



588-592 PRINCES HIGHWAY, ROCKDALE

URBAN CONTEXT STUDY

APRIL 2016

Urban Context Study | 588-592 Princes Hwy, Rockdale

April 2016

Prepared by

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In conjunction with:

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Front cover image by Anthony Vavayis & Associates Architects

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Executive Summary

This analysis demonstrates that the height potential of the Rockdale Town Centre is defined by the Object Limitation Surface. The benefits and the values created with additional high quality living spaces and good quality streets and public domain that come with urban renewal and good design, outweighs the benefits of a dipped skyline. We consider that the heights proposed in this scheme represents a very desirable and built outcome for Rockdale.

This analysis demonstrates the scarcity of relatively unconstrained sites. Given the attractiveness of Rockdale as a place to live, and given the desirability of increasing the number of residents in walking distance to the shops and

public transport, is important that the yield of these sites should be optimised (section 6). The subject site is unusual for its location and disposition, it is capable of very good solar access, whereas a tall building on the site has relatively little shading impact on the development potential of the neighbouring sites.

The proposal is for a well considered and distinctive design. The design optimises the yield and therefore number people who can live in this setting; it creates a recognisable landmark building, while dramatically improving the setting and the public interface at this important corner in Rockdale.

1. Introduction

1.1 Purpose of this Report

Atlas Urban Design & Strategy has been engaged by the Anthony Vavayis & Associates Architects to prepare a Context Study to review and consider;

1. Whether the site has capacity for increased height and development yield, and the impact that will have in the Rockdale Town Centre.
2. The existing and likely future opportunities for development within this part of Rockdale.

This report looks beyond generic planning controls to consider the particular circumstance of the site in relation to its context. It explores what opportunities exist to optimise the development outcome of this site. The report reviews the Local Environment Plan controls applicable in the precinct, with particular regard to height and density.

This assessment, along with a detailed analysis of the site, sets out the opportunities for this site to contribute to the development of the Rockdale Town Centre, in line with council visions and goals for the precinct.

This vision is supported by a series of identified urban design opportunities with justification for an amendment to height with variation to the current controls for the precinct.

1.2 Site Overview

The site is located in the Rockdale Town Centre at 588 -592 Princes Highway. It sits in an area currently undergoing substantial change with the redevelopment of numerous sites. It is anticipated that this site will follow a similar pattern of development. This development has the potential to significantly contribute to a vibrant town centre and further encourage the revitalisation of the Princes Highway Corridor through increased residential density improved street level activation and high quality design.

The location of the site presents an opportunity to increase residential density based on its proximity to public transport and retail services. It is one of the few larger developable sites within a comfortable 400m walk to the areas major retail at Rockdale Plaza, the Rockdale Town Centre as well as within a comfortable 400m walk to Rockdale Train Station, as shown in figure 1. It is also less than 200m away from four bus stops which are serviced by approximately six different bus routes.

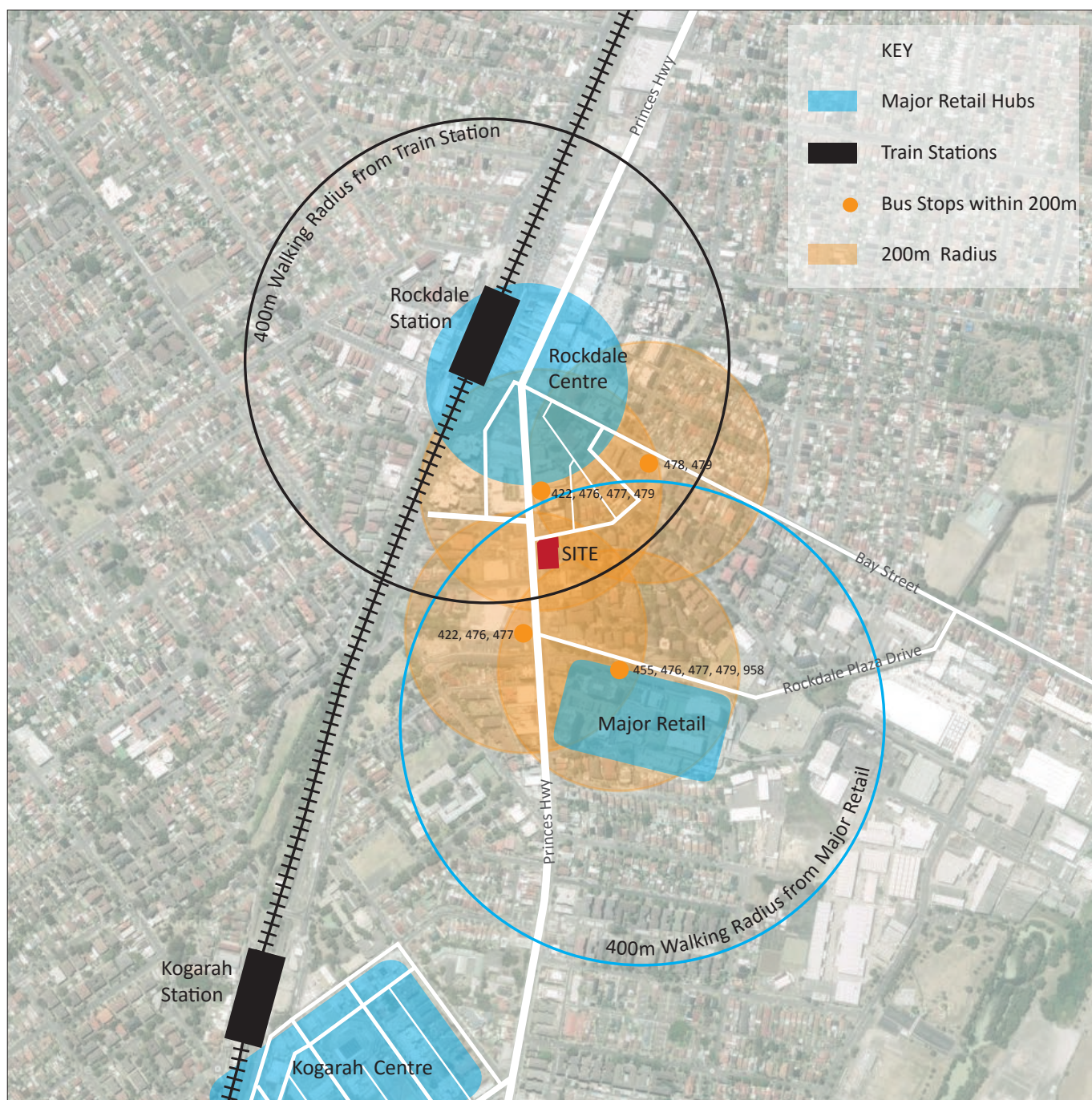


Fig. 1: Public Transport and Retail Amenity

2. Urban Design Considerations

The Urban Design team together with the Architectural team have worked closely together on this project to understand the issues surrounding the precinct, and develop solutions which bring the best overall outcome for the site. Through the consultation process, three Urban design objectives have helped shape the Urban Design analysis and the resulting proposal

The proposal detailed in the accompanying architectural scheme is for distinctive high quality residential apartments, with retail/ commercial at the lower levels.

The urban design objectives for the project seek to fill a number of the councils goals as described in the 2011 Rockdale DCP, the Rockdale Town Centre Masterplan 2012 and the Public Domain Plan 2012.

The proposal meets the three objectives which are as follows;

1. Encourage 'Revitalisation of the Princes Highway Corridor', increasing residential density along a major transport route.
2. 'Concentrate future development around the City's existing villages and local centres through an increase in the local residential population' and improving public space amenity.
3. 'Ensure all aspects of development within the city are of a high design quality'.

