95	1.53	17.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1627.6 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	57.7	LOS E	0.2	0.2	0.91	0.91
P2	East Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P3	North Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
P4	West Full Crossing	50	30.3	LOS D	0.1	0.1	0.66	0.66
All Pedestrians		200	44.0	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	986	4.8	940	4.8	0.571	11.1	LOS A	27.7	202.1	0.67	0.63	43.8
6	R2	88	11.3	84	11.4	0.571	28.5	LOS B	12.0	89.2	0.87	0.84	39.5

Approach		1074	5.3	1023N1	5.4	0.571	12.5	LOS A	27.7	202.1	0.68	0.64	43.1
North: Haldon Street													
7	L2	60	5.0	60	5.0	0.831	81.1	LOS F	8.9	65.9	1.00	0.95	15.7
9	R2	126	8.7	126	8.7	0.831	83.8	LOS F	8.9	65.9	1.00	0.95	15.3
Approach		186	7.5	186	7.5	0.831	82.9	LOS F	8.9	65.9	1.00	0.95	15.4
West: Canterbury Road w													
10	L2	94	8.2	94	8.2	0.731	29.6	LOS C	37.3	274.7	0.80	0.75	38.1
11	T1	1417	5.9	1417	5.9	0.731	23.9	LOS B	37.9	278.8	0.80	0.75	30.4
Approach		1511	6.0	1511	6.0	0.731	24.3	LOS B	37.9	278.8	0.80	0.75	31.2
All Vehicles		2771	5.8	2720N1	5.9	0.831	23.9	LOS B	37.9	278.8	0.77	0.72	32.7

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.

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

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

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

Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1097.6 %

Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	17.5	LOS B	0.1	0.1	0.50	0.50
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	40.9	LOS E			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021_AM_Option 4 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	65	7.1	65	7.1	0.588	59.8	LOS E	12.5	92.7	0.96	0.81	19.8
2	T1	316	6.4	316	6.4	2.941	2043.7	LOS F	205.2	1555.5	0.98	2.60	1.7
3	R2	153	13.6	153	13.6	2.941	3527.7	LOS F	205.2	1555.5	1.00	3.93	0.5
Approach		535	8.6	535	8.6	2.941	2228.0	LOS F	205.2	1555.5	0.99	2.76	1.3
East: Canterbury Road E													
4	L2	77	16.7	74	16.7	0.499	10.7	LOS A	5.8	43.4	0.20	0.27	49.2
5	T1	932	7.1	893	7.1	0.499	3.5	LOS A	5.8	43.4	0.14	0.17	53.1
6	R2	37	0.0	36	0.0	0.118	43.4	LOS D	1.7	12.1	1.00	0.72	34.0
Approach		1047	7.5	1003 N1	7.6	0.499	5.4	LOS A	5.8	43.4	0.17	0.20	50.7
North: Sharp Street													
7	L2	70	5.3	70	5.3	0.534	43.3	LOS D	3.7	26.8	0.88	0.75	23.1
8	T1	404	4.6	404	4.6	2.406	2575.1	LOS F	222.8	1620.8	1.00	5.42	1.4
Approach		474	4.7	474	4.7	2.406	2199.3	LOS F	222.8	1620.8	0.98	4.73	1.5
West: Canterbury Road w													
10	L2	6	0.0	6	0.0	1.209	446.4	LOS F	111.4	816.0	1.00	2.86	7.1
11	T1	1201	5.5	1201	5.5	1.209	441.6	LOS F	111.4	816.0	1.00	2.86	3.9
12	R2	283	9.6	283	9.6	0.608	12.2	LOS A	5.0	38.0	0.44	0.71	45.6
Approach		1490	6.2	1490	6.2	1.209	360.0	LOS F	111.4	816.0	0.89	2.45	5.5
All Vehicles		3546	6.8	3503 N1	6.8	2.941	792.8	LOS F	222.8	1620.8	0.71	2.16	2.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1097.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	19.6	LOS B	0.1	0.1	0.53	0.53
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	19.1	LOS B	0.1	0.1	0.52	0.52
P4	West Full Crossing	50	55.9	LOS E	0.2	0.2	0.89	0.89
All Pedestrians		200	39.7	LOS D			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021_AM_Option 4 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	45	8.5	45	8.5	0.765	59.5	LOS E	12.7	95.2	0.92	0.86	20.0
2	T1	504	8.5	504	8.5	1.695	919.4	LOS F	161.0	1208.6	0.98	3.46	3.6
3	R2	44	8.0	44	8.0	1.695	1312.5	LOS F	161.0	1208.6	1.00	4.63	1.4
Approach		593	8.5	593	8.5	1.695	883.5	LOS F	161.0	1208.6	0.97	3.35	3.5
East: Canterbury Road East													
4	L2	35	8.5	34	8.7	0.807	49.4	LOS D	42.0	316.1	1.00	0.91	32.1
5	T1	987	8.5	950	8.7	0.807	45.2	LOS D	42.0	316.1	0.99	0.90	23.2
6	R2	268	8.5	258	8.7	0.697	44.6	LOS D	10.8	81.1	0.90	0.91	31.9
Approach		1290	8.5	1242 N1	8.7	0.807	45.2	LOS D	42.0	316.1	0.97	0.90	25.9
North: Thorncraft Parade													
7	L2	157	8.5	157	8.5	0.334	34.1	LOS C	7.0	52.6	0.70	0.74	26.1
8	T1	221	8.5	221	8.5	1.406	794.1	LOS F	90.8	681.8	1.00	3.46	4.1
9	R2	69	8.5	69	8.5	1.406	798.8	LOS F	90.8	681.8	1.00	3.46	2.2
Approach		447	8.5	447	8.5	1.406	527.8	LOS F	90.8	681.8	0.90	2.50	4.6
West: Canterbury Road West													
10	L2	62	0.0	61	0.0	0.877	25.3	LOS B	37.4	278.1	0.77	0.75	41.2
11	T1	1416	8.0	1397	7.9	0.877	21.3	LOS B	39.8	297.9	0.80	0.77	34.6
12	R2	95	0.1	94	0.1	0.230	29.0	LOS C	3.3	23.1	0.90	0.78	39.5
Approach		1572	7.2	1551 N1	7.2	0.877	21.9	LOS B	39.8	297.9	0.80	0.77	35.5
All Vehicles		3902	8.0	3833 N1	8.1	1.695	221.7	LOS F	161.0	1208.6	0.89	1.41	8.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1097.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped

P1	South Full Crossing	50	27.1	LOS C	0.1	0.1	0.62	0.62
P2	East Full Crossing	50	49.8	LOS E	0.2	0.2	0.84	0.84
P3	North Full Crossing	50	27.1	LOS C	0.1	0.1	0.62	0.62
P4	West Full Crossing	50	49.8	LOS E	0.2	0.2	0.84	0.84
All Pedestrians		200	38.5	LOS D			0.73	0.73

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021_AM_Option 4 - SCATS (Double Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	98	4.4	98	4.4	1.125	312.4	LOS F	68.3	497.5	1.00	2.17	5.3
2	T1	621	4.9	621	4.9	1.125	308.9	LOS F	68.3	497.5	1.00	2.22	9.4
3	R2	348	4.1	348	4.1	2.838	3354.0	LOS F	210.5	1525.1	1.00	4.91	0.5
Approach		1067	4.6	1067	4.6	2.838	1303.6	LOS F	210.5	1525.1	1.00	3.09	2.1
East: Canterbury Road E													
4	L2	232	4.0	232	4.0	0.717	41.0	LOS C	25.2	183.9	0.82	0.84	35.0
5	T1	794	5.8	794	5.8	0.717	37.7	LOS C	28.3	207.7	0.86	0.80	26.8
6	R2	1	0.0	1	0.0	0.005	31.6	LOS C	0.0	0.2	0.87	0.60	38.9
Approach		1027	5.4	1027	5.4	0.717	38.4	LOS C	28.3	207.7	0.85	0.81	29.3
North: Beamish Street													
7	L2	45	17.9	45	17.9	0.893	97.2	LOS F	20.3	152.5	1.00	1.16	14.3
8	T1	427	6.8	427	6.8	0.893	84.2	LOS F	20.3	152.5	1.00	1.12	23.2
9	R2	71	27.9	71	27.9	1.051	199.0	LOS F	9.0	78.3	1.00	1.46	7.8
Approach		543	10.5	543	10.5	1.051	100.2	LOS F	20.3	152.5	1.00	1.17	19.7
West: Canterbury Road w													
10	L2	106	12.7	103	12.6	0.904	42.0	LOS C	47.2	347.8	0.89	0.92	34.3
11	T1	1233	5.1	1198	5.0	0.904	33.7	LOS C	47.2	347.8	0.72	0.77	27.5
12	R2	251	5.8	243	5.7	0.521	26.4	LOS B	7.3	53.4	0.85	0.81	38.3
Approach		1590	5.7	1545 N1	5.6	0.904	33.1	LOS C	47.2	347.8	0.75	0.79	30.4
All Vehicles		4227	6.0	4182 N1	6.0	2.838	367.3	LOS F	210.5	1525.1	0.87	1.43	6.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1097.6 %
Number of Iterations: 10 (maximum specified: 10)

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

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	34.4	LOS D	0.1	0.1	0.70	0.70
P2	East Full Crossing	50	59.6	LOS E	0.2	0.2	0.92	0.92
P3	North Full Crossing	50	21.2	LOS C	0.1	0.1	0.55	0.55
P4	West Full Crossing	50	55.0	LOS E	0.2	0.2	0.89	0.89
All Pedestrians		200	42.5	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1315	8.5	1315	8.5	0.445	4.6	LOS A	13.6	101.9	0.34	0.31	51.2
6	R2	424	8.5	424	8.5	0.716	47.9	LOS D	21.5	161.8	0.93	0.97	30.5
Approach		1739	8.5	1739	8.5	0.716	15.1	LOS B	21.5	161.8	0.48	0.47	40.1
North: Wonga Street													
7	L2	295	8.5	295	8.5	0.523	35.6	LOS C	14.7	110.2	0.78	0.80	25.5
9	R2	90	8.5	90	8.5	0.511	71.2	LOS F	6.0	45.1	0.99	0.78	17.1
Approach		384	8.5	384	8.5	0.523	43.9	LOS D	14.7	110.2	0.83	0.80	22.9
West: Canterbury Road West													
10	L2	54	8.0	42	9.0	1.061	170.9	LOS F	88.5	667.0	1.00	1.69	15.5
11	T1	1608	8.0	1230	9.0	1.061	163.7	LOS F	88.5	667.0	1.00	1.70	9.4
Approach		1662	8.0	1271 N1	9.0	1.061	163.9	LOS F	88.5	667.0	1.00	1.70	9.7
All Vehicles		3785	8.3	3395 N1	9.3	1.061	74.1	LOS F	88.5	667.0	0.72	0.97	18.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1097.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	25.3	LOS C	0.1	0.1	0.60	0.60
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	44.8	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021_AM_Option 4 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.723	21.4	LOS B	37.6	281.8	0.69	0.64	47.4
5	T1	1060	8.5	1060	8.5	0.723	19.8	LOS B	37.6	281.8	0.74	0.69	36.6
6	R2	35	8.6	35	8.6	0.723	48.5	LOS D	9.3	69.8	1.00	0.90	34.3
Approach		1108	8.4	1108	8.4	0.723	20.7	LOS B	37.6	281.8	0.75	0.69	36.6
NorthEast: Jeffrey Street													
24b	L3	20	10.0	20	10.0	0.921	114.2	LOS F	10.6	79.3	1.00	1.14	20.9
24	L2	4	0.0	4	0.0	0.921	113.1	LOS F	10.6	79.3	1.00	1.14	21.0
26a	R1	218	7.8	218	7.8	0.921	101.3	LOS F	10.6	79.3	1.00	1.10	14.1
26b	R3	1	0.0	1	0.0	0.921	93.9	LOS F	9.6	71.6	1.00	1.07	23.6
Approach		243	7.8	243	7.8	0.921	102.5	LOS F	10.6	79.3	1.00	1.11	15.0
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.682	76.5	LOS F	7.6	54.9	1.00	0.82	26.6
7	L2	63	0.0	63	0.0	0.682	75.5	LOS F	7.6	54.9	1.00	0.82	26.5
7a	L1	1	0.0	1	0.0	0.682	74.2	LOS F	7.6	54.9	1.00	0.82	26.7
9	R2	137	8.0	137	8.0	0.682	77.0	LOS F	7.6	54.9	1.00	0.82	17.2
Approach		202	5.4	202	5.4	0.682	76.5	LOS F	7.6	54.9	1.00	0.82	20.7
West: Canterbury Road w													
10	L2	18	5.6	15	5.7	0.900	53.9	LOS D	20.7	155.0	0.99	1.01	25.1
10a	L1	159	8.2	132	8.5	0.900	52.7	LOS D	20.7	155.0	0.99	1.01	25.4
11	T1	1664	8.1	1384	8.3	0.900	47.7	LOS D	20.7	155.0	0.99	1.01	26.1
Approach		1841	8.0	1531 N1	8.3	0.900	48.2	LOS D	20.7	155.0	0.99	1.01	26.0
All Vehicles		3394	8.0	3084 N1	8.8	0.921	44.4	LOS D	37.6	281.8	0.91	0.89	26.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 1097.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	7.9	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	9.7	LOS A	0.1	0.1	0.52	0.52
P3	North Full Crossing	108	23.5	LOS C	0.2	0.2	0.58	0.58
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	29.3	LOS C			0.63	0.63

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.428	11.7	LOS A	17.2	125.1	0.44	0.40	53.1
5	T1	1275	4.6	1197	4.9	0.428	5.8	LOS A	17.2	125.1	0.42	0.38	54.8
6	R2	89	4.6	84	4.9	0.408	16.1	LOS B	2.2	16.3	0.40	0.69	46.3
Approach		1365	4.6	1282 N1	4.9	0.428	6.5	LOS A	17.2	125.1	0.41	0.40	54.1
North: Punchbowl Road													
7	L2	28	8.5	28	8.5	0.894	84.5	LOS F	16.0	113.2	1.00	0.99	16.1
8	T1	1	0.0	1	0.0	0.894	78.9	LOS F	16.0	113.2	1.00	0.99	25.2
9	R2	378	4.6	378	4.6	0.894	84.6	LOS F	16.0	113.2	1.00	0.99	24.8
Approach		407	4.8	407	4.8	0.894	84.6	LOS F	16.0	117.7	1.00	0.99	24.4
West: Canterbury Road West													
10	L2	165	2.8	165	2.8	0.091	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1322	2.4	1322	2.4	0.438	5.1	LOS A	14.4	102.6	0.35	0.32	51.5
Approach		1487	2.5	1487	2.5	0.438	5.2	LOS A	14.4	102.6	0.32	0.35	52.1
All Vehicles		3260	3.6	3176 N1	3.7	0.894	15.9	LOS B	17.2	125.1	0.44	0.45	45.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		50	64.3	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	170	1.5	170	1.5	1.231	490.5	LOS F	66.6	474.4	1.00	2.11	3.4
3	R2	321	2.8	321	2.8	1.231	498.1	LOS F	66.6	474.4	1.00	2.14	3.4
Approach		491	2.4	491	2.4	1.231	495.5	LOS F	66.6	474.4	1.00	2.13	3.4
East: Canterbury Road E													
4	L2	233	2.1	215	2.3	0.887	52.0	LOS D	23.1	163.2	0.98	0.96	24.1
5	T1	1320	0.4	1222	0.4	0.887	36.1	LOS C	23.2	163.2	0.92	0.90	9.5
Approach		1553	0.6	1437 N1	0.7	0.887	38.5	LOS C	23.2	163.2	0.93	0.91	13.5
West: Canterbury Road W													
11	T1	1241	2.6	1241	2.6	0.952	68.3	LOS E	60.7	433.9	0.96	1.15	18.7
12	R2	144	2.1	144	2.1	0.273	27.5	LOS B	5.6	40.2	0.87	0.79	38.3
Approach		1385	2.5	1385	2.5	0.952	64.0	LOS E	60.7	433.9	0.95	1.11	20.7
All Vehicles		3429	1.6	3313 N1	1.7	1.231	116.9	LOS F	66.6	474.4	0.95	1.18	9.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	28.3	LOS C	0.1	0.1	0.64	0.64
P4	West Full Crossing	50	56.8	LOS E	0.2	0.2	0.90	0.90
All Pedestrians		100	42.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1406	5.9	1384	6.0	1.100	248.0	LOS F	44.6	326.4	1.00	1.99	2.8
6	R2	106	2.0	104	2.0	1.100	236.4	LOS F	44.6	326.4	1.00	1.75	8.5
Approach		1512	5.7	1489 N1	5.7	1.100	247.1	LOS F	44.6	326.4	1.00	1.98	3.3
North: Rosmore Avenue													
7	L2	107	0.0	107	0.0	0.097	17.4	LOS B	3.1	21.5	0.46	0.66	34.0
9	R2	197	0.5	197	0.5	2.291	2377.6	LOS F	105.9	744.7	1.00	4.13	0.8
Approach		304	0.3	304	0.3	2.291	1546.0	LOS F	105.9	744.7	0.81	2.91	1.1
West: Canterbury West													
10	L2	141	1.5	141	1.5	1.145	339.4	LOS F	22.8	163.2	1.00	2.23	5.7
11	T1	1245	2.8	1245	2.8	1.145	332.1	LOS F	22.8	163.2	1.00	2.31	1.2
Approach		1386	2.7	1386	2.7	1.145	332.8	LOS F	22.8	163.2	1.00	2.30	1.7
All Vehicles		3202	3.9	3178 N1	3.9	2.291	408.7	LOS F	105.9	744.7	0.98	2.21	2.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	37.2	LOS D	0.1	0.1	0.73	0.73
All Pedestrians		100	50.7	LOS E			0.84	0.84

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	351	1.1	351	1.1	1.881	1651.5	LOS F	162.4	1147.7	1.00	3.81	1.1
3	R2	84	4.5	84	4.5	1.104	282.0	LOS F	13.4	97.8	1.00	1.61	5.7
Approach		435	1.8	435	1.8	1.881	1387.3	LOS F	162.4	1147.7	1.00	3.38	1.3
East: Canterbury Road E													
4	L2	78	5.5	76	5.6	0.898	33.0	LOS C	26.2	193.8	0.41	0.57	36.1
5	T1	1112	6.5	1088	6.5	0.898	41.4	LOS C	46.3	342.1	0.71	0.83	16.6
Approach		1190	6.4	1164 N1	6.5	0.898	40.8	LOS C	46.3	342.1	0.69	0.82	18.2
West: Canterbury Road w													
11	T1	1068	2.7	1030	2.7	0.702	8.9	LOS A	38.8	277.8	0.62	0.58	35.5
12	R2	371	1.2	358	1.2	1.756	1405.3	LOS F	46.1	326.4	1.00	3.46	1.7
Approach		1439	2.3	1388 N1	2.3	1.756	369.0	LOS F	46.1	326.4	0.72	1.32	3.1
All Vehicles		3063	3.8	2987 N1	3.9	1.881	389.4	LOS F	162.4	1147.7	0.75	1.43	3.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	10.4	LOS B	0.1	0.1	0.39	0.39
P2	East Full Crossing	50	62.4	LOS F	0.2	0.2	0.94	0.94
All Pedestrians		100	36.4	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles										
Mov ID	OD Mov	Demand Flows	Arrival Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed

		Total veh/h	HV %	Total veh/h	HV %	v/c	sec		Vehicles veh	Distance m		per veh	km/h
East: Canterbury East													
5	T1	1265	4.6	1236	4.6	0.618	11.2	LOS A	32.8	238.8	0.60	0.60	36.2
6	R2	102	4.6	100	4.6	0.618	25.3	LOS B	15.2	110.4	0.61	0.70	37.9
Approach		1367	4.6	1336 N1	4.6	0.618	12.3	LOS A	32.8	238.8	0.60	0.61	36.5
North: Dudley Street													
7	L2	57	8.5	57	8.5	0.076	23.0	LOS B	1.9	14.5	0.59	0.68	30.9
9	R2	66	4.6	66	4.6	0.503	72.9	LOS F	4.5	32.6	0.99	0.77	16.8
Approach		123	6.4	123	6.4	0.503	49.7	LOS D	4.5	32.6	0.81	0.73	21.4
West: Canterbury West													
10	L2	37	2.7	37	2.7	0.799	46.6	LOS D	33.0	236.1	0.94	0.86	29.2
11	T1	1136	2.7	1123	2.7	0.799	40.4	LOS C	36.8	263.4	0.94	0.86	16.8
Approach		1173	2.7	1160 N1	2.7	0.799	40.6	LOS C	36.8	263.4	0.94	0.86	17.5
All Vehicles		2663	3.8	2618 N1	3.9	0.799	26.6	LOS B	36.8	263.4	0.76	0.73	24.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

MOVEMENT SUMMARY

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 820 [Canterbury Road - Pentland Avenue_2021_PM_Option 4 - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	98	4.6	98	4.6	0.101	15.8	LOS B	2.9	21.2	0.46	0.66	35.1
3	R2	105	2.7	105	2.7	0.924	93.2	LOS F	8.5	60.6	0.99	1.09	14.2
Approach		203	3.6	203	3.6	0.924	55.9	LOS D	8.5	60.6	0.74	0.88	19.9
East: Canterbury Raod East													
4	L2	55	4.6	53	4.6	0.804	44.0	LOS D	37.8	275.3	0.94	0.86	34.3
5	T1	1252	4.6	1221	4.6	0.804	38.3	LOS C	38.2	278.2	0.94	0.86	26.7
Approach		1307	4.6	1275 N1	4.6	0.804	38.5	LOS C	38.2	278.2	0.94	0.86	27.1
West: Canterbury Road West													
11	T1	1285	2.4	1285	2.4	0.631	5.2	LOS A	11.9	85.1	0.26	0.31	45.4
12	R2	155	2.7	155	2.7	0.631	16.9	LOS B	11.9	85.1	0.42	0.63	42.4
Approach		1440	2.4	1440	2.4	0.631	6.5	LOS A	11.9	85.1	0.28	0.34	44.6
All Vehicles		2951	3.5	2918 N1	3.5	0.924	23.9	LOS B	38.2	278.2	0.60	0.61	30.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	27.7	LOS C	0.1	0.1	0.63	0.63
P2	East Full Crossing	50	60.5	LOS F	0.2	0.2	0.93	0.93
All Pedestrians		100	44.1	LOS E			0.78	0.78

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.

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Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
All Pedestrians		100	46.9	LOS E			0.81	0.81

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.
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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	308	11.7	308	11.7	0.341	25.6	LOS B	11.2	86.1	0.61	0.79	35.9
2	T1	1631	5.3	1631	5.3	1.037	170.2	LOS F	73.9	540.9	1.00	1.67	20.0
3	R2	245	1.6	245	1.6	1.052	197.9	LOS F	15.5	110.2	1.00	1.42	14.1
Approach		2183	5.8	2183	5.8	1.052	152.9	LOS F	73.9	540.9	0.95	1.52	19.9
East: Canterbury Road E													
4	L2	124	4.5	124	4.5	1.038	131.3	LOS F	59.3	426.6	1.00	1.20	14.7
5	T1	853	2.7	853	2.7	1.038	151.7	LOS F	60.8	435.6	1.00	1.47	7.5
6	R2	216	4.3	216	4.3	0.853	85.0	LOS F	8.2	59.3	1.00	0.95	27.5
Approach		1193	3.2	1193	3.2	1.038	137.5	LOS F	60.8	435.6	1.00	1.35	11.3
North: King Georges Road													
7	L2	150	4.1	150	4.1	1.024	121.9	LOS F	69.1	496.8	1.00	1.28	18.8

8	T1	2045	3.0	2045	3.0	1.024	137.2	LOS F	88.6	636.3	1.00	1.47	21.8
9	R2	264	2.6	264	2.6	1.015	151.4	LOS F	29.5	210.8	1.00	1.31	14.7
Approach		2459	3.0	2459	3.0	1.024	137.8	LOS F	88.6	636.3	1.00	1.44	21.0
West: Canterbury Road W													
10	L2	159	3.8	159	3.8	0.158	19.8	LOS B	5.1	36.6	0.51	0.68	47.5
11	T1	785	0.8	785	0.8	0.851	54.6	LOS D	27.3	192.2	0.94	0.93	30.4
12	R2	378	4.0	378	4.0	1.055	207.3	LOS F	25.2	182.2	1.00	1.49	14.6
Approach		1323	2.0	1323	2.0	1.055	94.0	LOS F	27.3	192.2	0.90	1.06	23.7
All Vehicles		7158	3.7	7158	3.7	1.055	134.3	LOS F	88.6	636.3	0.97	1.38	19.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 442.6 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	56.8	LOS E	0.2	0.2	0.90	0.90
P2	East Full Crossing	50	38.0	LOS D	0.1	0.1	0.74	0.74
P3	North Full Crossing	50	49.0	LOS E	0.2	0.2	0.84	0.84
P4	West Full Crossing	50	47.3	LOS E	0.2	0.2	0.82	0.82
All Pedestrians		200	47.8	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1181	4.9	1120	5.0	0.602	7.7	LOS A	17.9	129.3	0.37	0.35	47.5
6	R2	147	2.1	139	2.1	0.602	34.5	LOS C	17.9	129.3	1.00	0.94	36.9
Approach		1327	4.6	1259 N1	4.7	0.602	10.7	LOS A	17.9	129.3	0.44	0.41	45.0
North: Haldon Street													
7	L2	63	4.7	63	4.7	0.881	85.0	LOS F	11.1	79.8	1.00	1.00	15.2
9	R2	193	2.6	193	2.6	0.881	85.8	LOS F	11.1	79.8	1.00	1.00	15.1

Approach		256	3.1	256	3.1	0.881	85.6	LOS F	11.1	79.8	1.00	1.00	15.1
West: Canterbury Road w													
10	L2	151	5.6	151	5.6	0.682	27.9	LOS B	34.0	245.1	0.76	0.73	38.7
11	T1	1316	3.1	1313	3.1	0.682	21.9	LOS B	34.6	248.8	0.76	0.71	31.6
Approach		1467	3.3	1464 N1	3.3	0.682	22.5	LOS B	34.6	248.8	0.76	0.71	32.8
All Vehicles		3051	3.9	2978 N1	4.0	0.881	22.9	LOS B	34.6	248.8	0.64	0.61	33.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	16.5	LOS B	0.1	0.1	0.49	0.49
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		100	40.4	LOS E			0.72	0.72

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2021_PM_Option 4 - SCATS (single diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	162	3.2	162	3.2	0.892	65.8	LOS E	31.9	226.8	0.96	1.00	8.7
2	T1	358	0.9	358	0.9	0.892	65.9	LOS E	31.9	226.8	0.97	1.02	8.3
3	R2	74	1.4	74	1.4	0.892	86.4	LOS F	12.3	87.1	1.00	1.09	6.8
Approach		594	1.6	594	1.6	0.892	68.4	LOS E	31.9	226.8	0.97	1.02	8.2
East: Canterbury Rd													
4	L2	151	25.2	140	26.0	0.837	25.2	LOS B	28.9	219.2	0.75	0.72	38.0
5	T1	1203	4.6	1107	4.8	0.837	11.8	LOS A	28.9	219.2	0.54	0.51	43.0
6	R2	35	0.0	32	0.0	0.406	82.5	LOS F	2.3	16.3	1.00	0.72	16.9
Approach		1389	6.7	1279 N1	7.0	0.837	15.0	LOS B	28.9	219.2	0.57	0.54	40.6
North: Chapel St													
7	L2	33	0.0	33	0.0	0.402	44.3	LOS D	12.3	86.6	0.84	0.72	4.5
8	T1	453	0.5	453	0.5	0.673	48.4	LOS D	17.2	121.2	0.92	0.78	13.0
9	R2	18	0.0	18	0.0	0.673	57.4	LOS E	17.2	121.2	0.97	0.83	3.6
Approach		504	0.5	504	0.5	0.673	48.4	LOS D	17.2	121.2	0.91	0.78	12.2
West: Canterbury Rd													
10	L2	44	0.0	44	0.0	0.699	47.5	LOS D	42.9	308.4	0.99	0.90	18.5
11	T1	1229	3.2	1227	3.2	0.699	40.5	LOS C	42.9	308.4	0.98	0.88	25.9
12	R2	175	3.1	175	3.1	0.585	56.2	LOS D	10.4	74.7	0.91	0.80	24.6
Approach		1449	3.1	1446 N1	3.1	0.699	42.6	LOS D	42.9	308.4	0.97	0.87	25.4
All Vehicles		3935	3.8	3822 N1	3.9	0.892	38.2	LOS C	42.9	308.4	0.83	0.77	23.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	31.0	LOS D	0.1	0.1	0.67	0.67
P2	East Full Crossing	50	44.1	LOS E	0.2	0.2	0.79	0.79
P3	North Full Crossing	50	20.7	LOS C	0.1	0.1	0.54	0.54
All Pedestrians		150	31.9	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2021_PM_Option 4 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	152	4.0	152	4.0	0.294	38.2	LOS C	8.7	63.0	0.75	0.74	24.9
2	T1	368	3.9	368	3.9	1.472	815.6	LOS F	162.9	1190.5	0.98	2.85	3.9
3	R2	151	8.1	151	8.1	1.472	887.1	LOS F	162.9	1190.5	1.00	3.03	1.9
Approach		671	4.8	671	4.8	1.472	655.3	LOS F	162.9	1190.5	0.93	2.41	3.8
East: Canterbury Road E													
4	L2	95	8.8	88	8.8	0.899	41.0	LOS C	39.7	288.8	0.92	0.93	34.7
5	T1	1277	3.9	1178	3.9	0.899	32.5	LOS C	39.7	288.8	0.91	0.90	28.2
6	R2	23	0.0	21	0.0	0.052	25.4	LOS B	0.6	4.4	0.81	0.71	41.0
Approach		1395	4.1	1287 N1	4.1	0.899	33.0	LOS C	39.7	288.8	0.91	0.90	29.2
North: Sharp Street													
7	L2	53	0.0	53	0.0	0.372	42.1	LOS C	4.8	33.6	0.94	0.76	24.1
8	T1	459	2.0	459	2.0	1.680	1153.1	LOS F	167.3	1191.0	0.99	4.19	2.9
Approach		512	1.8	512	1.8	1.680	1037.5	LOS F	167.3	1191.0	0.99	3.84	3.1
West: Canterbury Road w													
10	L2	13	9.1	13	9.1	0.772	46.3	LOS D	33.6	241.9	0.97	0.87	33.6
11	T1	1098	3.1	1094	3.1	0.772	40.4	LOS C	33.6	241.9	0.95	0.85	26.0
12	R2	287	4.1	286	4.1	0.738	47.8	LOS D	14.1	102.4	1.00	0.93	31.6
Approach		1397	3.4	1392 N1	3.4	0.772	42.0	LOS C	33.6	241.9	0.96	0.87	27.8
All Vehicles		3975	3.7	3863 N1	3.8	1.680	277.5	LOS F	167.3	1191.0	0.94	1.54	7.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.0	LOS D	0.1	0.1	0.69	0.69
P2	East Full Crossing	50	61.4	LOS F	0.2	0.2	0.94	0.94
P3	North Full Crossing	50	32.3	LOS D	0.1	0.1	0.68	0.68

P4	West Full Crossing	50	42.5	LOS E	0.2	0.2	0.78	0.78
All Pedestrians		200	42.3	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2021_PM_Option 4 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	92	4.6	92	4.6	0.996	140.8	LOS F	21.8	161.8	0.83	1.37	10.6
2	T1	741	8.5	741	8.5	2.207	1895.2	LOS F	525.2	3875.2	0.97	5.10	1.8
3	R2	378	2.7	378	2.7	2.207	2230.9	LOS F	525.2	3875.2	1.00	5.80	0.8
Approach		1211	6.4	1211	6.4	2.207	1866.7	LOS F	525.2	3875.2	0.97	5.03	1.5
East: Canterbury Road East													
4	L2	89	4.6	89	4.6	0.799	27.7	LOS B	29.3	212.9	0.77	0.72	39.8
5	T1	1130	4.6	1130	4.6	0.799	16.0	LOS B	29.3	212.9	0.64	0.59	38.1
6	R2	199	4.6	199	4.6	0.703	47.5	LOS D	9.1	65.9	1.00	0.88	31.1
Approach		1418	4.6	1418	4.6	0.799	21.2	LOS B	29.3	212.9	0.70	0.64	36.3
North: Thorncraft Parade													
7	L2	76	8.5	76	8.5	0.502	45.8	LOS D	16.1	118.2	0.86	0.76	23.5
8	T1	374	4.6	374	4.6	2.222	965.9	LOS F	176.6	1284.9	0.92	2.53	3.5
9	R2	179	4.6	179	4.6	2.222	2257.1	LOS F	176.6	1284.9	1.00	5.00	0.8
Approach		629	5.1	629	5.1	2.222	1222.4	LOS F	176.6	1284.9	0.94	3.02	2.3
West: Canterbury Road West													
10	L2	152	2.7	147	2.5	0.872	62.0	LOS E	46.3	331.2	1.00	0.95	28.7
11	T1	1184	2.7	1144	2.5	0.872	54.6	LOS D	46.3	331.2	1.00	0.96	20.8
12	R2	82	0.0	79	0.0	0.264	32.0	LOS C	2.5	17.8	0.91	0.77	38.2
Approach		1418	2.5	1370 N1	2.4	0.872	54.1	LOS D	46.3	331.2	0.99	0.95	23.0
All Vehicles		4677	4.5	4628 N1	4.5	2.222	677.2	LOS F	525.2	3875.2	0.89	2.20	3.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped

P1	South Full Crossing	50	31.0	LOS D	0.1	0.1	0.67	0.67
P2	East Full Crossing	50	39.5	LOS D	0.1	0.1	0.75	0.75
P3	North Full Crossing	50	31.0	LOS D	0.1	0.1	0.67	0.67
P4	West Full Crossing	50	39.5	LOS D	0.1	0.1	0.75	0.75
All Pedestrians		200	35.2	LOS D			0.71	0.71

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2021_PM_Option 4 - SCATS (Double Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	114	2.1	114	2.1	0.656	56.9	LOS E	17.3	124.3	0.96	0.83	20.4
2	T1	453	4.2	453	4.2	0.656	52.3	LOS D	17.9	129.9	0.96	0.82	29.0
3	R2	465	1.0	465	1.0	1.501	940.2	LOS F	153.5	1083.6	1.00	2.84	1.8
Approach		1032	2.5	1032	2.5	1.501	452.6	LOS F	153.5	1083.6	0.98	1.73	5.0
East: Canterbury Road E													
4	L2	198	1.6	198	1.6	0.899	35.0	LOS C	40.2	287.2	0.86	0.91	37.4
5	T1	1137	2.9	1136	2.9	0.899	42.2	LOS C	46.4	332.4	0.93	0.95	25.2
6	R2	1	0.0	1	0.0	0.003	27.1	LOS B	0.0	0.2	0.74	0.59	40.8
Approach		1336	2.7	1335 N1	2.7	0.899	41.1	LOS C	46.4	332.4	0.92	0.95	27.5
North: Beamish Street													
7	L2	51	12.5	51	12.5	1.200	414.6	LOS F	45.2	335.8	1.00	1.94	3.8
8	T1	376	5.7	376	5.7	1.200	423.2	LOS F	45.2	335.8	1.00	2.12	7.0
9	R2	88	14.6	88	14.6	0.916	92.6	LOS F	7.0	55.1	1.00	1.11	14.3
Approach		514	7.9	514	7.9	1.200	366.1	LOS F	45.2	335.8	1.00	1.93	7.0
West: Canterbury Road w													
10	L2	89	11.4	74	11.2	0.599	40.2	LOS C	29.2	209.4	0.91	0.82	34.9
11	T1	1014	1.6	848	1.5	0.599	37.5	LOS C	29.2	209.4	0.93	0.82	25.9
12	R2	214	1.6	179	1.5	0.635	36.3	LOS C	6.2	43.8	0.96	0.81	34.6
Approach		1317	2.2	1102 N1	2.2	0.635	37.5	LOS C	29.2	209.4	0.93	0.82	28.6
All Vehicles		4199	3.1	3983 N1	3.3	1.501	188.7	LOS F	153.5	1083.6	0.95	1.24	9.9

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	50	33.7	LOS D	0.1	0.1	0.69	0.69
P2	East Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	50	27.1	LOS C	0.1	0.1	0.62	0.62
P4	West Full Crossing	50	49.8	LOS E	0.2	0.2	0.84	0.84
All Pedestrians		200	43.7	LOS E			0.78	0.78

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2021_PM _Option 4 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1773	4.6	1773	4.6	0.580	5.1	LOS A	21.4	155.5	0.40	0.37	50.3
6	R2	460	4.6	460	4.6	0.825	56.8	LOS E	26.4	191.8	0.99	1.04	28.3
Approach		2233	4.6	2233	4.6	0.825	15.8	LOS B	26.4	191.8	0.52	0.51	39.4
North: Wonga Street													
7	L2	230	8.5	230	8.5	0.514	40.3	LOS C	12.1	90.8	0.82	0.80	24.0
9	R2	106	4.6	106	4.6	0.686	75.5	LOS F	7.4	54.0	1.00	0.83	16.4
Approach		336	7.3	336	7.3	0.686	51.4	LOS D	12.1	90.8	0.88	0.81	21.0
West: Canterbury Road West													
10	L2	63	2.7	49	2.9	0.943	68.3	LOS E	50.4	361.3	1.00	1.12	27.9
11	T1	1364	2.7	1070	2.9	0.943	64.1	LOS E	50.4	361.3	0.99	1.14	19.4
Approach		1427	2.7	1119 N1	2.9	0.943	64.3	LOS E	50.4	361.3	0.99	1.14	19.9
All Vehicles		3996	4.1	3688 N1	4.5	0.943	33.7	LOS C	50.4	361.3	0.70	0.73	28.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	50	21.8	LOS C	0.1	0.1	0.56	0.56
P4	West Full Crossing	50	64.3	LOS F	0.2	0.2	0.96	0.96

All Pedestrians	100	43.0	LOS E	0.76	0.76

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2021_PM_Option 4 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	15	0.0	15	0.0	0.811	27.8	LOS B	46.8	350.7	0.83	0.78	43.8
5	T1	1482	8.5	1482	8.5	0.811	28.7	LOS C	46.8	350.7	0.88	0.82	31.2
6	R2	22	9.1	22	9.1	0.811	45.9	LOS D	37.0	278.0	0.95	0.88	35.4
Approach		1519	8.4	1519	8.4	0.811	29.0	LOS C	46.8	350.7	0.88	0.82	31.5
NorthEast: Jeffrey Street													
24b	L3	7	0.0	7	0.0	0.739	72.7	LOS F	11.9	88.4	1.00	0.87	27.5
24	L2	10	0.0	10	0.0	0.739	71.8	LOS F	11.9	88.4	1.00	0.87	27.4
26a	R1	326	8.0	326	8.0	0.739	71.0	LOS F	11.9	88.4	1.00	0.87	18.3
26b	R3	1	0.0	1	0.0	0.739	73.0	LOS F	11.9	88.9	1.00	0.87	27.3
Approach		344	7.6	344	7.6	0.739	71.1	LOS F	11.9	88.9	1.00	0.87	18.9
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.596	75.0	LOS F	6.4	46.5	1.00	0.79	26.8
7	L2	48	0.0	48	0.0	0.596	74.0	LOS F	6.4	46.5	1.00	0.79	26.7
7a	L1	1	0.0	1	0.0	0.596	72.7	LOS F	6.4	46.5	1.00	0.79	27.0
9	R2	125	8.0	125	8.0	0.596	75.4	LOS F	6.4	46.5	1.00	0.79	17.4
Approach		175	5.7	175	5.7	0.596	75.0	LOS F	6.4	46.5	1.00	0.79	20.6
West: Canterbury Road w													
10	L2	17	5.9	14	7.0	0.909	63.8	LOS E	20.5	155.0	1.00	1.03	22.3
10a	L1	321	7.5	261	8.8	0.909	62.6	LOS E	20.5	155.0	1.00	1.03	22.5
11	T1	1304	8.1	1060	9.5	0.909	56.7	LOS E	20.5	155.0	1.00	1.04	23.5
Approach		1642	7.9	1334 N1	9.3	0.909	57.9	LOS E	20.5	155.0	1.00	1.04	23.3
All Vehicles		3680	8.0	3372 N1	8.7	0.909	47.1	LOS D	46.8	350.7	0.95	0.91	25.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 472.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	10.8	LOS B	0.1	0.1	0.39	0.39
P2	East Full Crossing	20	61.3	LOS F	0.1	0.1	0.94	0.94
P6	NorthEast Full Crossing	68	15.6	LOS B	0.1	0.1	0.47	0.47
P3	North Full Crossing	108	28.4	LOS C	0.3	0.3	0.64	0.64

P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	32.6	LOS D			0.65	0.65

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.

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Option 4 – 2036

MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.306	5.9	LOS A	0.9	6.9	0.03	0.03	58.1
5	T1	1187	8.5	965	9.3	0.306	0.3	LOS A	0.9	6.9	0.03	0.03	59.7
6	R2	95	8.4	77	9.2	0.666	22.2	LOS B	2.7	20.7	0.49	0.73	42.9
Approach		1283	8.5	1043 N1	9.3	0.666	1.9	LOS A	2.7	20.7	0.07	0.08	58.0
North: Punchbowl Road													
7	L2	28	7.1	28	7.1	2.816	3312.2	LOS F	161.9	1144.5	1.00	4.21	0.5
8	T1	11	9.1	11	9.1	2.816	3306.6	LOS F	161.9	1144.5	1.00	4.21	1.1
9	R2	499	8.4	499	8.4	2.816	3312.3	LOS F	161.9	1144.5	1.00	4.30	1.1
Approach		538	8.4	538	8.4	2.816	3312.1	LOS F	161.9	1284.2	1.00	4.30	1.0
West: Canterbury Road West													
10	L2	144	8.3	144	8.3	0.082	5.7	LOS A	0.0	0.0	0.00	0.52	54.6
11	T1	1389	8.1	1389	8.1	0.899	30.1	LOS C	43.1	322.8	0.63	0.72	30.4
Approach		1533	8.1	1533	8.1	0.899	27.8	LOS B	43.1	322.8	0.57	0.70	32.9
All Vehicles		3354	8.3	3114 N1	8.9	2.816	586.6	LOS F	161.9	1284.2	0.48	1.11	4.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	160	11.3	160	11.3	1.480	912.0	LOS F	99.6	744.0	1.00	2.44	1.9
3	R2	392	4.3	392	4.3	1.480	926.3	LOS F	99.6	744.0	1.00	2.72	1.9
Approach		552	6.3	552	6.3	1.480	922.1	LOS F	99.6	744.0	1.00	2.64	1.9
East: Canterbury Road E													
4	L2	203	3.0	166	3.3	0.899	62.8	LOS E	22.3	163.2	1.00	0.99	21.6
5	T1	1177	5.9	968	6.5	0.899	59.8	LOS E	22.3	163.2	1.00	1.00	6.2
Approach		1380	5.4	1134 N1	6.1	0.899	60.2	LOS E	22.3	163.2	1.00	1.00	9.4
West: Canterbury Road W													
11	T1	1718	7.1	1718	7.1	1.293	577.4	LOS F	109.9	816.0	1.00	3.40	3.0
12	R2	157	12.1	157	12.1	0.243	36.7	LOS C	7.2	55.6	0.70	0.82	34.9
Approach		1875	7.5	1875	7.5	1.293	532.1	LOS F	109.9	816.0	0.97	3.18	3.5
All Vehicles		3807	6.6	3561 N1	7.0	1.480	442.3	LOS F	109.9	816.0	0.99	2.40	3.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	36.4	LOS D	0.0	0.0	0.72	0.72
P4	West Full Crossing	15	57.6	LOS E	0.1	0.1	0.91	0.91
All Pedestrians		18	54.1	LOS E			0.88	0.88

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1227	8.6	1059	9.2	0.835	10.6	LOS A	16.2	120.5	0.36	0.44	32.2
6	R2	138	2.2	118	2.4	0.835	21.4	LOS B	16.2	120.5	0.55	0.72	38.4
Approach		1365	7.9	1178 N1	8.5	0.835	11.7	LOS A	16.2	120.5	0.38	0.46	33.7
North: Rosmore Avenue													
7	L2	144	2.8	144	2.8	0.152	20.0	LOS B	4.6	32.6	0.55	0.69	32.5
9	R2	163	2.5	163	2.5	4.168	5740.5	LOS F	114.2	815.9	1.00	3.96	0.3
Approach		307	2.6	307	2.6	4.168	3057.3	LOS F	114.2	815.9	0.79	2.43	0.6
West: Canterbury West													
10	L2	191	1.6	161	1.6	0.910	68.2	LOS E	22.3	163.2	1.00	1.04	20.5
11	T1	1219	6.4	1028	6.5	0.910	62.6	LOS E	22.3	163.2	1.00	1.05	5.8
Approach		1410	5.7	1189 N1	5.8	0.910	63.4	LOS E	22.3	163.2	1.00	1.05	8.7
All Vehicles		3082	6.4	2674 N1	7.4	4.168	384.3	LOS F	114.2	815.9	0.70	0.95	2.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	34.3	LOS D	0.0	0.0	0.70	0.70
All Pedestrians		7	59.9	LOS E			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	371	3.5	371	3.5	0.471	19.1	LOS B	12.4	89.5	0.54	0.72	33.0
3	R2	163	5.5	163	5.5	0.906	81.9	LOS F	12.4	91.1	0.88	1.03	15.6
Approach		534	4.1	534	4.1	0.906	38.2	LOS C	12.4	91.1	0.64	0.81	24.6
East: Canterbury Road E													
4	L2	102	8.8	83	9.7	0.825	75.4	LOS F	32.0	238.6	1.00	0.91	23.1
5	T1	1040	6.3	842	7.0	0.825	68.2	LOS E	32.2	238.8	1.00	0.91	11.3
Approach		1142	6.6	925 N1	7.2	0.825	68.9	LOS E	32.2	238.8	1.00	0.91	12.7
West: Canterbury Road w													
11	T1	979	8.6	863	8.8	0.728	3.7	LOS A	14.6	105.5	0.21	0.21	46.0
12	R2	402	3.0	354	3.1	0.728	23.2	LOS B	14.6	105.5	0.70	0.84	36.9
Approach		1381	7.0	1217 N1	7.1	0.728	9.3	LOS A	14.6	105.5	0.35	0.39	40.3
All Vehicles		3057	6.3	2676 N1	7.2	0.906	35.7	LOS C	32.2	238.8	0.63	0.65	22.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	40.9	LOS E	0.0	0.0	0.76	0.76
P2	East Full Crossing	19	41.7	LOS E	0.1	0.1	0.77	0.77
All Pedestrians		21	41.6	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1091	8.5	871	9.4	0.343	1.1	LOS A	3.8	28.6	0.08	0.10	55.4
6	R2	83	8.4	66	9.3	0.343	8.1	LOS A	3.8	28.6	0.16	0.22	49.2
Approach		1174	8.5	938 N1	9.4	0.343	1.6	LOS A	3.8	28.6	0.09	0.11	54.2
North: Dudley Street													
7	L2	109	8.3	109	8.3	0.155	29.4	LOS C	4.4	32.7	0.67	0.72	27.9
9	R2	63	7.9	63	7.9	0.857	87.9	LOS F	4.9	36.3	1.00	0.96	14.8
Approach		172	8.1	172	8.1	0.857	50.8	LOS D	4.9	36.3	0.79	0.81	21.1
West: Canterbury West													
10	L2	8	12.5	7	12.4	0.582	18.0	LOS B	14.2	106.0	0.45	0.40	42.1
11	T1	1108	8.0	1009	8.0	0.582	16.9	LOS B	19.1	142.6	0.52	0.47	28.9
Approach		1116	8.1	1017 N1	8.0	0.582	16.9	LOS B	19.1	142.6	0.52	0.47	29.1
All Vehicles		2462	8.3	2126 N1	9.6	0.857	12.9	LOS A	19.1	142.6	0.35	0.34	34.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	23.4	LOS C	0.0	0.0	0.58	0.58
All Pedestrians		16	33.6	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows	Arrival Flows	Deg. Satn	Average Delay	Level of Service	95% Back of Queue	Prop. Queued	Effective Stop Rate	Average Speed

		Total veh/h	HV %	Total veh/h	HV %	v/c	sec		Vehicles veh	Distance m		per veh	km/h
South: Pentland Avenue													
1	L2	103	8.7	103	8.7	0.103	12.7	LOS A	2.6	19.6	0.41	0.65	37.2
3	R2	54	7.4	54	7.4	0.714	83.0	LOS F	4.0	29.7	1.00	0.83	15.4
Approach		157	8.3	157	8.3	0.714	36.9	LOS C	4.0	29.7	0.61	0.71	25.1
East: Canterbury Raod East													
4	L2	138	8.7	108	9.7	0.727	43.6	LOS D	30.3	229.1	0.91	0.82	34.2
5	T1	1221	8.5	955	9.5	0.727	37.9	LOS C	30.6	231.6	0.91	0.82	26.7
Approach		1359	8.5	1062 N1	9.5	0.727	38.5	LOS C	30.6	231.6	0.91	0.82	27.8
West: Canterbury Road West													
11	T1	1529	5.3	1477	5.3	0.599	4.3	LOS A	11.9	87.1	0.28	0.31	47.4
12	R2	148	8.1	143	8.1	0.599	14.8	LOS B	11.8	87.1	0.46	0.55	44.0
Approach		1677	5.5	1620 N1	5.5	0.599	5.2	LOS A	11.9	87.1	0.30	0.33	46.6
All Vehicles		3193	7.0	2839 N1	7.8	0.727	19.4	LOS B	30.6	231.6	0.55	0.53	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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	29.6	LOS C	0.0	0.0	0.65	0.65
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	57.2	LOS E			0.90	0.90

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.

