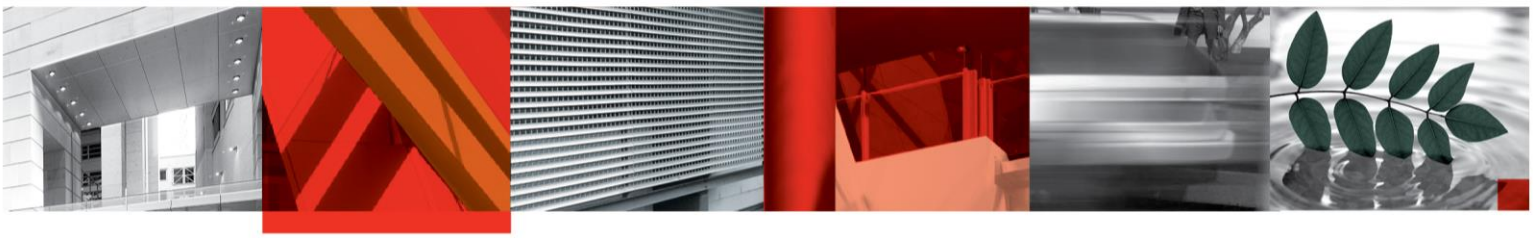
Development Application
Statement of Environmental Effects



152-200 and 202-206 Rocky Point Road, Kogarah

Residential Apartment Development

Submitted to Bayside Council
On Behalf of Rocky Point Road Development Pty Ltd

December 2016 ■ 16272

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JBA operates under a Quality Management System. This report has been prepared and reviewed in accordance with that system. If the report is not signed below, it is a preliminary draft.

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1.0 Introduction

This Statement of Environmental Effects (SEE) is submitted to Bayside Council in support of a Development Application (DA) for a Residential Apartment Development at 152-200 and 202-206 Rocky Point Road, Kogarah.

The DA seeks approval for:

- Site preparation works:
  - Demolition of existing building structures and associated factory facilities;
  - Bulk earthworks;
  - Tree removal;
- Construction and use of 533 residential dwellings:
  - 513 apartments over four (4) residential apartment buildings interconnected by three residential blocks. At ground level, these blocks present as two-storey attached dwellings;
  - Twenty (20) terrace-style townhouses along the site's southern alignment with underground parking for 40 cars, accessible from a separate driveway connecting to the proposed internal access road;
- Construction and use of a part two level and part three level basement car park associated with the residential apartment component of the development, with a single access point from Production Lane, accommodating 639 cars (21 visitor car spaces proposed on the internal access road);
- Construction and use of an internal access road running east-west through the site, connecting Rocky Point Road from the west to Production Lane to the east, including the construction of a new signalised intersection at Rocky Point Road and road upgrades to Production Lane;
- Landscaping works, including ground level landscaping for communal open space and green roofs at the rooftop levels of the residential apartment buildings;
- Extension/augmentation of services and utilities to service the development; and
- Stage 1 envelope development consent for a 495m^2 child care centre and associated road upgrades to Production Lane.

The SEE has been prepared by JBA on behalf of Rocky Point Road Development Pty Ltd, and is based on the Architectural Drawings provided by PTW Architects (see **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

This report describes the site, its environs, the proposed development, and provides an assessment of the environmental impacts and identifies the steps to be taken to protect or lessen the potential impacts on the environment.

1.1 Background

The overall site, being the former Darrell Lea Chocolate factory site, was the subject of a rezoning and subsequent LEP amendment in 2014. The site was formerly zoned for industrial purposes and was rezoned to both B6 Enterprise Corridor and R4 High Density Residential under the Rockdale LEP 2011. As part of the rezoning, the then Rockdale Council entered into a Voluntary Planning Agreement with the proponent to require, as part of the future redevelopment of the site a child care centre to be constructed, with the land and facility to be subsequently dedicated back to Council once delivered.

The Planning Proposal and subsequent Master Plan for the site which informed the zoning, height and floor space ratio amendment to the LEP was prepared with the

following key aspects, in order to address concerns raised by Council and local residents:

- New commercial uses at the site's western end fronting Rocky Point Road;
- Residential uses located on the eastern two thirds of the site;
- A central tree lined road that acts as a natural extension of Weeney Street and provides a direct connection between Rocky Point Road and Leo Smith Reserve;
- A new pocket park and landscaped open space that provides a point of focus and enhances the site's amenity for residents and the local community;
- A mix of building typologies including townhouses, medium rise apartment complexes and taller apartment buildings, providing a mix of one, two and three bed dwellings; and
- Graduation of building heights from south to north in accordance with the 'Building Height Plane' nominated by Rockdale Council.

Since the amendment to the LEP, JQZ have acquired the land from the former owners. Accordingly, the proposed development constitutes the redevelopment of land within the residential zoning of the site, and seeks to deliver the envisioned internal access road from Rocky Point Road, provide a centralised communal open space, and seek approval for the demolition of existing buildings within the B6 zone component of the site to facilitate the future redevelopment of the commercial element of the overall scheme. The proposal also seeks approval for a Stage 1 envelope for the child care centre which would be subject to a future detailed DA.

The owners of the land are currently undertaking feasibility studies into the commercial mix for the land zoned B6, which will be the subject of a separate future DA.

1.2 Pre-lodgement Meetings

1.2.1 St George Design Review Panel

Bayside Council, in combination with the former Hurstville and Kogarah Councils (now Georges River Council) require development applications which involve residential apartment buildings or commercial buildings at three or more storeys in height be referred to the St George Design Review Panel (DRP) for initial design advice prior to the application being submitted, and following lodgement of the application for comment. Given the scale of the proposal, initial concepts of the scheme were provided to the DRP for comment prior to lodgement.

The DRP provided comments on the proposal's overall achievement of the Design Principles of *State Environmental Planning Policy No. 65 – Design Quality of Residential Apartment Development*, as well as detailed design comments, which have been incorporated into the design of the development. Details on the issues raised by the DRP in early iterations of the proposal are provided in the minutes issued for meetings with the DRP dated 21 July 2016 and 14 September 2016 (**Appendix U**).

1.2.2 Council Pre-lodgement Meeting

A pre-lodgement meeting was held with Bayside Council staff on 3 August 2016 to discuss the evolution of the scheme following feedback from the DRP on initial designs. Council provided feedback on a number of aspects of the proposed development including building heights, floor space ratio, site constraints, and general compliance with planning controls. A copy of the pre-lodgement meeting minutes has been provided (**Appendix V**) which details on the issues raised by Council and how the proposal as submitted responds to these comments.

1.3 Capital Investment Value

Newtown, Fisher & Associates has undertaken a calculation for the project and estimates that the cost of the development for the proposal is $153,180,000 including GST. In accordance with Clause 3 of Schedule 4A in the EP&A Act, the proposal qualifies as 'regional development' as it is general development which has a Capital Investment Value over $20 million. The Sydney Central Planning Panel is therefore the consent authority. A copy of the Quantity Surveyors certificate has been provided under separate cover.

1.4 Planning Framework and Necessary Referrals

The DA will require an Integrated Development Referral to the Roads and Maritime Services (RMS) given consent is required under Section 138 of the *Roads Act 1993* to connect the proposed internal access road to Rocky Point Road, which is a classified road. The DA will also require an Integrated Development Referral to the NSW Office of Water as the proposal has the potential intercept the water table during construction and may require approval under the *Water Management Act 2000.*

The DA will also require a concurrence referral to the RMS under Clause 104 of *State Environmental Planning Policy (Infrastructure) 2007* as it is identified as traffic-generating development within the meaning of Schedule 3 of the SEPP.

1.5 Subdivision Development Application

It is noted that a DA for the land subdivision of the site will be submitted separately to Bayside Council. This application does not propose subdivision in any form.

2.0 Site Analysis

2.1 Site Location and Context

The site is located at 152-200 and 202-206 Rocky Point Road, Kogarah within the Bayside Local Government Area. The site is located 1.4 km from Kogarah Town Centre and approximately 8km from Sydney Airport.

The site's locational context is shown at **Figure 1**.

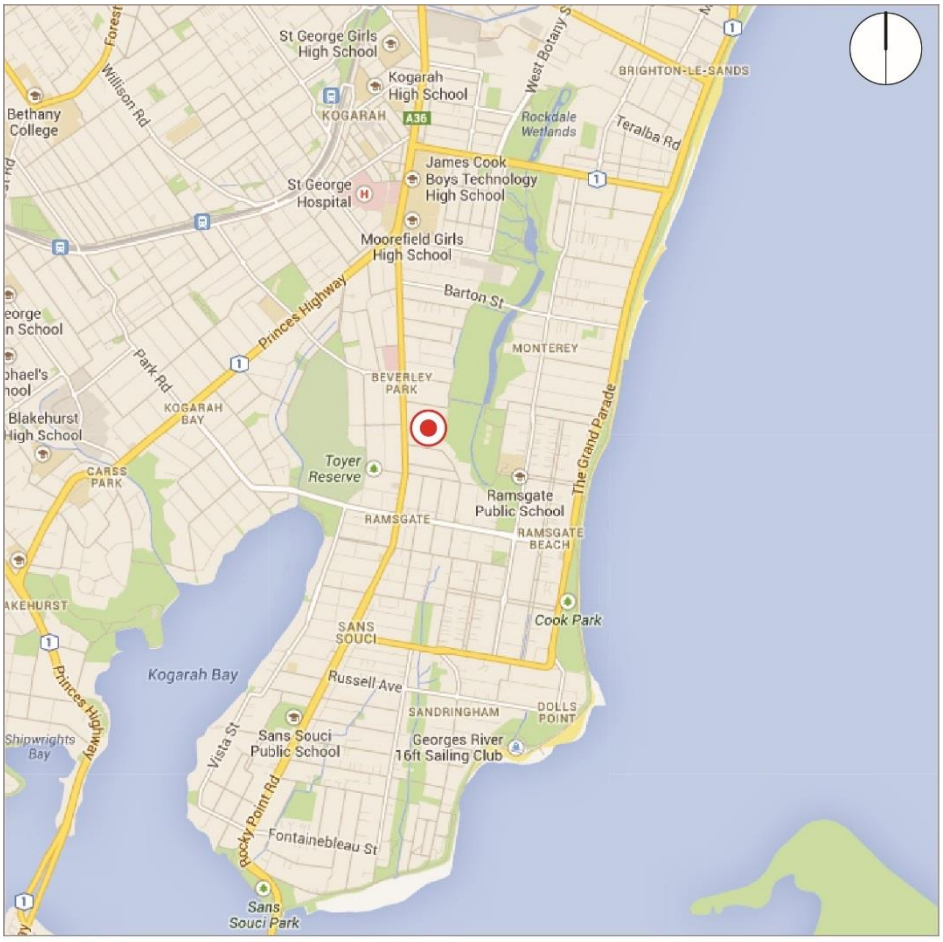

Figure 1 – Site context

2.2 Site Description

2.2.1 Existing Development

Given the former use of the site as a factory facility, the site currently consists of a range of two and three storey industrial buildings, warehouses and two residential dwellings which front onto Rocky Point Road. The eastern half of the site is covered by surface level car parking, driveways and grassed landscaped areas.

Road access is currently available to the site directly from Rocky Point Road and Production Lane.

Vegetation is limited to a small number of trees scattered throughout the site and small landscaped gardens along the Rocky Point Road frontage
Existing built form is aged and is predominantly built to boundary across much of the site's primary frontage to Rocky Point Road. However, much of this frontage consists of

buildings, built with outlook away from Rocky Point Road, high wall fencing and intermittent landscaping, resulting in a poor built form response along Rocky Point Road.