The table adjacent shows key objectives of Councils respective planning documents and how this proposal responds to them.



Fig. 2: Rockdale Council Planning Documents

Document	Relevant objectives of Planning Document	Response
DCP Development Control Plan 2011	1. Concentrate future development around the City's existing villages and local centres, improving their vibrancy and character through an increase in the local residential population.	This site in close proximity to rail and other amenities has the potential to cater for an increase in the City's residential population, while improving the vibrancy of the area through increased residential density, high quality design and an attractive frontage to the Princes Highway corridor.
	3. Encourage revitalisation of the Princes Highway.	The proposal provides a generous tree lined frontage to Princes Highway, adding to the image of a 'green gateway' along this popular route.
	4. Ensure all aspects of development within the city are of a high design quality.	The proposal is for a highly distinctive architectural expression and built form.
	5. Improve the City's sustainable transport network to encourage alternative transport modes.	The proposal increases residential population on a site that has close proximity to public transport.
Rockdale Town Centre Masterplan 2012	1. Establish a unique identity for Rockdale	The proposal is for a highly distinctive architectural expression and built form. The project will become a recognisable landmark along the busy Princes Highway.
	2. Increase vitality and lifestyle	The proposal will help to create an active and safe street front through active retail frontages, population density and passive surveillance. Through connections to the wider area, high quality public domain and increased economic functionality the project itself will become a lifestyle magnet in line with other redevelopments in the area.
	3. Improve the pedestrian experience	The Princes Highway Corridor will receive a facelift with attractive retail on the lower level/levels and driveway crossovers consolidated to Lister Ave.
	6. Green gateways (section 5.4)	The proposal provides a generous tree lined frontage to Princes Highway, adding to the image of a 'green gateway' along this popular route.
	7. Residential Revitalisation - Centre edges ... increased residential densities...housing choice...creating an active and attractive public domain.	This site in close proximity to rail and other amenities has the potential to cater for an increase in the City's residential population, while improving the vibrancy of the area through increased residential density, high quality design and an attractive frontage to the Princes Highway corridor.
Rockdale Public Domain Plan 2012	1. Cohesive and high quality public realm	This high quality addition to the public domain under the proposal is fully integrated into a network of proposed and existing cycle, walking and public transport routes.
	2. Maximise long term amenity for public benefit	The minimising of vehicle crossovers to prioritise pedestrian movement will remain permanent.
	3. Improve the character of each precinct	The existing precinct character is quite poor. The is to proposal is to transform this with high quality architecture and attractive street frontages.
	4. Increase pedestrian priority	The Princes Highway Corridor will receive a facelift with attractive retail on the lower level/levels and driveway crossovers consolidated and wider footpath to Lister Ave.

3. Height

3.1 Height Environment in Urban Sydney

Figure 3 presents a set of urban centres in eastern Sydney similar to the Rockdale Town Centre. Each centre is identified by its position in the Sydney Metropolitan Strategy hierarchy, Rockdale being identified as a Town Centre. The maximum height and FSR is recorded for each centre. The following observations are relevant to the future height and density in Rockdale:

- Among the 'Town Centres' maximum heights range from 27 metres to 70 metres.
- Wolli Creek is identified as a 'Village' has a maximum height of 64 metres, whereas Kogarah is a major centre and a maximum height of only 33 metres.

- Among the 'Town Centres' there is great variability in FSR ranging from 1.8:1 to 6:1.
- Generally greater height corresponds with greater FSR although the ratio between these figures is quite variable.

In conclusion, Rockdale would remain within a height pattern of nearby 'Town Centres', if the height limit was to increase.



Fig. 3: Height Environment in Urban Sydney

3.2 Rockdale Height Controls

The height of buildings map reflects a pattern of taller buildings toward the Rockdale train station and along the Princess Highway. Council's recent planning proposal suggest greater height should be permitted on larger sites. A number of pending projects are looking to take the opportunity to achieve greater height in the town centre, in line with councils objectives as described in their planning controls.

The height map (fig. 4) has been composed to illustrate the likely maximum heights in the vicinity of Rockdale. The heights record the actual heights, the LEP permitted heights, the possible heights under the standing planning proposal and, the proposed height on the subject site.

The distribution of height in the area follows a logical framework:

- Greater height follows the Princess Highway
- Greater height occurs on larger sites
- Absolute height is limited by the Sydney Airport "Object Limitation Surface"

- The skyline generally takes a 'flat-top' profile (limited by the OLS)
- Greater height occurs in areas of mixed land use

The subject site is considered capable of height rising to the Object Limitation Surface for the following reasons:

- It lies between areas of greater absolute height: Rockdale town centre & Rockdale Plaza
- It lies along the Princess Highway Corridor
- It lies in an area well serviced by both public transport and major retail centres

