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Our reference: P5825.002L Woodville Road Corridor TTS Report Addendum.docx

14 January 2025

16 Memorial Avenue
PO Box 42
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Attention: **Janine Saab**
Sent via email: ***Janine.Saab@cumberland.nsw.gov.au***

Dear Janine

RE: WOODVILLE ROAD CORRIDOR TRAFFIC AND TRANSPORT STRATEGY
POST-GATEWAY REPORT ADDENDUM

Bitzios Consulting previously prepared a traffic and transport strategy report in November 2023 to support the Woodville Road Corridor Planning Proposal.

It is understood that the Woodville Road Corridor Planning Proposal was submitted for and received Gateway approval, conditional on a number of items. It is further understood that some minor changes to the yields of the Planning Proposal sites have been made since the last revision of our report.

This letter summarises our review and evaluation of the latest documentation for the Planning Proposal, and provides commentary to address Gateway conditions pertaining to traffic and transport.

This letter should be read in conjunction with **P5825.006R Woodville Road Corridor Traffic and Transport Strategy Report** as an addendum to the main report.

1. Planning Proposal Site Changes

1.1. Additional Sites

Two (2) additional sites have been added to the Planning Proposal scope, for a new total of 31 sites (from 29). The two additional sites, Sites 30 and 31, are located on the southern side of the Merrylands East Precinct as shown in Figure 1.1

Source: Woodville Road Corridor Planning Framework – Amended Urban Design Report (CM+, December 2024)

Figure 1.1: New Site Locations

1.2. Site Yield Changes

In additional to the new sites, a number of changes have been made to select sites across the study area. These changes include:

- Site 2 – changes to site FSR splits resulting in reduction in residential GFA and dwellings
- Site 15 – changes to zoning typology on this site from townhouses to R4 for the entire site
- Site 23 – reduction in permissible building height from 9 storeys to 4 storeys for rear-facing sites
- Site 24 – reduction in permissible building height from 9 storeys to 4 storeys for rear-facing sites.

These changes are summarised in Table 1.1

Table 1.1: Masterplan Yield Changes

Site	Precinct	No. of Proposed Dwellings		
		Previous	New	Change
2	Woodville North	113 dwellings	92 dwellings	-21 dwellings
15	Woodville North	164 dwellings	170 dwellings	+6 dwellings
30	Merrylands East	-	85 dwellings	+85 dwellings
31	Merrylands East	-	88 dwellings	+88 dwellings
23	Woodville South	597 dwellings	501 dwellings	-96 dwellings
24	Woodville South	549 dwellings	408 dwellings	-141 dwellings
			Total	**-79 dwellings**

1.3. Overall Masterplan Changes

The overall built form masterplan yield changes in the Planning Proposal sites are summarised in Table 1.2.

Table 1.2: Masterplan Yield – Previous vs. New

Precinct	Previous	New
Aggregate site area	219,474 m^2	229,094 m^2
Total residential yield	370,364 m^2	362,035 m^2
Total non-residential yield	20,788 m^2	20,102 m^2
Total Population	10,349 persons	10,187 persons
Total Dwellings	3,696 dwellings	3,617 dwellings

2. Traffic Generation Changes

As a result of the site changes detailed in Section 1, traffic generation for the Planning Proposal sites have been updated to reflect the modified/new sites. The corresponding calculations and changes are summarised below in Table 2.1 and detailed in **Attachment A**.

Table 2.1: Trip Generation – Previous vs. New

Net Trip Generation	Number of Trips		
	Previous	New	Change
AM Peak			
Woodville North	176 trips	167 trips	-9 trips
Merrylands East	397 trips	415 trips	+18 trips
Woodville South	314 trips	255 trips	-59 trips
		Total	**-50 trips**
PM Peak			
Woodville North	162 trips	153 trips	-9 trips
Merrylands East	630 trips	640 trips	+10 trips
Woodville South	349 trips	290 trips	-59 trips
		Total	**-58 trips**

The trip generation changes can therefore be summarised as:

- A minor decrease in trip generation in the Woodville North Precinct, as associated with the small changes to Sites 2 and 15
- An increase in trip generation in the Merrylands East Precinct, as associated with yields corresponding to the two new Sites 30 and 31
- A notable decrease in trip generation in the Woodville South Precinct, as associated with the reduction in building heights (and therefore number of dwellings) at Sites 23 and 24.

The overall traffic generation across the Masterplan is noted to be reduced compared to the yields adopted for traffic modelling as part of the Woodville Road Corridor TTS.

It is further noted that the change in traffic generation in each precinct, ranging from a difference of around 10 to 50 trips in the peak hour, represents a very small change in traffic volumes on Woodville Road. With modelled volumes of around 3,000 vehicles per hour (bidirectional), the Planning Proposal site changes represent a 0.3% to 2% change in traffic volumes along the major corridor. It is further noted that the upper spectrum of the change is negative in nature, being a reduction in traffic when compared to the modelled volumes.

For these reasons, updates to the traffic modelling have not been undertaken as part of this addendum to the report and it is considered that the traffic impact associated with the changes to the latest Masterplan relative to the previous iteration are negligible and will not have a significant impact on assessment findings.

3. Changes to Strategic Transport Measures and Recommendations

3.1. Overview

Our review of the proposed changes to the Woodville Road Corridor Masterplan has confirmed that we do not expect any significant impacts or changes to our previous assessment detailed in the TTS report.

However, the following sections detail our comments regarding the recommended strategic transport measures for each precinct.

3.2. Woodville North Precinct

No comments. The proposed site changes do not affect the recommendations for this precinct.

3.3. Merrylands East Precinct

Two new sites have been added in the southern side of the Precinct. The majority of the transport measures for this Precinct focused on improving active and public transport accessibility near Oxford Street and Lansdowne Street, including capacity upgrades and new pedestrian facilities near the John Cootes site.

The new sites are noted to be located on the southern side of the precinct, and are not subject to the majority of the benefits from these recommendations. At the same time, similarly to the previous Site 18, these sites are not conveniently located for catering for significant uplift. As Woodville Road is primarily a free-flow traffic corridor at this location (not near any traffic signals or other major intersections), it presents a significant obstacle for travel.

It is recommended that Council explore options to:

- Improve local network active transport accessibility and/or crossing opportunities in the 750m section of Woodville Road between Oxford Street and Guildford Road
- Enhance local corridors like Excelsior Street to the east to provide safer active transport connections to the busier Precinct hearts.

3.4. Woodville South Precinct

See comments for Merrylands East Precinct. Where Site 29 was previously a single isolated site, it now forms part of an inter-precinct cluster of sites (Sites 29, 30, and 31) at this location. There is increased value in providing improved services and facilities at this location as a reflection of the increased density of the proposed land use in this area.

4. Response to Gateway Conditions

4.1. Appropriateness of Traffic Generation Rates

The adopted traffic generation rates are summarised in Table 4.1.

Table 4.1: Traffic Generation Rates

Land Use	Rate(s)	Source	Comments
Medium density residential	▪ AM peak: 0.5 trips / dwelling ▪ PM peak: 0.5 trips / dwelling	Guide to Traffic Generating Developments (GTTGD) 2002	In comparison to the latest Guide to Traffic Impact Assessments 2024 (GTIA 2024), we note that the adopted rates are higher and therefore more conservative for medium density housing.
High density residential	▪ AM peak: 0.19 trips / dwelling ▪ PM peak: 0.15 trips / dwelling	TDT 2013/04a	▪ Adopted rates are for average Sydney rates based on surveys on a number of sites. In comparison to the GTIA 2024 rates, we note that the adopted rates match the same rates in the latest standard. ▪ It is acknowledged that these rates are appropriate for areas with 'high public transport accessibility', with the requirement for applying these rates being within 800m of a major transport interchange or multiple public transport services with acceptable capacity. ▪ Woodville North sites are mostly or very close to being within 800m catchment of the Merrylands Train Station ▪ Merrylands East sites is generally outside of an 800m catchment of Merrylands and Guildford Train Stations ▪ Woodville South sites are mostly just outside of the 800m catchment of Guildford Train Station ▪ All developments are serviced by public transport (bus) facilities along Woodville Road, with the three Precincts centred around connecting roads like William Street, Merrylands Road, and Guildford Road. ▪ Therefore, with respect to the borderline proximity of the developments to the train stations, and the close proximity to existing or proposed public transport services, these traffic generation rates are considered appropriate for use.
Commercial	▪ AM peak: 2.1 trips per 100m2 GFA ▪ PM peak: 1.8 trips per 100m2 GFA	TDT 2013/04a	▪ We adopted traffic generation rates for Site OB5 (16 Giffnock Avenue Macquarie Park) from TfNSW's guidelines as opposed to average Sydney rates for the commercial land use. ▪ This was considered to be more appropriate as a number of other surveyed sites were very close to railway hubs, thus ensuring a more conservative assessment for employment uses
Retail	▪ AM peak: 2.5 trips per 100m2 GFA ▪ PM peak: 5 trips per 100m2 GFA	GTTGD 2002	▪ Retail trip generation rates were adopted from typical restaurant peak hour trip generation rates. This was considered to be appropriate given the expected food-orientated nature of the majority of retail land use. ▪ Shopping centre traffic generation rates were adopted from the Merrylands East Neighbourhood Centre Traffic Impact Assessment and associated traffic assessment by Stantec 2021-2022 ▪ These rates are noted to be based on traffic generation rates for shopping centres from GTTGD 2002.
Shopping Centre (Supermarket)	▪ AM peak: 5.8 trips per 100m2 GFA ▪ PM peak: 11.6 trips per 100m2 GFA	Stantec report GTTGD 2002	

In addition to the above justifications, we note that the proposed public transport initiatives and travel demand management measures identified in each precinct's Integrated Strategic Transport Measure map seek to encourage a mode shift from private to public modes of transportation in line with the overarching principle of the urban design masterplan and transport strategy. The proposal of these transport initiatives seeks to facilitate better routes and connections to nearby stations. Simultaneously, the recommendations pursue stricter parking controls across the subject sites, with lowered or capped parking rates for new sites.

We therefore consider the selected traffic generation rates as appropriate for the purposes of this 'Vision and Validate' assessment. The rates are in alignment with the transport vision for the Woodville Road Corridor as established through the principles of the Cumberland 2030 Local Strategic Planning Statement.

Finally, for the purposes of understanding the implications of adopting favourable traffic generation for high density residential trip generation, we've prepared the following comparison:

- The TfNSW GTIA 2024 rate for high density residential dwellings with low public transport accessibility in the sub-metropolitan area in the AM peak is: 0.19 * P + 1.79, where P is the number of parking spaces
- Assuming a provision of 1 parking space per dwelling (for high density residential, this would on average be a generous allowance for studios, 1-bed and 2-bed units), the rate becomes very similar to that of the high density residential with high public transport accessibility (0.19 * D, where D is the number of dwellings).

This therefore demonstrates that there will be little difference in the overall traffic outcomes, and the adopted 'transit-orientated' traffic generation rates are unlikely to underestimate the traffic impacts of the proposed development.

4.2. Traffic Capacity Improvements

The Road Network (RN) upgrades proposed in the Woodville Road Corridor TTS are summarised in Table 4.2. Of these, the upgrades which are considered road capacity upgrades or road closures are highlighted in blue for clarity.

Table 4.2: Road Network Upgrades

Type/ID	Location	Description
RN-1	Woodville Road / Randle Street	New pedestrian crossing on the western approach
RN-2	Woodville Road / William Street	Upgrades to signalised intersection
RN-3	Woodville Road / Randle Street	Upgrade existing pedestrian crossing to a shared pedestrian and cyclist crossing
RN-4	William Street / Bennalong Road	New crossing facility for cyclists across William Street
RN-5	Merrylands Road / Bennalong Road	New crossing facility for cyclists across Merrylands Road
RN-6	Woodville Road / Louis Street	Upgrade existing pedestrian crossing to a shared pedestrian and cyclist crossing
RN-7	Partial segment of Union Street	Road closure as part of uplift development to provide future open spaces
RN-8	Partial segment of Elizabeth Street	Road closure as part of uplift development to provide future open spaces

Type/ID	Location	Description
RN-9	Partial segment of Brady Street	Road closure as part of uplift development to provide future open spaces
RN-10	Woodville Road / Lansdowne Street	Upgrade intersection with new traffic signals
RN-11	Woodville Road / Oxford Street	Upgrades to signalised intersection
RN-12	Near Lansdowne Street / Lamb Crescent	New crossing facility for cyclists crossing Lansdowne Street
RN-13	Partial segment of Kenelda Avenue	Road closure as part of uplift development to provide future open spaces
RN-14	Woodville Road / Guildford Road	Upgrades to signalised intersection
RN-15	Guildford Road / Chamberlain Road	Upgrade intersection to seagull or roundabout intersection
RN-16	Woodville Road / Rawson Road	Upgrades to signalised intersection
RN-17	Woodville Road near Rhodes Avenue	New mid-block signalised pedestrian crossing
RN-18	Partial segment of Rhodes Avenue	Road closure as part of uplift development to provide future open spaces

There are therefore a total of six (6) intersection capacity improvements and five (5) road closures.

