

Proposed Mixed Use Development

**395-397 Princes Highway,
Rockdale**

TRAFFIC AND PARKING ASSESSMENT REPORT

23 June 2016

Ref 16182

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants 

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Document Verification

Location:	395-397 Princes Highway, Rockdale	Job Number		16182	
Revision	Details	Prepared		Approved	
Final	Final for Submission	By	Date	By	Date
		TN	23/06/16	RV	23/06/16

1. INTRODUCTION

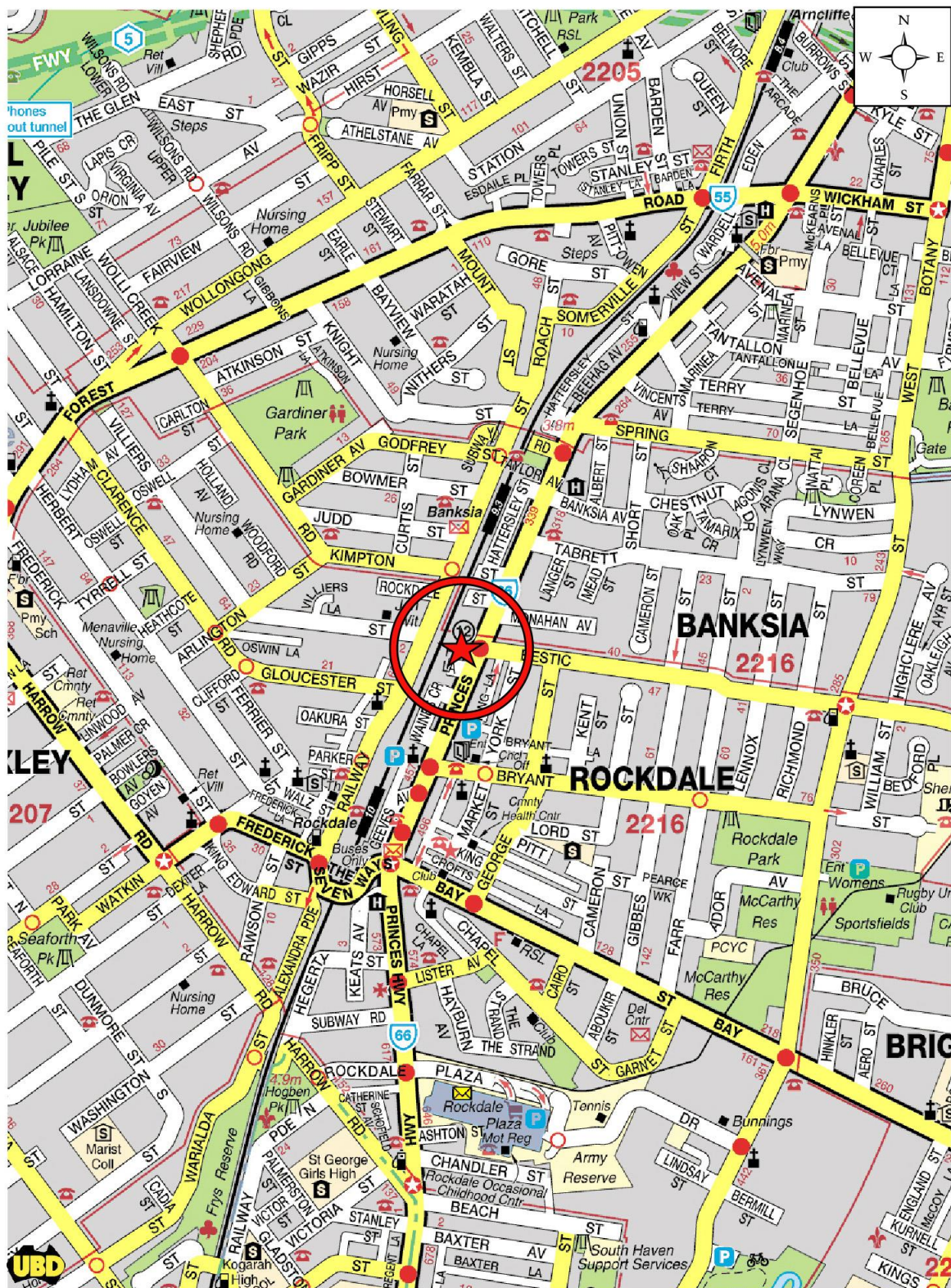
This report has been prepared to accompany a Development Application to Rockdale City Council for a mixed use development proposal to be located at 395-397 Princes Highway, Rockdale (Figures 1 and 2).