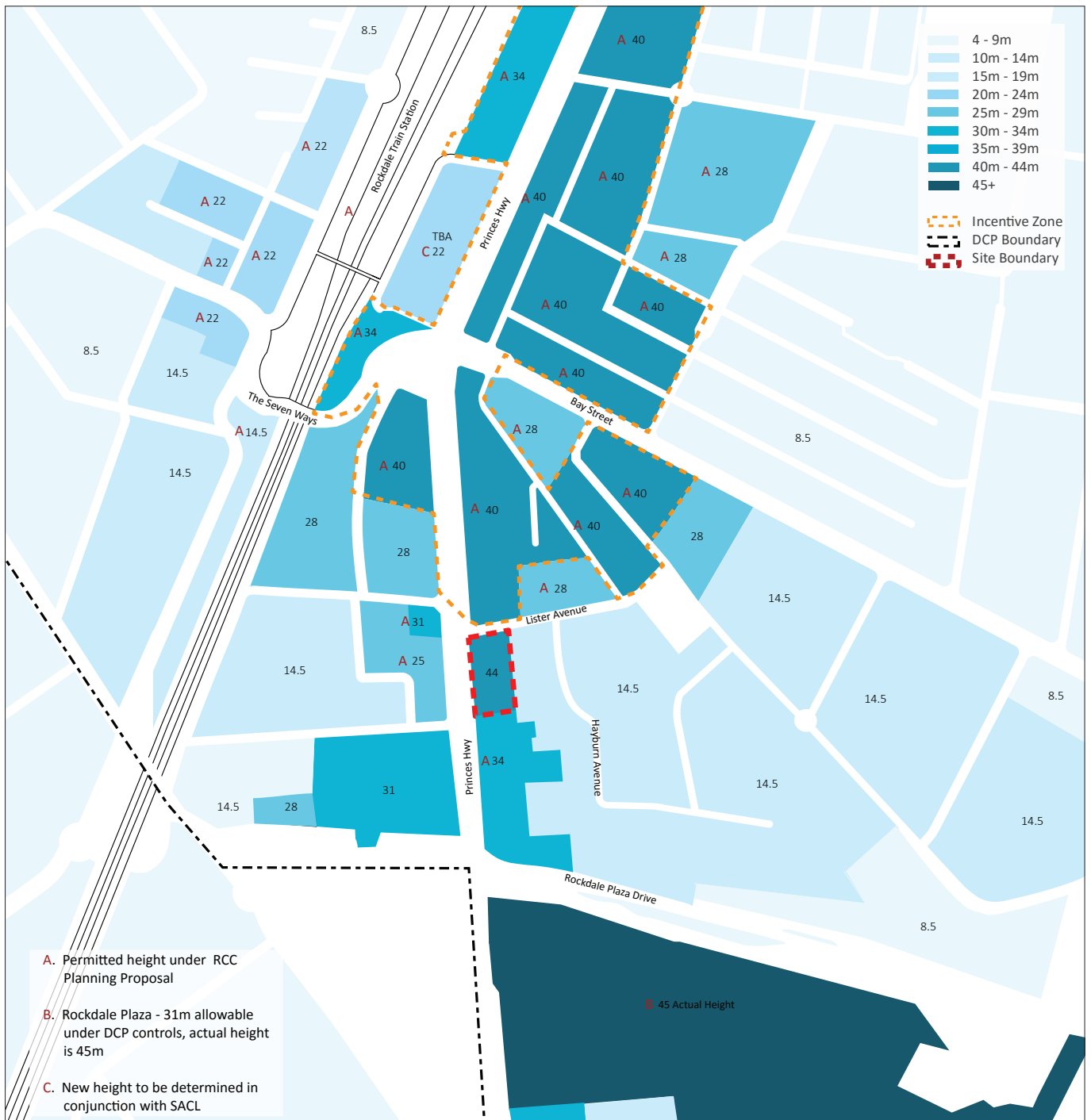


Fig. 4: Rockdale Maximum Permissible Building heights

3.3 Skyline Analysis

Different cities around the world have quite different skylines, in particular the distribution of taller buildings are determined by a variety of different considerations and norms. These are in addition to the particular circumstances of the site's immediate surrounds. In Sydney in recent years a set of norms have gained currency:

- Most centres have an arc-shaped skyline with tallest buildings toward the centre and mid-rise buildings transitions to low-rise. Rockdale has a particular constraint: the Object Limitation Surface (OLS) from Sydney Airport. This has produced a generally level absolute limit in height in the centre and resulted in a flat-top skyline. The subject site stands between

the taller buildings of Rockdale Plaza and Rockdale Centre, and by achieving a height of 44m the proposal would strengthen the existing skyline of Rockdale, rather than creating a 'dipped' skyline.

- Recent developments have seen infilling with taller buildings within existing sites
- Generally taller buildings and centre skylines occur where infrastructure exists to support densification such as train stations and arterial roads, as is the case in Rockdale
- The absolute height limits in centres tends to be determined by an existing perceived constraint such as potential overshadowing of an important open space or a desire not to exceed an existing height datum established by existing buildings

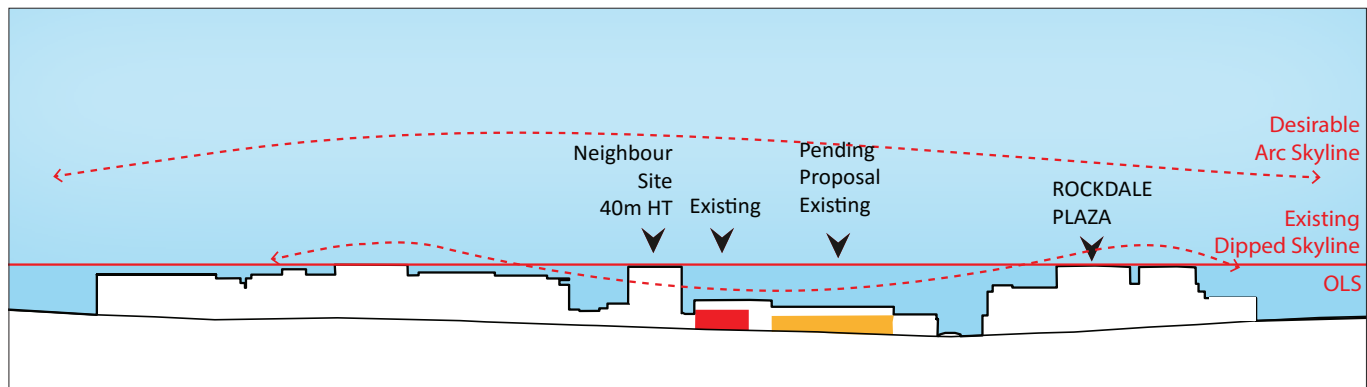


Fig. 5: Rockdale Existing Conditions & Skyline, showing Desirable Arc Skyline

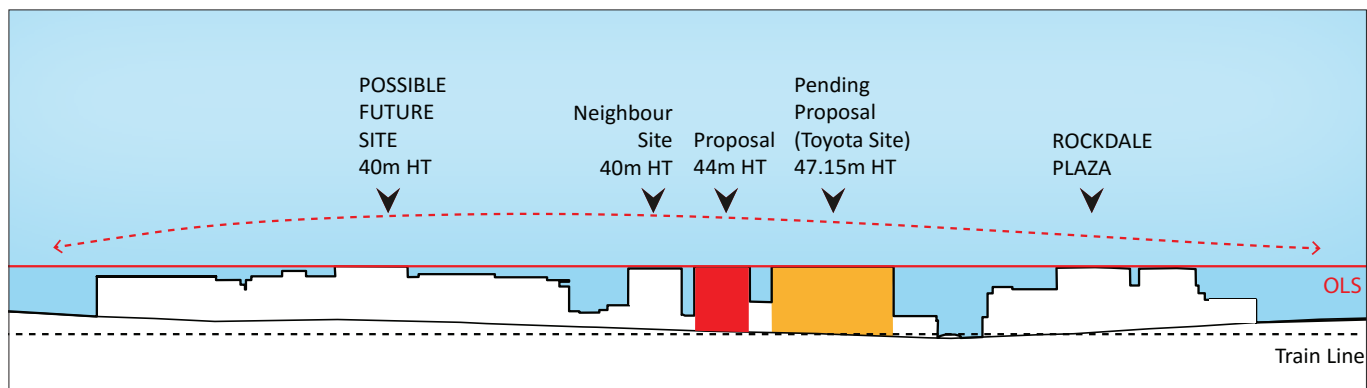


Fig.6: Rockdale Skyline with Development, showing Flat-top Skyline limited by OLS

3.4 Skyline Impact Analysis

These skyline diagrams illustrate the existing heights and the height potential of Rockdale. The solid ground line represents the ground at the point where the sectional view is taken. Section BB also shows the level of the train line as a dashed line. The subject proposal is shown in orange.

- The OLS establishes an absolute height limit across Rockdale. The sloping ground means that slightly taller buildings are achievable in the valley without breaking the OLS

- Section AA (fig. 6) illustrates the existing tall buildings to the north and to the south of the site
- Section BB (fig. 7) illustrates taller buildings in the Town Centre to the north west (behind) and at Rockdale Plaza to the south east of the site
- Section BB illustrates the larger setback of the site from the Princess Highway relative to the buildings both north (behind) and south (in front) of the site