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MOVEMENT SUMMARY

Network: N101 [AM Peak Punchbowl Rd to King George Rd - SCATS]

Site: TCS 64 [Canterbury Road - King Georges Road_ 2036_AM_Option 4 - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	179	21.2	179	21.2	0.189	19.1	LOS B	5.5	45.7	0.49	0.67	40.0
2	T1	3122	7.6	3122	7.6	1.362	712.0	LOS F	326.0	2430.0	1.00	3.77	6.4
3	R2	235	3.0	235	3.0	1.021	155.9	LOS F	12.9	92.4	1.00	1.32	16.9

Approach		3536	7.9	3536	7.9	1.362	640.0	LOS F	326.0	2430.0	0.97	3.45	6.7
East: Canterbury Road E													
4	L2	118	10.2	118	10.2	1.344	654.3	LOS F	164.1	1204.0	1.00	2.04	4.8
5	T1	1030	4.5	1030	4.5	1.344	668.5	LOS F	164.1	1204.0	1.00	2.86	2.1
6	R2	261	10.0	261	10.0	1.070	226.4	LOS F	18.1	137.7	1.00	1.49	14.4
Approach		1409	6.0	1409	6.0	1.344	585.4	LOS F	164.1	1204.0	1.00	2.54	3.4
North: King Georges Road													
7	L2	419	7.4	419	7.4	0.993	112.4	LOS F	93.7	702.7	1.00	1.33	24.0
8	T1	2192	9.1	2192	9.1	0.993	104.4	LOS F	93.7	702.7	1.00	1.33	27.0
9	R2	252	5.2	252	5.2	1.313	636.9	LOS F	68.6	501.4	1.00	2.44	4.2
Approach		2863	8.5	2863	8.5	1.313	152.4	LOS F	93.7	702.7	1.00	1.43	20.7
West: Canterbury Road W													
10	L2	112	10.7	110	10.8	0.153	31.5	LOS C	4.6	35.4	0.66	0.70	42.5
11	T1	681	7.5	668	7.5	1.027	160.9	LOS F	43.3	322.9	1.00	1.55	15.4
12	R2	131	21.4	129	21.4	0.946	102.2	LOS F	5.4	44.9	1.00	1.08	23.8
Approach		924	9.8	907 N1	9.9	1.027	136.9	LOS F	43.3	322.9	0.96	1.38	18.3
All Vehicles		8732	8.0	8715 N1	8.0	1.362	418.7	LOS F	326.0	2430.0	0.99	2.42	8.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 476.0 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	54.9	LOS E	0.0	0.0	0.89	0.89
P2	East Full Crossing	2	28.3	LOS C	0.0	0.0	0.64	0.64
P3	North Full Crossing	1	57.6	LOS E	0.0	0.0	0.91	0.91
P4	West Full Crossing	1	32.9	LOS D	0.0	0.0	0.69	0.69
All Pedestrians		5	40.4	LOS E			0.75	0.75

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	Demand Flows HV	Arrival Flows Total	Arrival Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed

		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
East: Canterbury Road E													
5	T1	1133	4.8	1027	4.7	0.880	18.8	LOS B	18.6	135.5	0.35	0.45	37.1
6	R2	100	11.0	91	10.9	0.880	27.4	LOS B	18.2	133.9	0.65	0.82	40.2
Approach		1233	5.3	1117 N1	5.2	0.880	19.5	LOS B	18.6	135.5	0.37	0.48	37.5
North: Haldon Street													
7	L2	66	4.5	66	4.5	2.219	2245.2	LOS F	72.0	532.9	1.00	3.66	0.8
9	R2	139	8.6	139	8.6	2.219	2245.4	LOS F	72.0	532.9	1.00	3.29	0.8
Approach		205	7.3	205	7.3	2.219	2245.3	LOS F	72.0	532.9	1.00	3.41	0.8
West: Canterbury Road w													
10	L2	101	7.9	96	7.8	0.896	52.5	LOS D	54.8	403.3	0.99	0.99	30.1
11	T1	1536	5.9	1460	5.8	0.896	46.7	LOS D	55.1	405.0	0.99	0.99	20.8
Approach		1637	6.0	1556 N1	5.9	0.896	47.1	LOS D	55.1	405.0	0.99	0.99	21.6
All Vehicles		3075	5.8	2879 N1	6.2	2.219	192.9	LOS F	72.0	532.9	0.75	0.97	7.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	24.6	LOS C	0.0	0.0	0.59	0.59
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	60.2	LOS F			0.92	0.92

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2036_AM_Option 4 - SCATS (single diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	Demand Flows HV	Arrival Flows Total	Arrival Flows HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	95% Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed

		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Chapel St													
1	L2	123	8.1	123	8.1	0.888	61.8	LOS E	30.6	221.5	0.91	0.96	9.2
2	T1	471	2.5	471	2.5	0.888	62.6	LOS E	30.6	221.5	0.94	1.00	8.7
3	R2	112	7.1	112	7.1	0.888	78.3	LOS F	21.2	154.4	1.00	1.07	7.5
Approach		706	4.2	706	4.2	0.888	65.0	LOS E	30.6	221.5	0.95	1.01	8.6
East: Canterbury Rd													
4	L2	86	12.8	77	12.6	0.785	69.1	LOS E	32.3	238.2	1.00	0.89	22.7
5	T1	999	5.0	890	4.9	0.785	64.0	LOS E	33.0	240.7	1.00	0.89	19.5
6	R2	22	0.0	20	0.0	0.247	73.8	LOS F	1.3	9.1	0.94	0.69	18.3
Approach		1107	5.5	987 N1	5.4	0.785	64.6	LOS E	33.0	240.7	1.00	0.89	19.7
North: Chapel St													
7	L2	50	0.0	50	0.0	0.303	39.2	LOS C	9.7	69.2	0.78	0.68	5.0
8	T1	427	2.3	427	2.3	0.508	39.4	LOS C	16.6	118.7	0.84	0.73	15.1
9	R2	22	0.0	22	0.0	0.508	44.6	LOS D	16.6	118.7	0.87	0.75	4.6
Approach		499	2.0	499	2.0	0.508	39.6	LOS C	16.6	118.7	0.83	0.72	13.9
West: Canterbury Rd													
10	L2	56	0.0	52	0.0	0.794	15.0	LOS B	23.1	168.3	0.50	0.48	26.5
11	T1	1372	5.4	1278	5.3	0.794	9.0	LOS A	23.1	168.3	0.43	0.41	46.3
12	R2	187	7.5	174	7.4	0.601	36.4	LOS C	5.9	43.8	0.98	0.81	30.6
Approach		1615	5.4	1505 N1	5.4	0.794	12.4	LOS A	23.1	168.3	0.50	0.46	42.0
All Vehicles		3927	4.8	3696 N1	5.1	0.888	40.0	LOS C	33.0	240.7	0.76	0.71	22.5

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	38.6	LOS D	0.0	0.0	0.74	0.74
P2	East Full Crossing	6	40.1	LOS E	0.0	0.0	0.76	0.76
P3	North Full Crossing	50	23.5	LOS C	0.1	0.1	0.58	0.58
All Pedestrians		67	27.5	LOS C			0.62	0.62

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036_AM -Option 4 SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	82	7.3	82	7.3	0.269	36.5	LOS C	8.3	61.5	0.73	0.68	26.1
2	T1	397	6.3	397	6.3	1.343	501.1	LOS F	137.7	1039.5	0.94	2.11	5.9
3	R2	192	13.5	192	13.5	1.343	655.3	LOS F	137.7	1039.5	1.00	2.57	2.5
Approach		671	8.5	671	8.5	1.343	488.5	LOS F	137.7	1039.5	0.93	2.07	5.0
East: Canterbury Road E													
4	L2	88	17.0	77	16.7	0.883	73.3	LOS F	36.2	272.0	1.00	1.01	26.3
5	T1	1051	7.0	921	6.9	0.883	64.7	LOS E	36.8	272.7	1.00	1.00	18.6
6	R2	46	0.0	40	0.0	0.523	78.0	LOS F	2.8	19.9	0.99	0.73	25.5
Approach		1185	7.5	1039 N1	7.4	0.883	65.9	LOS E	36.8	272.7	1.00	0.99	19.7
North: Sharp Street													
7	L2	78	5.1	78	5.1	0.339	35.9	LOS C	4.8	34.7	0.90	0.75	26.0
8	T1	445	4.5	445	4.5	1.531	936.9	LOS F	147.4	1071.6	0.99	3.96	3.6
Approach		523	4.6	523	4.6	1.531	802.5	LOS F	147.4	1071.6	0.98	3.48	3.9
West: Canterbury Road w													
10	L2	7	0.0	7	0.0	0.746	23.2	LOS B	26.5	193.8	0.67	0.61	42.8
11	T1	1340	5.4	1265	5.5	0.746	17.5	LOS B	26.5	193.8	0.66	0.60	38.3
12	R2	316	9.5	298	9.5	0.913	80.3	LOS F	23.4	177.1	1.00	0.97	24.7
Approach		1663	6.2	1570 N1	6.2	0.913	29.4	LOS C	26.5	193.8	0.73	0.67	32.7
All Vehicles		4042	6.8	3803 N1	7.2	1.531	226.7	LOS F	147.4	1071.6	0.87	1.39	8.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	40.2	LOS E	0.1	0.1	0.76	0.76
P2	East Full Crossing	33	58.6	LOS E	0.1	0.1	0.92	0.92
P3	North Full Crossing	25	25.2	LOS C	0.1	0.1	0.60	0.60
P4	West Full Crossing	7	36.4	LOS D	0.0	0.0	0.72	0.72
All Pedestrians		82	42.7	LOS E			0.77	0.77

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036_AM_Option 4 - SCATS (Single Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	79	6.3	79	6.3	1.740	1394.6	LOS F	153.9	1133.3	1.00	4.57	1.3
2	T1	888	6.0	888	6.0	3.854	3966.9	LOS F	461.4	3393.0	1.00	6.06	0.9
3	R2	76	5.3	76	5.3	3.854	5183.0	LOS F	461.4	3393.0	1.00	6.77	0.4
Approach		1043	5.9	1043	5.9	3.854	3860.7	LOS F	461.4	3393.0	1.00	6.00	0.9
East: Canterbury Road East													
4	L2	40	7.5	39	7.3	0.661	39.0	LOS C	38.9	291.8	0.94	0.86	35.4
5	T1	1135	8.5	1097	8.3	0.661	33.8	LOS C	38.9	291.8	0.93	0.84	27.4
6	R2	308	8.4	298	8.2	0.879	51.1	LOS D	16.0	119.5	1.00	0.95	30.2
Approach		1483	8.5	1433 N1	8.3	0.879	37.5	LOS C	38.9	291.8	0.95	0.86	28.6
North: Thorncraft Parade													
7	L2	269	8.6	269	8.6	0.918	83.8	LOS F	26.1	195.8	1.00	1.24	15.5
8	T1	379	8.4	379	8.4	4.059	4137.5	LOS F	275.8	2070.7	1.00	4.46	0.9
9	R2	118	8.5	118	8.5	4.059	5544.8	LOS F	275.8	2070.7	1.00	5.57	0.3
Approach		766	8.5	766	8.5	4.059	2930.7	LOS F	275.8	2070.7	1.00	3.50	0.9
West: Canterbury Road West													
10	L2	67	0.0	62	0.0	0.936	37.1	LOS C	51.7	384.3	0.92	0.94	36.3
11	T1	1533	8.0	1426	7.9	0.936	31.7	LOS C	51.7	384.3	0.86	0.89	28.7
12	R2	163	0.0	152	0.0	0.636	75.1	LOS F	10.4	73.0	1.00	0.81	26.1
Approach		1763	7.0	1640 N1	6.9	0.936	35.9	LOS C	51.7	384.3	0.87	0.88	28.6
All Vehicles		5055	7.4	4882 N1	7.7	4.059	1307.8	LOS F	461.4	3393.0	0.94	2.38	1.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	19.0	LOS B	0.0	0.0	0.52	0.52
P2	East Full Crossing	32	56.8	LOS E	0.1	0.1	0.90	0.90
P3	North Full Crossing	8	27.7	LOS C	0.0	0.0	0.63	0.63
P4	West Full Crossing	32	56.8	LOS E	0.1	0.1	0.90	0.90
All Pedestrians		84	48.6	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2036_AM_Option 4 - SCATS (Double Diamond)]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	116	4.3	116	4.3	2.248	2296.1	LOS F	229.0	1668.0	1.00	5.46	0.8
2	T1	736	4.9	736	4.9	2.248	2291.2	LOS F	229.0	1668.0	1.00	5.42	1.5
3	R2	413	4.1	413	4.1	1.999	1855.6	LOS F	200.2	1451.0	1.00	4.03	1.0
Approach		1265	4.6	1265	4.6	2.248	2149.4	LOS F	229.0	1668.0	1.00	4.97	1.3
East: Canterbury Road E													
4	L2	237	3.8	232	3.8	0.879	67.9	LOS E	36.6	267.0	1.00	1.07	27.9
5	T1	810	5.8	794	5.8	0.879	59.1	LOS E	36.6	267.0	1.00	1.02	20.5
6	R2	1	0.0	1	0.0	0.013	76.6	LOS F	0.1	0.5	0.98	0.59	26.3
Approach		1048	5.3	1027 N1	5.3	0.879	61.1	LOS E	36.6	267.0	1.00	1.03	22.7
North: Beamish Street													
7	L2	54	18.5	54	18.5	1.897	1644.6	LOS F	121.8	919.4	1.00	2.58	1.1
8	T1	506	6.7	506	6.7	1.897	1654.4	LOS F	135.2	1000.6	1.00	3.67	2.1
9	R2	84	27.4	84	27.4	0.600	63.0	LOS E	5.3	45.4	0.94	0.78	18.6
Approach		644	10.4	644	10.4	1.897	1446.0	LOS F	135.2	1000.6	0.99	3.20	2.1
West: Canterbury Road w													
10	L2	109	12.8	100	12.8	0.942	65.8	LOS E	56.6	417.0	1.00	1.10	27.8
11	T1	1263	5.1	1155	5.0	0.942	60.1	LOS E	56.6	417.0	0.90	1.03	19.3
12	R2	257	5.8	235	5.8	0.908	77.4	LOS F	18.1	133.4	0.98	0.97	24.6
Approach		1629	5.7	1489 N1	5.7	0.942	63.2	LOS E	56.6	417.0	0.92	1.02	21.2
All Vehicles		4586	6.0	4426 N1	6.2	2.248	860.2	LOS F	229.0	1668.0	0.97	2.47	2.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	42.4	LOS E	0.0	0.0	0.78	0.78
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	21.7	LOS C	0.0	0.0	0.56	0.56
P4	West Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96

All Pedestrians	40	48.1	LOS E		0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1336	8.5	1318	8.5	0.413	2.1	LOS A	9.2	69.3	0.23	0.21	55.6
6	R2	431	8.6	425	8.6	0.911	78.6	LOS F	30.1	226.4	1.00	1.14	23.9
Approach		1767	8.5	1743 N1	8.6	0.911	20.7	LOS B	30.1	226.4	0.42	0.44	36.1
North: Wonga Street													
7	L2	327	8.6	327	8.6	1.010	154.1	LOS F	39.4	296.4	1.00	1.31	9.7
9	R2	99	8.1	99	8.1	1.315	640.7	LOS F	27.1	202.6	1.00	2.27	2.7
Approach		426	8.5	426	8.5	1.315	267.1	LOS F	39.4	296.4	1.00	1.54	6.0
West: Canterbury Road West													
10	L2	58	8.6	48	9.1	0.994	92.4	LOS F	80.5	604.7	1.00	1.31	23.6
11	T1	1693	8.0	1410	8.5	0.994	87.1	LOS F	80.5	604.7	1.00	1.32	15.6
Approach		1751	8.1	1458 N1	8.5	0.994	87.3	LOS F	80.5	604.7	1.00	1.32	16.0
All Vehicles		3944	8.3	3628 N1	9.0	1.315	76.4	LOS F	80.5	604.7	0.72	0.92	17.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	15.1	LOS B	0.0	0.0	0.46	0.46
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	50.2	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036_AM_Option 4 - SCATS]

Network: N101 [AM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	13	0.0	13	0.0	0.674	21.0	LOS B	32.9	247.2	0.65	0.61	47.6
5	T1	1067	8.5	1067	8.5	0.674	18.3	LOS B	32.9	247.2	0.73	0.67	37.7
6	R2	36	8.3	36	8.3	0.674	35.8	LOS C	10.7	80.3	0.96	0.85	39.0
Approach		1116	8.4	1116	8.4	0.674	18.9	LOS B	32.9	247.2	0.73	0.67	37.9
NorthEast: Jeffrey Street													
24b	L3	24	8.3	24	8.3	1.027	166.9	LOS F	16.8	125.3	1.00	1.39	16.0
24	L2	4	0.0	4	0.0	1.027	165.8	LOS F	16.8	125.3	1.00	1.39	16.0
26a	R1	263	8.0	263	8.0	1.027	163.7	LOS F	16.8	125.3	1.00	1.39	9.5
26b	R3	1	0.0	1	0.0	1.027	164.5	LOS F	16.6	124.0	1.00	1.39	16.1
Approach		292	7.9	292	7.9	1.027	164.0	LOS F	16.8	125.3	1.00	1.39	10.2
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	26.4
7	L2	67	0.0	67	0.0	0.716	76.3	LOS F	8.1	58.5	1.00	0.84	26.3
7a	L1	1	0.0	1	0.0	0.716	75.0	LOS F	8.1	58.5	1.00	0.84	26.6
9	R2	144	7.6	144	7.6	0.716	77.7	LOS F	8.1	58.5	1.00	0.84	17.1
Approach		213	5.2	213	5.2	0.716	77.3	LOS F	8.1	58.5	1.00	0.84	20.6
West: Canterbury Road w													
10	L2	21	9.5	18	9.9	0.903	47.7	LOS D	20.7	155.0	0.97	0.98	27.0
10a	L1	172	8.1	150	8.5	0.903	46.5	LOS D	20.7	155.0	0.97	0.98	27.3
11	T1	1796	8.0	1571	8.3	0.903	41.5	LOS C	20.7	155.0	0.97	0.98	28.1
Approach		1989	8.0	1740 N1	8.4	0.903	42.0	LOS C	20.7	155.0	0.97	0.98	28.1
All Vehicles		3610	8.0	3361 N1	8.6	1.027	47.2	LOS D	32.9	247.2	0.90	0.90	25.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 268.6 %
Number of Iterations: 15 (maximum specified: 15)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped

P5	SouthEast Full Crossing	52	8.2	LOS A	0.1	0.1	0.34	0.34
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	8.6	LOS A	0.1	0.1	0.35	0.35
P3	North Full Crossing	108	18.6	LOS B	0.2	0.2	0.52	0.52
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	27.5	LOS C			0.58	0.58

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.

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MOVEMENT SUMMARY

Site: TCS 813 [Canterbury Road - Punchbowl Road_2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Punchbowl Road / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road East													
4	L2	1	0.0	1	0.0	0.385	7.7	LOS A	6.0	43.8	0.16	0.15	56.4
5	T1	1519	4.6	1189	5.8	0.385	2.1	LOS A	6.0	43.8	0.16	0.15	58.0
6	R2	106	4.7	83	5.9	0.742	75.0	LOS F	6.2	45.9	1.00	0.90	26.5
Approach		1626	4.6	1272 N1	5.8	0.742	6.9	LOS A	6.2	45.9	0.22	0.20	53.8
North: Punchbowl Road													
7	L2	35	8.6	35	8.6	1.610	1161.2	LOS F	92.6	655.5	1.00	3.00	1.5
8	T1	1	0.0	1	0.0	1.610	1155.5	LOS F	92.6	655.5	1.00	3.00	2.9
9	R2	467	4.5	467	4.5	1.610	1160.8	LOS F	101.2	756.8	1.00	3.00	2.9
Approach		503	4.8	503	4.8	1.610	1160.8	LOS F	101.2	756.8	1.00	3.00	2.8
West: Canterbury Road West													
10	L2	172	2.9	172	2.9	0.095	5.6	LOS A	0.0	0.0	0.00	0.53	54.8
11	T1	1378	2.4	1378	2.4	0.905	34.6	LOS C	47.5	339.6	0.70	0.80	28.3
Approach		1550	2.5	1550	2.5	0.905	31.4	LOS C	47.5	339.6	0.62	0.77	31.4
All Vehicles		3679	3.7	3325 N1	4.1	1.610	192.9	LOS F	101.2	756.8	0.52	0.89	11.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Average Back of Queue Distance	Prop. Queued	Effective Stop Rate

		ped/h	sec		ped	m		per ped
P2	East Full Crossing	5	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	64.1	LOS F			0.96	0.96

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.

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MOVEMENT SUMMARY

Site: TCS 816 [Canterbury Road - Belmore Road_2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - Belmore Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Belmore Road S													
1	L2	290	1.4	290	1.4	1.609	1142.7	LOS F	178.7	1272.3	1.00	2.76	1.5
3	R2	550	2.9	550	2.9	1.609	1157.3	LOS F	178.7	1272.3	1.00	3.04	1.5
Approach		840	2.4	840	2.4	1.609	1152.2	LOS F	178.7	1272.3	1.00	2.94	1.5
East: Canterbury Road E													
4	L2	229	2.2	181	2.5	0.888	59.7	LOS E	23.1	163.2	0.99	0.97	22.2
5	T1	1300	0.4	1025	0.4	0.888	61.7	LOS E	23.2	163.2	1.00	0.98	6.0
Approach		1529	0.7	1206 N1	0.8	0.888	61.4	LOS E	23.2	163.2	0.99	0.98	9.3
West: Canterbury Road W													
11	T1	1469	2.6	1469	2.6	1.187	411.5	LOS F	114.0	816.0	1.00	2.77	4.2
12	R2	171	2.3	171	2.3	0.304	44.1	LOS D	7.7	54.8	0.69	0.85	32.6
Approach		1640	2.6	1640	2.6	1.187	373.2	LOS F	114.0	816.0	0.97	2.57	5.0
All Vehicles		4009	1.8	3686 N1	2.0	1.609	448.7	LOS F	178.7	1272.3	0.98	2.13	3.2

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

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	3	35.0	LOS D	0.0	0.0	0.71	0.71
P4	West Full Crossing	15	50.6	LOS E	0.1	0.1	0.85	0.85
All Pedestrians		18	48.0	LOS E			0.83	0.83

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.

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MOVEMENT SUMMARY

Site: TCS 817 [Canterbury Road - Rosmore Avenue_2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Rossmore Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1402	5.9	1204	6.3	1.034	131.0	LOS F	44.6	326.4	1.00	1.51	4.8
6	R2	106	1.9	91	2.0	1.034	125.0	LOS F	44.6	326.4	1.00	1.29	11.5
Approach		1508	5.6	1295 N1	6.0	1.034	130.6	LOS F	44.6	326.4	1.00	1.49	5.4
North: Rosmore Avenue													
7	L2	105	0.0	105	0.0	0.252	34.1	LOS C	4.7	33.0	0.74	0.74	26.1
9	R2	192	0.5	192	0.5	4.842	6954.5	LOS F	139.7	982.1	1.00	4.10	0.3
Approach		297	0.3	297	0.3	4.842	4507.9	LOS F	139.7	982.1	0.91	2.91	0.4
West: Canterbury West													
10	L2	167	1.2	149	1.2	1.106	283.7	LOS F	22.9	163.2	1.00	2.06	6.8
11	T1	1478	2.8	1317	2.7	1.106	271.2	LOS F	22.9	163.2	1.00	2.11	1.4
Approach		1645	2.6	1465 N1	2.6	1.106	272.4	LOS F	22.9	163.2	1.00	2.11	2.1
All Vehicles		3450	3.7	3057 N1	4.2	4.842	623.8	LOS F	139.7	982.1	0.99	1.92	1.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	6	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	1	20.6	LOS C	0.0	0.0	0.54	0.54
All Pedestrians		7	57.9	LOS E			0.90	0.90

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.

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MOVEMENT SUMMARY

Site: TCS 818 [Canterbury Road - Bonds Road_ 2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bonds Road													
1	L2	428	1.2	428	1.2	0.710	25.1	LOS B	18.3	129.2	0.68	0.78	29.8
3	R2	103	4.9	103	4.9	2.884	3434.9	LOS F	63.2	460.8	1.00	3.43	0.5
Approach		531	1.9	531	1.9	2.884	686.5	LOS F	63.2	460.8	0.74	1.29	2.5
East: Canterbury Road E													
4	L2	85	5.9	67	6.6	1.001	119.6	LOS F	54.9	408.0	1.00	1.43	16.9
5	T1	1209	6.5	959	7.2	1.001	121.8	LOS F	54.9	408.0	1.00	1.45	6.9
Approach		1294	6.4	1026 N1	7.2	1.001	121.6	LOS F	54.9	408.0	1.00	1.44	7.7
West: Canterbury Road w													
11	T1	1239	2.7	1122	2.7	0.940	40.0	LOS C	43.9	311.7	0.46	0.63	14.4
12	R2	430	1.2	390	1.1	0.940	47.9	LOS D	43.9	311.7	0.93	1.12	27.9
Approach		1669	2.3	1512 N1	2.3	0.940	42.1	LOS C	43.9	311.7	0.58	0.75	19.5
All Vehicles		3494	3.8	3070 N1	4.3	2.884	180.2	LOS F	63.2	460.8	0.75	1.08	6.3

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	36.4	LOS D	0.0	0.0	0.72	0.72
P2	East Full Crossing	19	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		21	61.5	LOS F			0.94	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.

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MOVEMENT SUMMARY

Site: TCS 819 [Canterbury Road - Dudley Street_2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Dudley St / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury East													
5	T1	1340	4.6	1019	5.0	0.688	4.4	LOS A	11.5	84.0	0.22	0.21	47.6
6	R2	108	4.6	82	5.1	0.688	82.9	LOS F	8.5	62.0	1.00	0.94	21.1
Approach		1448	4.6	1101 N1	5.0	0.688	10.3	LOS A	11.5	84.0	0.28	0.26	38.8
North: Dudley Street													
7	L2	73	8.2	73	8.2	0.777	78.1	LOS F	5.4	40.5	1.00	0.95	16.1
9	R2	84	4.8	84	4.8	1.369	736.3	LOS F	25.1	182.9	1.00	2.28	2.3
Approach		157	6.4	157	6.4	1.369	430.2	LOS F	25.1	182.9	1.00	1.66	3.9
West: Canterbury West													
10	L2	50	2.0	47	1.9	0.987	109.6	LOS F	57.1	408.0	1.00	1.36	17.5
11	T1	1518	2.6	1420	2.6	0.987	104.7	LOS F	57.1	408.0	1.00	1.37	7.9
Approach		1568	2.6	1467 N1	2.5	0.987	104.9	LOS F	57.1	408.0	1.00	1.37	8.3
All Vehicles		3173	3.7	2725 N1	4.3	1.369	85.4	LOS F	57.1	408.0	0.71	0.94	10.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	12	5.7	LOS A	0.0	0.0	0.29	0.29
All Pedestrians		16	20.3	LOS C			0.45	0.45

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.

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MOVEMENT SUMMARY

Site: TCS 820 [Canterbury Road - Pentland Avenue_2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Pentland Avenue / Canterbury Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Pentland Avenue													
1	L2	160	4.4	160	4.4	0.146	15.7	LOS B	4.6	33.7	0.45	0.65	35.1
3	R2	173	2.9	173	2.9	3.096	3813.2	LOS F	109.0	782.0	1.00	4.10	0.5
Approach		333	3.6	333	3.6	3.096	1988.6	LOS F	109.0	782.0	0.74	2.44	0.9
East: Canterbury Raod East													
4	L2	63	4.8	50	5.3	0.923	72.8	LOS F	47.7	348.4	1.00	1.08	27.0
5	T1	1440	4.6	1142	5.1	0.923	67.2	LOS E	47.9	349.6	1.00	1.08	18.8
Approach		1503	4.6	1192 N1	5.1	0.923	67.4	LOS E	47.9	349.6	1.00	1.08	19.3
West: Canterbury Road West													
11	T1	1640	2.4	1575	2.4	0.859	6.3	LOS A	23.8	170.0	0.40	0.45	43.4
12	R2	197	2.5	189	2.5	0.859	19.7	LOS B	23.8	170.0	0.57	0.75	40.8
Approach		1837	2.4	1764 N1	2.4	0.859	7.7	LOS A	23.8	170.0	0.42	0.48	42.7
All Vehicles		3673	3.4	3289 N1	3.8	3.096	229.9	LOS F	109.0	782.0	0.66	0.90	6.0

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	1	35.0	LOS D	0.0	0.0	0.71	0.71
P2	East Full Crossing	4	64.1	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		5	58.3	LOS E			0.91	0.91

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.

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MOVEMENT SUMMARY

Site: TCS 64 [Canterbury Road - King Georges Road_ 2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak Punchbowl Rd to King George Rd - SCATS]

Canterbury Road - King Georges Road
Signals - Fixed Time Isolated Cycle Time = 140 seconds (Practical Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: King Georges Road													
1	L2	397	11.6	397	11.6	0.587	33.2	LOS C	15.6	120.1	0.76	0.92	32.1
2	T1	2100	5.3	2100	5.3	1.481	926.4	LOS F	256.8	1879.2	1.00	4.29	5.0
3	R2	315	1.6	315	1.6	1.355	710.8	LOS F	45.8	325.0	1.00	2.42	4.7
Approach		2812	5.8	2812	5.8	1.481	776.1	LOS F	256.8	1879.2	0.97	3.60	5.3
East: Canterbury Road E													
4	L2	144	4.9	144	4.9	1.435	818.4	LOS F	188.4	1355.7	1.00	2.26	4.0
5	T1	992	2.7	992	2.7	1.435	831.3	LOS F	188.4	1355.7	1.00	3.13	1.7
6	R2	251	4.4	251	4.4	1.101	274.8	LOS F	19.7	143.3	1.00	1.59	12.3
Approach		1387	3.2	1387	3.2	1.435	729.3	LOS F	188.4	1355.7	1.00	2.76	2.9
North: King Georges Road													
7	L2	189	3.2	189	3.2	1.320	615.2	LOS F	246.2	1761.2	1.00	2.26	6.0
8	T1	2598	2.4	2598	2.4	1.320	630.7	LOS F	260.1	1858.3	1.00	3.17	7.0
9	R2	338	2.7	338	2.7	1.434	850.9	LOS F	110.1	788.1	1.00	2.84	3.2
Approach		3125	2.5	3125	2.5	1.434	653.6	LOS F	260.1	1858.3	1.00	3.08	6.4
West: Canterbury Road W													
10	L2	246	3.7	217	3.5	0.203	18.6	LOS B	6.6	47.8	0.50	0.68	48.1
11	T1	1212	0.7	1070	0.7	1.089	248.1	LOS F	85.7	603.7	1.00	2.04	10.9
12	R2	583	3.9	514	3.8	1.433	848.5	LOS F	83.1	600.7	1.00	2.83	4.4
Approach		2041	2.0	1800 N1	1.9	1.433	391.8	LOS F	85.7	603.7	0.94	2.10	8.1
All Vehicles		9365	3.5	9124 N1	3.6	1.481	651.2	LOS F	260.1	1879.2	0.98	3.00	5.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 136.8 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	2	55.8	LOS E	0.0	0.0	0.89	0.89
P2	East Full Crossing	2	38.6	LOS D	0.0	0.0	0.74	0.74
P3	North Full Crossing	7	47.2	LOS E	0.0	0.0	0.82	0.82
P4	West Full Crossing	1	50.6	LOS E	0.0	0.0	0.85	0.85
All Pedestrians		12	47.5	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 447 [Canterbury Road - Haldon Street_ 2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Haldon Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
5	T1	1354	4.9	1079	5.4	0.922	37.1	LOS C	43.4	318.0	0.63	0.78	27.1
6	R2	169	2.4	134	2.6	0.922	40.1	LOS C	29.4	213.9	0.84	1.01	35.1
Approach		1523	4.7	1213 N1	5.1	0.922	37.4	LOS C	43.4	318.0	0.66	0.81	28.4
North: Haldon Street													
7	L2	71	4.2	71	4.2	3.388	4340.9	LOS F	118.7	854.7	1.00	4.19	0.4
9	R2	219	2.7	219	2.7	3.388	4339.6	LOS F	118.7	854.7	1.00	3.84	0.4
Approach		290	3.1	290	3.1	3.388	4339.9	LOS F	118.7	854.7	1.00	3.93	0.4
West: Canterbury Road w													
10	L2	180	5.6	147	6.4	0.907	60.3	LOS E	52.8	382.3	1.00	1.02	28.0
11	T1	1570	3.1	1276	3.5	0.907	54.5	LOS D	53.4	384.9	1.00	1.03	18.7
Approach		1750	3.3	1423 N1	3.8	0.907	55.1	LOS D	53.4	384.9	1.00	1.02	20.1
All Vehicles		3563	3.9	2926 N1	4.7	3.388	472.4	LOS F	118.7	854.7	0.86	1.22	3.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	2	28.9	LOS C	0.0	0.0	0.64	0.64
P4	West Full Crossing	18	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		20	60.7	LOS F			0.93	0.93

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.

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MOVEMENT SUMMARY

Site: TCS 505 [Canterbury Road - Chapel St_2036_PM_Option 4 - SCATS (single diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Intersection: Canterbury Road - Chapel Street
Scenario: Existing Base Case - AM Peak
Description: Existing Surveyed Volumes
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Chapel St													
1	L2	194	3.1	194	3.1	0.887	54.3	LOS D	39.3	279.3	0.91	0.94	10.3
2	T1	429	0.9	429	0.9	0.887	52.8	LOS D	39.3	279.3	0.92	0.95	9.7
3	R2	88	1.1	88	1.1	0.887	87.7	LOS F	10.3	72.5	1.00	1.08	6.7
Approach		711	1.5	711	1.5	0.887	57.5	LOS E	39.3	279.3	0.93	0.96	9.3
East: Canterbury Rd													
4	L2	156	25.0	120	27.1	0.825	24.8	LOS B	24.1	183.2	0.72	0.69	38.2
5	T1	1253	4.6	944	5.1	0.825	17.6	LOS B	24.1	183.2	0.70	0.65	37.9
6	R2	52	0.0	39	0.0	0.489	83.0	LOS F	2.8	19.8	1.00	0.73	16.8
Approach		1461	6.6	1103 N1	7.3	0.825	20.7	LOS B	24.1	183.2	0.71	0.65	36.3
North: Chapel St													
7	L2	44	0.0	44	0.0	0.429	34.3	LOS C	16.3	114.3	0.76	0.68	5.8
8	T1	600	0.5	600	0.5	0.719	41.7	LOS C	20.7	145.2	0.87	0.76	14.5
9	R2	24	0.0	24	0.0	0.719	55.4	LOS D	20.7	145.2	0.97	0.84	3.7
Approach		668	0.4	668	0.4	0.719	41.7	LOS C	20.7	145.2	0.87	0.76	13.8
West: Canterbury Rd													
10	L2	52	0.0	41	0.0	0.825	20.1	LOS B	27.1	195.6	0.64	0.61	24.8
11	T1	1453	3.2	1154	3.7	0.825	14.3	LOS A	27.1	195.6	0.56	0.53	40.9
12	R2	207	3.4	164	3.9	0.796	65.2	LOS E	11.1	80.0	0.99	0.83	22.5
Approach		1712	3.2	1360 N1	3.6	0.825	20.6	LOS B	27.1	195.6	0.61	0.56	35.7
All Vehicles		4552	3.6	3841 N1	4.3	0.887	31.1	LOS C	39.3	279.3	0.74	0.70	25.7

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	11	36.4	LOS D	0.0	0.0	0.72	0.72
P2	East Full Crossing	6	32.9	LOS D	0.0	0.0	0.69	0.69
P3	North Full Crossing	50	29.6	LOS C	0.1	0.1	0.65	0.65
All Pedestrians		67	31.0	LOS D			0.67	0.67

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.

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MOVEMENT SUMMARY

Site: TCS 80 [Canterbury Road - Kingsgrove Road_Sharp St_2036_PM - Option 4 SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Kingsgrove Road_Sharp St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Kingsgrove Road													
1	L2	178	3.9	178	3.9	0.294	33.0	LOS C	9.7	70.4	0.70	0.73	26.8
2	T1	429	4.0	429	4.0	1.469	797.2	LOS F	186.4	1362.8	0.97	2.85	4.0
3	R2	176	8.0	176	8.0	1.469	881.1	LOS F	186.4	1362.8	1.00	3.07	1.9
Approach		783	4.9	783	4.9	1.469	642.3	LOS F	186.4	1362.8	0.92	2.41	3.9
East: Canterbury Road E													
4	L2	105	8.6	75	8.4	0.889	30.0	LOS C	30.1	218.4	0.83	0.82	38.9
5	T1	1421	3.9	1022	3.8	0.889	23.7	LOS B	30.6	221.1	0.84	0.80	32.9
6	R2	86	0.0	62	0.0	0.193	68.6	LOS E	4.2	29.2	1.00	0.77	27.4
Approach		1612	4.0	1160 N1	3.9	0.889	26.5	LOS B	30.6	221.1	0.84	0.80	32.9
North: Sharp Street													
7	L2	60	0.0	60	0.0	0.369	42.0	LOS C	5.7	40.5	0.92	0.76	24.2
8	T1	519	1.9	519	1.9	1.665	1105.6	LOS F	183.5	1305.6	0.99	4.24	3.1
Approach		579	1.7	579	1.7	1.665	995.4	LOS F	183.5	1305.6	0.98	3.88	3.2
West: Canterbury Road w													
10	L2	15	6.7	12	7.5	0.871	71.4	LOS F	38.2	275.6	1.00	0.94	27.4
11	T1	1304	3.1	1073	3.5	0.871	65.5	LOS E	38.2	275.7	1.00	0.94	19.3
12	R2	340	4.1	280	4.6	0.895	85.2	LOS F	20.9	151.8	1.00	0.92	23.9
Approach		1659	3.4	1366 N1	3.8	0.895	69.6	LOS E	38.2	275.7	1.00	0.94	20.7
All Vehicles		4633	3.6	3888 N1	4.3	1.665	310.0	LOS F	186.4	1362.8	0.93	1.63	6.8

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	17	37.9	LOS D	0.0	0.0	0.74	0.74
P2	East Full Crossing	33	58.6	LOS E	0.1	0.1	0.92	0.92
P3	North Full Crossing	25	37.2	LOS D	0.1	0.1	0.73	0.73

P4	West Full Crossing	7	37.2	LOS D	0.0	0.0	0.73	0.73
All Pedestrians		82	46.0	LOS E			0.81	0.81

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.

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MOVEMENT SUMMARY

Site: TCS 507 [Canterbury Road - Charlotte Street_Thorncraft Parade_2036_PM_Option 4 - SCATS (Single Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Charlotte Street / Canterbury Street
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Charlotte Street													
1	L2	201	4.5	201	4.5	3.003	3666.5	LOS F	1130.6	8462.6	1.00	7.51	0.5
2	T1	1617	8.5	1617	8.5	3.003	3661.9	LOS F	1130.6	8462.6	1.00	7.51	1.0
3	R2	825	2.7	825	2.7	14.720	24727.1	LOS F	690.1	4940.8	1.00	5.33	0.1
Approach		2643	6.4	2643	6.4	14.720	10237.6	LOS F	1130.6	8462.6	1.00	6.83	0.3
East: Canterbury Road East													
4	L2	96	4.2	92	4.0	0.902	31.8	LOS C	41.0	297.7	0.86	0.85	38.1
5	T1	1212	4.6	1163	4.4	0.902	24.7	LOS B	41.0	297.7	0.72	0.72	32.0
6	R2	214	4.7	205	4.5	0.887	86.1	LOS F	15.2	110.8	1.00	0.90	23.2
Approach		1522	4.6	1460 N1	4.4	0.902	33.8	LOS C	41.0	297.7	0.77	0.75	29.8
North: Thorncraft Parade													
7	L2	128	8.6	128	8.6	1.380	751.8	LOS F	224.3	1641.1	1.00	3.65	2.3
8	T1	632	4.6	632	4.6	6.103	1128.0	LOS F	250.8	1825.4	1.00	3.71	3.0
9	R2	302	4.6	302	4.6	6.103	9216.4	LOS F	250.8	1825.4	1.00	4.82	0.2
Approach		1062	5.1	1062	5.1	6.103	3382.8	LOS F	250.8	1825.4	1.00	4.02	0.8
West: Canterbury Road West													
10	L2	182	2.7	154	2.8	0.906	73.2	LOS F	50.7	363.0	1.00	0.97	26.3
11	T1	1418	2.7	1203	2.7	0.906	66.7	LOS E	50.7	363.0	1.00	0.97	18.2
12	R2	214	0.0	181	0.0	0.760	78.2	LOS F	12.8	89.8	1.00	0.85	25.5
Approach		1814	2.4	1539 N1	2.4	0.906	68.7	LOS E	50.7	363.0	1.00	0.96	20.4
All Vehicles		7041	4.8	6704 N1	5.0	14.720	4595.3	LOS F	1130.6	8462.6	0.95	3.71	0.6

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	12	30.9	LOS D	0.0	0.0	0.66	0.66
P2	East Full Crossing	32	40.2	LOS E	0.1	0.1	0.76	0.76
P3	North Full Crossing	8	30.9	LOS D	0.0	0.0	0.66	0.66
P4	West Full Crossing	32	40.2	LOS E	0.1	0.1	0.76	0.76
All Pedestrians		84	38.0	LOS D			0.74	0.74

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.

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MOVEMENT SUMMARY

Site: TCS 79 [Canterbury Road - Beamish St_Bexley Road_ 2036_PM_Option 4 - SCATS (Double Diamond)]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Beamish St_Bexley Road
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Bexley Road													
1	L2	134	2.2	134	2.2	0.633	50.8	LOS D	19.7	142.2	0.93	0.82	21.8
2	T1	529	4.2	529	4.2	0.633	47.0	LOS D	19.7	142.2	0.93	0.81	30.3
3	R2	544	1.1	544	1.1	1.563	1051.7	LOS F	191.1	1350.2	1.00	2.99	1.6
Approach		1207	2.6	1207	2.6	1.563	500.2	LOS F	191.1	1350.2	0.96	1.79	4.6
East: Canterbury Road E													
4	L2	211	1.4	206	1.4	0.905	36.2	LOS C	42.9	306.7	0.87	0.93	37.0
5	T1	1215	2.9	1187	2.9	0.905	42.5	LOS D	48.8	350.1	0.94	0.96	25.1
6	R2	1	0.0	1	0.0	0.012	76.6	LOS F	0.1	0.5	0.99	0.59	26.3
Approach		1427	2.7	1394 N1	2.7	0.905	41.6	LOS C	48.8	350.1	0.93	0.96	27.4
North: Beamish Street													
7	L2	61	13.1	61	13.1	1.508	958.8	LOS F	91.5	680.4	1.00	2.82	1.8
8	T1	442	5.7	442	5.7	1.508	964.4	LOS F	91.5	680.4	1.00	3.11	3.4
9	R2	103	14.6	103	14.6	1.366	729.8	LOS F	30.5	240.0	1.00	2.46	2.4
Approach		606	7.9	606	7.9	1.508	923.9	LOS F	91.5	680.4	1.00	2.97	3.1
West: Canterbury Road w													
10	L2	97	11.3	56	11.9	0.443	49.6	LOS D	23.0	165.7	0.99	0.87	31.9
11	T1	1114	1.5	637	1.6	0.443	44.1	LOS D	23.0	165.7	0.99	0.87	23.5
12	R2	236	1.7	135	1.8	0.886	87.2	LOS F	10.1	71.7	1.00	0.90	23.1
Approach		1447	2.2	828 N1	2.3	0.886	51.5	LOS D	23.0	165.7	1.00	0.87	24.1
All Vehicles		4687	3.2	4035 N1	3.7	1.563	313.3	LOS F	191.1	1350.2	0.96	1.49	6.6

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.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P1	South Full Crossing	10	32.2	LOS D	0.0	0.0	0.68	0.68
P2	East Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
P3	North Full Crossing	10	32.2	LOS D	0.0	0.0	0.68	0.68
P4	West Full Crossing	10	64.2	LOS F	0.0	0.0	0.96	0.96
All Pedestrians		40	48.2	LOS E			0.82	0.82

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.

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MOVEMENT SUMMARY

Site: TCS 1167 [Canterbury Road - Wonga Street_2036_PM _Option 4 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

New Site
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road - East													
5	T1	1945	4.6	1780	4.5	0.567	4.1	LOS A	19.1	139.1	0.35	0.33	52.0
6	R2	505	4.6	462	4.5	0.563	25.4	LOS B	15.4	111.9	0.79	0.89	38.3
Approach		2450	4.6	2242 N1	4.5	0.567	8.5	LOS A	19.1	139.1	0.44	0.44	46.1
North: Wonga Street													
7	L2	235	8.5	235	8.5	0.321	29.1	LOS C	9.9	74.1	0.66	0.75	28.1
9	R2	108	4.6	108	4.6	0.765	78.6	LOS F	7.8	56.8	1.00	0.87	16.0
Approach		343	7.3	343	7.3	0.765	44.7	LOS D	9.9	74.1	0.77	0.79	22.7
West: Canterbury Road West													
10	L2	69	2.9	41	3.5	0.669	38.1	LOS C	23.6	170.0	0.78	0.70	36.3
11	T1	1497	2.7	884	3.2	0.669	31.0	LOS C	23.6	170.0	0.76	0.68	29.8
Approach		1566	2.7	925 N1	3.2	0.669	31.3	LOS C	23.6	170.0	0.76	0.68	30.3
All Vehicles		4359	4.1	3510 N1	5.1	0.765	18.0	LOS B	23.6	170.0	0.56	0.54	37.4

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P3	North Full Crossing	8	28.9	LOS C	0.0	0.0	0.64	0.64
P4	West Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
All Pedestrians		28	54.1	LOS E			0.87	0.87

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.