Along this western alignment, with frontage to Rocky Point Road, is the existing three storey commercial development at 168 Rocky Point Road. The development is relatively recent and well designed in its presentation and response to Rocky Point Road. This building is proposed to be retained under this application and will be integrated with the commercial development subject to redevelopment of the B6 zone under a separate future DA.

An aerial photo of the site is shown at **Figure 2**. Photographs of the site are included below.

Figure 2 – Aerial photograph of the site
Source: Nearmap and JBA

Figure 3 – View of the site looking north-east from Rocky Point Road

Figure 4 – View of the site looking north-east from Rocky Point Road

Figure 5 – View of the site looking south-west from Rocky Point Road

Figure 6 – View of the site looking west from Production Lane

Figure 7 – View of the site looking west from Production Lane

Figure 8 – View of the northern boundary of the site, looking west from Production Lane

2.3 Land Ownership and Legal Description

This DA relates to the redevelopment of the site at 152-200 and 202-206 Rocky Point Road, Kogarah. JQZ have recently acquired the site and owners consent is provided under a separate cover with this application. The subject site includes six separate allotments, as shown in **Table 1**.

Table 1 – Legal description

Lot	Deposited Plan
22	620329
2	838198
1	599502
1	666138
2	405531

The allotments have a combined total area of approximately 33,525m^2. The site is irregularly shaped and has a western frontage of approximately 204 metres to Rocky Point Road and an eastern frontage of approximately 142 metres to Production Lane. A survey of the site has been prepared by Cardno and is located at **Appendix B**.

As discussed in **Section 1.5**, land subdivision of the site into two separate lots is proposed and will form a DA to be lodged separately with Council. The proposed subdivision pattern will reflect the recent rezoning boundaries of the site into a B6 zone and R4 zone, and will assign each land use zone a new allotment as detailed below in **Table 2**.

Table 2 – Proposed subdivision of the site

Lot	Land Use Zone	Land Area
1	B6 Enterprise Corridor	11,151m^2
2	R4 High Density Residential	22,374m^2

Figure 9 demonstrates the extent of the site the subject of this application, with demolition works proposed across the whole site, and the extent of the construction works being within the component of the site zoned R4 High Density Residential.

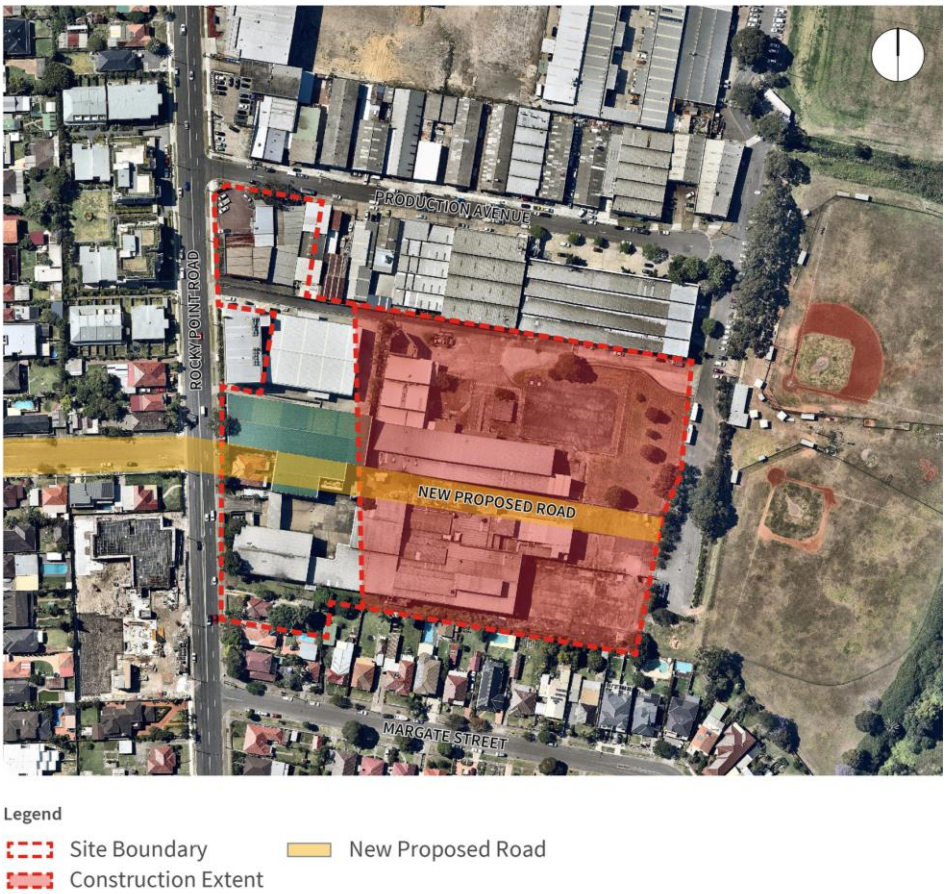

Figure 9 – Aerial map demonstrating extent of the subject site and proposed construction works
Source: JBA

2.4 Surrounding Development

The site is bound predominantly by light industrial uses to the north and low density residential areas to the south. The site has street frontage to Rocky Point Road to its west and an existing laneway to its east.

An existing concreted driveway runs along much of the site's northern alignment. Industrial zoned land along the site's northern boundary comprises an array of small scale light industrial uses including vehicle repair shops and some large format warehousing showrooms that predominantly occupy sites to the north.

The Kogarah town centre is located approximately 1.4km further north and consists of a mix of local businesses and retail shops, St George Hospital and other health and medical-related facilities. Renewal is noted along the northern end of the town centre, accommodating several low-rise shop top housing typologies with active frontages to Rocky Point Road.

The site's southern boundary adjoins the rear alignment of a strip of lower density detached dwellings that have houses fronting Margate Street with relatively generous back yards that back onto the subject site.

Further to the south is the Ramsgate local centre, which is located along Rocky Point Road and comprises a mix of small scale retail and commercial uses.

To the site's west on the western side of Rocky Point Road are a series of four (4) storey apartment buildings and two (2) storey modern terrace style dwellings.

The rear boundary of the site fronts onto Production Lane to the east. Across this lane is Leo Smith Reserve which includes a selection of sport fields used for soccer, rugby,

baseball and cricket among other areas of the park for alternate active recreational uses. The park interconnects with Scarborough Park to the North and Rotary Park and Tornbridge Street Reserve to its south, forming a local grid of functional open spaces for residents and the community within the wider area. The reserve takes a more natural vegetated parkland form to its south west.

The site is also located within proximity to rail transport, being 1.8 kilometres south east from Kogarah Railway Station and 1.5 kilometres east of Carlton Railway Station. These stations are serviced by the T4 Eastern Suburbs and Illawarra Rail line, which connects Bondi Junction to Wolli Creek, Kogarah, Sutherland and Cronulla via Central Sydney stops.

Local bus networks (Route 476 and Route 477) regularly service the site and connect the site to Kogarah and Carlton Station as well as service the local and surrounding suburbs of Rockdale, San Souci, Dolls Point, and Ramsgate.

Figure 10 – View looking eastward, across Rocky Point Road

Figure 11 – Low density residential dwellings, south of the subject boundary

Figure 12 – View looking east down Production Avenue

Figure 13 – View looking north along Production Lane

Figure 14 – View of Leo Smith Reserve, looking north-east

Figure 15 – View of Rocky Point road from the north-western corner of the site, looking south

Figure 16 – View of businesses along Production Avenue, looking east

3.0 Description of Proposed Development

This application seeks approval for the following development:

- Site preparation works:
  - Demolition of existing building structures and associated factory facilities;
  - Bulk earthworks;
  - Tree removal;
- Construction and use of 533 residential dwellings:
  - 513 apartments over four (4) residential apartment buildings interconnected by three residential blocks. At ground level, these interconnecting blocks present as two-storey attached dwellings, containing 513 apartments;
  - Twenty (20) terrace-style townhouses along the site's southern alignment with underground parking for 40 cars, accessible from a separate driveway connecting to the proposed internal access road;
- Construction and use of a part two level and part three level basement car park associated with the residential apartment development, with a single access point from Production Lane, accommodating 639 cars (21 visitor car spaces proposed on the internal access road);
- Construction and use of an internal access road running east-west through the site, connecting Rocky Point Road from the west to Production Lane to the east, including the construction of a new signalised intersection at Rocky Point Road and road upgrades to Production Lane;
- Landscaping works, including ground level landscaping for communal open space and green roofs at the rooftop levels of the residential apartment buildings;
- Extension/augmentation of services and utilities to service the development; and
- Stage 1 envelope development consent for a 495m^2 child care centre and associated road upgrades to Production Lane.

Architectural drawings illustrating the proposed development are included at **Appendix A**. A photomontage of the proposed development is shown at **Figure 17**.

Figure 17 – Photomontage of the proposed development, looking north
Source: PTW Architects

3.1 Development/Urban Design Principles

The planning and design principles adopted for the proposed development of the site are as follows:

- To deliver a high quality integrated residential development that provides for a mix of dwelling types and which responds to identified market demand;
- To produce a built form layout that positively responds to the site's setting and context and provides a design outcome that is attractive, of a high quality and which complements the surrounding area;
- To enhance the high quality landscaped character of the Bayside LGA;
- To deliver a development which respects the amenity of neighbouring dwellings, providing appropriate separation and setbacks from the more sensitive adjoining land uses to the south and west;
- To provide opportunities for future residents to age in place;
- To maximise the number of dwellings with northern sunlight exposure and northern views; and
- To create varied and expansive areas of communal outdoor open space with high quality facilities for future residents to enjoy.

3.2 Numerical Overview

The key numeric development information is summarised in **Table 3**.

Table 3 – Key development information

Component	Proposal
Site area total (R4 zone)	Subject site: 22,374m^2
Maximum permitted FSR (2.0:1)	2.02:1
Maximum permitted GFA (44,748m^2)	Residential development: 44,747m^2 Child care centre: 495m^2 **Total proposed: 45,242m^2**
Maximum Height	▪ Building B: RL 48.050 (42.05 metres) ▪ Building C: RL 41.000 (37.20 metres) ▪ Building D: RL 40.300 (37.16 metres) ▪ Building E: RL 40.300 (37.75 metres) ▪ Two storey townhouses range from 6 metres to 9.175 metres
Boundary Setbacks ▪ North ▪ South ▪ East ▪ West	▪ North: 6 metre setback from the northern site boundary at ground level ▪ South: 8 metre setback from the townhouses to the southern site boundary ▪ East: 3 metre setback from the building line to the eastern site boundary to Production Lane (zero setback for courtyards fronting Production Lane at ground level in Building E) ▪ West: 3 metres from side boundary to the B6 Enterprise Corridor zone part of the site
Proposed Yield	533 dwellings (513 apartments and 20 townhouses)
Dwelling Mix	1 bedroom dwellings: 109 (20.45%) 2 bedroom dwellings: 360 (67.54%) 3 bedroom dwellings: 64 (12%)
Car parking spaces	▪ Residential apartment buildings' basement: 639 ▪ Townhouses' basement (south): 40 ▪ On-street (proposed access road): 25 ▪ **Total: 704**
Bicycle parking	63 spaces
Motor cycle parking	48 spaces
Site coverage	34% (7,611m^2 building footprint)

Component	Proposal
Landscaped Area	Ground level: 5,188m^2 of soft landscaping Rooftop: 373m^2 of soft landscaping Total: 31.5% (excluding ground floor balconies)
Deep Soil Area	3,375m^2 (15.08% of the site area)

3.3 Demolition, Site Preparation and Bulk Earthworks

Demolition works are proposed as part of this application to the majority of the site with the exception of the existing three (3) storey commercial building at 168 Rocky Point Road, Kogarah (for the purposes of this application the site at 168 Rocky Point Road has not been included as part of the 'subject site'). **Figure 18** below indicates the extent of the site to which demolition works are proposed.