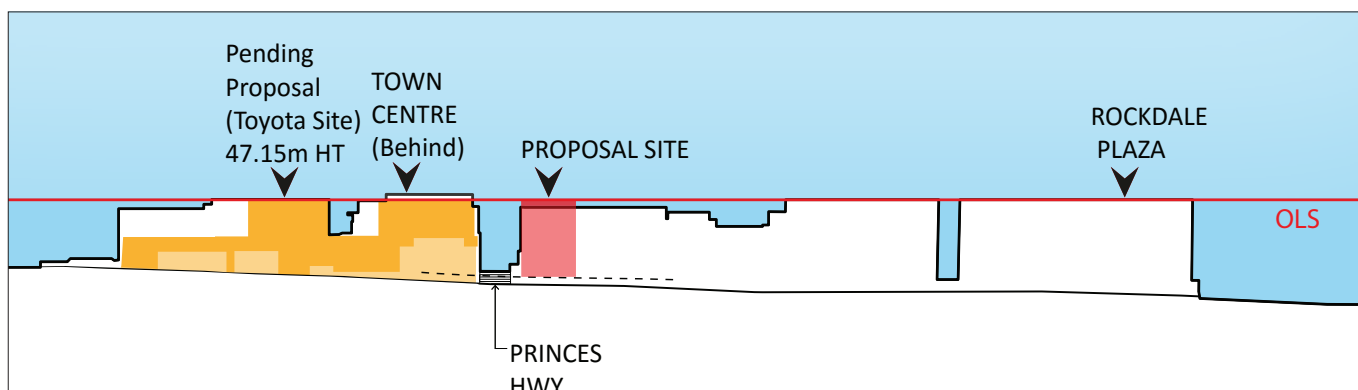
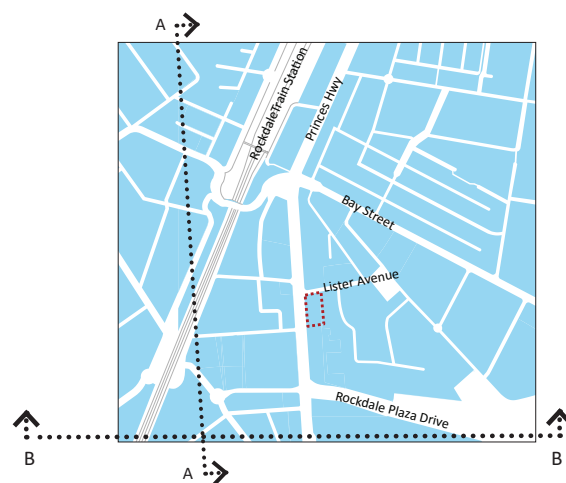


Fig. 7: Site Section BB

4. Managing Constraints

4.1 Rockdale Town Centre Constraints

The Town Centre constraints effecting the site are;

- Princes Highway. The noise and vehicle pollution from Princes Highway create an unpleasant pedestrian environment. The highway itself is a barrier to pedestrians. The pedestrian footpaths lack buffers such as street planting and are generally in poor condition. The proposal creates an attractive pedestrian environment with street planting, high quality materials, engaging retail with driveway crossovers consolidated on Lister Avenue.
- Poor visual amenity. There is little visual interest for pedestrians and passing motorists along the Princes Highway Corridor. The proposal negates this constraint through high design quality. By creating a landmark at the corner of Princes Highway and Lister Avenue, the journey of both pedestrians and motorists is enhanced.
- Poor street activation. In the area shown in figure 8, empty retail and office spaces as well as surface carparks present inactive frontages to Princes Highway. Some activation at the corner of Subway Rd and Princes Highway and Lister Avenue and Princes Highway exists, however this is hampered by a level change, colonnade system and retaining wall. The proposal defines the street edge with built form, creating activation at ground level though publicly accessible spaces and attractive retail space, increasing passive surveillance.
- The tall building directly to the north of the site, and tall buildings to the north-west of the site occupy a high RL and create overshadowing that needs to be taken into consideration.

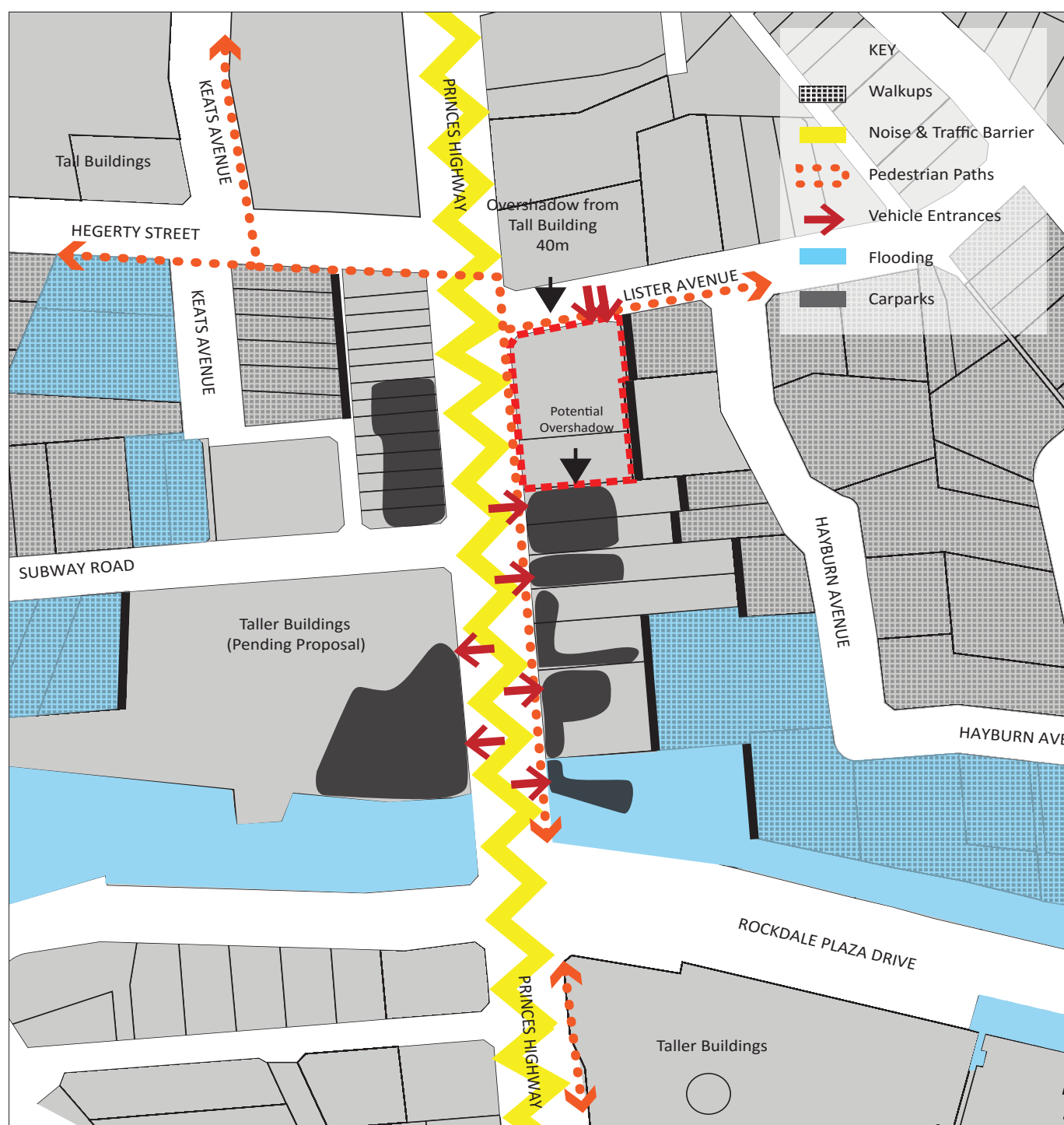


Fig. 8: Constraints Diagram, based on GMU Rockdale Town Centre Masterplan, presented to council 05/12/2012, Item Number: ORD15. Accessed at [https://rcnet.rockdale.nsw.gov.au/RBP/CBP.nsf/\(vwUnid\)/6F87E64945C5B197CA257ACC001CEDDF?OpenDocument](https://rcnet.rockdale.nsw.gov.au/RBP/CBP.nsf/(vwUnid)/6F87E64945C5B197CA257ACC001CEDDF?OpenDocument)

4.2 Overshadowing

The diagrams illustrate the ‘worst case scenario’; mid-winter shadows cast by the proposal at Noon and 3pm. Any development on the subject site would overshadow the site to its south. The site to the south is the subject of a development application and we have viewed the plans provided by council for this report.

The principle shading will occur on the northern elevation of the proposed development on the neighbouring site. This elevation stands in close proximity to the subject site and consists primarily of non-habitable rooms.

Apartments in this part of the neighbouring proposal have their principle frontages towards the princes highway on the west and the open space to the east. This relationship minimises any overshadowing impact of the additional height on the proposed development over the south. Furthermore the proposed built form has its highest elements at the northern part of the site and its lower elements towards the south, as a means to mitigate impact of overshadowing.