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MOVEMENT SUMMARY

Site: TCS 855 [Canterbury Road - Broughton_ Jeffrey St_2036_PM_Option 4 - SCATS]

Network: N101 [PM Peak King George RD to Broughton St_Jeffrey St- SCATS]

Canterbury Road - Broughton_ Jeffrey St
Signals - Fixed Time Coordinated Cycle Time = 140 seconds (Network Cycle Time - Program)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Arrival Flows Total veh/h	Arrival Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Canterbury Road E													
4b	L3	17	0.0	17	0.0	0.787	25.6	LOS B	44.4	333.2	0.79	0.74	45.0
5	T1	1618	8.5	1618	8.5	0.787	23.1	LOS B	44.4	333.2	0.83	0.76	34.4
6	R2	23	8.7	23	8.7	0.787	33.8	LOS C	39.2	294.3	0.87	0.78	39.9
Approach		1658	8.4	1658	8.4	0.787	23.2	LOS B	44.4	333.2	0.83	0.76	34.7
NorthEast: Jeffrey Street													
24b	L3	8	0.0	8	0.0	1.114	262.3	LOS F	32.0	237.3	1.00	1.36	9.6
24	L2	12	0.0	12	0.0	1.114	261.3	LOS F	32.0	237.3	1.00	1.36	9.6
26a	R1	412	7.8	412	7.8	1.114	278.6	LOS F	36.0	269.1	1.00	1.59	5.5
26b	R3	1	0.0	1	0.0	1.114	297.1	LOS F	36.0	269.1	1.00	1.79	10.0
Approach		433	7.4	433	7.4	1.114	277.9	LOS F	36.0	269.1	1.00	1.58	5.7
North: Broughton Street													
7b	L3	1	0.0	1	0.0	0.650	75.9	LOS F	7.1	51.2	1.00	0.81	26.7
7	L2	53	0.0	53	0.0	0.650	74.9	LOS F	7.1	51.2	1.00	0.81	26.6
7a	L1	1	0.0	1	0.0	0.650	73.6	LOS F	7.1	51.2	1.00	0.81	26.9
9	R2	137	6.6	137	6.6	0.650	76.3	LOS F	7.1	51.2	1.00	0.81	17.3
Approach		192	4.7	192	4.7	0.650	75.9	LOS F	7.1	51.2	1.00	0.81	20.5

West: Canterbury Road w													
10	L2	20	10.0	14	13.3	0.902	62.9	LOS E	20.3	155.0	1.00	1.02	22.5
10a	L1	334	8.1	231	10.9	0.902	61.7	LOS E	20.3	155.0	1.00	1.02	22.7
11	T1	1477	8.1	1023	10.8	0.902	56.1	LOS D	20.3	155.0	1.00	1.03	23.7
Approach		1831	8.1	1268 N1	10.9	0.902	57.2	LOS E	20.3	155.0	1.00	1.03	23.5
All Vehicles		4114	8.0	3551 N1	9.3	1.114	69.3	LOS E	44.4	333.2	0.92	0.96	19.1

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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Largest change in Average Back of Queue or Degree of Saturation for any lane during the last three iterations: 184.5 %
Number of Iterations: 10 (maximum specified: 10)
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

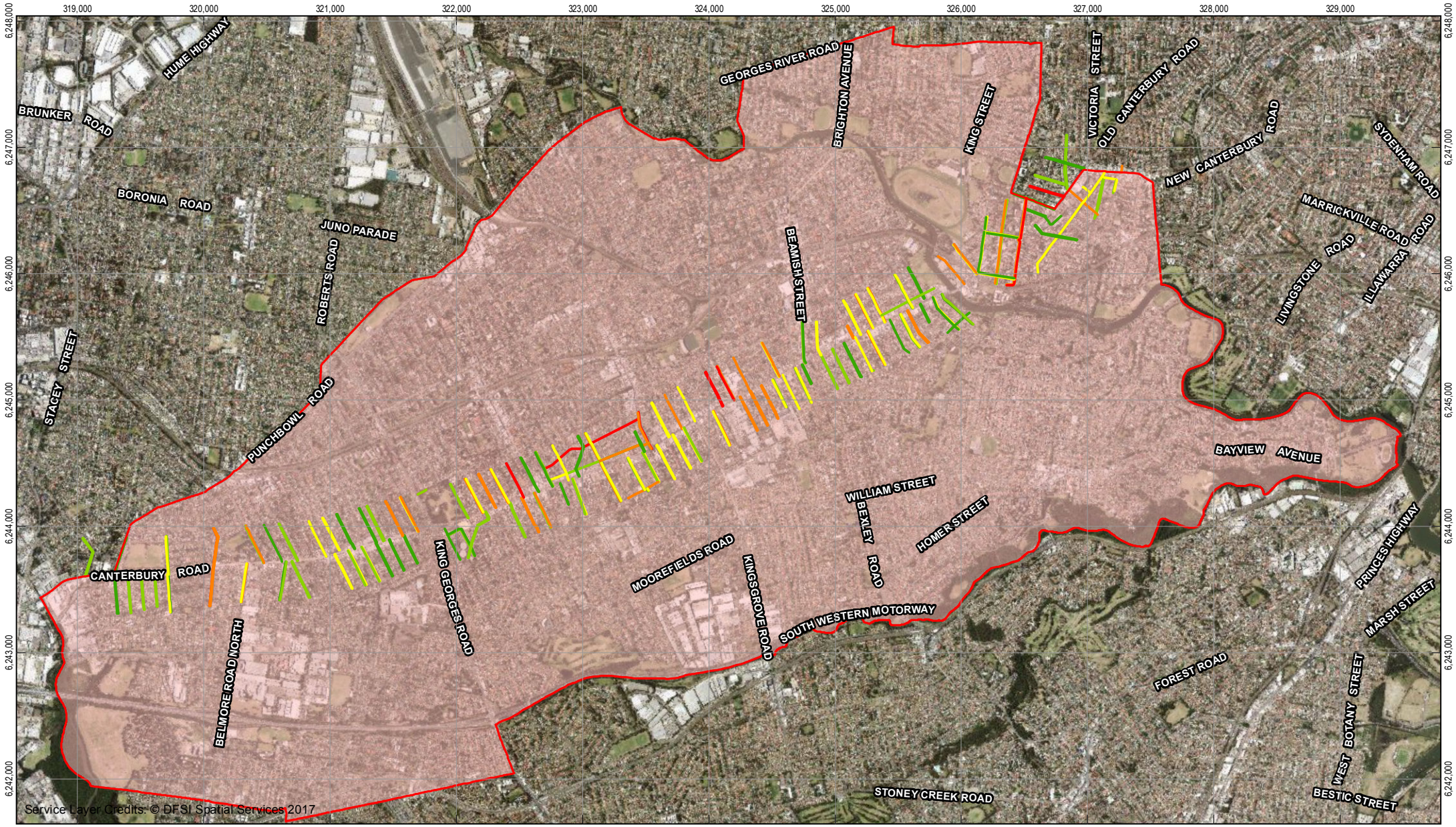
Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate per ped
P5	SouthEast Full Crossing	52	9.7	LOS A	0.1	0.1	0.37	0.37
P2	East Full Crossing	20	64.2	LOS F	0.1	0.1	0.96	0.96
P6	NorthEast Full Crossing	68	12.2	LOS B	0.1	0.1	0.59	0.59
P3	North Full Crossing	108	29.7	LOS C	0.3	0.3	0.65	0.65
P4	West Full Crossing	68	64.3	LOS F	0.3	0.3	0.96	0.96
All Pedestrians		316	32.3	LOS D			0.68	0.68

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.

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Appendix E – Parking Demand



Paper Size A4

0 400 800 1,600

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Parking Utilisation

Figure 1

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

Level 15, 133 Castlereagh Street Sydney NSW 2000 **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com.au **W** www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 2

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 3

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 4

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 5

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 6

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 7

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z002_Location.mxd

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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Parking Utilised

- 0 - 25%
- 25 - 50%
- 50 - 75%
- 75 - 100%
- 100% +

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Parking Utilisation

Figure 8

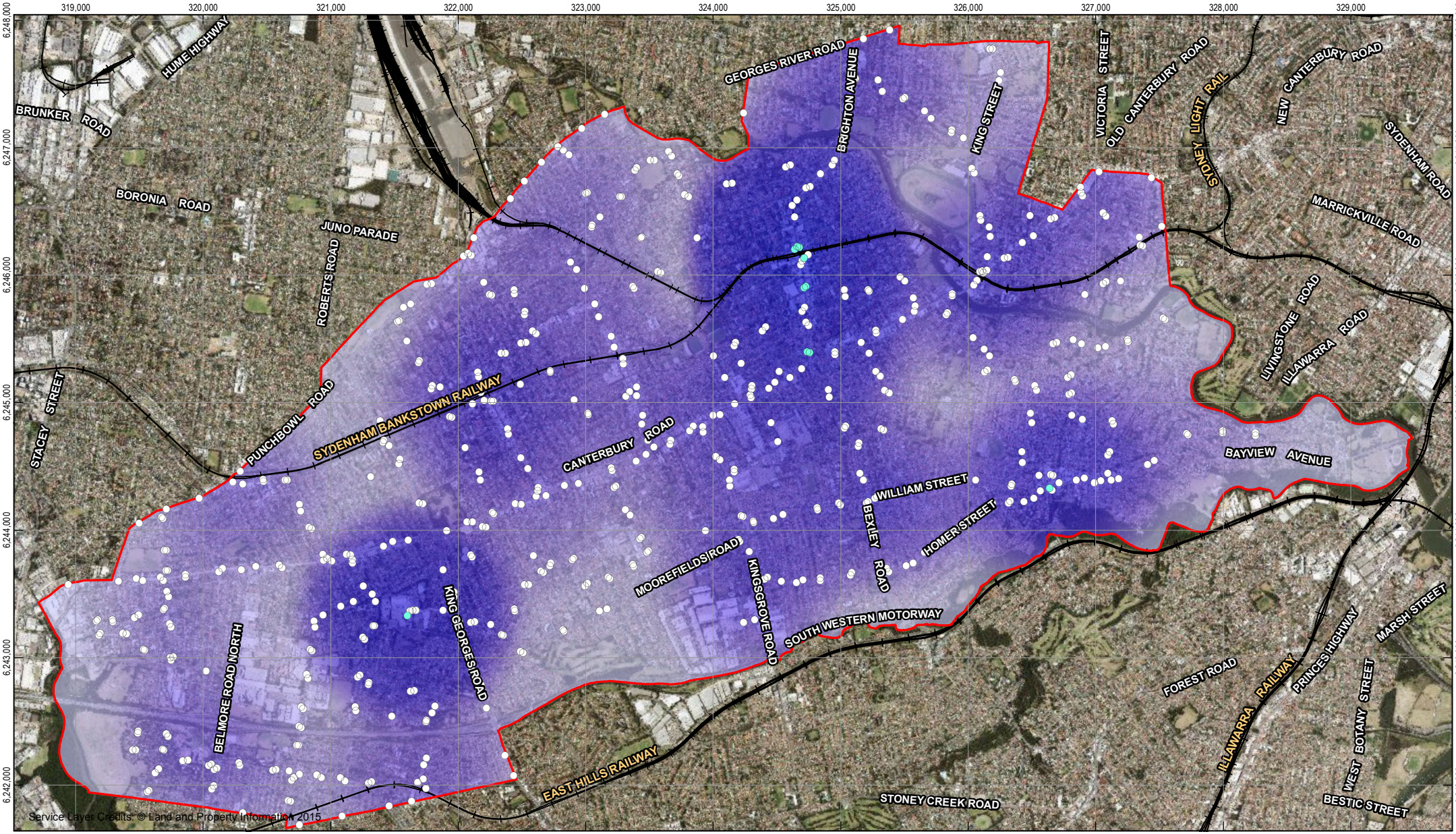
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Data source: Aerial Imagery: Sixmaps (2017 NSW LPI), General Topo: NSW LPI DTDB 2015. Created by:mking3

Appendix F – Bus Stop Data



Paper Size A4

0 400 800 1,600

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Bus stops
- Most utilised bus stops

Bus stop utilisation

High — Low

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	12 Apr 2017

Bus Stop Utilisation

Figure 1

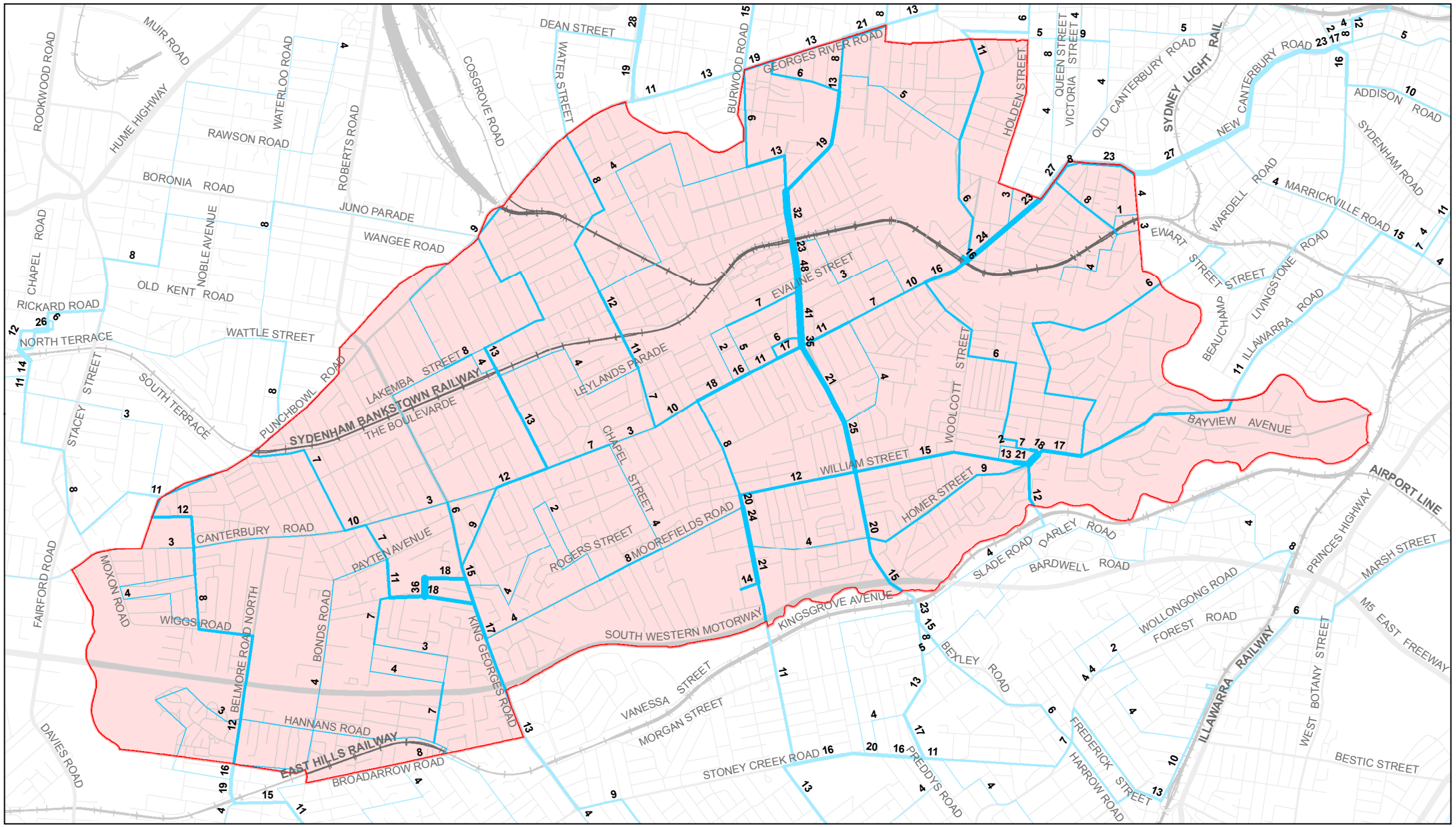
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Level 15, 133 Castlereagh Street Sydney NSW 2000 **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com.au **W** www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo: NSW LPI DTDB 2015, Crash Data: TFNSW. Created by:mking3

Appendix G – 2106 and 2036 Bus Frequency Data



Paper Size A4

0 375 750 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Study Area

Bus Frequency (Buses per Hour)

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 81

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 11 Apr 2017

Bus Frequency (2016)

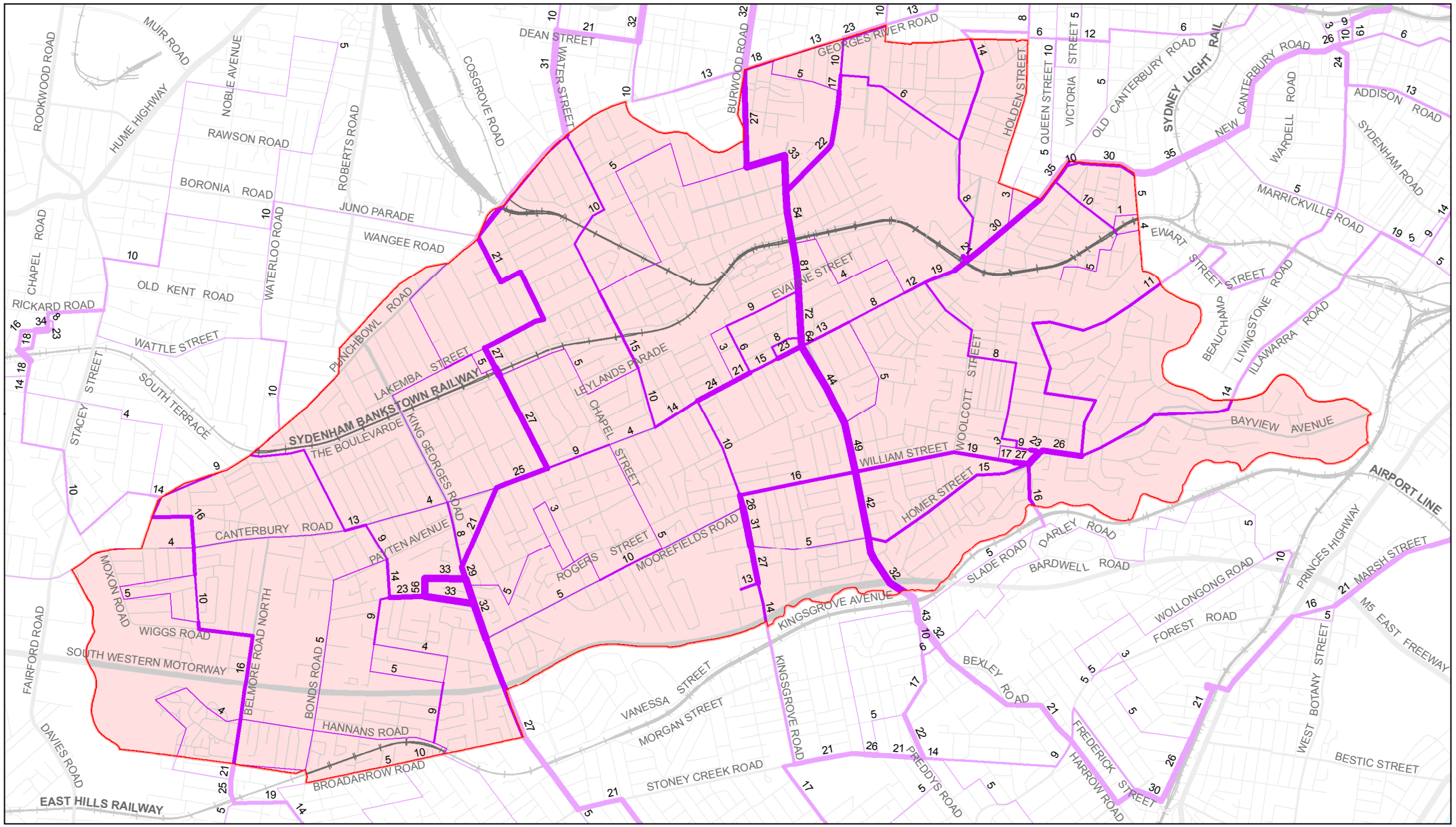
Figure 1

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z005_BusFrequencies_2016.mxd

Level 15, 133 Castlereagh Street Sydney NSW 2000 **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com.au **W** www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 375 750 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Study Area

Bus Frequency (Buses per Hour)

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 81

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 11 Apr 2017

Bus Frequency (2036)

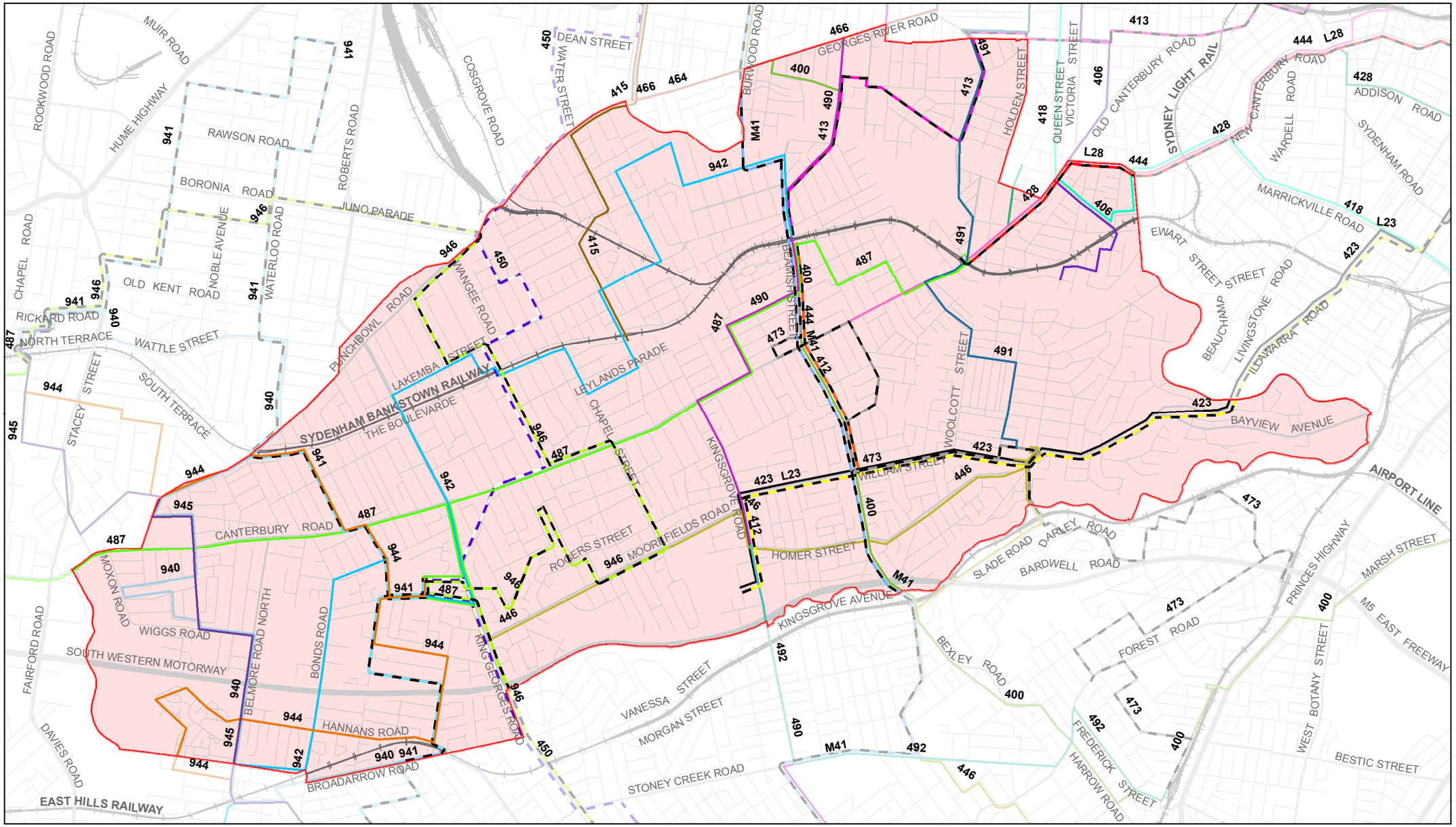
Figure 1

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z005_BusFrequencies_2036.mxd

Level 15, 133 Castlereagh Street Sydney NSW 2000 **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com.au **W** www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 375 750 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Study Area

400 406 412 413 415 418 423 428 444 446 450 464 466 473 487 490 491 492 940 941 942 944 945 946 L23 L28 M41

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 11 Apr 2017

Bus Routes (2016)

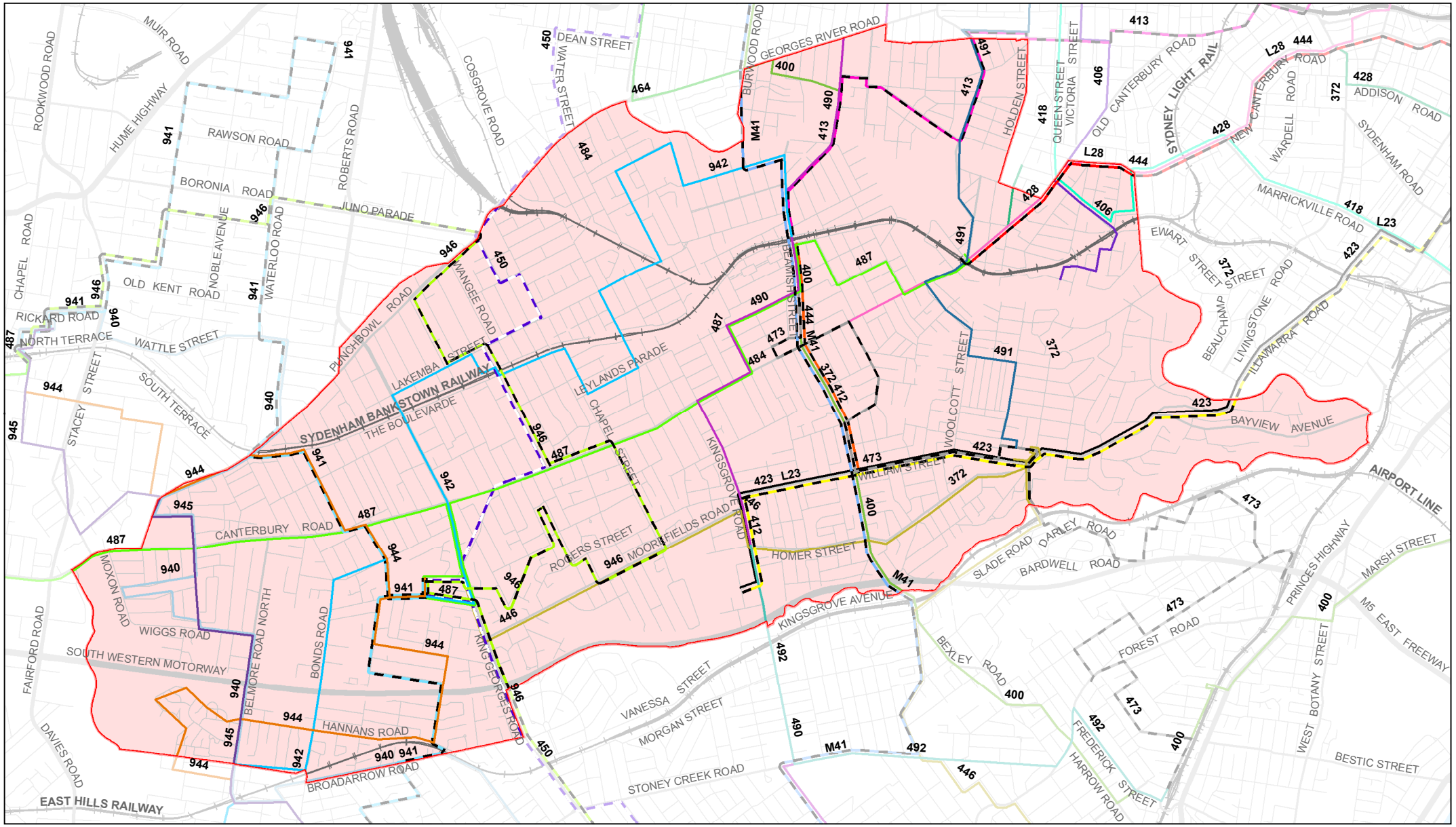
Figure 1

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z065_BusRoutes_2016.mxd

Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:mking3



Paper Size A4

0 375 750 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Study Area

400 406 412 413 418 423 428 444 446 450 464 473 487 490 491 492 940 941 942 944 945 946 L23 L28 M41

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 11 Apr 2017

Bus Routes (2036)

Figure 1

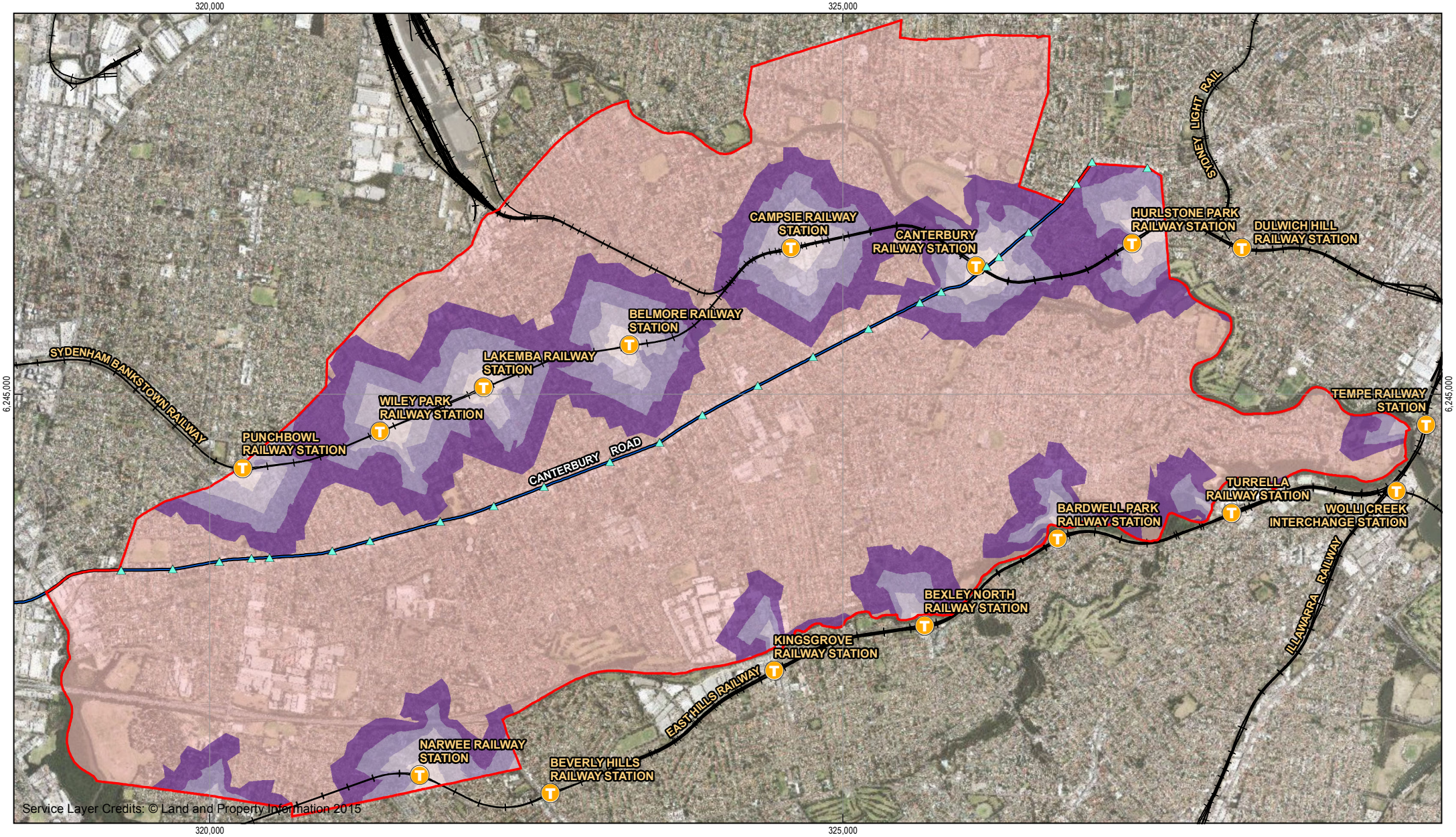
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Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:mking3

Appendix H – Pedestrian Catchment Data



Paper Size A4

0 375 750 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Pedestrian Crossings (Canterbury Road)

Walking Distance to Station (m)

200 600
400 800

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 11 Apr 2017

800m Walking Catchments

Figure 1

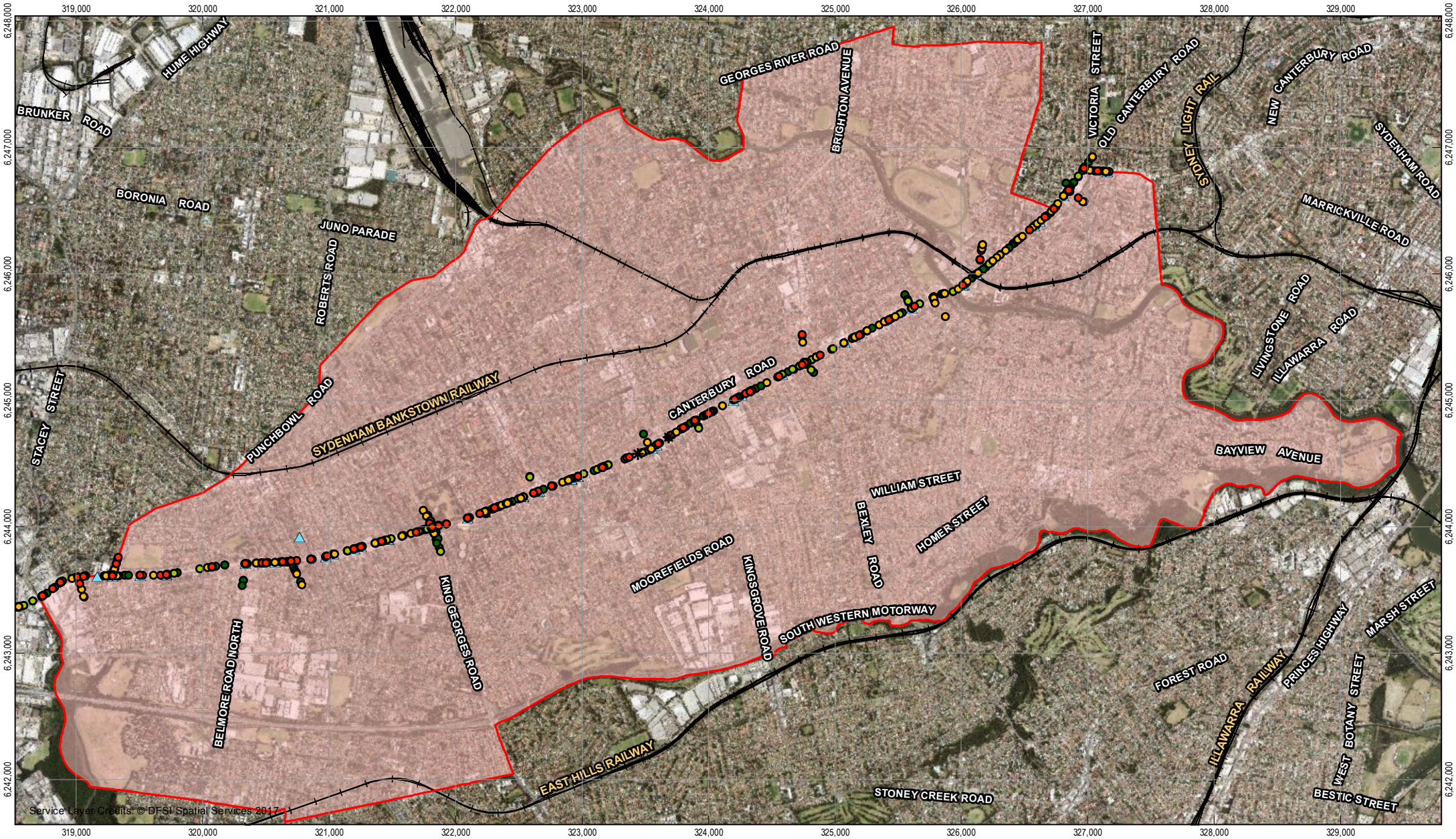
N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z003_Catchments.mxd

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015. Created by:mking3

Appendix I – Crash Data



Paper Size A4

0 400 800 1,600

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury
- Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Crash Data

Figure 1

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z001_CrashData.mxd

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo: NSW LPI DTDB 2015, Crash Data: TFNSW. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury
- Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Crash Data

Figure 2

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z001_CrashData.mxd

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo: NSW LPI DTDB 2015, Crash Data: TFNSW. Created by:mking3



Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury
- Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Crash Data

Figure 3

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z001_CrashData.mxd

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Paper Size A4

0 50 100 200

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Crash Data

Figure 4

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Paper Size A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury
- Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number	21-26234
Revision	A
Date	10 Jul 2017

Crash Data

Figure 5

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury
- Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

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Figure 6

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Paper Size A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury
- Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Crash Data

Figure 7

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Paper Size A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

Degree of Injury

- Fatal
- Serious Injury
- Moderate Injury
- Non-casualty (towaway)
- Minor/Other Injury
- Uncategorised Injury

Study Area

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 10 Jul 2017

Crash Data

Figure 8

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Appendix J – Travel Demand Measures Research

1.1 Local Government Strategies

Parramatta Road Urban Transformation Strategy – November 2016

The key recommendations of the *Parramatta Road Urban Transformation Strategy* are provided below:

- Implementation of a diverse transport accessibility and land use integrated network that encourages the use of public and active transport.
- A cohesive land use framework linking heritage sites with proposed housing, recreational and business zones to utilise the corridor's existing geography.
- Sustainability improvements to facilitate a greener environment to protect and enhance landscaped areas, parks and trees within the vicinity of the corridor.

The provision of a "green environment" is consistent with the vision of Canterbury Road with median and kerbside tree planting.

Traffic calming measures to reduce car speeds and prioritise pedestrian zones within the Parramatta Road Corridor included:

- Footpath widening and reducing road widths using planted medians.
- Prioritising streets for pedestrians over private vehicles with textured pavements.
- Marked pedestrian crossings.
- Reductions to speed limits across the corridor to maintain adequate traffic management at all times.
- Wherever possible, creating a change in the road environment to warn drivers of the presence of pedestrians.

Parking measures to facilitate the provision of a pedestrian friendly road corridor include:

- Short term paid parking to discourage short and non-essential private vehicle trips.
- Implementing time restrictions on parking spaces close to town centres.
- Implementation of maximum parking rates in high volume areas to increase pedestrian mobility.
- Selective reduction of on-street parking to improve public domain by introducing unbundled or decoupled parking strategies in residential areas.
- Reduction of car parking rates in residential areas to minimise car dependency which increases the patronisation of public transport.
- Encouraging businesses within the road corridor to implement car share within their organisations to provide access to a shared car fleet system.

Measures identified to facilitate the provision of an "integrated transport network" with respect to the '*Sydney CBD to Parramatta Strategic Transport Plan'* include:

- Determining the Greater Parramatta to Olympic Peninsula as a Priority Growth Area by initiating a growth in community and housing facilities, to create more jobs from the linkage of the Parramatta Corridor to Sydney CBD.
- Identify key locations for employment, shops and other open spaces to understand travel times and patterns across different land uses within the corridor

- Take advantage of changing land use patterns to bring common destinations closer to residents creating easier access to local centres and reducing congestion for public transport.
- Introduce modifications to the timings and needs of road users' trips to create a shift from peak to off-peak periods and from multiple to single trips.
- Re-routing of commonly identified trip routes of road users to reduce congestion within the corridor.
- Introduce new and improved active transport infrastructure by reinforcing the active transport as a priority over private vehicle movements.
- Modify traffic signal phasing at major signalised intersections to improve traffic flow during peak periods.
- Integration of active transport with public transport by creating dedicated walking or bicycle riding lanes within public transport interchanges.

City of Bayswater and Vincent Metropolitan Region Scheme Amendment 1310/41: Guildford Road from East Parade to Tonkin Highway – December 2016

Guildford Road is an arterial road in Perth with two travel lanes in either direction that provides access to residential, retail and commercial developments. Main Roads Western Australia has prepared concept designs for the redevelopment plan of Guildford Road will provide wider lanes in both directions with a median strip along the middle of the carriageway.

The aim of the project is to establish an integrated transport network with a balance between pedestrians, cyclists, private vehicles and public transport.

Measures identified to establish efficient land use and transport planning within the Guildford Road corridor have been identified as follows:

- Creating a divided road carriageway by introducing a median along the majority of the corridor to increase verge widths.
- Installation of trees, shared paths and other service infrastructure on verges with a minimum width of 4.1 metres.
- The introduction of bus queue jump facilities at signalised intersections which provide buses with the opportunity to bypass normal traffic flow at major intersections with the help of a 'bus only' signal.
- Provision of dedicated on road cycle lanes to encourage the use of active transport.
- Enhancing public transport options to encourage a shift away from the use of privately owned vehicles.
- Installation of pedestrian refuges along the median to increase pedestrian mobility and allow safe crossing methods.
- Provision of bus bays along each bus stop to allow buses to be able to safely pick up passengers without having to obstruct normal traffic flow within the corridor.

City Road Master Plan 2016-2023

City Road is an arterial road in the Melbourne CBD that provides access to a variety of land uses including high density commercial and residential developments.

The *City Road Master Plan* provides options to make City Road more sustainable for the benefit of the environment along with fulfilling two major objectives:

- Recognising the road corridor as being an important means for different transport modes by various road user groups and improving the corridor to meet current and future needs.
- Enhancing the local street environment in order to create a more people-friendly transport corridor.

The specified outcomes to be achieved from the *City Road Master Plan* for creating a more sustainable and efficient traffic corridor that encourages multi-modal transport options include:

- Increased and improved pedestrian facilities to reinforce walking as a primary mode of transport within the corridor by providing direct access to high volume areas.
- Introduction of brightly lit public transport shelters and stops to encourage the use of public transport and create a safer waiting area.
- Mitigating the need for pedestrians to cross illegally and in an unsafe manner within the corridor by creating signalised intersections and modifying traffic signals to minimise waiting times.
- Introduction of median islands to act as pedestrian refuges which can provide pedestrians with assistance in crossing the road.
- Creating tram and bus priority lanes within the corridor to encourage the use of more efficient public transport and reduce overall congestion.
- Prioritising bicycle lanes by separating them from normal traffic flow to create a safer bicycle network and promote the use of active transport.
- Enhancing transport infrastructure by providing more on-street bicycle and car parking to provide cyclists and motorists with convenient access to services.
- Decreasing speed limits to provide all road users with increased safety by encouraging on-street activity and decreasing noise pollution.
- Provision of on-street car parking that is located between normal road traffic and cycle ways to create a buffer and increase safety.

The *City Road Master Plan* identifies measures to increase transport activity, such as:

- Encouraging the development of building frontages that are visually appealing and attractive to promote activity on the street.
- Promoting fine grain development which includes the presence of smaller stores can offer a variety of services in a limited space.
- Ensuring the presence of awnings along all building frontages to create a layer of protection from unfavourable weather conditions.
- Introduction of pedestrian crossings at frequently visited locations to increase walkability and provide better pedestrian connections.
- Provision of wider footpaths to minimise crowding and create opportunity for hospitality services to introduce on-street dining facilities.

- Removal of slip lanes within the corridor to create better pedestrian visibility, minimise crossing distances and create space for sustainable options such as trees and amenities.
- Placing trees on median strips or islands to generate a shade cover from the tree canopy which increases pedestrian mobility in harsh weather conditions.
- Insertion of street furniture such as bicycle racks or hoops to generate a shift towards active transport.
- Removal of redundant driveways to create an even footpath surface with bluestone paving to minimise trip hazards.
- Promoting safe cyclist movements by the introduction of cyclist activated turn signals.

Brisbane City Council Transport Plan for Brisbane 2008 - 2026

The *Brisbane City Council Transport Plan for Brisbane* identifies measures to increase and promote coordinated transport and land use, such as:

- Integration of public transport interchanges within large urban centres to improve access for residents and create enhanced transport linkages.
- Extensive and efficient public transport networks to facilitate urban centre growth.
- Promotion and campaigning for active/alternative modes of transport through Local and Neighbourhood Plans.
- Ensuring that adequate traffic generation for Higher Mass Limit vehicles involved in industrial activities is located within close proximity to the major transport network.
- Creation of mixed land use projects around existing transport nodes to encourage diversified developments
- Implementing tidal flow schemes to prioritise public transport with dedicated lanes during peak times.

Strategies to address the use of increased “clean and green” transport options are identified as:

- Creation and maintenance of conveniently located crossing points and high quality shared paths.
- Implementation of directional signage along bicycle and pedestrian routes to highlight accessibility and safety.
- Introducing of high quality active transport infrastructure both on and off-road such as along busway corridors.
- Creation of recreational and end-of-trip facilities to encourage the use of active transport.
- Implementation of innovative lighting systems along commonly used bicycle and pedestrian paths such as solar ‘cats eyes’ and reflective edge lines.
- Expanding walking trails along major corridors to eliminate missing links within the network.
- Promoting and encouraging the use of citywide active transport maps that highlight pedestrian and bicycle paths.
- Installing bike parking racks in secure locations at major transport and shopping sites.

- Providing for pedestrians and cyclists, where practical, during construction phases of busy corridors.
- Introducing “Park and Ride” or “Park and Pool” schemes that create designated parking facilities to allow commuters to park their cars for the day and utilise public transport.
- Educating the community of the costs and benefits of active travel choices.

1.2 State Government Policies

Liveable Neighbourhoods, a WA Government sustainable cities initiative (2009)

Liveable Neighbourhoods is an operational policy for the design of structure plans in urban areas.

The document specifies that creating liveable neighbourhoods ensures that residents can access a variety of land uses that are well interconnected and designed for all users. Creating neighbourhoods that are based on a 400-450 m radius, or a 5 – 10 minutes walking radius ensures that streets are not dependent on private vehicles and active modes of travel can be utilised. Other liveable neighbourhood structure characteristics include:

- Ensuring that public transport is located within the centre of the community for ease of accessibility.
- Reducing travel distances between communities.
- Implementing good interconnectedness between neighbourhoods.

Easy Steps for a Walkable Community, Queensland Government (2005)

Easy Steps was prepared as a guideline for local councils to inform, encourage and provide tools for improving walking environments. Key recommendations include:

- Develop a vision for walking in accordance with community expectations/requirements.
- Prepare strategic objectives that are linked to the vision and can produce measurable results.
- Develop implementation strategies in accordance with a set of criteria that will determine the most effective use of the available sources of funding for the provision of active transport facilities.
- Develop community partnerships with other levels of government, community groups, health and community services providers and educational facilities,
- Link pedestrian routes to public transport either at a strategic planning stage for new developments or as part of a comprehensive plan to improved linkages to established areas.
- Design good quality walking facilities in accordance with their expected demand i.e. pedestrian malls vs footpaths low density residential areas and relevant design guidelines.
- Provide high quality pedestrian wayfinding signage.

Guidelines for the Preparation of Integrated Transport Plan (2012) – Western Australian Planning Commission

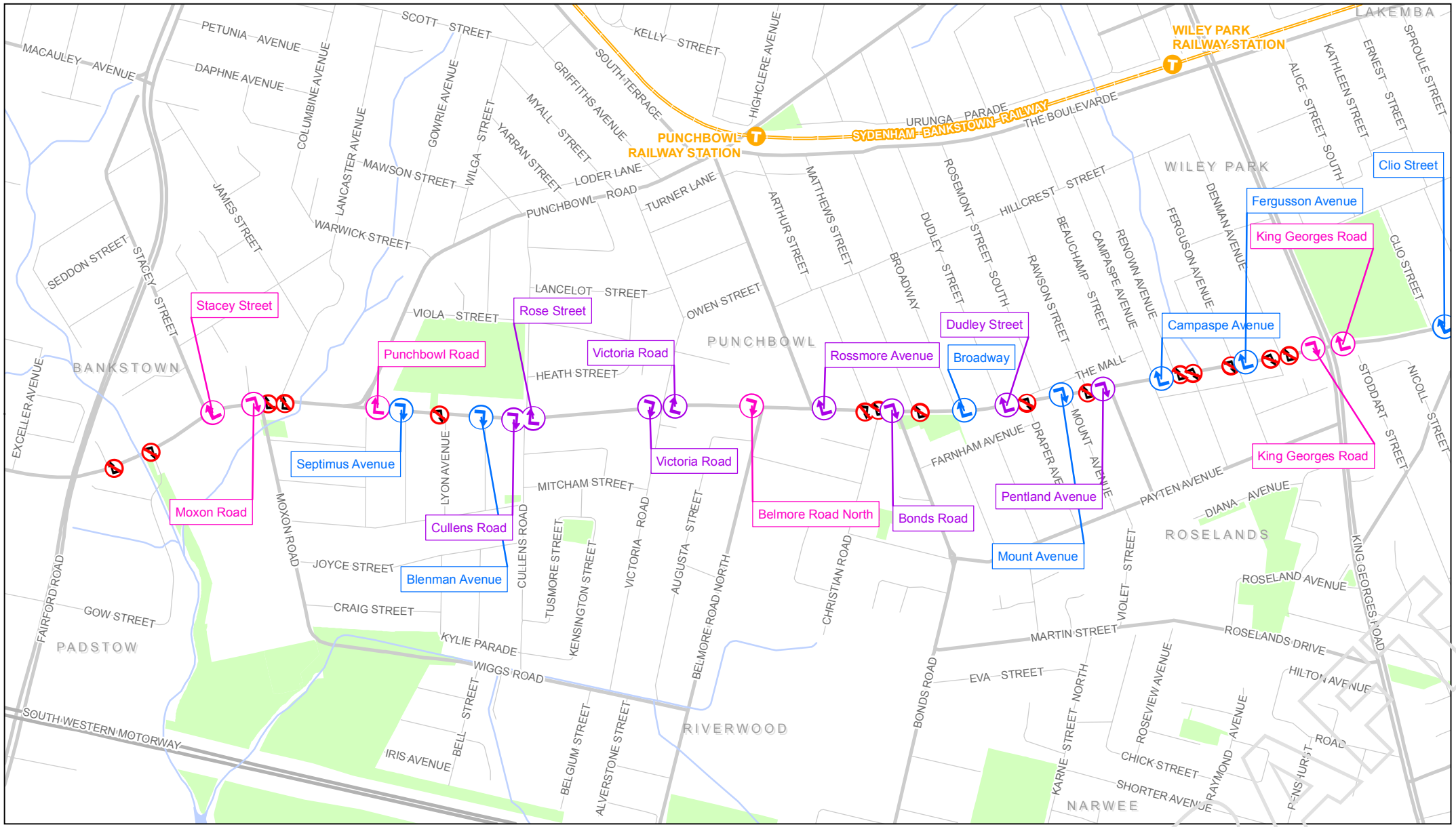
The key recommendations and observations in the guidelines with respect to developing integrated transport plans includes:

- Traffic volumes and choices of travel mode are influenced by the location, density and mixture of land uses.
- Barriers and discontinuities are a major deterrent to pedestrians and cyclists.
- Traffic congestion is a major issues in urban areas and should be addressed as part of an integrated transport planning process, including capacity enhancement and travel demand management.
- Parking is an essential contributor with respect to operation of transport systems.
- Evaluation and review is an essential component of a successful integrated transport strategy.