The proposed development involves the demolition of the existing car sales yard on the site to facilitate the construction of a new mixed-use residential/retail development.

Off-street parking is to be provided in a new multi-level basement car parking area in accordance with Council's requirements.

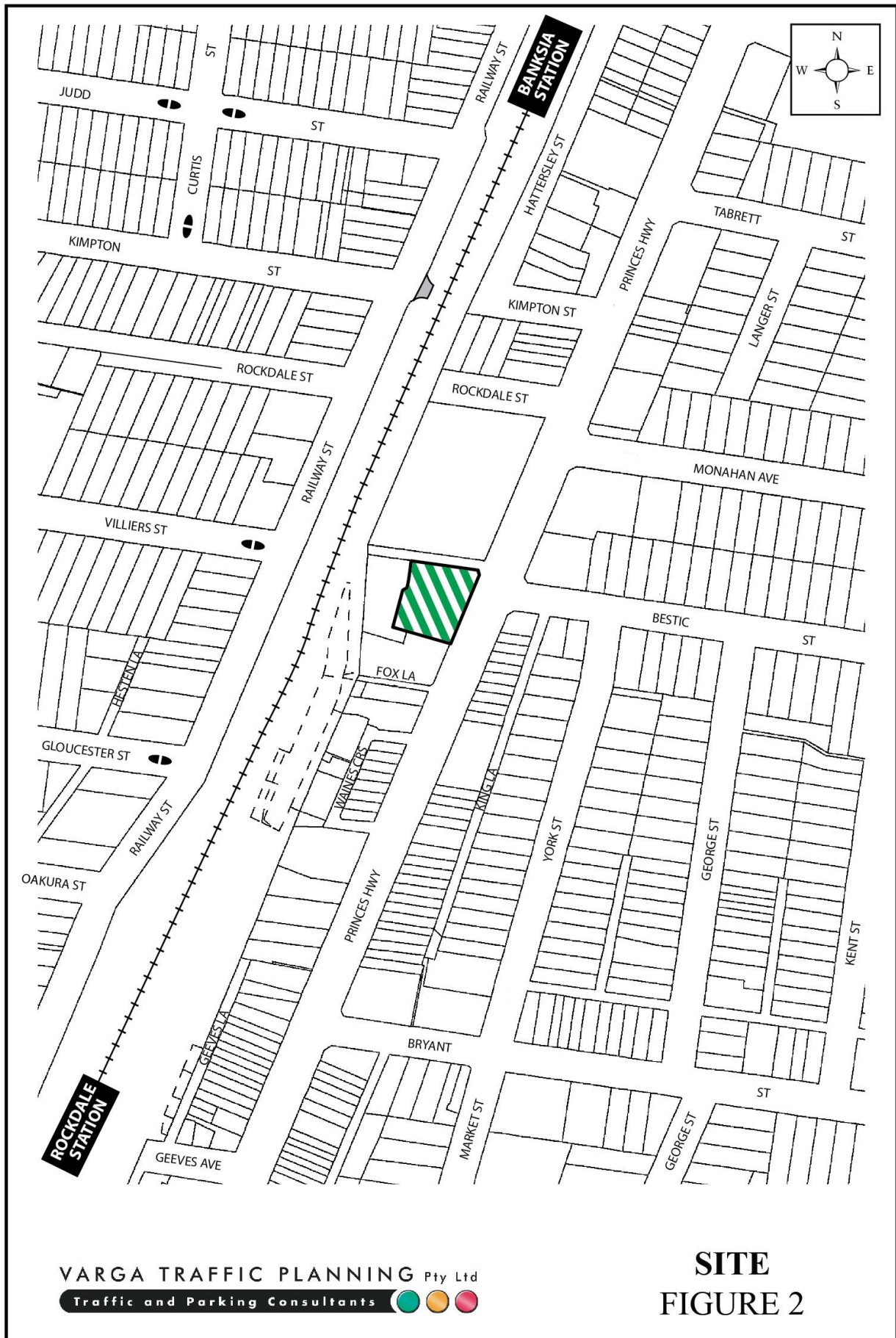
The purpose of this report is to assess the traffic and parking implications of the development proposal and to that end this report:

- 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 within 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 car parking facilities for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street car parking provided on the site.