The existing commercial building at 168 Rocky Point Road is a recent, operational development and as such will be integrated with other commercial developments that will be developed in accordance with a future development application to be lodged for the B6 zoned land.

Demolition will apply to the remaining structures and will include the two/three storey industrial warehousing structures, associated factory facilities, existing dwellings located along the western alignment of the site, and the existing driveway that runs along the northern boundary of the site. A demolition plan is included in **Appendix A**.

Tree removal is proposed as part of the demolition works. An Arboricultural Impact Report, provided as **Appendix C**, has informed the proposal to identify suitable trees for retention and integration with the proposed development scheme. Any loss of trees during demolition is proposed to be offset post development under the proposed scheme.

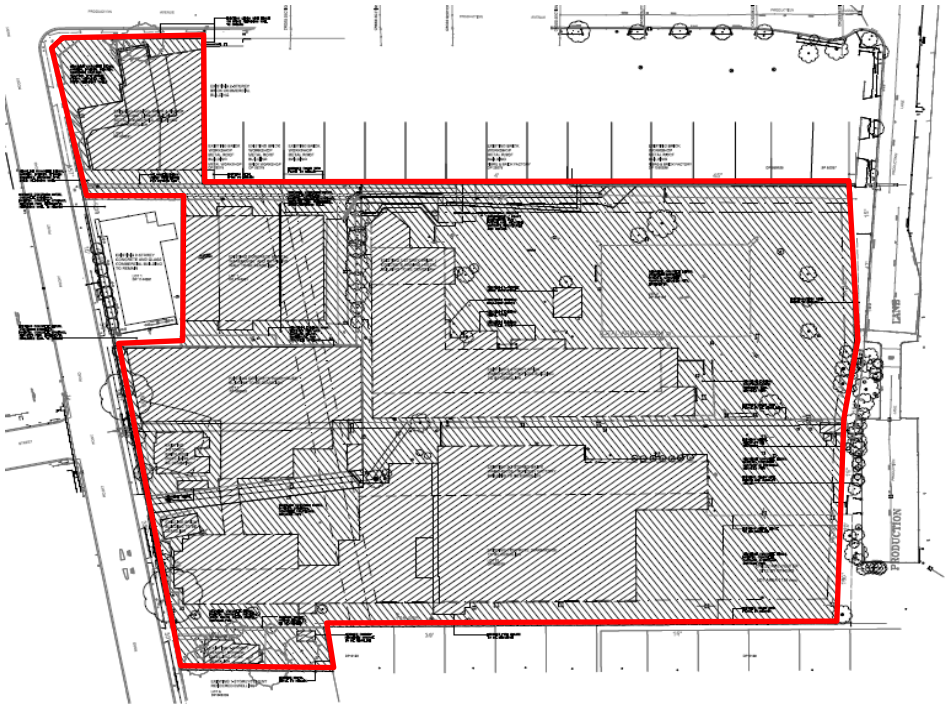

Figure 18 – Extent of demolition works proposed under this DA (shown bound in red)
Source: PTW Architects

3.4 Proposed Development Scheme

Whilst demolition works are proposed across the entire site, development and construction works as proposed under this DA will be limited to part of the site, being part of Lot 22 DP 620329 and part of Lot 2 DP 838198 (specifically, the land zoned R4 High Density Residential). **Figure 19** below illustrates the development scheme for the site. Accordingly, construction works proposed include:

- Development of four (4) residential apartment buildings ranging from 6 to 13 storeys (Buildings B, C, D and E) interconnected by three (3) x two (2) storey residential blocks (Blocks BC, CD and DE). Each of these blocks consists of four (4) x attached cross-through dwellings with individual entries from ground level;
- Twenty (20) x 2 storey terrace style townhouses along the southern edge of the site, accommodating 40 car spaces underground;
- Two basement levels including a mezzanine basement level accommodating 639 car parking spaces;
- Street parking of some 25 spaces; and
- An internal access road connecting the residential precinct to Rocky Point Road via land zoned B6.

Development of land zoned B6 Enterprise Corridor is not considered under this application and will be subject to a separate future DA.

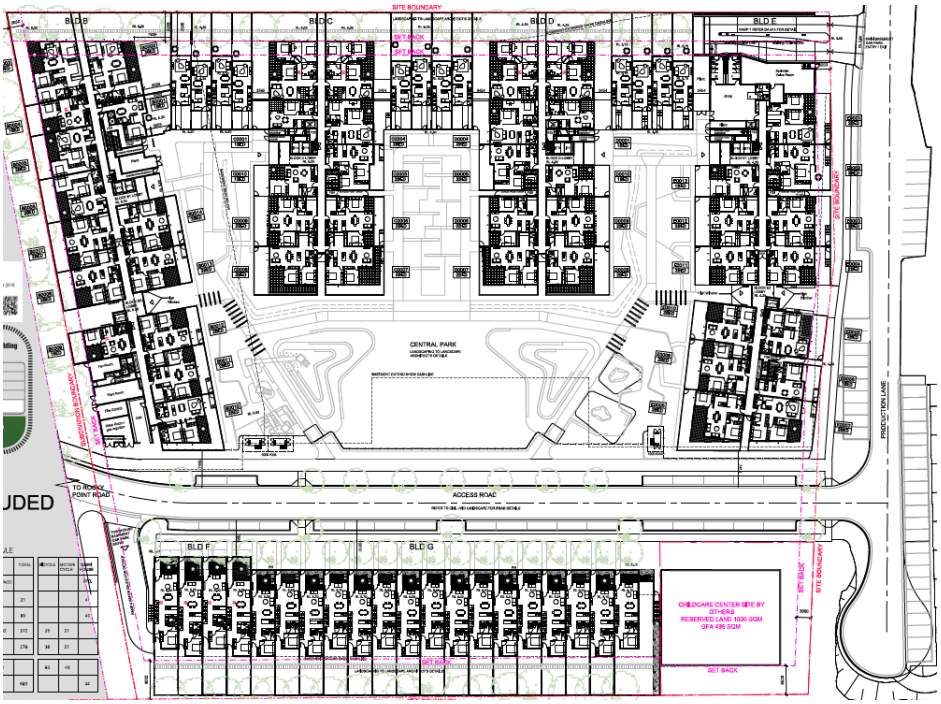

Figure 19 – Proposed development scheme for the R4 High Density Residential component of the site
Source: PTW Architects

3.4.1 Residential Apartment Buildings

Building B

Building B is to be situated along the north-western edge of the residential precinct and accommodates a mix of one, two and three bedroom apartments. This building will be constructed to a maximum height of RL 48.050 and ranges from 8 storeys at its southern end to 13 storeys adjacent to the northern boundary. It is the tallest building proposed under the scheme. The building is oriented to primarily address the proposed communal open space at ground level and sits perpendicular to the proposed east-

west internal access road that connects the residential precinct to Rocky Point Road and Production Lane along the site's eastern alignment.

The building has been designed to achieve high levels of amenity, with apartments primarily oriented to the east, west and north to ensure ample solar access. The built form is provided with vertical indents/recess approximately 5 metres wide to its southern interface. These indents have been incorporated into the design to articulate and vary the building length and massing, introducing an element of verticality, whilst at the same time help to maximise solar access to apartments.

At ground level, two principal building entries are proposed along the building's eastern elevation. Ground floor apartments are provided with individual private residential courtyards and individual access to these apartments via residential courtyards. Internal access via the proposed building lobby is also provided.

A total of 178 apartments are proposed in Building B.

Figure 20 – Eastern elevation of Building B
Source: PTW Architects

Building C and Building D

These building are located centrally within the residential zoned part of the site and achieve maximum building heights of RL 41.000 and RL 40.300 metres respectively. These buildings also scale up in height from south to north and range between 6 to 11 storeys.

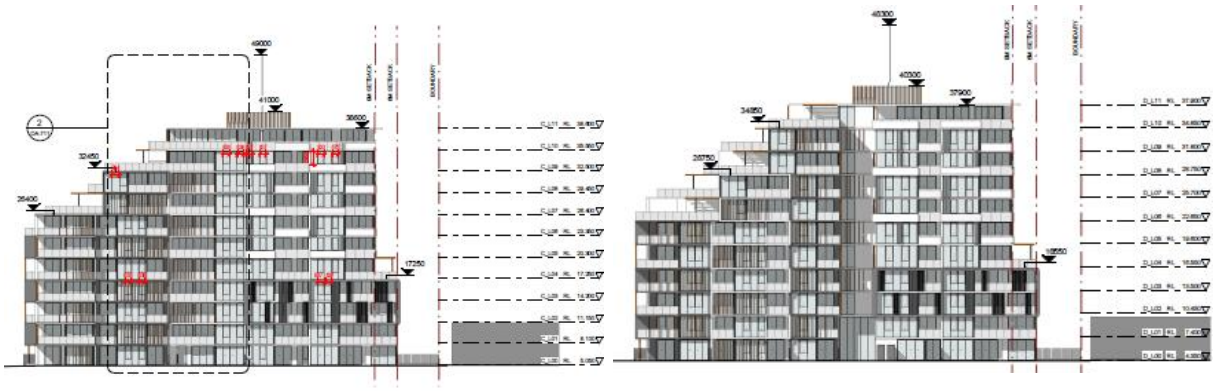

Figure 21 – Eastern elevation of Building C (left) and D (right)
Source: PTW Architects

The southern interfaces of the upper levels of these buildings are designed to step back in height from level 6 to level 10, accommodating terraced rooftop gardens.

Principal building entries for Buildings C and D are proposed along their western and eastern elevations respectively. One, two and three bedroom apartments located at ground level are provided with private terraces which address the communal space

and add diversity to the building's façade composition at ground level. Access to individual dwellings from the communal open space areas is also provided to some of the ground floor apartments within these buildings.

A total of 93 apartments are proposed for each Building C and Building D.

Building E

Building E is situated along the eastern edge of the residential precinct and accommodates a communal gym space at ground level. The building is also provided with vertical indents that maximise solar access and natural ventilation to apartments and circulation spaces, providing relief to the built form. This building achieves a maximum height of RL 40.300. A communal rooftop garden is proposed on Level 7.

A total of 137 apartments is proposed for Building E.

Figure 22 – Eastern elevation of Building E
Source: PTW Architects

Interconnecting Terraces / Cross-through Apartments

Between Buildings B, C, D and E are three interconnecting sets of 4 attached terraces, which act as two-storey cross-through apartments. These dwellings are attached and are orientated both north and south, connecting to the communal open space to the south at ground level and containing expansive landscaped courtyards to the north. These terrace-style apartments provide an additional form of dwelling typology which break up the massing of the four primary apartment buildings, and are designed as two-bedroom dwellings.

These dwellings are physically interconnected with the four apartment buildings through the provision of an upper level courtyard / balcony, however do not provide a through connection to each of the primary apartment buildings. The figures below provide a general floor plan layout and typical elevation of these terrace style apartments.