The intersection capacity upgrades can be divided into two categories:

- Upgrades to existing signalised intersections to provide additional capacity (William Street RN-2, Oxford Street RN-11, Guildford Road RN-14, and Rawson Road RN-16).
- Upgrades to existing priority intersections to new intersection control types to accommodate the increased traffic flows from the Planning Proposal uplift (Lansdowne Street RN-10 and Guildford Road / Chamberlain Road RN-15).

These intersection capacity upgrades align with the Woodville Road Corridor Structure Plan target of providing an "*urban hub in each precinct to serve the local community".* Improved ability for traffic movements to turn and pass through the key 'bottleneck' intersections facilitates better accessibility to each of the urban hubs, and the provision of new signalised crossings aligns with the main urban design principle of enhancing active transport across the corridor. Furthermore, the majority of proposed capacity upgrades do not involve widening of the road, and do not otherwise compromise the convenience, amenity or safety of pedestrians, cyclists and public transport users. The upgrades seek to achieve reductions in traffic congestion and safer crossing facilities that work hand in hand to deliver a more cohesive transport network for all road users.

The proposed road closures were tested as part of the Project Case microsimulation modelling for the TTS via the application of traffic management policies (lane closures) and/or adjustments to zone connectors to reflect closed roads. The road network was determined to be capable of accommodating the proposed closures, noting that the majority are on minor local roads with minimal existing traffic volumes. The public domain benefits are considered to outweigh the minor traffic impacts at these locations.

Yours faithfully

Jeffrey Yang
Senior Traffic Engineer and Transport Planner
BITZIOS CONSULTING
Attachments:
A: Traffic Generation and Demand Development Tech Note

Attachment A

Traffic Generation and Demand Development Tech Note

Issue History

File Name	Prepared	Reviewed	Issued by	Date	Issued to
P5825.001T Woodville Road Corridor Planning Framework TTS Demand Development	R. Jain	A.Grey	J. Yang	12/04/2023	Janine Saab via email: janine.saab@cumberland.nsw.gov.au
P5825.002T Woodville Road Corridor Planning Framework TTS Demand Development	J.Yang	A.Grey	J. Yang	20/04/2023	Janine Saab via email: janine.saab@cumberland.nsw.gov.au
P5825.003T Woodville Road Corridor Planning Framework TTS Demand Development	R. Jain / J.Yang	A.Grey	J. Yang	9/05/2023	Janine Saab via email: janine.saab@cumberland.nsw.gov.au
P5825.004T Woodville Road Corridor Planning Framework TTS Demand Development	A. Hu	J. Yang	J. Yang	19/12/2024	Janine Saab via email: janine.saab@cumberland.nsw.gov.au
P5825.005T Woodville Road Corridor Planning Framework TTS Demand Development	A. Hu	J. Yang	J. Yang	14/01/2025	Janine Saab via email: janine.saab@cumberland.nsw.gov.au

Woodville Road Corridor Traffic and Transport Study

Demand Development Technical Note

1. Introduction

1.1 Background

Cumberland City Council commissioned Bitzios Consulting to undertake a Traffic and Transport Study (TTS) to support the delivery of the new planning framework for the Woodville Road Corridor. This TTS involved coordination with the Urban Design team to provide input into the traffic and transport implications of the proposed uplift in key precincts along the Woodville Road corridor.

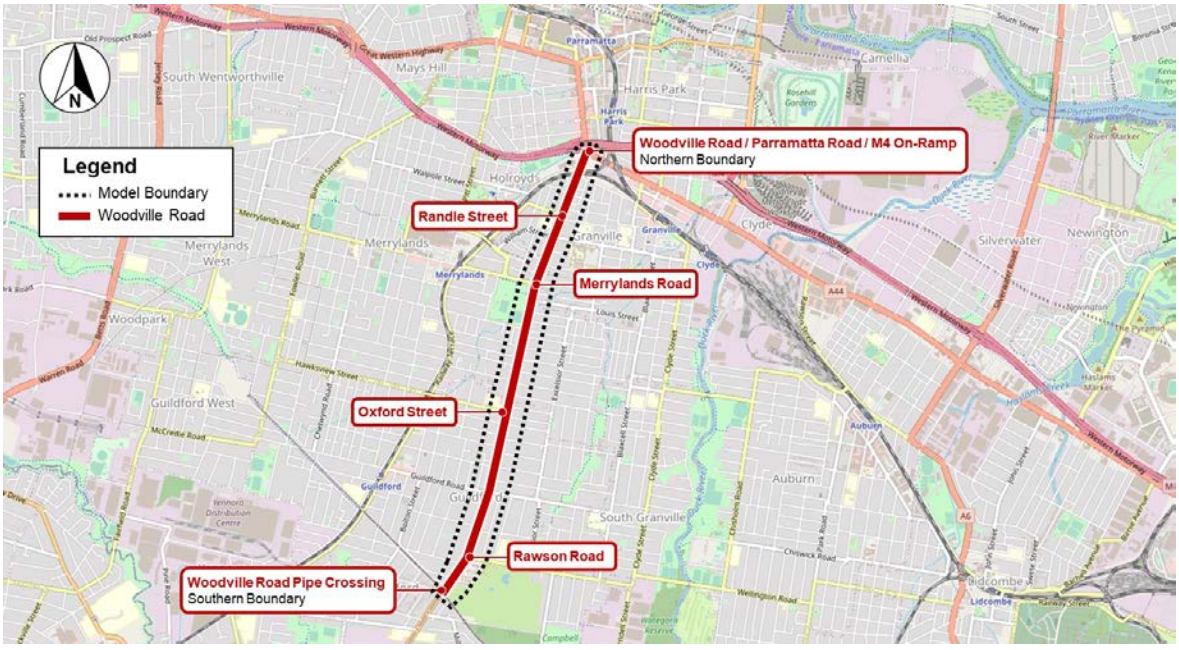
As a part of TTS, future design year AIMSUN models were developed for future year growths based on traffic demands accounting for proposed uplift of key precincts.

This technical document outlines the latest future year traffic calculations associated with the proposed Planning Proposal uplift of key precincts and the relevant land use and traffic generation assumptions.

1.2 Modelled Area

The modelled area is a focused corridor cordoned close to Woodville Road, between the Parramatta and Road / M4 on-ramp intersection and the Woodville Road water supply pipe crossing near Springfield Street.

The modelled area is shown in Figure 1.1.



Adapted from OpenStreetMap

Figure 1.1: Modelled Area

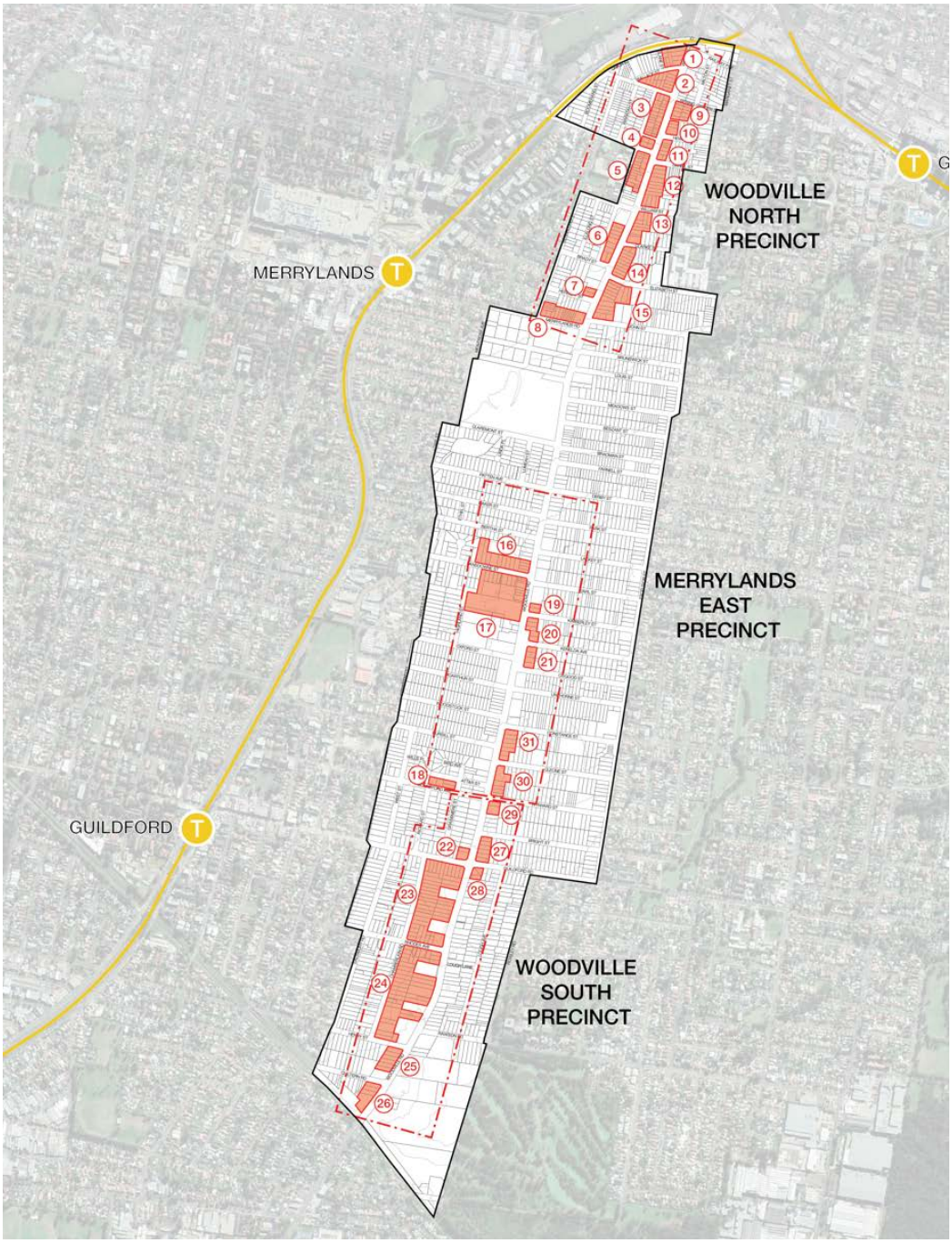
2. Planning Proposal Development

2.1 Overview

There are three (3) key precincts planned along the Woodville Road Corridor, targeting specific land use and built form density changes at 31 discrete Planning Proposal sites. The sites are divided among the precincts as follows:

- Woodville North Precinct: Sites 1-15
- Merrylands East Precinct: Sites 16-21, 30 and 31.
- Woodville South Precinct: Sites 22-29.

An overview of the precincts and planning proposal sites is shown in Figure 2.1.



Source: CM+

Figure 2.1: Overview of Development Precincts

Land use and yield information for each of the sites in terms of residential and business growth have been supplied by CM+ as part of the following documents:

- Built Form Masterplan Workshop slides (dated 28 November 2022)
- Final Urban Design Report (dated 05 December 2024)
- WRC – Amended Urban Design Report – Updated Site Yields v2 (dated 8 January 2025).

The latest yield breakdown is provided in **Attachment A**.

Furthermore, other documents reviewed included:

- Merrylands East Neighbourhood Centre Traffic Impact Assessment (Stantec, dated 9 February 2021)
- 246-264 Woodville Road Merrylands Traffic and Parking Assessment Letter (Stantec, dated 22 April 2022)
- Planning Proposal Merrylands East Local Centre (Green Dior Holdings Pty Ltd, dated 29 April 2022).

These documents were reviewed to inform the development of traffic generation assumptions for this assessment.

The Masterplan was noted to include three (3) growth scenarios ranging from Low Growth, Medium (Base) Growth and High Growth. It is understood that Council has decided to proceed with the 'Base Case' growth scenario. Therefore, the relevant information used to form the residential and business traffic growth assumptions described in the following sections has been based on the Medium (Base) Case yields.

