asongroup

Prepared for

TURNER ON BEHALF OF HOLDMARK PROPERTY GROUP

Transport Impact Assessment

Mixed Use Development Planning Proposal
1 Leicester Street, Chester Hill

Ref: P1007r01v01
2/08/2019

Info@asongroup.com.au | +61 2 9083 6601 | Suite 5.02, Level 5, 1 Castlereagh Street. Sydney, NSW 2000

Document Control

Project No: P1007

Project: 1 Leicester Street, Chester Hill; Planning Proposal

Client: Turner on behalf of Holdmark Property Group

File Reference: P1007r01v01 PP TIA 1 Leicester St, Chester Hill.docx

Revision History

Revision	Date	Details	Author	Approved by
-	31/07/2019	Draft	D. Budai	
1	1/08/2019	Issue I	D. Budai	

Table of Contents

Appendices

Tables

Figures

1 Introduction

1.1 Background

Ason Group has been engaged by Turner architects on behalf of Holdmark Group to prepare a Transport Impact Assessment (TIA) to support a Planning Proposal for a mixed-use development at 1 Leicester Street, Chester Hill (the Site). The proposal generally relates to development of a mix of retail, commercial and residential units. Located within the Canterbury-Bankstown (LGA); the Site is therefore subject to that's Council's control.

1.2 Site Planning Context

The Site is currently zoned B2: Local Centre under the Bankstown Local Environmental Plan 2015 and the applicable planning controls are summarised below.

- Local Environmental Plans Bankstown Local Environmental Plan 2015 (pub. 5-3-2015)
- Land Zoning B2 - Local Centre: (pub. 5-3-2015)
- Height of Building 20m
- Floor Space Ratio 2.5:1

Chester Hill is identified in Canterbury-Bankstown Council's North West Local Area Plan as one of the most important centres in the LGA with additional housing and employment to generally be encouraged.

The new development will provide a high-density residential development, retail and commercial development close to existing public transport nodes. In this regard, the proposal is consistent with objectives of Council and the Sydney Metropolitan Strategy by increasing and accelerating housing supply. Furthermore, the Proposal satisfies the NSW Government's priorities by achieving the following:

- Providing an opportunity for improving local connectivity between the Site and its surrounds through redevelopment and amalgamation.
- The Site is readily accessible to key centres by a range of public and active transport modes, including existing and planned pedestrian, cycling networks, thus potentially reducing reliance on the use of private car travel.
- Increased density on the Site optimises the potential value capture of planned public transport infrastructure investment in the area.
- Locating development on public transport corridors is sound transport planning and should arguably supersede other considerations such as congestion for private vehicle use.

2 Overview of Proposal

2.1 Summary of the Planning Proposal

The Site is currently zoned B2 Local Centre to accommodate a 20 metre maximum building height and a maximum floor space ratio (FSR) of 2.5:1. It is intended to submit a Planning Proposal that considers the vision of the Master Plan to fully develop the Site to its maximum with the following amendments to the Bankstown Local Environmental Plan 2015:

- Amend the 'Height of Buildings Map' to introduce a range of building heights from 9 metres of 65 metres to reflect the concept proposal.
- Amend the 'Floor Space Ratio Map' to introduce a floor space ratio of 4.53:1.
- Introduce an additional Clause 6.11 to the LEP in relation to the provision of affordable housingas follows:

  6.12 Affordable Housing on Certain Land at Chester Hill

  (1) This clause applies to the land identified as 1 Leicester Street, Chester Hill.

  (2) The consent authority may, when granting development consent to development on the land, impose a condition requiring 5% of any residential floor area to be dedicated to Council as affordable housing to be managed by a registered community housing provider.

This is achieved with a preferred concept option that includes a mix of residential, retail and commercial land uses as well as 4 levels of basement parking, as discussed below.

2.2 Indicative Yield

The proposed development yield for the Site had not been completely determined at the time of preparation of this TIA. However, for the purpose of our modelling the Project Team has provided an indicative development yield which sets out what the Proposal is likely to comprise.

Accordingly, the Proposal relates to the demolition of all existing buildings and the construction of residential dwellings on the Site and construction of a mixed-use development comprising:

- 648 high density residential dwellings
- 15,763m^2 of retail floor space
- 1,000m^2 of office space
- Provision of parking within the ground floor and basement level.

- Vehicular access from Bent Street.

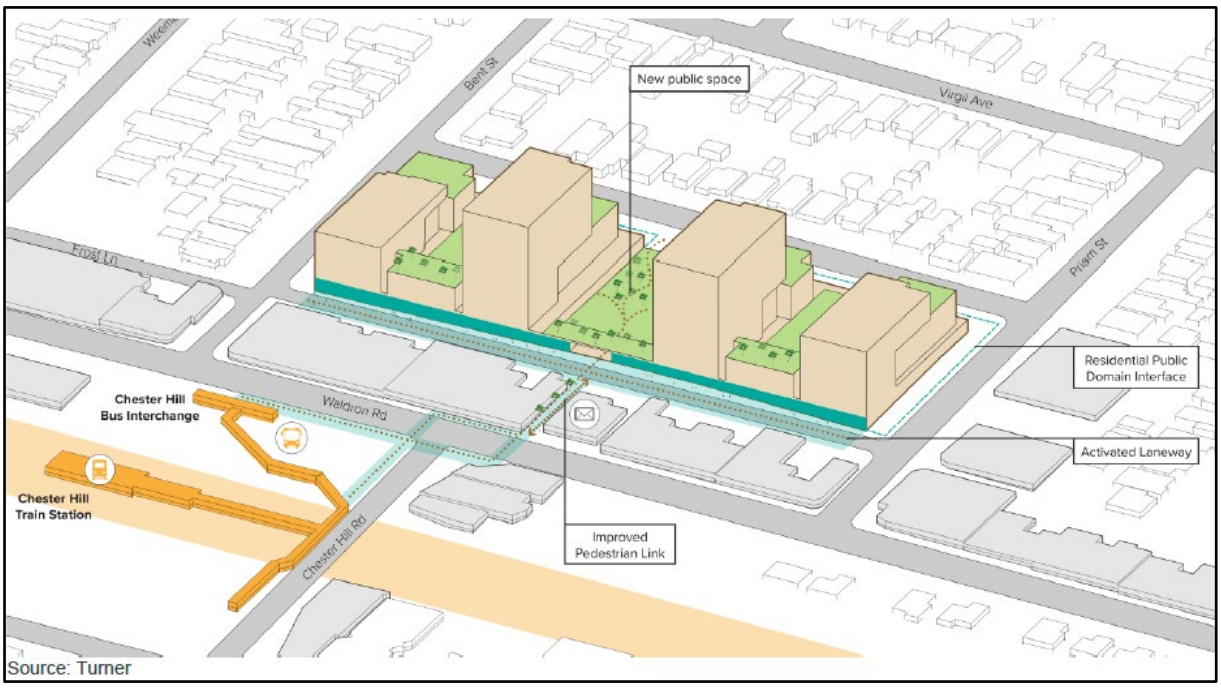


Figure 1: Indicative Concept Plan

3 Existing Conditions

3.1 Site and Location

The Site comprises the existing Chester Square Shopping Centre and is located in the suburb of Chester Hill. It is located at 1 Leicester Street, with the Canterbury-Bankstown local government area (LGA), and is shown in **Figure 2**.

Figure 2: Overview of the Site

Chester Square is a single-storey shopping centre comprising almost 8,300sqm of retail floorspace and is anchored by a Woolworths supermarket. It encompasses a site area of 1.67ha and is zoned B2 Local Centre under the Bankstown Local Environmental Plan 2015.

The existing Chester Square Shopping Centre is currently accessed via direct and separate access driveways on Bent Street, Leicester Street (two, one in and one out) and Priam Street (two, one staff and one left-in only). It has a total of 350 parking spaces with the breakdown as follows:

- Basement Car Park: 150 spaces
- At Grade Car Park: 170 spaces (includes 4 accessible parking spaces)
- Staff Parking: 30 space

3.2 Active Transport Network

The Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area (TfNSW, December 2013), states that train services influence the travel mode choices of areas within 800 metres walking distance (approximately 10 minutes) of a train station. Sections 3.2.1 and 3.2.2 demonstrate that the proximity of the Site to Chester Hill Station easily satisfies this criterion and therefore, provides an excellent opportunity to affect mode shift away from car use.

3.2.1 Pedestrian Network

The accessibility of the Site to surrounding land uses is shown in **Figure 3** which demonstrates the 5–10 minutes walkable catchment to and from the Site. This walking catchment includes the Chester Hill Station and the employment precinct along Waldron Road as well as recreational areas.

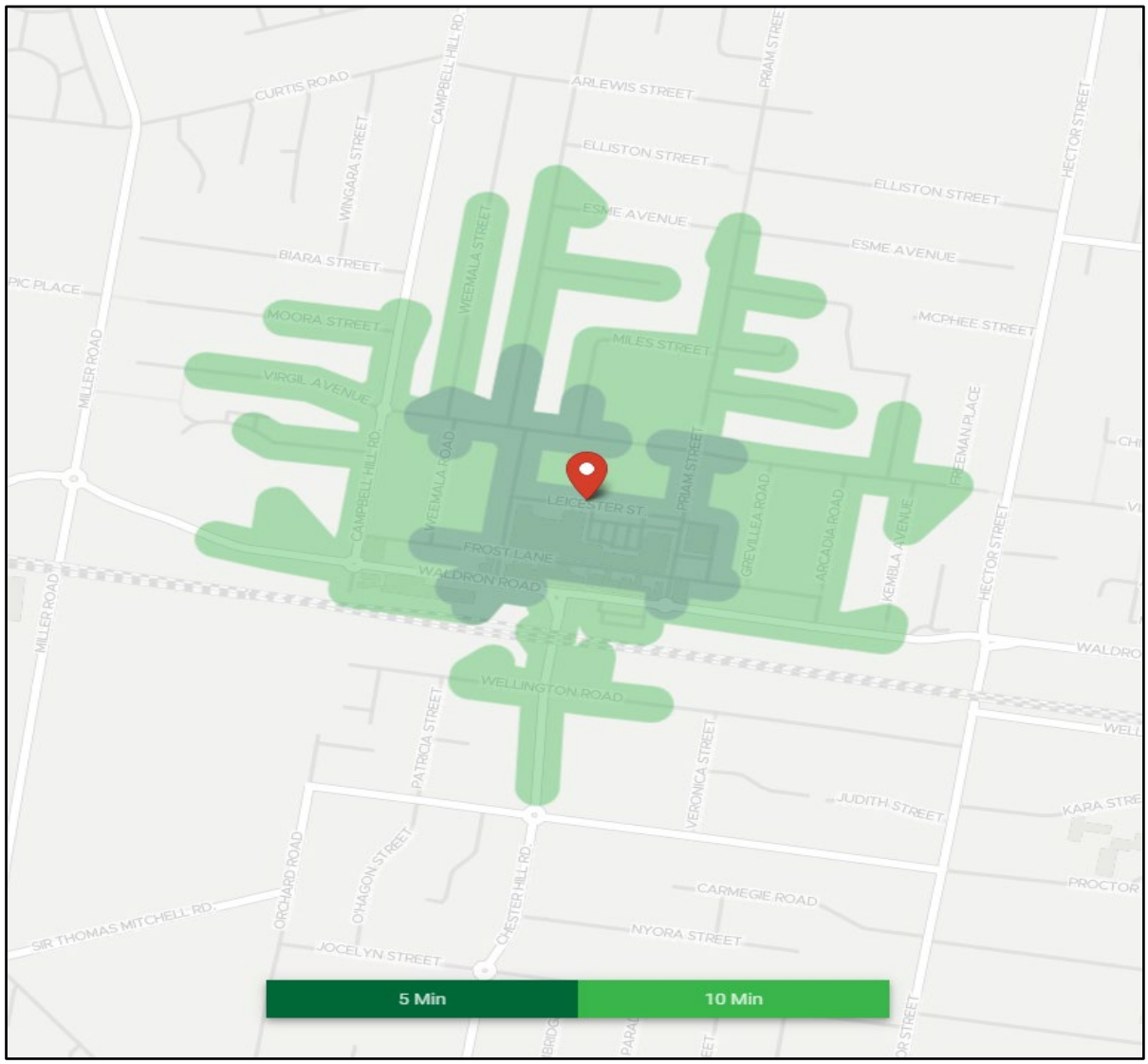


Figure 3: Walking Catchment for the Site

3.2.2 Bicycle Network

The existing Chester Hill 5–10 minutes bicycle network is illustrated below in **Figure 4**. The cycling catchment includes the Chester Hill Station and the employment precinct along Waldron Road as well as Chester Hill and Sefton High Schools, Chester Hill North Public School, recreational areas to the north and Sefton Golf Club to the south.

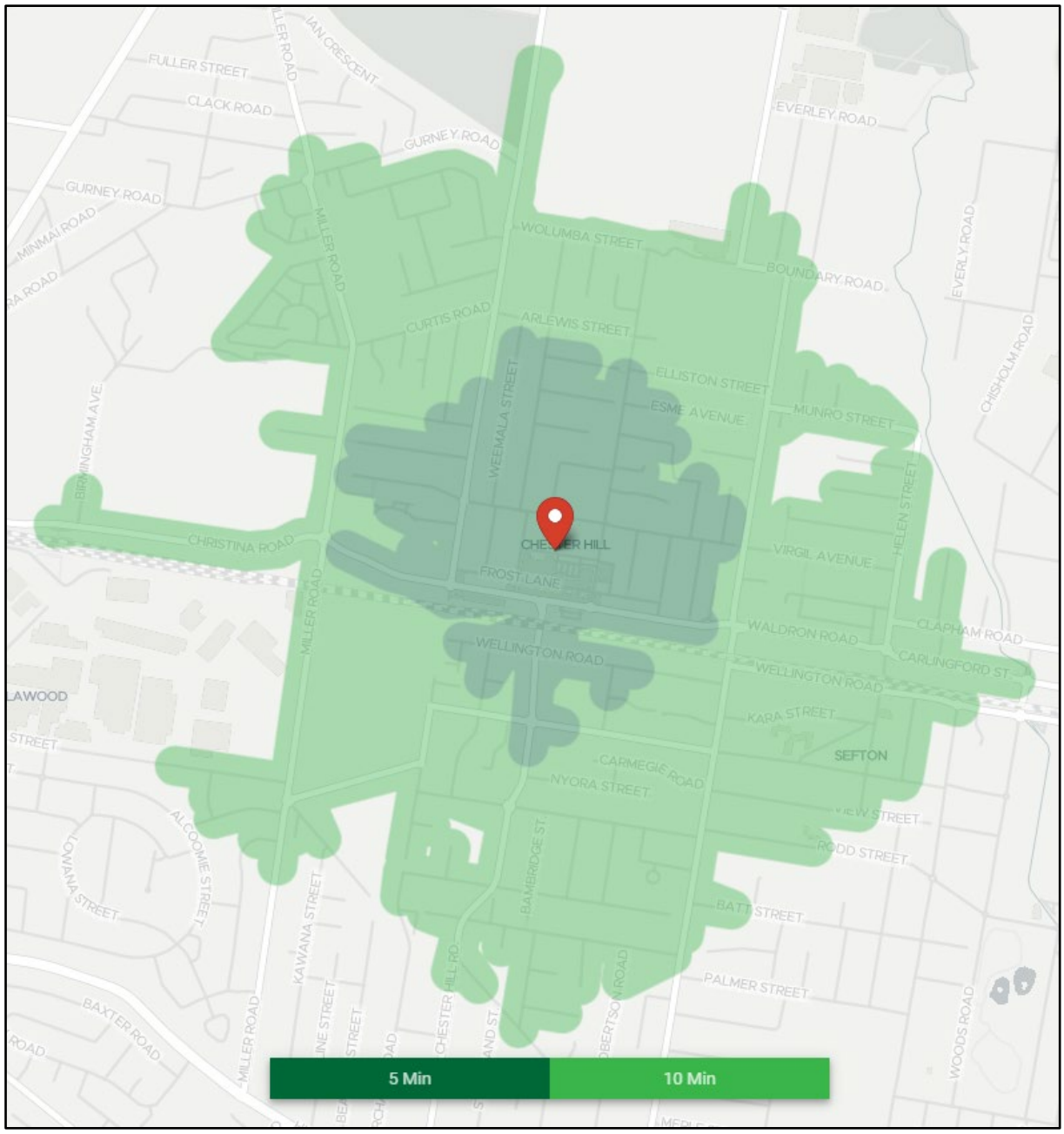


Figure 4: Cycling Catchment for the Site

The existing bicycle network is shown in **Figure 6**.

3.3 Public Transport

A summary of the 30-minute public transport catchment for the Site is shown in **Figure 5**.