Management measures that local governments should consider with respect to parking include:

- Minimum or maximum parking requirements limits can be set depending on the conditions of existing transport and land use.
- Discounts for parking that is in close proximity to alternate modes of transport (park and ride facilities).
- Ensuring that developers specify parking uses, whether it may be for visitors, disabled or service vehicles.
- Cash in lieu for parking, where money paid for parking can be invested in funds that support alternate forms of transport and access.
- The guidelines details key barriers to the use of active transport and public transport:
- The key barriers to walking include:
  - Lack of time
  - Poor facilities
  - Safety concerns
  - Poor weather
  - Heavy or fast traffic volumes
  - Poor urban form
  - Poor lighting
- Key barriers to bicycle riding include:
  - Lack of skills and confidence in mixed traffic
  - Social and cultural differences
  - Safety concerns
  - Poor bicycle riding infrastructure
- Key barriers to public transport utilisation include:
  - Time taken to walk to public transport stops/stations
  - Frequency of service
  - Safety concerns
  - Directness and convenience of routes
  - Congestion on public transport networks

Appendix K – Traffic Management Measures



Paper Size A4

0 100 200 400

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- No right turn permitted from Canterbury Road
- Priority controlled right turn - proposed turn bay
- Traffic signal controlled right turn - proposed turn bay
- Traffic signal controlled right turn with existing turn bay
- Train Stations
- Railway
- Waterways
- Open space

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 1 (High Accessibility)

Figure 1-1

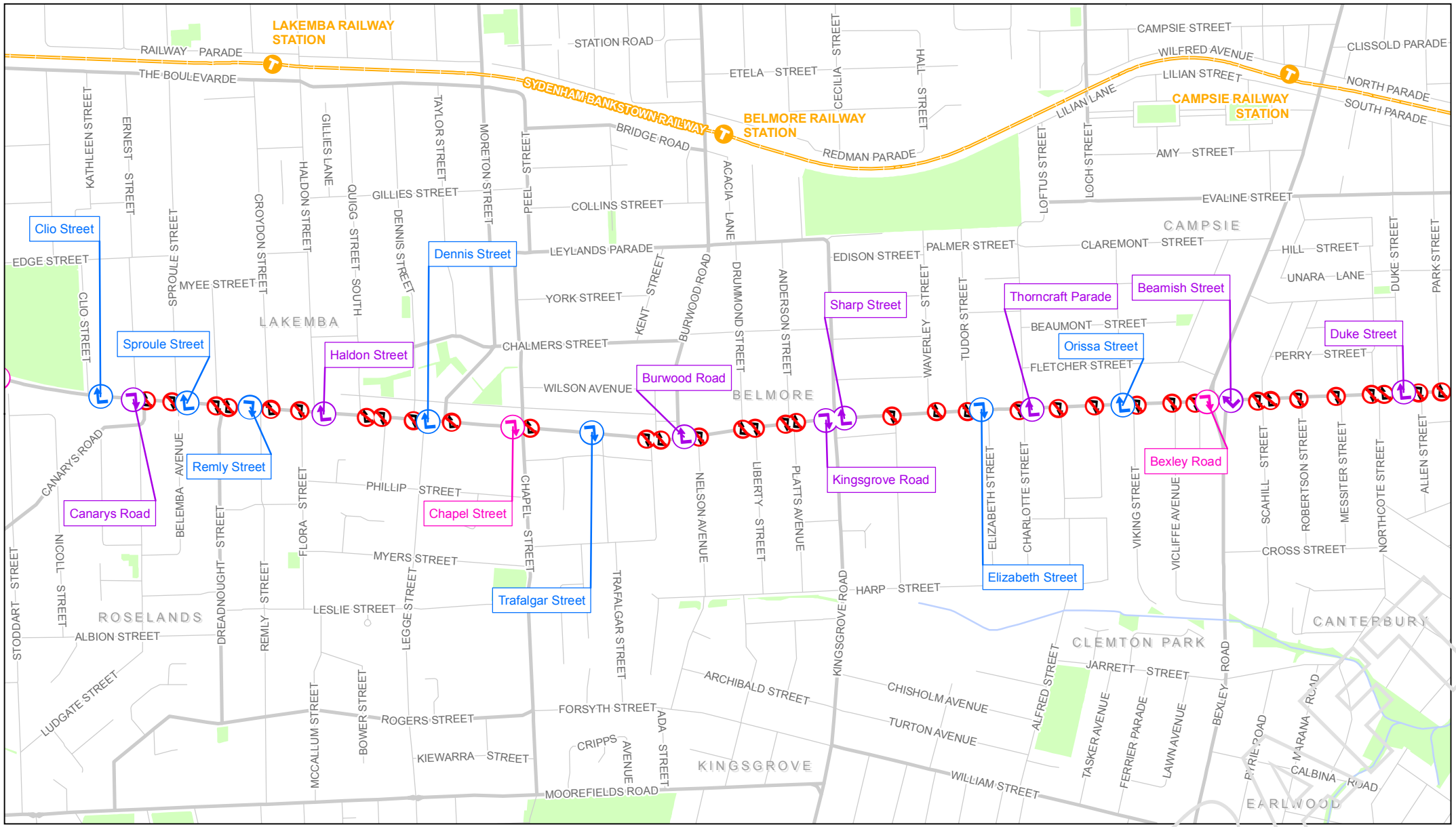
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0 100 200 400

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

- No right turn permitted from Canterbury Road
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- Railway
- Waterways
- Open space

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 1 (High Accessibility)

Figure 1-2

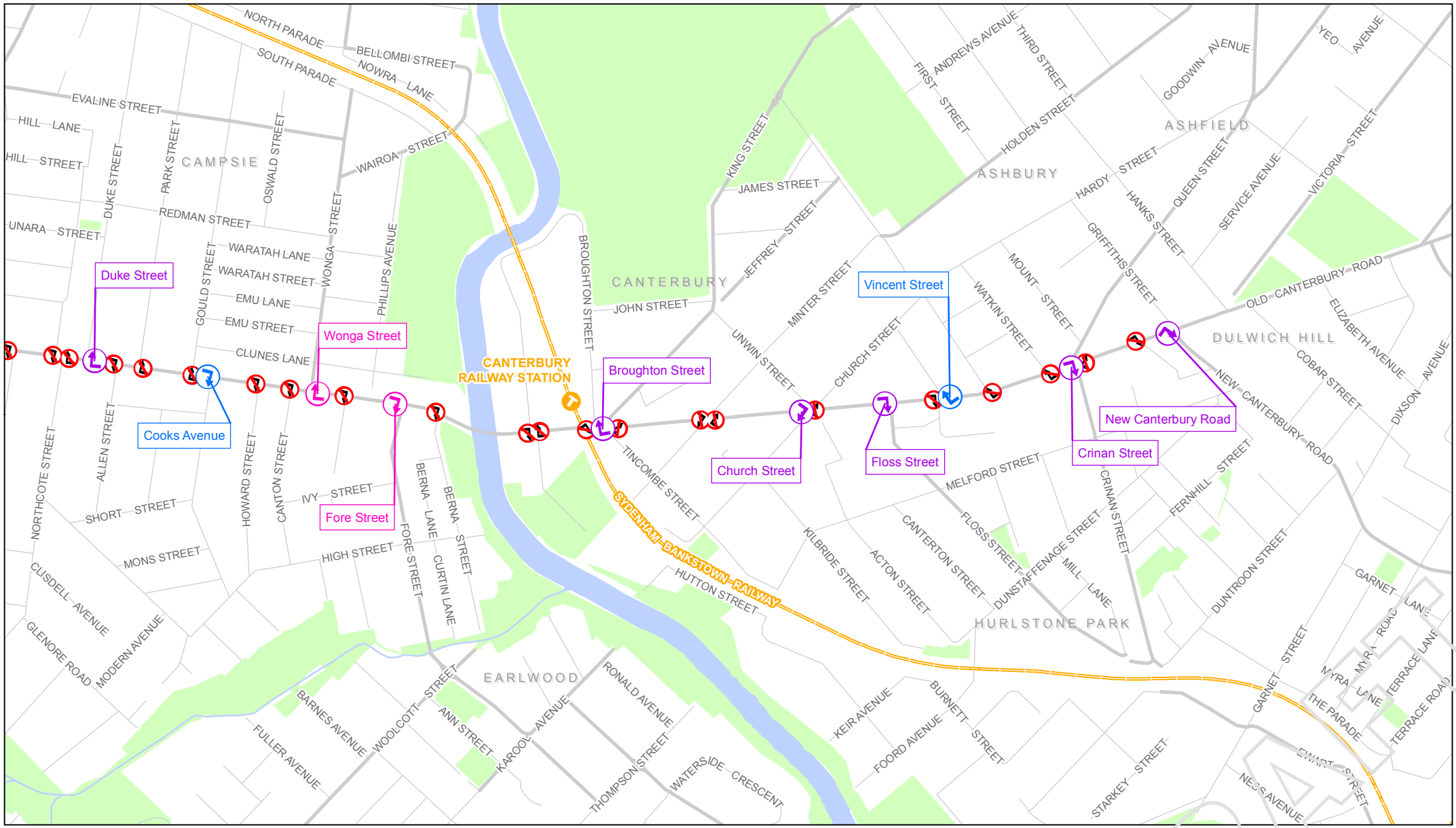
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Paper Size A4

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

- No right turn permitted from Canterbury Road
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Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 1 (High Accessibility)

Figure 1-3

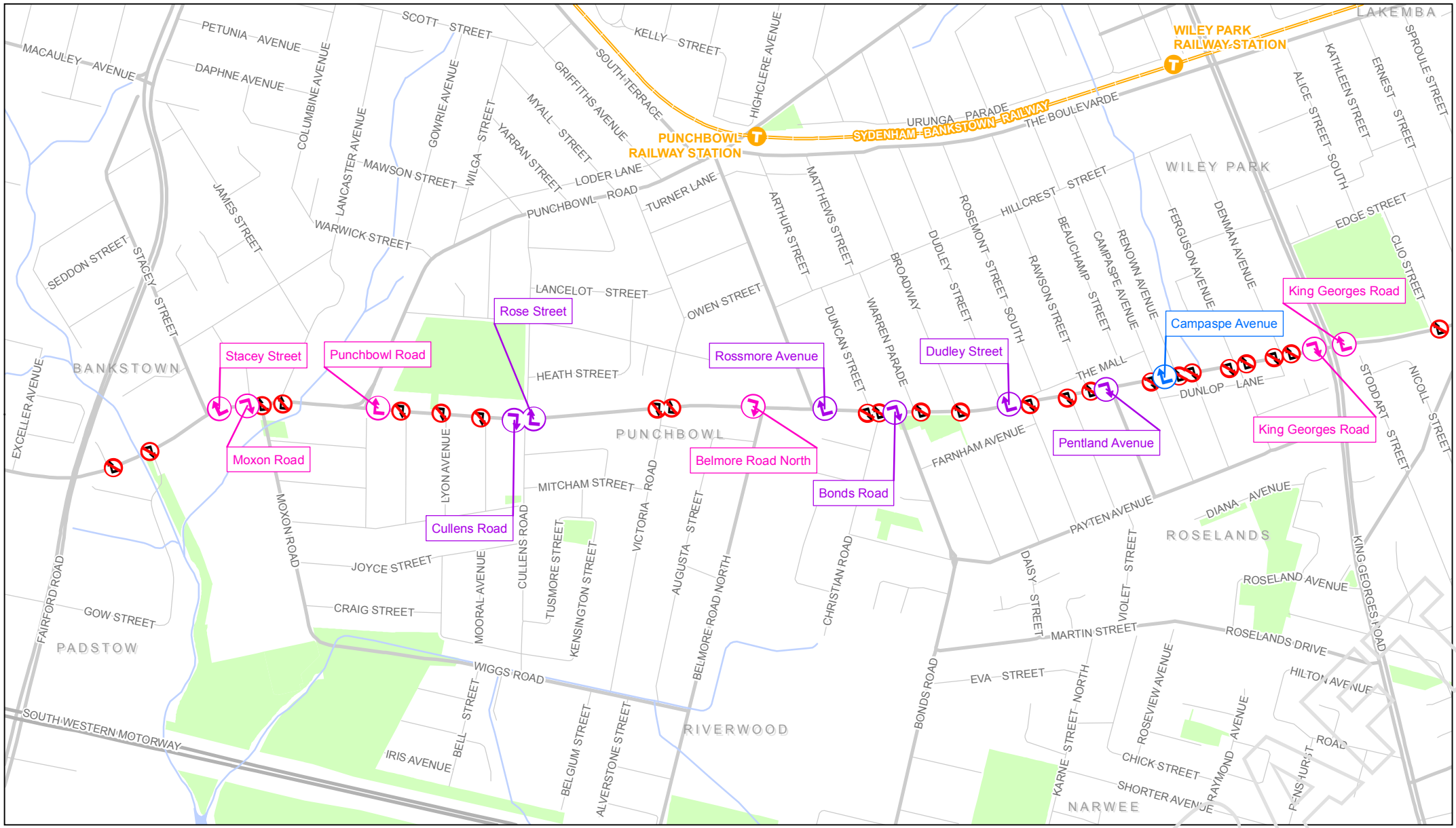
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Metres

Map Projection: Transverse Mercator
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Grid: GDA 1994 MGA Zone 56

N

LEGEND

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- Railway
- Waterways
- Open space

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Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 2 (Access Control) Figure 2-1

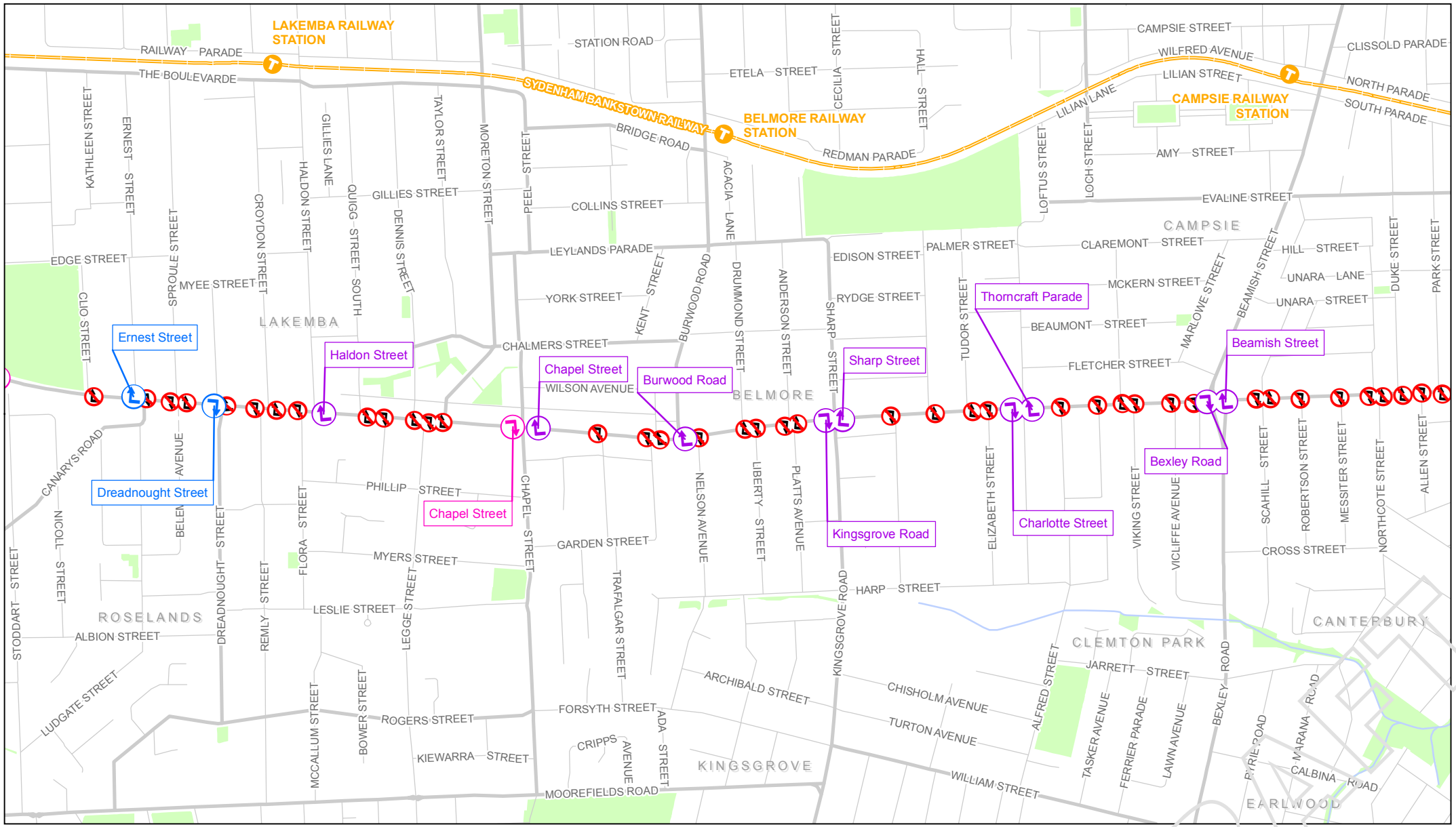
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- No right turn permitted from Canterbury Road
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- Traffic signal controlled right turn - proposed turn bay
- Traffic signal controlled right turn with existing turn bay
- Train Stations
- Railway
- Waterways
- Open space

Canterbury District Council
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Revision A
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Canterbury Road Right Turn Scenario Option 2 (Access Control) Figure 2-2

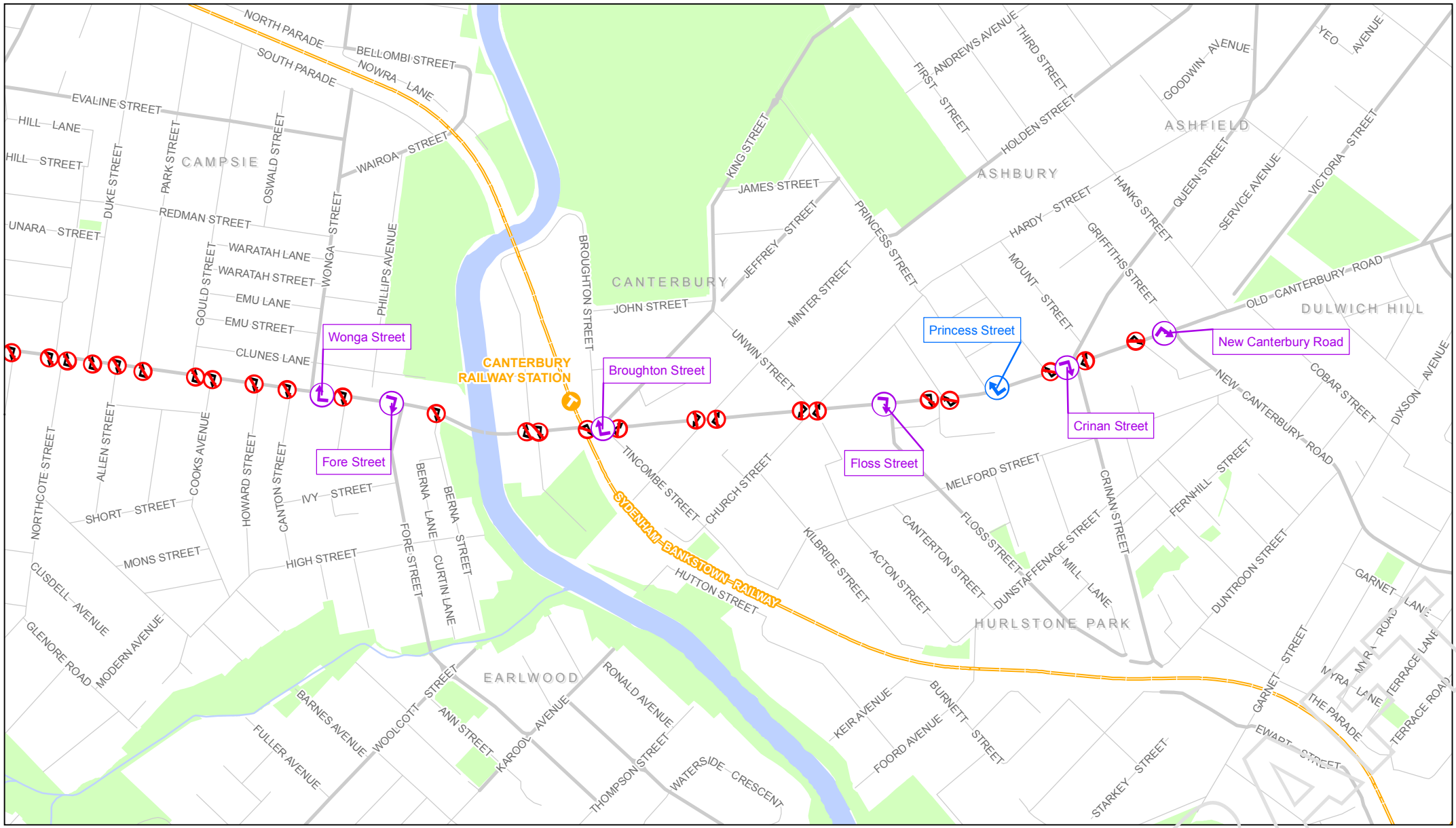
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Paper Size A4

0 75 150 300

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

- No right turn permitted from Canterbury Road
- Priority controlled right turn - proposed turn bay
- Traffic signal controlled right turn - proposed turn bay
- Train Stations
- Railway
- Waterways
- Open space

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 2 (Access Control) Figure 2-3

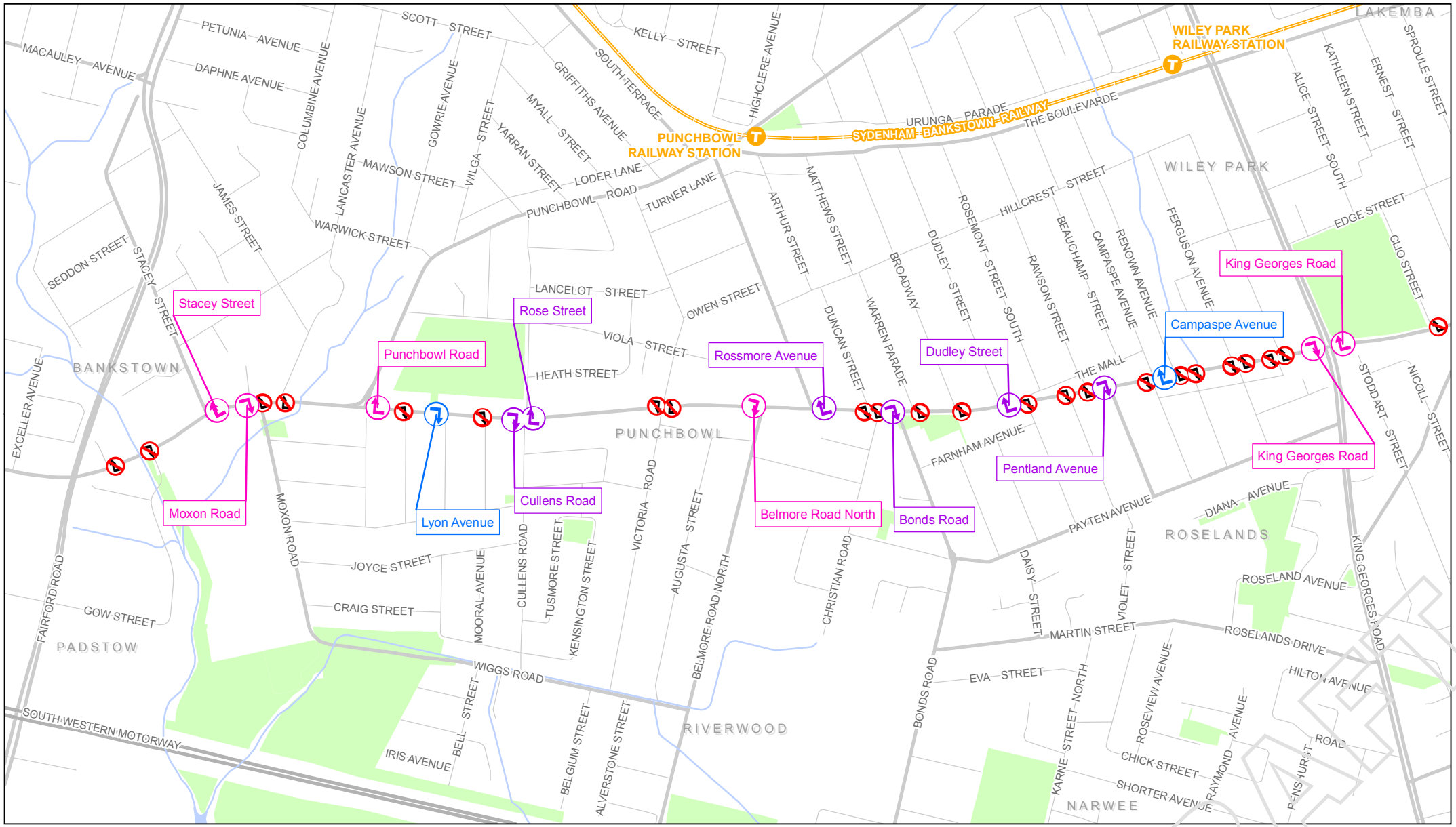
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- No right turn permitted from Canterbury Road
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- Traffic signal controlled right turn with existing turn bay
- Train Stations
- Railway
- Waterways
- Open space

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 3 (Consolidated Access)

Figure 3-1

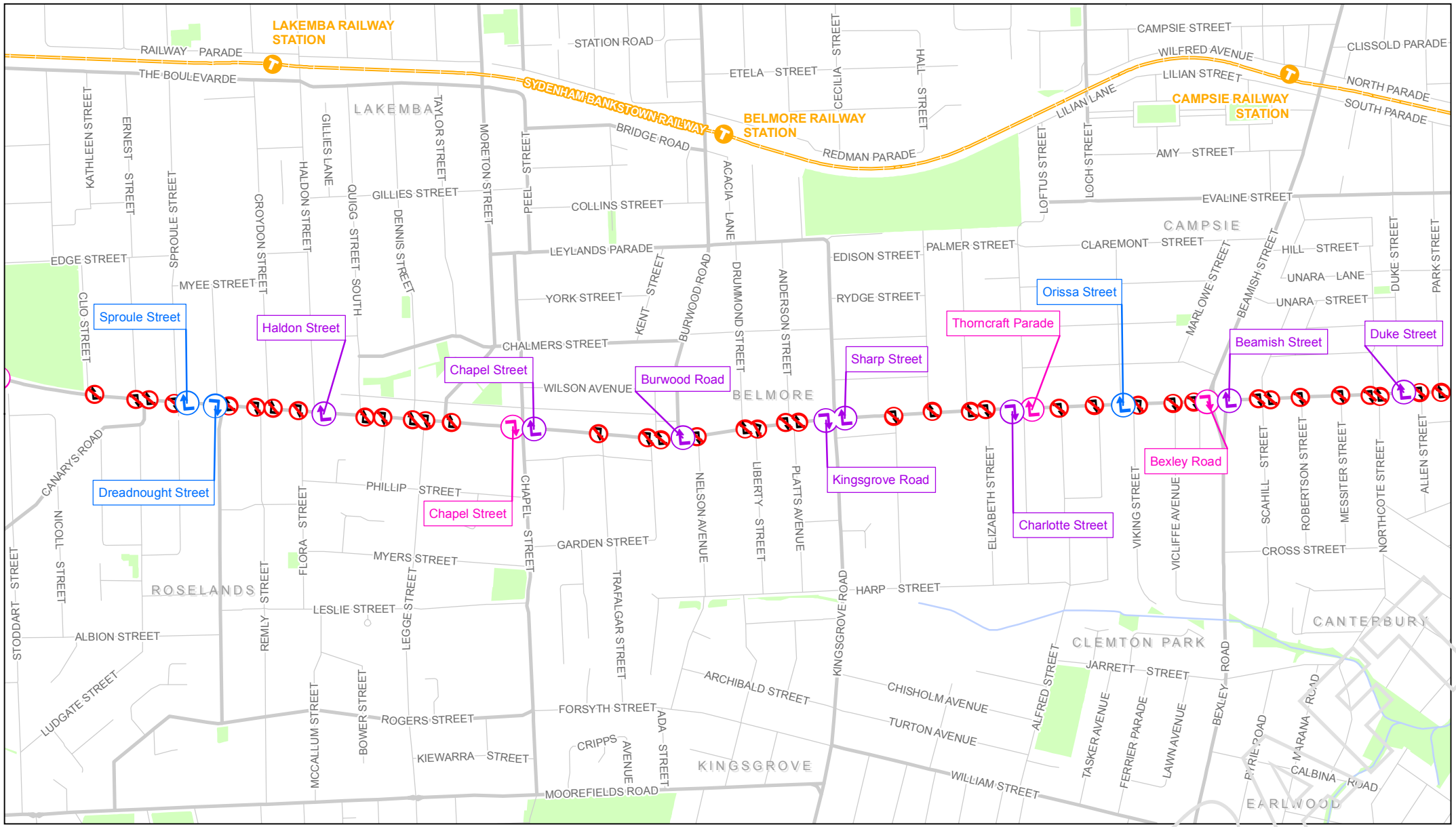
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- No right turn permitted from Canterbury Road
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- Traffic signal controlled right turn - proposed turn bay
- Traffic signal controlled right turn with existing turn bay
- Train Stations
- Railway
- Waterways
- Open space

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 3 (Consolidated Access)

Figure 3-2

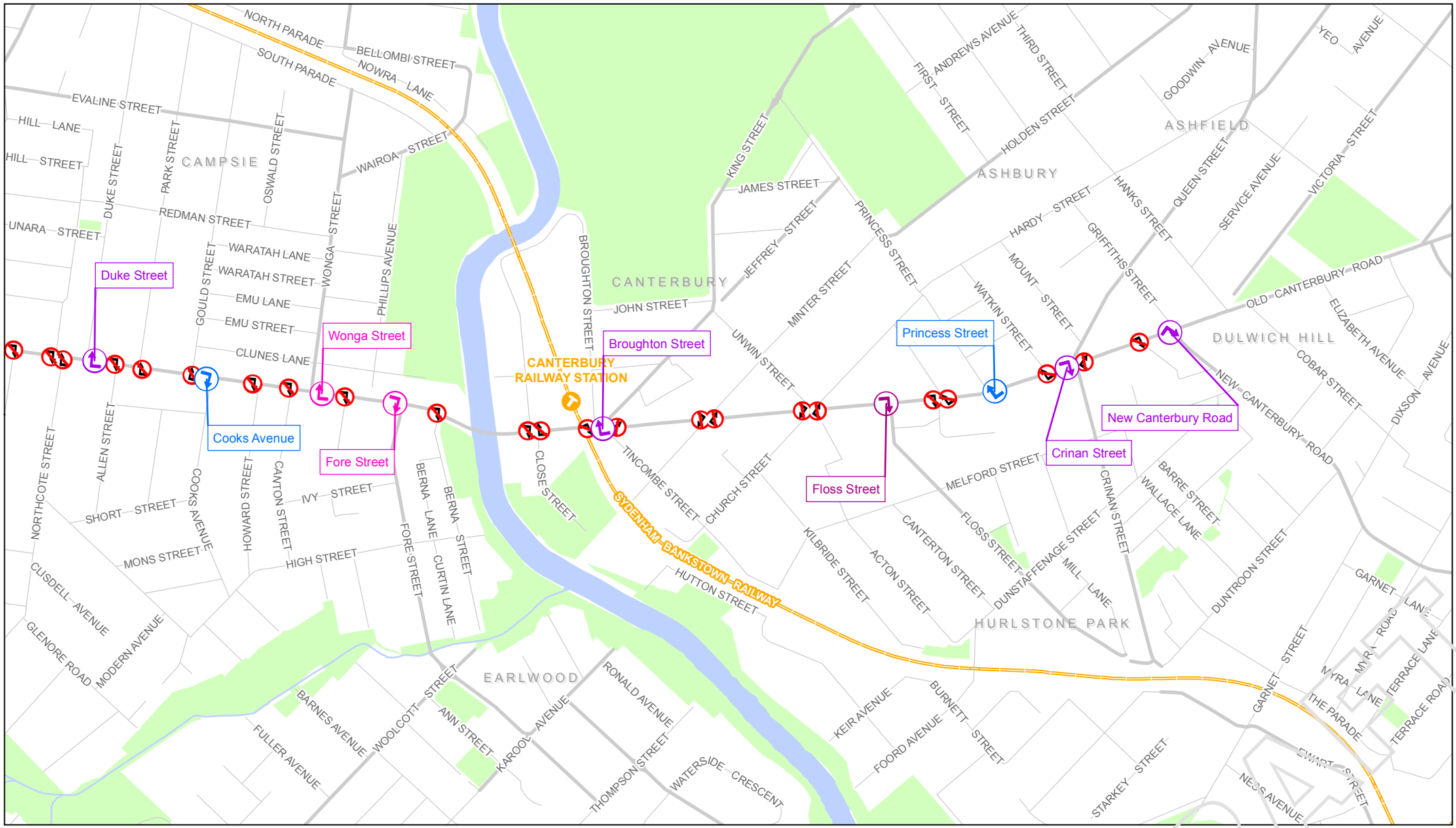
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

LEGEND

- No right turn permitted from Canterbury Road
- Priority controlled right turn - proposed turn bay
- Traffic signal controlled right turn - proposed turn bay
- Traffic signal controlled right turn with existing turn bay
- Traffic signal controlled right turn - proposed traffic signals and turn bay
- Train Stations
- Railway
- Waterways
- Open space

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 28 Apr 2017

Canterbury Road Right Turn Scenario Option 3 (Consolidated Access)

Figure 3-3

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z010_RightTurnScenario_Option3.mxd

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Appendix L – Base Model Development Report

Canterbury Bankstown Council

Canterbury Road Transport and Traffic Study

Base Model Development Report

21 July 2017

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Appendices

Appendix A – Modelled and observed traffic volumes with GEH statistic

Appendix B – Demand matrix scatter plots

1. Introduction

1.1 Background

GHD have been commissioned by Canterbury Bankstown Council (CBC) to carry out a Transport and Traffic Study to investigate the impact of changing land uses in the Canterbury Road corridor.

To facilitate this analysis, GHD have developed a sub-area strategic traffic model. This model provides a tool for forecasting the impacts of future year land use changes in terms of traffic volumes on the strategic road network. In turn, the information from the strategic model will be used to inform detailed intersection modelling.

1.2 Purpose of this report

This report provides an overview of the development of the base year strategic traffic model. The objective of the report is to provide enough information to ensure CBC and Roads and Maritime Services (Roads and Maritime) have confidence in the modelling approach for this study and that it meets acceptable standards.

1.3 Structure of this report

Following this introduction, the report is divided into the following four sections:

- Modelling methodology;
- Development of the base model;
- Comparison with observed data; and
- Summary and conclusions.

1.4 Scope and limitations

This report: has been prepared by GHD for Canterbury Bankstown Council and may only be used and relied on by Canterbury Bankstown Council for the purpose agreed between GHD and the Canterbury Bankstown Council as set out in section 1.1 and 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Canterbury Bankstown Council arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in section 1.5 and chapter 4 of this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by Canterbury Bankstown Council and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does

not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.5 Assumptions

Roads and Maritime Strategic Traffic Assignment Model (STAM) was used for the development of the strategic traffic model. The processes, network data and demands have not been checked or reviewed beyond what is detailed in this document. It has been assumed that STAM is fit for the purpose it has been used.

Traffic count data collected by TTM and 15 minute peak hour surveys have been used to update the demands in the model and check its accordance with this observed data. No wider checks or reviews of the TTM data has been carried out.

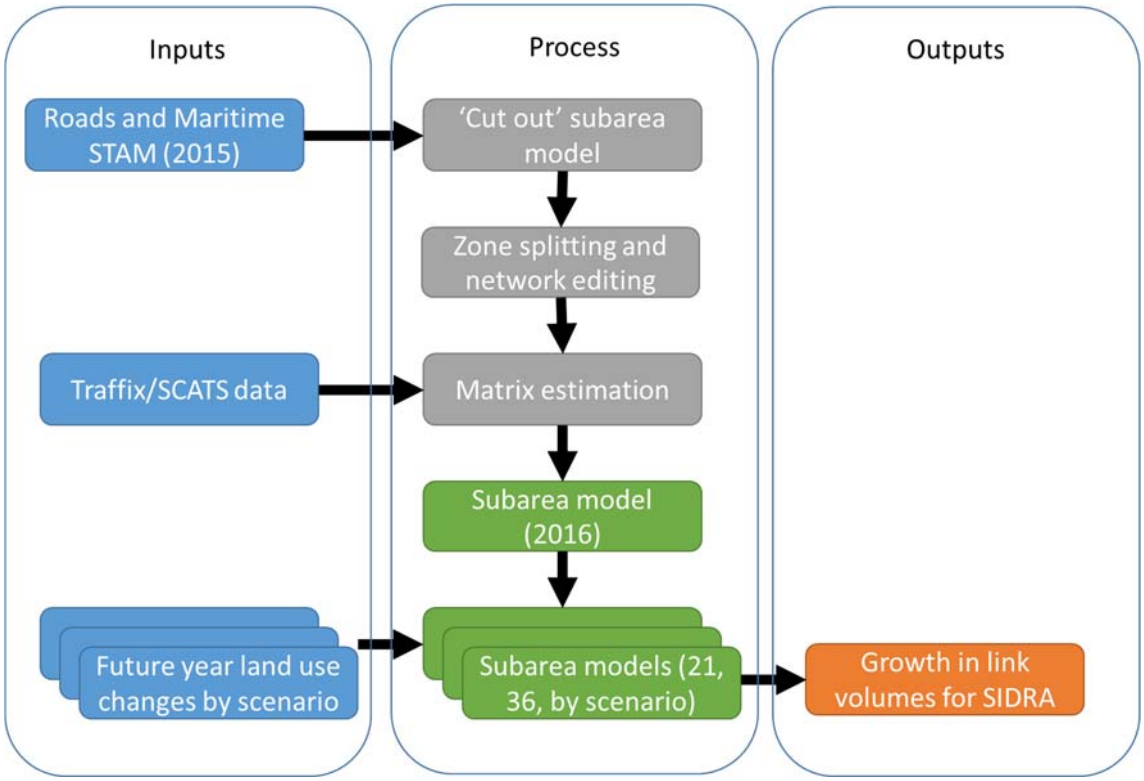
SCATS traffic volume data has been used to update the demands in the model and check its accordance with this observed data. No wider checks or reviews of the SCATS data has been carried out.

2. Modelling methodology

The objective of the strategic traffic modelling is to provide a tool for calculating the impact on traffic volumes on Canterbury Road caused by future changes in land use. To this end, am peak (07:00 – 09:00) and pm peak (16:00 – 18:00) models were developed.

Figure 1 provides an overview of the modelling process employed.

Figure 1 Modelling methodology



An advantage of using STAM for this purpose is that the models zone structure is underpinned by a standard zoning system for which Transport for NSW publish expected changes in population and employment numbers for each zone. By applying and adjusting these forecasts, the traffic model can reflect changes to land use in terms of traffic on the road.

As a result, the growth in link volumes between base and future model year and scenario can be applied to existing turning counts to allow detailed SIDRA analysis to be undertaken for each future year land use scenario.

The steps outlined in the 'Process' section will be discussed in more detail in the remainder of this report.

3. Development of the base model

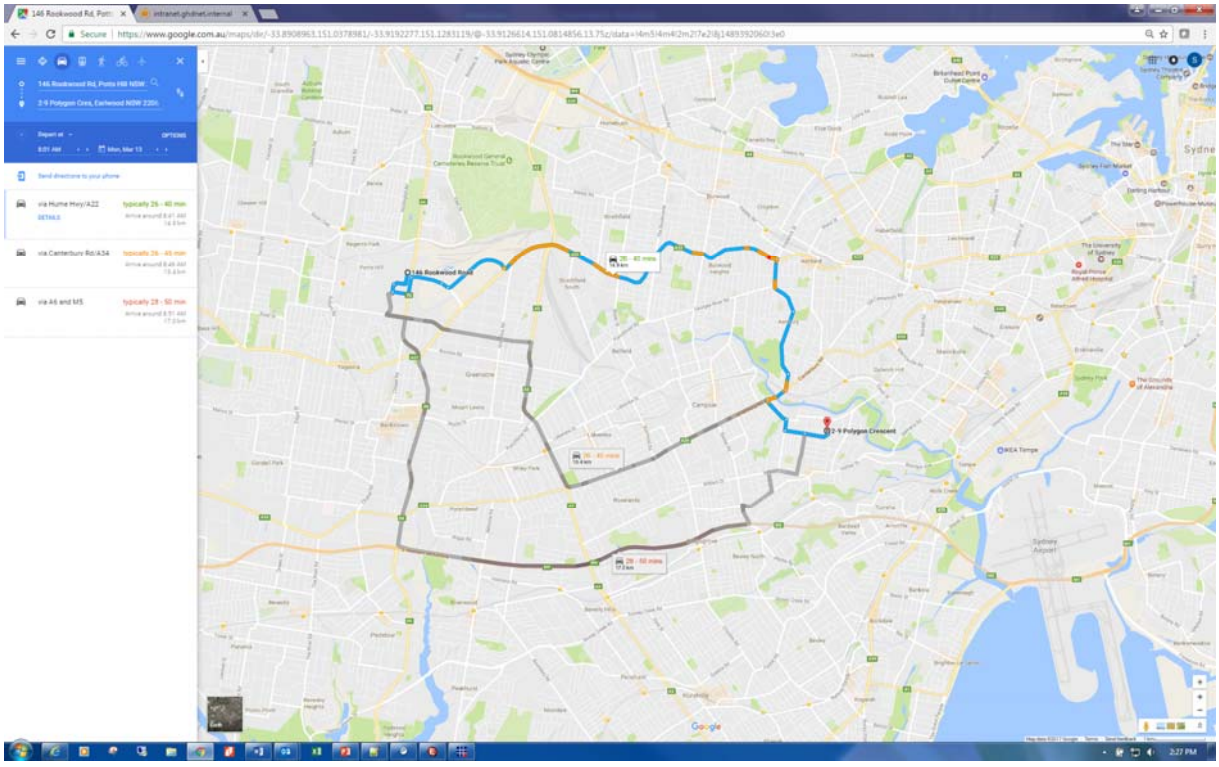
3.1 Creating a subarea model

STAM has a geographical coverage of the whole of Sydney's metropolitan area, including Wollongong to the south, the Blue Mountains to the west and Newcastle to the north. For the purposes of the Canterbury Road Transport and Traffic Study, only the immediate vicinity of the Canterbury Road corridor is required.

As a result, a subarea process has been undertaken to 'cut out' the section of the road network that is pertinent for this application. In parallel to cutting out the network, the demand matrix is also 'cut out' so as to only represent trips starting, ending or passing through the subarea.

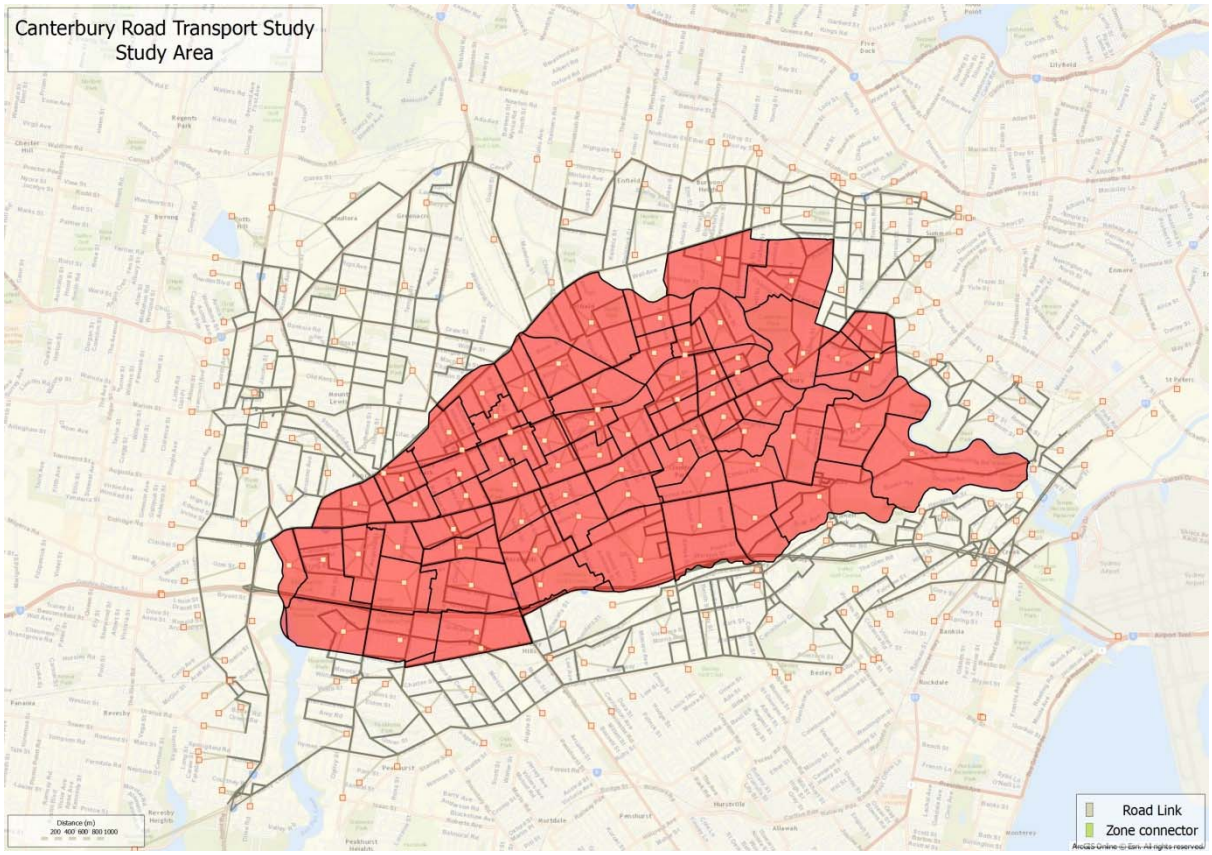
The subarea needs to be as small as possible to cut down on unnecessary computing power and time. Conversely, it needs to be large enough to ensure the wider impact of land use changes in the study area are included. To define the required subarea, a range of tests were undertaken using Google Maps to ascertain reasonable route choices through the study area from a selection of origin and destination points in am and pm peak periods. This ensures that adjacent routes that are affected by changes to Canterbury Road are included in the subarea model. Figure 2 shows a sample of the Google Maps analysis.

Figure 2 Sample of Google Maps route choice analysis



The resulting subarea, overlaid with the study area, which consists of the old Canterbury Council Local Government Area is shown in Figure 3.