Figure 23 – Cross Sectional Elevation of the subject site, looking north
Source: PTW Architectural Plans

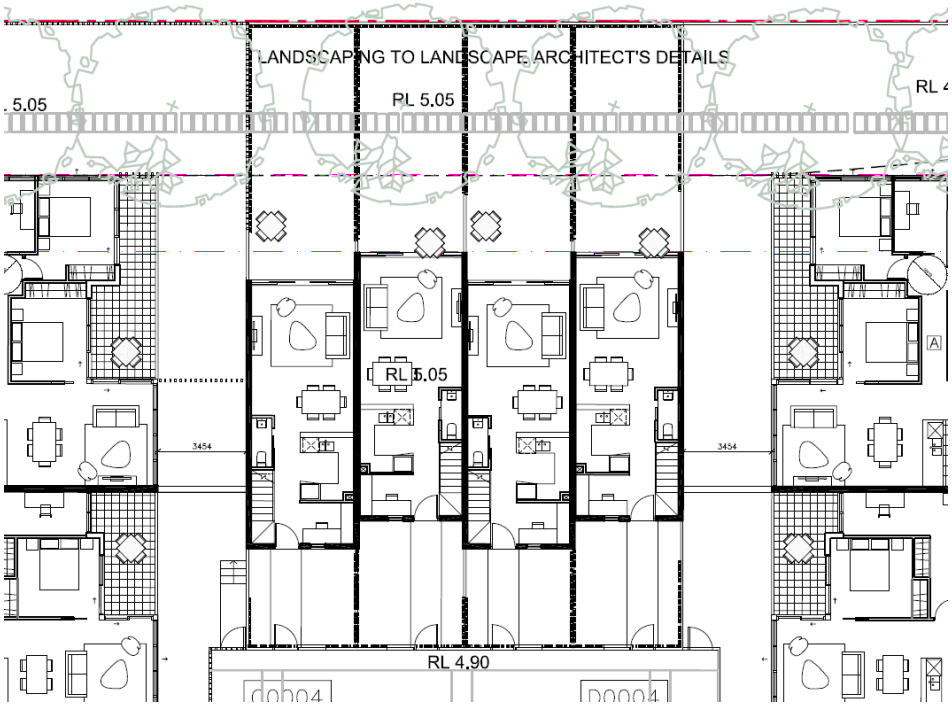

Figure 24 – Ground floor plan of Building CD, located between Buildings C and D
Source: PTW Architects

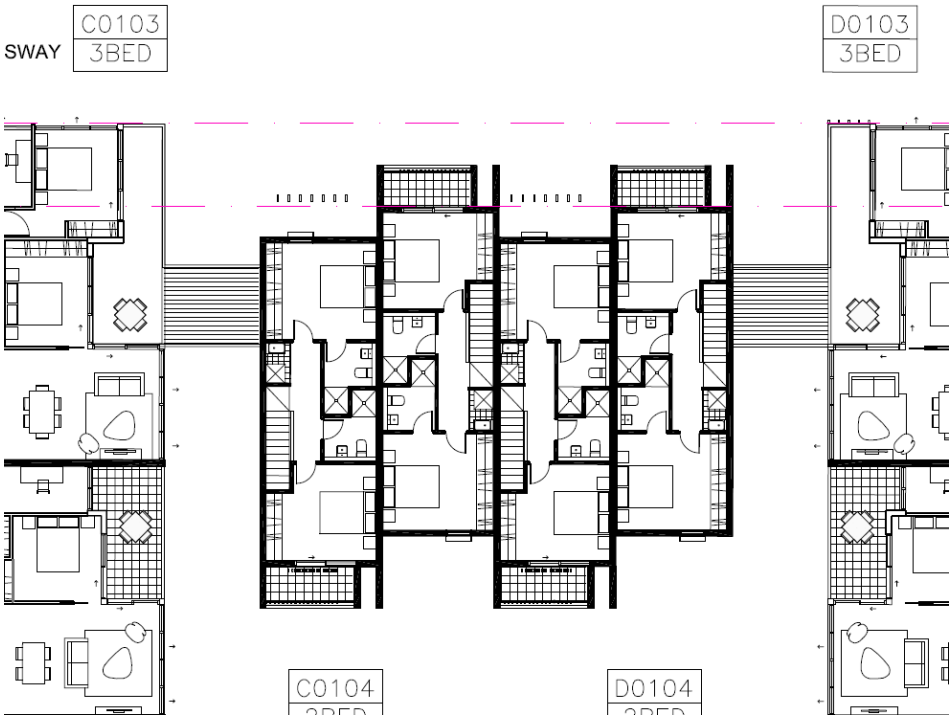

Figure 25 – First floor plan floor plan of Building CD, located between Buildings C and D
Source: PTW Architects

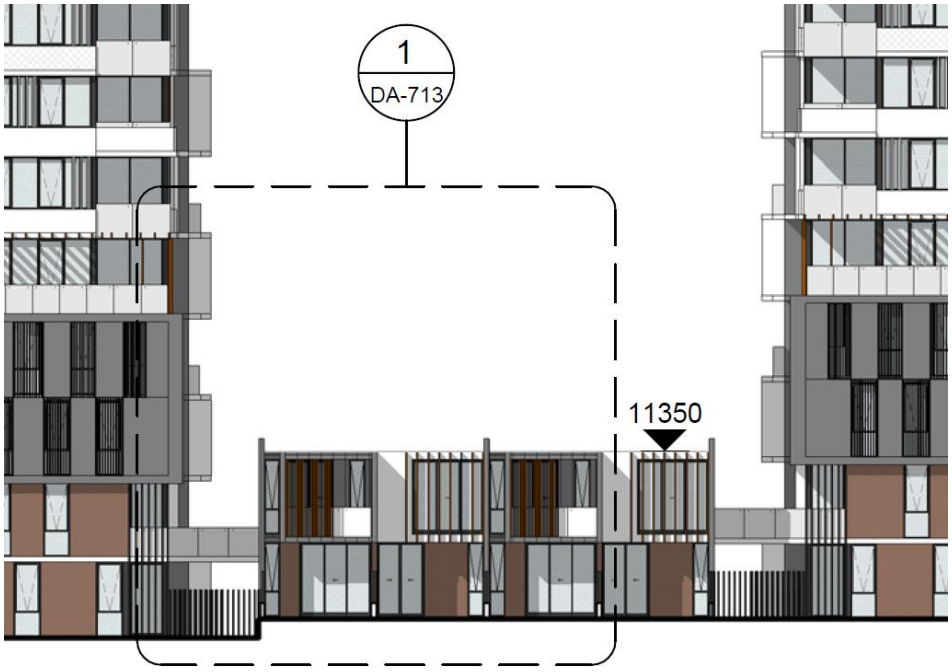

Figure 26 – Northern elevation of Building CD
Source: PTW Architects

Townhouses

A series of townhouses are proposed to the south of the proposed internal access road. These dwellings present as double storey, terrace-style housing oriented to the north, with an outlook to central the communal open space.

An internal road is proposed to the north of these terraces, running east-west across the site and providing a direct street frontage to these houses. The road is proposed to serve as a shared access way/street with at grade parking bays flanking the southern side and parts of the northern side of the proposed road. The terraces are setback from the southern edge of the roadway by approximately 7.6 to 10.3 metres. Private open spaces are provided to the front of the individual lots.

The terraces are also provided with internally accessible basement car parking, located within the proposed mezzanine basement level. Individual street entries are proposed for each of the terraces.

Permeable/partly screened fencing is proposed along the public domain interface to ensure the privacy of these dwellings are retained whilst maximising opportunities for passive surveillance of the public domain. Landscaping is proposed as an additional soft buffer along this interface.

A total of twenty (20) terraces are proposed, and these are designed as 3 bed dwellings with accessible private rooftops.

Figure 27 – Northern elevation of row of townhouses along the southern portion of the site
Source: PTW Architects

3.5 Child Care Centre Stage 1 Development Consent

A Stage 1 Development Consent approval is sought for a 495m^2 child care centre in the south-east corner of the site, fronting the corner of Production Lane and the proposed internal access road. A Stage 1 Development Consent is sought to determine the building parameters for a future detailed DA for the design and fit out of a child care centre, in accordance with the executed VPA for the site, which requires the construction and dedication of a child care centre as part of the redevelopment of the overall site, as well as the dedication of land.

A two-storey building envelope is proposed for the child care centre in the south-east corner, which was identified as the most appropriate location for the child care centre in order to achieve the required levels of amenity for the centre in terms of access to sunlight and its proximity to public open space along Production Lane and its siting away from main roads. As child care centres are not a permissible use in the B6 Enterprise Corridor zone, but are permissible in the R4 High Density Residential zone, the child care centre is required to be accommodated as part of the overall residential redevelopment of the site. The enveloped is setback 6 metres from the southern boundary, and 6-8 metres from the eastern boundary to provide amenity to future occupants and neighbouring dwellings to the south.

Figure 28 below demonstrates the proposed land dedication and overall concept envelope, which responds to feedback obtained from the Design Review Panel in terms of envelope height and size, responds to Council planning controls with regards to setbacks, and can accommodate, as part a future detailed DA, 60 children in accordance with the requirements of the VPA.

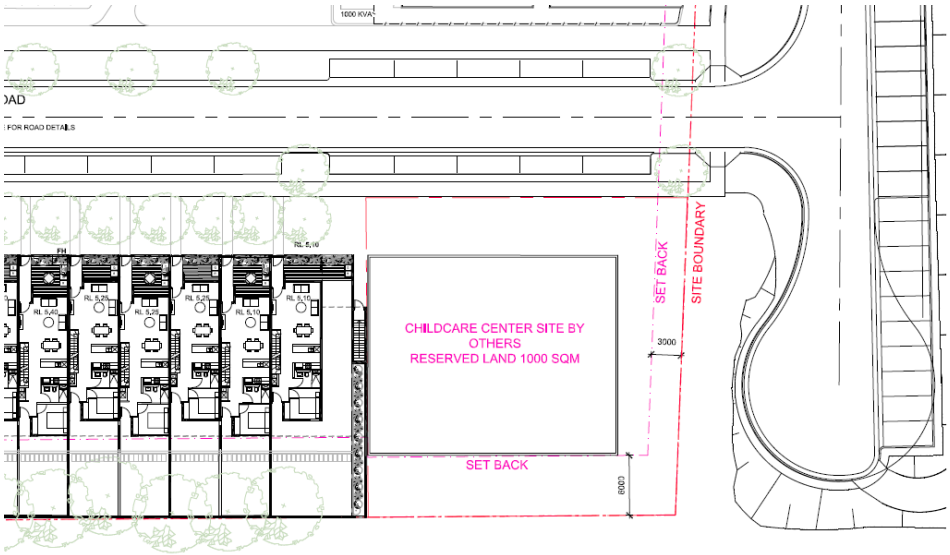

Figure 28 – Proposed child care centre Stage 1 envelope and land dedication
Source: PTW Architects

3.6 Proposed New Road and Improvement Works

3.6.1 Internal access road

As part of this application, a new east-west internal access road is proposed, connecting Rocky Point Road to Production Lane. Keeping with the existing street grid, the proposed road will be designed as a formalised two-way lane access road. The access road is proposed to include side street parking along its southern alignment and two drop off bays on the northern side.

The proposed road will traverse across both the commercial and residential zoned land and function as a shared road servicing both the commercial and the residential parts of the site. The internal road is to be designed in accordance with RMS and Council specifications, as well as other relevant Australian Standards. RMS have been consulted during the design stage of this proposal and their feedback integrated into the proposed design.

A Civil Infrastructure Report, prepared by AT&L, provides additional detail in relation to the construction, design and delivery of the infrastructure and is appended as **Appendix D** to this report. As part of the proposal, a new signalised intersection will be constructed at the Rocky Point Road.

3.6.2 Production Lane Upgrades

Upgrades are proposed to Production Lane to the east of the site. Works proposed to the existing road include:

- Construction of an intersection connecting to the internal access road to Production Lane;
- Installation of a cul-de sac turning head at the southern end of Production Lane; and
- Formalisation of a kerb edge and at grade street parking spaces.

Further details of the proposed road upgrades to Production Lane are shown in the Civil Infrastructure Report and the Civil Drawings in **Appendix D**. The upgrades proposed have been designed to accommodate a future child care centre along the south-eastern portion of the site.