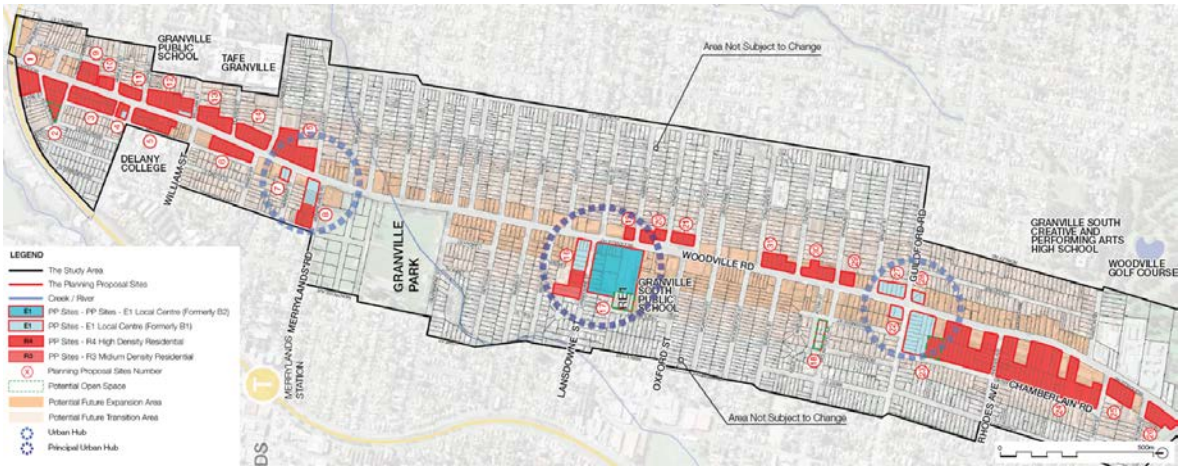
2.2 Residential and Employment Growth

2.2.1 Overview

The overall Masterplan comprises the following land uses and yields along the corridor:

- A total aggregate site area of 229,094m^2 across all 31 sites
- A total residential yield of 362,035m^2 gross floor area (GFA):
  - Associated increase in population projected to be around 10,187 persons
  - Corresponding increase in number of dwellings projected to be around 3,617 dwellings
- A total non-residential yield of 20,102m^2 GFA:
  - Can be formed by some combination of retail, commercial and shopping centre land uses
  - Industrial land use is not planned at any of the sites.

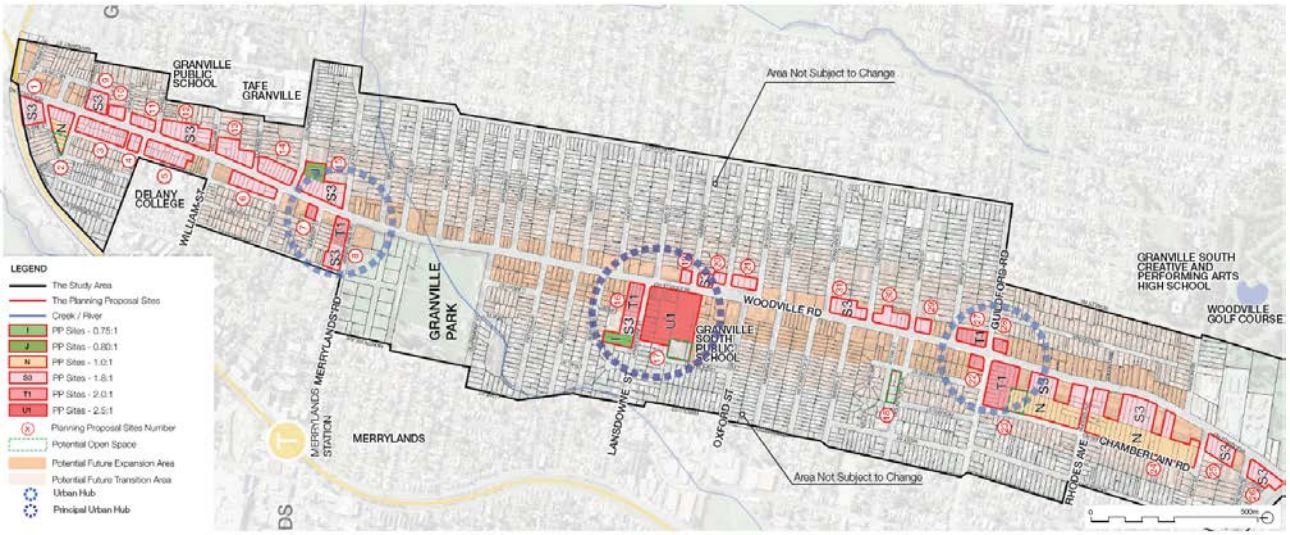
The proposed land zoning is shown in Figure 2.2.



Source: Draft Urban Design Masterplan (CM+)

Figure 2.2: Land Zoning Map

The floor space ratio (FSR) map is shown in Figure 2.3.



Source: Draft Urban Design Masterplan (CM+)

Figure 2.3: Floor Space Ratio Map

Most sites are exclusively a single type of land use and FSR. Where one of the sites spans multiple land uses, a portion of the site GFA was allocated to each use based on the available information.

2.2.2 Woodville North Precinct

The Woodville North Precinct comprises 15 of 31 sites, with the following proposed yields within the precinct:

- A total aggregate site area of 80,724m^2
- A total residential yield of 136,833m^2 gross floor area (GFA):
  - Associated increase in population projected to be around 3,891 persons
  - Corresponding increase in number of dwellings projected to be around 1,368 dwellings
- A total non-residential yield of 1,776m^2 GFA.

The planned uplift in the Woodville North Precinct is noted to be primarily residential in nature, with a relatively small allocation of land for ancillary retail and commercial facilities.

The following site-specific observations were made:

Site 2

Site 2 is a triangle site bounded by Woodville Road, Union Street and Wallace Street. The land zoning map indicates that it is proposed to be composed of both R4 High-Density Residential and Open Space land uses. An overall FSR of 1.8:1 applies to the subject site, with the following site yields being based on the incentive outcome with bonus uplift at the site:

- Site area: 6,301m^2
- Residential GFA: 9,208m^2.

It is understood that the base FSR control will apply to the site in the case that the site cannot be amalgamated, and no open space can be provided.

The above site yields have been adopted for the purpose of the conservative 'worst-case' traffic assessment.

2.2.3 Merrylands East Precinct

The Merrylands East Precinct comprises 8 of 31 sites, with the following proposed yields within the precinct:

- A total aggregate site area of 58,379m^2
- A total residential yield of 100,015m^2 gross floor area (GFA):
  - Associated increase in population projected to be around 2,791 persons
  - Corresponding increase in number of dwellings projected to be around 997 dwellings
- A total non-residential yield of 11,871m^2 GFA.

The planned uplift in the Merrylands East Precinct is noted to comprise significant levels of both residential and retail/commercial growth. The core of this precinct is the Merrylands East Local Centre, previously known as the John Cootes site, located at Site 17.

The following site-specific observations were made:

Site 16

Site 16 is an irregular site adjacent to Woodville Road and Lansdowne Street comprising Other E Zone, R4 High Density Residential and R3 Medium Density Residential land uses.

To determine the dwelling splits between high and medium density units for trip generation calculations, the areas and GFAs for each portion of the site was determined from the

available total site area and GFA and associated FSR for each land use. This data was supplemented by manual measurements of the site division via Sixmaps satellite imagery. The resulting land use breakdown adopted for the purposes of this traffic assessment is as follows:

- R3 Medium Density: 2,353m^2 GFA (20 dwellings)
- R4 High Density: 4,753m^2 GFA (48 dwellings)
- Other E Zone (residential development): 8,278m^2 GFA (83 dwellings).

Merrylands East Local Centre (Site 17)

Merrylands East Local Centre, previously known as the John Cootes site, located at Site 17 is planned to be a large-scale E1 Local Centre for the precinct and also for the wider Corridor as a whole, with dense uplift of both residential and retail components at the site. The proposed development yields provided include:

- Residential GFA: 54,722m^2 GFA (547 dwellings)
- Non-residential GFA: 10,951m^2 GFA.

It is noted that while these differ slightly from the original Merrylands East Local Centre Planning Proposal (April 2022), the proportions of the development types are generally similar. The aforementioned Planning Proposal uses included shopping centre, specialty retail, hotels and serviced apartments, childcare centres and car wash facilities. Based on the provided information, for the purpose of this traffic assessment the non-residential land uses at this site were assumed to be divided between specialty retail and shopping centre uses:

- Specialty Retail: 7,301m^2 GFA (67%)
- Shopping Centre: 3,650m^2 GFA (33%).

2.2.4 Woodville South Precinct

The Woodville South Precinct comprises 8 of 31 sites, with the following proposed yields within the precinct:

- A total aggregate site area of 89,991m^2
- A total residential yield of 125,187m^2 gross floor area (GFA):
  - Associated increase in population projected to be around 3,505 persons
  - Corresponding increase in number of dwellings projected to be around 1,252 dwellings
- A total non-residential yield of 6,455m^2 GFA.

The planned uplift in the Woodville South Precinct is divided between both residential and retail/commercial growth. There is a moderate amount of growth for retail/commercial land use, with a neighbour centre located around the intersection of Woodville Road and Guildford Road. It is anticipated that the area would be characterised by mixed-use buildings with ground-level food retail like restaurants and cafés, as well as some commercial offices; however, it is noted that specifics on tenancies will be determined at a later stage.

The following site-specific observations were made:

Site 24

Site 24 is an irregular site adjacent to Woodville Road, Rhodes Avenue and Henry Street planned to be exclusively R4 High Density Residential land use. Despite this, it was noted that the planned yields for the site include 1,440m^2 GFA of non-residential land use.

As commercial premises are prohibited in R4 zones, it was therefore assumed that 100% of the site's non-residential land use was for ancillary retail facilities.

It is understood that while an overall FSR of 1.8:1 applies to Site 24, two (2) sites are considered to be 'constrained' by having 8+ owners and remain unchanged in terms of planning controls or new development. Due to its resulting isolation, one of the sub-sites in Site 24 cannot be amalgamated and subsequently cannot make use of any incentives and maintains a base FSR of 1:1.

Notwithstanding the above, the adopted traffic calculations assume the worst-case development scenario based on the preferred site amalgamation and incentive outcome.

2.3 Strategic Growth

The strategic traffic growth external to the network has been acquired from the TfNSW STFM cordon matrices for the study area. This data will form the foundation of the future year base case traffic demand matrices. The total STFM traffic demand is summarised in Table 2.1.

Table 2.1 Trips Generated (Gross)

Year	Total Trips Generated (veh)	
	AM Peak	PM Peak
2021	21,241	22,745
2031	26,231	27,412
2021 – 2031 Growth	**+4,989 trips**	**+4,667 trips**

The projected 10-year growth is around 23% in the AM peak and 21% in the PM peak, corresponding to traffic growth of around **2% linear growth p.a**.

It is noted that the future year population and employment demographics for the Travel Zones which encompass the study area assumes some level of increase in line with the current land controls, but does not include any Planning Proposal land use changes.

3. Traffic Generation

3.1 Traffic Rates

The estimation of trip generation was primarily sourced from applicable traffic rates from the following documents:

- *RTA's Guide to Traffic Generating Developments, Version 2.2, October 2002 (GTTGD 2002)*
- *Technical Direction – Guide to Traffic Generating Developments Updated traffic surveys (TDT 2013/04a).*

3.2 Residential Land Use Assumptions

The proposed sites include R3 and R4 residential land use, representing medium-density and high-density housing respectively. However, residential uses are also present in Other E Zone and E1 Local Centre zones. For the purposes of this assessment, it was assumed that these would take the form of mixed-use buildings with high-density land use for the residential components of the site (e.g. apartment units with ground-floor retail).

The following ratios and calculations were adopted from CM+ assumptions on developing the proposed built form land use yields:

- Floor Space Ratio = Gross Floor Area / Site Area
- Average household size = 2.8 persons per dwelling
- For R4 High Density Residential:
  - GFA to Net Saleable Area (NSA) ratio: 85%
  - No. Dwellings = NSA / 85m^2
- For R3 Medium Density Residential:
  - No. Dwellings = GFA / 120m^2.

Trip generation rates for residential land use was adopted from *TDT 2013/04a* for high density residential and *GTTGD 2022* for medium density residential.

3.3 Non-Residential Land Use Assumptions

3.3.1 Land Use Splits

Non-residential land use was generally zoned as either E1 Local Centre or Other E Zones (B1 Neighbourhood Centre, B4 Mixed Use, B5 Business Development or B6 Enterprise Corridor). Where not directly stipulated, it was assumed non-residential land use was divided between retail and commercial uses. Industrial land use is not proposed in any of the subject sites along the Woodville Road Corridor.