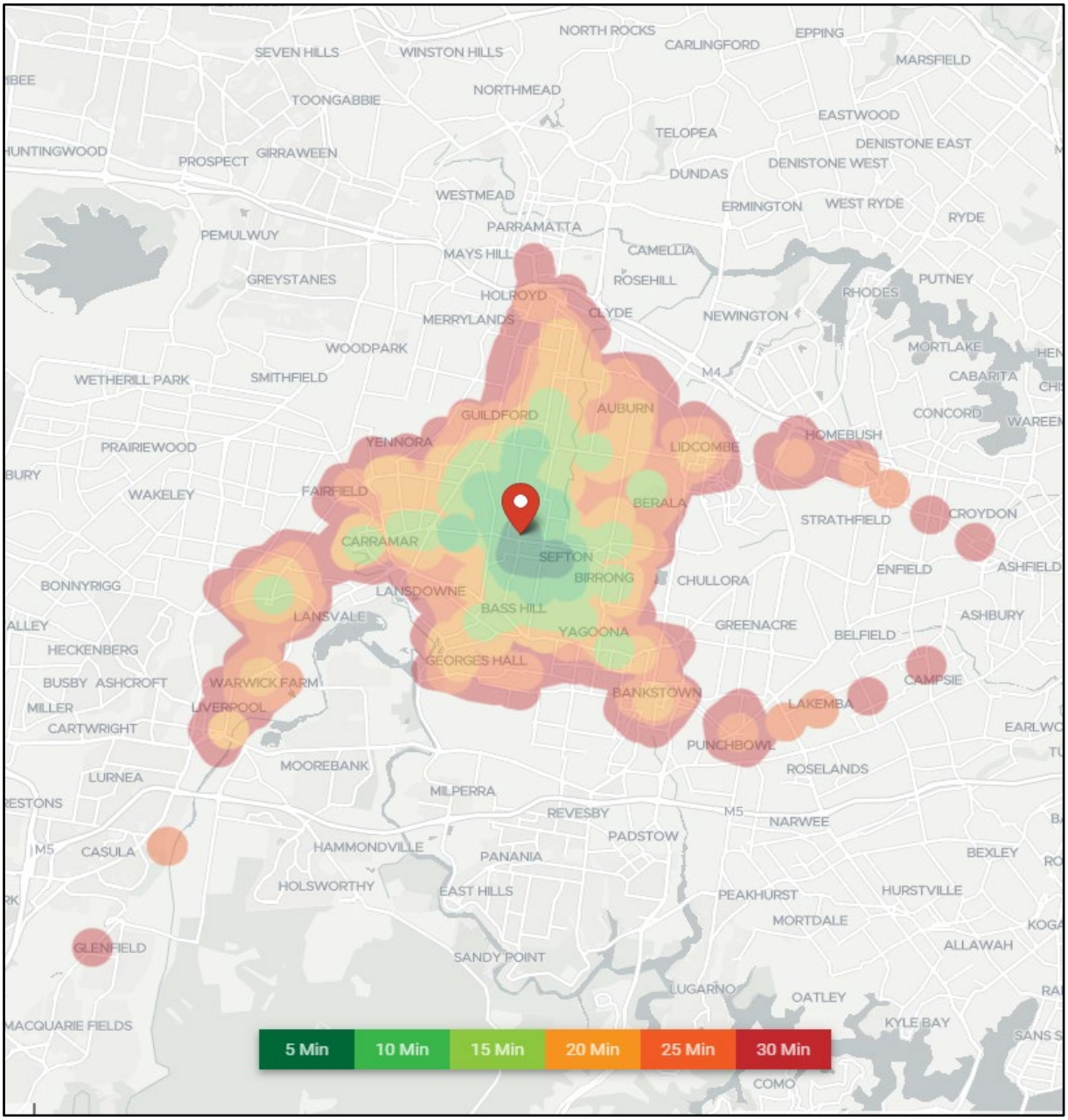


Figure 5: 30 Minute Public Transport Catchment

3.3.1 Rail Services

The *Integrated Public Transport Service Planning Guidelines*, Sydney Metropolitan Area (TfNSW, December 2013), states that train services influence the travel mode choices of areas within 800 metres

walking distance (approximately 10 minutes) of a train station. It is therefore noteworthy that the main access of the Site is located approximately 150 metres from Chester Hill railway station, on the T3 Bankstown line. Accordingly, a significant proportion of future commuters travelling to and from the Site would be expected to use train and bus services. Proximity to this existing rail infrastructure is shown in **Figure 6**.

The frequency of services at Chester Hill Station on the T3 Liverpool or Lidcombe to City via Bankstown is generally every 15 minutes during the peak periods and every 30 minutes off-peak.

3.3.2 Bus Services

Having regard to the standard bus travel, the *Integrated Public Transport Service Planning Guidelines* state that bus services influence the travel mode choices of sites within 400 metres (approximately 5 minutes) of a bus stop. The Site is well serviced by eight bus stops within 400 metres walking distance as shown in **Figure 6**; these include the following Transdev NSW operated five routes via Chester Hill station:

Table 1: Bus Frequency

Route	Frequency
911: Bankstown station to Auburn station	Peak: 30 minutes Off-peak: Hourly
916: to Guildford station	Peak: 1 trip per peak Off-peak: 0
M91: Parramatta station to Hurstville	Peak: 10 minutes Off-peak: 30 minutes
S2: Sefton to Granville	Hourly from 9am to 3pm
S4: to Fairfield	Hourly from 9am to 3pm
N50: Liverpool station to City (Town Hall)	Hourly from 12am to 5am

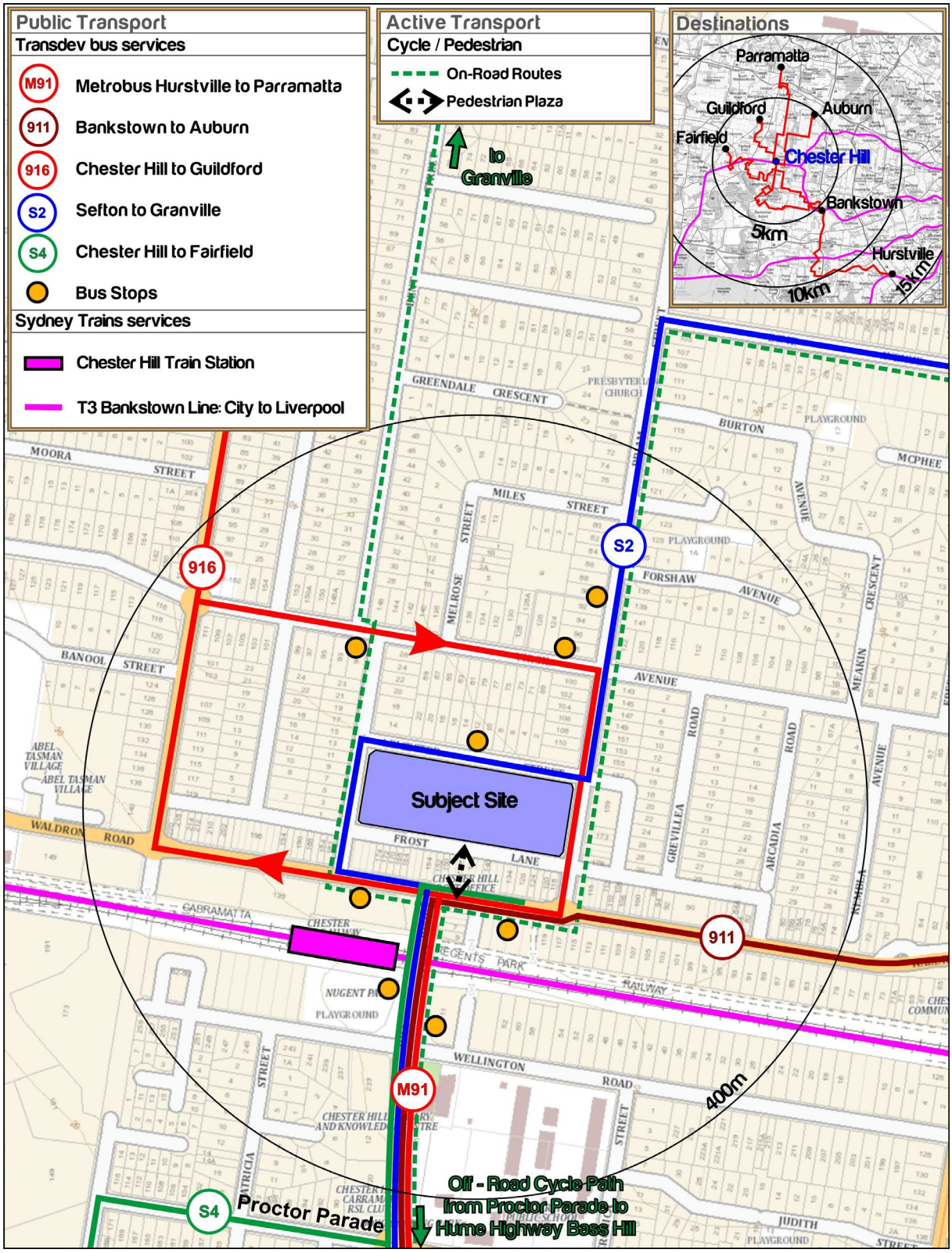


Figure 6: Existing Public and Active Transport Network

3.4 Private Transport

3.4.1 Road Network

The context of the Site with regard to the surrounding road network is presented in **Figure 7** below. This shows that the Site is bounded by local roads with the collector roads Campbell Hill Road to the west, Waldon Road to the south and Hector Street to the east. The nearest arterial road is Woodville Road, located approximately 1.8 kilometres to the west.

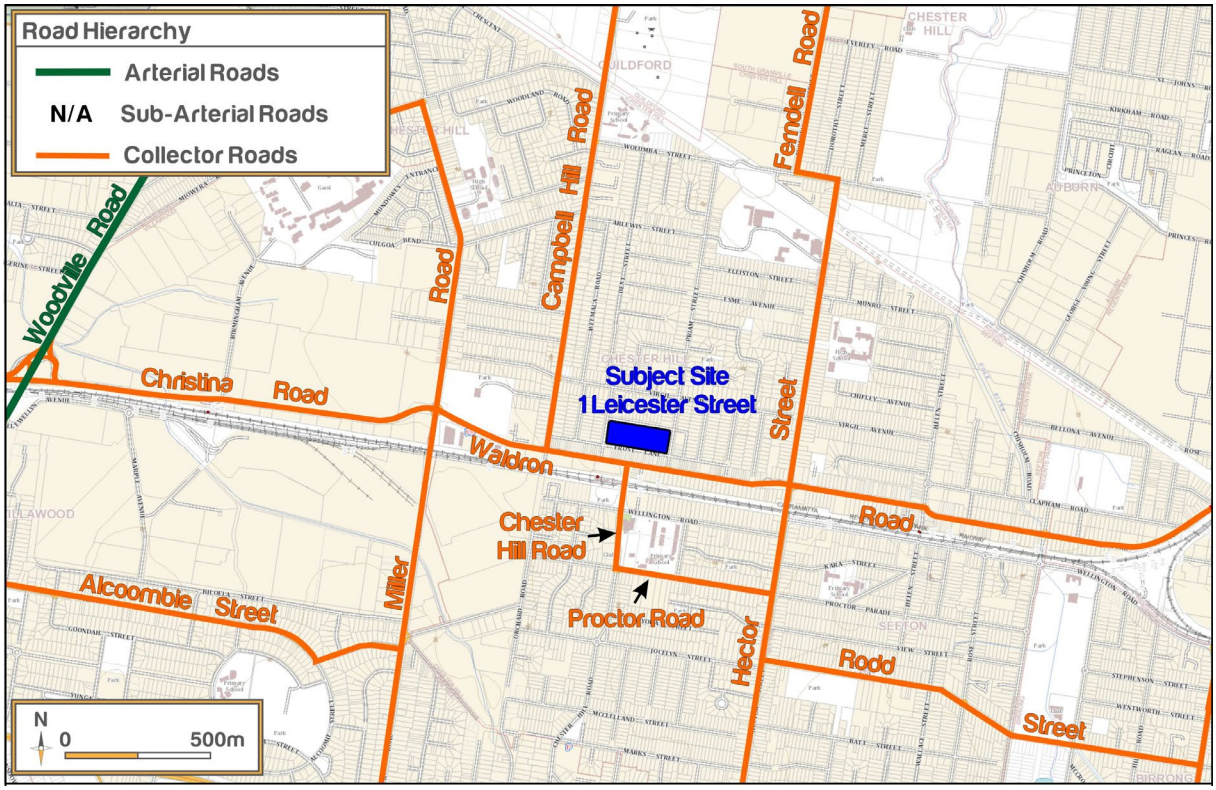


Figure 7: Road Hierarchy

3.4.2 Traffic Volumes

The existing traffic on the surrounding road network was surveyed during the road network weekday morning and evening peaks on Thursday, 6th June 2019 and the weekend business peak on Saturday 8th June 2019.

Accordingly, the existing traffic volumes within the study network are shown from Figure 8-Figure 10.