3.7 Proposed GFA

Whilst this DA relates to the demolition of existing structures across the entire site (including the majority of land zoned B6, with the exception of 168 Rocky Point Road), the proposed construction is limited to the eastern portion of the site as a residential precinct, being land within the R4 High Density Residential zone. Accordingly, for the purposes of accurately determining the total GFA for the residential component of this application, the total site area of land zoned R4 High Density Residential is 22,374m^2, as indicated in the survey prepared by Cardno (**Appendix B**).

The total GFA proposed as part of this application is as follows:

- Total residential: 44,747m^2
- Total child care centre: 495m^2

Therefore, based on the site area of 22,347m^2 identified above for all land within the R4 High Density Residential zone, the proposed GFA of all development the subject of this application constitutes a total GFA of 45,242m^2, or an FSR of 2.02:1. An assessment of the proposal's compliance with the FSR development standard attributed to the R4 High Density portion of the site is discussed in **Section 4.2.4** of this report.

3.8 Dwelling Mix

In addition to the diverse range of housing typologies accommodated on site, a dwelling mix of one, two and three bedroom apartments of varying sizes and layouts is proposed under this scheme. **Table 4** below details the proposed dwelling mix under the development scheme.

Table 4 – Proposed dwelling mix

Housing Type	Dwelling Type	No. of Dwellings (%)
Apartment buildings	One bedroom	109 (20.45%)
	Two bedroom	360 (67.54%)
	Three bedroom	64 (12%)

3.9 Basement levels

Two subterranean basement levels and an underground mezzanine basement level are proposed for the residential buildings to the north of the site and cover the majority of the northern extent of the site. Given the rise in the natural ground level along the north-western portion of the site, an additional mezzanine basement level is accommodated below Building B.

A single subterranean basement level is also proposed for the row of terrace townhouses to the south of the site. This level is accommodated as a subterranean mezzanine basement level with a separate access point from the proposed internal access road.

Given the size of the development and largely distinct residential typologies proposed for Buildings B-E and the row of townhouses to the south, two separate basement egress/ingress points are proposed. An access point for the northern apartment precinct is proposed to the north-east corner, access to which is proposed via Production Lane.

The proposed basement alignments have been setback from the site boundaries along the north and south, and marginally to the east and west to allow for deep soil planting.

3.10 External Materials and Finishes

The selection of materials and finishes for this project is acknowledged as highly important in the context of achieving a high quality design outcome for the site. External materials and finishes are shown on the architectural plans which accompany the application.

The buildings within the development are characterised by a combination of contemporary materials including render paint finish, clear glazing, glass and solid balustrades, batten and metal vertical screening. Materials and detailing for each building have been carefully chosen to differentiate and breakup the appearance of the development. In particular, the façade treatment and detailing for the townhouses is different to the residential apartment buildings, whilst maintaining some similarities to achieve consistency in design.

Further details are set out in the accompanying Architectural Design Statement prepared by PTW and provided under separate cover. An extract of the sample board of the DA is provided below.

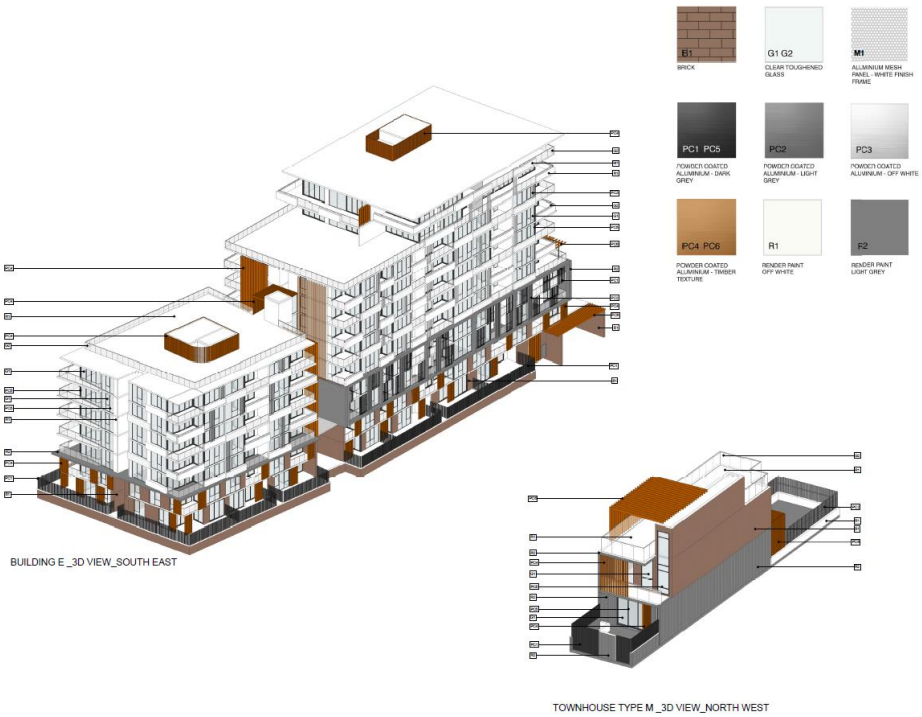

Figure 29 – Proposed materials and finishes
Source: PTW Architects

3.11 Landscaping and Public Domain

A detailed landscaping strategy prepared by Arcadia is provided in **Appendix E**. The proposed landscaping strategy has been designed to complement and enhance the built form. In addition to enhancing the aesthetic quality of the proposal, the landscape strategy integrates functionality into the design, creating outdoor spaces for relaxation, entertaining and play.

The landscape strategy consists of the following main components:

- Parkland planting;
- Terrace streetscape;
- Urban rainforest;
- Bushland/deep planting; and
- Rooftop planting and recreation areas.

The ‘parkland planting zone’ is an open, centrally located area fitted with various functional elements including a barbeque zone to the southeast edge. A children’s playground space is proposed across the barbeque zone to the west, separated by a large central open space area, designed to cater for active recreational uses. Stepped landscaping mounds are proposed along the eastern corner of the central open space, creating a natural amphitheatre style seating area.

Landscaping provided along the terrace streetscape is designed to complement the aesthetic quality of this interface whilst maximising opportunities for privacy through soft landscaping.

Figure 30 – Overview of the proposed landscaping plan
Source: Arcadia

The 'urban rainforest zones' integrate both private and communal open space areas. These include the private courtyards of ground level apartments and fringe landscaping along the proposed pedestrian access ways. Planting will consist of shade and low light tolerant plants that will dovetail with the proposed ground level built form interface. A prominent feature of this zone is the water pool located centrally between Building C and Building D. The water pool is surrounded by vegetation and planting to offer shade, shelter and an alternate relaxation space for future residents of the development.

Bush land / deep planting is provided along the northern and southern alignment of the site. Low lying shrubs, groundcovers and grasses with a dense canopy cover structure is proposed. This also creates a natural buffer/setback from the land uses to the north and south of the site.

The upper levels of each of the residential apartment buildings accommodate a rooftop garden. These gardens are proposed to include outdoor furniture and pergolas for shade. The terrace dwellings to the south of the precinct are also designed as accessible rooftop terraces. **Figure 31** below illustrates landscaping proposed across the rooftop levels.

Figure 31 – Communal rooftop terraces
Source: Arcadia

3.12 Services

3.12.1 Water supply

A 450mm existing potable water main owned and operated by Sydney Water is located along the eastern alignment of Rocky Point Road, along the western boundary of the site. There is also an existing 100mm potable water main to the southern alignment of Production Avenue, north of the site. A Section 73 *Notice of Requirement* will be sought from Sydney Water to obtain approval to connect into this main at detailed design stage.

3.12.2 Sewerage

There is an existing 225mm sewer pipe owned and operated by Sydney Water running west to east through the site and a 225 CI (Cast Iron) sewer pipe running parallel to the eastern boundary adjacent to Production Lane. The existing sewer mains within the proposed development site will need to be diverted and relocated at a later stage.

3.12.3 Communication Services

An existing telecommunication and NBN fibre optic cables are located along the site's western alignment to Rocky Point Road and the northern alignment of the site to Production Avenue. Confirmation will need to be sought with the telecommunications authorities for all connections at a later stage.

3.12.4 Electrical and Gas

There are existing electrical and gas network connections located to the north and west of the subject site. Two electrical substations are proposed to be constructed to the south east and south west of the residential precinct, which are proposed to be connected to existing Ausgrid infrastructure in accordance with Ausgrid requirements. Approval will be sought from Jemena as owners of the gas mains for all connections into their network at a later stage.

3.13 Accessibility

Pedestrian Access

A key feature of the development is opening of the site and improvements to its permeability. Central to this will be:

- The creation of a new east-west road linking Rocky Point Road to Production Lane and greatly improving connectively between Leo Smith Reserve and the surrounding residential area;
- Improvements and upgrades to Production Lane; and
- Construction of a signalised intersection at Rocky Point Road to improve safety and the ability for pedestrians to cross Rocky Point Road.

Disabled Access

The proposed development scheme was assessed by access consultants, Moris-Goding Access Consulting, early in the design phase to ensure compliance with access requirements and standards. Where non-compliance was identified, these were generally modified in accordance with access requirements, ensuring equitable access and design to all parts of the development. A copy of the Access report is provided at **Appendix F** to this report.

The proposed scheme also incorporates 54 apartments (10% of total units) designed in accordance with adaptable housing guidelines. Accordingly, 54 adaptable car parking bays are also provided across the three proposed basement levels B1, B2 and Mezzanine level.

3.14 Vehicular Access and Parking

Access

Vehicle access will be provided through the site via the creation of a new east-west internal access road connecting Rocky Point Road to Production Lane. Vehicle access to the residential apartment component of the development will be obtained via a driveway entrance connecting to Production Lane in the site's north eastern corner. This will connect with a single large consolidated two level and a half level basement car park that services the residential flat buildings north of the internal road.

A separate vehicle entrance will service the terrace houses located along the site's southern boundary. This driveway will be accessed via the new internal road and will connect to an under-croft basement area servicing the proposed residential terraces.

Parking

Vehicle parking will be provided within the large two and a half level basement servicing the northern part of the site, as well as the secondary basement servicing the proposed terrace houses. In addition to this parking will also be provided along the proposed new road. In total 704 spaces are proposed to service the entire development, accommodating residential car parking spaces, accessible spaces and residential visitor spaces. The proposal will also provide for motor cycle spaces and visitor bicycle spaces.

Servicing

Service vehicles, including garbage trucks, will access the site via the driveway entrance from Production Lane, from here they will enter the basement to access the loading dock area situated within the basement level. Once in the loading vehicles will be able to access the waste room and all undertake all other loading/unloading associated with the development.

Servicing, loading and waste collection for the terrace houses will be undertaken from the proposed new internal street.

3.15 Waste Management

A Waste Management Plan has been prepared by Elephants Foot Recycling Solutions (**Appendix G**) and details the proposed management practices and procedures for waste generated by the development. Key waste management features proposed include:

- Provision of centrally located dual waste chutes (garbage and recycling) across all residential levels that will service all buildings and connect with dedicated waste rooms located on Basement Level 2.
- Residential waste storage areas/rooms located on Basement Level 2 that include 1100L MGBs for collection of waste and recycled materials. The building caretaker will be responsible for transferring all full bins from each waste discharge room to the bin holding room on basement 2 for servicing by Council
- Provision of 240L waste and recycling bins to service the residential terrace houses.
- Provision of 3 x 1,100L waste bins and 3 x 1,100L recycling bins to service the commercial tenancies.
- A separate waste storage area/room for storage of bulky items.
- Each apartment to be provided with a waste collection area (generally in the kitchen) to deposit waste and collect recyclable material.
- Collection of all waste for the residential apartment buildings via a dedicated loading dock situated within the basement. Residential waste to be collected by Council.
- Waste for the residential terraces to be collected from the street via the proposed new internal road.