In each of the key precincts, for the purpose of traffic generation calculations the non-residential GFA provided has been split between retail and commercial land use in the following ways:

- Woodville North Precinct:
  - This precinct is planned to have a strong residential character, with some minor business use around Merrylands Road. It was assumed that ancillary retail facilities (like cafés, small neighbourhood shops and services, etc) would be the most appropriate non-residential land use within this precinct.
  - Therefore, the non-residential use is assumed to be **100% retail.**
- Merrylands East Precinct:

- This precinct is planned to cater the new Local Centre for the Woodville Road Corridor, with a mix of uses including major employment opportunities. Site 17, Merrylands East Local Centre, is assumed to be a major shopping and retail centre. The remaining B Zone land uses were assumed to be divided equally between retail (like cafés, restaurants and shops) and commercial facilities (business offices) to reflect the planned mix of employment within this precinct.
- Therefore, the non-residential use is assumed to be **50% retail** and **50% commercial** (unless otherwise stipulated).

- Woodville South Precinct:
  - This precinct is planned to offer a balance between higher density living and employment opportunities, with a smaller neighbourhood centre around Guildford Road. It was assumed that a mix of retail and commercial facilities would be appropriate for this area to reflect the mix of uses.
  - Therefore, the non-residential use is assumed to be **50% retail** and **50% commercial** (unless otherwise stipulated).

3.3.2 Shopping Centres

The peak hour trip generation rates for shopping centres were adopted from the Stantec traffic assessments for the Merrylands East Local Centre (now Site 17 as part of this Planning Proposal). These rates are based on the traffic generation rates for shopping centres from the *GTTGD 2002*.

The following reductions have been included in these rates:

- Trips to shopping centres typically result in 'chain trips' and 'multi-purpose trips'. To allow for the incidence of these, the trip generation of the shopping centre is **reduced by 25%**.
- Trips to retail land uses are reduced during the AM peak compared to the PM peak due to typical post-peak shop opening times in the morning and general trip patterns. To allow for this, the trip generation of retail facilities were **reduced by 50% in the AM peak only** (unless a specific morning rate was otherwise stipulated).

3.3.3 Retail Land Use

There are a wide range of potential retail land uses, including cafés, restaurants, neighbourhood shops, grocery stores, utility stores, hardware stores, etc. At this stage, retail tenancies are indeterminate and therefore an assumption must be adopted for the purpose of calculating traffic generation for the retail uses.

The general retail developments at the subject sites are assumed to be mainly food-orientated facilities such as restaurants and cafés. A comparison of trip generation rates for restaurants to other retail land uses generally indicates that a selection of retail rates similar to the restaurant rate is appropriate, and is unlikely to underestimate traffic generation (other facilities like bulky goods and hardware stores generally have lower trip generation rates).

Therefore, for the purpose of this assessment, the trip generation rate for 'general retail' land use has been adopted from the peak hour trip generation rate for restaurants.

The following reductions have been included in this rate:

- Trips to retail land uses are reduced during the AM peak compared to the PM peak due to typical post-peak shop opening times in the morning and general trip patterns. To allow for this, the trip generation of retail facilities were **reduced by 50% in the AM peak only** (unless a specific morning rate was otherwise stipulated).

3.3.4 Commercial Land Use

The peak hour trip generation rates for commercial offices were sourced from *TDT 2013/04a.* It was noted that these average trip generation rates were based on surveys of a number of office blocks around Greater Sydney. However, a number of these sites were located in close proximity to major public transport hubs. The planned commercial developments along the Woodville Road Corridor are typically between 1-2km walk away from either Guildford or Merrylands train stations, thereby limiting (but not excluding) the effectiveness of public transport as a mode of travel.

To reflect the nature of the site, the traffic generation rates were adopted from Site OB5 (16 Giffnock Avenue Macquarie Park) site surveys instead of the average rates. The Macquarie Park site is located around 600m walk away from the train station (now Metro station), and therefore is posited as the best representation for the planned commercial sites along the Woodville Road Corridor.

3.3.5 Open Space

Open space land use is proposed at a few locations along the corridor, comprising parks and other green spaces. It was assumed that these areas will generate a negligible number of vehicle trips during the peak hour periods.

3.4 Trip Generation Calculations

3.4.1 Traffic Generation Rates

The trip generation rates used for each land use type as part of the Planning Proposal are outlined in Table 3.1.

Table 3.1: Trips Generation Rates – Planning Proposal Uses

Land Use	Trip Generation Rate			
	AM Peak	PM Peak	Units	Source
Medium Density Residential	0.5	0.5	Trips per Dwelling	GTTGD 2002
High Density Residential	0.19	0.15	Trips per Dwelling	TDT 2013/04a
Shopping Centre (Supermarket)[1]	5.8	11.6	Trips per 100m^2 GLFA	Stantec Report (GTTGD 2002)
Shopping Centre (Speciality Retail)[1]	1.7	3.5	Trips per 100m^2 GLFA	Stantec Report (GTTGD 2002)
Retail (Generic)[1]	2.5	5	Trips per 100m^2 GFA	GTTGD 2002
Commercial (Office)	2.1	1.8	Trips per 100m^2 GFA	TDT 2013/04a
Open Space	-	-	-	-

1. Trip rate inclusive of reductions and discounts

3.4.2 Uplift Traffic Generation (Gross)

Based on the above rates and the provided development yields, the total trip generation is summarised in Table 3.2.

Table 3.2 Trips Generated (Gross)

Precinct	Total Trips Generated (veh)	
	AM Peak	PM Peak
Woodville North Precinct	304	293
Merrylands East Precinct	468	697
Woodville South Precinct	391	430
Total	**1,163 veh**	**1,420 veh**

Details on the estimated trip generation for each Planning Proposal site are provided in **Attachment B**.

These trip generation numbers include the total trip generation associated with the uplift development. However, it is noted that the sites in each precinct are not greenfield sites, and the proposed uplift is effectively a 'replacement' of the existing site. Therefore, the net traffic increase associated with the uplift must be calculated by subtracting the existing traffic generation of each site.

3.4.3 Existing Site Controls Traffic Generation

The traffic generation representing the current planning controls has been assessed based on the type of land zoning and current permitted FSR for each of the sites. This represents the trip potential for the sites under the current approved land use, but does not include the existing (and retained) trip generation of any constrained sites.

The trip generation rates used for each existing land use type is shown in Table 3.3.

Table 3.3: Trips Generation Rates – Existing Uses

Land Use	Trip Generation Rate			
	AM Peak	PM Peak	Units	Source
Low Density Residential	0.95	0.99	Trips per Dwelling	TDT 2013/04a
Medium Density Residential	0.5	0.5	Trips per Dwelling	GTTGD 2002
Open Space	-	-	-	-

Site 17 (the John Cootes site) has been evaluated separately due to its unique site context. It is understood that there is an approved Development Application (DA 2020/0493) for the site, which projects a maximum residential potential for the site of 425 dwellings under the current planning controls, along with other retail and commercial land uses. However, this approved development is not included within the future land use projections for the corresponding STFM travel zone. The site is also noted to currently be significantly under-developed comparing to the permitted land use and FSR.

For the purposes of this assessment, the future traffic yield of the subject site as assumed by the STFM is estimated based on the existing site yield and increased in line with the predicted growth rate extracted from the TZP19 dataset for the corresponding zone (TZ Code 1250). Between 2016 and 2036, an average annual growth rate of 1.4% and 2.0% has been applied to the subject zone for population and employment respectively. For a

conservative assessment, a 2.0% annual growth rate has been adopted. These calculations are summarised in Table 3.4.

Table 3.4: Trips Generated (John Cootes Site 17)

Address	Lot / DP	Description	Trips – AM (veh)	Trips – PM (veh)
244 Woodville Road	A/379850	Single dwelling	0.95	0.99
246 Woodville Road	B/379850 & C/379850	Single dwelling	0.95	0.99
248 Woodville Road	2/204284	Empty lot	0	0
256 Woodville Road	4-7/128586 &1/433824	Empty lot	0	0
258-264 Woodville Road	2581/803841 & 1/382912	Monster Furniture Clearance Depot	0[1]	0[1]
19 Highland Street	F/382911	Empty lot	0	0
2 Lansdowne Street	1/204284 & A/418199	Single dwelling	0.95	0.99
4 Lansdowne Street	A/409259	Single dwelling	0.95	0.99
8 Lansdowne Street	F/364338 &2/385967	Single dwelling	0.95	0.99
8A Lansdowne Street	1/385967	Single dwelling	0.95	0.99
10 Lansdowne Street	D/364338	Single dwelling	0.95	0.99
12 Lansdowne Street	C/364338	Single dwelling	0.95	0.99
14 Lansdowne Street	A/344408	Single dwelling	0.95	0.99
16 Lansdowne Street	81/128805	Single dwelling	0.95	0.99
		Total	**9.5 veh**	**9.9 veh**
		Total + 2.0% annual growth (to 2031)	**11.2 veh**	**11.7 veh**

1. For conservative assessment, trip generation assumed to be negligible due to site land use (furniture warehouse depot)

The calculated total trip generation potential for each of the precincts is summarised in Table 3.5.

Table 3.5 Trips Generated (Total Existing Potential)

Precinct	Total Trip Potential (veh)	
	AM Peak	PM Peak
Woodville North Precinct	137	140
Merrylands East Precinct	53	57
Woodville South Precinct	136	140
Total	**326 veh**	**337 veh**

The site-by-site breakdown is shown in **Attachment B**.

3.4.4 Uplift Traffic Generation (Net)

The gross, existing and subsequent net growth in trip generation for the Planning Proposal sites is summarised in Table 3.6.

Table 3.6 Trips Generated (Net)

Precinct	Total Trip Potential (veh)					
	AM Peak			PM Peak		
	Uplift Total	Existing Potential	Net Increase	Uplift Total	Existing Potential	Net Increase
Woodville North Precinct	304	137	167	293	140	153
Merrylands East Precinct	468	53	415	697	57	640
Woodville South Precinct	391	136	255	430	140	290
Total	1,163 veh	326 veh	847 veh	1,420 veh	337 veh	1,083 veh

3.5 Trip In/Out Splits

The in/out splits for trips generated for each land use type was based on the type of traffic behaviour (commuter, shopper, resident) in each peak, and are outlined in Table 3.7.

Table 3.7: Trip In/Out Split

Development Type	In / Out Split			
	AM		PM	
	In	Out	In	Out
Low Density Residential	30%	70%	60%	40%
Medium Density Residential	30%	70%	60%	40%
High Density Residential	30%	70%	60%	40%
Retail (Supermarket)	50%	50%	50%	50%
Retail (Specialty Retail)	50%	50%	50%	50%
Retail (Generic)	50%	50%	50%	50%
Commercial (Office)	80%	20%	20%	80%

4. Trip Distribution

4.1 Overview

The distribution of the new development trips to and from each of the sites was based on an analysis of Journey to Work data and O-D surveys data.

Journey to Work (JTW) data was collected from the Australian Bureau of Statistics, based on 2016 Census data. While 2021 Census datasets have been recently released, it is understood that the surveys were undertaken during the midst of the COVID-19 pandemic and may show impacted travel patterns due to movement restrictions and state-wide lockdowns. A subsequent analysis of the 2021 dataset revealed that there was a disproportionate weighting towards areas with a high density of industrial land use, with reduced percentages to areas characterised more strongly by retail centres and commercial offices (e.g. Sydney CBD). This could reflect the greater uptake of commercial working-from-home arrangements during this period, understating the general traffic patterns to certain origin-destination zones.

It was therefore determined that 2016 data would be a better reflection of business-as-usual travel patterns for residents and workers in vicinity of the Woodville Road Corridor.

Detailed JTW data is shown in **Attachment C.**

4.2 Journey to Work Analysis

4.2.1 Methodology

JTW data was collected for two (2) key SA2 zones to represent the study area, being:

- Granville-Clyde (Code: 1250311481)
- Guildford-South Granville (Code: 125031483).

The following data was extracted from the Census dataset:

- Places of Work for individuals with a Usual Residence located within the SA2 zones
- Usual Residence for individuals with a Place of Work located within the SA2 zones.

These two tables identified the existing traffic distribution for commuter traffic in the morning peak (outbound trips from residential sites within the study area and inbound trips to employment areas within the study area).

Trip directionality was assigned an approximate cardinal direction (North, South, East or West) for distribution through the corridor (e.g. trips from Guildford-South Granville to Parramatta would be orientated North). For the East and West directions, there were a number of different roads servicing each cardinal direction. The selected road(s) used for traffic generated by each of the Planning Proposal sites will be determined based on proximity to the major east-west roads and informed through review of OD patterns.