Figure 3 Subarea model area



3.2 Zone splitting and network editing

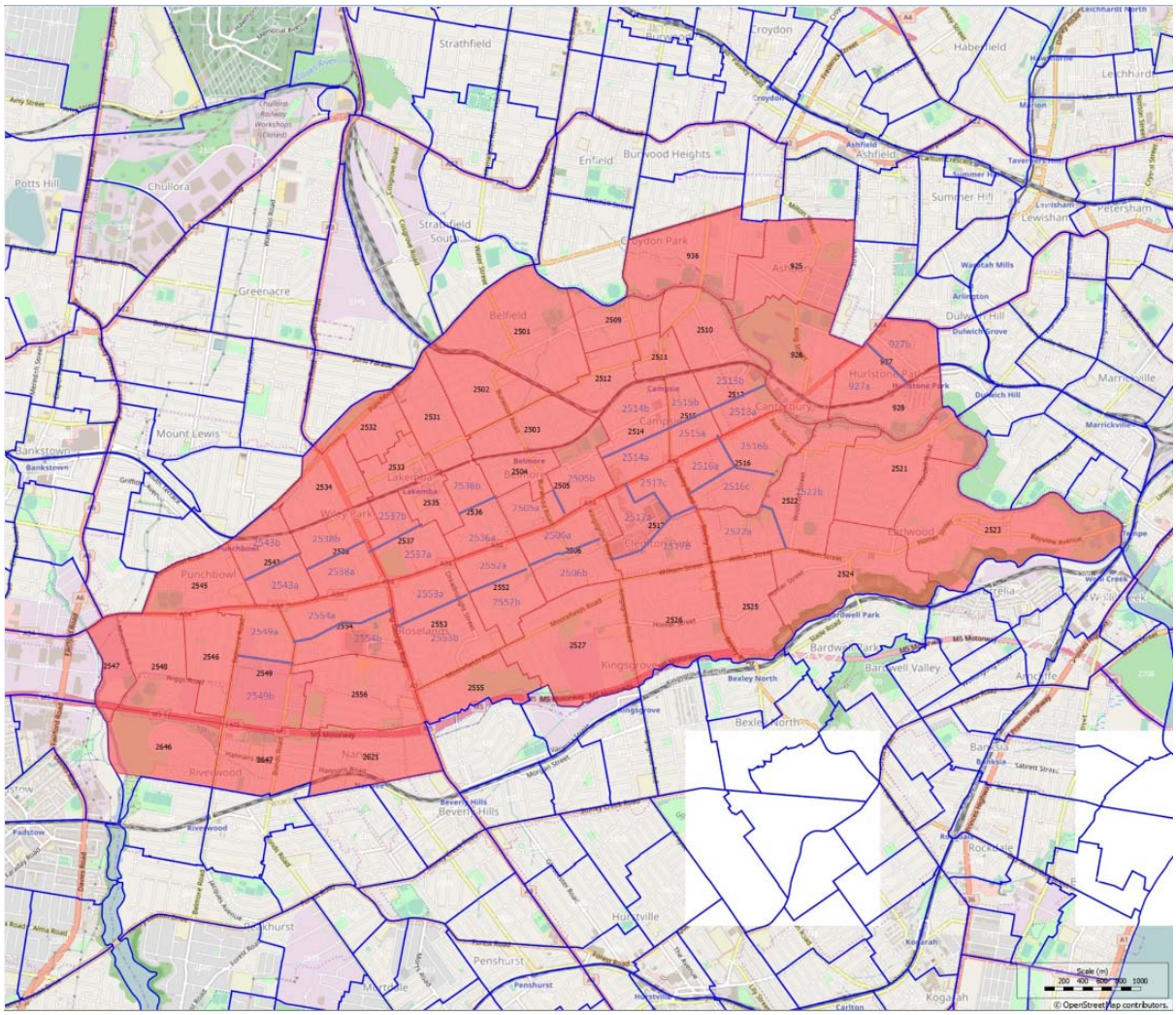
As STAM is a strategic traffic model, the zones can be too large for a detailed corridor study. As a result, and to ensure that the forecast changes in land use can be reflected in the strategic model to a reasonable level of accuracy, a number of zone splits were required. This necessitates both

- Splitting zones and reattaching these new zones to the road network in a realistic manner – so that the zones load onto the network at sensible locations.
- Splitting the traffic demand for each of the zones in a reasonable manner.

3.2.1 Network changes

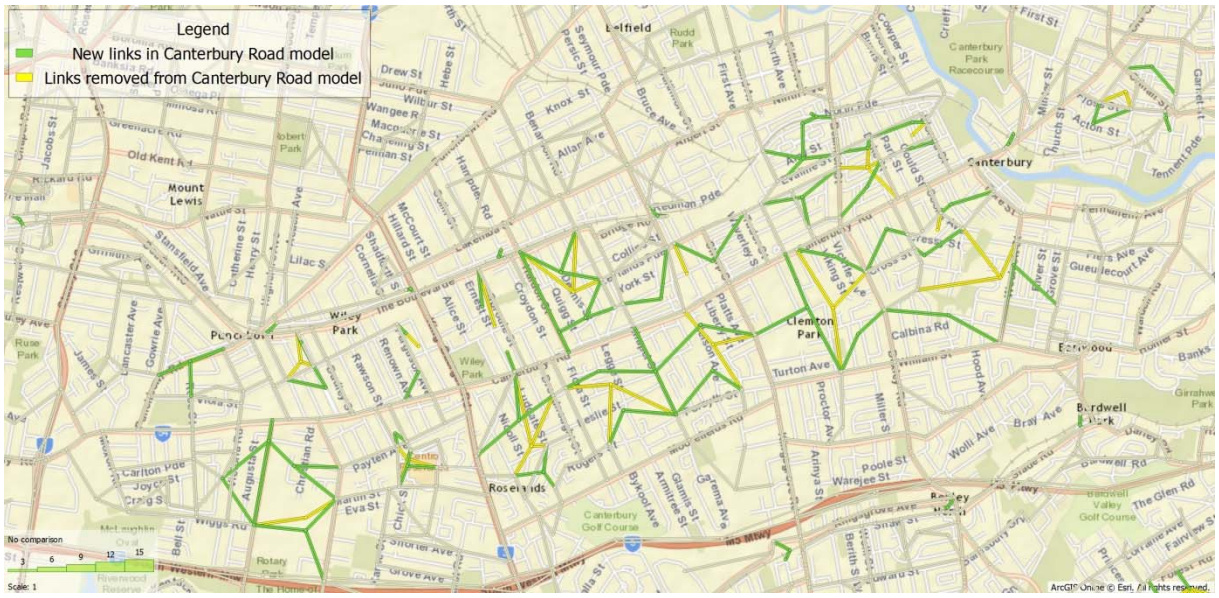
Figure 4 shows how the travel zones have been split to provide more detail in the study area.

Figure 4 Zone splits



The resulting changes to the network are shown in Figure 5. Note that this figure includes all changes to the STAM network made for the purpose of this study, where a number of links were segmented to allow for new zone connectors without directly loading zones into intersections on Canterbury Road.

Figure 5 Network changes due to zone splitting and model calibration



3.2.2 Demand changes

Changes in the zone demands were carried out using simple proportions based on the population and employment in each split zone. The proportions applied to trip origin and destination are shown in Table 1.

Table 1 Factors for splitting demands

	AM Peak						PM Peak					
	Split Zone A		Split Zone B		Split Zone C		Split Zone A		Split Zone B		Split Zone C	
original zone	from (orig)	to (dest)	from (orig)	to (dest)	from (orig)	to (dest)	from (orig)	to (dest)	from (orig)	to (dest)	from (orig)	to (dest)
2554	0.70	0.50	0.30	0.50			0.30	0.50	0.70	0.50	0	0
2549	0.70	0.50	0.30	0.50			0.30	0.50	0.70	0.50	0	0
2543	0.40	0.40	0.60	0.60			0.40	0.40	0.60	0.60		
2538	0.62	0.62	0.38	0.38			0.62	0.62	0.38	0.38		
2537	0.58	0.58	0.42	0.42			0.58	0.58	0.42	0.42		
2536	0.51	0.51	0.49	0.49			0.51	0.51	0.49	0.49		
2505	0.48	0.48	0.52	0.52			0.48	0.48	0.52	0.52		
2506	0.48	0.48	0.52	0.52			0.48	0.48	0.52	0.52		
2514	0.30	0.20	0.70	0.80			0.20	0.40	0.80	0.60		
2515	0.53	0.53	0.47	0.47			0.53	0.53	0.47	0.47		
2513	0.48	0.48	0.52	0.52			0.48	0.48	0.52	0.52		
927	0.42	0.42	0.58	0.58			0.42	0.42	0.58	0.58		
2516	0.18	0.18	0.53	0.53	0.29	0.29	0.18	0.18	0.53	0.53	0.29	0.29
2517	0.37	0.37	0.28	0.28	0.35	0.35	0.37	0.37	0.28	0.28	0.35	0.35
2522	0.50	0.50	0.50	0.50			0.50	0.50	0.50	0.50		
2552	0.60	0.60	0.40	0.40			0.60	0.60	0.40	0.40		
2553	0.37	0.37	0.63	0.63			0.37	0.37	0.63	0.63		

4. Comparison with existing volumes

As STAM covers the whole of the metropolitan area, it is calibrated to a strategic level. As a result, traffic volumes on local roads are not necessarily accurate to the degree that is advisable for a study of this type.

Therefore, a matrix estimation process was carried out on the subarea model, with the split zones, to better reflect the traffic volumes at a local level.

This matrix estimation was carried out for both the am and pm peak periods.

The following data sources were used to create link volume counts for use in the matrix estimation:

- TTM turning count surveys (November 2012)
- Where traffic survey data was not available, GHD staff undertook 15 minute AM and PM peak hour surveys.
- Roads and Maritime also provided traffic survey data (from 2015) for the intersection of Canterbury Road with Beamish Street and King Georges Road.
- SCATS traffic count data (7th December 2016, with a few locations supplemented with data on 8th March 2017 due to missing data)

STAM assigns a single demand matrix in passenger car units (pcu) for each time period. For consistency, available data from the available survey data has been used to factor the SCATS data to reflect heavy vehicle composition. The heavy vehicle composition is assumed to be 6% in the am peak and 3% in the pm peak. Further, it is assumed that each heavy vehicle is 2 pcu.

Figure 6 and Figure 7 show the resulting observed traffic volumes in pcu.

Figure 6 Traffic volumes in pcu (am peak 07:00-09:00)



Figure 7 Traffic volumes in pcu (pm peak 16:00-18:00)


PM Peak Observed volumes (2 hour pcu)
Canterbury
Belmore
Lakemba
Wiley Park
Punchbowl Park
Roberts Park
Hurlstone Park
Bardwell Park
Bardwell Valley
Canterbury Golf Course
Canterbury Park Racecourse
Weyland St
Health St
Belair St
Carlton Pde
The Boulevarde
Old Kent Rd
Wilbur St
Drew St
Banksia Rd
Chiswick Rd
Northcote Rd
Lauma Ave
Valencia St
Karuah St
Hugh St
Lucerne St
Campsie St
Beamish St
Archibald St
Myers St
Phillis St
Leslie St
Parker Ave
Olive St
Kilkee Ave
Fleet Ave
Hood Ave
Bray Ave
Moore St
Eastwood Park
Kitchener Ave
Hamilton Ave
Coney Rd
Homer Ln
Glenore Rd
Fuller Ave
Wearne St
Page St
Louisa St
Spark St
Doris Ave
Ann St
Elsie St
Hutton St
Acton St
Kilbride St
Mill Rd
Cobar St
Fifth St
Fourth St
Third St
Second St
First St
Arlington St
Service Ave
Yeo Park
Hanks St
Princess St
Watkin St
Jeffrey St
Winter St
Cleeland St
Crichett St
Mallerry St
Byron St
Madura Reserve
Croydon Park
Rosedale Reserve
Albert Rd
Broad St
Hampton St
Yandaro St
Hestol St
Flockhart Park
Rudd Park
Cecily St
Linda St
Pearce St
Batcelin St
Minnie St
Knox St
Belgravia St
Allan Ave
Kennedy Ave
Oxford St
Lakemba St
Wiltshire Ave
Lawrence St
Railway Pde
Bridge St
Collins St
Wonga St
Wangee Rd
Jamieson Ln
Napoleon Rd
Abel St
Plasto St
Macquarie St
Chesterfield St
Penman St
Gould St
Hillard St
McCourt St
Fairmount St
Trillbert Ln
Hayden Ln
Murrell St
Jarrong St
Lewis St
Mount Lewis Ave
Catherine St
Telopea St
Bouvardia St
Lilac St
Waratah St
Carnation Ave
Verbena Ave
Petunia Ave
Daphne Ave
Megan Ave
Rose Ave
Gardenia Ave
Salvia Ave
Raymond St
Stanley St
Leonard St
Percy St
Kenneth St
Prairie Vale Rd
Resthaven Rd
Milton St
Myrtle Rd
Harold St
Frank St
Lovett St
Goodwin Ave
Prospect St
Rose St
Cowell St
Hewitt St
Pandora St
Tennyson St
Hebe St
Pomona St
Sylvanus St
Wentworth St
Cecily St
Linda St
Pearce St
Batcelin St
Minnie St
Hugh St
Knox St
Belgravia St
Lucerne St
Allan Ave
Kennedy Ave
Oxford St
Lakemba St
Wiltshire Ave
Lawrence St
Railway Pde
Bridge St
Collins St
Wonga St
Wangee Rd
Jamieson Ln
Napoleon Rd
Abel St
Plasto St
Macquarie St
Chesterfield St
Penman St
Gould St
Hillard St
McCourt St
Fairmount St
Trillbert Ln
Hayden Ln
Murrell St
Jarrong St
Lewis St
Mount Lewis Ave
Catherine St
Telopea St
Bouvardia St
Lilac St
Waratah St
Carnation Ave
Verbena Ave
Petunia Ave
Daphne Ave
Megan Ave
Rose Ave
Gardenia Ave
Salvia Ave
Raymond St
Stanley St
Leonard St
Percy St
Kenneth St
Prairie Vale Rd
Resthaven Rd
Milton St
Myrtle Rd
Harold St
Frank St
Lovett St
Goodwin Ave
Prospect St
Rose St
Cowell St
Hewitt St
Pandora St
Tennyson St
Hebe St
Pomona St
Sylvanus St
Wentworth St
Drone St
Valencia St
Karuah St
Banksia Rd
Chiswick Rd
Northcote Rd
Lauma Ave
Gosling Park
Greenacre Civic Centre Reserve
Bentley Reserve
Punchbowl Park
Roberts Park
Wiley Park
Hurlstone Park
Canterbury Park Racecourse
Bardwell Park
Bardwell Valley
Canterbury Golf Course
Weyland St
Health St
Belair St
Carlton Pde
The Boulevarde
Old Kent Rd
Wilbur St
Drew St
Banksia Rd
Chiswick Rd
Northcote Rd
Lauma Ave
Valencia St
Karuah St
Hugh St
Lucerne St
Campsie St
Beamish St
Archibald St
Myers St
Phillis St
Leslie St
Parker Ave
Olive St
Kilkee Ave
Fleet Ave
Hood Ave
Bray Ave
Moore St
Eastwood Park
Kitchener Ave
Hamilton Ave
Coney Rd
Homer Ln
Glenore Rd
Fuller Ave
Wearne St
Page St
Louisa St
Spark St
Doris Ave
Ann St
Elsie St
Hutton St
Acton St
Kilbride St
Mill Rd
Cobar St
Fifth St
Fourth St
Third St
Second St
First St
Arlington St
Service Ave
Yeo Park
Hanks St
Princess St
Watkin St
Jeffrey St
Winter St
Cleeland St
Crichett St
Mallerry St
Byron St
Madura Reserve
Croydon Park
Rosedale Reserve
Albert Rd
Broad St
Hampton St
Yandaro St
Hestol St
Flockhart Park
Rudd Park

The matrix estimation process adjusts the demands from travel zones to better reflect the observed turning volumes.

The revised demand matrix is reassigned to the road network to ascertain the extent to which the traffic volumes reflect the observed volumes. To do this, a statistical measure called GEH is generally used. The GEH formula is as follows:

$$GEH = \sqrt{\frac{2(M-O)^2}{(M+O)}}$$

Where M is the modelled hourly volume and O is the observed hourly volume.

For the purposes of this assessment, the hourly volume is assumed to be half of the peak two hour volume.

Table 2 provides a summary of the GEH results. A full list of the links are provided in Appendix A.

Table 2 Summary of GEH statistic results

	AM	AM %	PM	PM %
GEH < 3	75	80%	78	83%
GEH < 5	87	93%	86	91%
GEH < 10	93	99%	93	99%
Number of observations	94		94	

The GEH statistics in Table 2 indicate that the model that is reflecting observed volumes well.

Figure 8 and Figure 9 show the difference between observed and modelled volumes.

Figure 8 AM peak 2 hour (pcu) modelled – observed traffic volumes

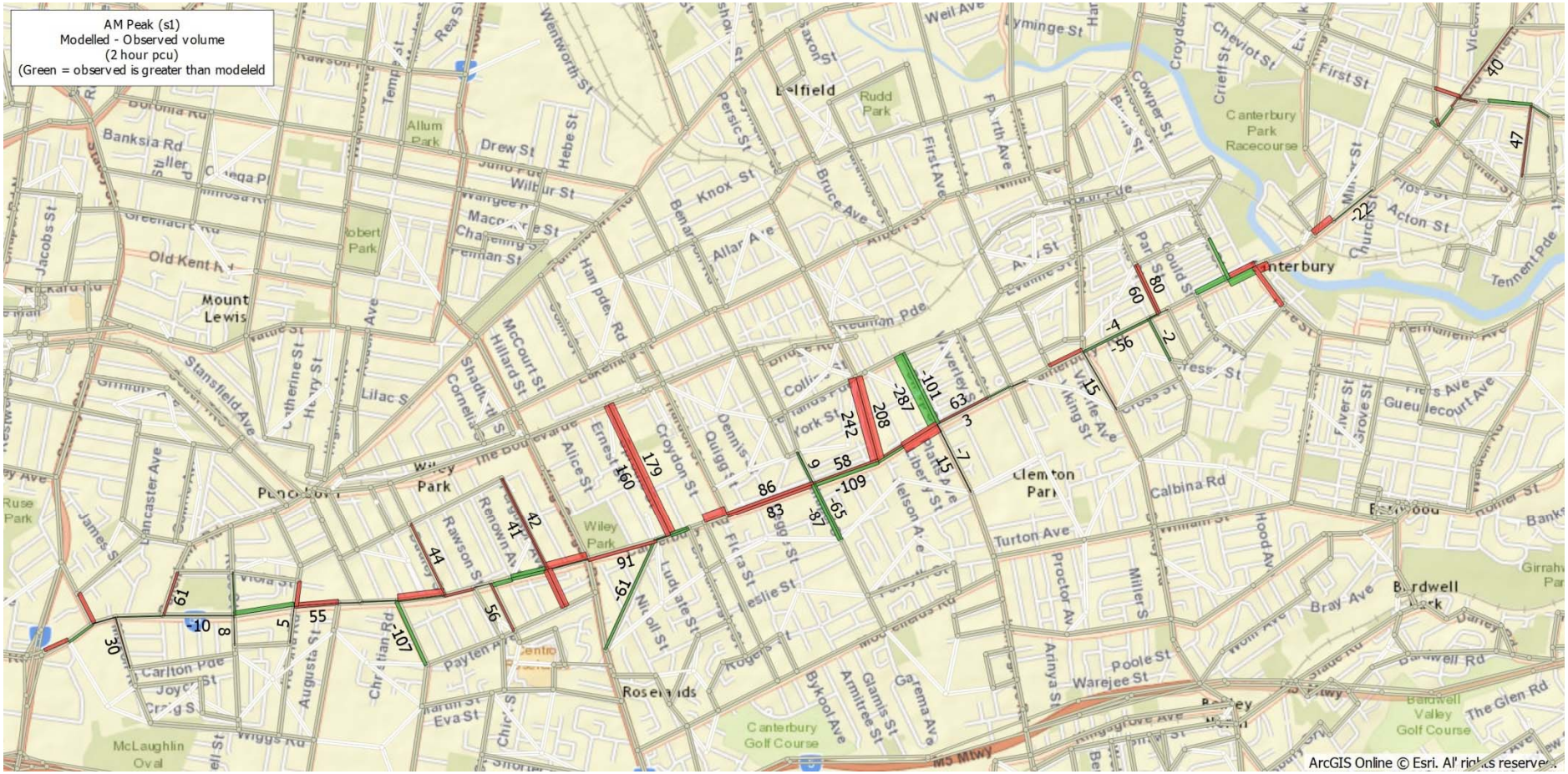
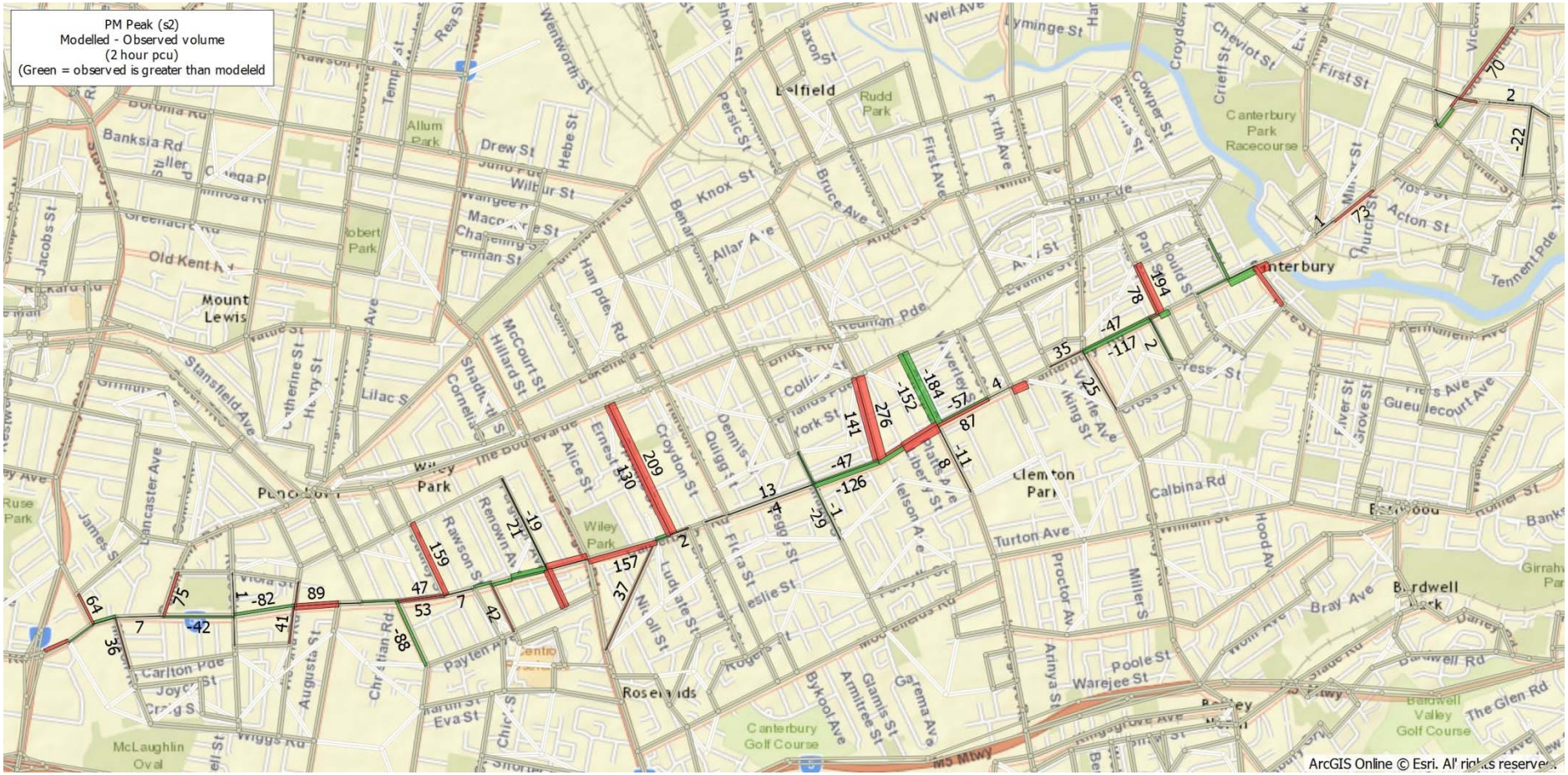


Figure 9 PM peak 2 hour (pcu) modelled – observed traffic volumes



It is important to check that when carrying out matrix estimation, that the underlying demand is not altered too significantly, as if this occurs it is generally a sign that there are errors or omissions in the way the network is constructed or coded. This has been checked by producing scatterplots of pre and post matrix estimation demand for each time period and origin/destination totals. These figures are included in Appendix B.

Each of these charts have an R^2 value of greater than 0.98, which indicates a high level of correlation between observed and modelled volumes. Furthermore, the gradient of the best fit line is between 0.97 and 0.99 which indicates that the total matrix size before and after the matrix estimation has not altered significantly.

These charts indicate that the matrix estimation has not significantly altered the underlying patterns of the demand matrices and therefore it is reasonable to apply this method.

5. Summary and Conclusion

This report provides an overview of the development of the base year strategic traffic model. The objective of the report is to provide enough information to ensure CBC and Roads and Maritime Services (Roads and Maritime) have confidence in the modelling approach for this study and that it meets acceptable standards.

The process of developing the base models from STAM consisted of

- Creating a subarea model
- Splitting a number of the zones in the proximity of Canterbury Road
- Carrying out a matrix estimation procedure to better reflect observed traffic volumes.

Analysis of the matrix estimation process concludes that:

- Modelled traffic volumes closely reflect the observed volumes
- No significant changes have been made to the underlying demand matrices

Therefore, it is considered that the base model is a tool suitable for the analysis of the forecast land use scenarios.

Appendices

Appendix A – Modelled and observed traffic volumes with GEH statistic

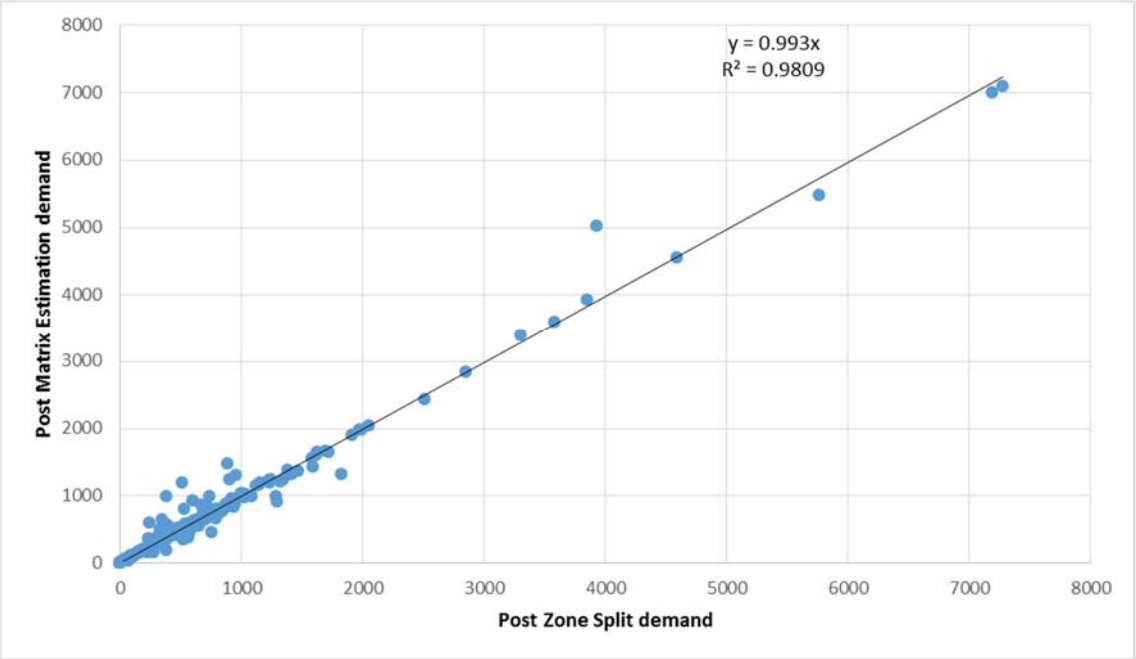
		AM Peak 2 hours			PM Peak 2 hours		
inode	jnode	modelled	observed	GEH	modelled	observed	GEH
12436	17316	3389	3380	0.1	2475	2522	0.7
12437	12436	1553	1519	0.6	1445	1420	0.5
12439	13676	3544	3671	1.5	2635	2674	0.5
12440	13676	2725	3010	3.8	4109	4358	2.7
12441	24518	3815	3568	2.9	2335	2334	0.0
12442	12440	2708	2411	4.2	3838	3545	3.4
12457	13678	653	864	5.4	556	708	4.3
12457	19523	1833	1648	3.1	2836	2590	3.3
12457	24381	1412	1406	0.1	1407	1418	0.2
12457	24813	2947	2890	0.7	2193	2250	0.9
12459	12436	3140	3016	1.6	2460	2425	0.5
12460	12461	902	736	4.1	819	678	3.6
12460	12478	1644	1728	1.4	2678	2804	1.7
12460	19523	3134	3096	0.5	2422	2350	1.0
12461	12460	754	532	6.2	888	612	7.1
12476	19395	2094	2092	0.0	2796	2806	0.1
12477	15067	3530	3272	3.1	2497	2474	0.3
12478	12460	3092	3048	0.6	2195	2242	0.7
12478	15067	1824	1722	1.7	2838	2842	0.0
12478	19487	1008	1056	1.1	678	712	0.9
12478	30003	1315	1362	0.9	1659	1660	0.0
12483	14998	855	919	1.5	458	421	1.2
12485	12492	735	815	2.0	789	877	2.2
12489	15874	1920	1832	1.4	2802	2692	1.5
12491	12489	2084	2043	0.6	3099	3122	0.3
12491	12492	3096	3171	0.9	2563	2617	0.7
12492	13609	2773	2564	2.9	2369	2322	0.7
12522	12529	3567	3553	0.2	3887	3913	0.3
12529	12522	4451	4536	0.9	3802	3880	0.9
12529	24238	3144	3184	0.5	3327	3376	0.6
12531	12522	2714	2707	0.1	3166	3159	0.1
12532	24238	3787	3692	1.1	2717	2612	1.4
13604	12531	2013	1997	0.2	2585	2627	0.6
13604	15874	2629	2790	2.2	2091	2173	1.3
13609	12492	1599	1608	0.2	2454	2401	0.8
13610	15886	1658	1764	1.8	2329	2430	1.5
13610	19395	1893	2034	2.3	2205	2330	1.9
13676	12440	4057	3876	2.0	3048	3030	0.2
13678	12457	710	780	1.8	678	862	4.7
13679	12423	849	795	1.3	1404	1334	1.3
13680	12423	713	593	3.3	555	559	0.1
14998	12476	1748	1655	1.6	2093	1936	2.5
14998	19429	3857	3920	0.7	2497	2586	1.2

15067	12478	3439	3390	0.6	2535	2522	0.2
15870	13609	317	281	1.5	442	283	5.9
15874	12489	2988	2910	1.0	2411	2322	1.3
16537	13604	145	187	2.3	273	272	0.0
16538	12531	912	845	1.6	720	645	2.0
16539	15874	354	229	5.2	454	410	1.5
17316	12436	2338	2410	1.0	3209	3326	1.5
17316	24515	3448	3416	0.4	2586	2534	0.7
17316	24815	160	164	0.2	427	476	1.6
17514	24515	330	236	3.9	546	352	6.5
19253	12529	1223	1096	2.6	1317	1253	1.3
19268	12522	888	860	0.7	760	724	0.9
19295	13604	319	310	0.4	245	231	0.7
19312	15874	374	335	1.5	272	231	1.8
19371	13609	1818	1747	1.2	2637	2630	0.1
19371	15886	2009	1992	0.3	2136	2221	1.3
19382	15886	265	238	1.2	507	465	1.4
19395	12476	1983	1774	3.4	2213	2017	3.0
19395	13610	1879	1940	1.0	2560	2612	0.7
19395	21741	124	84	2.8	175	154	1.1
19395	21752	261	116	7.5	305	160	6.7
19411	19429	253	84	9.2	289	80	10.9
19429	14998	1964	1980	0.3	2782	2824	0.6
19429	19411	339	170	7.5	250	120	6.8
19429	19432	3809	3916	1.2	2650	2616	0.5
19432	19429	2001	2058	0.9	2896	2894	0.0
19487	12478	958	914	1.0	1092	1126	0.7
19523	12457	3134	3044	1.1	2422	2308	1.7
19523	12460	1833	1980	2.4	2836	2978	1.9
19559	13677	1906	1854	0.9	3050	2775	3.6
19645	13676	647	769	3.2	693	755	1.6
19697	24518	1842	1832	0.2	2892	2819	1.0
19728	12423	3571	3475	1.1	2066	1984	1.3
19728	12424	1537	1567	0.5	2711	2824	1.5
19739	12423	1319	1268	1.0	2405	2347	0.8
19744	13698	2591	2651	0.8	1485	1483	0.0
21741	19395	132	94	2.5	89	108	1.3
21752	19395	128	8	10.3	163	26	9.9
22320	13698	248	200	2.3	124	146	1.4
24381	12457	1425	1420	0.1	1320	1312	0.2
24515	17316	2490	2540	0.7	3634	3682	0.6
24515	17514	105	46	4.8	134	56	5.7
24628	12424	3477	3697	2.6	2232	2325	1.4
24629	12424	370	308	2.4	415	421	0.2
24813	12457	1576	1564	0.2	2571	2484	1.2

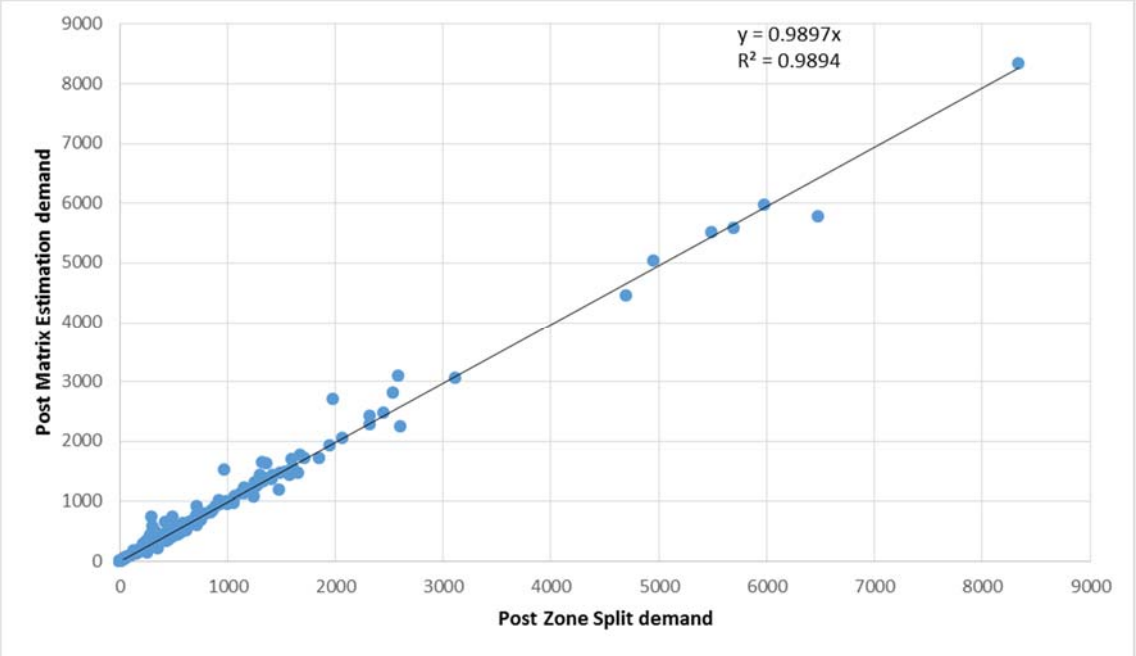
24813	13677	3070	3091	0.3	2318	2314	0.1
24815	17316	66	124	4.2	112	110	0.2
24816	12440	926	798	3.1	1090	953	3.0
24821	24515	2375	2398	0.3	3271	3456	2.3
25047	13698	1233	1255	0.4	2539	2560	0.3
30003	12478	1197	1276	1.6	1065	1094	0.6

Appendix B – Demand matrix scatter plots

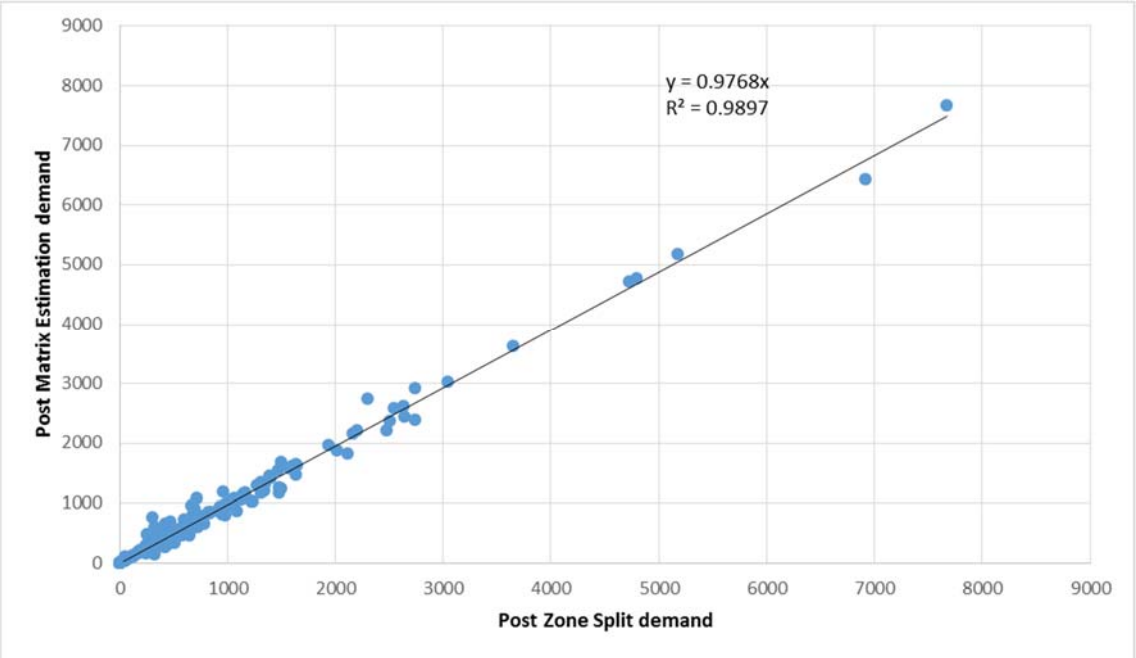
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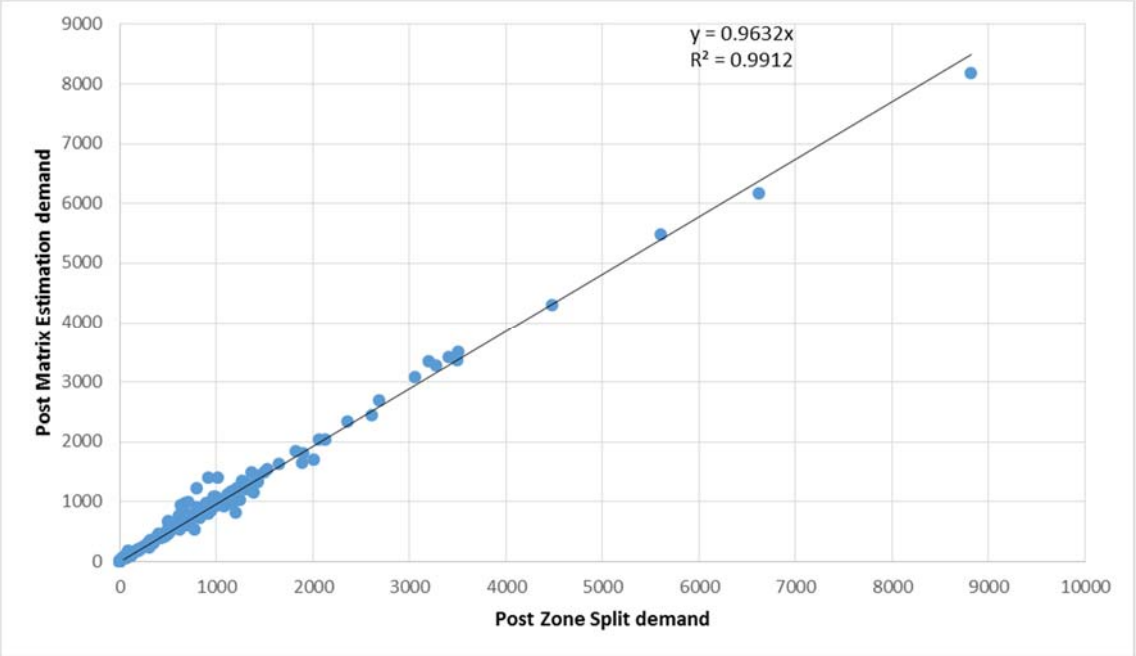
AM Peak destination zones



PM peak origin zones



PM peak destination zones



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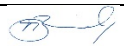
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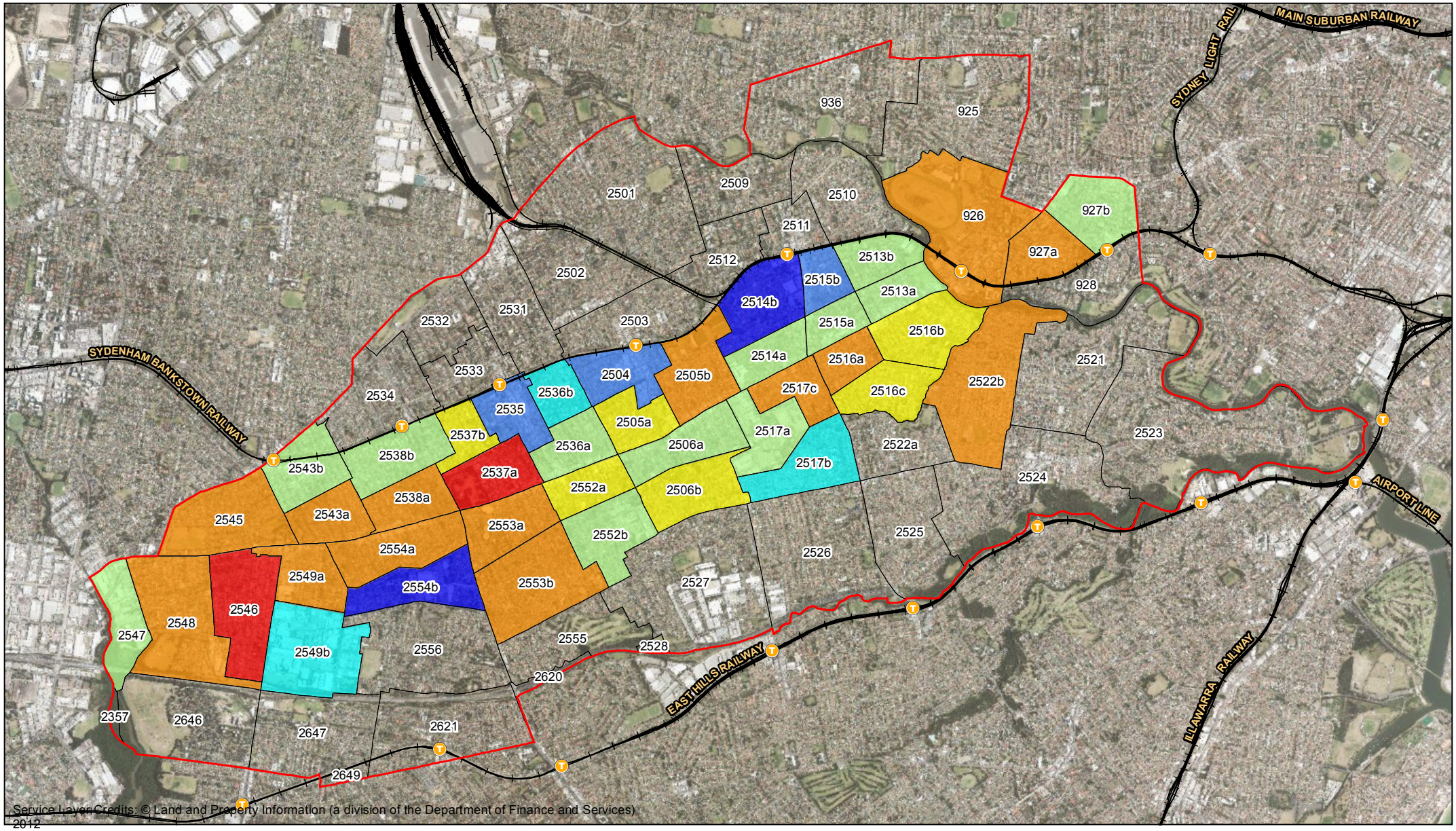
Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
A	SP	GM		GM		28/06/17
Rev 1	SP	OP		TB		21/07/17

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Appendix M – Land Use Scenario Data



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Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Employment Density (Jobs per Hectare)

0.000 - 1.205	17.82 - 34.41
1.206 - 6.334	34.42 - 52.69
6.335 - 9.431	52.70 - 84.29
9.432 - 17.81	

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Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 06 Jul 2017

Employment Density Max Yield - 2021

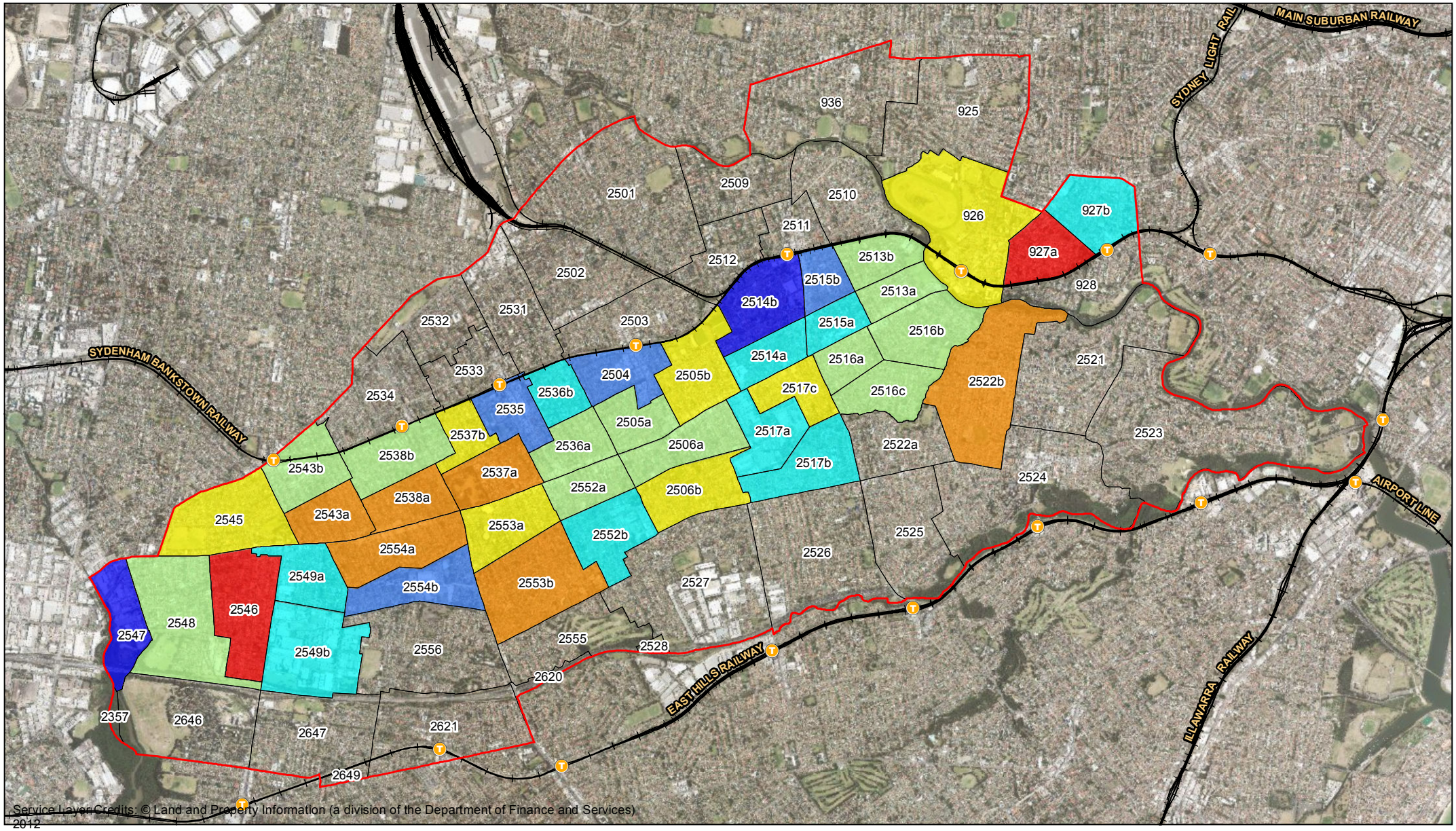
Figure 1

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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Employment Density (Jobs per Hectare)