Demolition, excavation and construction waste will be managed by the construction contractor and detailed prior to the issue of a Construction Certificate. All demolition and excavation waste will be classified and removed from the site as required.

3.16 Water Cycle Management

The Civil Drawings prepared by AT&L (**Appendix H**) details the proposed stormwater management system for the proposed development, which includes appropriate measures relating to stormwater detention, basement drainage, stormwater pollution control and water management.

3.17 Environmentally Sustainable Development

A BASIX Assessment has been prepared (**Appendix I**) which demonstrates that the proposed development will satisfy the relevant requirements for water, thermal and energy efficiency.

3.18 Infrastructure and Services

The site is currently served by water, electricity, gas and telecommunications. These existing utilities shall be augmented / upgraded as required.

3.19 Development and Construction Staging

The proposed development will be one continuous building programme but subject to separate construction and occupation certificates. It is proposed to lodge a DA separately for the land subdivision to Bayside Council.

4.0 Assessment of Environmental Impacts

This section considers the planning issues relevant to the proposed development. It contains our assessment of the environmental impacts of the proposal and identifies the steps to be taken to prevent or mitigate the potential impacts on the environment.

Under section 79C(1) of the EP&A Act, in determining a development application the consent authority must consider a range of matters relevant to the development including the provisions of environmental planning instruments, impacts of the built and natural environment, the social and economic impacts of the development, the suitability of the site, and whether the public interest would be served by the development.

The assessment includes only those matters under section 79C(1) that are relevant to the proposal.

4.1 Compliance with Relevant Strategic and Statutory Plans and Policies

The DA's consistency and compliance with the relevant statutory plans and policies is provided in **Table 5** below. Variations to, and non-compliance with, the key standards and guidelines highlighted in the table are discussed in the following sections of this environmental assessment.

Table 5 – Summary of consistency with key strategic and statutory plans and policies

Plan	Comments	
Strategic Plans Instruments		
SEPP 55	A Phase 2 Contamination Assessment has been conducted by Coffey (**Appendix J**) which identified aesthetic impacts, including staining and odorous soils, in two locations in shallow fill material. Based on the isolated nature of the impacts, they are considered not to affect the suitability of the site for the proposed development. Both impacts are located in the vicinity of decommissioned underground storage tanks and therefore may be attributed to the former use of the tanks. Based on the absence of staining and odours in nearby test locations, the impacts are considered by Coffey to be minor and localised. Based on the results of this targeted Phase 2 Contamination Assessment, Coffey concludes that the current and former occupation of the site does not appear to have resulted in contamination of the subsurface which warrants further investigation or remediation. Accordingly, the consent authority can be satisfied that, in accordance with Clause 7 of SEPP 55, pending the remediation of any contaminated material on the site, the site can be made suitable for the proposed use.	
SEPP 65	A Design Verification Statement prepared by PTW Architects which addresses the principles of SEPP 65 is included at **Appendix K**. Further discussion is provided in **Section 4.4** of this report.	
SEPP (Infrastructure)	Clause 101 of the Infrastructure SEPP applies to the proposal as the site has a frontage to Rocky Point Road, which is identified as a classified road. The proposed development is consistent with Clause 101 of the Infrastructure SEPP in that: ▪ Vehicular access is proposed to be provided to the site via a new signalised internal access road extending from Rocky Point Road, running east-west through the site, as well as via Production Lane to the east; ▪ The safety, efficiency and ongoing operation of the Rocky Point Road will not be significantly impacted by the proposed development, as outlined in the traffic report; and ▪ All proposed dwellings have been appropriately designed taking into consideration the potential for traffic noise and the recommendations of the Acoustic Assessment prepared by Acouras (**Appendix L**). The proposed residential use has been designed to comply with the noise criteria in Clause 102. In addition, the proposal is considered traffic generating development, in accordance with the definition in Clause 104 and being of the relevant size or capacity in Schedule 3, being a residential apartment building of 300 or more dwellings, and accommodating parking for more than 200 vehicles on the site. Accordingly, the DA needs to be referred to the RMS.	
SEPP (BASIX)	A BASIX Certificate is provided at **Appendix I**.	
SEPP (State and Regional Development)	As the proposal is a class of development described in Schedule 4A of the EP&A Act, being a development that has a capital investment value of more than $20 million, Part 4 of the State and Regional Development SEPP applies to the DA. Under Part 4 of the SEPP the Council's consent function is exercised by the Greater Sydney Commission Planning Panel (GSCPP).	
Local Planning Instruments and Controls		
	Clause 2.2 – Zone	The overall site is zoned both R4 High Density Residential and B6 Enterprise Corridor. Under the

Plan	Comments	
Rockdale Local Environmental Plan 2011		R4 zone, the proposed uses being Residential Flat Buildings, multi-dwelling housing, child care centres and all associated works are permissible with consent. In both the B6 Enterprise Corridor zone and the R4 High Density Residential zone, works in relation to the construction of the proposed internal road are permissible without consent.
	Clause 4.3 – Height of Buildings	Under the RLEP 2011, a range of height zones which increase from south to north apply to the subject site, permitting a maximum of 33 metres to the north end of the site and a maximum of 17.5 metres to the south. These heights were established through the recent rezoning of the site and are governed by a maximum building height plane (refer to Clause 4.3A below). Notwithstanding, Clause 4.3A under the RLEP 2011 permits a height greater than that proposed for the subject site under the Height of Buildings Map, subject to compliance with the maximum Building Height Plane. Further discussion on building height is provided below.
	Clause 4.3A Exception to height of buildings	This Clause, which applies specifically to the subject site, operates to allow the development on the site to exceed the maximum building heights outlined under Clause 4.3 (and the Height of Buildings map), subject to compliance with the maximum building height plane which is effectively situated above the maximum heights permitted. The effect of Clause 4.3A is, therefore, to increase the maximum permitted building height in certain sections of the site. The building height plane was established as part of the rezoning of the site to ensure any bulk and scale impacts to existing residential development to the south of the site from a future redevelopment of the site would be appropriately managed. Building heights proposed for the residential apartment buildings under this scheme in some circumstances exceed the maximum height as shown in the Building Height Map, however are located entirely below the Building Height Plane in Clause 4.3A. Further justification is provided in **Section 4.1.1** below.
	Clause 4.4 – Floor Space Ratio	A maximum FSR control of 2:1 applies to the residential land use zone. Under this scheme, the proposal achieves a maximum FSR of 2.02:1. See discussion below.
	Clause 6.1 – Acid Sulfate Soils	The site is partly affected by Class 5 and Class 3 Acid Sulfate Soils. An Acid Sulfate Soils Management Plan has been prepared for the site by Coffey (**Appendix M**) which presents the approach and methodology for management of acid sulfate soils if encountered during redevelopment of the site. The objective of this plan is to reduce potential environmental impacts

Plan	Comments	
		associated with the disturbance of ASS within the area of future redevelopment works.
	Clause 6.2 Earthworks	A Geotechnical Study has been prepared by Martens and is included in **Appendix N**. The study assesses the geotechnical conditions for the management of geotechnical risks that may affect the proposed development, the site and surrounding land and infrastructure. The study provides several recommendations for the foundation conditions of the development, excavation and shoring, groundwater and trafficability. The study also provides design parameters and recommends further monitoring and an inspection program. The geotechnical constraints and recommendations are discussed further in **Section 4.7**.
	Clause 6.6 Flood Planning	The north-eastern corner of the site (Lot 2 DP 838198) is identified as flood planning area under the mapping associated with Clause 6.6. Flood testing was undertaken by Cardno for the proposed scheme and demonstrates that the site is mostly located above the 1% AEP flood level, with the exception of fringe areas within the site's north east corner. Further, the proposed building footprints, and the basement driveway entrance are located above the FPL and PMF levels and accordingly is free from flood risks. Further discussion is provided in **Section 4.10** and a flooding assessment is provided in the Civil Infrastructure Report in **Appendix D**.
	Clause 6.7 Stormwater	A Civil Infrastructure and Stormwater Management report has been prepared by AT&L (**Appendix D**) which identifies how stormwater is managed across the development. Stormwater management is discussed further in **Section 4.6**.

Rockdale Development Control Plan (RDCP) 2011

The RDCP 2011 applies to the subject site and thereby the provisions of this plan have been considered early in the design phase of the proposed development. The proposed scheme is therefore generally consistent with the aims and objectives of this plan. **Table 6** provides an assessment of the proposal against the key built form provisions of the RDCP 2011.

Table 6 – Assessment of the proposal against the provisions of the RDCP 2011

Provisions/ Controls	Minimum Requirements	Consistency	Compliance
Rockdale Development Control Plan 2011			
5.1 Low and Medium Density Residential			
Storey height and setbacks	Multi-dwelling housing ▪ Max height in storeys: two storeys ▪ Street setback: – Must be consistent with the prevailing setbacks in the street – If there is not a consistent or established setback, a 6m setback applies ▪ Secondary street setback: min 3m ▪ Side setback: – Min 4.5m, except where dwellings do not primarily address side boundaries, side setbacks may be a min of 3m; and – Min 7.5m where setback includes side driveway; ▪ Rear setback and rear lane setback: – Min 3m for single storey building or ground floor of a two-storey building – Min 6m for first floor of a two-storey building, except when fronting a lane may be set back 3m	The proposed row of 20 townhouses along the southern portion of the site has been designed and sited having regard to the feedback obtained from the DRP and Council during initial design discussions. The proposed townhouses have been designed as attached multiple dwelling housing sharing common walls as side setbacks, and orientated as cross-through dwellings with the primary orientation to the north (southern orientation for rear private open spaces). The proposed townhouses comply with all setback requirements, being located a substantial distance from proposed future built form to the north and with a rear setback 8 metres to the residential properties north of Margate Street.	✓
5.2 Residential Flat Buildings			
4.3.1 Open Space and Landscape Design	▪ Residential flat buildings (15% - minimum landscaped area [of the site area])	3,375m^2 or 15.08% of the site area is provided as deep soil planting under this scheme.	✓
	▪ Front setback (landscaped): 20% ▪ Min width – 1 metre	The built form of Building C and D within the northern apartment precinct is setback from the internal access road and is landscaped to create a centralised communal open space area. The proposed landscaped zone has an approximate depth of 38 metres from the internal access road. The first 15 metres of this zone contributes to deep soil planting.	✓
4.3.2 Private Open Space	▪ Each apartment must achieve the recommended external area as outlined in the ADG and achieve a balcony depth of 2m	Private open spaces for the apartment buildings are provided in accordance with SEPP 65 Requirements.	✓
	▪ Each townhouse (multi-dwelling housing) should achieve the following amounts of private open space: – 1 bedroom: 30m^2 – 2 bedroom: 40m^2 – 3 or more bedrooms: 50m^2	The proposed townhouses include private open spaces of a combined 69.8m^2 to 74.6m^2, apart from one townhouse (G0016), which includes a private open space of 166m^2.	✓