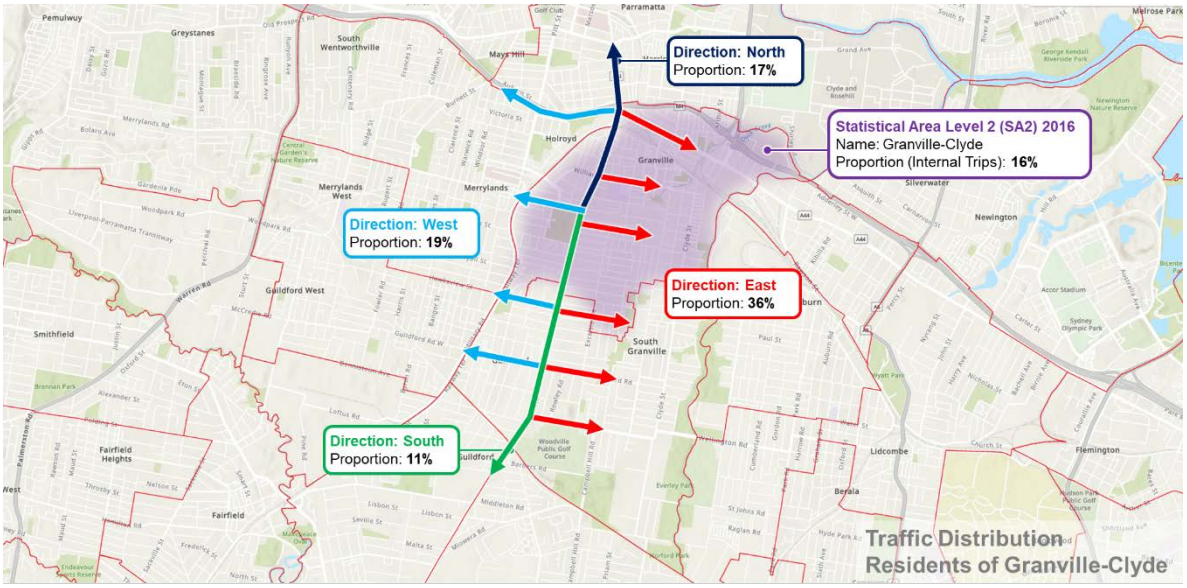
Some proportion of trips were also identified as ‘internal’ to the study area, being residents that both live and work within the two key SA2 zones. These trips will be distributed to appropriate sites / zones based on several factors, including the future projected land use, employment and retail centres and the assumed access arrangements to the corridor network.

For this assessment, the return trip was assumed to follow the same distribution in the opposite direction.

Discrete distributions were identified for each of the two key SA2 zones to reflect the change in trip distribution between sites to the northern and southern sides of the corridor.

4.2.2 Traffic Distribution - Residents

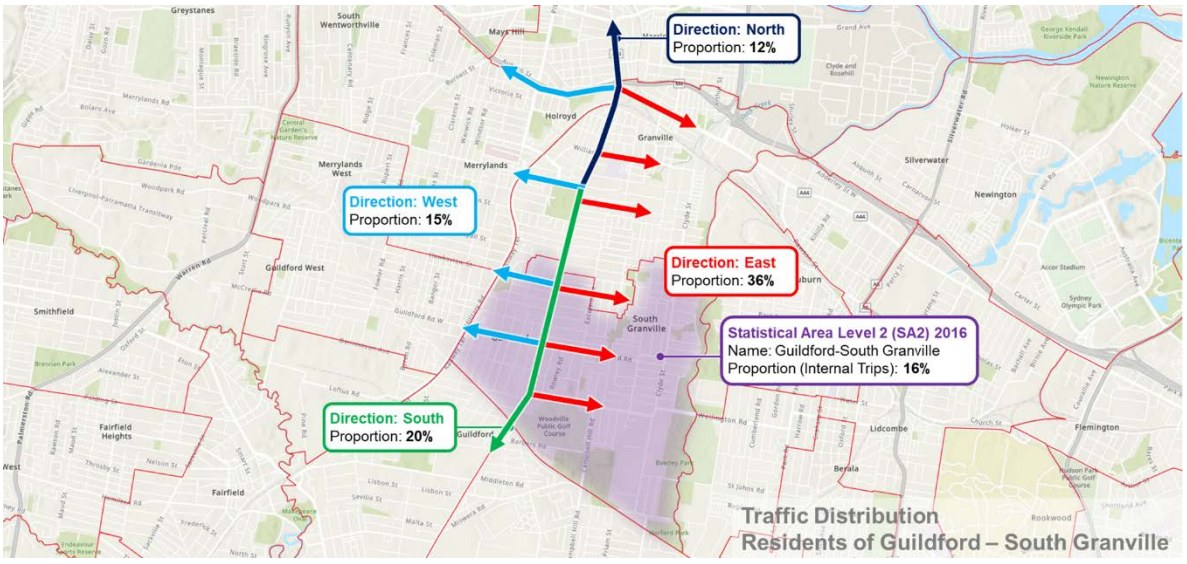
Figure 4.1 shows the residential traffic distribution based on JTW data for the shown Granville-Clyde SA2 zone, which encompasses the Woodville North Precinct and part of the Merrylands East Precinct.



Adapted from: ABS Maps

Figure 4.1: Journey to Work – Granville-Clyde SA2

Figure 4.2 shows the residential traffic distribution based on JTW data for the shown Guildford-South Granville SA2 zone, which encompasses the Woodville South Precinct and part of the Merrylands East Precinct.

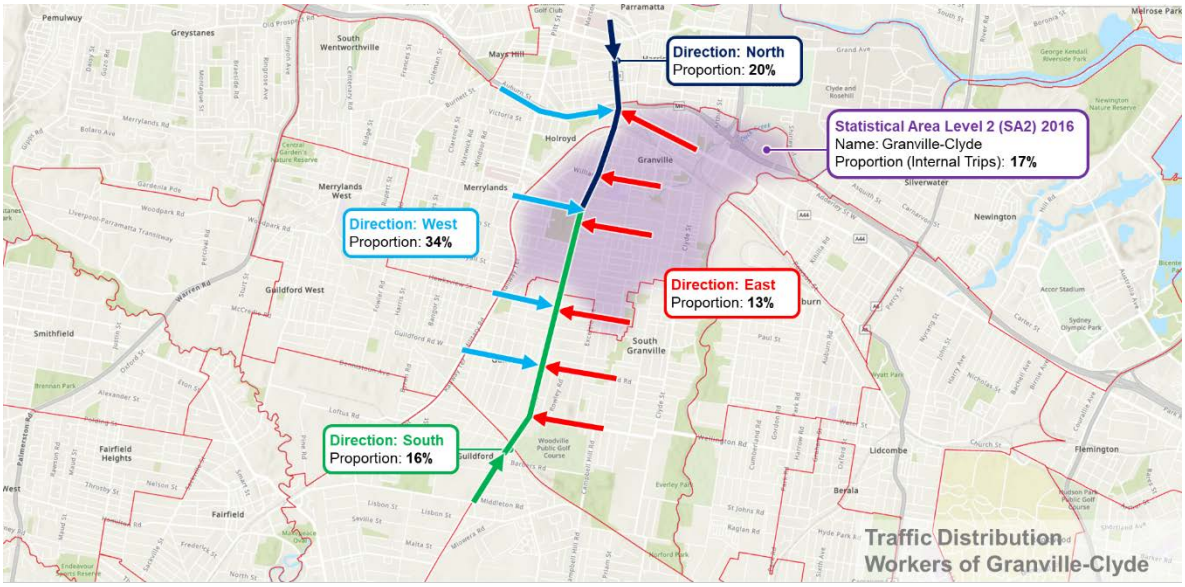


Adapted from: ABS Maps

Figure 4.2: Journey to Work – Guildford-South Granville SA2

4.2.3 Traffic Distribution – Workers

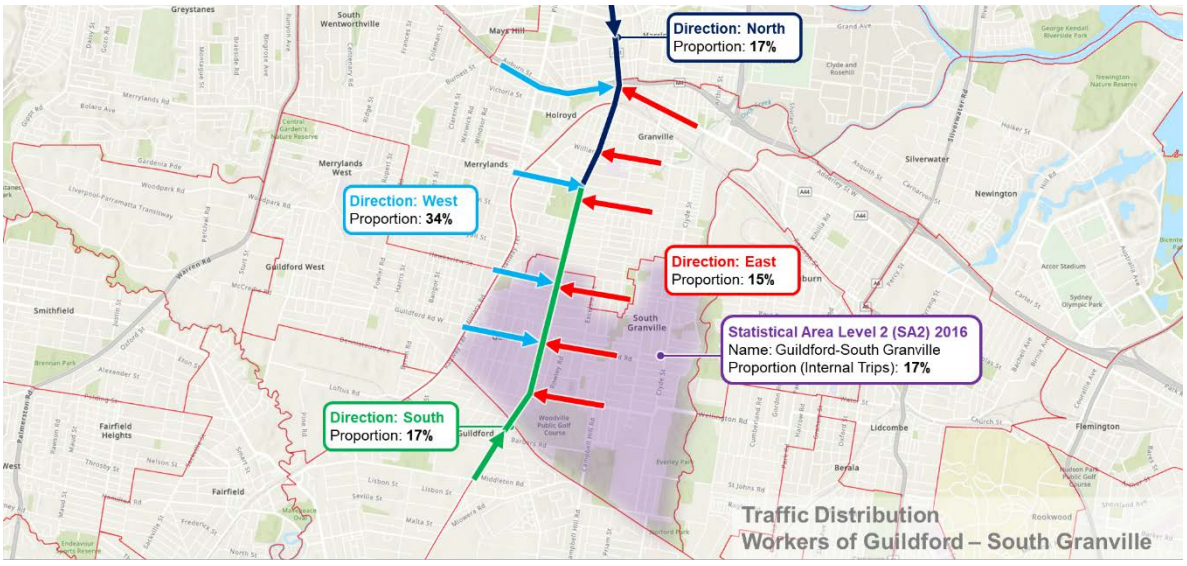
Figure 4.3 shows the employment traffic distribution based on JTW data for the shown Granville-Clyde SA2 zone, which encompasses the Woodville North Precinct and part of the Merrylands East Precinct.



Adapted from: ABS Maps

Figure 4.3: Journey to Work – Granville-Clyde SA2

Figure 4.4 shows the employment traffic distribution based on JTW data for the shown Guildford-South Granville SA2 zone, which encompasses the Woodville South Precinct and part of the Merrylands East Precinct.



Adapted from: ABS Maps

Figure 4.4: Journey to Work – Guildford-South Granville SA2

4.2.4 Summary

The resulting traffic distributions are summarised in Table 4.1.

Table 4.1: Traffic Distributions Summary

Direction	Residents (travelling to)		Workers (travelling from)	
	Granville-Clyde	Guildford-South Granville	Granville-Clyde	Guildford-South Granville
North	19%	12%	20%	17%
South	13%	20%	16%	17%
East	42%	36%	13%	15%
West	26%	15%	34%	34%
Internal	11%	16%	17%	17%

4.3 O-D Data Analysis

O-D survey data collected in 2022 as part of the calibration and validation of the Woodville Road Corridor traffic model will be used to refine and inform the traffic distribution identified from the JTW data.

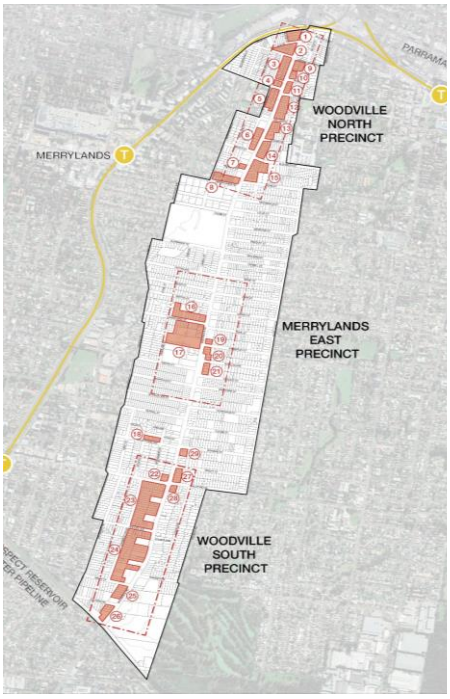
Where possible, existing origin-destination travel patterns will be used to ‘split’ trips travelling to the East or West among the identified major roads. To do this, an appropriate O-D station would need to be identified for each of the Planning Proposal sites. This selection will be developed on the basis of proximity and similar access to the road network.

