

Proposed Mixed Use Development

**16 Chapman Street (Stage 4A & 4B),
Werrington**

TRAFFIC AND PARKING ASSESSMENT REPORT

14 March 2022

Ref 22110



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1. INTRODUCTION

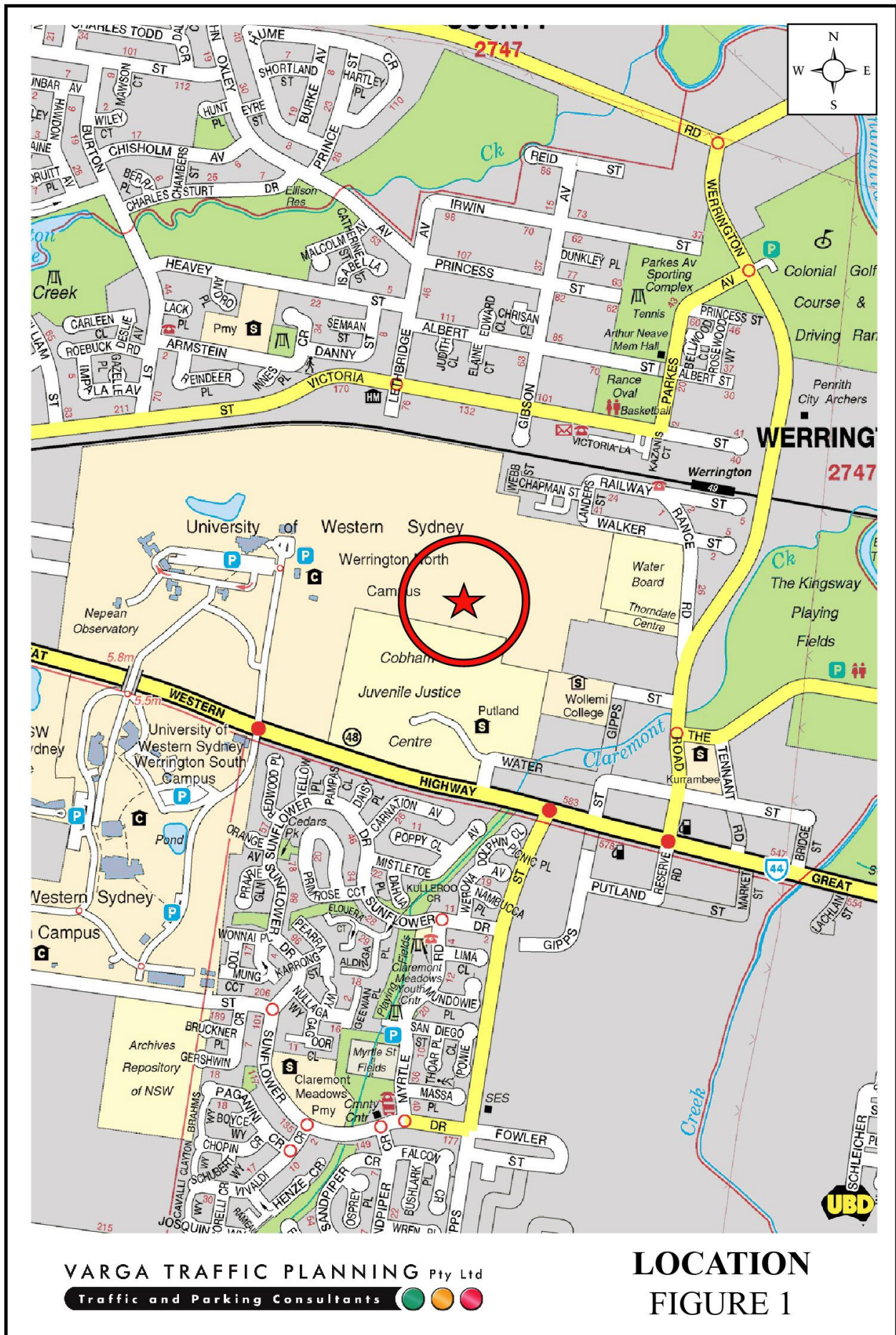
This report has been prepared to accompany a development application to Council for a mixed-use development proposal to be located at 16 Chapman Street (Stage 4A & 4B), Werrington (Figures 1 and 2).