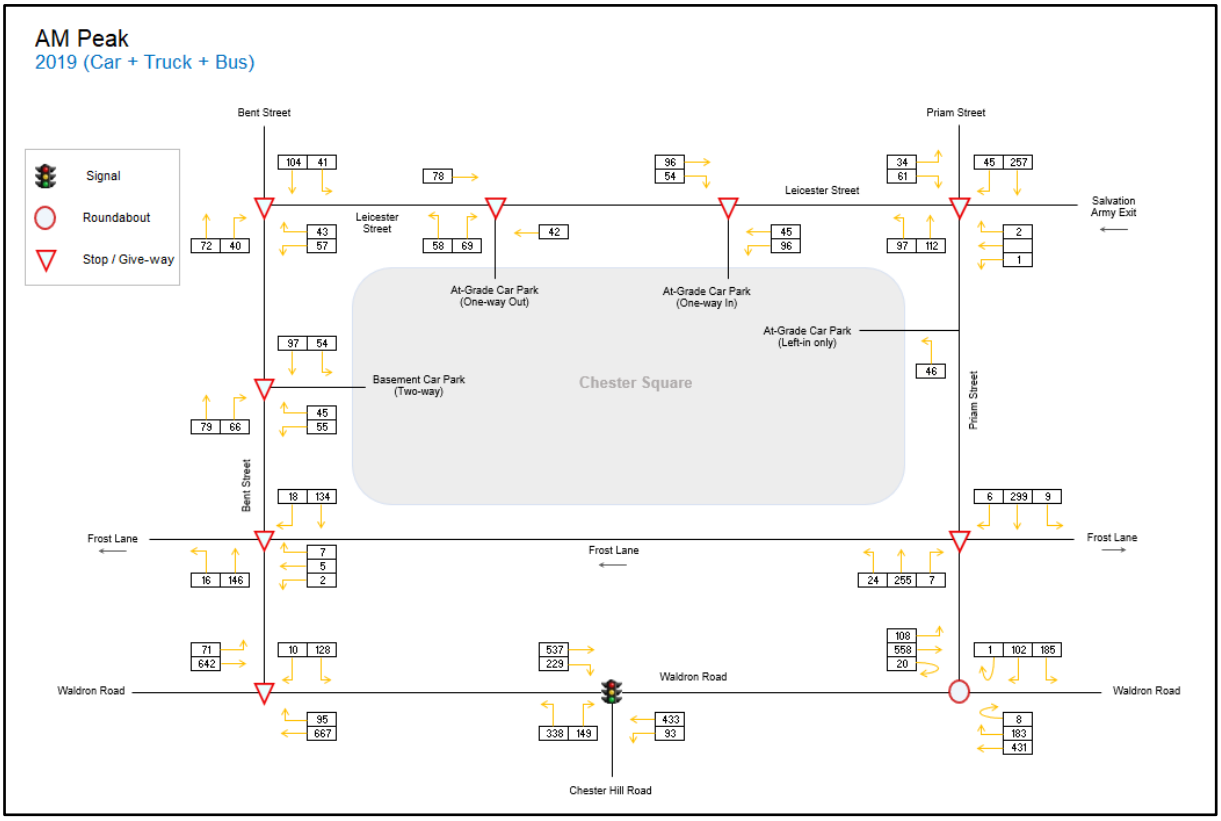


Figure 8: Weekday Morning Peak Traffic Volumes

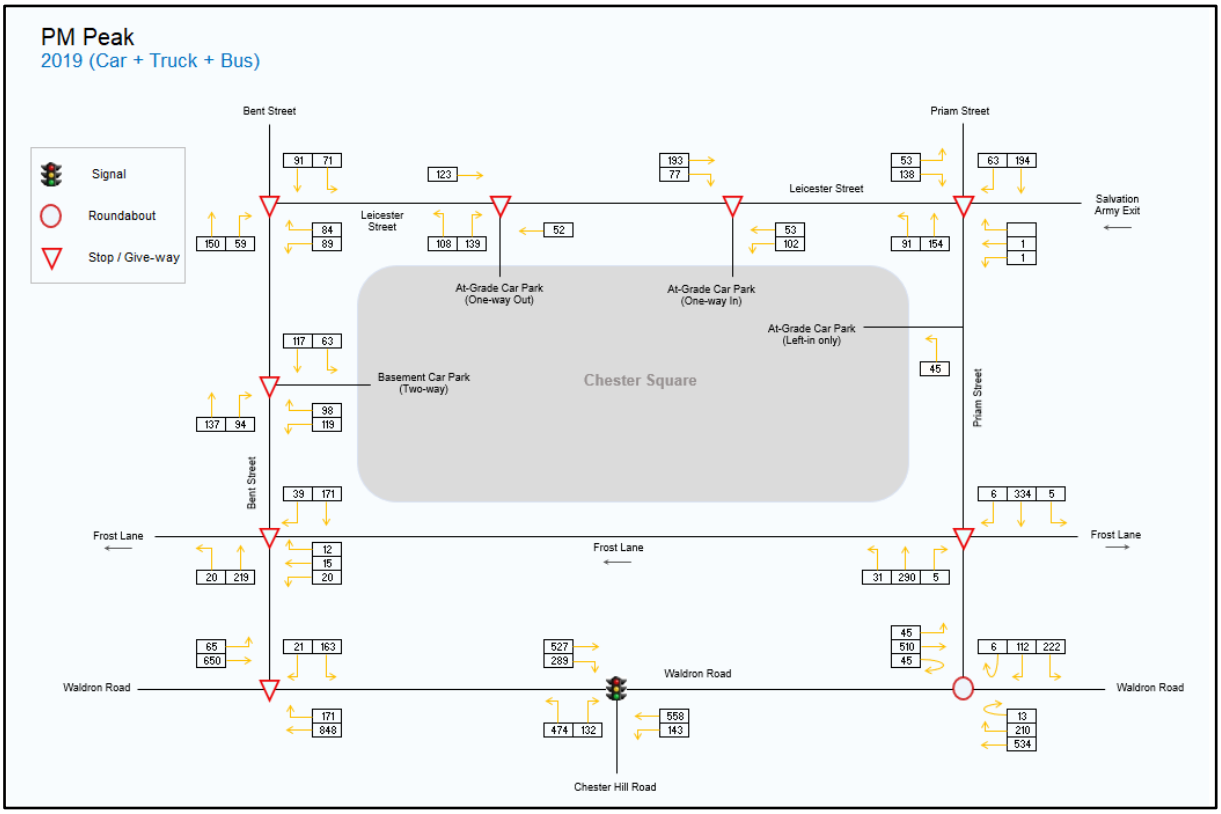


Figure 9: Weekday Evening Peak Traffic Volumes

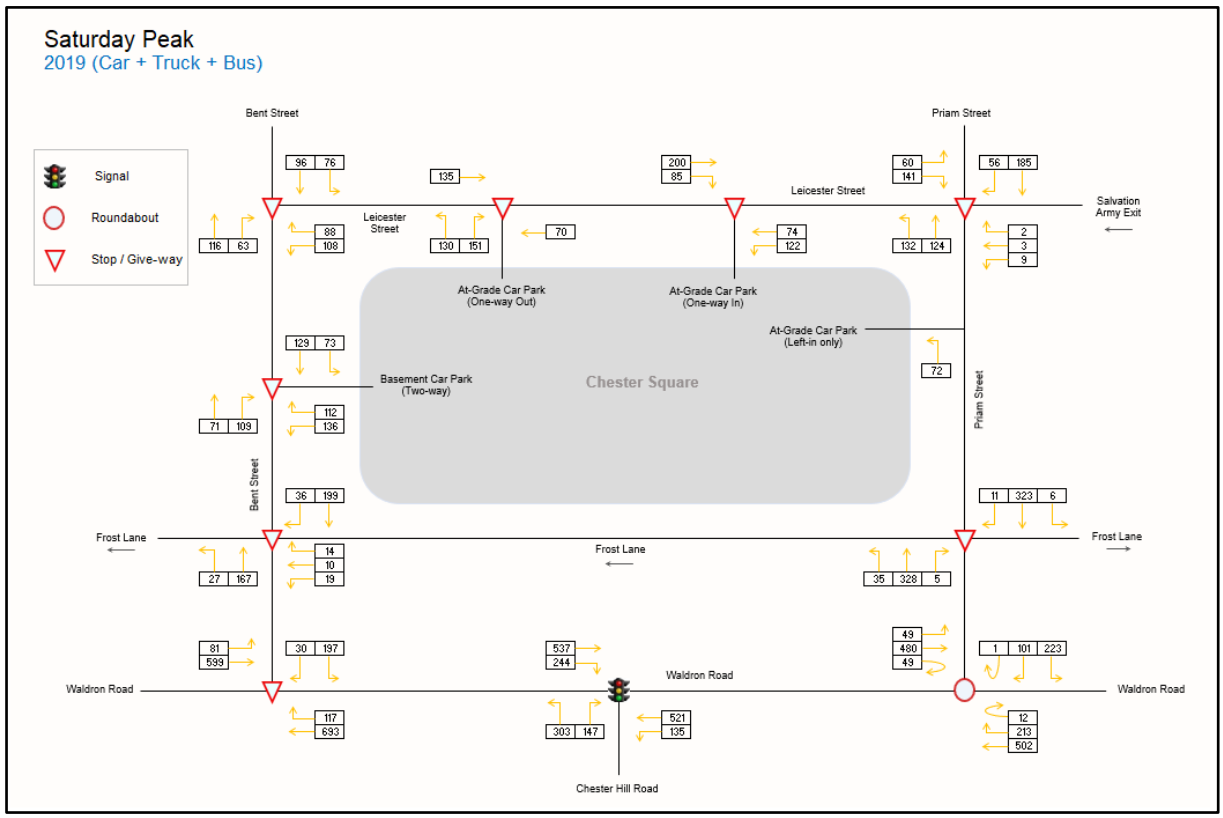


Figure 10: Saturday Peak Peak Traffic Volumes

3.4.3 Existing Intersection Performance

The performance of the above key intersection has been analysed using the SIDRA Intersection computer program. SIDRA modelling outputs a range of performance measures, in particular:

- *Average Vehicle Delay (AVD)* – The AVD (or average delay per vehicle in seconds) for intersections also provides a measure of the operational performance of an intersection and is used to determine an intersection's Level of Service (see below). For signalised intersections, the AVD reported relates to the average of all vehicle movements through the intersection. For priority (Give Way, Stop & Roundabout controlled) intersections, the AVD reported is that for the movement with the highest AVD.
- *Level of Service (LOS)* – This is a comparative measure that provides an indication of the operating performance, based on AVD.

The following table provides a recommended baseline for assessment as per the RMS Guide:

Table 2: RMS Level of Service Summary

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabout	Give Way and Stop Signs
A	less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays & spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity & accident study required
E	57 to 70	At capacity; at signals, incidents will cause excessive delays. Roundabouts require other control mode	At capacity, requires other control mode
F	More than 70	Unsatisfactory and requires additional capacity.	Unsatisfactory and requires other control mode or major treatment.

The local network performance is provided in **Table 3** which presents the SIDRA intersection modelling results of the key intersections under the existing “baseline” scenario:

Table 3: Existing Intersection Performance

Intersection	Period	Average delay, seconds (Level of Service)
Chester Hill Road / Waldron Road	AM	29 (C)
	PM	67 (E)
	Sat	34 (C)
Waldron Road / Bent Street	AM	25 (B)
	PM	37 (C)
	Sat	26 (B)
Bent Street / Leicester Street	AM	5 (A)
	PM	6 (A)
	Sat	6 (A)
Leicester Street / Priam Street	AM	8 (A)
	PM	8 (A)
	Sat	7 (A)
Waldron Road / Priam Street	AM	13 (A)
	PM	201 (F)
	Sat	128 (F)

The signalised intersection of Chester Hill Road / Waldron Road is one of the key intersections in Chester Hill controlling only one of three railway crossing points in the suburb; the other two located approximately 670m to the west (Miller Road) and 570m to the east (Hector Street).

The operation of the intersections in the study area during morning, afternoon and Saturday peak periods were confirmed with site inspections and indicate that:

- All intersections perform at a good level of service during the weekday morning peak except Chester Hill Road / Waldron Road which performs at a satisfactory Level of Service C.
- All intersections perform at a satisfactory or better Level of Service during the weekday evening peak except Chester Hill Road / Waldron Road which is currently at capacity and the Waldron Road / Priam Street roundabout which currently fails.
- All intersections perform at a satisfactory or better Level of Service during the Saturday peak except the Waldron Road / Priam Street roundabout which currently fails.

3.4.4 Parking Facilities and Demand

Council manages a range of parking facilities across the LGA. However, there are no such Council-owned facilities within Chester Hill. Where the demand for parking is high and availability limited, the parking is usually controlled by timed parking restrictions, as occurs on surrounding roads; closer to Station on-street parking is typically restriction to 1-hour (1P) parking, becoming 2-hour (2P) further up Priam Street — north of Frost Lane — with some areas of unrestricted parking in Leicester Street.

Commuter parking is provided by Transport for NSW at Chester Hill Station.

4 Future Context (without Proposal)

4.1 Committed Upgrades and Services

The North West Local Area Plan has identified a number of Community Aspirations for the North West Local Area including:

- Reducing speeds in in local street e.g. speed bumps (planned for Priam Street in 2020).
- Providing additional parking near the train station and around local shops.
- Investigating resident parking schemes in and around the Chester Hill Village Centre.
- Improving traffic movement through Chester Hill.
- Improving public transport services and connections
- Improving access across local government boundaries, including a bike path on Sydney Water land from Regents Park to Woodville Road. It could be expanded to link with the centres and Jim Ring Reserve.
- Advocating for an accessible station at Chester Hill.

Council's 2019-2020 Maintenance and Capital Works Program does not identify and significant projects other than speed humps along Priam Street and the installation of a new roundabout at the intersection of Priam Street with Virgil Avenue.

4.2 Background Growth

The background traffic growth rates on the surrounding road network—extracted from TfNSW's Strategic Traffic Forecasting Model (STFM)—have been provided by TfNSW and are contained in **Appendix A**. For the purposes of this study, relevant future base year assumed to be the estimated opening year of 2021 (subject to planning approvals).

4.3 Intersection Performance

Table 4: 2021 Intersection Performance without Proposal

Intersection	Period	(average delay, seconds | (Level of Service)	
		Existing	2021 Base Case
Chester Hill Road / Waldron Road	AM	29 (C)	34 (C)
	PM	67 (E)	64 (E)
	Sat	34 (C)	37 (C)
Waldron Road / Bent Street	AM	25 (B)	27 (B)
	PM	37 (C)	40 (C)
	Sat	26 (B)	28 (B)
Bent Street / Leicester Street	AM	5 (A)	6 (A)
	PM	6 (A)	6 (A)
	Sat	6 (A)	6 (A)
Leicester Street / Priam Street	AM	8 (A)	8 (A)
	PM	8 (A)	8 (A)
	Sat	7 (A)	7 (A)
Waldron Road / Priam Street	AM	13 (A)	13 (A)
	PM	201 (F)	248 (F)
	Sat	128 (F)	169 (F)

5 Operational Impacts (with Proposal)

5.1 Travel Forecasts

5.1.1 Trip Generation

The traffic impacts of the Planning Proposal have been assessed having regard for the RMS Guide and RMS Technical Direction documents for residential and commercial (office) land-uses. Retail rates have been derived from surveys of the existing Chester Square shopping centre. The existing shopping centre is currently generating 0.065 (AM), 0.102 (PM) and 0.119 (SAT) trips per square metre, respectively. With consideration of increased shopping centre GFA and additional residential component it is reasonable—and conservative—to adopt a 5% reduction in this rate for the Proposal.

Accordingly, the following generation rates were adopted for the relevant land-uses.

Table 5: Proposed Traffic Generation Rates

Land Use	AM	PM	SAT
High Density Residential	0.19 trips per unit	0.15 trips per unit	0.25 trips per unit
Office	1.6 trips per 100 m2 GFA	1.2 trips per 100 m2 GFA	0
Retail [1]	0.062 per m^2	0.097 per m^2	0.113 per m^2

1) 5% reduction of the existing site's rate from surveys

The rates provided above are considered to be a worst-case, conservative assumption considering that:

- The Site is located 150m from Chester Hill railway station, which is located on the Main South line therefore, it is reasonable to expect a reduction in the rates used in **Table 5** due to the influence on travel mode choices.
- A reduction in trip generation of 5% from that surveyed has been assumed for retail due to the intensification of the retail component and addition of the residential land use. However, this reduction should likely to be much higher—depending on the mix and type of future retail tenants—in acknowledgement of the increased retail centre size in question. For example, the RMS Guide trip rates for centres up to 20,000m^2 are on average less than 50% of that of a 10,000m^2 centre, although this reduction is slightly offset by a reduction in the number of 'linked trips'.

Notwithstanding the above, the rates in **Table 5** have been adopted for the purposes of this assessment.

Peak	Existing			Proposed			Net Change		
	In	Out	Total	In	Out	Total	In	Out	Total
AM	315	228	543	528	595	1,123	213	367	580
PM	381	464	845	846	792	1,638	465	328	793
SAT	461	529	990	975	975	1,950	514	446	961

5.1.2 Trip Distribution

The distribution of the Planning Proposal traffic considers the traditional 80% / 20% inbound and outbound distribution for residential and office uses and 50% / 50% for retail (derived from the existing centre average of 49.89%) as summarised in Table 6.

Table 6: Arrival and Departure Distribution

Land Use	AM		PM		SAT	
	In	Out	In	Out	In	Out
High Density Residential	20%	80%	80%	20%	50%	50%
Office	80%	20%	20%	80%	NA	NA
Retail	50%	50%	50%	50%	50%	50%

5.1.3 Mode Share

Potential future mode share for the Site relies on the assumptions used in the STM model incorporating Journey to Work (JTW) and Household Travel Surveys (HTS) data from TfNSW. The STM uses an assessment of the generalised cost of travel time to forecast mode choices for a particular journey.

The potential for reduction in car dependency by implementing the public transport initiatives for the Proposal is considerable and preferable to the alternative of the traditional car-based solution. As discussed earlier, the Site represents a major opportunity to influence travel through initiatives that

encourage transport alternatives that will reduce car dependency and this assessment is therefore considered to be conservative. Details of these initiatives are contained in the Green Travel Plan in **Appendix B**.

A comparison of mode share trends over the past three years from TfNSW Household Travel Survey for the Statistical Area Level 3 (SA3) that contains the Site – 12502 – is shown in **Figure 11** and demonstrates the relative stability of mode share as well as the potential to draw future mode share away from the existing car use by implementing a comprehensive strategy.

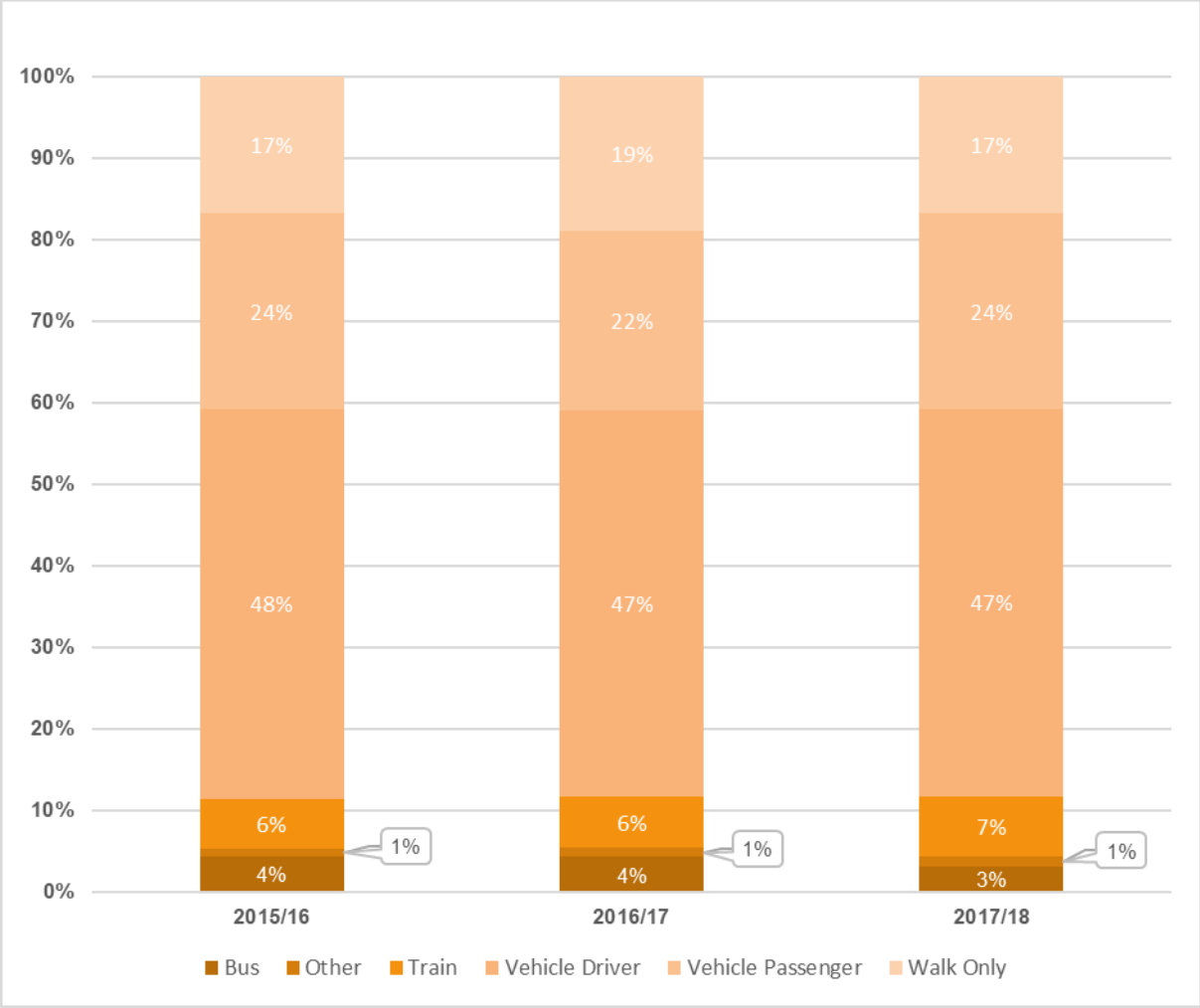


Figure 11: Mode Share Comparison

5.1.1 Trip Assignment

The Site's trip distribution to/from external origins and destinations has been determined with reference to the following:

- 2016 Journey to Work (JTW) Data.
- Travel patterns evident from the existing traffic flows within the study area.