Attachment A: Planning Proposal Development Site Yields (CM+)

BASE CASE

Site Number	Overall Site Area (sqm)	Constrained Site Area (sqm)	Opportunity Site Area (sqm)	Resi GFA (sqm)	No. of Proposed Dwellings (Units)*	Population Projection (person)**	Non-Resi GFA (sqm)
1	5,192	-	5,192	9,346	93		-
2	6,301	-	6,301	11,342	113		-
3	7,570	747	6,823	12,281	123		-
4	1,698	-	1,698	2,717	27		340
5	6,657	598	6,059	10,906	109		-
6	5,700	-	5,700	10,260	103		-
7	1,222	-	1,222	2,200	22		244
8	7,056	-	7,056	12,701	127		691
9	3,852	-	3,852	6,934	69		-
10	1,882	-	1,882	3,388	34		-
11	2,514	-	2,514	4,525	45		-
12	8,300	-	8,300	14,439	144		501
13	6,006	-	6,006	10,811	108		-
14	5,630	-	5,630	10,134	101		-
15	11,144	-	11,144	16,830	164		-
WOODVILLE NORTH PRECINCT TOTAL	**80,724**	**1,345**	**79,379**	**138,813**	**1,384**	**3,875**	**1,776**
16	10,377	-	10,377	15,385	150		920
17	28,747	-	28,747	54,722	547		10,951
18	2,639	-	2,639				
19	1,236	-	1,236	2,225	22		-
20	3,028	-	3,028	5,450	55		-
21	2,732	-	2,732	4,918	49		-
MERRYLANDS EAST PRECINCT TOTAL	**48,759**	**-**	**48,759**	**82,700**	**823**	**2,306**	**11,871**
22	1,713	-	1,713	3,083	31		343
23	33,949	-	33,949	59,738	597		4,277
24	36,891	4,552	32,339	54,899	549		1,440
25	5,010	-	5,010	9,018	90		-
26	4,916	-	4,916	8,849	88		-
27	3,944	143	3,801	6,842	68		760
28	1,605	-	1,605	2,889	29		321
29	1,963	-	1,963	3,533	35		-
WOODVILLE SOUTH PRECINCT TOTAL	**89,991**	**4,695**	**85,296**	**148,851**	**1,489**	**4,168**	**7,141**
TOTAL	**219,474**	**6,040**	**213,434**	**370,364**	**3,696**	**10,349**	**20,788**

open space



Site Map

NOTE:
The yield is of high level and included additional three E1 (B1) sites requested by Council on 22/02/23:
- *35 Grimwood Street is included in PP site 4*
- *161 William Street is included in PP site 12*
- *188 Guildford Road is included in PP site 23*

**** Number of dwellings assumption:***
Residential Flat Building:
Ground Floor GBA to GFA efficiency rate: 50%
GBA to GFA efficiency rate for other levels: 75%
FSR = GFA / Site Area
GFA to NSA efficiency rate for residential part: 85%
Average unit size: 85sqm
No. Dwellings = NSA / 85average unit size: 85sqm

Townhouse:
GBA to GFA efficiency rate: 90%
FSR = GFA / Site Area
Average townhouse size: 120sqm
No. Dwellings = GFA / 120

2,693

*****Population Projection***
Household Size: 2.8 ppl per dwelling

Dwelling yield has been updated

CM+

WRC - AMENDED Urban Design Report - Yield

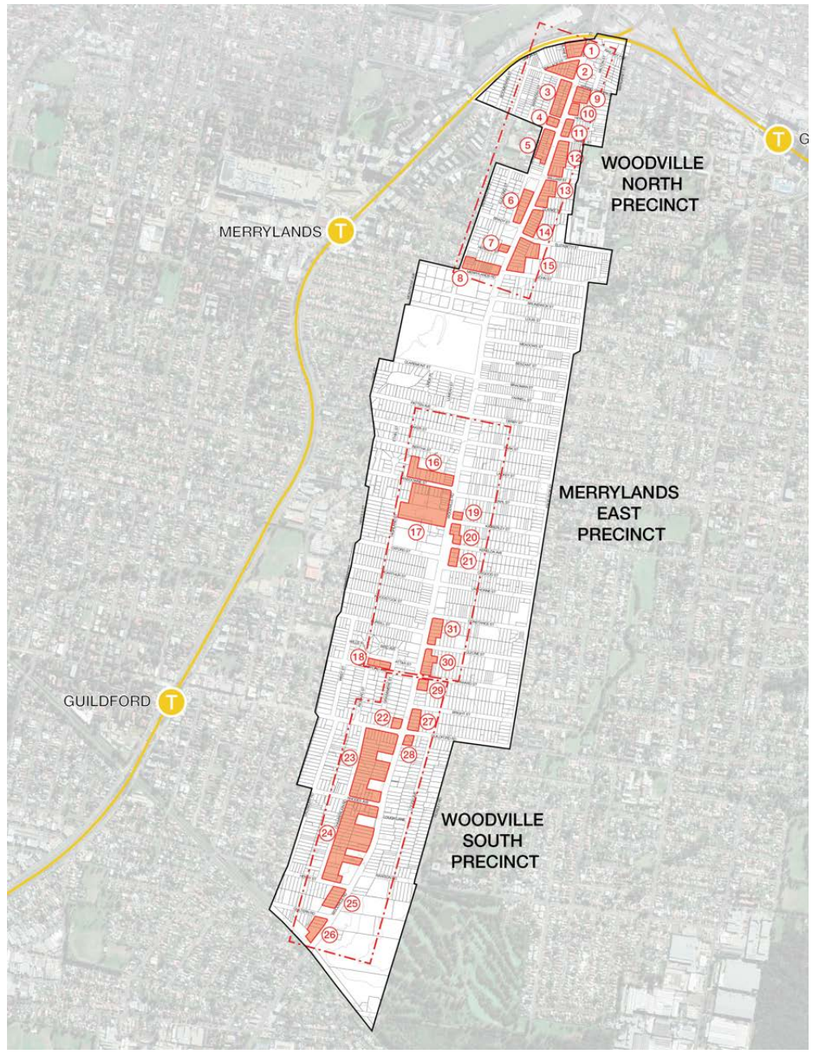
8/01/2025

Updated Site Yields as per Gateway Determination and Council Resolution

Site	Overall Site Area	Constrained Site Area	Opportunity Site Area	Resi GFA	No. of Proposed Dwellings*	Non-Resi GFA
Woodville North						
2	6,301 m^2	-	6,301 m^2	9,208 m^2	92	-
15	11,144 m^2	-	11,144 m^2	16,984 m^2	170	-
Merrylands East						
30	4,708 m^2	-	4,708 m^2	8,474 m^2	85	-
31	4,912 m^2	-	4,912 m^2	8,841 m^2	88	-
Woodville South						
23	33,949 m^2	-	33,949 m^2	50,136 m^2	501	3,591 m^2
24	36,891 m^2	4,552 m^2	32,339 m^2	40,837 m^2	408	1,440 m^2

***Number of dwellings assumptions:**

GFA = FSR * Site Area
GFA to NSA efficiency rate for residential part: 85%
Average unit size: 85sqm
No. Dwellings = NSA / average unit size: 85sqm



Attachment B: Planning Proposal Site Trip Generation

BITZIOS consulting

P5825 Woodville Road Corridor TTS
Uplift Trip Generation (Gross) - Planning Proposal (PP)

Precinct	PP Site	Land-use	Opportunity Site Area (m^2)	FSR	GFA (m^2)	Resi. Units	Trip Generation Rate Units	Trip Gen Rate (AM Peak)	Trips Gen (AM Peak)	TRIPS IN	TRIPS OUT	Trip Gen Rate (PM Peak)	Trips Gen (PM Peak)	TRIPS IN	TRIPS OUT
Woodville North Precinct	1	R4	5192	1.8	9346	93	trips per dwelling	0.19	18	5	13	0.15	14	8	6
Woodville North Precinct	2	R4	*6301*	1.8	9208	92	trips per dwelling	0.19	17	5	12	0.15	14	8	6
Woodville North Precinct	**2**	**Open Space**	***0***	**-**	**-**	**-**	**N/A**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Woodville North Precinct	3	R4	6823	1.8	12281	123	trips per dwelling	0.19	23	7	16	0.15	18	11	7
Woodville North Precinct	4	R4	1509	1.8	2717	27	trips per dwelling	0.19	5	2	3	0.15	4	2	2
Woodville North Precinct	4	Retail	189	1.8	340	-	trips per 100 m2 GFA	2.5	9	5	4	5	17	9	8
Woodville North Precinct	5	R4	6059	1.8	10906	109	trips per dwelling	0.19	21	6	15	0.15	16	10	6
Woodville North Precinct	6	R4	5700	1.8	10260	103	trips per dwelling	0.19	20	6	14	0.15	15	9	6
Woodville North Precinct	7	Retail	*122*	2	244	-	trips per 100 m2 GFA	2.5	6	3	3	5	12	6	6
Woodville North Precinct	7	R4	*1100*	2	2200	22	trips per dwelling	0.19	4	1	3	0.15	3	2	1
Woodville North Precinct	8	R4	*6699*	*1.90*	12701	127	trips per dwelling	0.19	24	7	17	0.15	19	11	8
Woodville North Precinct	8	Retail	357	*1.93*	691	-	trips per 100 m2 GFA	2.5	17	9	8	5	35	18	17
Woodville North Precinct	9	R4	3852	1.8	6934	69	trips per dwelling	0.19	13	4	9	0.15	10	6	4
Woodville North Precinct	10	R4	1882	1.8	3388	34	trips per dwelling	0.19	6	2	4	0.15	5	3	2
Woodville North Precinct	11	R4	2514	1.8	4525	45	trips per dwelling	0.19	9	3	6	0.15	7	4	3
Woodville North Precinct	12	R4	8022	1.8	14439	144	trips per dwelling	0.19	27	8	19	0.15	22	13	9
Woodville North Precinct	12	Retail	278	1.8	501	-	trips per 100 m2 GFA	2.5	13	7	6	5	25	13	12
Woodville North Precinct	13	R4	6006	1.8	10811	108	trips per dwelling	0.19	21	6	15	0.15	16	10	6
Woodville North Precinct	14	R4	5630	1.8	10134	101	trips per dwelling	0.19	19	6	13	0.15	15	9	6
Woodville North Precinct	**15**	**R4**	***11144***	**1.8**	***16984***	***170***	**trips per dwelling**	**0.19**	**32**	**10**	**22**	**0.15**	**26**	**16**	**10**
Merrylands East Precinct	**16**	**R3**	***3215***	**0.75**	***2411***	***20***	**trips per dwelling**	**0.5**	**10**	**3**	**7**	**0.5**	**10**	**6**	**4**
Merrylands East Precinct	**16**	**R4**	***2150***	**1.8**	***3869***	***39***	**trips per dwelling**	**0.19**	**7**	**2**	**5**	**0.15**	**6**	**4**	**2**
Merrylands East Precinct	**16**	**Retail**	***230***	**2**	**460**	**-**	**trips per 100 m2 GFA**	**2.5**	**12**	**6**	**6**	**5**	**23**	**12**	**11**
Merrylands East Precinct	**16**	**Commercial**	***230***	**2**	**460**	**-**	**trips per 100 m2 GFA**	**2.1**	**10**	**8**	**2**	**1.8**	**8**	**2**	**6**
Merrylands East Precinct	**16**	**R4**	***4552***	**2**	***9104***	***91***	**trips per dwelling**	**0.19**	**17**	**5**	**12**	**0.15**	**14**	**8**	**6**
Merrylands East Precinct	17	Retail (Specialty)	*2920*	2.5	7301	-	trips per 100 m2 GLFA	1.7	93	47	46	3.5	*192*	96	96
Merrylands East Precinct	17	Retail (Shopping)	*1460*	2.5	3650	-	trips per 100 m2 GLFA	5.8	159	80	79	11.6	***318***	**159**	**159**
Merrylands East Precinct	17	R4	*21889*	2.5	54722	547	trips per dwelling	0.19	104	31	73	0.15	82	49	33
Merrylands East Precinct	17	Open Space	*2478*	-	-	-	N/A	-	-	-	-	-	-	-	-
Merrylands East Precinct	18	Open Space	2639	-	-	-	N/A	-	-	-	-	-	-	-	-
Merrylands East Precinct	19	R4	1236	1.8	2225	22	trips per dwelling	0.19	4	1	3	0.15	3	2	1
Merrylands East Precinct	20	R4	3028	1.8	5450	55	trips per dwelling	0.19	10	3	7	0.15	8	5	3
Merrylands East Precinct	21	R4	2732	1.8	4918	49	trips per dwelling	0.19	9	3	6	0.15	7	4	3
Merrylands East Precinct	30	R4	4708	1.8	8474	85	trips per dwelling	0.19	16	5	11	0.15	13	8	5
Merrylands East Precinct	31	R4	4912	1.8	8841	88	trips per dwelling	0.19	17	5	12	0.15	13	8	5
Woodville South Precinct	22	Retail	*86*	2	172	-	trips per 100 m2 GFA	2.5	4	2	2	5	9	5	4
Woodville South Precinct	22	Commercial	*86*	2	172	-	trips per 100 m2 GFA	2.1	4	3	1	1.8	3	1	2
Woodville South Precinct	22	R4	*1542*	2	3083	31	trips per dwelling	0.19	6	2	4	0.15	5	3	2
Woodville South Precinct	23	Retail	*898*	2	1795.5	-	trips per 100 m2 GFA	2.5	45	23	22	5	90	45	45
Woodville South Precinct	23	Commercial	*898*	2	1795.5	-	trips per 100 m2 GFA	2.1	38	30	8	1.8	32	6	26
Woodville South Precinct	23	R4	*29869*	2	50136	501	trips per dwelling	0.19	95	29	66	0.15	75	45	30
Woodville South Precinct	23	Open Space	*2285*	-	-	-	N/A	-	-	-	-	-	-	-	-
Woodville South Precinct	24	R4	*32339*	**1.8**	40837	408	trips per dwelling	0.19	78	23	55	0.15	61	37	24
Woodville South Precinct	24	Retail	*800*	**1.8**	1440	-	trips per 100 m2 GFA	2.5	36	18	18	5	72	36	36
Woodville South Precinct	25	R4	5010	1.8	9018	90	trips per dwelling	0.19	17	5	12	0.15	14	8	6
Woodville South Precinct	26	R4	4916	1.8	8849	88	trips per dwelling	0.19	17	5	12	0.15	13	8	5
Woodville South Precinct	27	Retail	*190*	2	380	-	trips per 100 m2 GFA	2.5	10	5	5	5	19	10	9
Woodville South Precinct	27	Commercial	*190*	2	380	-	trips per 100 m2 GFA	2.1	8	6	2	1.8	7	1	6
Woodville South Precinct	27	R4	*3421*	2	6842	68	trips per dwelling	0.19	13	4	9	0.15	10	6	4
Woodville South Precinct	28	Retail	*80*	2	161	-	trips per 100 m2 GFA	2.5	4	2	2	5	8	4	4
Woodville South Precinct	28	Commercial	*80*	2	161	-	trips per 100 m2 GFA	2.1	3	2	1	1.8	3	1	2
Woodville South Precinct	28	R4	*1445*	2	2889	29	trips per dwelling	0.19	6	2	4	0.15	4	2	2
Woodville South Precinct	29	R4	1963	1.8	3533	35	trips per dwelling	0.19	7	2	5	0.15	5	3	2
Total	**-**	**-**	**223854**	**-**	**382138**	**3613**		**-**	**1163**	**464**	**699**	**-**	**1420**	**752**	**668**