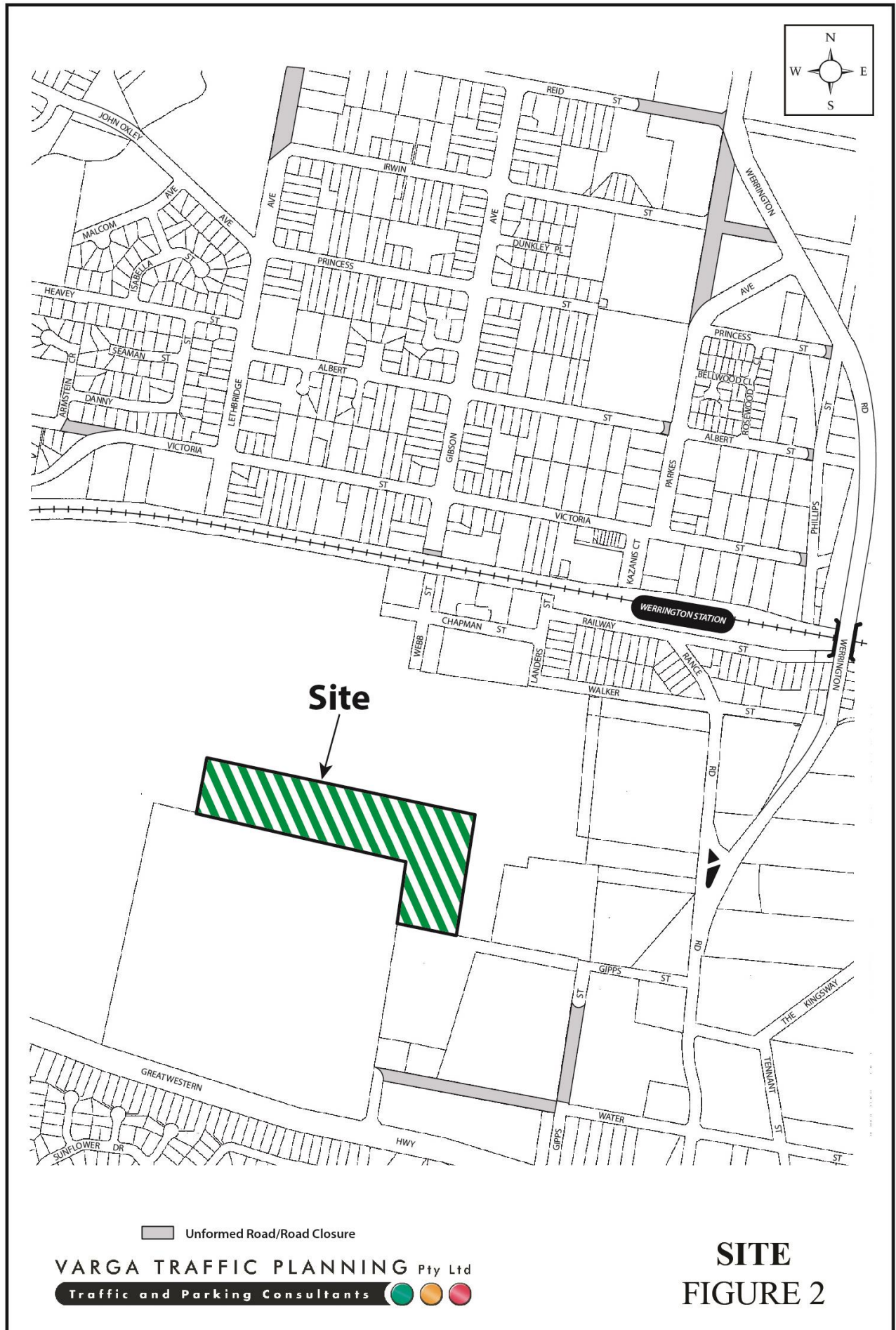
This application involves the construction of a new mixed-use development comprising warehouse, retail café, restaurant, gym and dance studio development, across 16 lots.