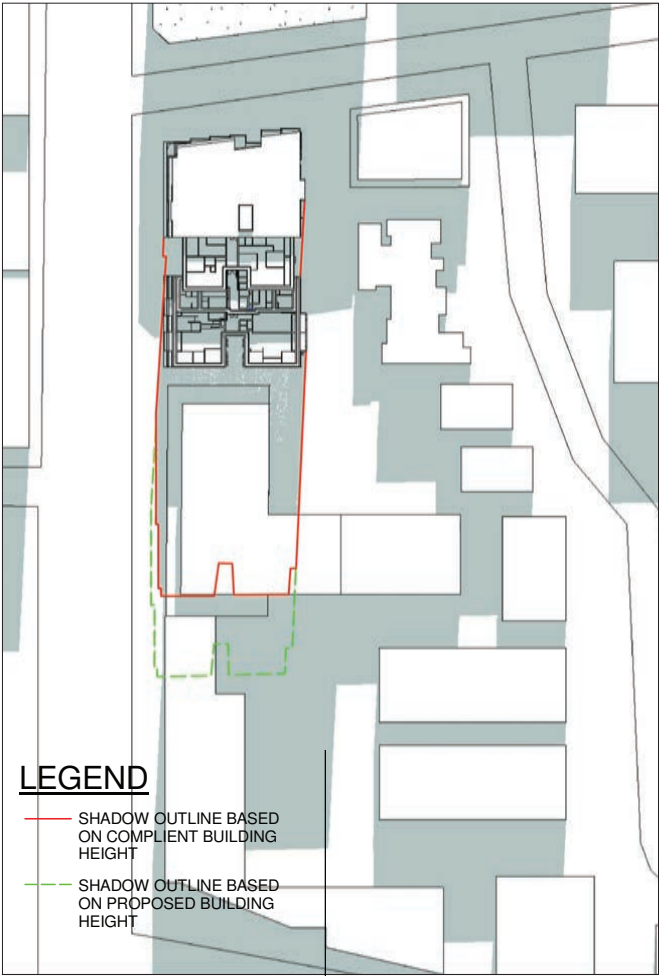


Fig. 9: June 21st - 12 Midday



Fig. 10: June 21st - 3pm
Diagrams by Anthony Vavayis & Associates

4.3 Street Views

The Princess Highway views on this page illustrate;

- The width of the Princess Highway corridor.
- That the corridor is already defined by buildings of significant height
- That the proposal is at a similar scale to the existing buildings that define the highway.
- The proposal will continue the height environment created by the building to its immediate the north on the opposite side of Lister Avenue. This environment is similar to nearby transitions between building heights, as proposed on Keats Avenue and existing on Rockdale Plaza Drive.
- The green titanium oxide feature element (fig. 11) on the north west corner of the proposal is a distinctive urban marker along the corridor. It: *“Purifies toxic particulates on a titanium dioxide coated surface”*.



Fig. 11: The Proposal - Activated Streetscape



Fig. 12: The Proposal - View from Princes Highway looking South

4.4 Comparable Streets

The precinct is undergoing a period of transformation. Previously it has been a setting of car-sales yards and low-scale 'walk-ups'. These images illustrate how modern high-rise apartment buildings can produce a desirable and contemporary physical environment. Building height can be celebrated through elements such as strong vertical lines. Tall elements at corner positions can emphasise height. This is particularly effective when longer views are possible (such as along the wide corridor of the Princess Highway).

The Surry Hills (fig. 13) illustrates how building of different eras can co-exist. Here the modern tower of 17 floors is located next to a two storey Victorian terrace house. In this case the lower part of the new building responds with a step at level 2 before rising in a dramatic tall form.

The image below of the project in Woollooware Bay (fig. 14 and 16) illustrates a dramatic tall building in a corner position, adjacent high-quality public domain creates the setting for this high density living environment. The image opposite at the bottom of the page illustrates how ground level apartments with individual entries direct from the street 'civilises' the edge by providing a set of individual addresses along the edge of the public domain.

The ESP Apartments (fig. 17) illustrates a tall building in a corner position (at right) and a dramatic change in scale to the adjacent building. This is intended to demonstrate how height transition can be both dramatic and pleasing. This condition already exists on Lister Avenue.



Fig. 13: 405/417 Bourke Street, Surry Hills



Fig.14: Woollooware Bay Development, Cronulla



Fig. 15: The Proposal - View Across Princes Highway



Fig. 16: Woollooware Bay Town Centre



Fig. 17: ESP Apartments, Zetland

4.5 Public Domain Constraints

The existing building at 588 Princes Highway is an older low scale commercial building with a number of awkward level changes and a poor relationship to the street. The lack of setback on Lister Avenue means that future wide roadening will not be possible until the site is redeveloped. This narrow setback also means that there is no room for landscaping to create a buffer between the existing building and the busy Princes Highway. The result is an unpleasant pedestrian environment near the heart of the Rockdale Town Centre.