P5825 Woodville Road Corridor TTS
Trip Generation - Existing Site Controls

Precinct	PP Site	Land-use	Opportunity Site Area (m^2)	FSR	GFA (m^2)	Dwellings	Trip Generation Rate Units	Trip Gen Rate (AM Peak)	Trips Gen (AM Peak)	TRIPS IN	TRIPS OUT	Trip Gen Rate (PM Peak)	Trips Gen (PM Peak)	TRIPS IN	TRIPS OUT
Woodville North Precinct	1	R2	5192	1	5192	8.65	trips per dwelling	0.95	8	2	6	0.99	9	5	4
Woodville North Precinct	2	R2	*6301*	1	6301	10.50	trips per dwelling	0.95	10	3	7	0.99	10	6	4
Woodville North Precinct	3	R2	6823	1	6823	11.37	trips per dwelling	0.95	11	3	8	0.99	11	7	4
Woodville North Precinct	4	R2	1698	1	1698	2.83	trips per dwelling	0.95	3	1	2	0.99	3	2	1
Woodville North Precinct	5	R2	6059	1	6059	10.10	trips per dwelling	0.95	10	3	7	0.99	10	6	4
Woodville North Precinct	6	R2	5700	1	5700	9.50	trips per dwelling	0.95	9	3	6	0.99	9	5	4
Woodville North Precinct	7	**R3**	*1222*	0.6	733.2	6.11	trips per dwelling	0.5	3	1	2	0.5	3	2	1
Woodville North Precinct	8	**R3**	*7056*	0.6	4233.6	35.28	trips per dwelling	0.5	18	5	13	0.5	18	11	7
Woodville North Precinct	9	R2	3852	1	3852	6.42	trips per dwelling	0.95	6	2	4	0.99	6	4	2
Woodville North Precinct	10	R2	1882	1	1882	3.14	trips per dwelling	0.95	3	1	2	0.99	3	2	1
Woodville North Precinct	11	R2	2514	1	2514	4.19	trips per dwelling	0.95	4	1	3	0.99	4	2	2
Woodville North Precinct	12	R2	8300	1	8300	13.83	trips per dwelling	0.95	13	4	9	0.99	14	8	6
Woodville North Precinct	13	R2	6006	1	6006	10.01	trips per dwelling	0.95	10	3	7	0.99	10	6	4
Woodville North Precinct	14	R2	5630	1	5630	9.38	trips per dwelling	0.95	9	3	6	0.99	9	5	4
Woodville North Precinct	15	**R3**	2929	0.6	1757.26	14.64	trips per dwelling	0.5	7	2	5	0.5	7	4	3
Woodville North Precinct	15	R2	8215	1	8215.24	13.69	trips per dwelling	0.95	13	4	9	0.99	14	8	6
Merrylands East Precinct	16	R2	*10377*	1	10377.00	17.30	trips per dwelling	0.95	16	5	11	0.99	17	10	7
Merrylands East Precinct	17	B2	*26271*	2.2	57796	-	-	-	11	3	8	-	12	7	5
Merrylands East Precinct	17	Open Space	*2476*	-	-	-	N/A	-	-	-	-	-	-	-	-
Merrylands East Precinct	18	Open Space	2639	-	-	-	N/A	-	-	-	-	-	-	-	-
Merrylands East Precinct	19	R2	1236	1	1236.00	2.06	trips per dwelling	0.95	2	1	1	0.99	2	1	1
Merrylands East Precinct	20	R2	3028	1	3028.00	5.05	trips per dwelling	0.95	5	2	3	0.99	5	3	2
Merrylands East Precinct	21	R2	2732	1	2732.00	4.55	trips per dwelling	0.95	4	1	3	0.99	5	3	2
Woodville South Precinct	22	R2	*1713*	1	1713.00	2.86	trips per dwelling	0.95	3	1	2	0.99	3	2	1
Woodville South Precinct	23	R2	*33949*	1	33949.00	56.58	trips per dwelling	0.95	54	16	38	0.99	56	34	22
Woodville South Precinct	24	R2	32339	1	32339.00	53.90	trips per dwelling	0.95	51	15	36	0.99	53	32	21
Woodville South Precinct	25	R2	5010	1	5010.00	8.35	trips per dwelling	0.95	8	2	6	0.99	8	5	3
Woodville South Precinct	26	R2	4916	1	4916.00	8.19	trips per dwelling	0.95	8	2	6	0.99	8	5	3
Woodville South Precinct	27	R2	3801	1	3801.00	6.34	trips per dwelling	0.95	6	2	4	0.99	6	4	2
Woodville South Precinct	28	R2	*1605*	1	1605.00	2.68	trips per dwelling	0.95	3	1	2	0.99	3	2	1
Woodville South Precinct	29	R2	*1963*	1	1963.00	3.27	trips per dwelling	0.95	3	1	2	0.99	3	2	1
Merrylands East Precinct	30	R2	4708	1	4708.00	7.85	trips per dwelling	0.95	7	2	5	0.99	8	5	3
Merrylands East Precinct	31	R2	4912	1	4912.00	8.19	trips per dwelling	0.95	8	2	6	0.99	8	5	3
Total	**-**	**-**	**223054**	**-**	**244981**	**357**		**-**	**326**	**97**	**229**	**-**	**337**	**203**	**134**

P5825 Woodville Road Corridor TTS
Uplift Trip Generation (Net)

Precinct	PP Site	Trip Gen AM (PP)	Trip Gen AM (Exist)	Trip Gen AM (Net)	AM TRIPS IN	AM TRIPS OUT	Trip Gen PM (PP)	Trip Gen PM (Exist)	Trip Gen PM (Net)	PM TRIPS IN	PM TRIPS OUT
Woodville North Precinct	1	18	8	10	3	7	14	9	5	3	2
Woodville North Precinct	2	17	10	7	2	5	14	10	4	2	2
Woodville North Precinct	3	23	11	12	4	8	18	11	7	4	3
Woodville North Precinct	4	14	3	11	6	5	21	3	18	9	9
Woodville North Precinct	5	21	10	11	3	8	16	10	6	4	2
Woodville North Precinct	6	20	9	11	3	8	15	9	6	4	2
Woodville North Precinct	7	10	3	7	3	4	15	3	12	6	6
Woodville North Precinct	8	41	18	23	11	12	54	18	36	18	18
Woodville North Precinct	9	13	6	7	2	5	10	6	4	2	2
Woodville North Precinct	10	6	3	3	1	2	5	3	2	1	1
Woodville North Precinct	11	9	4	5	2	3	7	4	3	2	1
Woodville North Precinct	12	40	13	27	11	16	47	14	33	18	15
Woodville North Precinct	13	21	10	11	3	8	16	10	6	4	2
Woodville North Precinct	14	19	9	10	3	7	15	9	6	4	2
Woodville North Precinct	15	32	20	12	4	8	26	21	5	4	1
Merrylands East Precinct	**16**	**56**	**16**	**40**	**19**	**21**	**61**	**17**	**44**	**22**	**22**
Merrylands East Precinct	17	356	11	345	155	190	592	12	580	297	283
Merrylands East Precinct	18	0	0	0	0	0	0	0	0	0	0
Merrylands East Precinct	19	4	2	2	0	2	3	2	1	1	0
Merrylands East Precinct	20	10	5	5	1	4	8	5	3	2	1
Merrylands East Precinct	21	9	4	5	2	3	7	5	2	1	1
Woodville South Precinct	22	14	3	11	6	5	17	3	14	7	7
Woodville South Precinct	23	178	54	124	66	58	197	56	141	62	79
Woodville South Precinct	24	114	51	63	26	37	133	53	80	41	39
Woodville South Precinct	25	17	8	9	3	6	14	8	6	3	3
Woodville South Precinct	26	17	8	9	3	6	13	8	5	3	2
Woodville South Precinct	27	31	6	25	13	12	36	6	30	13	17
Woodville South Precinct	28	13	3	10	5	5	15	3	12	5	7
Woodville South Precinct	29	7	3	4	1	3	5	3	2	1	1
Merrylands East Precinct	30	16	7	9	3	6	13	8	5	3	2
Merrylands East Precinct	31	17	8	9	3	6	13	8	5	3	2
Total	**-**	**1163**	**326**	**837**	**367**	**470**	**1420**	**337**	**1083**	**549**	**534**

Attachment C: Trip Distribution Based on Journey to Work Data

P5825 Woodville Road Corridor TTS
Distribution of Workers Residing within Guildford - South Granville (2016 SA2 Region)

Place of Work (2016 SA2 Region)	Number of Workers	Proportion	Cumulative Proportion	Direction
Total	**2876**	**100%**	**-**	**-**
Guildford - South Granville	366	13%	13%	Internal
Parramatta - Rosehill	202	7%	20%	N
Granville - Clyde	131	5%	24%	Internal
Homebush Bay - Silverwater	101	4%	28%	E
Auburn - Central	100	3%	31%	E
Lidcombe	91	3%	34%	E
Merrylands - Holroyd	88	3%	38%	W
Chester Hill - Sefton	82	3%	40%	S
Northmead	72	3%	43%	N
Wetherill Park Industrial	66	2%	45%	W
Auburn - North	65	2%	47%	E
Concord West - North Strathfield	64	2%	50%	E
Ermington - Rydalmere	63	2%	52%	E
Macquarie Park - Marsfield	59	2%	54%	E
Fairfield - East	59	2%	56%	S
Smithfield Industrial	55	2%	58%	W
Greenacre - Mount Lewis	50	2%	60%	E
Condell Park	49	2%	61%	S
Bankstown - South	49	2%	63%	S
Fairfield	47	2%	65%	S
Regents Park	41	1%	66%	E
Prospect Reservoir	40	1%	67%	W
Chullora	40	1%	69%	E
Homebush	37	1%	70%	E
North Parramatta	36	1%	71%	N
Guildford West - Merrylands West	36	1%	73%	W
Greystanes - Pemulwuy	36	1%	74%	W
Baulkham Hills (West) - Bella Vista	34	1%	75%	N
Sydney - Haymarket - The Rocks	33	1%	76%	E
Bankstown - North	33	1%	77%	S
Chipping Norton - Moorebank	31	1%	78%	S
Liverpool	30	1%	79%	S
Burwood - Croydon	30	1%	81%	E
Blacktown (East) - Kings Park	26	1%	81%	W
Erskineville - Alexandria	26	1%	82%	E
Lalor Park - Kings Langley	26	1%	83%	W
Ryde	23	1%	84%	E
Auburn - South	23	1%	85%	E
Cabramatta - Lansvale	23	1%	86%	S
Strathfield South	22	1%	86%	E
Smithfield - Wetherill Park	22	1%	87%	W
Warwick Farm	21	1%	88%	S
Canterbury (South) - Campsie	20	1%	89%	E
St Leonards - Naremburn	19	1%	89%	E
Strathfield	18	1%	90%	E
Pyrmont - Ultimo	18	1%	91%	E
Yagoona - Birrong	17	1%	91%	S
Concord - Mortlake - Cabarita	17	1%	92%	E
Yennora Industrial	16	1%	92%	S
Bass Hill - Georges Hall	16	1%	93%	S
Punchbowl	16	1%	93%	S
Fairfield - West	16	1%	94%	S
Campbelltown - Woodbine	15	1%	94%	S
Waterloo - Beaconsfield	15	1%	95%	E
Mascot - Eastlakes	14	0%	95%	S
Erskine Park	14	0%	96%	W
West Ryde - Meadowbank	14	0%	96%	E
Padstow	14	0%	97%	S
Rooty Hill - Minchinbury	13	0%	97%	W
Lane Cove - Greenwich	13	0%	98%	E
Gladesville - Huntleys Point	13	0%	98%	E
Prestons - Edmondson Park	13	0%	99%	S
St Marys - North St Marys	13	0%	99%	W
Castle Hill - Central	12	0%	100%	N
Epping - North Epping	12	0%	100%	E