Off-street parking is to be provided within new at-grade car parking area for each lot. Vehicular access to each car parking area is to be provided via a new driveway along the Road 11 and Road 12 site frontages.

The purpose of this report is to assess the traffic and parking implications of the development proposal and to that end this report:

- describes the site and provides details of the development proposal
- reviews the road network in the vicinity of the site
- reviews the public transport services available in the vicinity of the site
- estimates the traffic generation potential of the development proposal
- assesses the traffic implications of the development proposal in terms of road network capacity
- reviews the geometric design features of the proposed parking and loading facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street parking and loading provided on the site.





2. PROPOSED DEVELOPMENT

Site

The subject site is located approximately 370m south of Chapman Street. The site is also situated west of the Western Sydney University, north of Cobham Juvenile Detention Centre, and is located approximately 600m radii distance to/from Werrington railway station. The site has street frontages approximately 520m in length to Road 11, approximately 180m in length to Road 12, and occupies an area of approximately 38,945m².

A recent aerial image of the site and its surroundings is reproduced below.



The subject site is currently vacant and is located within the South Werrington Urban Village as per *Penrith Development Control Plan 2014 – E12 Penrith Health and Education Precinct*.



Proposed Development

The proposed development involves the construction of a new mixed warehouse/retail/restaurant/gym/dance studio development, across 16 lots.

The cumulative floor areas of the warehouse component are as follows:

	LOT							
	4002	4003	4004	4007	4101	4102	4103	4104
Warehouses:	465m ²	461m ²	473m ²	877m ²	953m ²	1,034m ²	623m ²	613m ²
Showrooms:	187m ²	173m ²	174m ²	-	-	-	-	-
Ancillary offices:	182m ²	170m ²	176m ²	318m ²	314m ²	311m ²	390m ²	396m ²
TOTAL FLOOR AREA:	834m²	804m²	823m²	1,195m²	1,267m²	1,345m²	1,013m²	1,009m²

	LOT						
	4105	4106	4107	4108	4109	4110	TOTAL
Warehouses:	613m ²	613m ²	862m ²	780m ²	765m ²	931m ²	10,063m ²
Showrooms:	-	-	-	-	-	-	534m ²
Ancillary offices:	399m ²	399m ²	336m ²	414m ²	456m ²	1,051m ²	5,312m ²
TOTAL FLOOR AREA:	1,012m²	1,012m²	1,198m²	1,194m²	1,221m²	1,982m²	15,909m²

Eleven retail units are also proposed on Lot 4005 with a cumulative floor area of 991m².

A mixed use café/restaurant/gym/dance studio is also proposed on Lot 4006 as follows:

Café:	39m ²
Restaurant (canteen):	198m ²
Gym:	179m ²
Dance studio:	93m ²
TOTAL FLOOR AREA:	509m²

Off-street parking is proposed for a total of 297 cars, in accordance with Council requirements, as follows:

	LOT							
	4002	4003	4004	4005	4006	4007	4101	4102
Spaces	17	17	17	34	71	15	15	15

	LOT								
	4103	4104	4105	4106	4107	4108	4109	4110	TOTAL
Spaces	12	12	12	12	12	12	12	12	297

Vehicular access to each car parking area is to be provided via a new driveway along the Road 11 and Road 12 site frontages.

Loading/servicing for the proposed development is to be undertaken by a variety of commercial vehicles up to and including MRV trucks. Each warehouse unit is to be provided with their own internal loading area. Vehicular access to the loading areas is to be provided via the abovementioned proposed site access driveways.