Provisions/ Controls	Minimum Requirements	Consistency	Compliance
4.3.3 Communal Open Space	▪ The development must provide a communal area for the benefits of its residents at the rate of 5m² for each dwelling within the development ▪ The communal open space should: – Be north facing; – Minimum area of 40% that has sunlight at 1pm on 21 June; – Include recreational uses.	Given the nature of existing land uses to the north and the stepping of the development bulk from the north down to the south, the communal open space areas are located centrally within the precinct to ensure equitable access for all future residents and to maximise the benefits created by the central area. The communal open space comprises a large centralised space as well as four dedicated rooftop amenity areas. These spaces are designed to complement the built form, enhance the aesthetic qualities of the development and include functional 'use specific' facilities (i.e. a communal barbeque zone, a children's play area, open playing field) to maximise usage. It is anticipated that future residents will also have access to vast open space reserves with existing sports fields/ courts and other utilities located adjacent to the site, east of Production Lane. These green spaces together with the communal spaces provided under this application can satisfy varying open space needs and requirements.	The proposal is generally consistent. See ADG discussion below on the proposed communal open space component.
4.4.2 Solar Access	▪ Ensure reduction of solar access of adjoining property is no more than 20% ▪ 70% of apartments within a development is to receive a minimum of 3 hours of mid-winter sun between 9 am to 3 pm	The proposal is designed to primarily accommodate much of its scale and bulk to the north of the site. The proposed 2 storey terraces along the southern portion of the site are setback from the southern boundary by approximately 8 metres and fit within the LEP building height plane, which was principally established with the objective of minimising the potential for solar access and shadowing impacts on the surrounding area. Given the former industrial use of the site, the built form of the adjoining residential dwellings to the south has also been setback from the subject site boundary. As such, the proposal provides a well-considered response to the existing dwellings to the south and does not compromise the amenity of these dwellings. Internal solar access requirements for the apartments are provided in accordance with SEPP 65 requirements (2 hours of daylight between 9am to3 pm). A total of 393 of 533 dwellings (73.7%) of apartments satisfy solar access requirements.	✓
4.4.3 Natural Lighting and Ventilation	▪ Floor to ceiling height requirements for habitable rooms: 2.7 metre. ▪ Floor to ceiling height requirements for habitable rooms: 2.4 metre.	The proposal achieves a floor to floor height of 3.05 metres for the proposed apartments, and a floor to floor height of 3.1 metres for the proposed townhouses. Accordingly, the proposal has the capacity to achieve a floor to ceiling height of 2.7 metres.	✓

Provisions/ Controls	Minimum Requirements	Consistency	Compliance
4.4.5 Visual and Acoustic Privacy	Building separation distances: ▪ 9 metres between habitable to habitable room windows minimum; ▪ Are sufficiently off-set to preclude views into the windows of the adjacent building; ▪ Have sill heights of 1.7m above floor level; ▪ Have fixed obscure glazing in any part of the window below 1.7m above floor level;	Internal building separation distances between Building B, C, D and E are provided in accordance with SEPP 65 requirements. Whilst the vertical indents integrated within the built form of Building B and E maximise solar access to habitable rooms, these result in windows with outlook to habitable rooms of other adjacent dwellings within the building. Any potential impacts from this have been mitigated through the inclusion of use of vertical panels/fins as screening screens that to retain and maximise privacy of these rooms.	See ADG discussion below.
4.5.1 Housing Diversity and Choice	▪ 3 bedroom and/or more: 10-20% ▪ 2 bedroom: 50-75% ▪ 1 bedroom and/or studio: 10-30%	As noted earlier in the report, the proposed development provides 20.45% 1 bedroom, 67.54% two bedroom and 12% three bedroom dwellings. The proposal delivers a contextual dwelling mix that is considered to best respond to the observed market demand in the area. Additionally, as part of this application, 20 three bedroom individual terraces and 12 two bedroom individual dwellings are proposed. These dwellings contribute to the diversified housing typology proposed as part of the scheme which will contribute to the diversity and choice.	✓ See discussion below.
	▪ Adaptable housing:10% of total apartment proposed	54 apartments (10%) are proposed to be designed as adaptable units.	✓
4.6 Car Parking	▪ 1 space per 1 and 2 bed ▪ 2 spaces per 3 bed ▪ Visitor parking: 1 space per 5 dwellings	<u>Residential Apartments</u> 1 bed: 109 x 1 = 109 spaces 2 bed: 360 x 1= 360 spaces 3 bed: 44 x 2= 88 spaces Visitor parking: 103 spaces Total required: 660 spaces **Provided: 660 spaces** <u>Terraces / Townhouses</u> Terraces/ townhouse (3 bed): 20 x 2= 40 spaces Visitors: 4 spaces **Provided: 44 spaces in total**	✓
	Child care centre parking: ▪ 1 space per 20 children ▪ 1 space per 2 members of staff (part or full time) ▪ 1 space/residential component	The proposed development includes upgrades to Production Lane which involves the extension of Production Lane and the provision of on street car parking spaces which. The traffic report prepared for the application has identified, based on the DCP requirements, that 11 spaces are required to accommodate the child care centre. The proposal seeks approval for on street parking spaces in excess of the required minimum. Compliance with the required number of car spaces can be resolved at the detailed design stage as part of a future DA.	Can be designed to comply at detailed design stage.
	10. The following developments shall be designed with internal	The proposed on street parking arrangement for Production Lane is such	✓

Provisions/ Controls	Minimum Requirements	Consistency	Compliance
	manoeuvring areas so that vehicles can enter and exit the site in a forward direction: a) … b) Child care centres c) …	that drivers entering and exiting Production Lane can do so in a forward direction. The cul-de-sac will allow for an adequate turning circle, and car spaces are located on the opposite side of the child care centre perpendicularly, connecting to the child care centre via a proposed footpath around the cul-de-sac. The objective of the control is to ensure that vehicles entering and exiting a private site onto the road network are always entering and then egressing onto the public road network in a forward direction. The control is not intended to restrict reverse vehicle movements when backing out of a car space. Given the proposed parking will likely be utilised by child care centre parents and staff, it is considered that the proposed parking arrangement is satisfactory.	
Adaptable parking spaces	▪ 1 space per adaptable dwelling	54 parking spaces provided.	✓
Bicycle parking	▪ 1 space / 10 dwellings	Whilst only a minimum of 52 spaces is required under this provision, a total of 63 bicycle parking spaces are proposed as part of this development.	✓
Motorcycle parking	▪ 1 space / 15 dwellings	Whilst only a minimum of 35 spaces is required under this control, a total of 48 spaces is proposed as part of this application.	✓
Site coverage	▪ Building footprints for residential flat buildings are limited to 35% of the site area ▪ Building foot print to be accommodated as per the setback requirements	The site coverage of the proposal is 34% (7,611m^2 building footprint)	✓
Street setbacks for residential flat buildings	▪ Consistent with the prevailing setback along the street within the range of 3-9 metres ▪ Secondary Street/lane: 3-5 metres	The proposal includes the following street setbacks: ▪ To Production Lane: – 0-0.84m setback at the courtyard fence for ground level apartments in Building E – 3-3.9 metre building setback for Building E ▪ To the proposed internal access road: – **Building B:** 9m setback for to the external wall, 7.4m setback to the ground level fence – **Building C:** 40.3m setback to the external wall, 39.8m setback to the ground level fence – **Building D:** 40.3m setback to the external wall, 39.8m setback to the ground level fence – **Building E:** 9.3m setback to the external wall, 7.4m setback to the ground level fence – **Townhouses:** setbacks range from 7.6m to 10.3m.	See discussion below.
Side and rear setbacks for residential flat buildings	▪ Side setback: minimum 3m for buildings up to three storeys, 4.5m for buildings more than three storeys	▪ Side setbacks: – Building B: 3 metres to zone boundary with B6 zone	See discussion below.

Provisions/ Controls	Minimum Requirements	Consistency	Compliance
	▪ Rear setback minimum of 12m or 15% length of the site, whichever is the greater	– Building E: zero setback to Production Lane at ground level, 3 metres above ground level. ▪ Rear setback: – from northern boundary of the subject site): 6 metres – From southern boundary (townhouses): 8 metres	
Apartment sizes	▪ In accordance with ADG	Dwelling sizes are provided in accordance with SEPP 65 and ADG requirements.	✓
Building Design	▪ Contextual building and façade design ▪ The floor level of the upper most storey must be at least 3.5m below the maximum permitted height to achieve a variety of roof forms. ▪ At least 50% of ground floor dwellings are to have individual gates and direct access off the street. ▪ All common corridors are to have a minimum width of 2 metres to enable bulky goods (white goods, furniture etc) to be easily transported through the building	The design of the proposal has been guided by discussions and meetings with the DRP. Accordingly, the proposal has been designed to respond to the desired future character of the area and in response to the comments received from the DRP. The maximum building height for this development is governed by the building height plane under Clause 4.3A of the RLEP 2011. The floor level of the upper most level is generally well below the maximum height plane and the proposal integrates a variety of architectural roof designs through a stepped height built form with communal terraces on roof levels. Corridor widths are proposed at 2 – 2.6m. A total of 67 dwellings of the 79 at ground floor throughout the whole development have individual access points, separate to the lobby at ground level.	✓
6.1 Child care centres			
Parking and Pedestrian Safety	35. The use of the kerb side parking lane may be permitted for set down and pick up of children subject to meeting the following criteria: d) the road carriageway has a minimum width of 12m; and e) Parking restrictions and/or traffic controls do not prevent the lawful use of the street for parking; and f) The street is not a classified road; and g) The dedication of the on-street parking for set down and pick up does not extent beyond the side property boundaries of the site, and does not encroach within 10m of a corner of another street; and h) A Road Safety Audit (Stage 5 Audit) has been undertaken by an accredited auditor in accordance with AUSTROADS and the	The proposed development and arrangement of the child care centre achieves compliance with all controls within Control 35. Further to this, the child care centre, being a cul-de-sac, will be located in a low-speed environment. The proposal includes upgrades to Production Lane, the inclusion of new car spaces to support the child care centre, and footpath works connecting the car spaces on the opposite side of the road to the child care centre around the cul-de-sac, providing a safe path of travel for pedestrians to enter the child care centre.	

Provisions/ Controls	Minimum Requirements	Consistency	Compliance
	audit result is satisfactory; and i) The parking is not used by staff or a resident.		

4.2 Urban Design and Built Form

The proposed building envelope has been designed with consideration of several factors including the existing and future built form surrounding the site, the development potential of the site, the amenity of future occupants and the constraints and opportunities unique to the site. The proposed built form has also been designed to respond to comments received in response to indicative schemes provided to the DRP and Council officers in Design Review Panel meetings and Pre-DA meetings for the proposal.

As demonstrated later in this report, the proposed development is consistent with the maximum Building Height Plane for the site. These controls have been designed to guide the bulk and scale of development on the site. In addition to this, the form of the building has been selected to maximise the amenity of future occupants whilst not compromising the amenity of surrounding uses.

4.2.1 Built Form Strategy

The site layout and the distribution of bulk has been a key element in the development of the design. The built form strategy centres around the creation of a centralised communal open space that acts as the focal point for activity and amenity within the site. This space also defines the entry points to the development both from the proposed internal access road from Rocky Point Road and from Production Lane.

Surrounding the central open space area are a series of buildings that vary in height form and scale. The proposed development incorporates three distinct building forms, being large, stepped apartment buildings, rows of two-storey terraces which sit between each of the building wings, and townhouses located along the southern portion of the site. The form and architecture of the overall proposal has sought to create a distinctive identity
whilst fitting into the wider context of Kogarah and the height and density controls which govern the bulk and scale of the proposal.

The architecture of the proposal is modulated, with building indents proposed in each of the primary residential apartment buildings to provide visual interest and allow solar access and ventilation to common circulation areas. The design will include different building treatments at the lower levels and a mix of building materials and both vertical and horizontal elements and a mix of balustrade materials. The proposed colour and material palette has been selected to respond to the envisaged landscape character of the project and respond to the natural attributes of the surrounding parklands.

Interface treatments with neighbouring properties, in particular the treatments to the future commercial development to the west on the B6 zoned land, treatments at ground level to the industrial sites to the north and the Margate Street low density residential dwellings to the south have been included, such as landscaped screening, to soften the interfaces of the development at ground level.

Figure 32 and **Figure 33** illustrate the proposed built form from various angles.