0.000 - 1.205	17.82 - 34.41
1.206 - 6.334	34.42 - 52.69
6.335 - 9.431	52.70 - 84.29
9.432 - 17.81	

Canterbury District Council
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Traffic and Transport Study

Job Number 21-26234
Revision A
Date 06 Jul 2017

Employment Density Max Yield - 2036

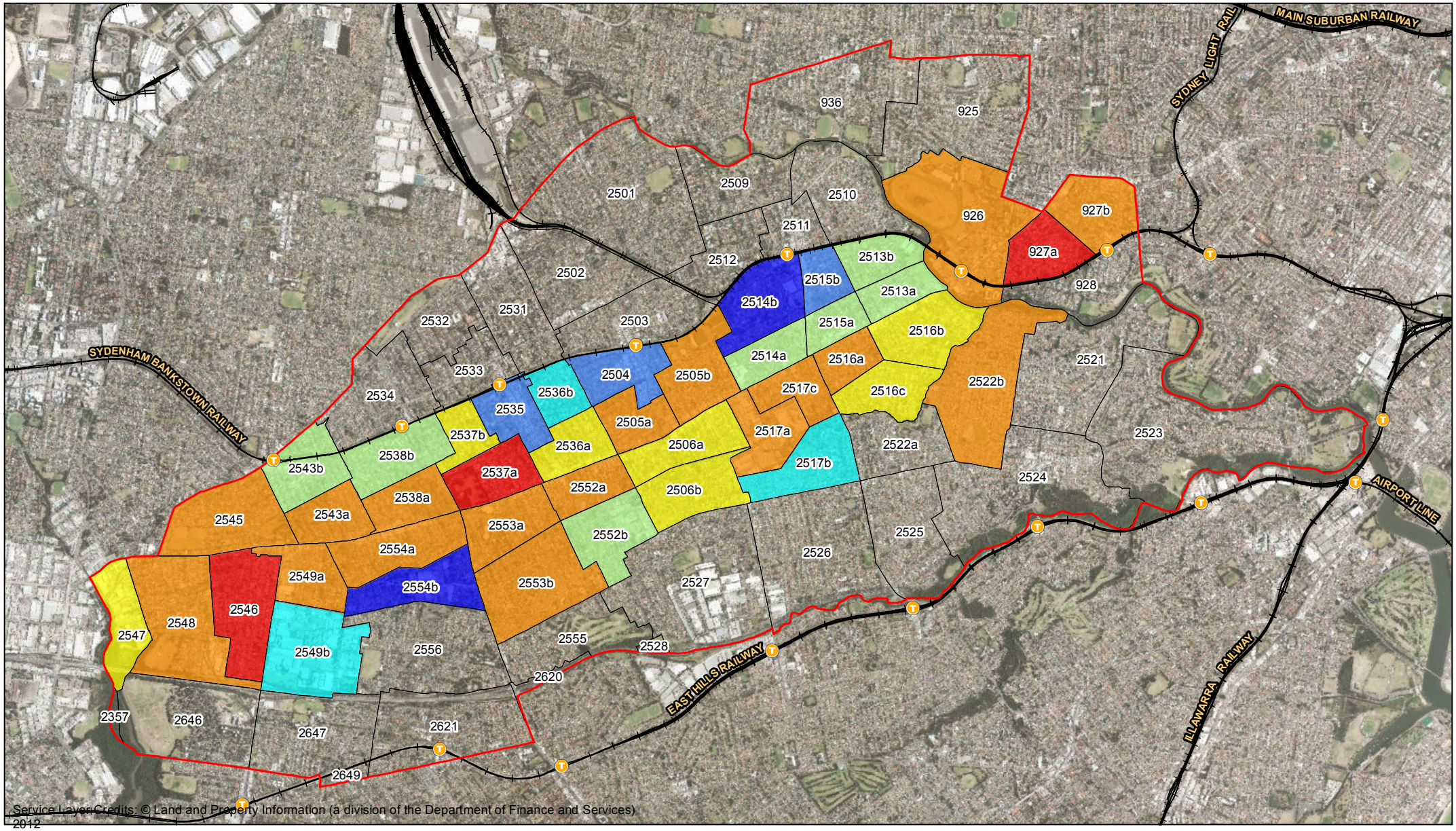
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LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Employment Density (Jobs per Hectare)

- 0.000 - 1.205
- 1.206 - 6.334
- 6.335 - 9.431
- 9.432 - 17.81
- 17.82 - 34.41
- 34.42 - 52.69
- 52.70 - 84.29

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Job Number 21-26234
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Employment Density Hill-Thalis - 2021

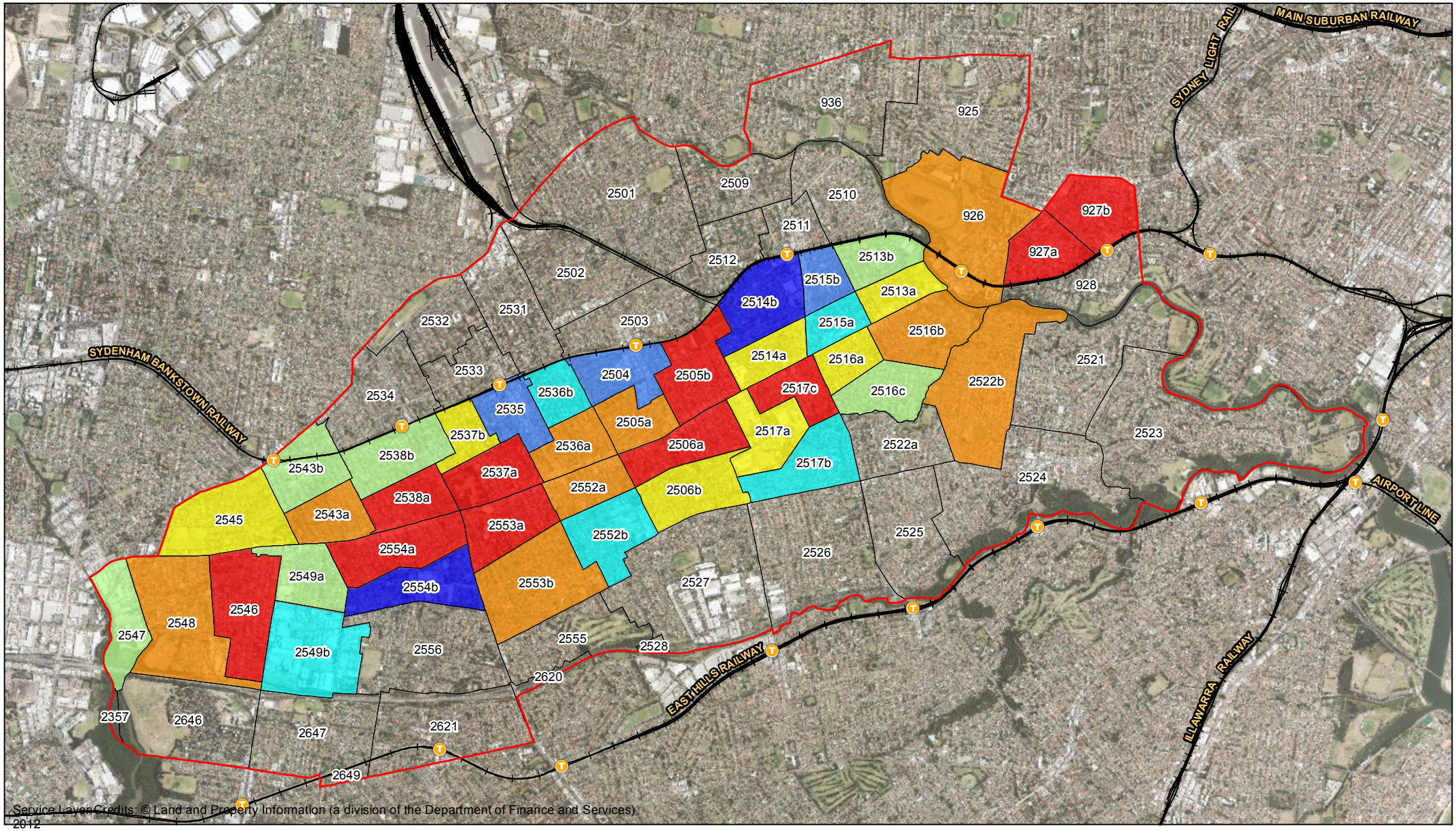
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Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Employment Density (Jobs per Hectare)

0.000 - 1.205	17.82 - 34.41
1.206 - 6.334	34.42 - 52.69
6.335 - 9.431	52.70 - 84.29
9.432 - 17.81	

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Date 06 Jul 2017

Employment Density
Hill-Thalis - 2036

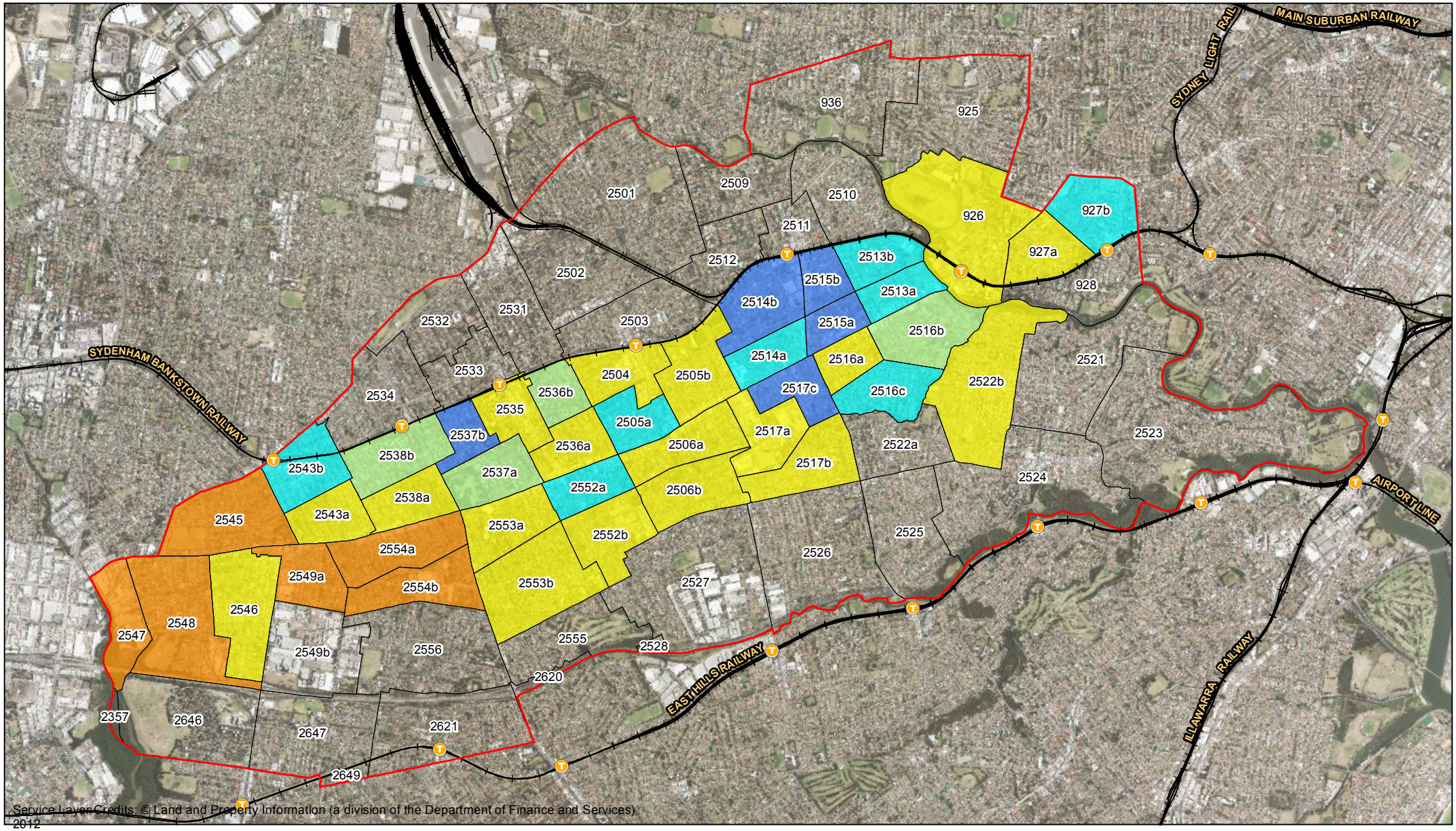
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Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Dwelling Density (Jobs per Hectare)

- 3.167 - 16.41
- 16.42 - 25.73
- 25.74 - 31.14
- 31.15 - 38.43
- 38.44 - 53.57

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Dwelling Density
Max Yield - 2021

Job Number	21-26234
Revision	A
Date	06 Jul 2017

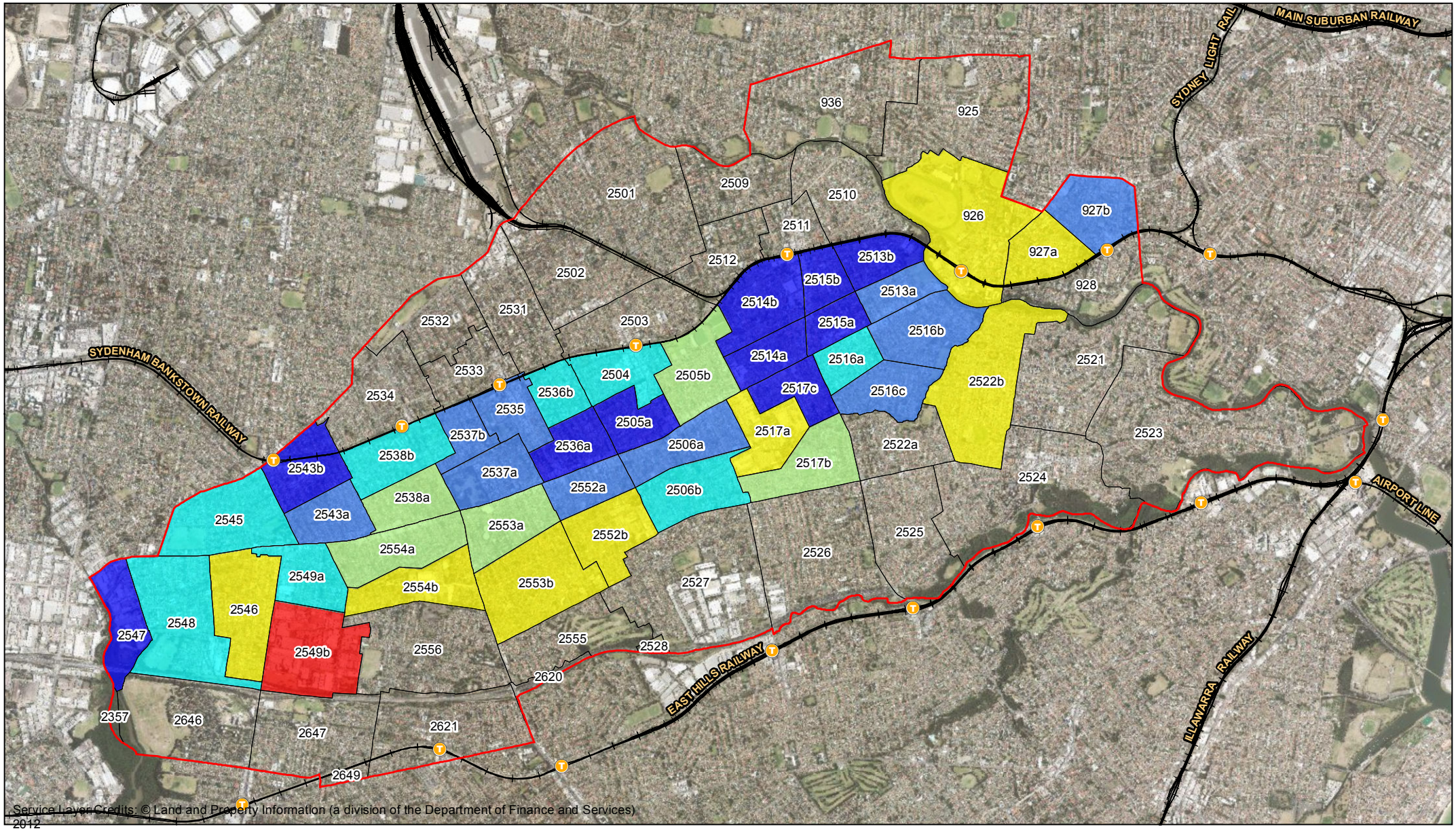
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Dwelling Density (Jobs per Hectare)

- 2.733 - 3.166
- 16.42 - 25.73
- 25.74 - 31.14
- 31.15 - 38.43
- 38.44 - 53.57
- 53.58 - 73.61

Canterbury District Council
Canterbury Road
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Dwelling Density
Max Yield - 2036

Job Number	21-26234
Revision	A
Date	06 Jul 2017

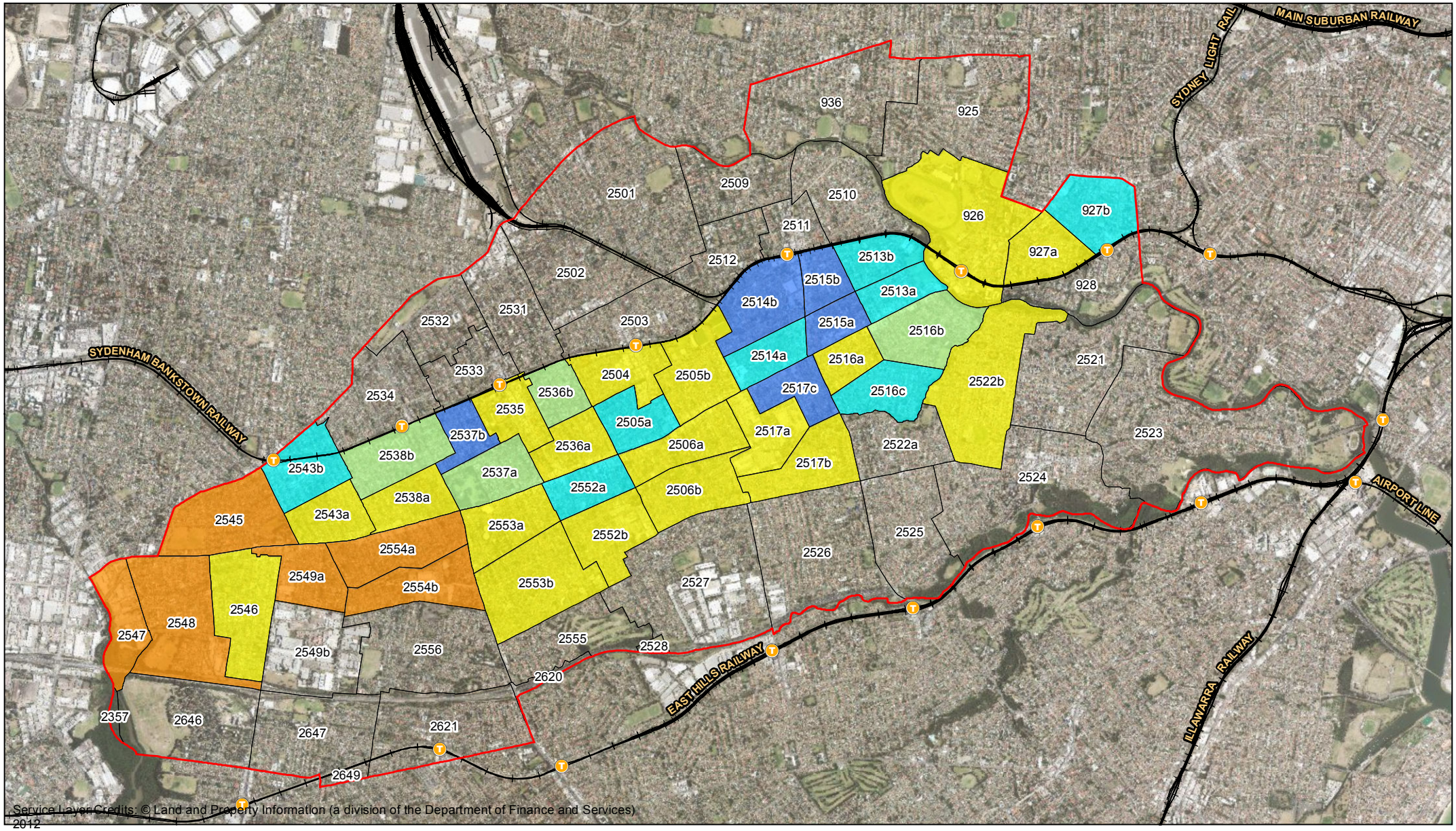
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Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Dwelling Density (Jobs per Hectare)

- 3.167 - 16.41
- 16.42 - 25.73
- 25.74 - 31.14
- 31.15 - 38.43
- 38.44 - 53.57

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Dwelling Density
Hill-Thalis - 2021

Job Number 21-26234
Revision A
Date 06 Jul 2017

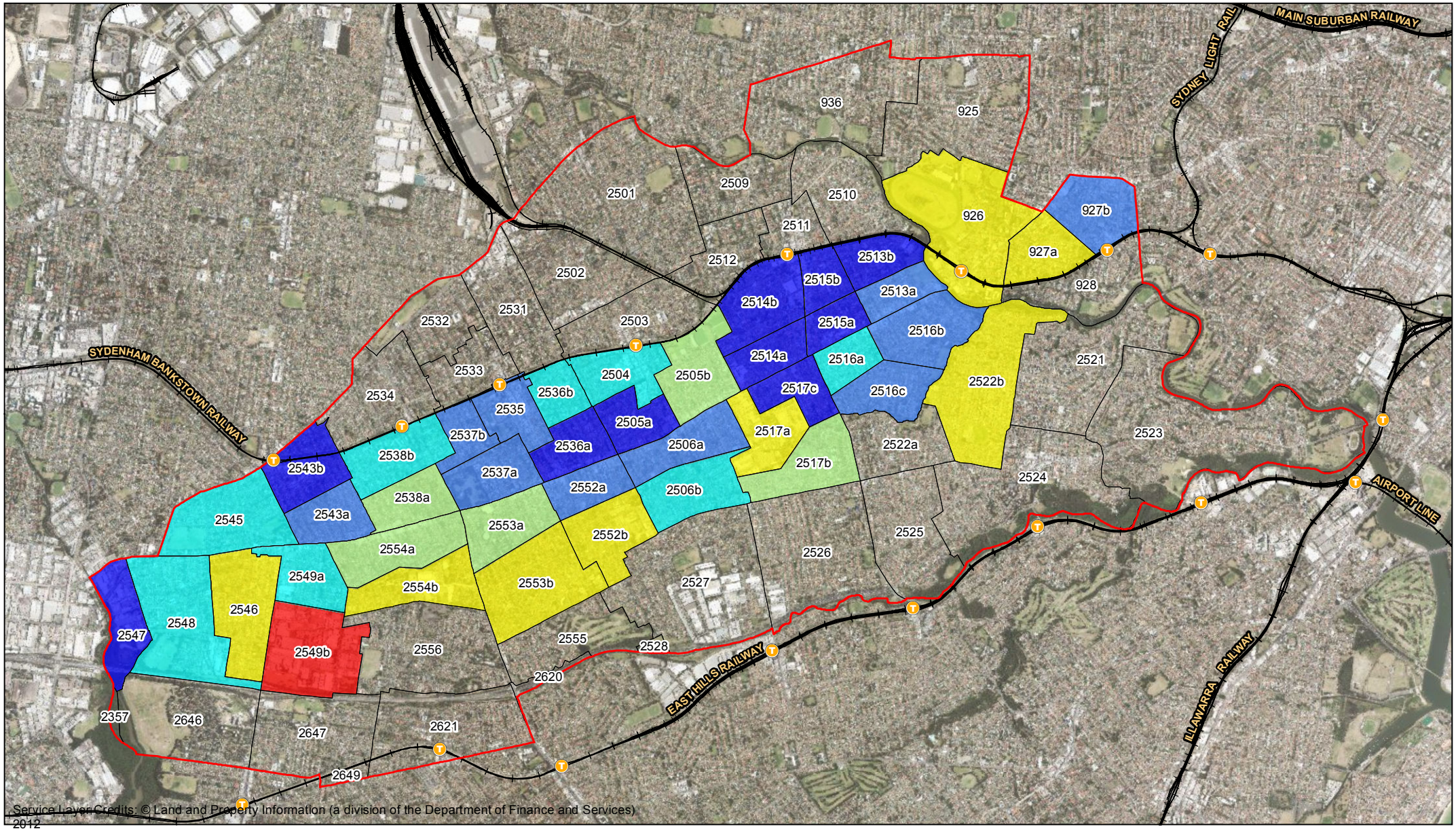
Figure 7

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Level 15, 133 Castlereagh Street Sydney NSW 2000 T 61 2 9239 7100 F 61 2 9239 7199 E sydmail@ghd.com.au W www.ghd.com.au

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Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015, Travel Zones: 2011 TfNSW, Employment Data: Canterbury District Council. Created by:mking3



Service Layer Credits: © Land and Property Information (a division of the Department of Finance and Services) 2012

Paper Size A4

0 375 750 1,500

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 56

N

LEGEND

- Study Area
- Train Stations
- Railway
- Travel Zones

Dwelling Density (Jobs per Hectare)

- 2.733 - 3.166
- 16.42 - 25.73
- 25.74 - 31.14
- 31.15 - 38.43
- 38.44 - 53.57
- 53.58 - 73.61

Canterbury District Council
Canterbury Road
Traffic and Transport Study

Job Number 21-26234
Revision A
Date 06 Jul 2017

Dwelling Density
Hill-Thalis - 2036

Figure 8

N:\AU\Sydney\Projects\21\26234\GIS\Maps\Deliverables\21_26234_Z013_EmploymentData_MY.mxd

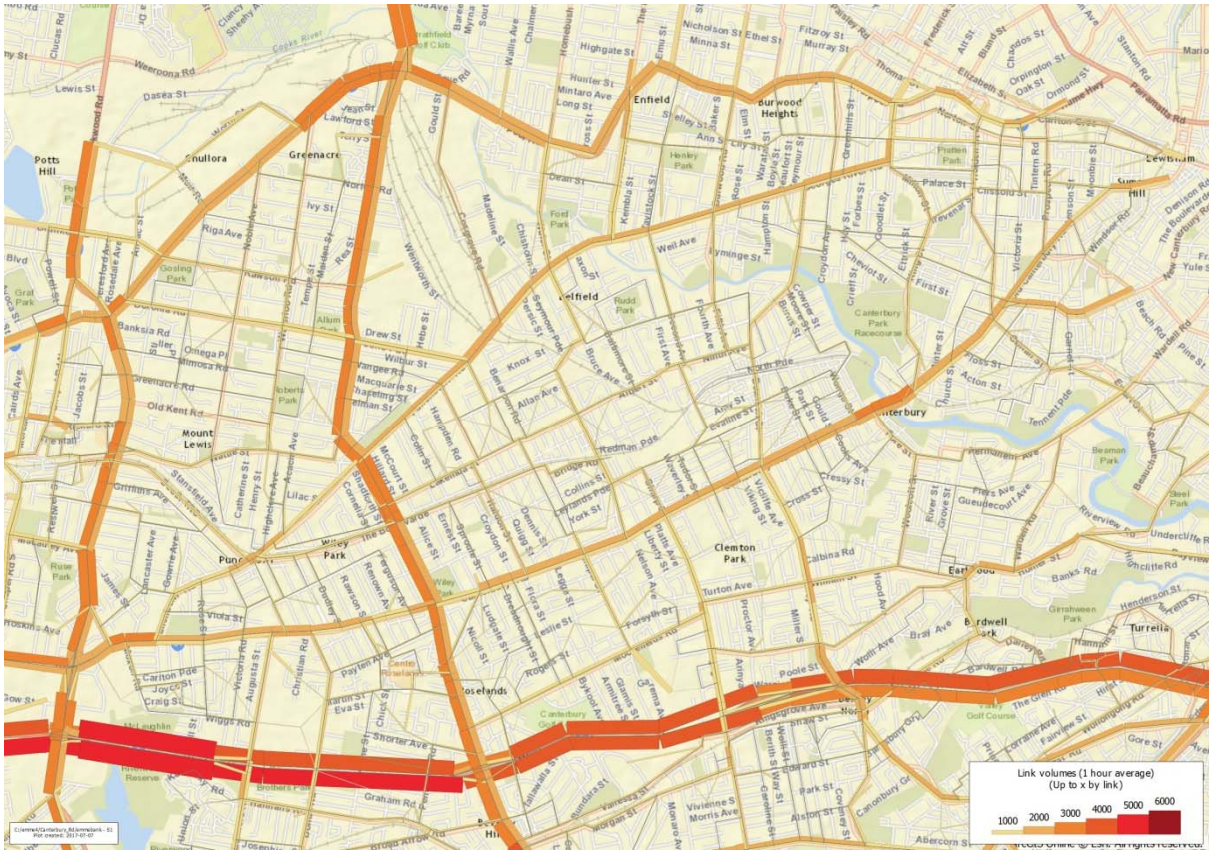
Level 15, 133 Castlereagh Street Sydney NSW 2000 **T** 61 2 9239 7100 **F** 61 2 9239 7199 **E** sydmail@ghd.com.au **W** www.ghd.com.au

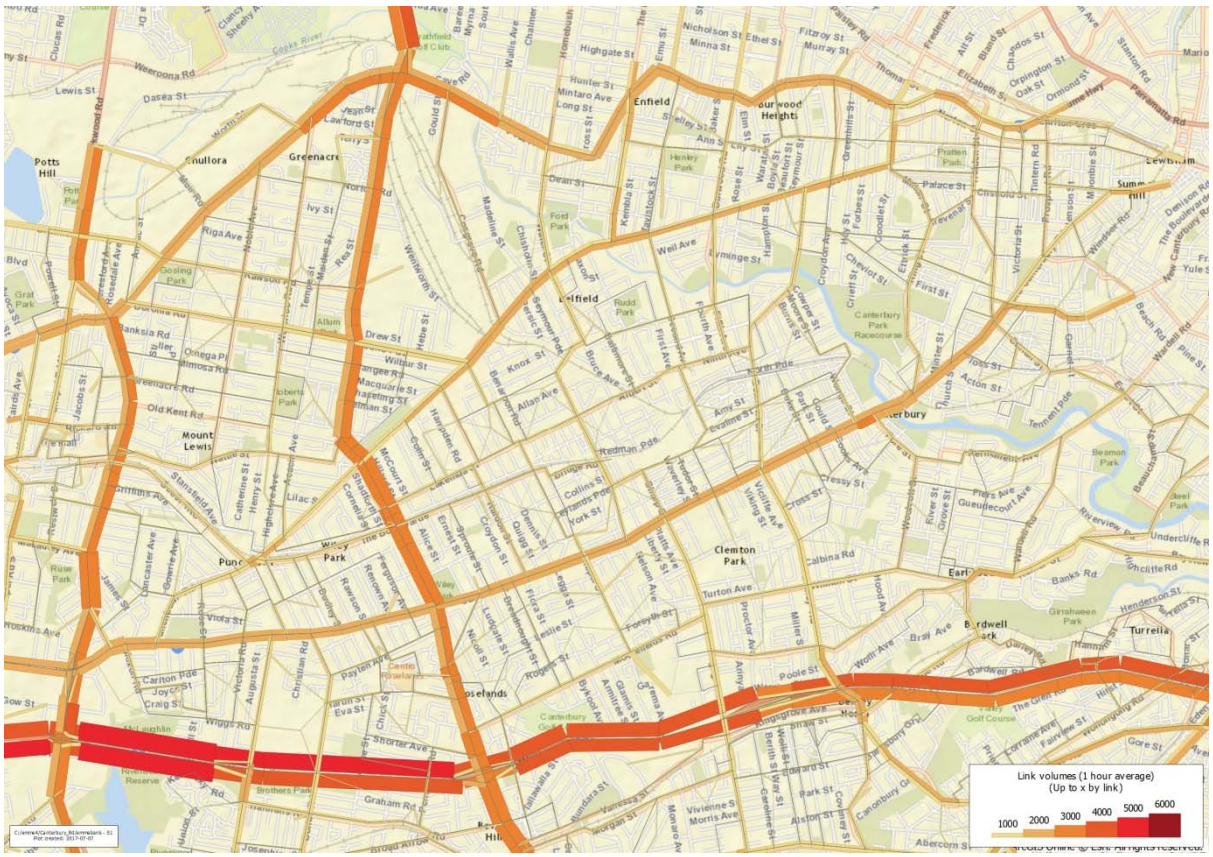
© 2017. Whilst every care has been taken to prepare this map, GHD (and NSW Land and Property Information, Transport for New South Wales) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Aerial Imagery: Sixmaps (2017 - NSW LPI), General Topo and Source Road Data: NSW LPI DTDB 2015, Travel Zones: 2011 TfNSW, Employment Data: Canterbury District Council. Created by:mking3

Appendix N – EMME Outputs

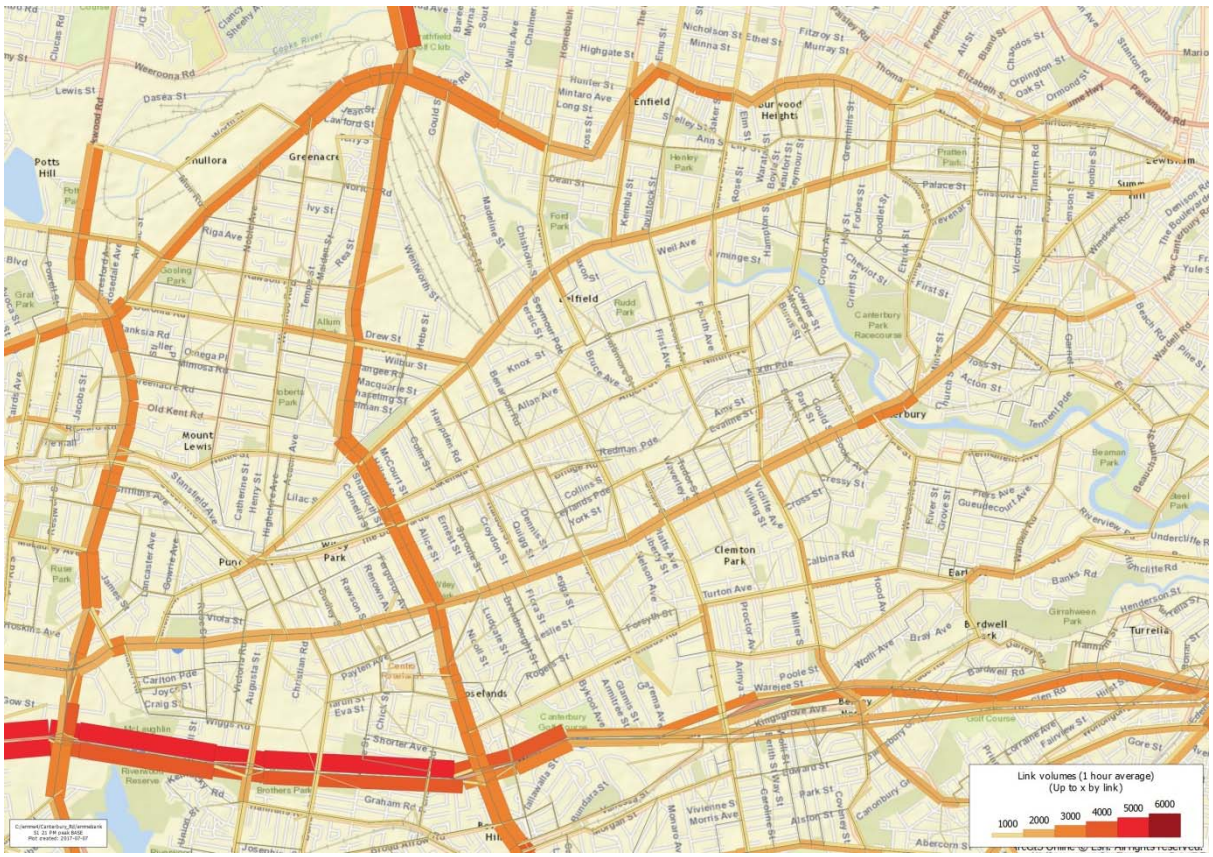
Traffic Volumes, 2016, AM peak (above), PM peak (below)





Traffic Volumes, 2021, Scenario 1 (Base), AM peak (above), PM peak (below)





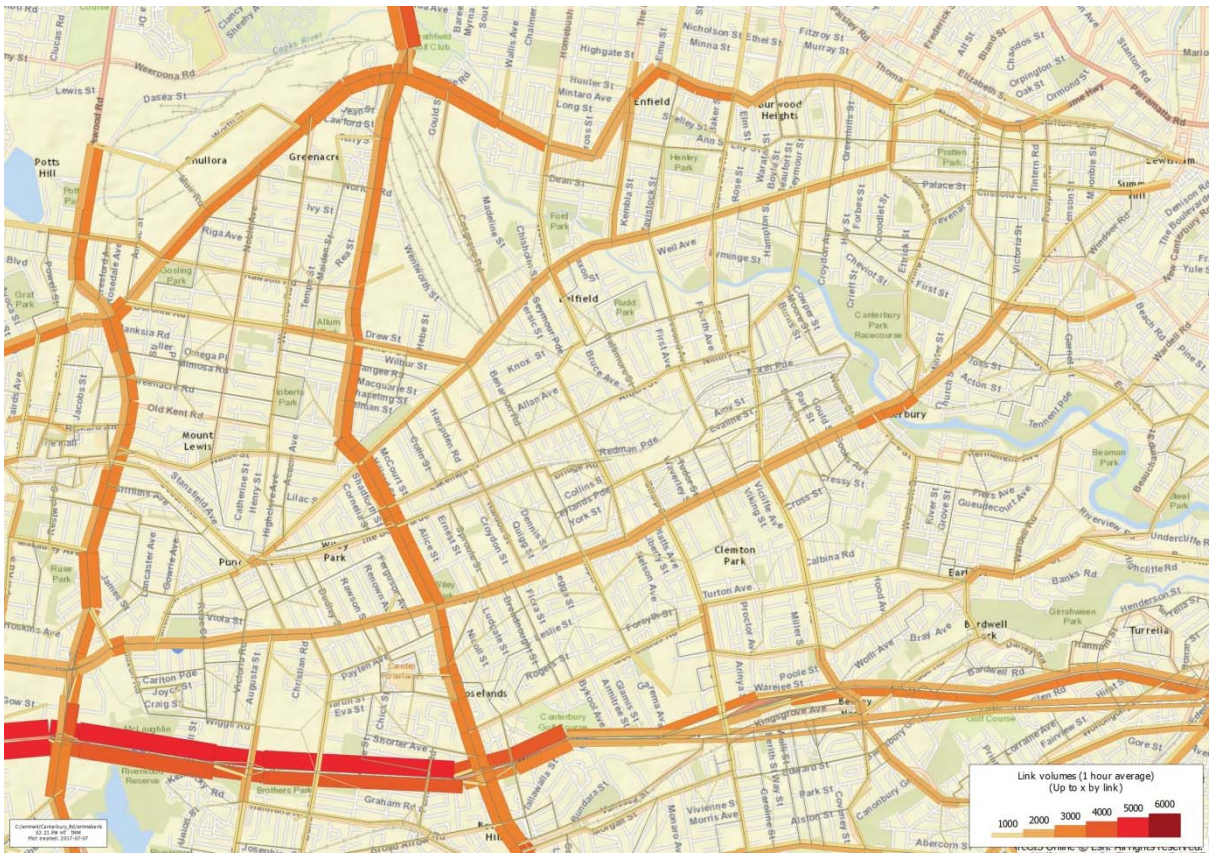
Traffic Volumes, 2021, Scenario 2 (Max Yield), AM peak (above), PM peak (below)



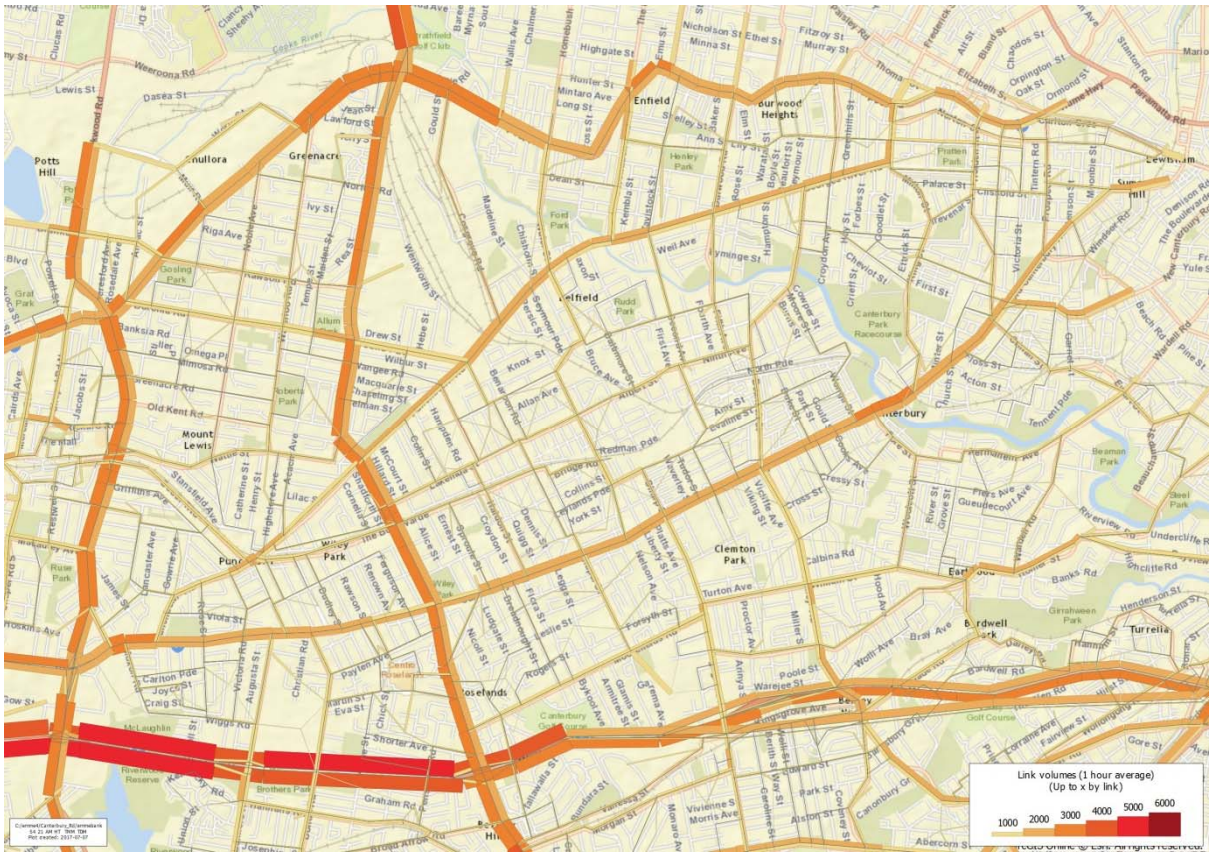


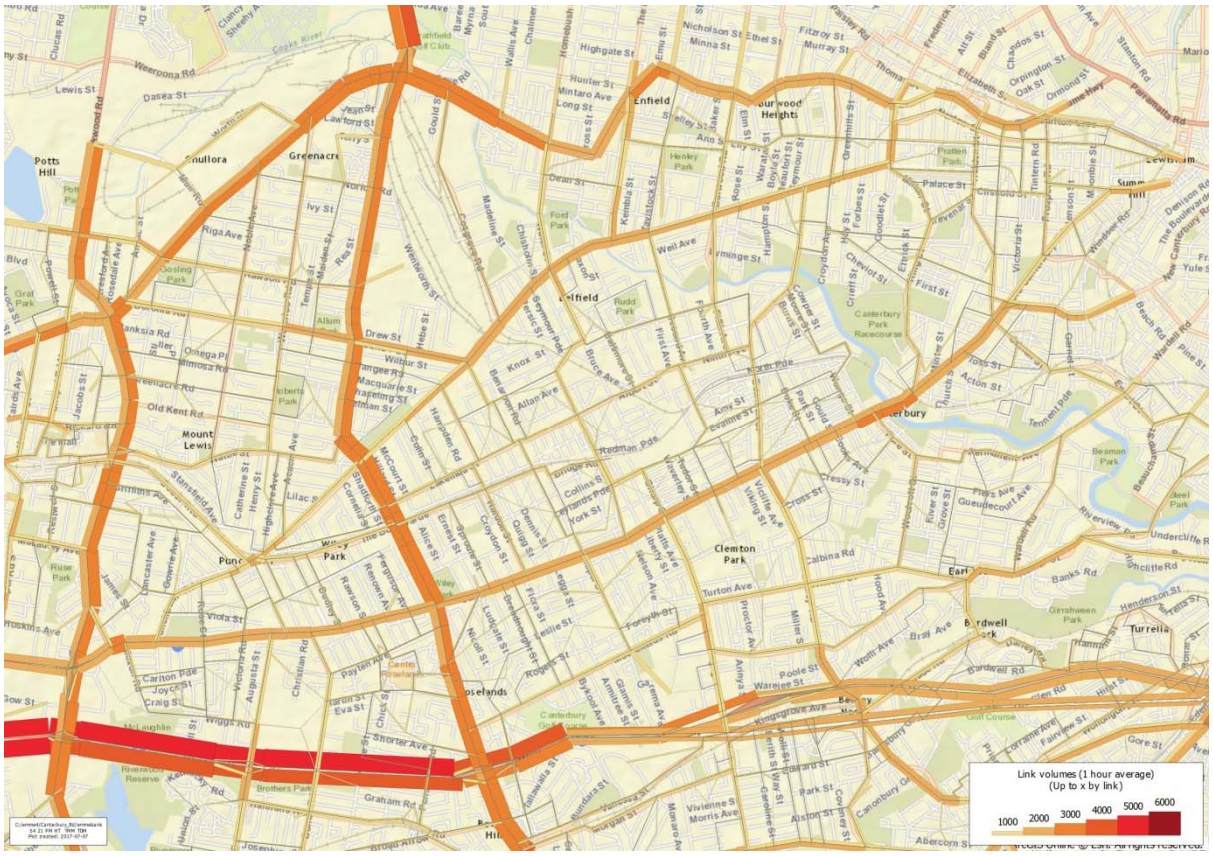
Traffic Volumes, 2021, Scenario 3 (Hill Thalis with TMM), AM peak (above), PM peak (below)