Loading/servicing for the retail and restaurant/gym/dance studio components (Lots 4005 and 4006) are expected to be undertaken by a variety of commercial vehicles up to and including Council's 9.7m long rigid garbage trucks. Vehicular access to the loading areas is to be provided via the abovementioned proposed site access driveways.

Plans of the proposed development have been prepared by *The Bathla Group* and are reproduced in Appendix A.

3. TRAFFIC ASSESSMENT

Road Hierarchy

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

Great Western Highway is classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking the City to the Blue Mountains and beyond to Bathurst. It typically carries two to three traffic lanes in each direction in the vicinity of the site with opposing traffic flows separated by a central median island. Turning bays are provided at key intersections, including Werrington Road.

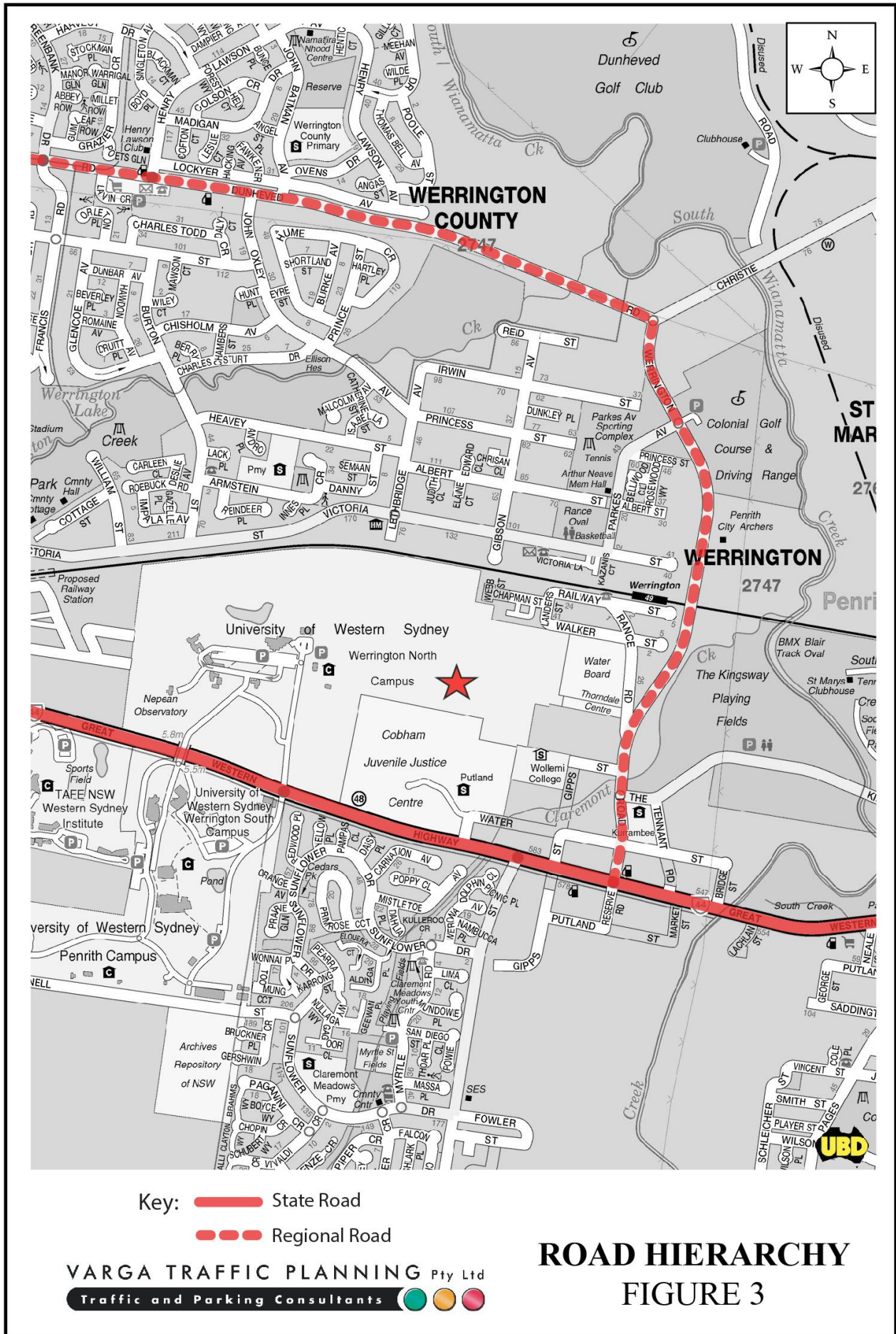
Werrington Road is classified by the RMS as a *Regional Road* and provides the key north-south road link in the area, linking the Great Western Highway and Dunheved Road/Christie Street. It typically carries one traffic lane in each direction in the vicinity of the subject site.