Traffic volumes have been assigned to the surrounding road network having regard for the catchment of the area, likely traffic routes considering minimum travel time (using Google Maps). Accordingly, the likely traffic of the Planning Proposal is graphically shown in **Figure 12**. This assumes all access via the Bent Street frontage.

Localised distribution may be subject to change as part of Development Application submission, should supplementary access points (desirable for a centre of this size) be considered at that time.

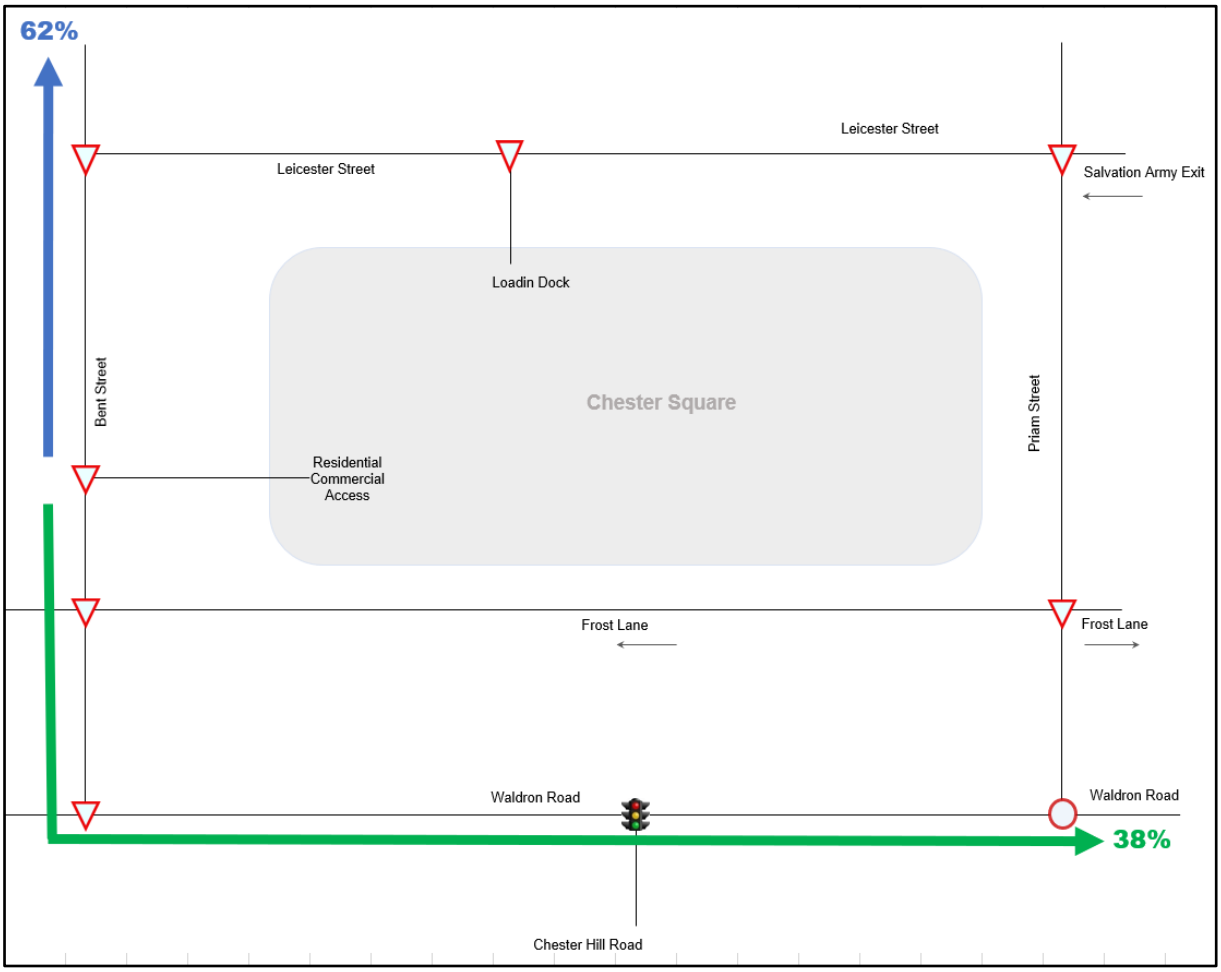


Figure 12: Trip Assignment

5.2 Active Transport

Provision of bicycle parking and end-of-trip facility is a matter for the DA stage. Furthermore, pending the number of employees for the proposed commercial and retail uses which will be determined at later

stages of the project, the provision of showers, lockers and change rooms at appropriate rates should be provided.

Reduced vehicular entry and exit points work with a new public square and improved pedestrian link to create a pedestrian friendly environment and facilitate connectivity and access to Chester Hill Station as shown in **Figure 13**.

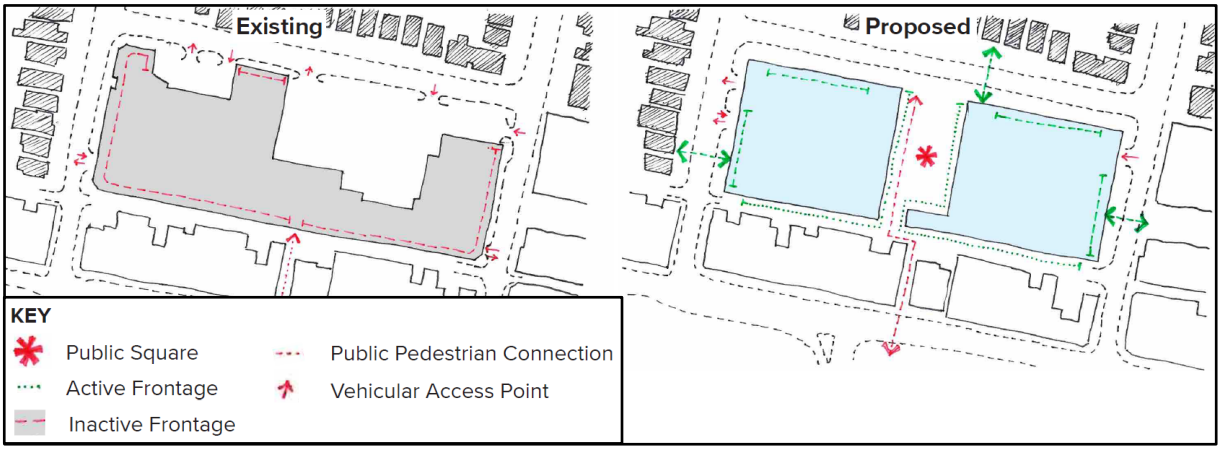


Figure 13: Pedestrian Connectivity

5.3 Public Transport

The public transport network for the Site provides connectivity to a range of key employment centres within the local and regional area, giving options for the future residents.

The public transport principles have been developed to support the key TIA objectives and the overall planning process. These include:

- Providing a network that supports a high level of accessibility and connectivity from day one of the development, eventually realising its full potential upon full build-out.
- Taking advantage of areas of the existing bus and rail network with spare capacity and leverage additional capacity provided by future new infrastructure investments e.g. Sydney Metro City and South West.
- Connect to destinations and interchanges within the local and regional area and aim to provide 30-minute public transport access to strategic centres.

5.4 Private Transport

To assess the impact of the Planning Proposal the estimated traffic volumes in the above section have been added to the future baseline traffic volumes and the impacts of the resultant 'Project Case' traffic volumes on the surrounding road network have been assessed.

5.4.1 Traffic Volume Forecasts

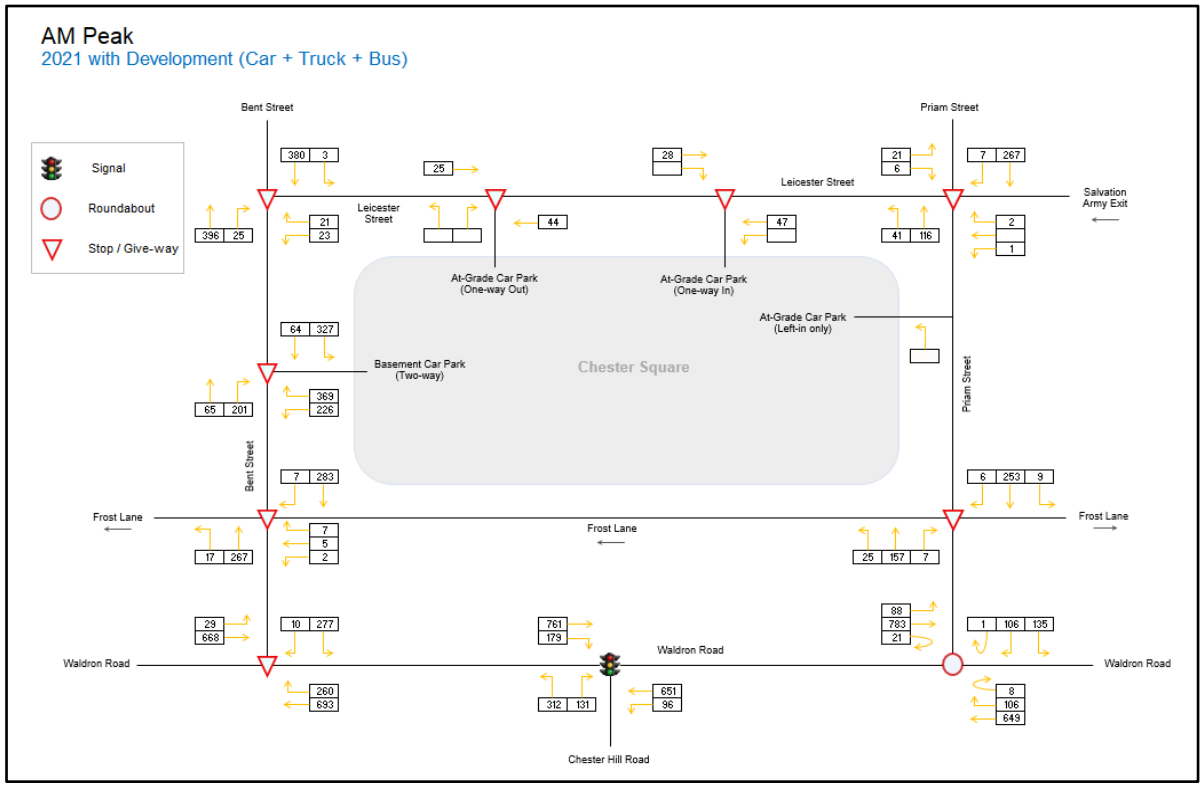


Figure 14: Weekday Morning Peak Traffic Volumes

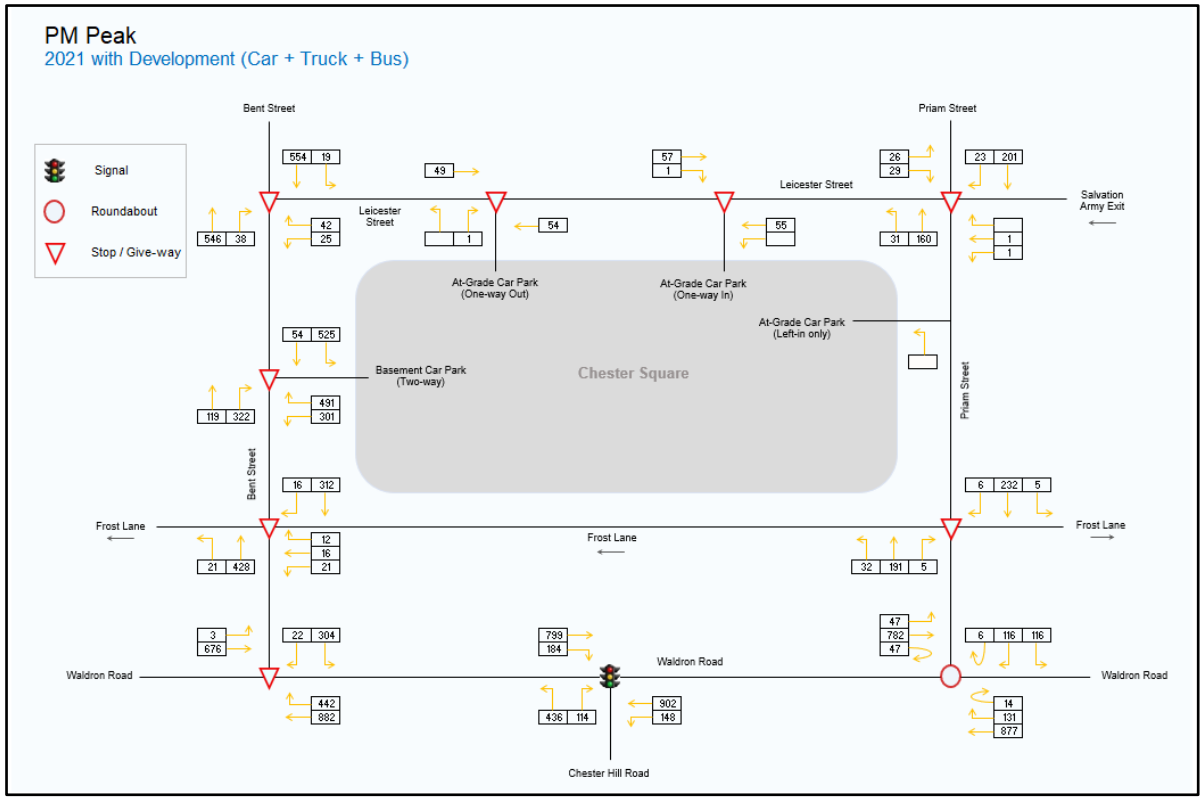


Figure 15: Weekday Evening Peak Traffic Volumes

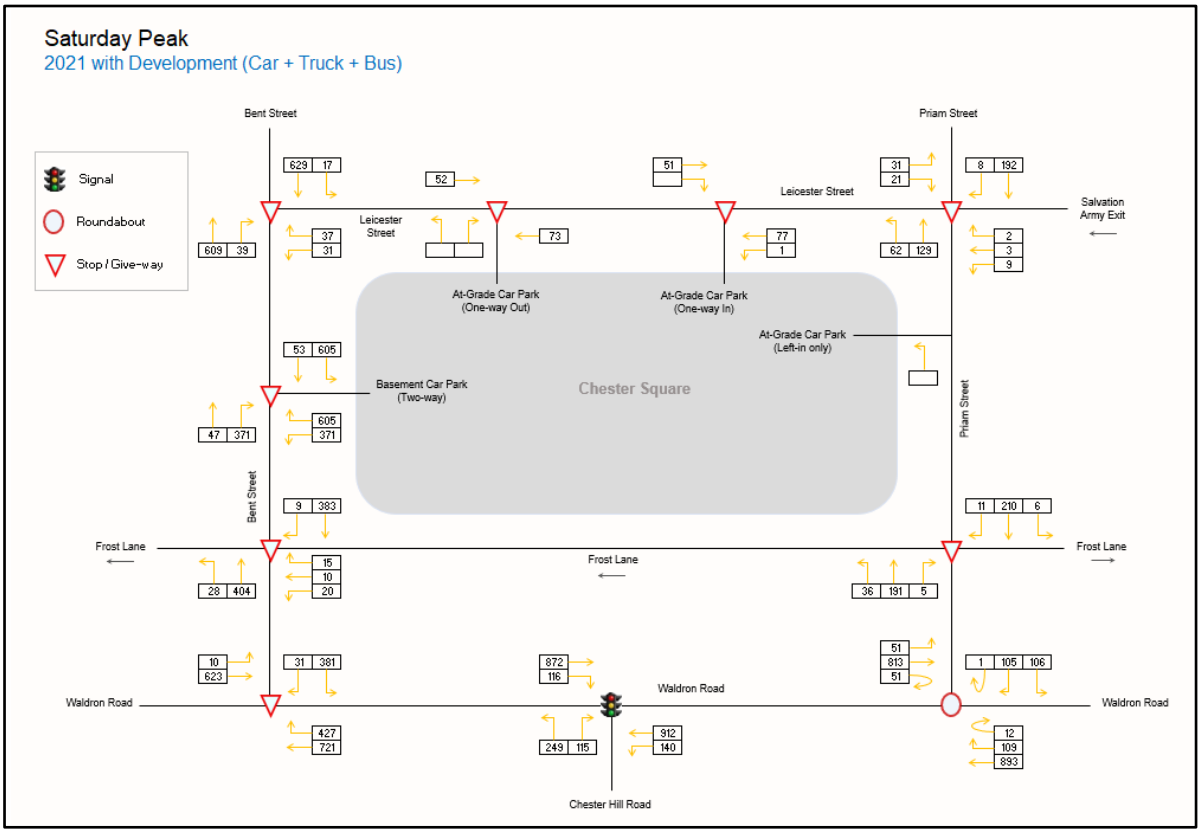


Figure 16: Saturday Peak Traffic Volumes

5.4.2 Capacity and Level of Service

A SIDRA analysis of the intersections within the study area was undertaken for the morning, afternoon and Saturday peak periods and the results in **Table 7** show that the Chester Hill Road / Waldron Road intersection fails during the weekday evening peak and is at capacity during the weekday morning peak. Waldron Road / Priam Street intersection also fails in all three peaks.