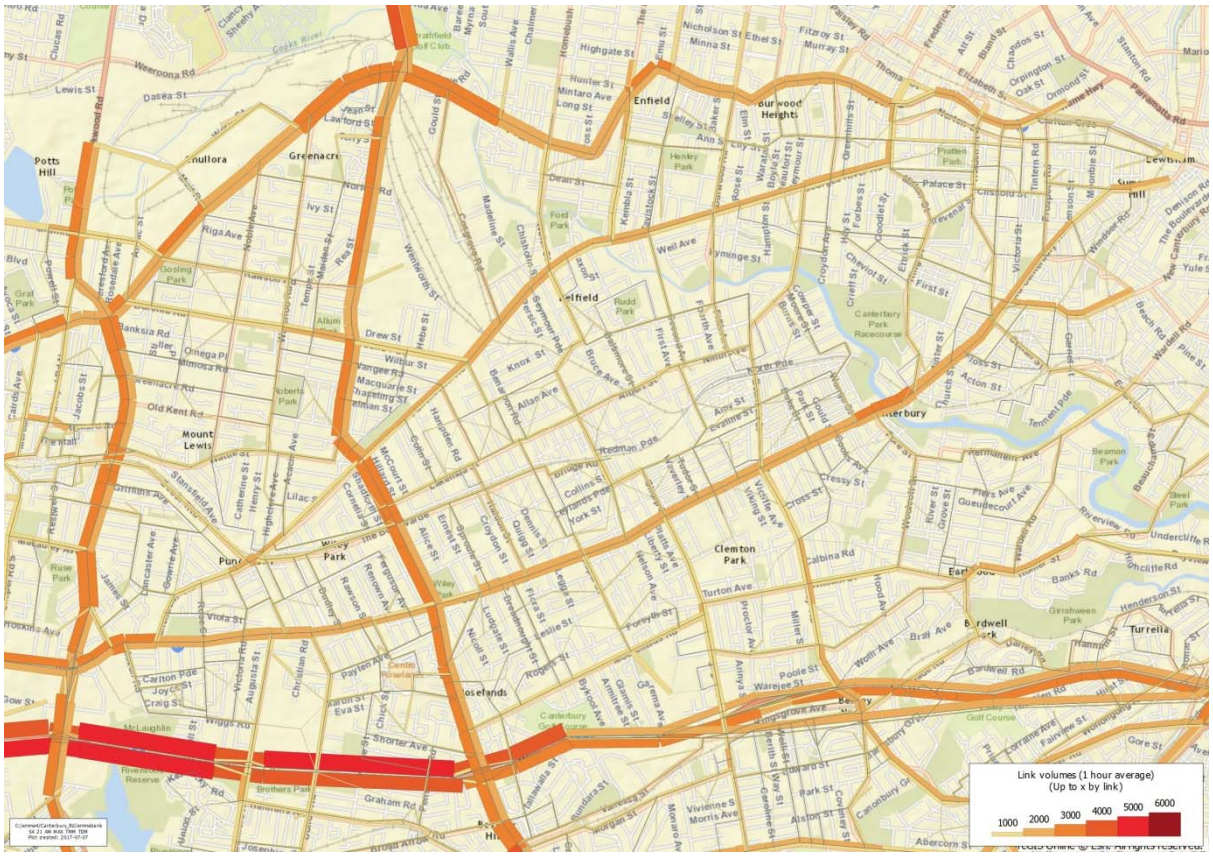


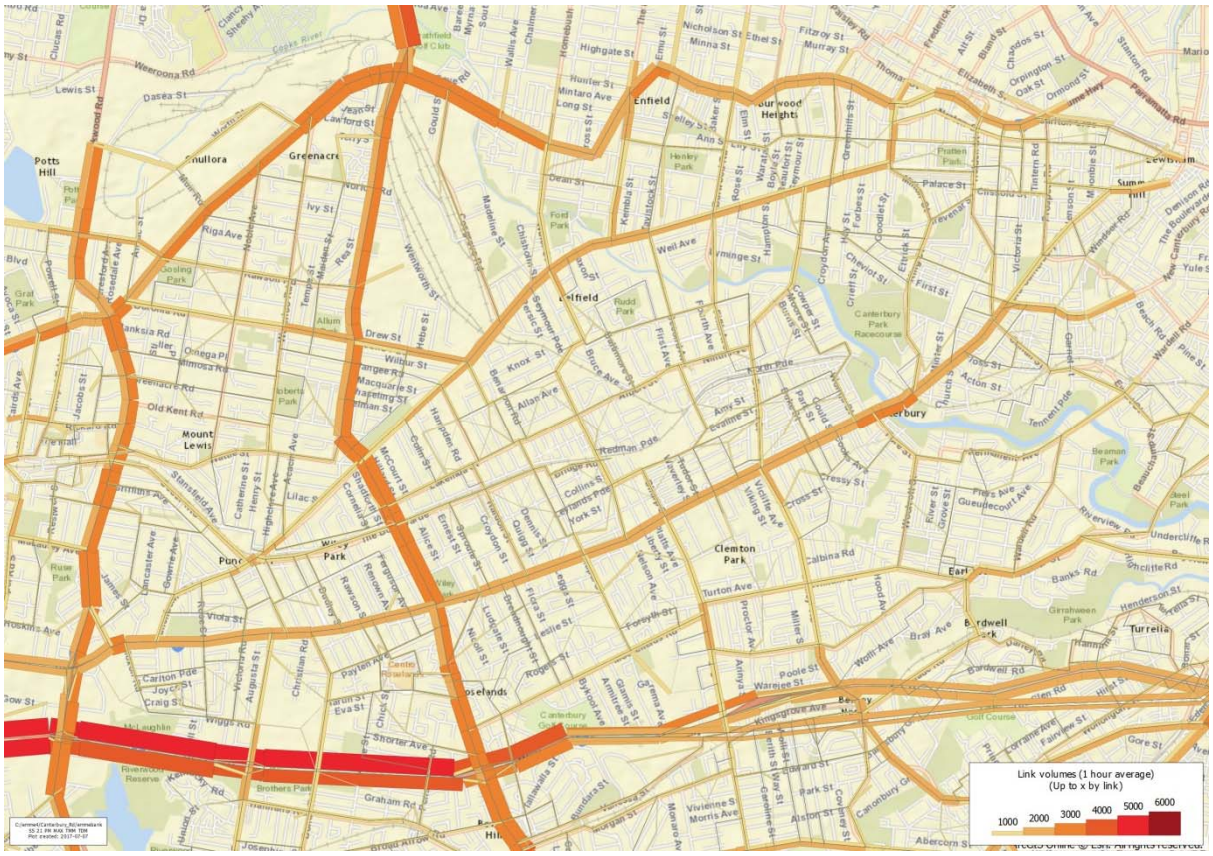
Traffic Volumes, 2021, Scenario 4 (Hill Thalis with TMM and TDM), AM peak (above), PM peak (below)





Traffic Volumes, 2021, Scenario 5 (Max Yield with TMM and TDM), AM peak (above), PM peak (below)





Traffic Volumes, 2036, Scenario 1 (Base), AM peak (above), PM peak (below)





Traffic Volumes, 2036, Scenario 2 (Max Yield), AM peak (above), PM peak (below)





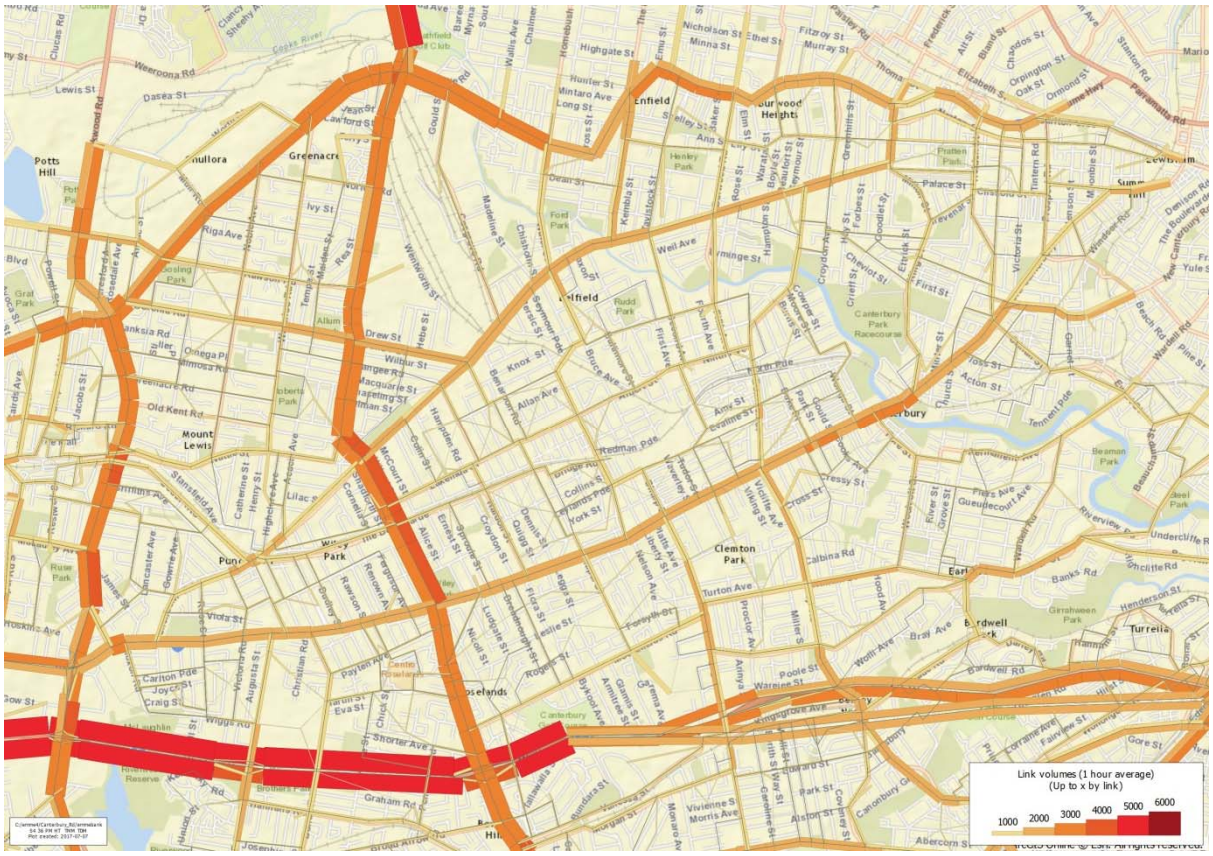
Traffic Volumes, 2036, Scenario 3 (Hill Thalis with TMM), AM peak (above), PM peak (below)





Traffic Volumes, 2036, Scenario 4 (Hill Thalis with TMM and TDM), AM peak (above), PM peak (below)



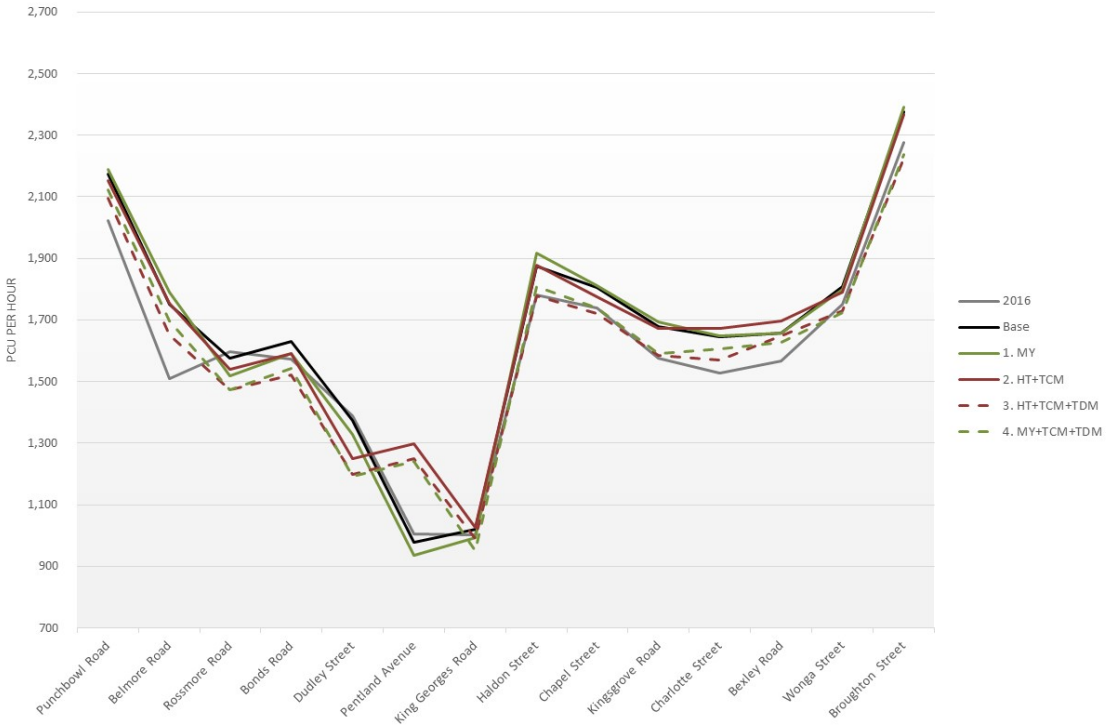


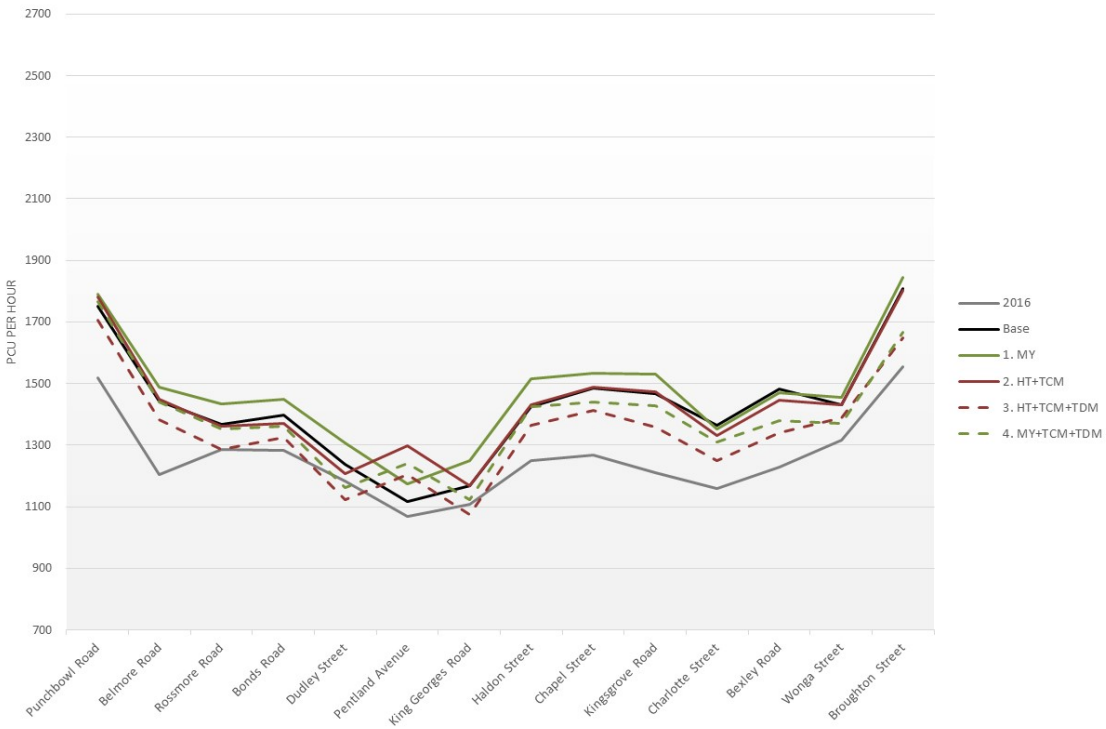
Traffic Volumes, 2036, Scenario 5 (Max Yield with TMM and TDM), AM peak (above), PM peak (below)



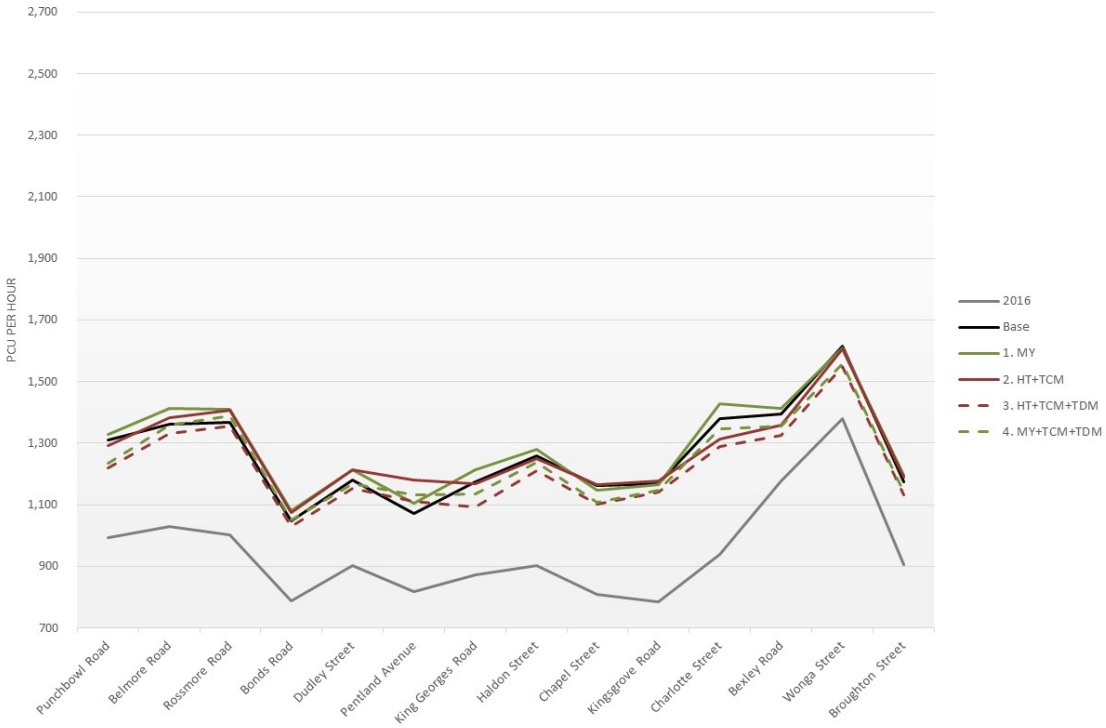


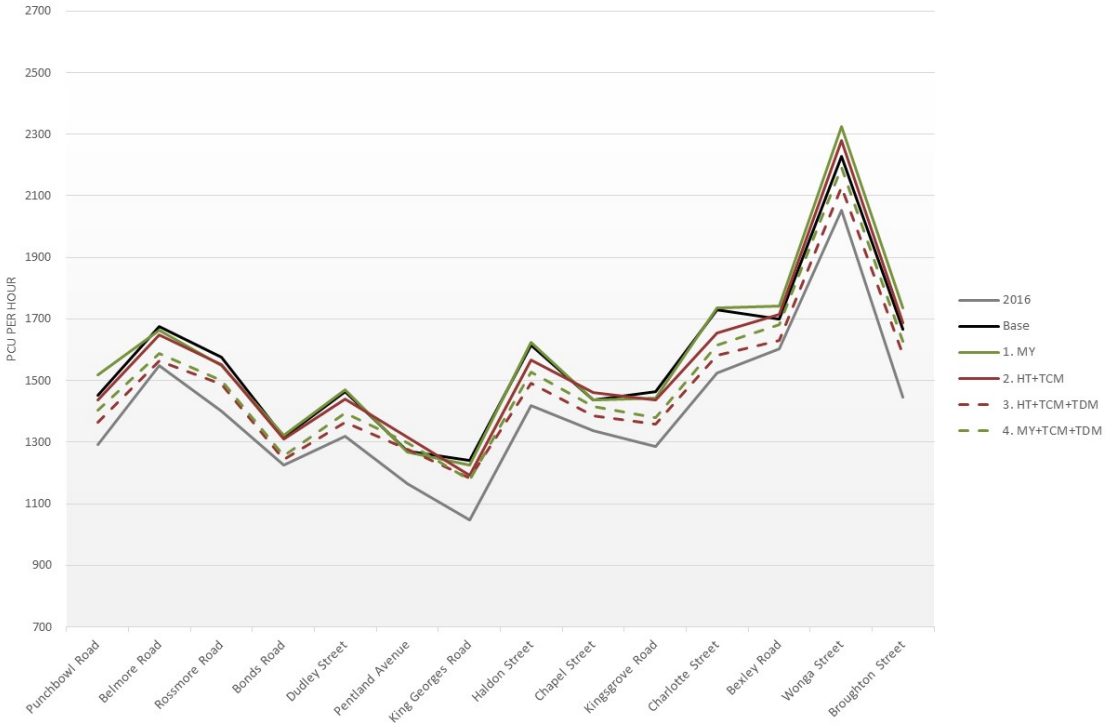
Traffic Volumes Plots – Average 1 hour pcu, 2021, Eastbound, AM peak (above), PM peak (below)



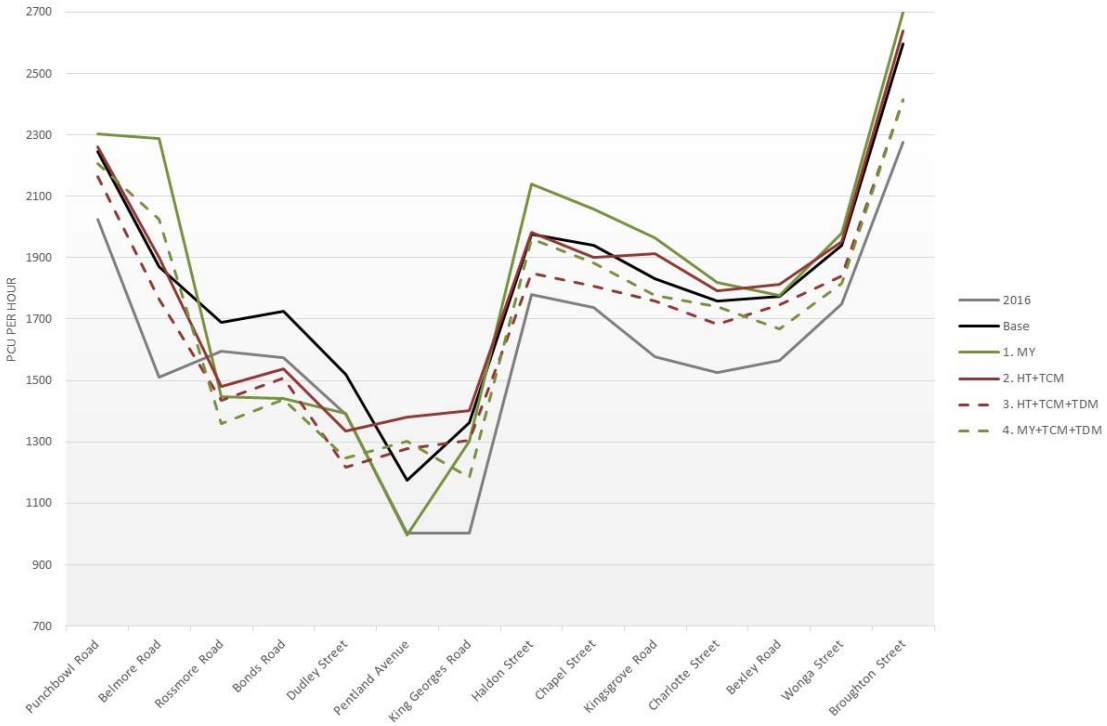


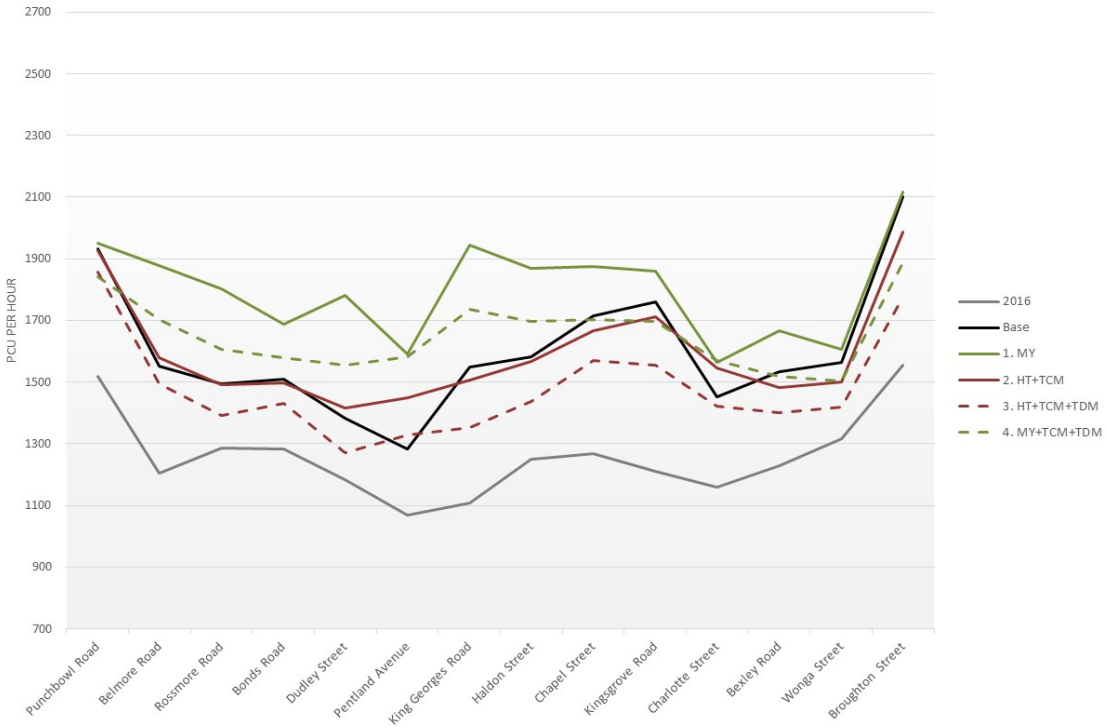
Traffic Volumes Plots – Average 1 hour pcu, 2021, Westbound, AM peak (above), PM peak (below)



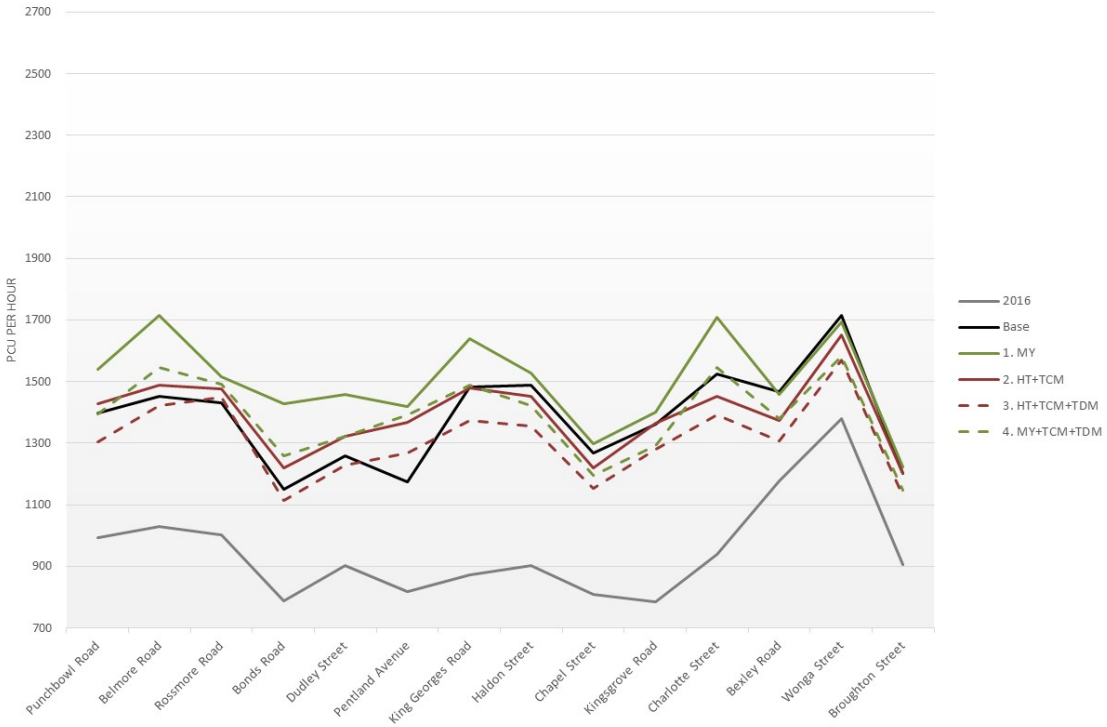


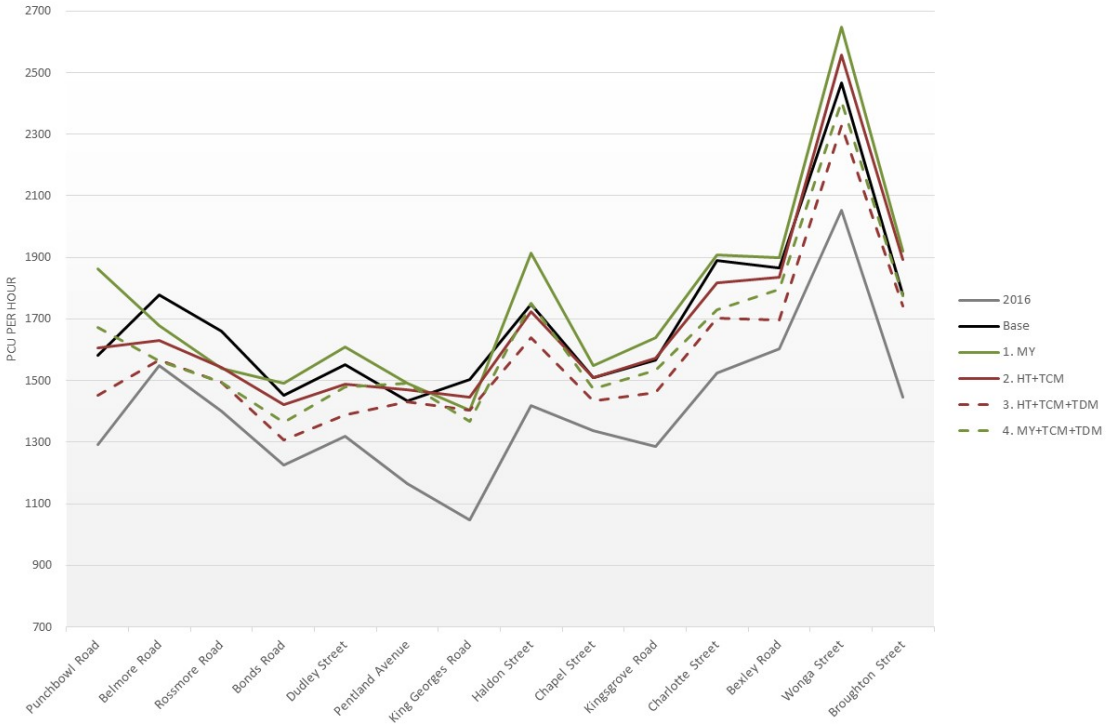
Traffic Volumes Plots – Average 1 hour pcu, 2036, Eastbound, AM peak (above), PM peak (below)



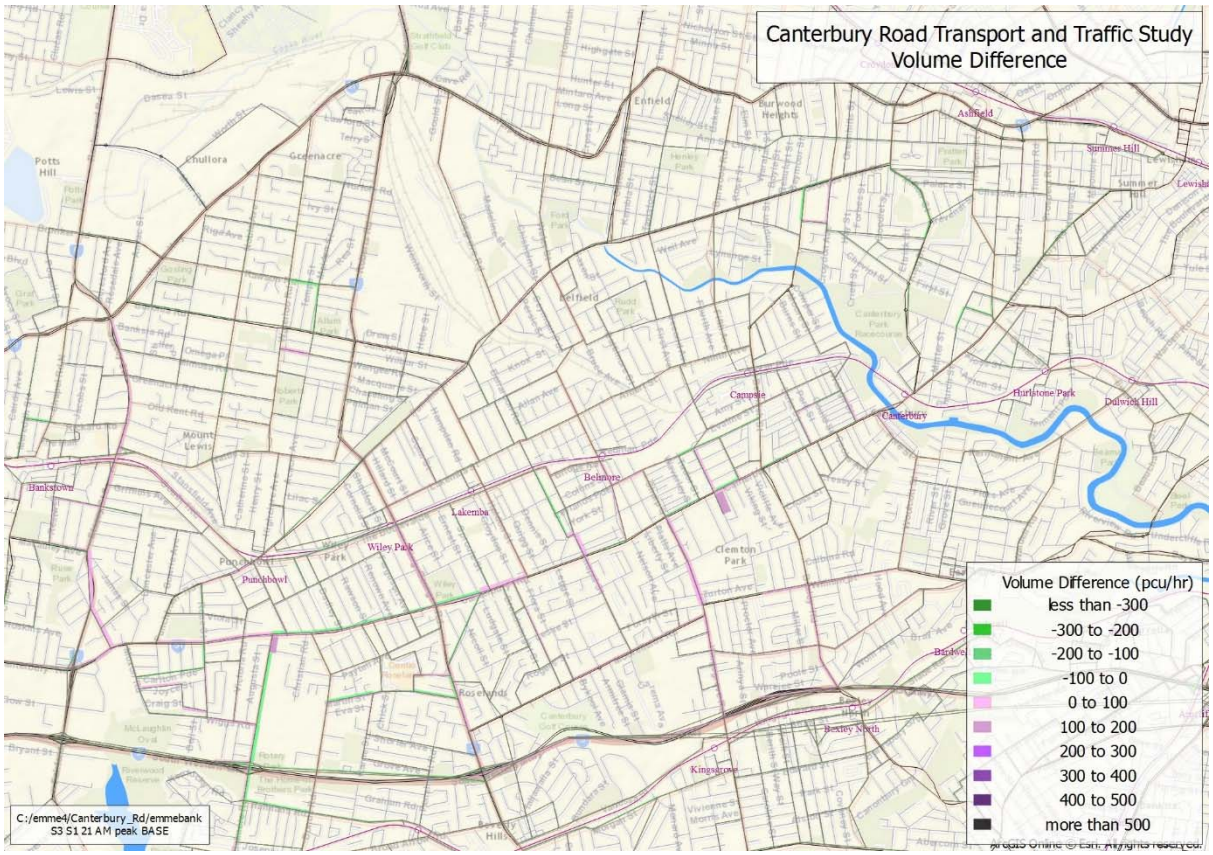


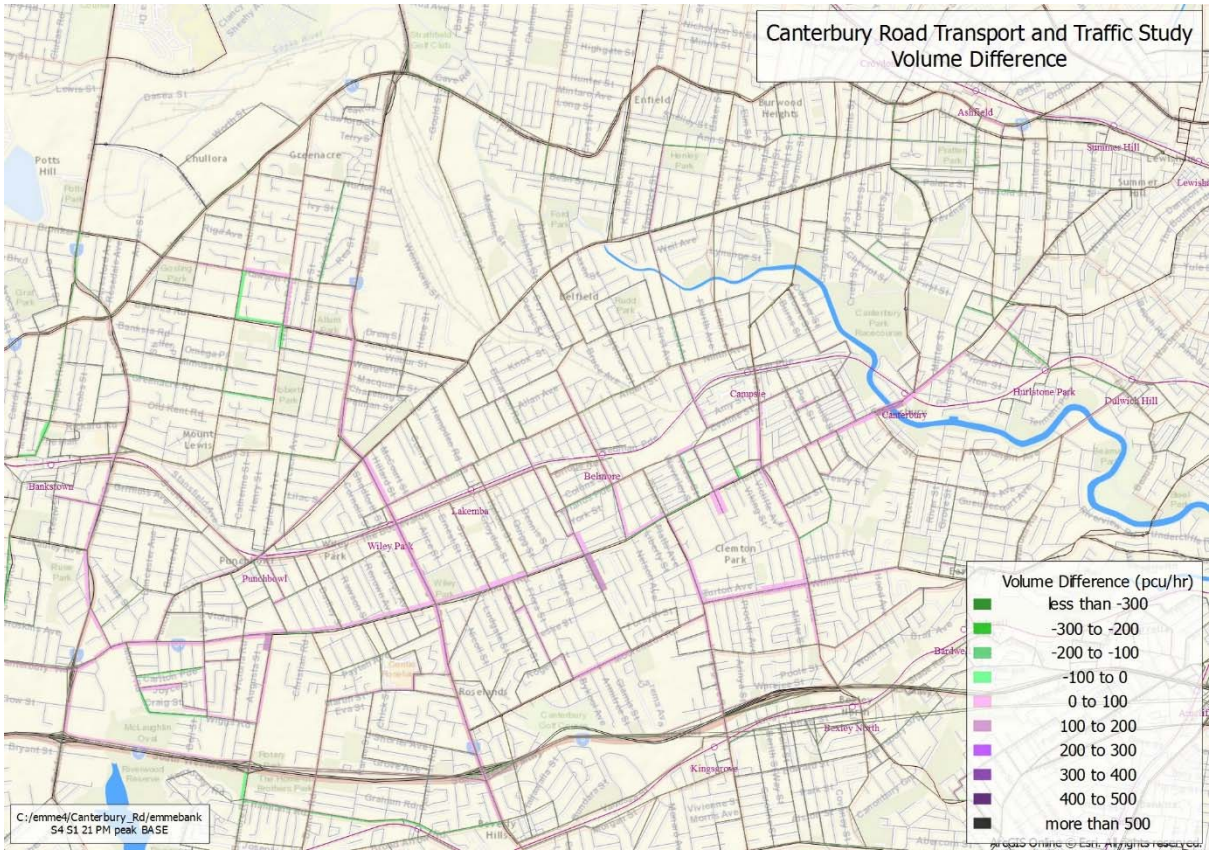
Traffic Volumes Plots – Average 1 hour pcu, 2036, Westbound, AM peak (above), PM peak (below)



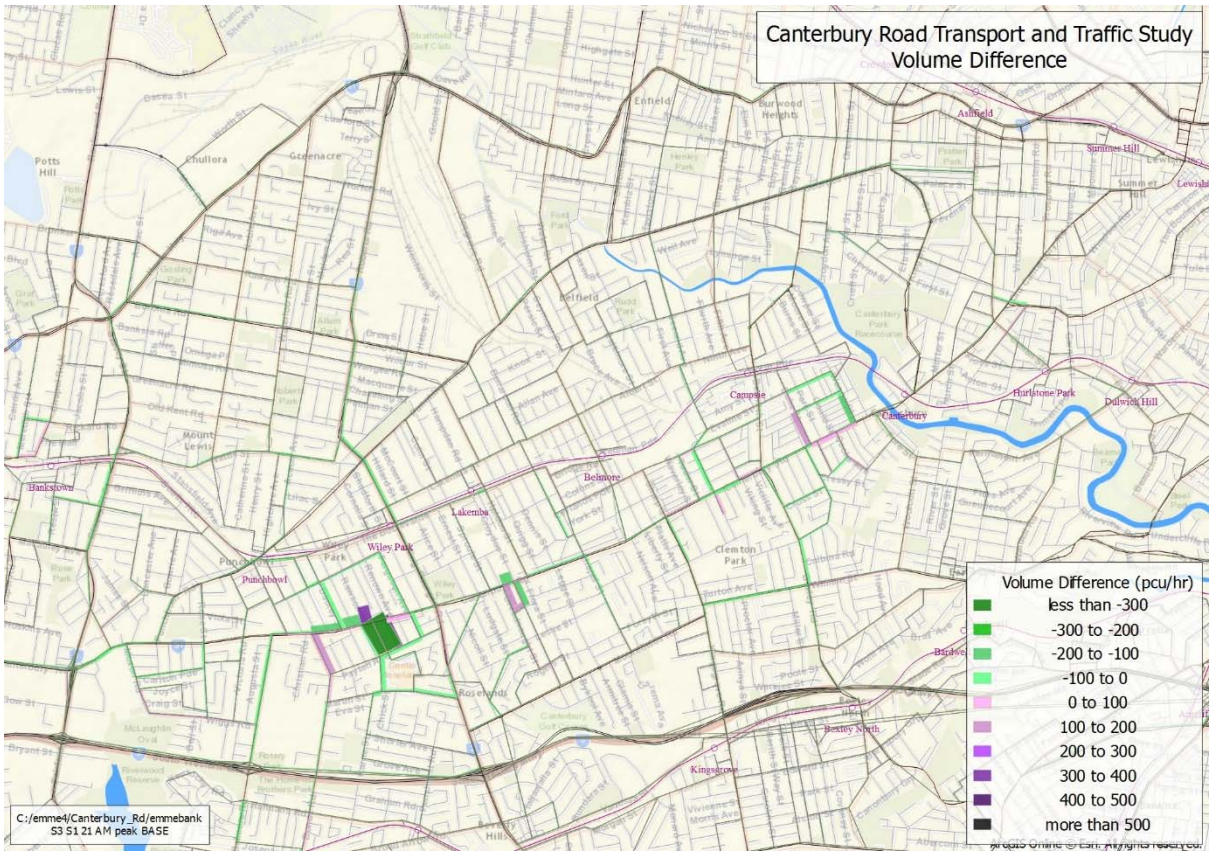


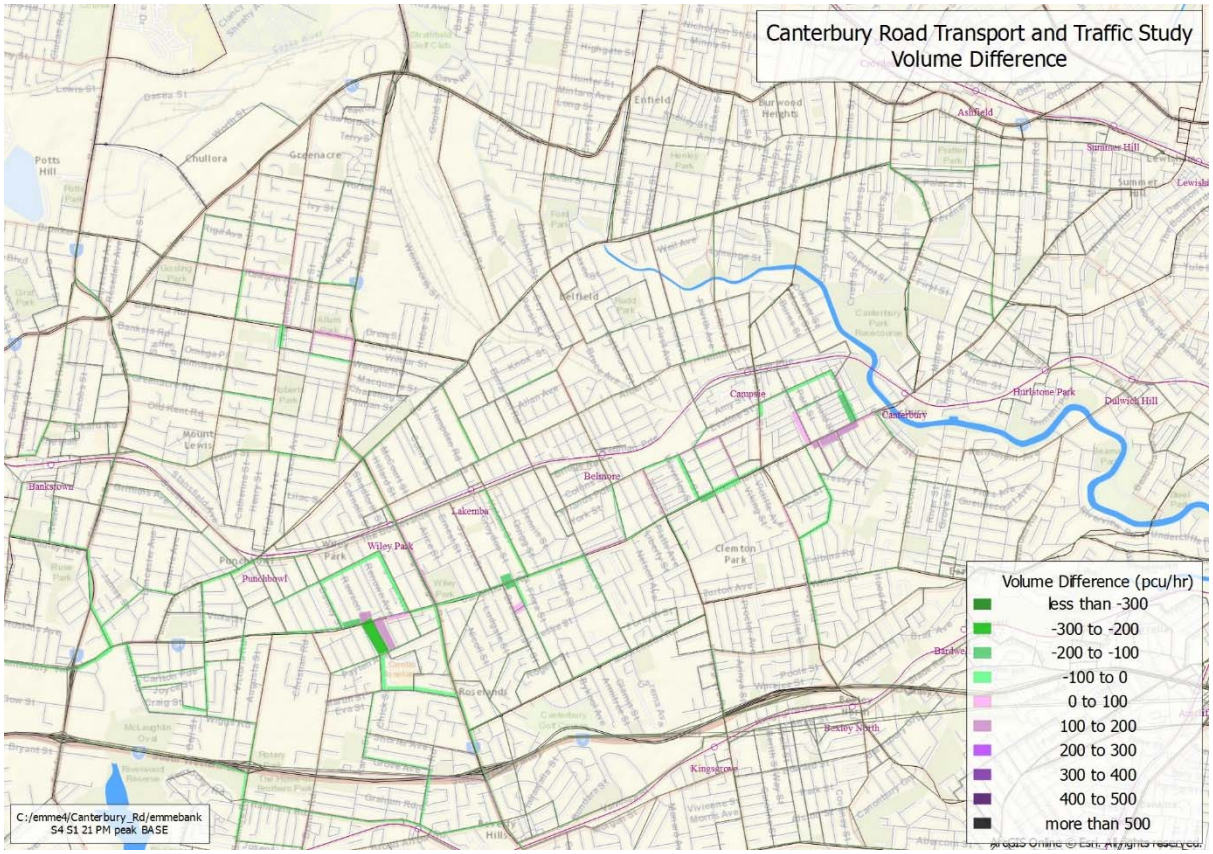
Traffic Volumes Difference from Scenario 1 (Base), 2021, Scenario 2 (Max Yield), AM peak (above), PM peak (below)



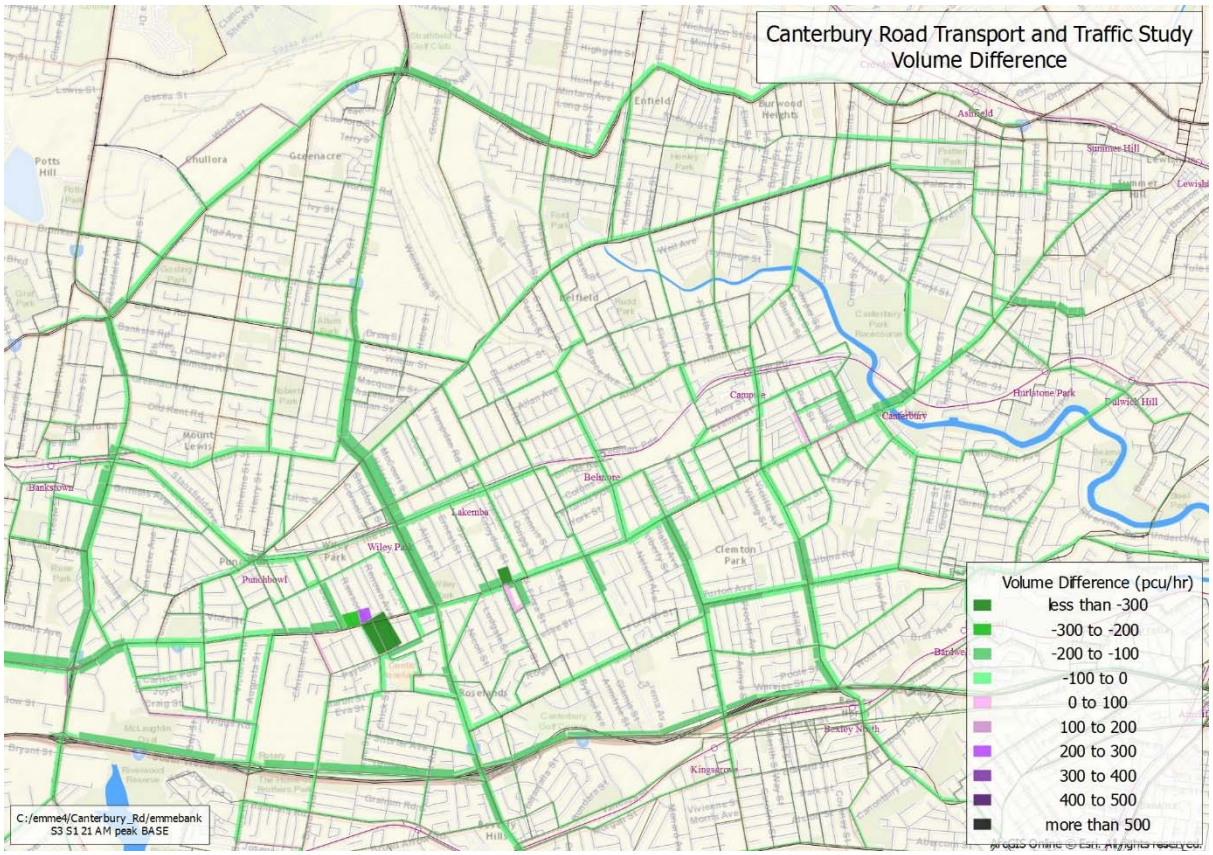


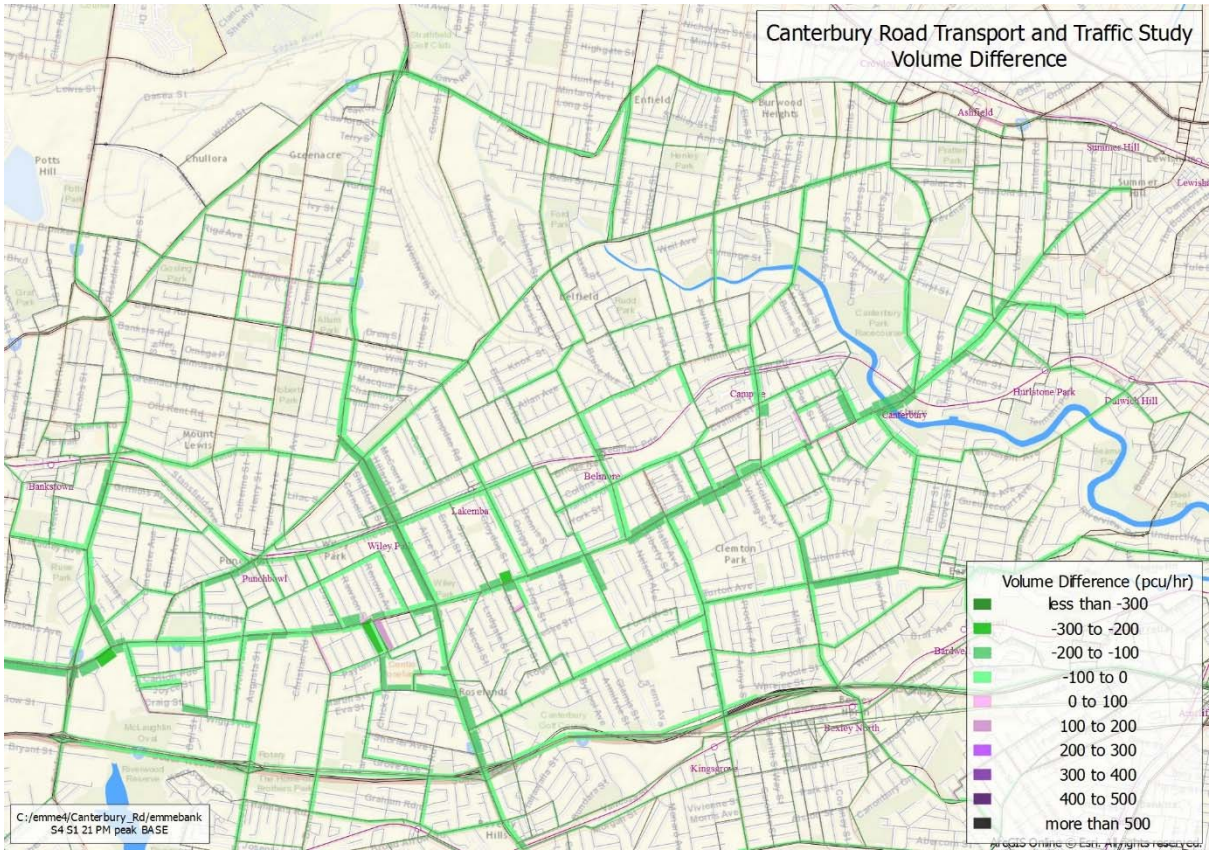
Traffic Volumes Difference from Scenario 1 (Base), 2021, Scenario 3 (Hill Thalis with TMM), AM peak (above), PM peak (below)