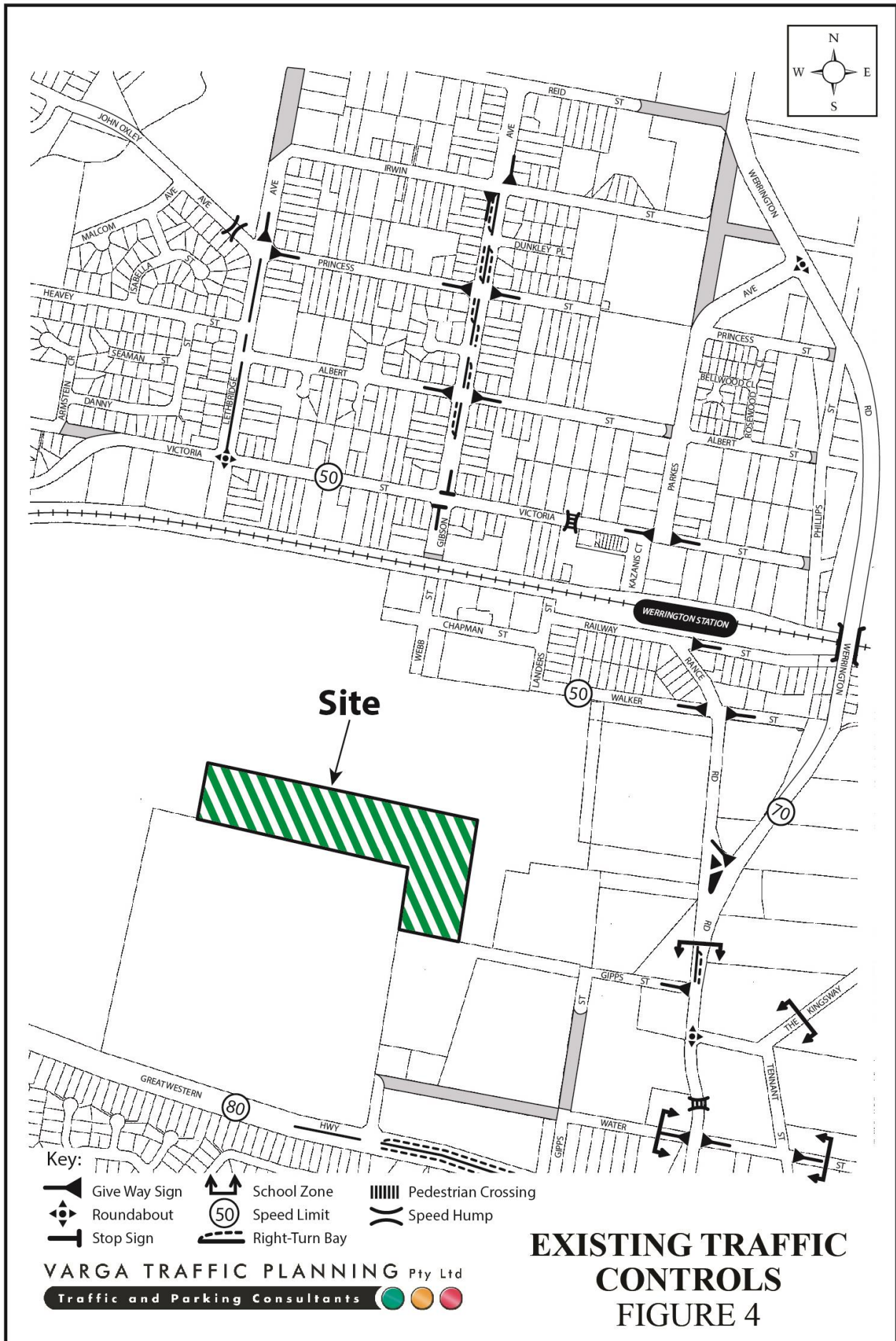
Chapman Street is a local, unclassified road which is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted along both sides of the road.