Table 7: 2021 Intersection Performance with Proposal

Intersection	Period	Average delay in seconds (Level of Service)		
		Existing	2021 Base Case	2021 Project Case
Chester Hill Road / Waldron Road	AM	29 (C)	34 (C)	52 (D)
	PM	67 (E)	64 (E)	76 (F)
	Sat	34 (C)	37 (C)	25 (B)
Waldron Road / Bent Street	AM	25 (B)	27 (B)	30 (C)
	PM	37 (C)	40 (C)	37 (C)
	Sat	26 (B)	28 (B)	25 (B)
Bent Street / Leicester Street	AM	5 (A)	6 (A)	7 (A)
	PM	6 (A)	6 (A)	7 (A)
	Sat	6 (A)	6 (A)	7 (A)
Leicester Street / Priam Street	AM	8 (A)	8 (A)	9 (A)
	PM	8 (A)	8 (A)	9 (A)
	Sat	7 (A)	7 (A)	8 (A)
Waldron Road / Priam Street	AM	13 (A)	13 (A)	263 (F)
	PM	201 (F)	248 (F)	677 (F)
	Sat	128 (F)	169 (F)	572 (F)

5.5 Car Parking

It is noted that the detailed parking demand / supply assessment is anticipated to be undertaken as part of the DA stage when the development yield and the development site plans are finalised. However, this Section of the TIA provides general guidance on the applicable DCP parking rates and will conclude a possible range for the parking requirement in accordance with the potential land uses on Site.

5.5.1 General Provisions

It is expected that any future development shall provide car parking in accordance with the DCP. Accordingly, the following parking rates would be applicable to the permissible land uses on this Site:

Table 8: Parking Rates

Land Use	Rate
Residential[1]	
1 Bed	1.0 spaces per 1 bedroom unit
2 Bed	1.2 spaces per 2 bedroom unit
3 Bed	1.5 spaces per 3 bedroom unit
Non-residential	
Retail	**Developments of greater than or equal to 4,000m² gross floor area** A parking survey should be carried out by the applicant, to assess the appropriate level of parking for developments greater than 4,000m² in gross floor area.
Commercial (Chester Hill Village)	1 car space per 40m^2 of half the gross floor area of the premises; and a planning agreement is considered on the remaining 50% of parking requirements for the purpose of public parking.

Note: 1) Given proximity to Chester Hill Station, reduced rates—per SEPP 65—would apply as relevant minimum requirement.

Application of the appropriate rates to the indicative yield results in a parking requirement of approximately 1300–1400 spaces so as not to have any adverse impact on the availability of on-street parking. However, this number should be assessed in detail at DA level as the required number could be significantly different with consideration of other influencing factors such as the level of car share provision and other measures contained in the Green Travel Plan.

As discussed previously, the current conceptual plans do not show any car parking spaces, recognising that this is a Planning Proposal and further design development will occur in due course, following planning approval. However, it is anticipated that as part of the DA submission, a sufficient amount of car parking spaces should be provided on the ground and basement levels to fully accommodate the proposed development demand.

5.5.2 Accessible Parking

The Bankstown DCP 2015 requires parking for disabled persons be provided at the following rate:

- At least 1 space per 100 car parking spaces provided.

Reference should also be made to relevant *Building Code of Australia* which references the *Disability (Access to Premises—Buildings) Standards 2010* requirements; notable is an increased requirement for retail (or shop) accessible parking to be provided at the following:

- 1 accessible space per 50 car parking spaces provided, or part thereof

It is anticipated that as part of the DA submission, a sufficient amount of accessible car parking spaces will be provided within the car park to fully accommodate the proposed development demand.

5.6 Bicycle Parking

Provision of bicycle parking and end-of-trip facility is also a matter for the DA stage. However, the following discussions around the general requirements are deemed noteworthy to assist the project architects.

The Bankstown DCP does not specify a rate for bicycle parking. However, as a guide, the Canterbury DCP specifies the following bicycle parking rates:

Table 9: Bicycle Parking Requirements

Land Use	Rate
Residential	Residents: Minimum 1 space per 5 dwellings. Visitors: Minimum 1 space per 10 dwellings.
Retail	Staff: Minimum 1 space per 300m^2 GFA. Patrons: Minimum 1 space per 500m2 GFA over 1,000m^2.
Commercial	

It is anticipated that as part of the DA submission, a sufficient amount of bicycle parking spaces will be provided on the ground and basement levels to fully accommodate the proposed development demand.

5.7 Service Vehicles

The RMS Guide provide the following minimum requirements for delivery and service vehicles for different land uses proposed:

- 1 space per 4,000 m^2 of GFA for commercial premises < 20,000 m^2 GFA,
- 4 + 1 space per 100 units for residential flat buildings over 200 units.

Accordingly, the Proposal would require a total of 14 service bays. It is anticipated that these service bays would cater for waste collection and other delivery purposes. With a range of land-uses, there is

opportunity for shared use of facilities subject to management. Nevertheless, resolution of the number of service bays will occur as part of future DA design development and assessment.

5.8 Design Commentary

As mentioned previously, detailed design of the development site plans is anticipated to occur at later stages of the project; during the DA phase. However, this section provides general guidance on the access crossover location and internal parking design specifications.

5.8.1 Relevant Design Standards

The Site access, car park and loading must generally be designed to comply with the following relevant Australian Standards:

- AS2890.1 for car parking areas;
- AS2890.2 for commercial vehicle loading areas;
- AS2890.3 for bicycle parking; and
- AS2890.6 for accessible (disabled) parking.

It is expected that any detailed construction drawings in relation to the car park, site access or loading areas would comply with these Standards.

5.8.2 Car Parking User Classes

It is anticipated that the following user classes of car parking area (outlined in AS2890.1) would be considered for different uses on this site:

- For residential and office component the design should be in accordance with user class 1A, and
- For the retail and commercial component, the design should be in accordance with user class 3.

5.8.3 Access Location

The concept plans prepared to assess the Planning Proposal envisage rationalisation of all existing access crossovers on Bent Street, Leicester Street and Priam Street and provision of a single access crossover to be located at the western end of the Site on Bent Street.

However, future traffic volumes generated by the development will likely exceed that which can be supported by a single access. As such, it is expected that provision of additional access points—or at least lanes—shall be explored as part of any future Development Application.

Detailed design of the access point(s) shall occur as part of future DA phase design development. It is expected that on-site loading shall need to make provision of access by 19m articulated vehicles (semi-trailers) to service the shopping centre. Notwithstanding, the relevant 'design vehicle' clarified in due course once the nature of retail premises is known.

6 Impact Mitigation

6.1 Improvements to Accommodate Existing Demand

Council's 2019-2020 Capital Expenditure Program does not include any improvements to the intersection of Waldron Road / Priam Street, which currently fails in the weekday evening and Saturday peaks.

Further, Council's 2019-2020 Capital Expenditure Program also does not include any improvements to the intersection of Chester Hill Road / Waldron Road which is currently at capacity during the weekday evening peak.

6.2 Additional Improvements to Accommodate the Proposal

To offset the impact from the Planning Proposal traffic, some option testing and sensitivity analysis was conducted on the existing critical intersections in the study area along Waldron Road. The existing failing roundabout shown in **Figure 17** was replaced with signals as shown in **Figure 18**.

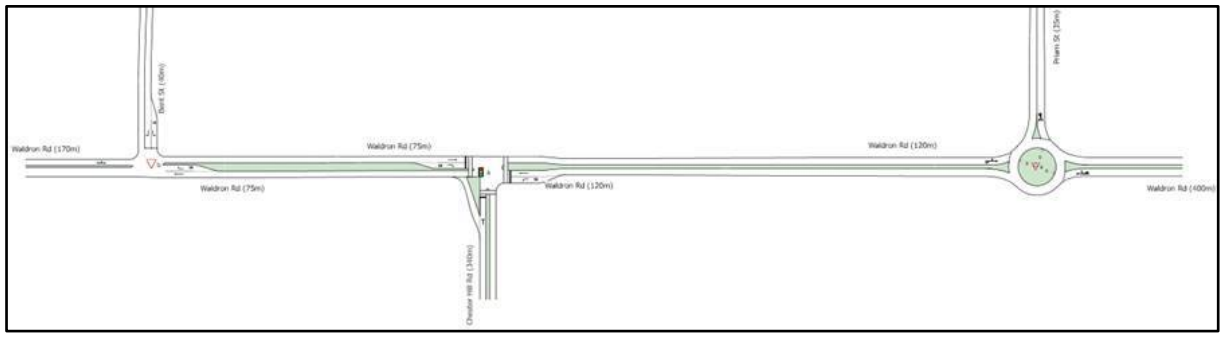


Figure 17: Existing SIDRA Layout on Waldron Road

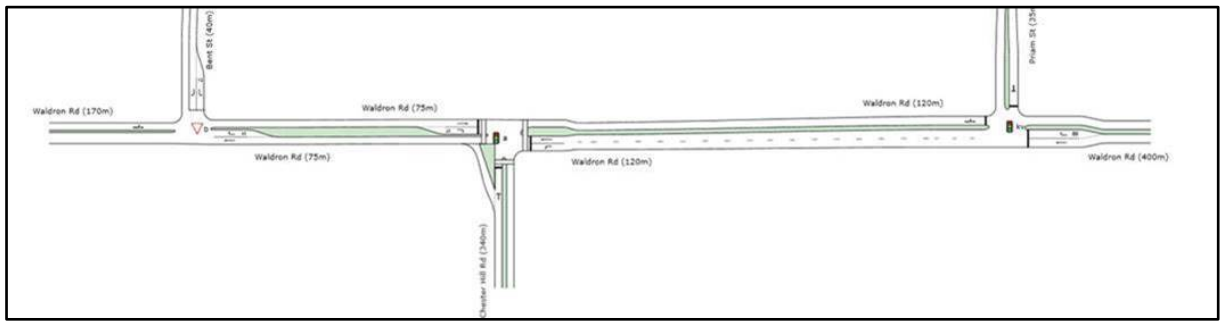


Figure 18: Optional SIDRA Layout on Waldron Road

Signalisation of the intersection of Waldron Road / Priam Street was analysed in SIDRA and the results shown in **Table 10**.

Table 10: 2021 Intersection Performance with Proposal and Improvements

Intersection	Period	Intersection Performance (seconds | (LoS))			
		Existing	2021 Base Case	2021 Project Case	Project Case (Improvement)
Chester Hill Road / Waldron Road	AM	29 (C)	34 (C)	52 (D)	33 (C)
	PM	67 (E)	64 (E)	76 (F)	54 (D)
	Sat	34 (C)	37 (C)	25 (B)	31 (C)
Waldron Road / Bent Street	AM	25 (B)	27 (B)	30 (C)	31 (C)
	PM	37 (C)	40 (C)	37 (C)	56 (D)
	Sat	26 (B)	28 (B)	25 (B)	36 (C)
Bent Street / Leicester Street	AM	5 (A)	6 (A)	7 (A)	7 (A)
	PM	6 (A)	6 (A)	7 (A)	7 (A)
	Sat	6 (A)	6 (A)	7 (A)	7 (A)
Leicester Street / Priam Street	AM	8 (A)	8 (A)	9 (A)	9 (A)
	PM	8 (A)	8 (A)	9 (A)	9 (A)
	Sat	7 (A)	7 (A)	8 (A)	8 (A)
Waldron Road / Priam Street	AM	13 (A)	13 (A)	263 (F)	15 (B)
	PM	201 (F)	248 (F)	677 (F)	39 (C)
	Sat	128 (F)	169 (F)	572 (F)	25 (B)

The results demonstrate that replacing the existing roundabout with signals will satisfactorily resolve the operation of the intersection to an acceptable Level of Service C. Noting that these intersections fail under existing base conditions, the improvements proposed under this Proposal will improve conditions as a net benefit for the broader public.

It should also be noted that a signalised intersection provides other benefit such as improved pedestrian crossing facilities which support Council's vision for Waldron Road a main street; improved by better pedestrian environment.

7 Conclusions and Recommendations

7.1 Key Findings

The key findings of this Traffic Impact Assessment are:

- The Proposal generally seeks amendment to the existing planning controls applicable to the site, as summarised below.

Planning Control	Existing	Proposed
Zoning	B2: Local Centre	B2: Local Centre (no change)
Floor-space-ration (FSR)	2.5 : 1	4.5 : 1

- Resulting from the above changes to planning controls, it is anticipated that future development could include:
  - 648 high density residential dwellings;
  - 15,763m^2 of retail
  - 1,000m^2 of commercial (office) floor space

  The above has been developed to explore the impact of the Proposal and will be subject to further refinement as part of future Development Application submission, following planning approval.
- The Site is located in close proximity to Chester Hill railway station and a number of bus routes, which will encourage new residents and employees to use alternative transport modes (other than private vehicles) to travel to and from the Site. As such, increased density on this site—as proposed—seeks to maximise the potential of this public transport infrastructure.
- It is expected that the on-site parking provisions will be assessed as part of the Development Application (DA) stage of the project. However, it is anticipated that the Proposal will provide sufficient off-street parking to satisfy Council DCP requirements.
- Preliminary parking assessments undertaken on the current indicative development yields indicate that the Proposal will require on-site parking provision in the order of 1,363 parking spaces in accordance with the Council DCP. It is expected that these parking bays would be provided within the proposed ground floor and basement levels.
- Regarding the proposed access, the Planning Proposal envisages rationalisation all existing access crossovers into a single access crossover to be located on Bent Street. However, subject to future development size and land-use mix, consideration for additional access points should be

considered to disperse traffic onto the surrounding road network; a single access not normally provided for a shopping centre of the size proposed.

- Site access and basement car parking areas shall be designed having regard for relevant Australian Standards (AS2890 series). Detailed design of the access and car parking layouts is considered to be a matter that can be resolved as part of the DA stage of the project.
- A summary of the modelled intersection performance at key intersections is provided below.

Intersection	Period	Intersection Performance (seconds | (LoS))			
		Existing	2021 Base Case	2021 Project Case	Project Case (Improvements)
Chester Hill Road / Waldron Road	AM	29 (C)	34 (C)	52 (D)	33 (C)
	PM	67 (E)	64 (E)	76 (F)	54 (D)
	Sat	34 (C)	37 (C)	25 (B)	31 (C)
Waldron Road / Bent Street	AM	25 (B)	27 (B)	30 (C)	31 (C)
	PM	37 (C)	40 (C)	37 (C)	56 (D)
	Sat	26 (B)	28 (B)	25 (B)	36 (C)
Bent Street / Leicester Street	AM	5 (A)	6 (A)	7 (A)	7 (A)
	PM	6 (A)	6 (A)	7 (A)	7 (A)
	Sat	6 (A)	6 (A)	7 (A)	7 (A)
Leicester Street / Priam Street	AM	8 (A)	8 (A)	9 (A)	9 (A)
	PM	8 (A)	8 (A)	9 (A)	9 (A)
	Sat	7 (A)	7 (A)	8 (A)	8 (A)
Waldron Road / Priam Street	AM	13 (A)	13 (A)	263 (F)	15 (B)
	PM	201 (F)	248 (F)	677 (F)	39 (C)
	Sat	128 (F)	169 (F)	572 (F)	25 (B)

- The addition of the Proposal traffic does not adversely affect intersections within the study area, other than Waldron Road / Priam Street and Chester Hill Road / Waldron Road which are already at capacity or failing.
- Replacing the existing roundabout at Waldron Road / Priam Street with signals will significantly improve the operation of the intersection to an acceptable Level of Service C.