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LOCATION
FIGURE 1



2. PROPOSED DEVELOPMENT

Site

The subject site is located on the western side of the Princes Highway, directly opposite the Bestic Street intersection, and lies within the Rockdale Town Centre. The site has street frontages approximately 45m in length to the Princes Highway and approximately 40m in length to the adjacent unnamed laneway along the northern boundary of the site.

The subject site is currently occupied by a car sales yard and has a site area of approximately 1,761m².

Vehicular access to the site is currently provided via several driveways located in the Princes Highway and in the adjacent lane.

Proposed Development

The proposed development involves the demolition of the existing car yard on the site to facilitate the construction of a new mixed-use residential/retail development.

A total of 92 residential apartments are proposed in the new development as follows:

1 bedroom apartments:	24
2 bedroom apartments:	65
3 bedroom apartments:	3
TOTAL APARTMENTS:	92

Three retail units are also proposed on the ground floor level fronting the Princes Highway, with a cumulative floor area of approximately 561m².

Off-street car parking is proposed for a total of 123 cars, comprising 96 residential spaces (including disabled/adaptable spaces), 15 visitor spaces (including a car wash bay) and 12 retail spaces, in a new three-level basement car parking area in accordance with Council's

requirements. Vehicular access to the car parking facilities is proposed via a new entry/exit driveway located towards the western end of the adjacent unnamed lane site frontage.

Plans of the proposed development have been prepared by *FUSE Architecture* and are reproduced in the following pages.





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.

The Princes Highway is classified by the RMS as a *State Road* and provides the key north-south road link in the area, linking St Peters to Heathcote and beyond. It typically carries three traffic lanes in each direction in the vicinity of the site, with kerbside parking generally permitted outside commuter peak periods.

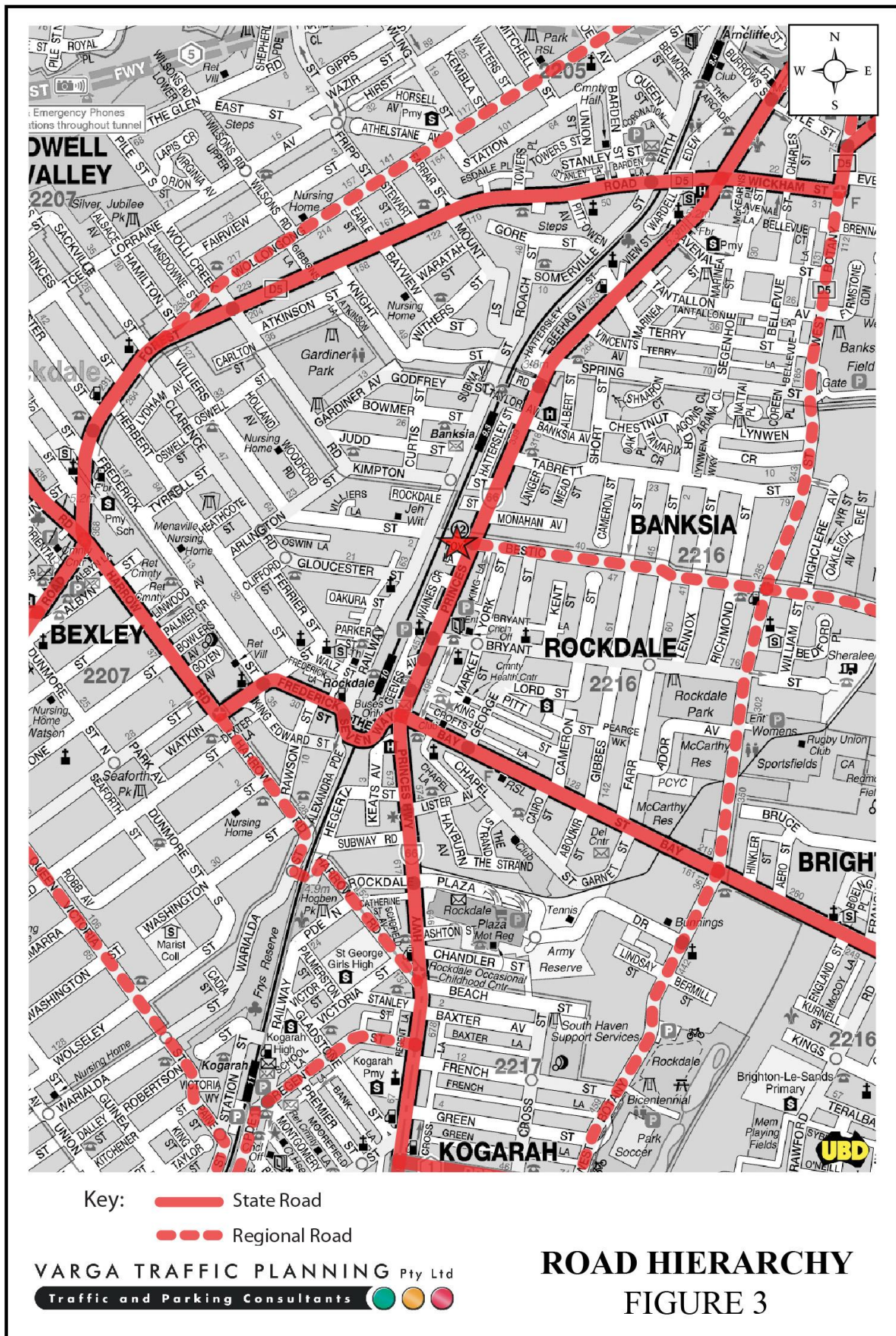
Bestic Street is classified by the RMS as *Regional Road* which provides an east-west road link between the Princes Highway and The Grande Parade. They typically carry one traffic lane in each direction in the vicinity of the site with kerbside parking generally permitted on both sides of both roads.