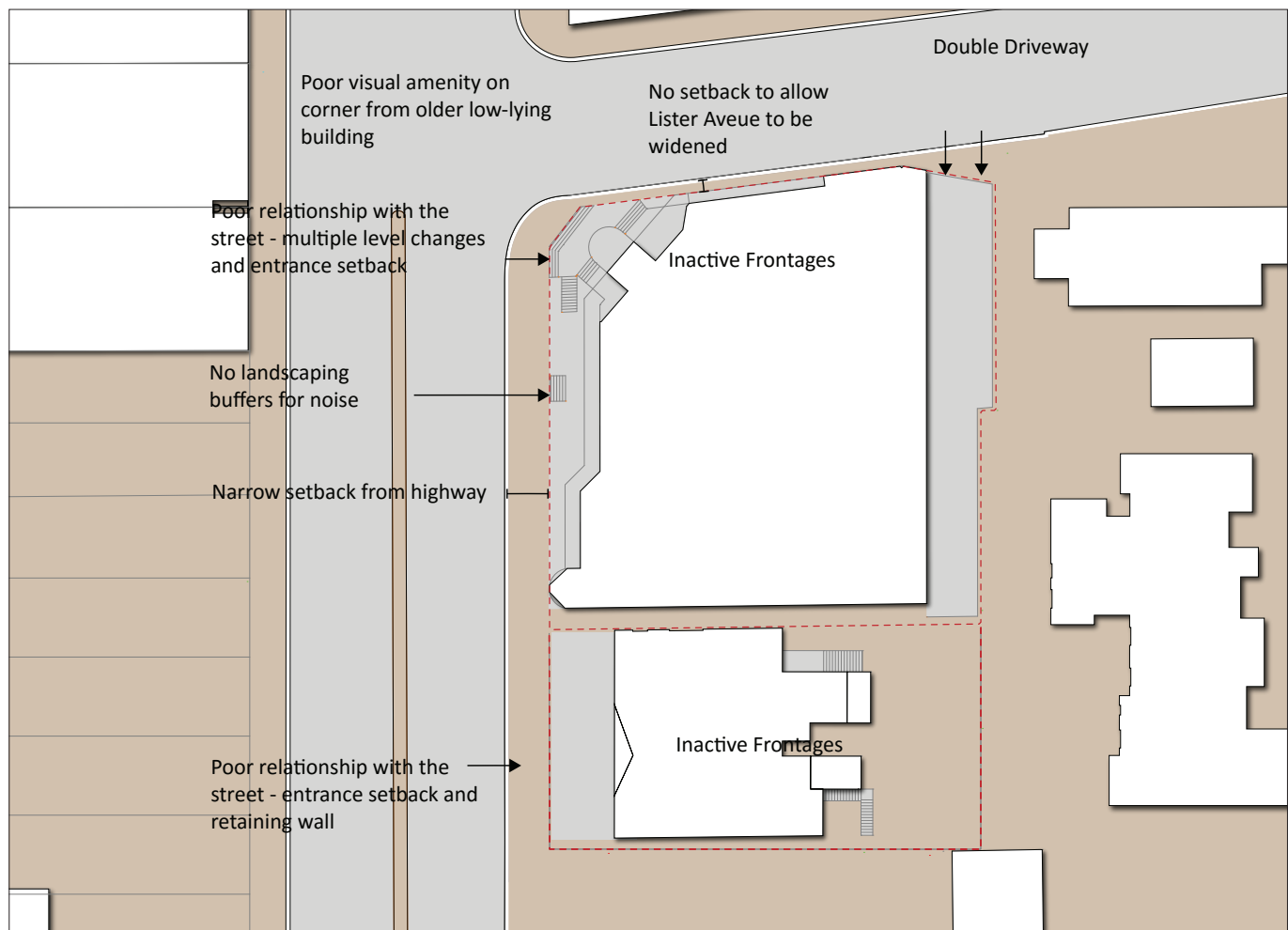


Fig. 18: Existing Site Constraints

4.6 Public Domain Improvements

The redevelopment of the site with a more generous setback from the street allows a pleasant walking environment with vegetated landscape buffers, that also allows for the future widening of Lister Avenue.

consolidating the driveway crossovers on Lister Avenue and stepping the retail floor levels to meet the street.

The landscaped buffers improves the pedestrian and retail environment, whilst reducing noise pollution from the busy Princes Highway. They also add to the already leafy quality of Lister Avenue, and extend the network of pedestrian friendly train station links in the Town Centre. The pedestrian is given further priority by

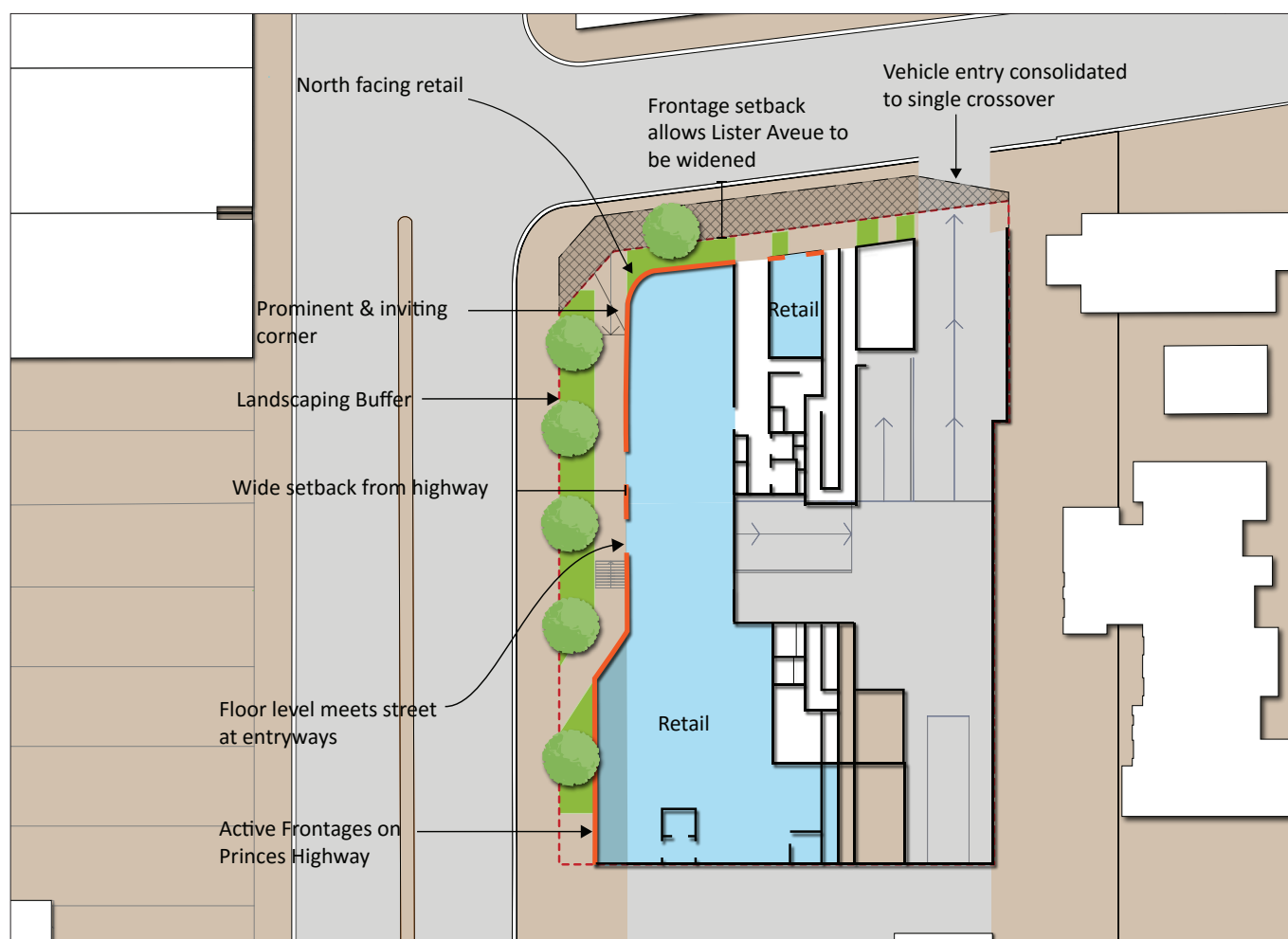


Fig. 19: Proposal Opportunities

5. Future Development

The plan below illustrates the project in its immediate surrounds. The precinct is undergoing a transformation. It is not possible to predict accurately the form of this transformation, however patterns are likely to emerge.

The sites to the east of the subject site along Lister Avenue are relatively small in size, and many of these are under strata ownership. This will make their consolidation and redevelopment difficult, although not impossible. They are likely to be redeveloped over time in sets of 2 or more sites. Larger consolidations

will provide greater design flexibility. They are likely to be street-oriented apartment buildings. If this pattern develops, Lister Avenue will have a distinct 'street wall' of residences that are already forming with the sites northern neighbour.