7.2 Conclusions and Recommendations

The key conclusions and recommendations of this TIA are:

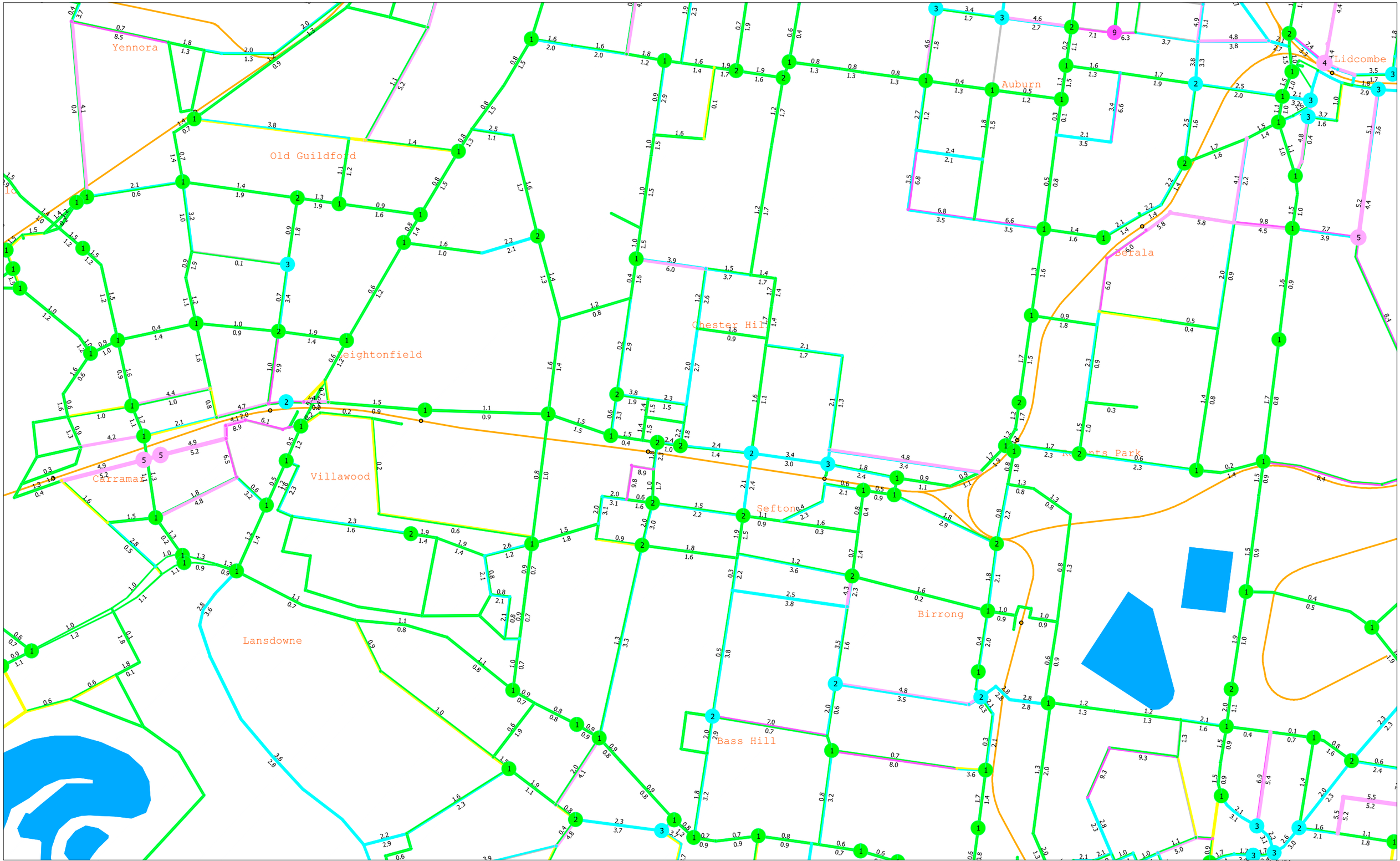
- The scale of development envisaged for the Site presents manageable challenges for road and public transport infrastructure and services.
- Transport infrastructure improvements proposed and assessed in this TIA can accommodate the development yields.
- To improve the current conditions and to offset the development traffic impacts at the intersection of Waldron Road / Priam Street, it is recommended that the roundabout be replaced with traffic signals to improve lane capacity for the eastern approach. These signals should then be coordinated with the signalised intersection of Chester Hill Road / Waldron Road to facilitate optimised traffic flow.

In summary, the Proposal is supportable on traffic planning grounds, subject to the above recommendations.

Appendix A

EMME Data

ROAD TRAFFIC GROWTH (%YR, 2HRSPK) LINKS & INTERSECTIONS

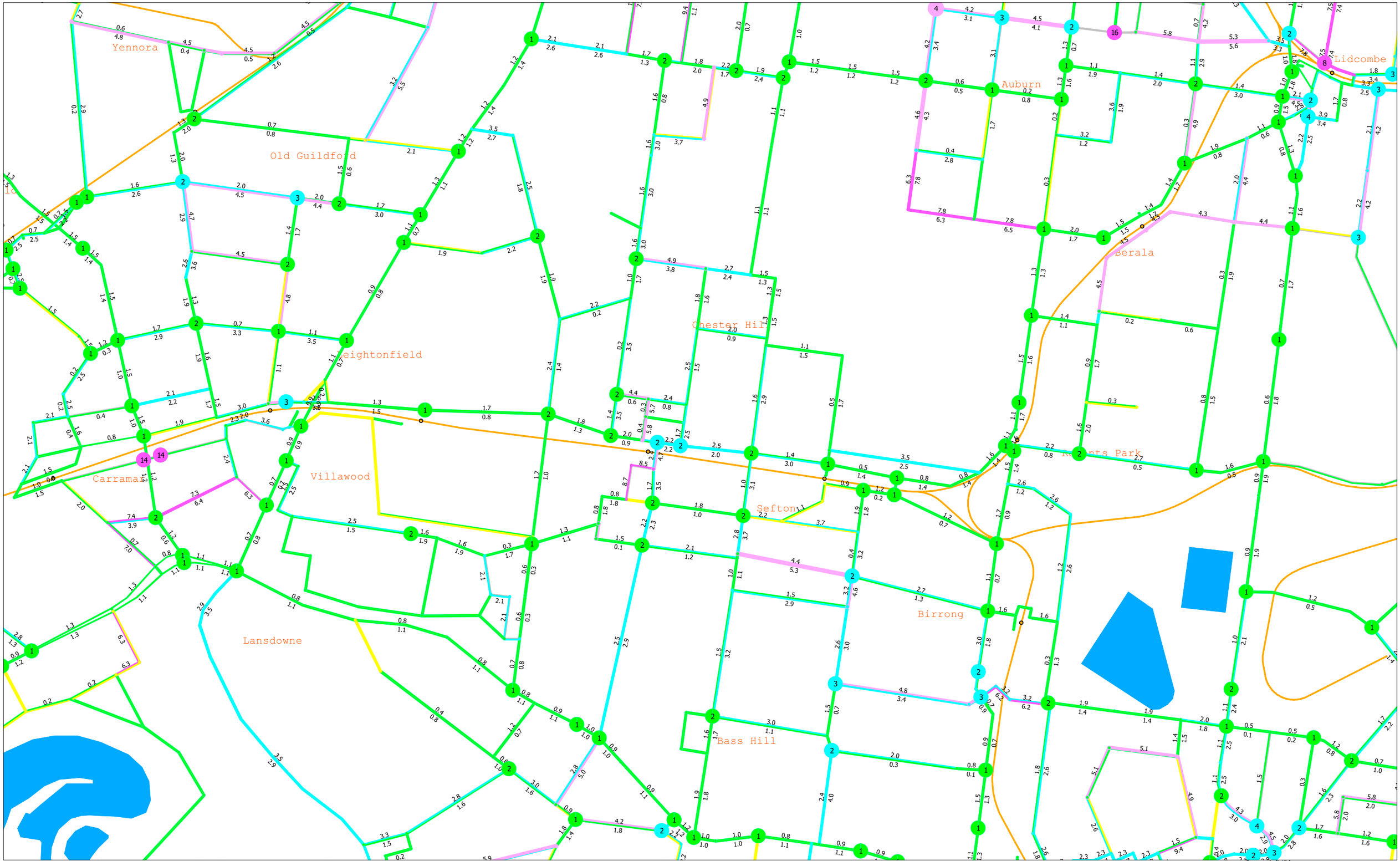


2011TZ SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL
Scenario 20260: 2026 SYDTRAFFICFORECASTMODELTZ11LU16V1.5STMV3.6-4-6PM(mf54)
2019-06-11 12:21

Growth(YR):

- <0
- <2.00
- 2.01-4.00
- 4.01-6.00
- >6.00
- New Links=999

ROAD TRAFFIC GROWTH (%YR, 2HRSPK) LINKS & INTERSECTIONS



2011TZ SYDNEY GMA STRATEGIC TRAFFIC FORECASTING MODEL
Scenario 2026: 2026 SYDTRAFFICFORECASTMODELTZ11LU16V1.5STMV3.6-7-9AM(mf34)
2019-06-11 12:20

Growth(YR):

<0
<2.00
2.01-4.00
4.01-6.00
>6.00
New Links=999

Appendix B

Green Travel Plan

asongroup

Prepared for

TURNER STUDIO ON BEHALF OF HOLDMARK PROPERTY GROUP

Green Travel Plan

Mixed Use Development Planning Proposal
1 Leicester Street, Chester Hill

Ref: P1007r02v01
2/08/2019

Info@asongroup.com.au | +61 2 9083 6601 | Suite 5.02, Level 5, 1 Castlereagh Street. Sydney, NSW 2000

Document Control

Project No: P1007

Project: 1 Leicester Street, Chester Hill

Client: Turner Studio on behalf of Holdmark Property Group

File Reference: P1007r02v01 PP GTP 1 Leicester St, Chester Hill.docx

Revision History

Revision	Date	Details	Author	Approved by
-	31/07/2019	Draft	D. Budai	
1	2/08/2019	Issue I	D. Budai	

Table of Contents

Appendices

1 Introduction

1.1 Background

Ason Group has been commissioned by Turner Studio to prepare a Green Travel Plan (GTP) in relation to a Planning Proposal at 1 Leicester Street, Chester Hill. This Plan addresses the traffic and transport implications of the proposed development of approximately 648 residential dwellings 15,763m^2 of retail floorspace and 1,000m^2 commercial floorspace (the Proposal).

1.2 Purpose

This Plan is intended to develop a package of site-specific measures to promote and maximise the use of sustainable travel modes, including walking, cycling, public transport and car sharing. These strategies will therefore assist in less reliance on private vehicles for the proposed development, supporting sustainability initiatives for growth into the future.

In this regard, this GTP sets out objectives and strategies to assist both the NSW Government and Council in achieving their goals to improve sustainability. It includes a review of the existing transport choices and sets targets so that the effective implementation of the Plan can be assessed. These targets are intended to be realistic but ambitious enough to initiate substantiative behavioural change to achieve the desired outcomes, given existing and future multi-modal transport networks.

This GTP is expected to be coordinated with the property owners or their representatives. It shall be reviewed regularly as part of an ongoing review to ensure it remains relevant and reflective of current conditions.

1.3 Reference Documents

In preparing this GTP, Ason Group has referenced the following key planning control documents:

- Transport for NSW (TfNSW), Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area, December 2013
- TfNSW, Future Transport Strategy 2056, March 2018
- TfNSW, Sydney Walking Future, December 2013
- TfNSW, Sydney's Cycling Future, December 2013
- TfNSW, Sydney's Bus Future, December 2013
- NSW Government, Planning Guidelines for Walking and Cycling

2 Site Audit and Data Collection

2.1 Site Location

The Site comprises the existing Chester Square Shopping Centre and is located in the suburb of Chester Hill. It is located at 1 Leicester Street, with the Canterbury-Bankstown local government area (LGA), and is shown in **Figure 1**.

Figure 1: Site Location

Chester Square is a single-storey shopping centre comprising almost 8,300sqm of retail floorspace and is anchored by a Woolworths supermarket. It encompasses a site area of 1.67ha and is zoned B2 Local Centre under the Bankstown Local Environmental Plan 2015.

The existing Chester Square Shopping Centre is currently accessed via direct and separate access driveways on Bent Street, Leicester Street (two, one in and one out) and Priam Street (two, one staff and one left-in only). It has a total of 350 parking spaces with the breakdown as follows:

- Basement Car Park: 150 spaces
- At Grade Car Park: 170 spaces (includes 4 accessible parking spaces)
- Staff Parking: 30 space

2.2 Proposed Development

The Site is currently zoned B2Local Centre to accommodate a 20 metre maximum building height and a maximum floor space ratio(FSR) of 2.5:1. However, it is understood that the intention is to submit a Planning Proposal that considers the vision of the Master Plan to fully develop the Site to its maximum, increasing the FSR to 4.5:1. This is achieved with a preferred concept option that includes a mix of residential, retail and commercial land uses as well as four levels of basement parking.

The Proposal will allow for the provision of:

- 648 high density residential dwellings;
- 15,763m^2 of retail and commercial floor space, including-
- 1,000m^2 of commercial floor space

The Site is located within the Local Government Area (LGA) of Canterbury Bankstown (Council) and is therefore subject to that Council's controls.

2.3 Travel Mode Share Analysis

A comparison of mode share trends over the past three years from TfNSW Household Travel Survey for the Statistical Area Level 3 (SA3) that contains the Site – 12502 – is shown in **Figure 2** and demonstrates the relative stability of mode share as well as the potential to draw future mode share away from the existing car use by implementing a comprehensive strategy.

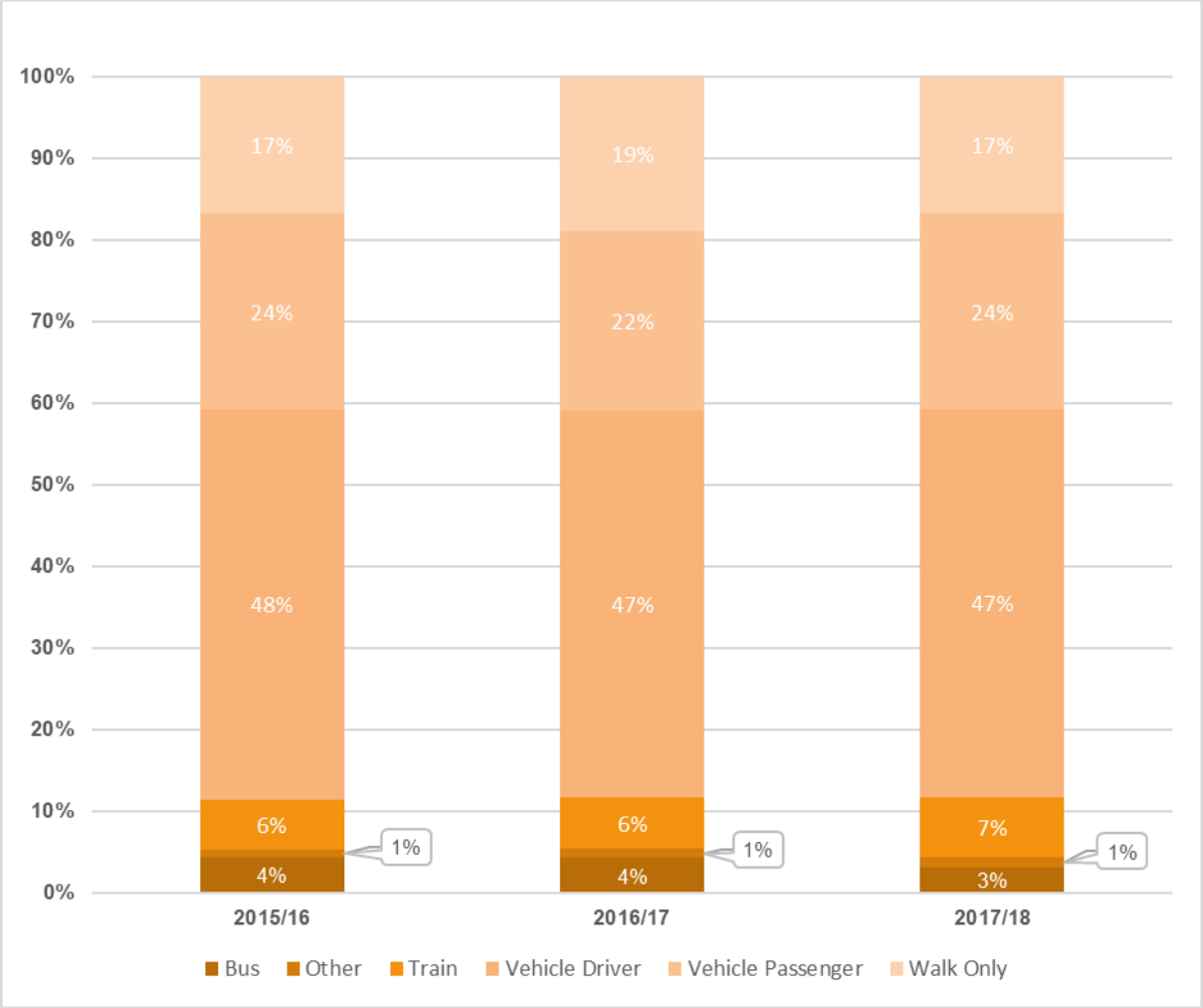


Figure 2: Mode Share Comparison

2.4 Public Transport Services

2.4.1 Rail Services

The *Integrated Public Transport Service Planning Guidelines*, Sydney Metropolitan Area (TfNSW, December 2013), states that train services influence the travel mode choices of areas within 800 metres walking distance (approximately 10 minutes) of a train station. It is therefore noteworthy that the main access of the Site is located approximately 150 metres from Chester Hill railway station, on the T3 Bankstown line. Accordingly, a significant proportion of future commuters travelling to and from the Site would be expected to use train and bus services. Proximity to this existing rail infrastructure is shown in **Figure 6**.