Rockdale 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 the northern side 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 60 km/h SPEED LIMIT which applies to the Princes Highway and Bestic Street
- a 50 km/h SPEED LIMIT which applies to all other local roads in the area
- TRAFFIC SIGNALS at the intersection of the Princes Highway and Bestic Street with all turning movements permitted



- a LEFT-TURN ONLY restriction in the unnamed lane where it intersects with the Princes Highway
- CENTRAL MEDIAN ISLANDS in the Princes Highway, including the site frontage which precludes right-turn movements into and out of the site.

Existing Public Transport Services

The existing public transport services available in the vicinity of the site are illustrated on Figure 5.

The subject site is conveniently located within 500 metres walking distance to/from Rockdale Railway Station which services the T4 Eastern Suburbs & Illawarra Line, operating between Waterfall and Cronulla to Bondi Junction via the Sydney CBD. The service typically operates at intervals of *less than* 10 minutes throughout the day and commuter wait times are expected to be minimal.

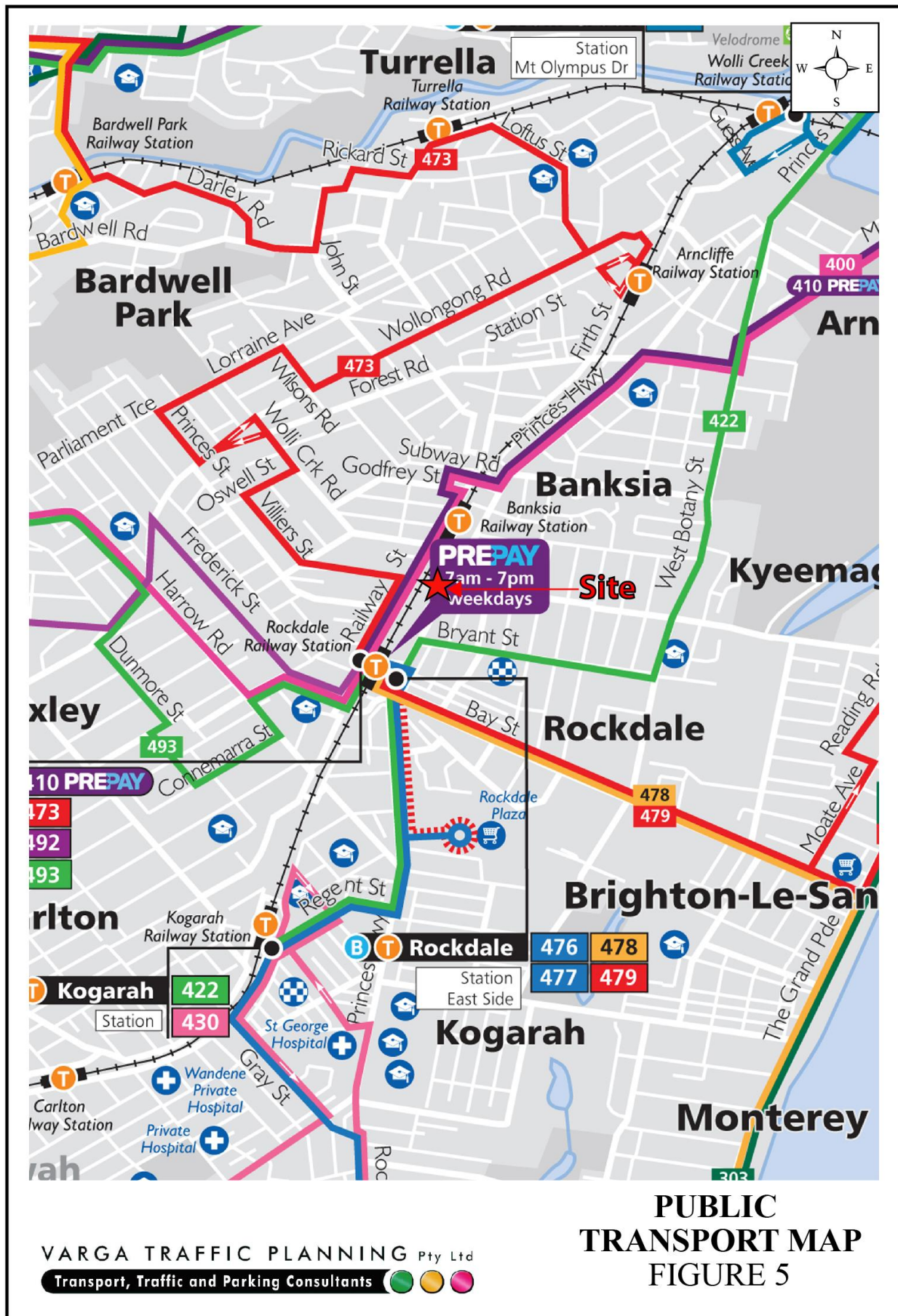
In addition to train services, a number of bus routes currently operate within the vicinity of the site, including route 400, 422, 476, 473, 477, 478, 479, 492 and 493.

On the above basis, it is clear that the subject site is conveniently located to take full advantage of the extensive public transport services available within its vicinity and encourage the greater use of sustainable modes of transport.

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 specifies that it replaces those sections of the RMS *Guidelines* indicated, and that it must be followed when RMS is undertaken 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 development proposal:

High Density Residential Flat Dwellings

AM: 0.19 peak hour vehicle trips per unit

PM: 0.15 peak hour vehicle trips per unit

The RMS *Guidelines* do not nominate a traffic generation rate for small, local shops, referring only to major regional shopping centres incorporating supermarkets and department stores. For the purposes of this assessment therefore, the traffic generation rate of “2.0 peak hour vehicle trips/100m² GFA” nominated in the RMS *Guidelines* for “commercial premises” has been adopted in respect of the retail component of the development proposal.

Application of the above traffic generation rates to the residential and retail components of the development proposal yields a traffic generation potential of approximately 29 vehicle trips per hour (vph) during the AM commuter peak period and 25 vph during the PM commuter peak period, as set out below:

	AM	PM
Residential apartments (92 apartments):	17.5 vph	13.8 vph
Retail Shops (561m ²):	11.2 vph	11.2 vph
TOTAL TRAFFIC GENERATION POTENTIAL:	28.7 vph	25.0 vph

That projected future level of traffic generation potential should however, be offset or *discounted* by the volume of traffic which could reasonably be expected to be generated by the existing uses of the site, in order to determine the *nett increase (or decrease)* in traffic generation potential expected to occur as a consequence of the development proposal.