Existing Traffic Controls

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 70 km/h SPEED LIMIT which applies to Werrington Road
- a 50 km/h SPEED LIMIT which applies to Chapman Street and all other local roads in the area
- a LEFT TURN SLIP LANE in Werrington Road turning into Rance Road





- TWO SOUTHBOUND TRAFFIC LANES in Werrington Road in the vicinity of Rance Road.

Projected Traffic Generation

The traffic implications of development proposals primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network.

An indication of the traffic generation potential of the development proposal is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 - Landuse Traffic Generation (October 2002)* and the updated traffic generation rates in the recently published RMS *Technical Direction* (TDT 2013/04a) document.

The *TDT 2013/04a* document states that it replaces those sections of the RMS *Guidelines* indicated, and must be followed when RMS is undertaking trip generation and/or parking demand assessments.

The RMS *Guidelines* and the updated *TDT 2013/04a* are based on extensive surveys of a wide range of land uses and nominate the following traffic generation rates which are applicable to the residential development proposal:

Industrial Estates

AM: 0.52 peak hour vehicle trips per 100m² GFA

PM: 0.56 peak hour vehicle trips per 100m² GFA

Gymnasiums (Metropolitan Sub Regional Areas)

9 *evening* peak hour trips per 100m² GFA

Office Blocks

AM: 1.6 peak hour vehicle trips per 100m² GFA

PM: 1.2 peak hour vehicle trips per 100m² GFA

The RMS *Guidelines* and the *TDT 2013/04a* do not nominate a traffic generation rate for dance studios. For the purposes of this assessment, the traffic generation rate nominated in the RMS *Guidelines* for “gym” has been adopted in respect of the dance studio component of the development proposal.

The RMS *Guidelines* and the *TDT 2013/04a* also does not nominate a traffic generation rate for small, local shops, referring only to regional shopping centres incorporating supermarkets and department stores. For the purposes of this assessment therefore, the traffic generation rate of “office blocks” nominated in the *TDT 2013/04a* has been adopted in respect of the retail component of the development proposal.

The RMS *Guidelines* and the *TDT 2013/04a* also does not nominate a traffic generation rate for local small cafes, referring only to major restaurants. For the purposes of this assessment therefore, the traffic generation rate of “office blocks” nominated in the *TDT 2013/04a* has been adopted in respect of the café and canteen components of the development proposal although it is noted that the café and canteen components are intended to cater primarily for the needs of employees and patrons of the subject development proposal, and are not expected to become destinations which would attract customers from the wider metropolitan area.

Application of the above traffic generation rates to the various components of the development proposal yields a traffic generation potential of approximately 184 vehicle trips per hour (vph) during the weekday AM peak period and approximately 162 vph during the weekday PM peak period, as set out on the following page:

Projected Future Traffic Generation Potential		
	AM	PM
Warehouses/showrooms (10,597m ²):	55.1 vph	59.3 vph
Ancillary Offices (5,312m ²):	85.0 vph	63.7 vph
Retail (991m ²):	15.9 vph	11.9 vph
Café (39m ²):	0.6 vph	0.5 vph
Canteen (198m ²):	3.2 vph	2.4 vph
Gym (179m ²):	16.1 vph	16.1 vph
Dance Studio (93m ²):	8.4 vph	8.4 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	184.3 vph	162.3 vph

In any event, that projected level of traffic generation potential of the site as a consequence of the development proposal is consistent with the zoning objectives of the site and will clearly not have any unacceptable traffic implications in terms of road network capacity.