The frequency of services at Chester Hill Station on the T3 Liverpool or Lidcombe to City via Bankstown is generally every 15 minutes during the peak periods and every 30 minutes off-peak.

2.4.2 Bus Services

Having regard to the standard bus travel, the *Integrated Public Transport Service Planning Guidelines* state that bus services influence the travel mode choices of sites within 400 metres (approximately 5 minutes) of a bus stop. The Site is well serviced by eight bus stops within 400 metres walking distance as shown in **Figure 6**; these include the following Transdev NSW operated five routes via Chester Hill station:

Table 1: Bus Frequency

Route	Frequency
911: Bankstown station to Auburn station	Peak: 30 minutes Off-peak: Hourly
916: to Guildford station	Peak: 1 trip per peak Off-peak: 0
M91: Parramatta station to Hurstville	Peak: 10 minutes Off-peak: 30 minutes
S2: Sefton to Granville	Hourly from 9am to 3pm
S4: to Fairfield	Hourly from 9am to 3pm
N50: Liverpool station to City (Town Hall)	Hourly from 12am to 5am

2.5 Active Transport Network

The Integrated Public Transport Service Planning Guidelines, Sydney Metropolitan Area (TfNSW, December 2013), states that train services influence the travel mode choices of areas within 800 metres walking distance (approximately 10 minutes) of a train station. Sections 2.5.1 and 2.5.2 demonstrate that the proximity of the Site to Chester Hill Station easily satisfies this criterion and therefore, provides an excellent opportunity to affect mode shift away from car use.

2.5.1 Pedestrian Network

The accessibility of the Site to surrounding land uses is shown in **Figure 3** which demonstrates the 5–10 minutes walkable catchment to and from the Site. This walking catchment includes the Chester Hill Station and the employment precinct along Waldron Road as well as recreational areas.

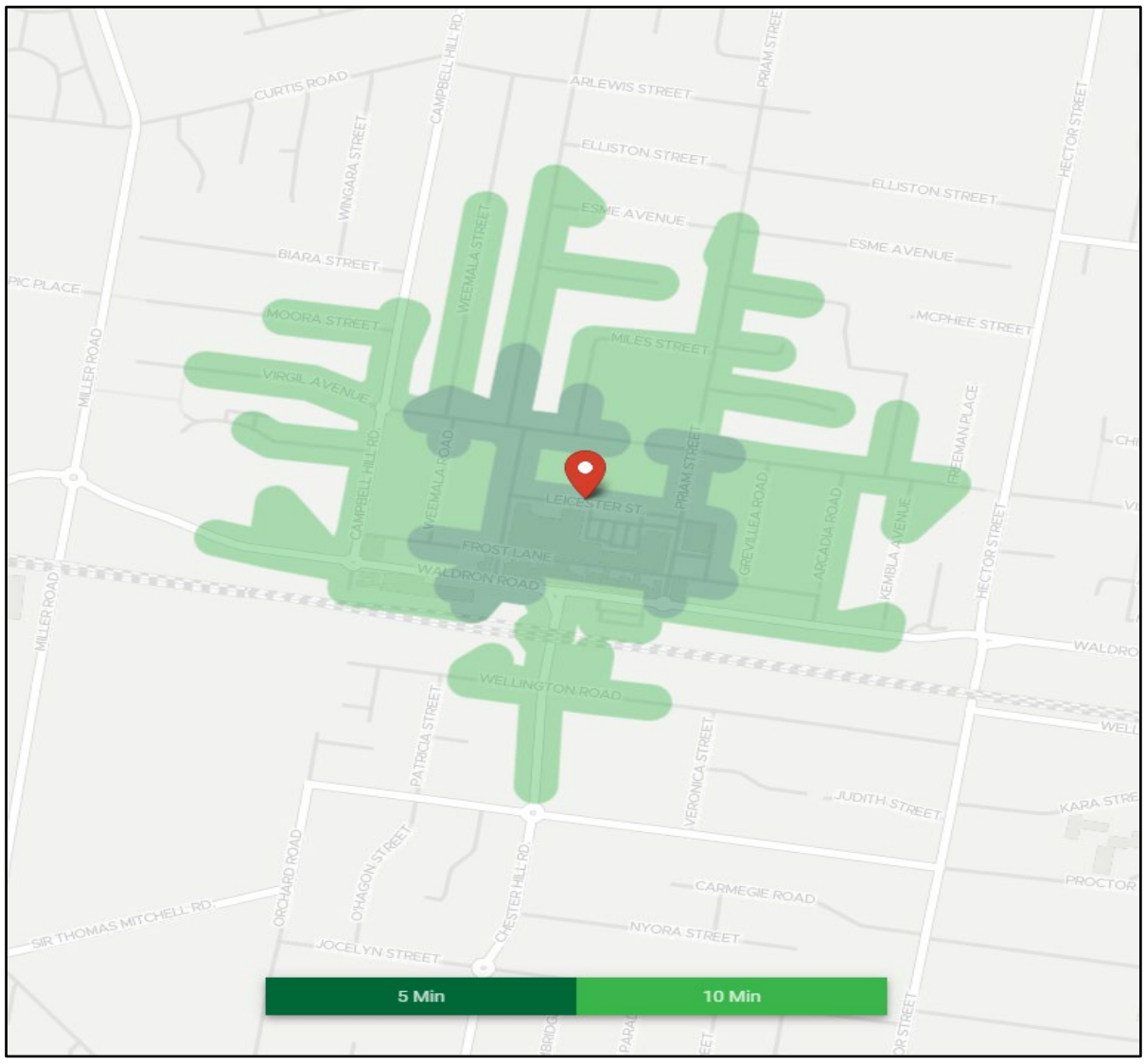


Figure 3: Walking Catchment for the Site

2.5.2 Bicycle Network

The existing Chester Hill 5–10 minutes bicycle network is illustrated below in **Figure 4**. The cycling catchment includes the Chester Hill Station and the employment precinct along Waldron Road as well as Chester Hill and Sefton High Schools, Chester Hill North Public School, recreational areas to the north and Sefton Golf Club to the south.

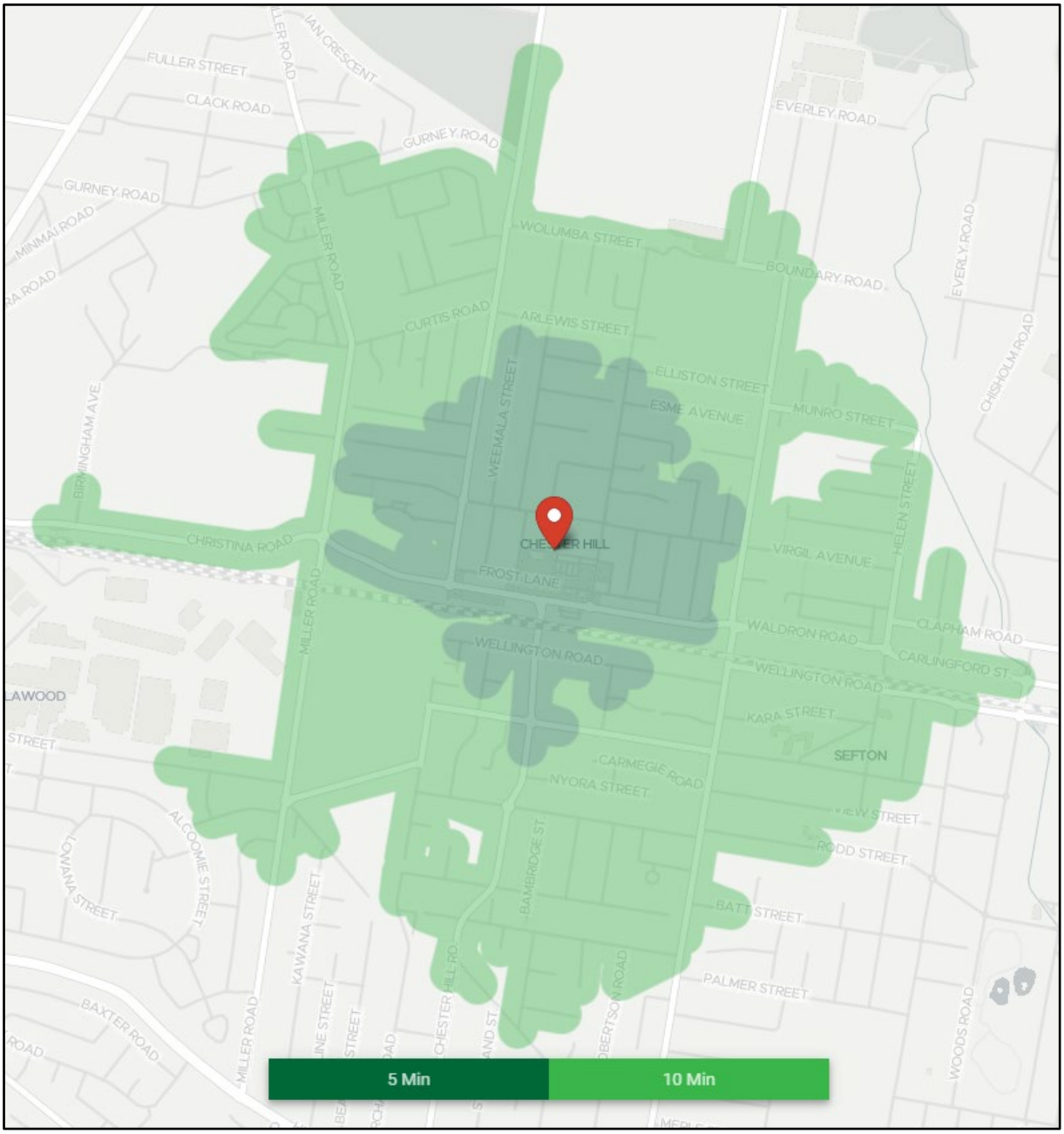


Figure 4: Cycling Catchment for the Site

3 Objectives and Targets

3.1 Objectives

The primary objectives of this Plan are to:

- Reduce the environmental footprint of the Site,
- Promote the use of 'active transport' modes such walking and cycling, particularly for short-medium distance journeys,
- Reduce reliance on the use of private vehicles for all journeys,
- Encourage a healthier, happier and more active social culture.

Having regard for the above, this GTP adopts the following movement hierarchy with priority given to 'active transport' followed by mass public transport and lastly the use of cars and other private vehicles.

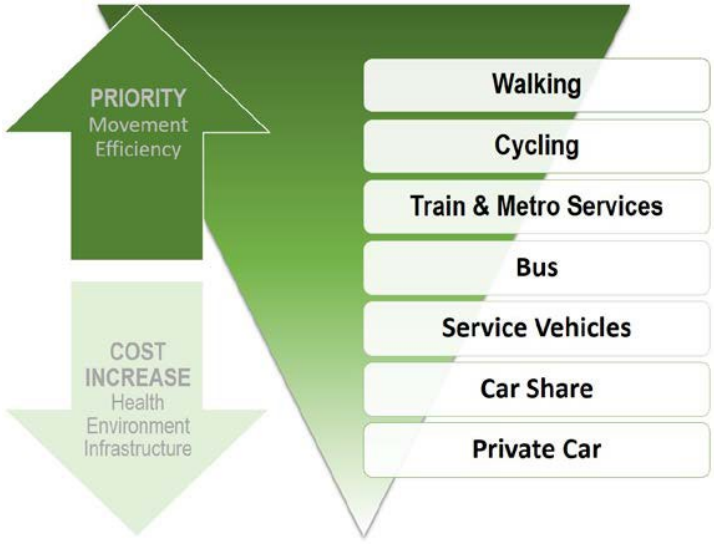


Figure 5 : Movement Hierarchy

In a broad sense, this GTP is intended to encourage the use of active transport thereby reducing the overall distance travelled by private vehicles.

3.2 Mode Share Targets

The State Government's NSW 2021 10-year plan contains targets for improving transport services and shifting trips away from the use of private vehicles toward public transport, walking and cycling. The plan also provides target mode shares for public transport for major centres in NSW. While no specific target is given for Chester Hill, a target of increasing the proportion of total journeys to work by public transport in the Sydney Metropolitan Region to 28% is given.

Increasing the use of walking and cycling for trips is also advocated, with the specific targets of more than doubling the mode share of bicycle trips and increasing the mode share of walking trips to 25%. The plan also aims to create planning policy that encourages job growth in centres close to where people live and to provide access by public transport. These goals apply to the Sydney Metropolitan Region in general.

In the absence of existing mode share figures specific to the Site, the target mode shares shown in **Table 2** have been identified based on the availability of infrastructure and service shown in **Figure 6**. It is expected that further travel mode surveys would be undertaken once the School is operational to establish baseline figures from which progress can be measured.

Table 2: Mode Share Targets

Travel Mode	Existing	Proposed
Walking	17%	20%
Cycling[2]	NA	5%
Train	7%	10%
Bus	3%	5%
Vehicle Passenger	24%	20%
Vehicle Driver	47%	40%
Other/Mode Not Stated	2%	-

Note: 1) 'Existing' mode share to be confirmed via surveys, once the Site is operational

2) Targets obtained from the NSW *Planning guidelines for walking and cycling*

Strategies and specific actions to achieve these targets are discussed in the following sections.

The aim of this GTP to reduce travel to the Site by private vehicles and encourage the use of more sustainable and healthy travel modes such as public and active transport as well as nearby car share vehicles also supports the proposed parking provision. The GTP is a framework for the development and implementation of action strategies for the Proposal and the Transport Access Guide contained in **Appendix GTP-A** would be integrated into the operation of the Site and its day-to-day activities.

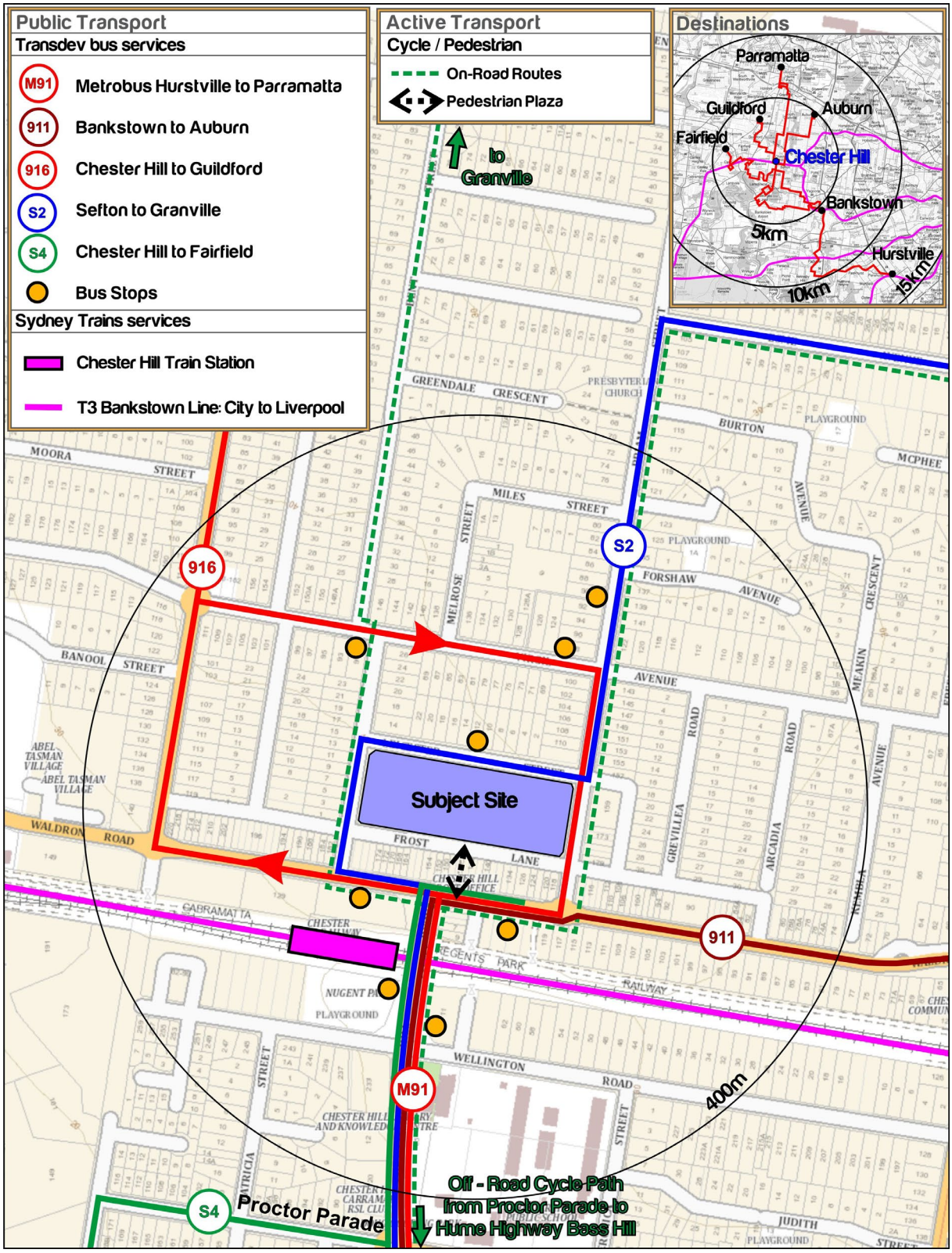


Figure 6: Public and Active Transport Network

3.3 Care Share

At the Development Application stage there is also an opportunity to provide car sharing vehicle spaces on-site.