Direction	Proportion
N	12%
E	36%
S	20%
W	15%
Internal	17%
Total	**100%**

P5825 Woodville Road Corridor TTS
Distribution of Workers Residing within Granville - Clyde (2016 SA2 Region)

Place of Work (2016 SA2 Region)	Number of Workers	Proportion	Cumulative Proportion	Direction
Total	**3097**	**100%**	-	-
Granville - Clyde	401	13%	13%	Internal
Parramatta - Rosehill	198	6%	19%	N
Homebush Bay - Silverwater	141	5%	24%	E
Merrylands - Holroyd	108	3%	27%	W
Guildford - South Granville	92	3%	30%	Internal
Macquarie Park - Marsfield	84	3%	33%	E
Lidcombe	83	3%	36%	E
Auburn - Central	74	2%	38%	E
Ermington - Rydalmere	73	2%	40%	N
Concord West - North Strathfield	67	2%	43%	E
Prospect Reservoir	66	2%	45%	W
Northmead	65	2%	47%	N
Chester Hill - Sefton	63	2%	49%	S
North Parramatta	63	2%	51%	N
Homebush	60	2%	53%	E
Wetherill Park Industrial	59	2%	55%	W
Baulkham Hills (West) - Bella Vista	56	2%	57%	N
Fairfield - East	53	2%	58%	S
Blacktown (East) - Kings Park	53	2%	60%	W
Sydney - Haymarket - The Rocks	51	2%	62%	E
Auburn - North	49	2%	63%	E
Smithfield Industrial	47	2%	65%	W
Liverpool	40	1%	66%	S
Guildford West - Merrylands West	36	1%	67%	W
Rooty Hill - Minchinbury	36	1%	68%	W
Pendle Hill - Girraween	36	1%	70%	W
Condell Park	34	1%	71%	S
Chullora	34	1%	72%	E
Greystanes - Pemulwuy	34	1%	73%	W
Burwood - Croydon	32	1%	74%	E
Erskineville - Alexandria	31	1%	75%	E
Carlingford	30	1%	76%	N
Fairfield	29	1%	77%	S
Yennora Industrial	29	1%	78%	S
St Leonards - Naremburn	28	1%	79%	E
Chipping Norton - Moorebank	27	1%	79%	S
Strathfield	25	1%	80%	E
Ryde	23	1%	81%	E
Castle Hill - Central	22	1%	82%	N
Marrickville	22	1%	82%	E
Wentworthville - Westmead	22	1%	83%	W
Greenacre - Mount Lewis	21	1%	84%	E
Lalor Park - Kings Langley	21	1%	85%	W
Pyrmont - Ultimo	21	1%	85%	E
Mascot - Eastlakes	21	1%	86%	E
Auburn - South	20	1%	87%	E
Erskine Park	20	1%	87%	W
Penrith	19	1%	88%	W
Bankstown - South	18	1%	88%	S
Canterbury (South) - Campsie	17	1%	89%	E
Riverstone - Marsden Park	17	1%	89%	W
Regents Park	16	1%	90%	E
Cabramatta - Lansvale	16	1%	91%	S
Lane Cove - Greenwich	16	1%	91%	E
West Ryde - Meadowbank	16	1%	92%	E
Sydney Airport	16	1%	92%	E
Prestons - Edmondson Park	16	1%	93%	S
Ashfield	16	1%	93%	E
Leichhardt - Annandale	16	1%	94%	E
Bankstown - North	15	0%	94%	S
Chatswood (East) - Artarmon	15	0%	95%	E
Epping - North Epping	15	0%	95%	E
Seven Hills - Toongabbie	15	0%	96%	W
Strathfield South	14	0%	96%	E
Bass Hill - Georges Hall	14	0%	96%	S
Kingswood - Werrington	14	0%	97%	W
North Rocks	14	0%	97%	N
Frenchs Forest - Belrose	14	0%	98%	E
Newtown - Camperdown - Darlington	14	0%	98%	E
Hurstville	14	0%	99%	E
Glebe - Forest Lodge	14	0%	99%	E
North Ryde - East Ryde	13	0%	100%	E

Direction	Proportion
N	17%
E	36%
S	11%
W	19%
Internal	16%
Total	**100%**

P5825 Woodville Road Corridor TTS
Distribution of Workers Employed within Guildford - South Granville (2016 SA2 Region)

Place of Residence (2016 SA2 Region)	Number of Workers	Proportion	Cumulative Proportion	Direction
Total	**3121**	**100%**	-	-
Granville - Clyde	401	13%	13%	Internal
Merrylands - Holroyd	152	5%	18%	W
Guildford - South Granville	131	4%	22%	Internal
Greystanes - Pemulwuy	83	3%	25%	W
Guildford West - Merrylands West	81	3%	27%	W
Parramatta - Rosehill	78	2%	30%	N
Chester Hill - Sefton	62	2%	32%	S
Toongabbie - Constitution Hill	60	2%	34%	W
Seven Hills - Toongabbie	59	2%	35%	W
Carlingford	57	2%	37%	N
Oatlands - Dundas Valley	53	2%	39%	N
Auburn - Central	50	2%	41%	E
Lidcombe	50	2%	42%	E
St Clair	50	2%	44%	W
North Parramatta	46	1%	45%	N
Ermington - Rydalmere	42	1%	47%	E
Rooty Hill - Minchinbury	42	1%	48%	W
Bass Hill - Georges Hall	41	1%	49%	S
Northmead	41	1%	51%	N
Yagoona - Birrong	41	1%	52%	S
Berala	38	1%	53%	E
Bossley Park - Abbotsbury	36	1%	54%	W
Parklea - Kellyville Ridge	36	1%	55%	N
Pendle Hill - Girraween	36	1%	57%	W
Blacktown (West)	35	1%	58%	W
Fairfield	35	1%	59%	S
Smithfield - Wetherill Park	35	1%	60%	W
Baulkham Hills (West) - Bella Vista	34	1%	61%	N
Kellyville	34	1%	62%	N
Blacktown (South)	33	1%	63%	W
Fairfield - West	33	1%	64%	S
Glenmore Park - Regentville	33	1%	65%	W
Glenwood	32	1%	66%	N
Punchbowl	31	1%	67%	S
Ryde	31	1%	68%	E
Winston Hills	31	1%	69%	N
Bonnyrigg Heights - Bonnyrigg	30	1%	70%	S
Epping - North Epping	30	1%	71%	E
Fairfield - East	30	1%	72%	S
Wentworthville - Westmead	30	1%	73%	W
Baulkham Hills (East)	29	1%	74%	N
Hassall Grove - Plumpton	29	1%	75%	W
Homebush Bay - Silverwater	29	1%	76%	E
Burwood - Croydon	28	1%	77%	E
Eastwood - Denistone	28	1%	78%	E
Rouse Hill - Beaumont Hills	27	1%	79%	N
West Hoxton - Middleton Grange	27	1%	79%	S
West Ryde - Meadowbank	26	1%	80%	E
Lalor Park - Kings Langley	25	1%	81%	W
Panania - Milperra - Picnic Point	25	1%	82%	S
Auburn - South	24	1%	83%	E
Cabramatta - Lansvale	24	1%	83%	S
Cambridge Park	24	1%	84%	W
Castlereagh - Cranebrook	24	1%	85%	W
Doonside - Woodcroft	24	1%	86%	W
Quakers Hill	24	1%	87%	W
Blacktown (North) - Marayong	23	1%	87%	W
Canley Vale - Canley Heights	23	1%	88%	S
Holsworthy - Wattle Grove	23	1%	89%	S
Homebush	23	1%	89%	E
Riverstone - Marsden Park	23	1%	90%	W
Erskine Park	22	1%	91%	W
Lethbridge Park - Tregear	22	1%	92%	W
Padstow	22	1%	92%	S
Auburn - North	21	1%	93%	E
Bidwill - Hebersham - Emerton	21	1%	94%	W
Concord - Mortlake - Cabarita	21	1%	94%	E
Macquarie Fields - Glenfield	21	1%	95%	S
Dural - Kenthurst - Wisemans Ferry	20	1%	96%	N
Green Valley	20	1%	96%	W
Mount Annan - Currans Hill	20	1%	97%	S
North Rocks	20	1%	98%	N
Concord West - North Strathfield	19	1%	98%	E
Condell Park	19	1%	99%	S
Greenfield Park - Prairiewood	19	1%	99%	W
Minto - St Andrews	19	1%	100%	S

Direction	Proportion
N	17%
E	15%
S	17%
W	34%
Internal	17%
Total	**100%**

P5825 Woodville Road Corridor TTS
Distribution of Workers Employed within Granville - Clyde (2016 SA2 Region)

Place of Residence (2016 SA2 Region)	Number of Workers	Proportion	Cumulative Proportion	Direction
Total	**3121**	**100%**	-	-
Granville - Clyde	401	13%	13%	Internal
Merrylands - Holroyd	152	5%	18%	W
Guildford - South Granville	131	4%	22%	Internal
Greystanes - Pemulwuy	83	3%	25%	W
Guildford West - Merrylands West	81	3%	27%	W
Parramatta - Rosehill	78	2%	30%	N
Chester Hill - Sefton	62	2%	32%	S
Toongabbie - Constitution Hill	60	2%	34%	N
Seven Hills - Toongabbie	59	2%	35%	W
Carlingford	57	2%	37%	N
Oatlands - Dundas Valley	53	2%	39%	N
Auburn - Central	50	2%	41%	E
Lidcombe	50	2%	42%	E
St Clair	50	2%	44%	W
North Parramatta	46	1%	45%	N
Ermington - Rydalmere	42	1%	47%	N
Rooty Hill - Minchinbury	42	1%	48%	W
Bass Hill - Georges Hall	41	1%	49%	S
Northmead	41	1%	51%	N
Yagoona - Birrong	41	1%	52%	S
Berala	38	1%	53%	E
Bossley Park - Abbotsbury	36	1%	54%	W
Parklea - Kellyville Ridge	36	1%	55%	N
Pendle Hill - Girraween	36	1%	57%	W
Blacktown (West)	35	1%	58%	W
Fairfield	35	1%	59%	S
Smithfield - Wetherill Park	35	1%	60%	W
Baulkham Hills (West) - Bella Vista	34	1%	61%	N
Kellyville	34	1%	62%	N
Blacktown (South)	33	1%	63%	W
Fairfield - West	33	1%	64%	S
Glenmore Park - Regentville	33	1%	65%	W
Glenwood	32	1%	66%	N
Punchbowl	31	1%	67%	S
Ryde	31	1%	68%	E
Winston Hills	31	1%	69%	N
Bonnyrigg Heights - Bonnyrigg	30	1%	70%	W
Epping - North Epping	30	1%	71%	E
Fairfield - East	30	1%	72%	S
Wentworthville - Westmead	30	1%	73%	W
Baulkham Hills (East)	29	1%	74%	N
Hassall Grove - Plumpton	29	1%	75%	W
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Condell Park	19	1%	99%	S
Greenfield Park - Prairiewood	19	1%	99%	W
Minto - St Andrews	19	1%	100%	S

Direction	Proportion
N	20%
E	13%
S	16%
W	34%
Internal	17%
Total	**100%**