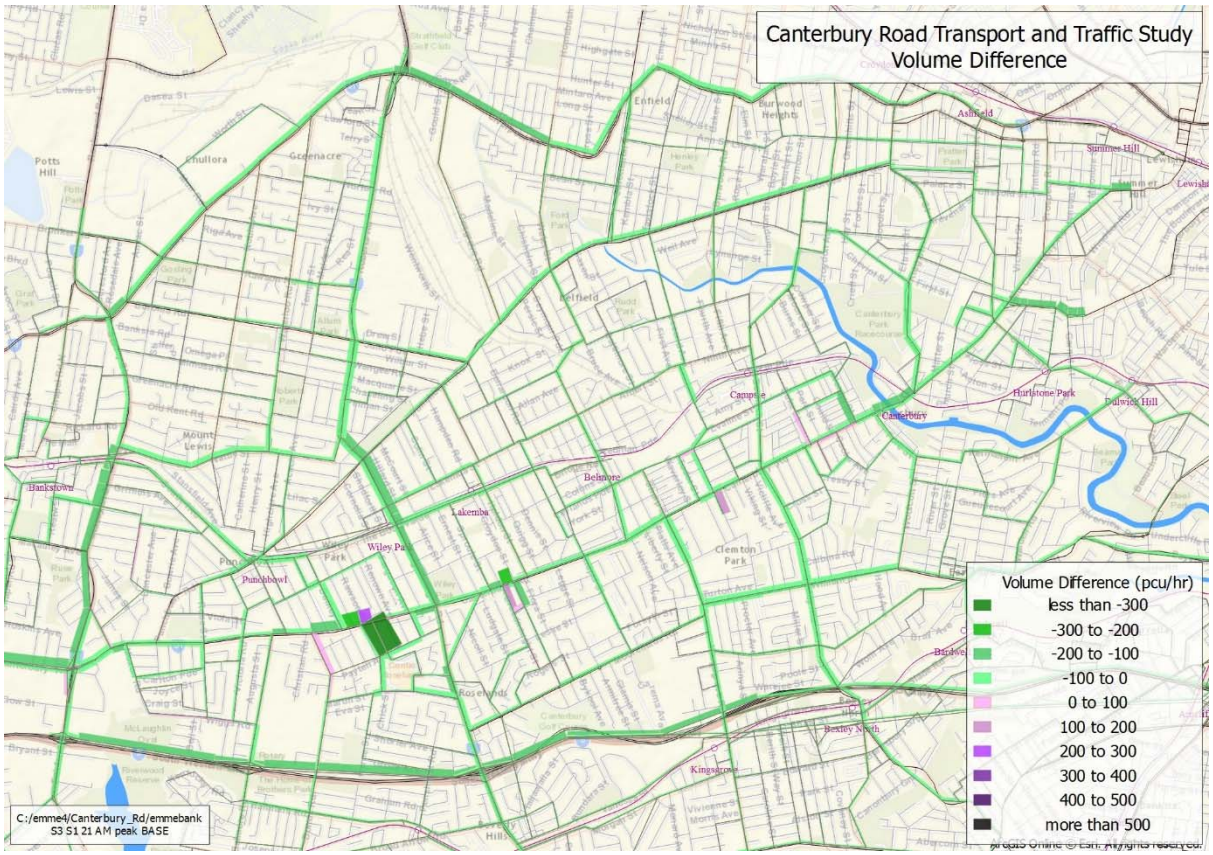


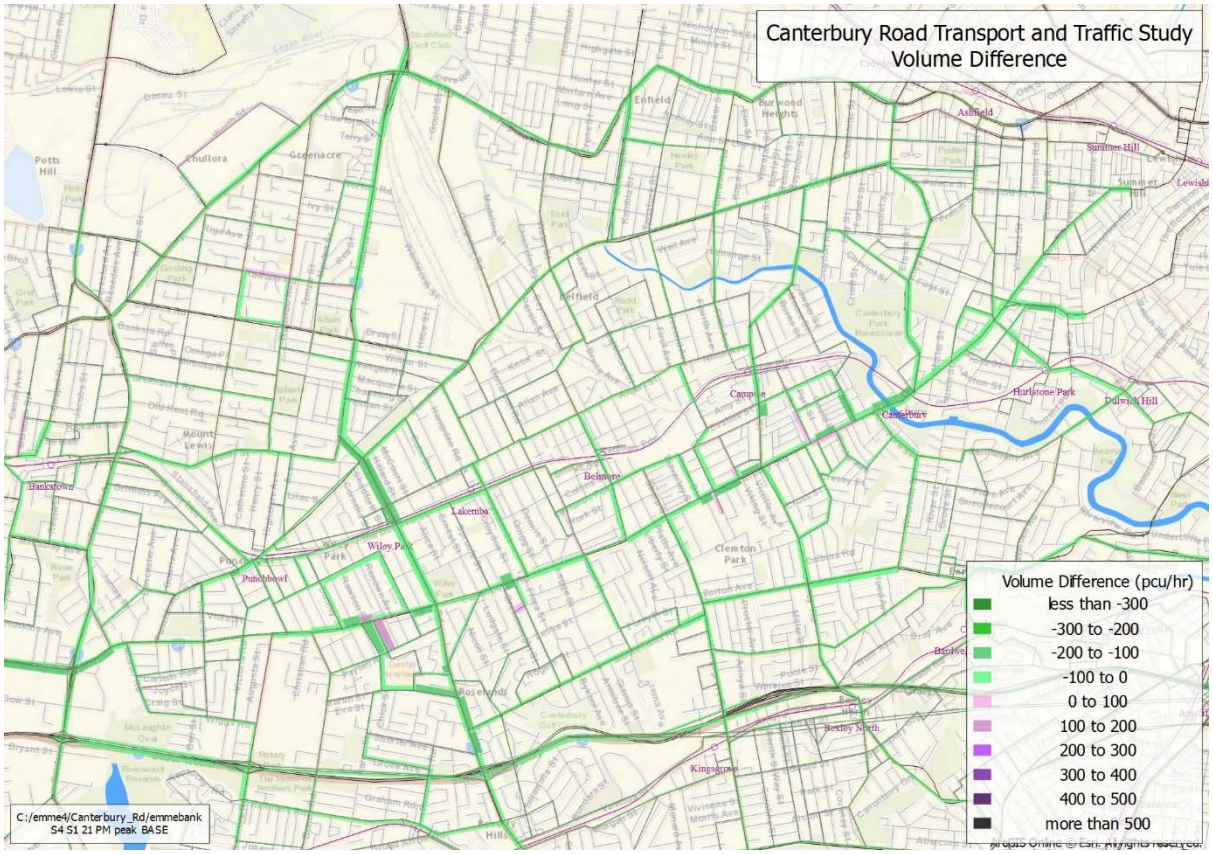
Traffic Volumes Difference from Scenario 1 (Base), 2021, Scenario 4 (Hill Thalis with TMM and TDM), AM peak (above), PM peak (below)



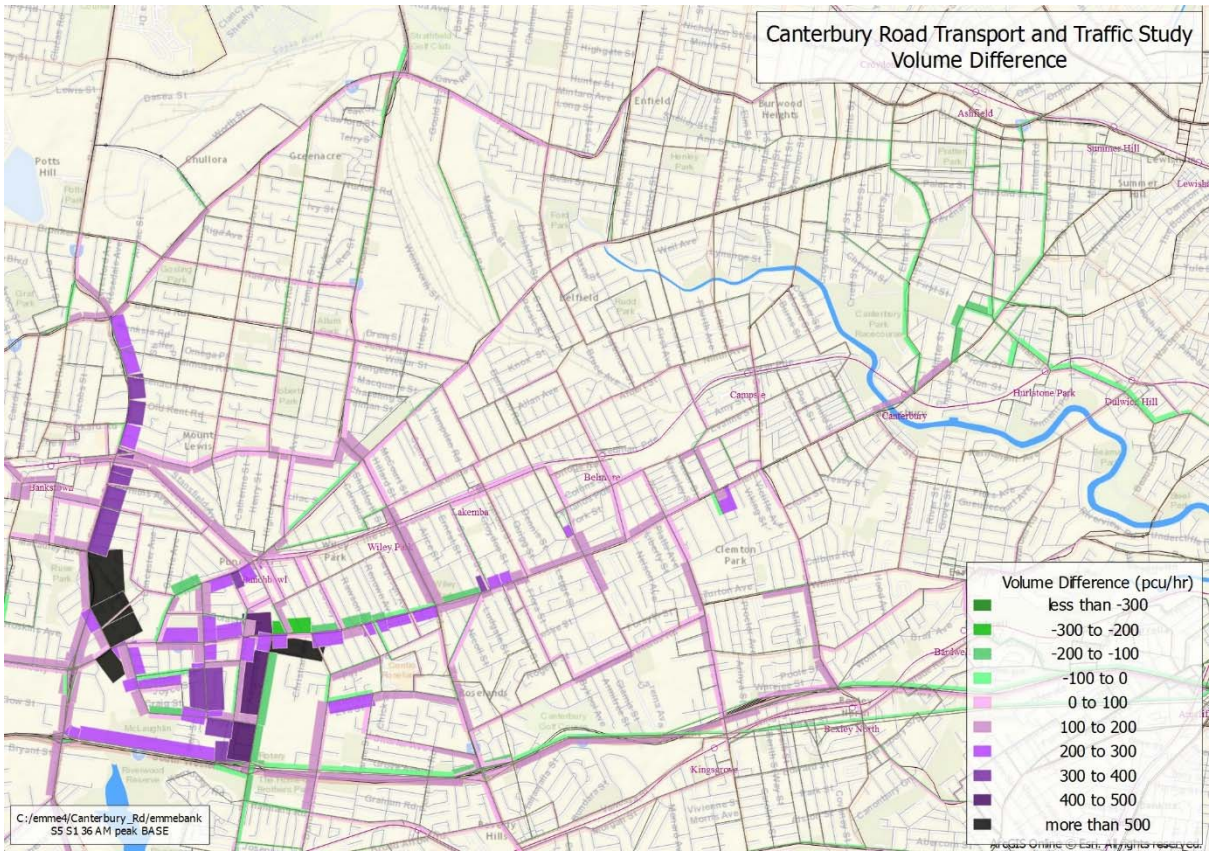


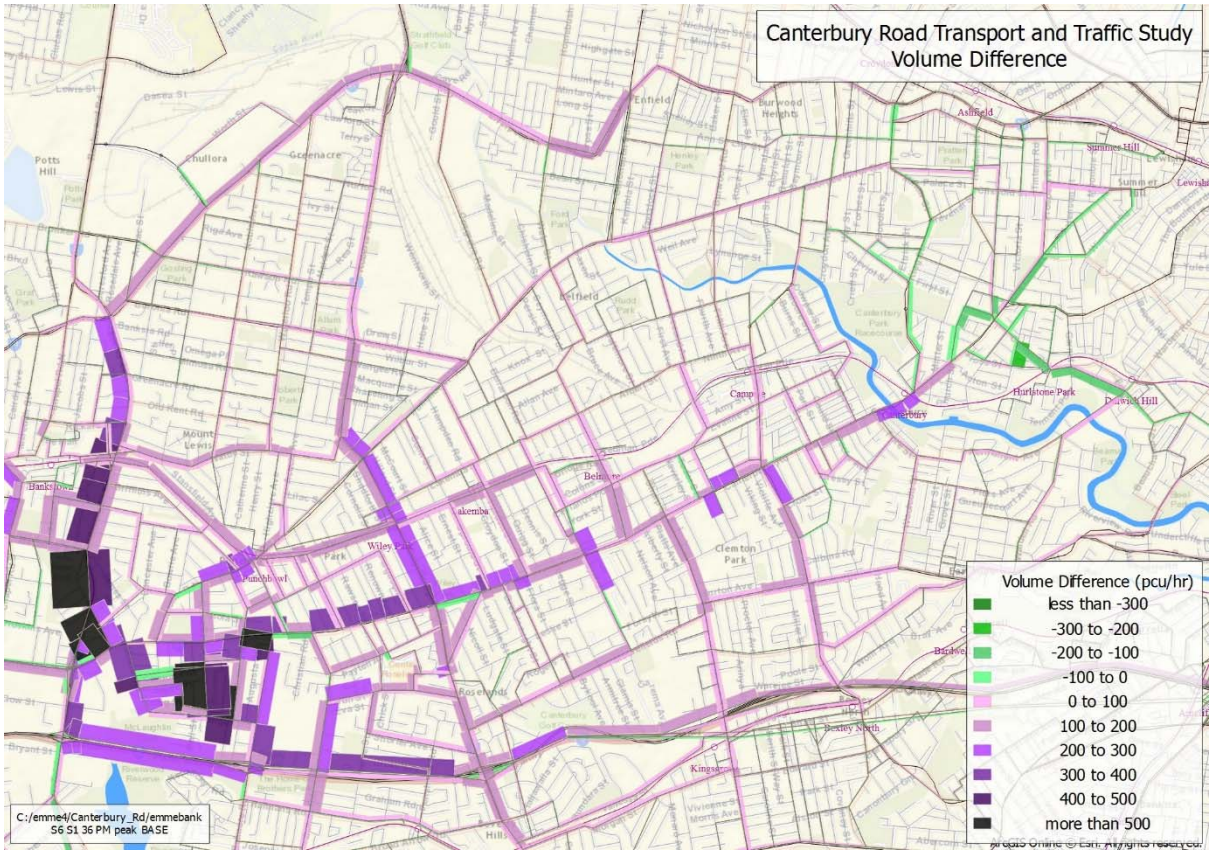
Traffic Volumes Difference from Scenario 1 (Base), 2021, Scenario 5 (Max Yield with TMM and TDM), AM peak (above), PM peak (below)



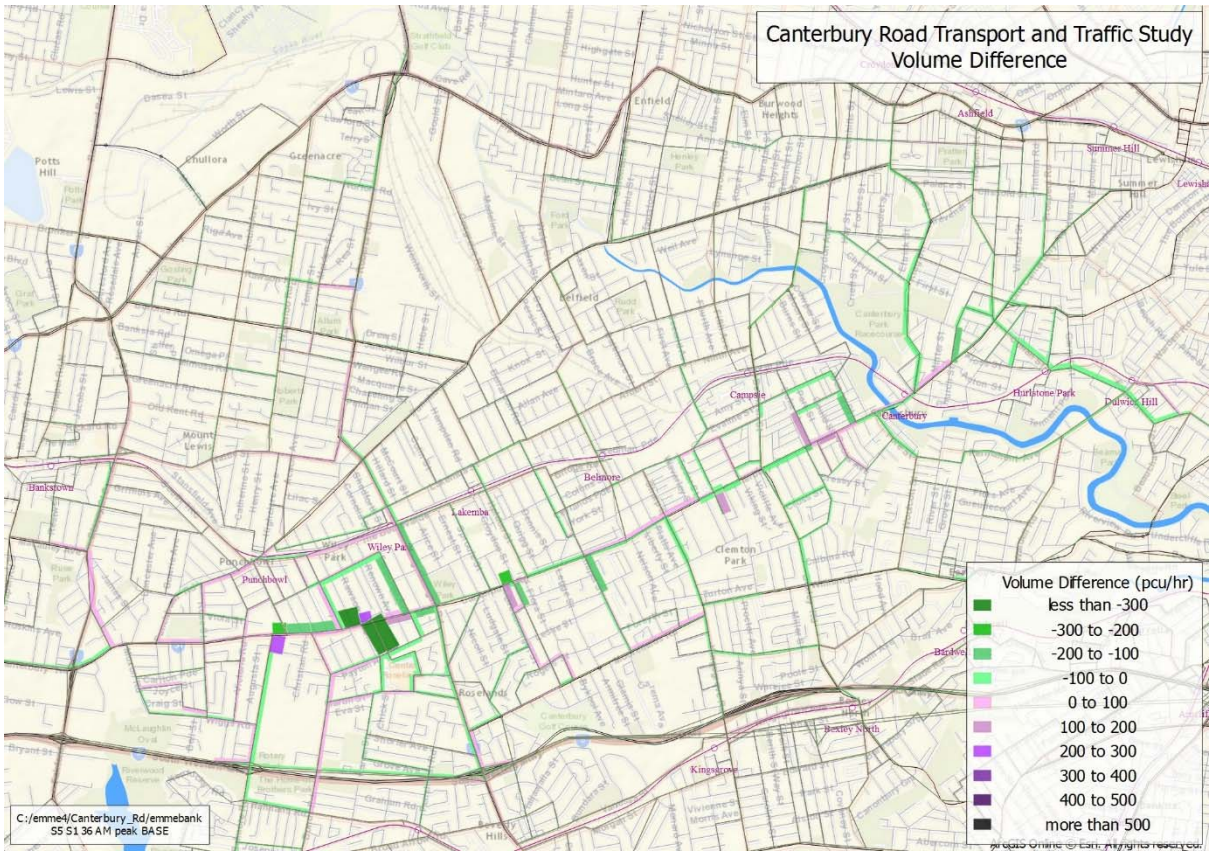


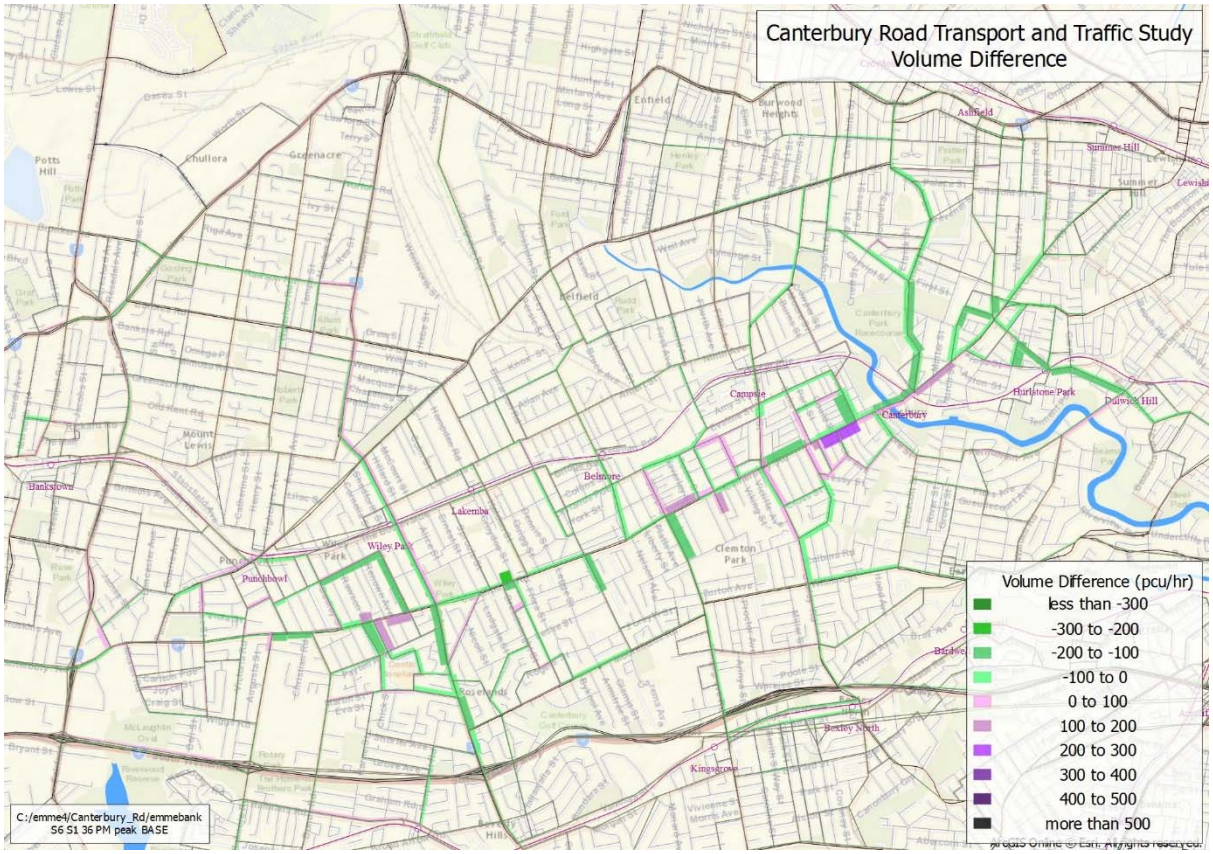
Traffic Volumes Difference from Scenario 1 (Base), 2036, Scenario 2 (Max Yield), AM peak (above), PM peak (below)



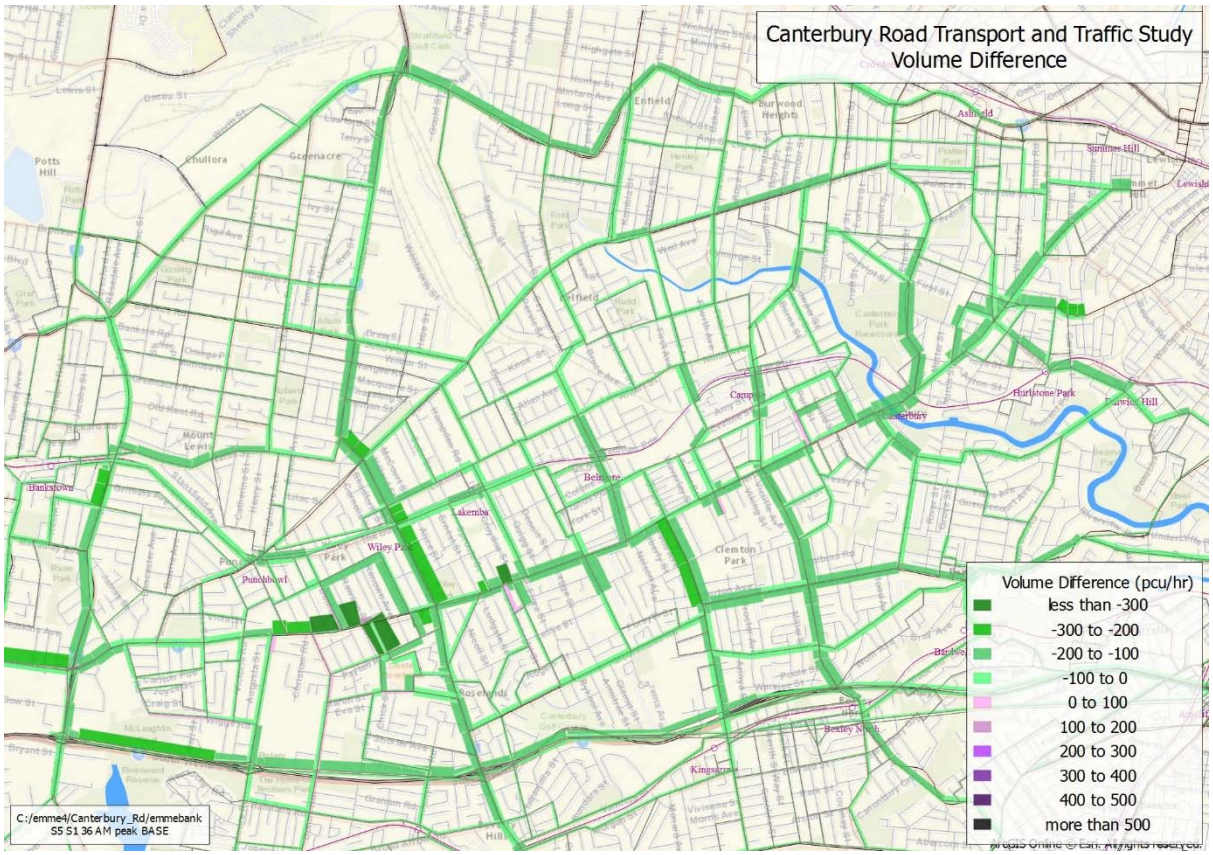


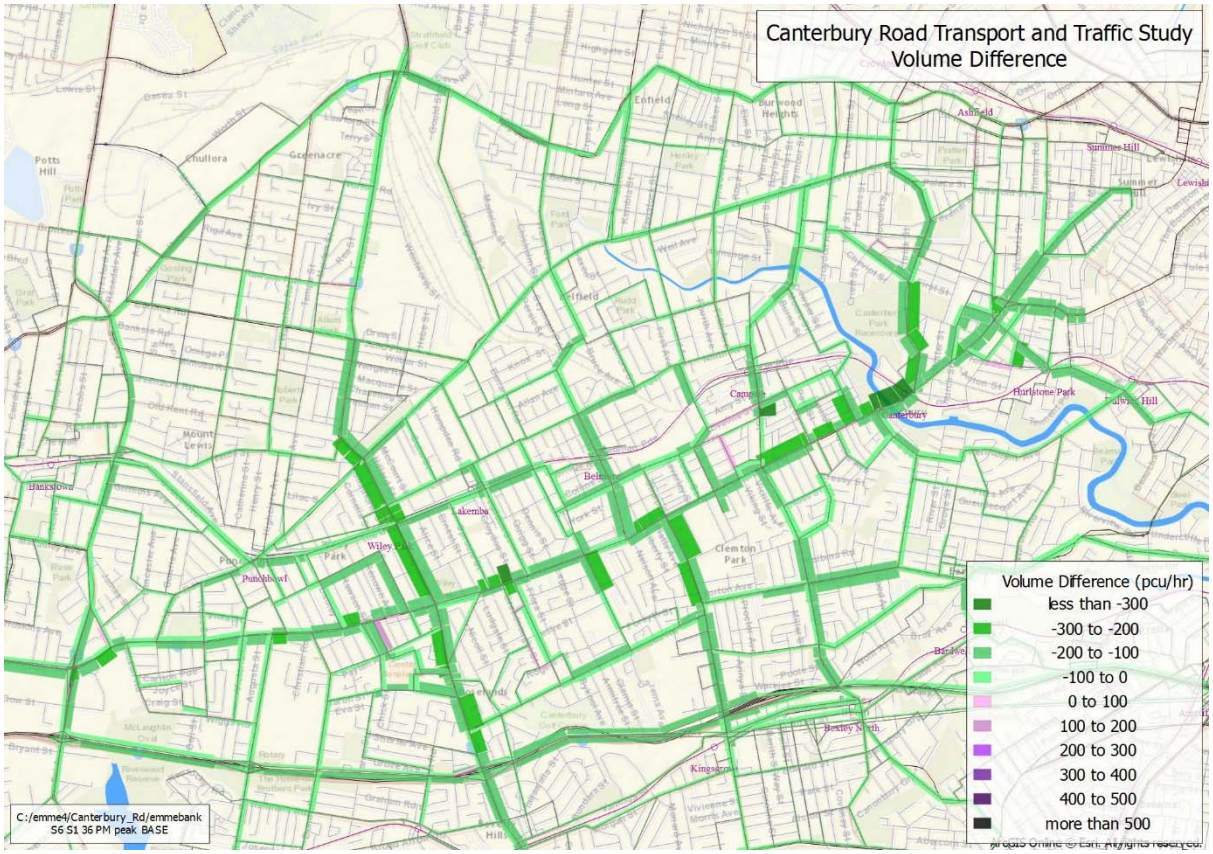
Traffic Volumes Difference from Scenario 1 (Base), 2036, Scenario 3 (Hill Thalis with TMM), AM peak (above), PM peak (below)



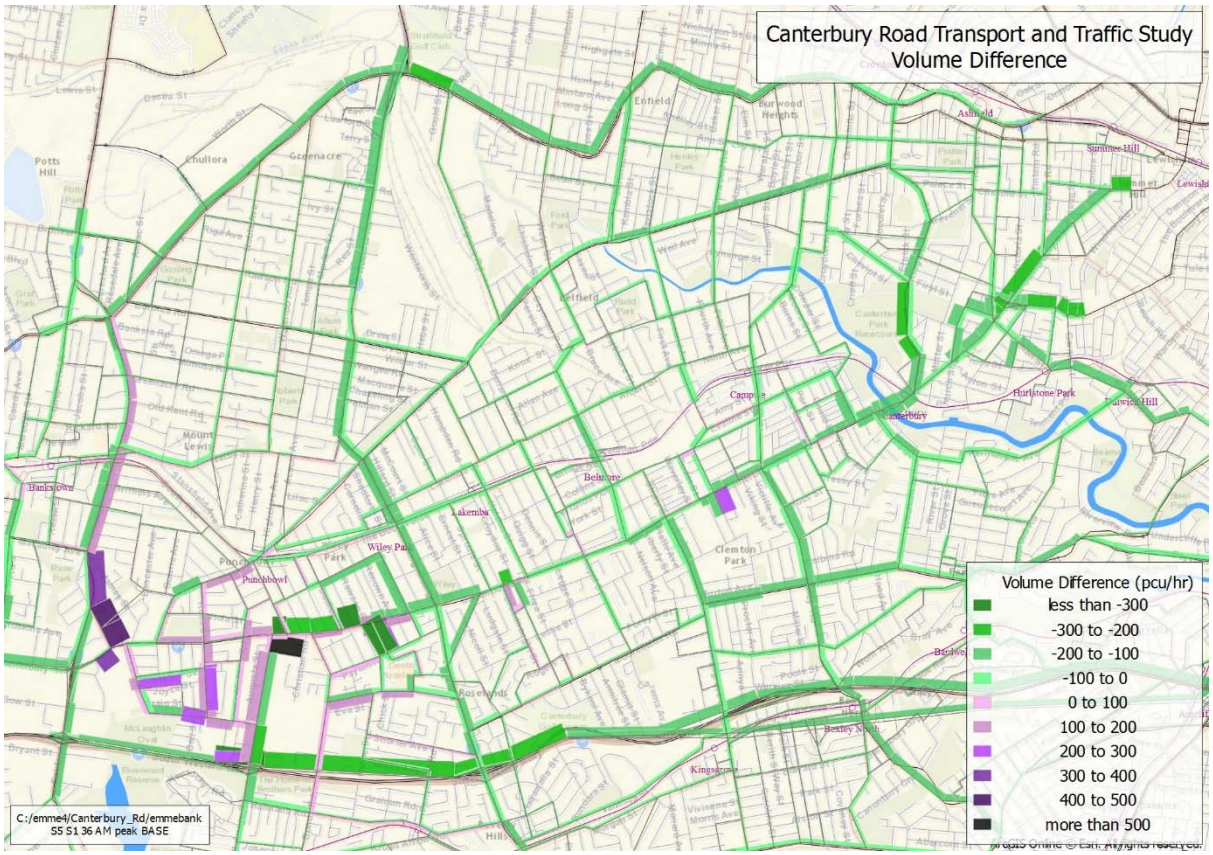


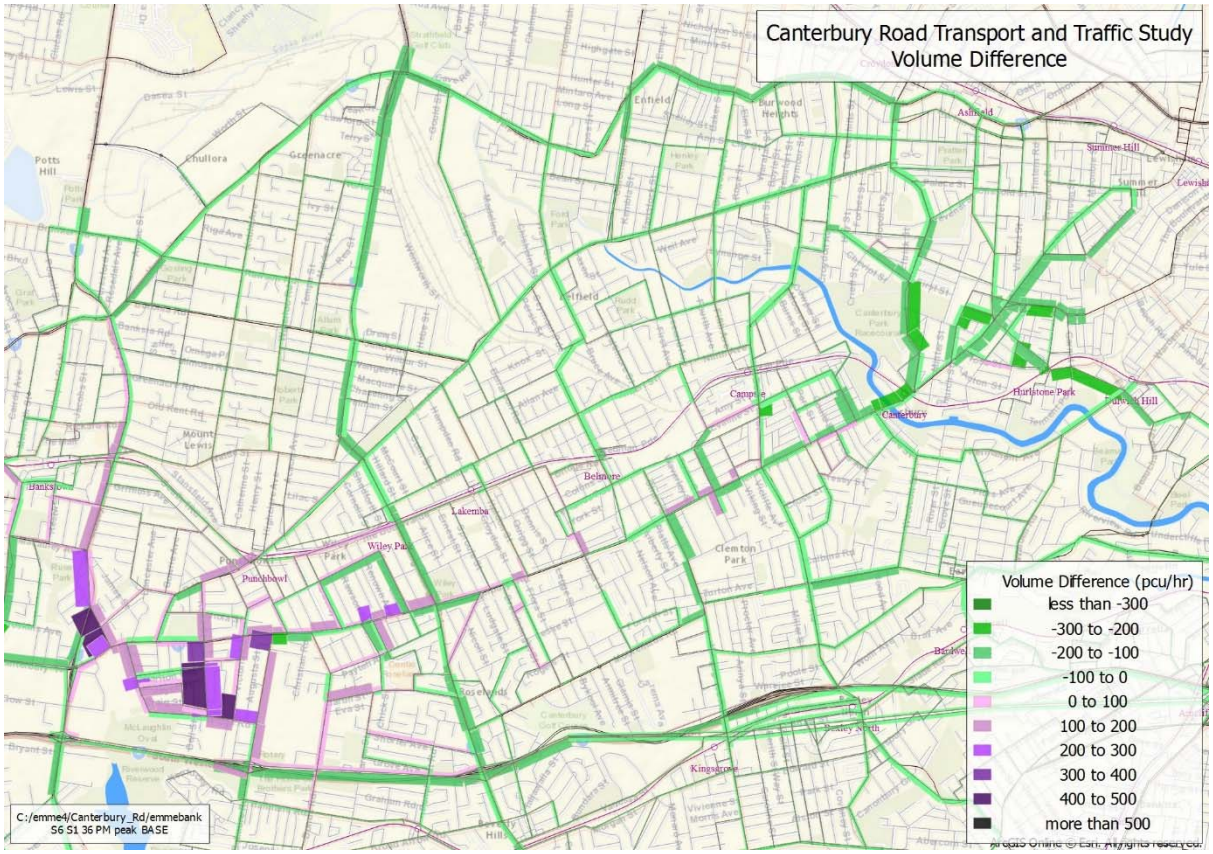
Traffic Volumes Difference from Scenario 4 (Base), 2036, Scenario 1 (Hill Thalis with TMM and TDM), AM peak (above), PM peak (below)



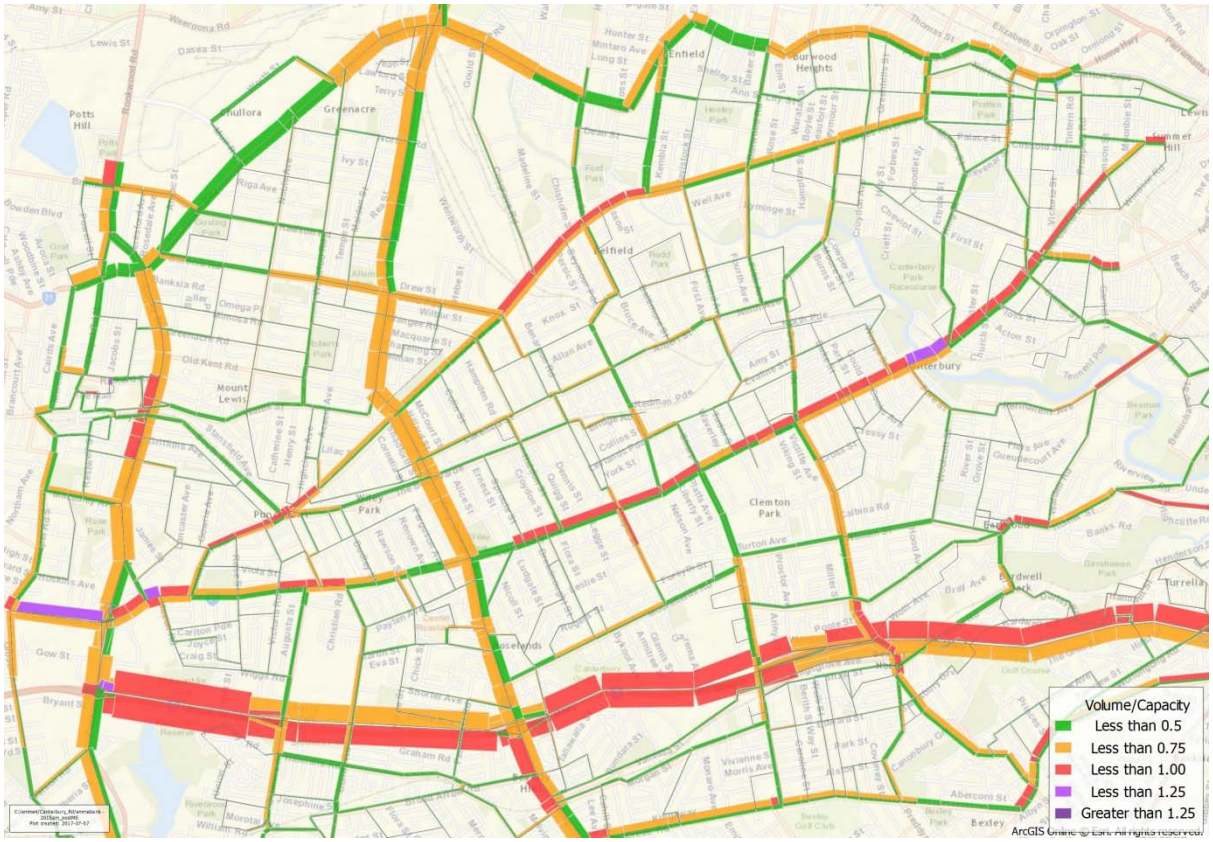


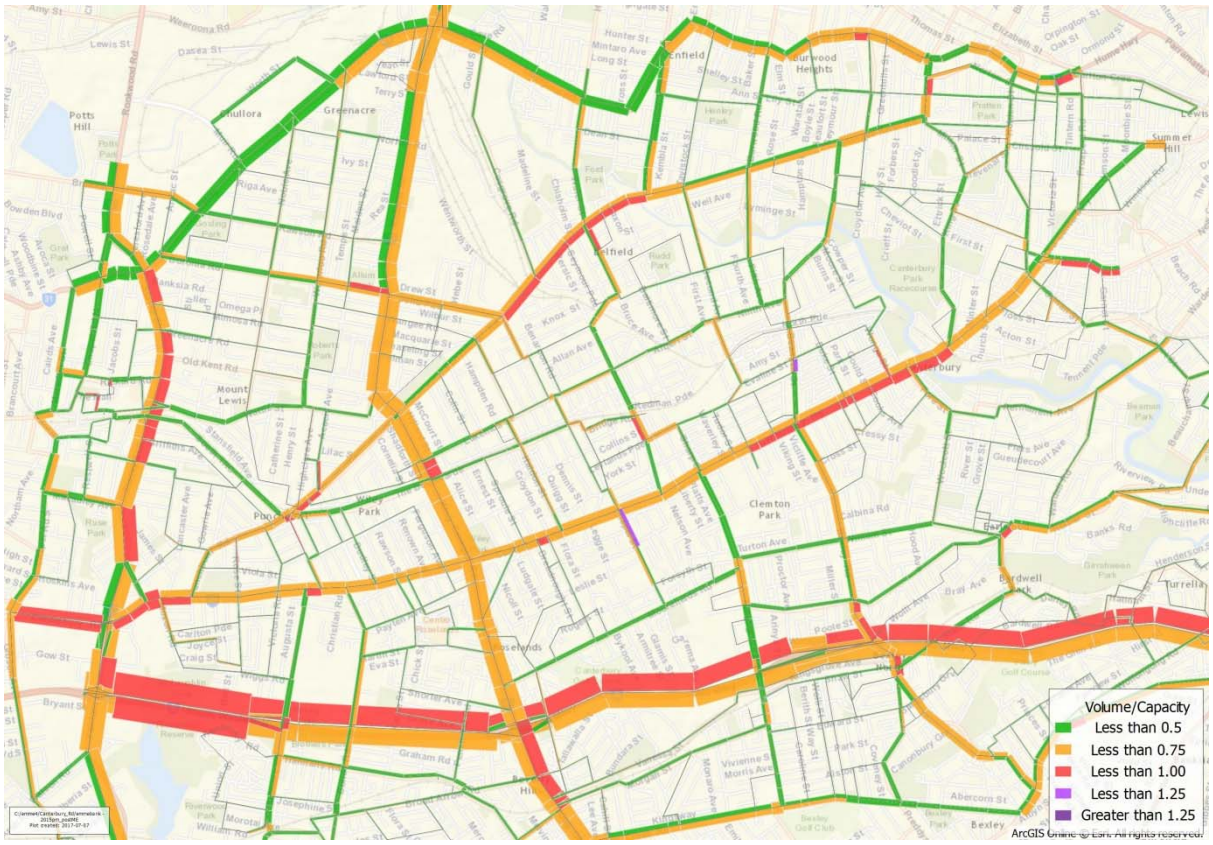
Traffic Volumes Difference from Scenario 5 (Base), 2036, Scenario 1 (Max Yield with TMM and TDM), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2016, AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2021 Scenario 1 (Base), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2021 Scenario 2 (Max Yield), AM peak (above), PM peak (below)





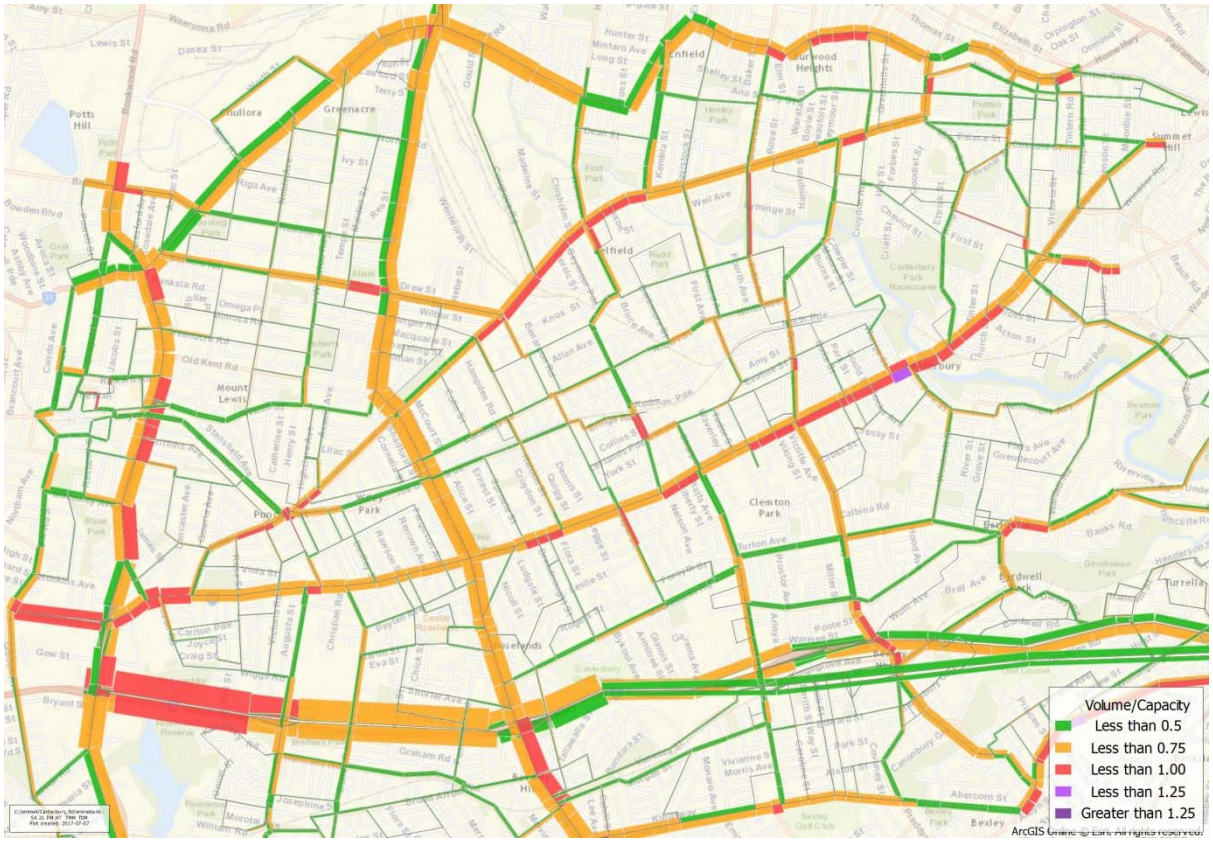
Traffic Volume/Capacity, 2021 Scenario 3 (Hill Thalis with TMM), AM peak (above), PM peak (below)





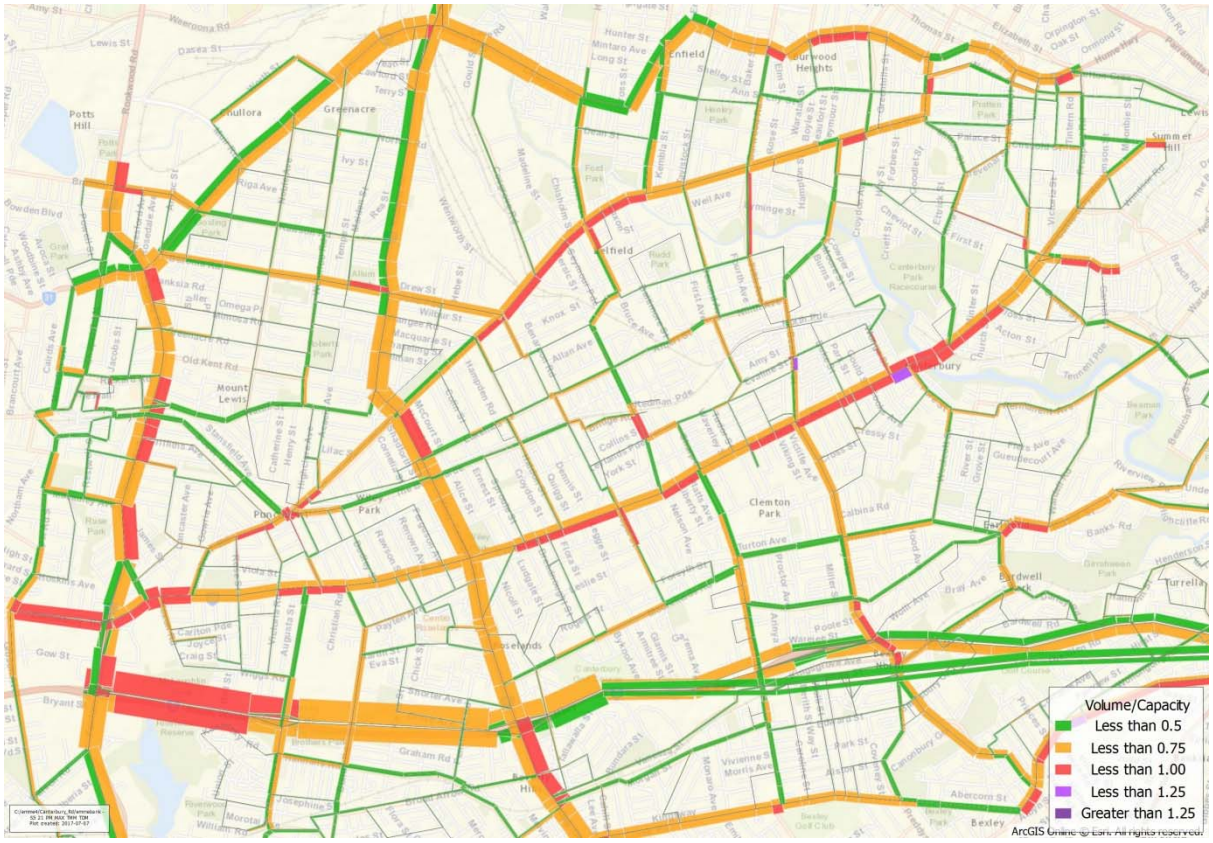
Traffic Volume/Capacity, 2021 Scenario 4 (Hill Thalis with TMM and TDM), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2021 Scenario 5 (Max Yield with TMM and TDM), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2036 Scenario 1 (Base), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2036 Scenario 2 (Max Yield), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2036 Scenario 3 (Hill Thalis with TMM), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2036 Scenario 4 (Hill Thalis with TMM and TDM), AM peak (above), PM peak (below)





Traffic Volume/Capacity, 2036 Scenario 5 (Max Yield with TMM and TDM), AM peak (above), PM peak (below)