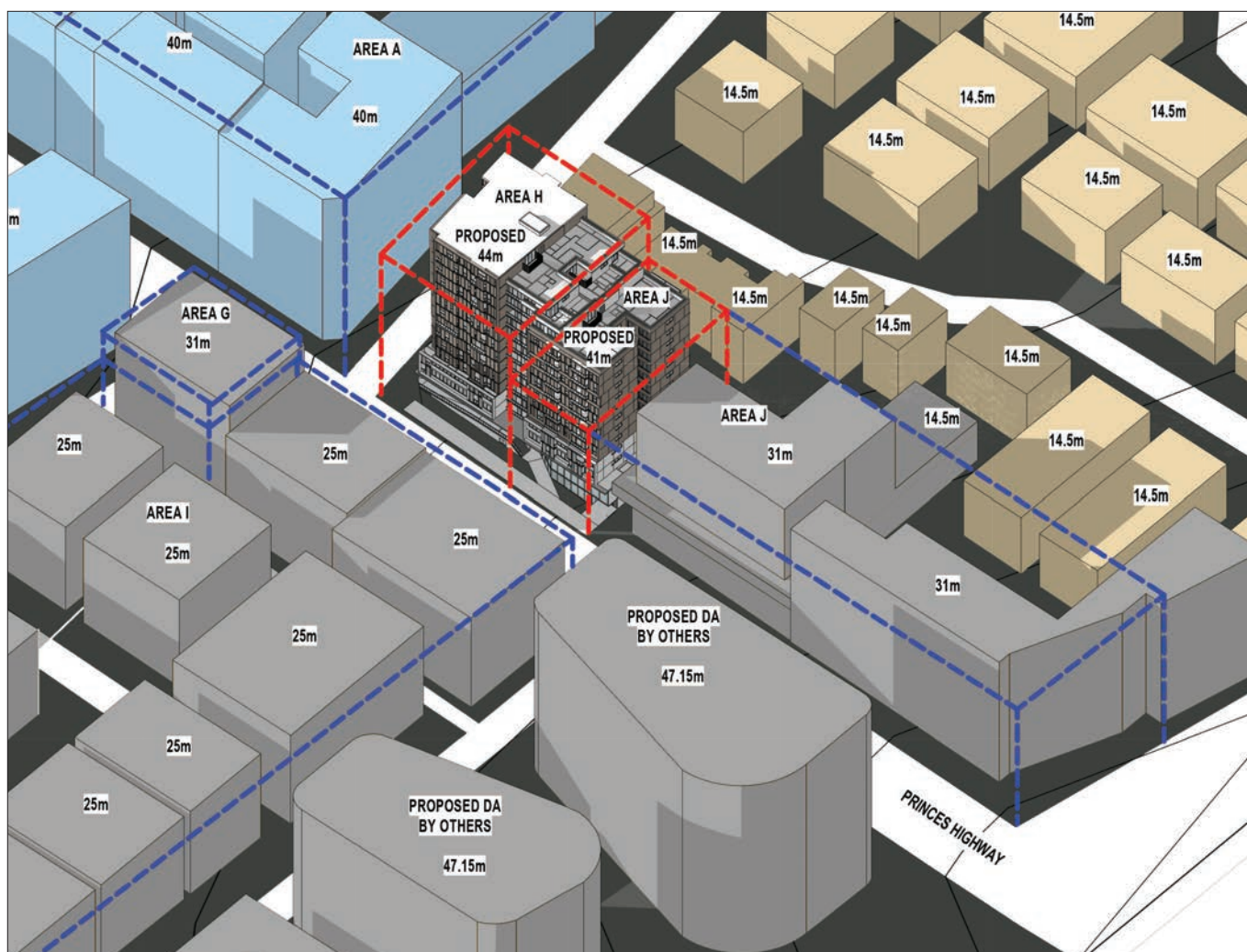


Fig. 20: Project & Surrounding Precinct
Diagram by Anthony Vavayis & Associates

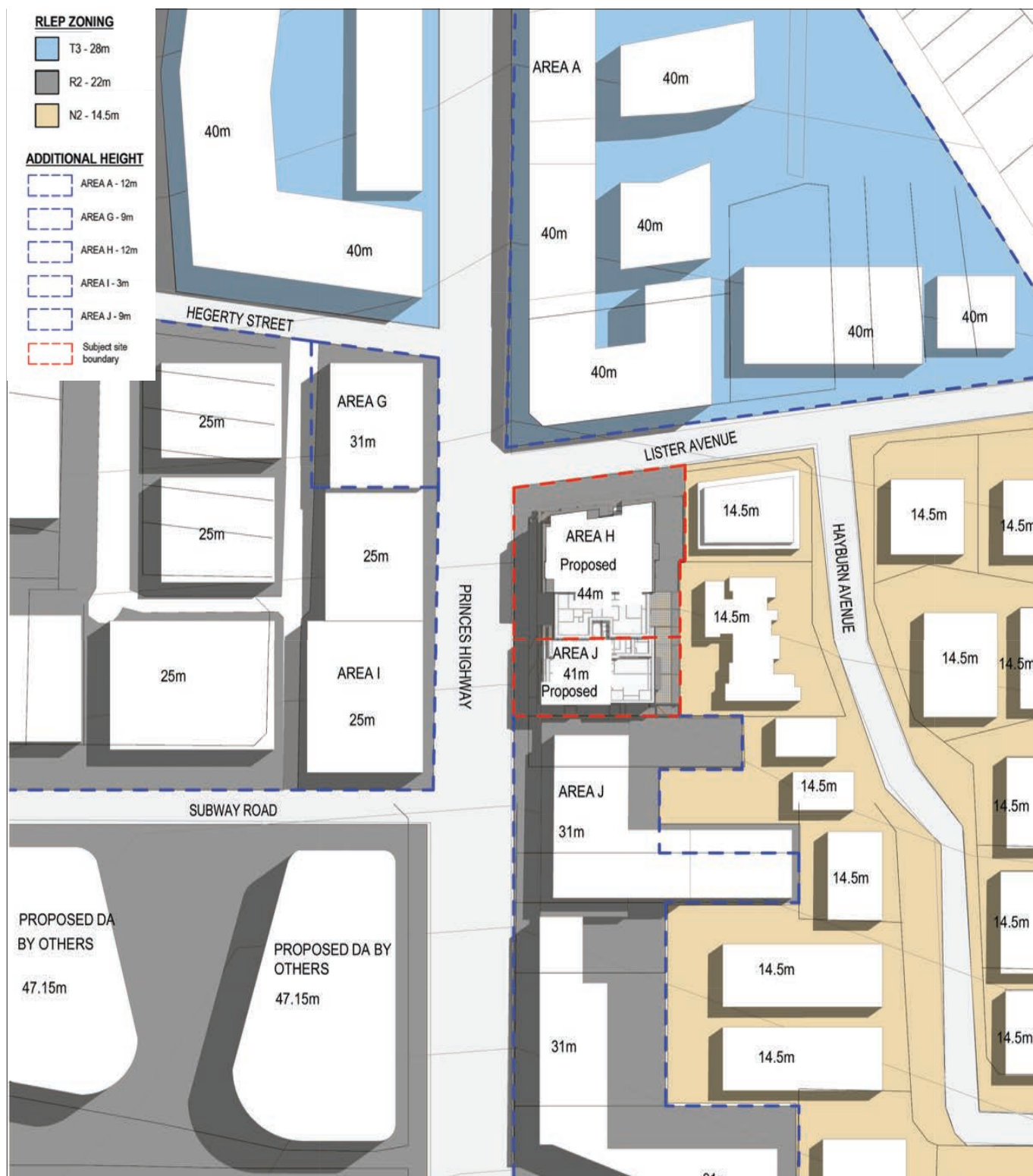


Fig. 21: Project & Surrounding Precinct
Diagram by Anthony Vavayis & Associates

6. Identification and Analysis of Opportunity Sites

There are a limited number of opportunity sites in Rockdale close to the station and major retail. Fragmented land ownership, residential neighbours and poor solar access restrict the development potential in the town centre. Recent low to medium scale development in areas that lay within or close to height incentive zones represent missed opportunities for increased density. These sites are shown in figure 22.

OPP sites are predominantly along the Princes Highway Corridor. Each has a set of opportunities and constraints that limit the attractiveness of redevelopment, as shown in the table below. The proposal site (OPP5), is second only to OPP7 for its lack of constraint.

The orientation of sites towards the highway combined with buildings of height, mean that sun amenity for new residential buildings is in high demand. The proposal site receives a higher degree of sun access in relation to its neighbours, as a consequence of its corner location.

This analysis demonstrates the scarcity of relatively unconstrained sites. Given the attractiveness of Rockdale as a place to live, and given the desirability of increasing the number of residents in walking distance to the shops and public transport, is important that the yield of these sites should be optimised.