4. PARKING IMPLICATIONS

Off-Street Car Parking Provisions

The off-street car parking requirements applicable to the development proposal are specified in the *Penrith Development Control Plan 2014, Part C10 – Transport, Access and Parking* document in the following terms:

Warehouse, including ancillary office

1 space per 100m² GFA

Retail Premises Shop (Other neighbourhood and specialty shops)

1 space per 30m² GFA

Restaurant

1 space per 6m² of seating area, plus 1 space per employee

Fitness Centre including Gym

7 spaces per 100m² GFA

Application of the above parking requirements to the development proposal yields an off-street car parking requirement of 257 spaces as set out below:

Lot	Proposed	Spaces Required	Proposed
4002	Warehouses/showrooms/offices (834m ²)	8.3	17.0
4003	Warehouses/showrooms/offices (804m ²)	8.0	17.0
4004	Warehouses/showrooms/offices (822m ²)	8.2	17.0
4005	Retail (991m ²)	33.0	34.0
4006	Café (39m ²) ~ 2 staff	8.5	
	Canteen (198m ²) ~ 4 staff	37.0	
	Gym (179m ²)	12.5	
	Dance Studio (93m ²)	6.5	
	Sub-total	64.5	71.0
4007	Warehouses/offices (1,195m ²)	12.0	15.0
4101	Warehouses/offices (1,267m ²)	12.7	15.0
4102	Warehouses/offices (1,345m ²)	13.5	15.0
4103	Warehouses/offices (1,013m ²)	10.1	12.0
4104	Warehouses/offices (1,009m ²)	10.1	12.0
4105	Warehouses/offices (1,012m ²)	10.1	12.0

4106	Warehouses/offices (1,012m ²)	10.1	12.0
4107	Warehouses/offices (1,198m ²)	12.0	12.0
4108	Warehouses/offices (1,194m ²)	12.0	12.0
4109	Warehouses/offices (1,221m ²)	12.2	12.0
4110	Warehouses/offices (1,982m ²)	19.8	12.0
TOTAL		256.6	297.0

The proposed development makes provision for a total of 297 off-street car parking spaces, thereby satisfying Council's car parking requirements (albeit with a shortfall of 8 spaces for 4110).

The geometric design layout of the proposed car parking facilities have been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1* and *Parking Facilities Part 6 - Off-Street Parking for People with Disabilities AS2890.6* in respect of parking bay dimensions, ramp gradients and aisle widths.

Loading/Servicing Provisions

The proposed new warehouse development is expected to be serviced by a variety of commercial vehicles up to and including MRV trucks. Each warehouse unit is to be provided with their own internal loading area.

The geometric design layout of the proposed loading facilities has been designed to comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2 - Off-Street Commercial Vehicle Facilities AS2890.2* in respect of loading bay dimensions, overhead clearances, ramp gradients and service area requirements for MRV trucks (pending relocation of roller shutters for Units 4002 to 4004).