The RMS *Guidelines* do not nominate a traffic generation rate for car yards. Therefore for the purposes of this assessment, the “motor showroom” traffic generation rate nominated in the RMS *Guidelines* (0.7 *evening* peak hour trips per 100m² of site area) has been adopted.

Application of the “motor showroom” traffic generation rate nominated in the RMS *Guidelines* to the subject site’s area of 1,761m² yields a traffic generation potential of approximately 12 peak hour vehicle trips.

Accordingly, it is likely that the proposed development will result in a *nett increase* in the traffic generation potential of the site of approximately 16 vph and 13 vph during the AM and PM commuter peak periods respectively, as set out below:

Projected Nett Increase in Peak Hour Traffic Generation Potential of the site as a consequence of the development proposal		
	AM	PM
Projected Future Traffic Generation Potential:	28.7 vph	25.0 vph
Less Existing Traffic Generation Potential:	-12.3 vph	-12.3 vph
NETT INCREASE IN TRAFFIC GENERATION POTENTIAL:	16.4 vph	12.7 vph

That projected *nett increase* in the traffic generation potential of the site as a consequence of the development proposal is minimal, 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

Existing Kerbside Parking Restrictions

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site are illustrated on Figure 6 and comprise:

- CLEARWAY restrictions along the western side of the Princes Highway during *morning* commuter peak periods
- CLEARWAY restrictions along the eastern side of the Princes Highway during *afternoon* commuter peak periods
- NO STOPPING restrictions along both sides of the Princes Highway and along the southern side of the adjacent unnamed lane, including the both entire site frontages.

Off-Street Parking Provisions

The off-street parking requirements applicable to the development proposal are specified in Council's *Development Control Plan 2011, Section 4.6 – Car Parking, Access and Movement* document in the following terms:

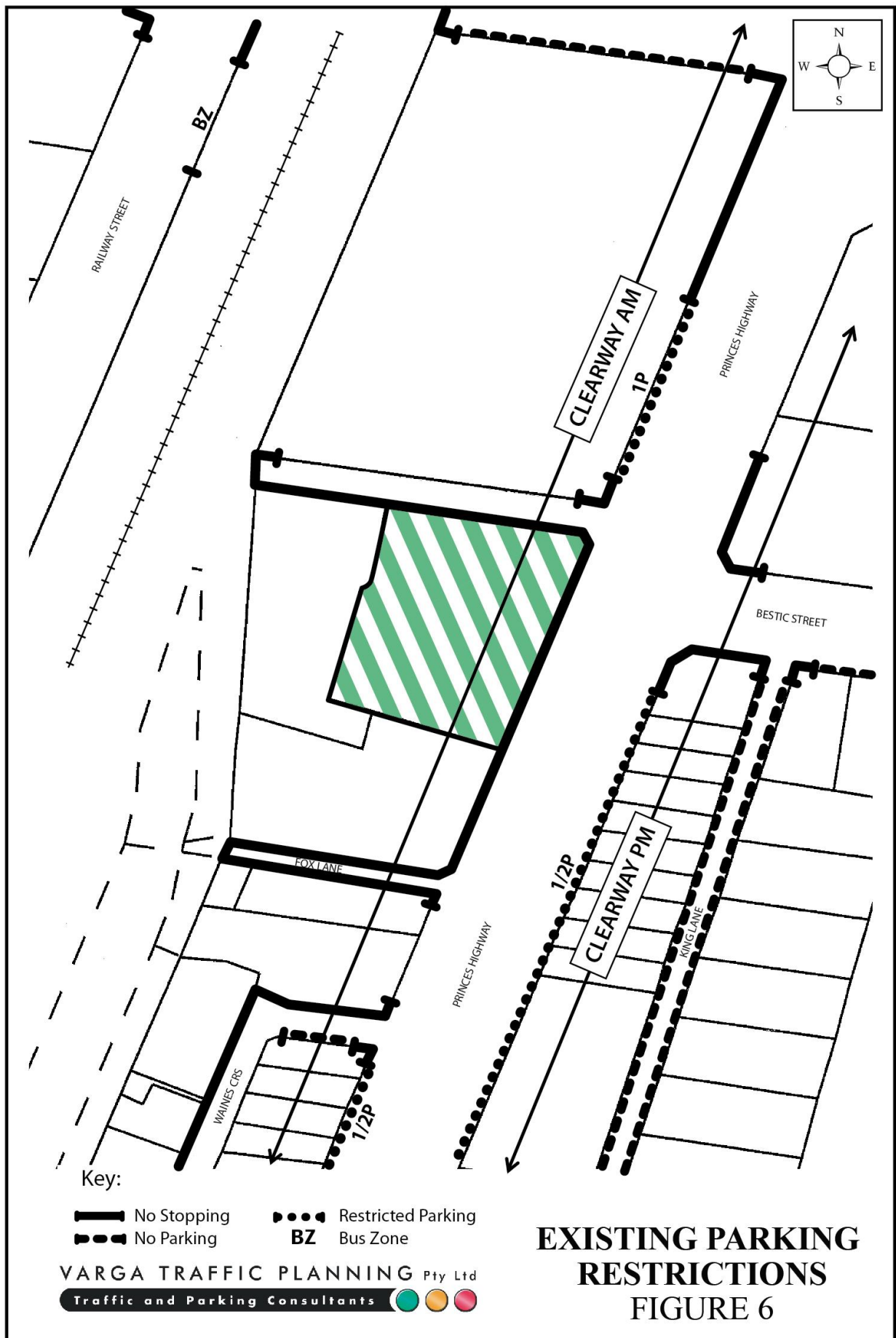
Residential Flat Buildings

1 bedroom apartment:	1 space per dwelling
2 bedroom apartment:	1 space per dwelling
3 bedroom apartment	2 space per dwelling
Visitors:	1 space per 5 dwellings
Carwash:	1 space (can be a visitor space)

Retail Premises

1 space per 40m² GFA

Note: a 20% reduction of the “non-residential” component of the parking requirement shall be applied to any development within the Rockdale Town Centre



Application of the above parking requirements to the residential and retail components of the development proposal yields an off-street parking requirement of 121 parking spaces as set out below:

Residential (92 Apartments):	95.0 spaces
Visitors:	14.7 spaces (with 20% discount)
Retail Shops (561m ²):	11.2 spaces (with 20% discount)
TOTAL:	120.9 spaces

The proposed development makes provision for a total of 123 cars, comprising 96 residential spaces (including disabled/adaptable spaces), 15 visitor spaces (including a car wash bay) and 12 retail spaces, thereby satisfying Council's Parking Code requirements.

Off-Street Bicycle Parking Provisions

The off-street bicycle parking requirements applicable to the development proposal are specified in the *Rockdale DCP 2011, Part 4.6* document in the following terms:

Multi Dwelling Housing/Residential Flat Buildings/Shoptop Housing

1 space/10 dwellings

Shops/Retail Premises

1 space/200m² GFA, with 15% to be accessible by visitors