Opportunity Site Analysis			
Site	No fragmented land ownership	Sun access for residential portion	No adverse impact of development potential on other sites
OPP1	★	★ ★ ★	★
OPP2	★	★ ★ ★	★ ★
OPP3	★ ★	★	★
OPP4	★ ★	★	★ ★
OPP5 - The Site	★ ★ ★	★ ★ ★	★ ★
OPP6	★ ★ ★	★	★ ★
OPP7	★ ★ ★	★ ★ ★	★ ★ ★

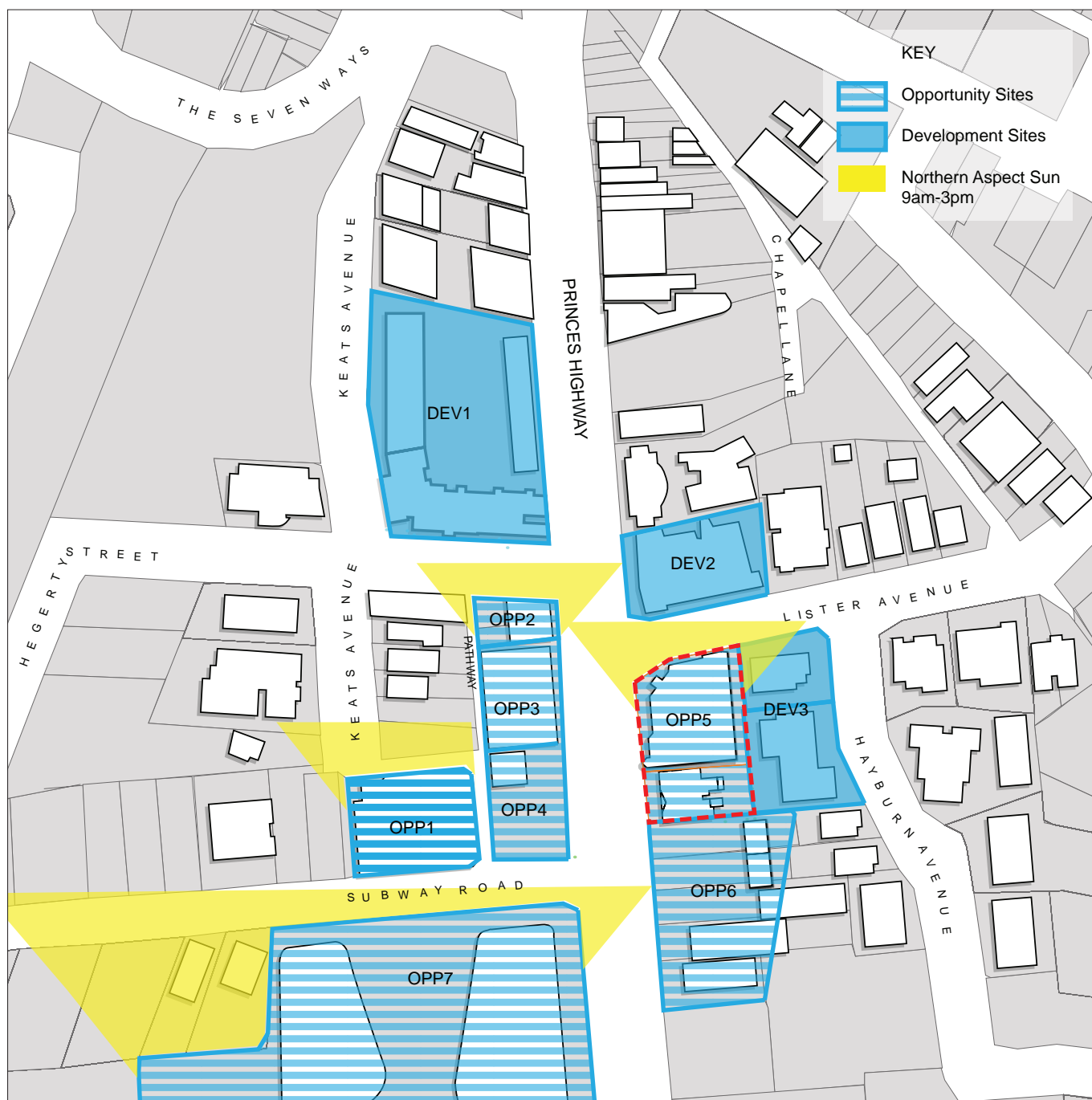


Fig. 22: Opportunity and Development Sites near Proposal

7. Conclusion

Rockdale is undergoing a significant transformation. The desirability of the centre as a living environment relates to the existing facilities and its strong transport linkages. Increasingly it will become more desirable as the quality of its streets and its open spaces improves. Recent developments are lifting the standard of buildings in the area and pending proposals such as the one for the Toyota site add to the urban permeability and the public domain. The proposal for 588-592 Princess Highway represents a strong step toward this positive transformation. The distinctive expression of the building; its 'urban decorum' has developed through a lengthy process of design development with numerous alternative designs developed and discarded, until the final scheme which represents an excellent outcome for this site.

The opportunity site analysis in section 6 examines 7 sites in the area that are capable of development as taller buildings. This demonstrates that they have a variety of opportunities and constraints. It reveals that the attributes of the subject site make it unusual for its lack of constraint and the opportunity it has. It occupies a corner position with the open space of Lister Street to its north and wide open corridor of the Princess Highway to its west. This means it has good solar access especially through the middle of the day and the afternoon. Furthermore the low scale of the buildings to the east mean that the eastern side of the site has excellent solar access; it also has excellent horizon views toward Botany Bay. Each of these advantages may be optimised with greater height. Particularly the upper levels of the building produce a very high amenity living environment.

This analysis demonstrates that the height potential of this area is defined by the Object Limitation Surface. The benefits and the values created with additional high quality living spaces and good quality streets and public domain that come with urban renewal and good design outweighs the benefits of a dipped skyline. We consider that the heights proposed in this scheme represents a very desirable and built outcome for Rockdale. The extensive design development and options investigated establish a quality architectural and urban outcome.

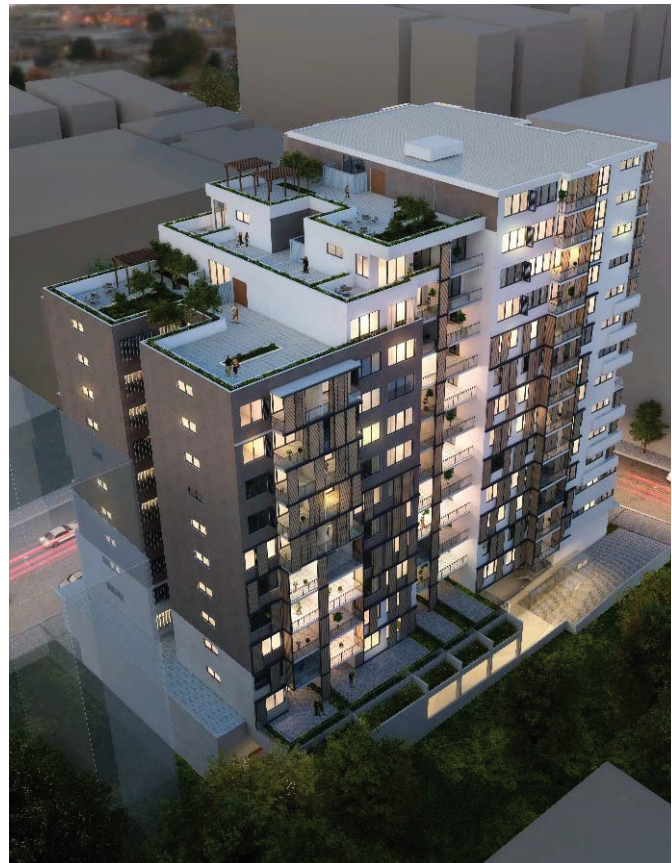


Fig. 23: Opportunity and Development Sites near Proposal

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