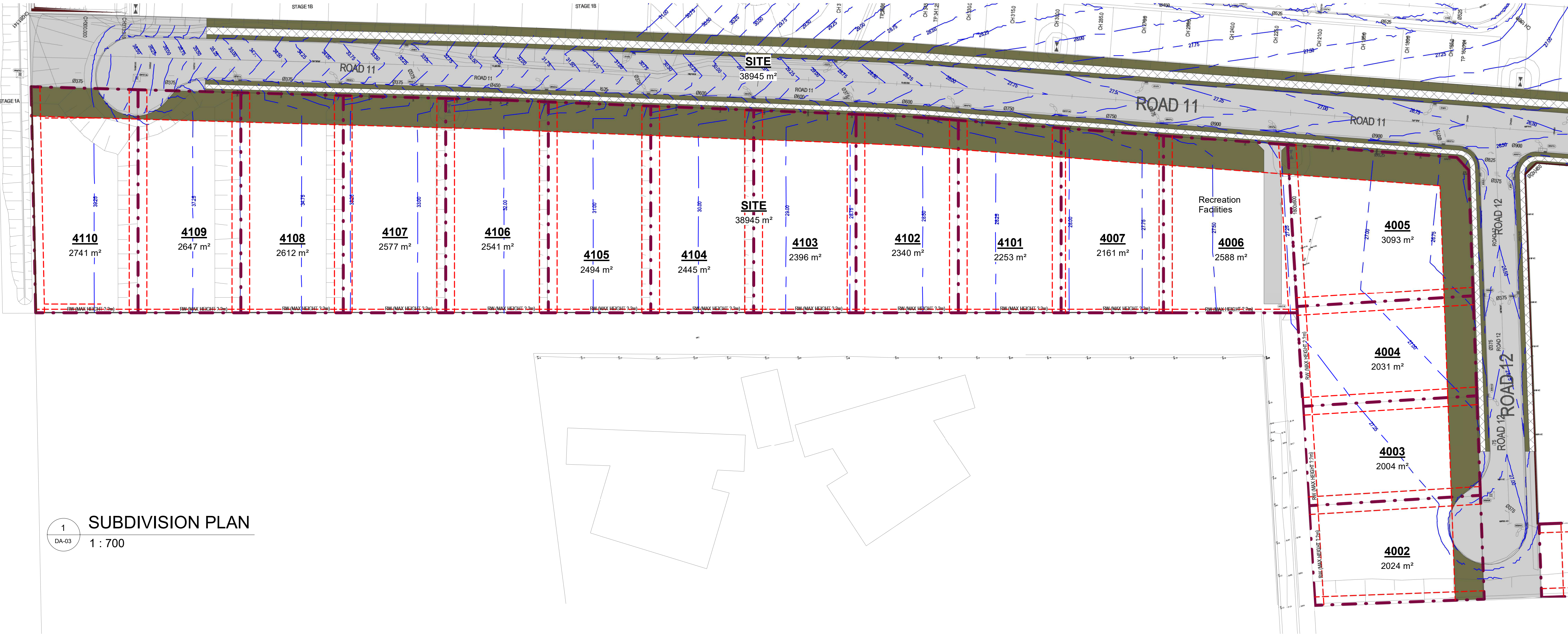
Lots 4005 and 4006 is expected to be serviced by a variety of commercial vehicles up to and including Council's 9.7m long rigid garbage trucks.

The manoeuvring areas have been designed to accommodate the swept turning path requirements of these heavy rigid trucks and Council's 9.7m garbage trucks, allowing them to enter and exit the site in a forward direction at all times.

In summary, the proposed parking and loading facilities satisfy the relevant requirements specified in both Council's *DCP 2014* and the Australian Standards, and it is therefore concluded that the proposed development will not have any unacceptable parking or loading implications.

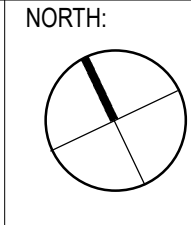
APPENDIX A

ARCHITECTURAL PLANS



1 SUBDIVISION PLAN
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GENERAL NOTES:			
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“Building dreams together.”

PROJECT:
16
Chapman St Werrington NSW 2747

LOT NUMBER:

DRAWING TITLE:
SUBDIVISION PLAN

DA ISSUE			
PROJECT No.	DATE	DRAWING No.	REV.
	FEB 2022	DA-03	A
DRAWN BY:	SCALE:	ISSUED BY:	
Author	1 : 700		

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