Application of the above bicycle parking requirements to the residential and retail components of the development proposal yields an off-street bicycle parking requirement of 12 spaces as set out below:

Residential (92 Apartments):	9.2 spaces
Retail shops (561m ²)	2.8 spaces
TOTAL:	12.0 spaces

The proposed development makes provision for a total of 12 off-street bicycle parking spaces, thereby satisfying Council's bicycle parking requirements.

Off-Street Motorcycle Provisions

The off-street motorcycle parking requirements applicable to the development proposal are specified in the *Rockdale DCP 2011, Part 4.6* document in the following terms:

Multi Dwelling Housing/Residential Flat Buildings/Shoptop Housing

1 space/15 dwellings

Shops/Retail Premises

1 space/20 car spaces

Application of the above motorcycle parking requirements to the residential and retail components of the development proposal yields an off-street motorcycle parking requirement of 7 spaces as set out below:

Residential (92 Apartments):	6.1 spaces
Retail shops (561m ²)	0.6 spaces
TOTAL:	6.7 spaces

The proposed development makes provision for a total of 7 motorcycle spaces, thereby satisfying Council's motorcycle parking requirements.

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 AS2890.1:2004* in respect of parking bay dimensions, ramp gradients and aisle widths.

In summary, the proposed parking facilities satisfy the relevant requirements specified in both Council's Parking Code as well as the Australian Standards and it is therefore concluded that the proposed development will not have any unacceptable parking implications.