Car sharing vehicles can be utilised in lieu of the provision additional parking spaces as mentioned in the Land and Environment Court matter of Turner Architects v City of Botany Bay Council [2016] NSW 1186, where Commissioner O'Neill held at [38]:

'…I accept the applicant's submission that… a car share vehicle replaces up to 10 to 12 private cars…'

4 Action Strategies

Six main strategies have been identified and the actions required for each are detailed in **Table 3**. The table details how the targets the specific actions to be implemented as part of this GTP and who will be responsible for implementing each action. In developing this GTP and the strategies and actions comprising it, it is recognised that the end user is not known to the developer. Consequently, it is vital that the developer explains to future tenants the expectations regarding travel planning that are agreed for the Site to facilitate the important process of monitoring and review.

Table 3: Proposed GTP Strategies

STRATEGY	HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY
1 Travel Planning and Demand Management			
1.1 Car Sharing	Utilisation and extension of existing, established car share scheme (GoGet) to set up a car sharing network for the Site, reducing residents need to own and operate their own vehicle. Promote existing car sharing schemes.	• Residents can conveniently utilise the pods on-site to easily achieve mode share targets. • Council should also consider extending this provision to make car share vehicles even more accessible.	Developer, Council
1.2 Travel Plans	• Develop mandatory Travel Plans and provide information for Workplace Travel Plans. • Management of Travel Plans • Promotion of Travel Plans	• Provide information and resources and implement a range of additional incentives (free public transport and car share, cycling merchandise etc) to reward and encourage those who travel actively to help develop a healthy, active culture and meet travel targets. • Continued support of the person/organisation in charge of managing the GTP. • Undertake a GTP event annually. • Promote the follow-up initiatives via web pages: ○ Travel Survey Results; and ○ Progress and update of GTP.	Developer, on-site managers, employees
1.3 Flexible Working hours	Allowing the building manager and retail staff the flexibility to commute outside peak periods to reduce overall congestion and travel time by taking advantage of accessible and convenient off peak public transport discounts and the close proximity of Chester Hill Station and nearby bus stops.	Manage staff rosters where possible to facilitate off peak start/finish times.	Employer, building manager

STRATEGY		HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY
1.4	Removal from Residential Parking Schemes	Removal of the Site from eligibility to participate in residential parking schemes eliminates pressure on availability of existing on-street parking.	Owners, tenants and occupiers of the building will be advised that they are not eligible to participate in any existing or proposed Council on-street resident parking schemes.	Council, owners, tenants
2 Promoting Public Transport and Car Share				
2.1	Travel Pass Loan Schemes Discount Opal	Commercial business may consider subsidising staff travel passes to increase public transport use. Alternatively, staff can pay for their own annual travel pass through their salary, spreading the cost over the year to make it more affordable.	Subject to owner/tenant negotiations and incentives. Opal cards can be provided for boarding house residents to facilitate achieving the public transport mode share target and incentivise ongoing use.	Commercial tenant and Manager responsibility
2.2	Public Transport and Car Share for Business travel	The retail tenants can promote public transport or car share as the first preference for business travel.	This should be supported by employees having access to Opal and GoGet account, subject to owner/tenant negotiations and incentives.	Commercial tenants
3 Promoting Cycling				
3.1	Bicycle Fleets	Building management staff and commercial tenant should consider having bicycle fleets which employees can use for local trips.	Utilisation of on-site bicycle parking facilities and purchase/lease of shared bicycles to achieve greater mode share for bicycle trips.	Building management, retail tenant
3.2	Providing / Maintaining End of Journey Facilities	Providing facilities such as showers, change rooms, lockers.	Each resident effectively has end of trip facilities with their individual bathrooms encouraging the shift towards more walking trips and achieving the 30% target for this mode. Design end of trip facilities such as showers, change rooms, lockers etc to maximise pedestrian activity to and from the Site.	Developer, retail tenant
3.3	Promote Bicycle User Groups	Bicycle User Groups (BUG) encourage bicycle use and promote bicycle rides and initiatives	Encourage the residents and staff to join the local BUG, BUG to lobby for facilities and promote cycling.	Building Manager, BUG
3.4	Promote Bicycle Initiatives	Promotion of bicycle initiatives – NSW bicycle week, cycle to work day etc.	In addition to BUG, promote and encourage cycling in the area. Actively participate in recognised NSW government bicycle initiatives such as bicycle week and cycle to work day.	Local businesses, Council
3.5	Provide bicycle training	Encourages those who wouldn't previously consider cycle as a mode choice to do so.	Provide short training sessions by qualified people.	Employers, tenant management

STRATEGY		HOW IT WORKS	IMPLEMENTATION	RESOURCES / RESPONSIBILITY
4 Promoting Walking				
4.1	Develop Pedestrian Network	Development and maintenance of a high quality, highly permeable pedestrian network around the Site.	Design, construct and maintain continuous pedestrian footpaths and crossing facilities at key locations. Limit delays to walk trips and make them convenient, direct, and integrated with land uses.	Council, developer
4.2	Providing End of Journey Facilities	Provision of sufficient end of trip facilities such, showers, change rooms, lockers etc to maximise pedestrian activity to and from the Site as the wider LGA.	Each resident effectively has end of trip facilities with their individual bathrooms encouraging the shift towards more walking trips and achieving the 30% target for this mode. Design end of trip facilities such as showers, change rooms, lockers etc to maximise pedestrian activity to and from the Site.	Developer, retail tenant
5 Restraining Parking				
5.1	Reduce Residential Parking Rates	Restrain parking requirements for the Site high density residential apartments to account for the availability of other travel options.	The Site has very good access by public transport, as well as good quality pedestrian and cycle networks, and a good range of local shops, services and facilities in close proximity, thereby reducing residents need to own and operate a car.	Developer
5.2	Site Co-sharing Parking	Provision of co-ordinated and shared parking on-site.	Provide parking on-site that is co-ordinated and where possible shared across multiple land uses or shared between retail and boarder parking that don't have similar peak parking demands.	Developer, Employers, Councils
5.3	Transport Access Guide	Provide residents and staff with a Transport Access Guide (Appendix GTP-A) and advise them of the transport options available in the area.	Keep a copy of the Transport Access Guide current, relevant, useful and accessible. The TAG should be clearly displayed in communal areas.	Building management
6 Influencing Travel Behaviour				
6.1	Provision of Sustainable Travel Packs to Residents	Introduces residents to the GTP and provides information on walking and cycling routes, and travel by bus & train. Contact details for who is responsible for the GTP will also be provided.	To be provided on first occupation of dwellings	Management
6.2	Promotional Free Travel	Providing the option to work remotely means there will be fewer vehicles on the road.	Manage staff rosters and develop work-from-home policies and procedures, where possible.	Employers
6.3	Transport Access Guide	Provide residents and staff with a Transport Access Guide advising them of the transport options available in the area.	Keep a copy of the Transport Access Guide current, relevant, useful and accessible. The TAG should be clearly displayed in communal areas.	Building management, employers

5 Implementation

5.1 Green Travel Welcome Information

All new staff and residents of the building will be provided with a welcome information pack that outlines the Site's green and sustainable transport initiatives. This welcome information will be prepared, maintained and distributed by the Building Manager and may be delivered as a hard copy or electronically (via email or equivalent). Welcome information will include:

- General information on the arrangement and management of car parking and bicycle parking on-site and details of the relevant contact;
- Advice on how to access public transport timetables and real time travel information through the building's intranet web page OR hard copies of train and tram timetables for routes within approximately a 5 minute walk from the Site;
- Advice on how to access public transport / cycling / walking maps and a map of key destinations (that identifies distances and estimated walking times and should include key services, nearby public transport stops and share care locations) through the building's intranet web page OR hard copies of these maps;
- Information on other sustainable transport information available either online OR via a hard copy pamphlet providing equivalent contact details.
- A redeemable offer of an Opal card to the value of one week along with registration information and details of the closest Opal top-up point; and
- Information on other Green Travel initiatives that may be implemented by the Building Manager.

The ongoing implementation of the Green Travel Plan will be the responsibility of the Building Manager. This includes a minimum annual review of all information provided within welcome information packs, accessible via the building's relevant online web page and displayed within the building lobbies to ensure that information is relevant and current.

The management of bicycle parking and implementation of other sustainable transport initiatives would be managed as part of the role of the Building Manager.

5.2 Monitoring and Review

In order to monitor the success of existing green travel initiatives and to inform the implementation of any new initiatives, a staged staff questionnaire system regarding travel habits will be implemented by the Building Manager.

Questionnaires would be implemented on-line either through a generic survey site or through an online management system. This system should generally have three stages:

- Stage 1 is a questionnaire survey of occupiers of the building upon occupation and used to collect information on their travel characteristics, to gauge interest in the various initiatives and to seek ideas for other initiatives.
- Stage 2 is a questionnaire and feedback form to be filled out 6 months after occupation and used to confirm travel habits and seek feedback on the efficiency and use of implemented green travel initiatives.
- Stage 3 is an annual Green Travel Plan review of travel habits for all occupants and provides an opportunity for occupants to suggest additional measures for implementation.

Appendix GTP-A

Transport Access Guide

Getting to and from Chester Square - 1 Leicester Street

Bus Services

There are 5 Transdev 5 bus services which run through Chester Hill.

Metrobus Route M91 is a 7 day service between Parramatta and Hurstville. Route 911 from Bankstown to Auburn runs 6 days a week and services to Guildford, Granville, Sefton and Fairfield are occasional weekday services only.

Transdev Bus services	First - Last Service Peak / Non-Peak Frequency		
Route Number	**Mon. - Fri.**	**Sat.**	**Sun.**
M91 Metrobus Hurstville to Parramatta	5:30 - 20:30 10 / 15 - 20m.	6:45 - 21:30 20 - 30mins.	7:15 - 21:30 20 - 30mins.
911 Bankstown to Auburn	6:00 - 18:00 30 / 60mins	6:45 - 21:30 60mins.	——
916 Chester Hill to Guildford	1xAM & 1xPM service	——	——
82 Sefton to Granville	2xAM,12:00 then 2xPM services	——	——
84 Chester Hill to Fairfield	9:45 - 12:15 190mins.	——	——

Further information regarding buses can be found by visiting the NSW Government's Plan Your Trip website at http://www.transportnsw.info/. or download the real-time app to your phone at http://www.transportnsw.info/apps

Train Services

Chester Hill Train Station is on the T8 Airport and South Line, with services to the city and Liverpool.
The station is within a 3 minute walk form the main entry on Frost Lane and the plaza connecting Waldron Road.

Sydney Trains services	First - Last Service Peak / Non-Peak Frequency	
T3 Bankstown Line	**Mon. - Fri.**	**Sat., Sun.**
City to Liverpool	4:10 - 00:40 15 / 20 - 30m.	4:20 - 23:55 30mins.

Further information regarding trains can be found by visiting the NSW Government's Plan Your Trip website at http://www.transportnsw.info/.

Parking

There are 4 levels of basement carparking, 2 for residents and 2 for the retail component.
Entry and exit is towards the southern end of the Bent Street frontage.

Cycling

On-road cycle routes north are Best Street and Priam Street linking Auburn and Granville.
Chester Hill Road south of the site has a shared cyclepath running to the Hume Highway.
A 16km Parramatta to Liverpool Rail Trail runs generally west of Chester Hill.

More detail in this region and across the Sydney cycle network can be found at https://www.rms.nsw.gov.au/maps/cycleway_finder

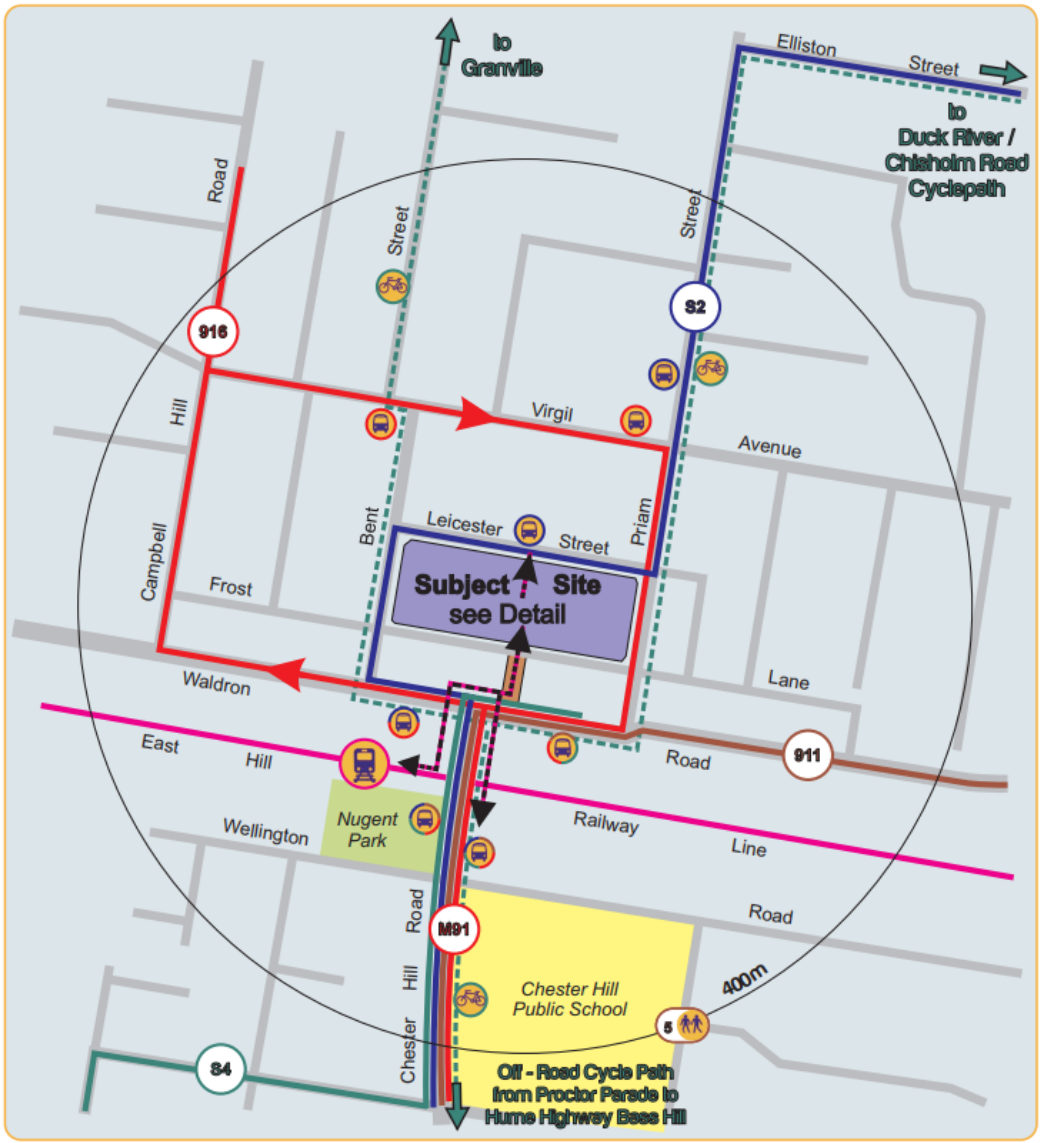
Prepared by
asongroup
info@asongroup.com.au | +61 2 9083 6601 | Suite 1202, Level 12, 220 George Street, Sydney NSW 2000

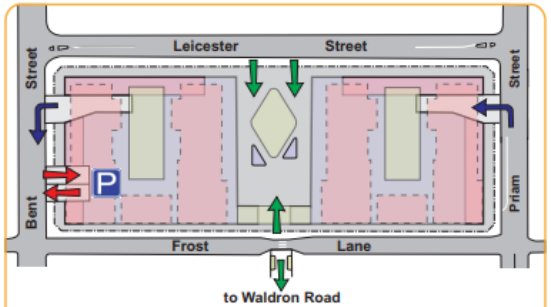
Chester Square

1 Leicester Street
Chester Hill, 2163

Transport Access Guide

June 2019





Legend

Transdev bus services

Bus Stop Location	Routes Number and Destination
Waldron Road / Virgil Street	M91 Metrobus Hurstville to Parramatta
Waldron Road	916 Chester Hill to Guildford
Waldron Road / Leicester Street	911 Bankstown to Auburn
Waldron Road	S2 Sefton to Granville
	S4 Chester Hill to Fairfield

Sydney Trains Services

Mascot Train Station	T8 Airport and Southern Line: City to Macarthur via East Hills

Active Transport Cycle / Walking Network

- Off-Road Shared Paths
- Pedestrian Routes
- 5 Walking Distance