Figure 32 – Photomontage view of the proposed development, looking north
Source: PTW Architects

Figure 33 – Photomontage view of the site, looking north from the proposed internal access road
Source: PTW Architects

4.2.2 Building Bulk and Scale

The maximum building height development standard is established through clause 4.3A of the Rockdale LEP 2011. A maximum height limit is governed by a Building Height Plane which applies to the site. The proposed development is compliant with the Building Height Plane, with the tallest element of the development being 48.05m above existing ground level (plant room roof associated with Building B.

The height and massing of the proposed development has been developed having regard to the established future character of the site and locality through the recently amended LEP zoning and controls for the site. The intention to transition development of the site from high density to low density to respect the existing character of the low-density precinct south of Margate Street is encapsulated in the drafting of the existing Building Height Plane for which the development is compliant.

Accordingly, when viewed from various areas of the public domain, the proposed development will present differently; from properties along Margate Street, low density townhouses will be visible, with a transition to a higher density form of development in the distance. When viewed from Production Avenue and Production Lane, the proposed development will present principally as a high density residential development and significant urban renewal site with a distinct landscape and design character.

Whilst largely guided by the Building Height Plane in terms of the location of bulk, the siting of the buildings has been developed through extensive consultation with the St George Design Review Panel in order to provide a development which achieves high levels of amenity through outlook, and in terms of the key built form amenity indicators such as solar access, natural ventilation and access to landscaped communal areas. The overall siting of the development and bulk distribution has resulted in the following key benefits:

- Views to the Sydney CBD and Sydney Airport to the north, to Ramsgate Beach and Botany Bay to the east and to Leo Smith Reserve and Scarborough Park to the east are maximised through the orientation and siting of buildings;
- A transition to the lower scale residential areas to the south both in terms of perceived bulk and overshadowing impacts is appropriately achieved through the concentration of bulk to the north of the site;
- An appropriate transition to the existing industrial sites to the north is satisfactorily achieved through interface treatments; and
- The concentration of bulk to the north provides for a unique communal 'park' to be centrally located within the development and allow for an internal access road which services the overall development in an orderly manner.

4.2.3 Building Height

Clause 4.3 Height of Buildings

As outlined in **Table 5**, four height limits apply to the portion of the site zoned R4 High Density Residential, being:

- U2: 33m height limit along the northern portion of the site extending east/west within the zone;
- T4: 29m height limit to the immediate south of U2, also extending east-west;
- P1: 17.5m height limit to the immediate south of T4, also extending east-west; and
- I: 8.5m height limit to the immediate south of P1, also extending east-west.

These height limits are shown in an extract of the Building Height map in **Figure 34** below.

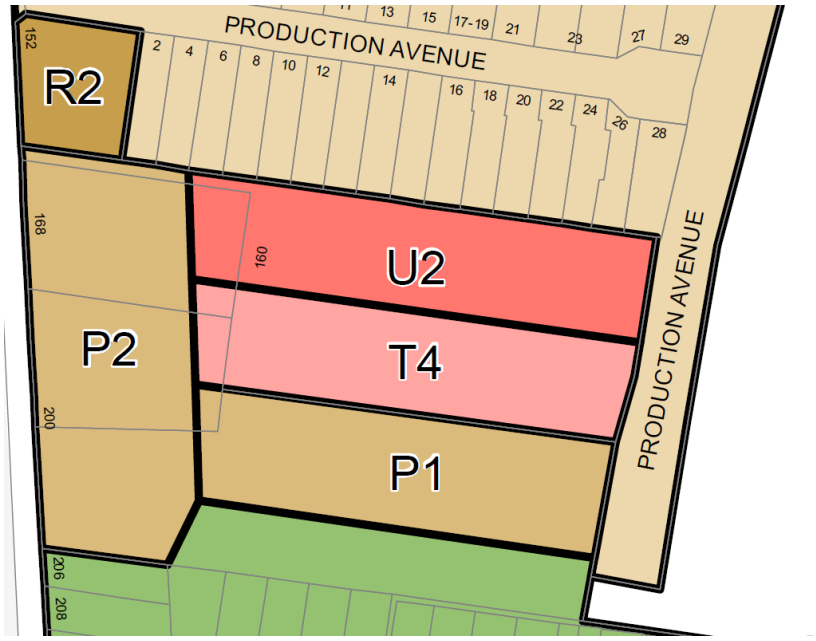

Figure 34 – LEP Height of Buildings Map extract
Source: NSW Legislation

These heights were established through the recent rezoning of the former Darrell Lea Factory site, where it was identified throughout the process that the renewal of large sites such as this should achieve a compatible built form with surrounding development while optimising urban renewal opportunities. The heights stepping down have addressed this through transitioning height and scale from lower density residential development on Margate Street to the south, and concentrating development within the site and adjoining the industrial development to the north.

The proposed development seeks components for each of the buildings that are located above the LEP height limits, but which remain below the Building Height Plane (see discussion below) referred to in Section 4.3A of the Rockdale LEP 2011. These elements are shown in the figures below.

Despite the fact that the proposed building heights exceed the height limit, it is noted that the wording of Clause 4.3A of the RLEP 2011 is such that a Clause 4.6 Variation request is not required for the elements of the proposal which sit above the LEP height limit but which are below the Building Height Plane that applies to the site. Clause 4.3A (discussed further below) states as follows:

> ***4.3A Exception to height of buildings***
>
> *(1) This clause applies to land at 152–206 Rocky Point Road, Kogarah, being Lot 22, DP 620329, Lot 2, DP 838198, Lot 1, DP 599502, Lot 1, DP 1144981, Lot 1, DP 666138 and Lot 2, DP 405531.*
>
> *(2) Despite clause 4.3, the height of a building on land to which this clause applies may exceed the maximum height shown for the land on the Height of Buildings Map, but must not exceed the building height plane for that land.*
>
> (Our emphasis underlined)

As per the wording above, Clause 4.3A has the effect of increasing the maximum height development standard to beyond those limits identified in the LEP Height of Buildings Map, but below the Building Height Plane without the requirement of a Clause 4.6 Variation.

The proposed building heights have been designed taking into consideration feedback provided by the DRP during the design development of the proposal, as outlined in **Appendix U**. Key considerations include:

- The desire to provide a stepped built form;
- To ensure adequate solar access to the proposed dwellings in all buildings;
- To ensure adequate solar access to the proposed communal open space in accordance with ADG and DCP requirements; and
- To accommodate rooftop communal open spaces in addition to the proposed ground level communal open space; and
- Concentrate bulk to the north of the site in order to minimise overshadowing within the site and on the existing detached dwellings to the south.

The figures below show the heights of the proposed buildings relative to the Building Height Plane that applies to the site.

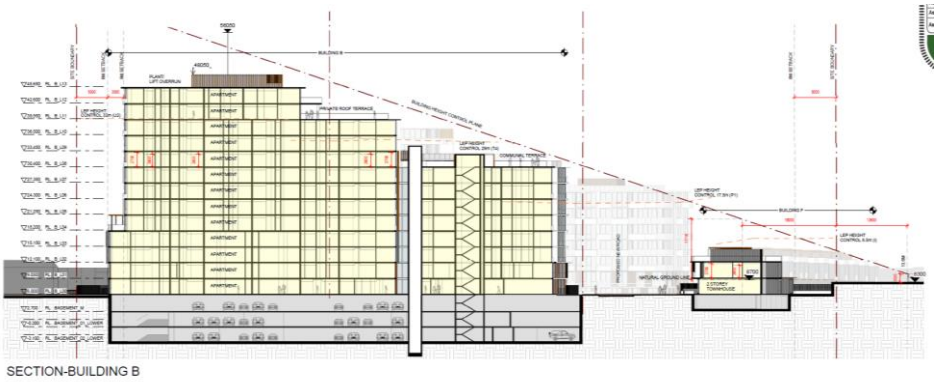

Figure 35 – Building B Section
Source: PTW Architects

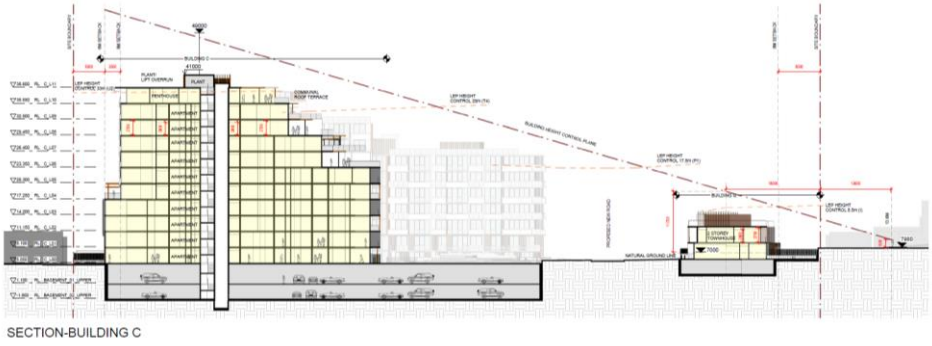

Figure 36 – Building C Section
Source: PTW Architects

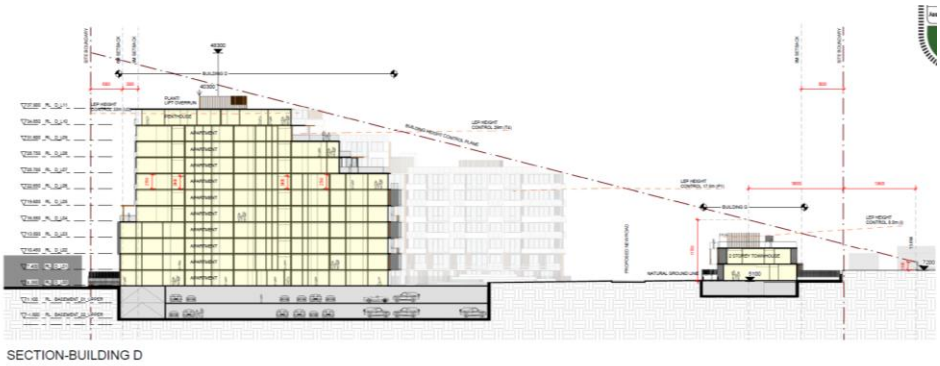

Figure 37 – Building D Section
Source: PTW Architects

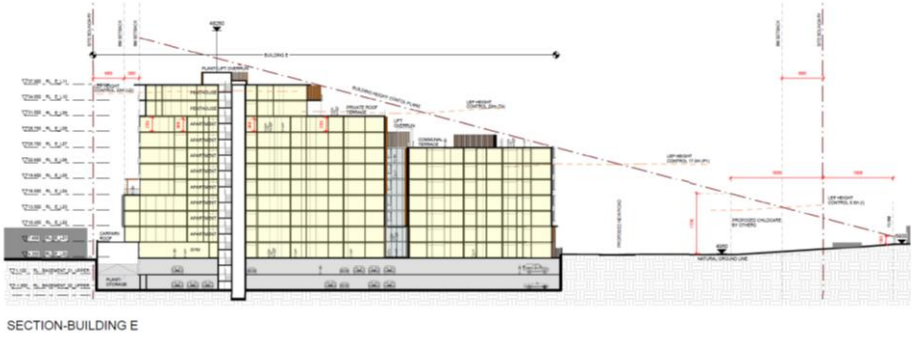

Figure 38 – Building E Section
Source: PTW Architects

Clause 4.3A Exception to Height of Buildings

To ensure that any future proposed development of the site achieves a compatible built form with low density residences located to the south, a 'Building Height Plane' Clause was drafted and gazetted as part of the LEP amendment relating to the site. The height plane clause was included within the LEP amendment to provide certainty of a graduation of building heights and to ensure no development would occur above a certain height through the site. The height plane, as part of the rezoning, was designed and drafted to ensure that, when viewed from a resident standing on the properties to the immediate north of Margate Street (south of the subject site boundary) and looking north, that a development on the subject site would not be overbearing or inappropriate from a bulk and scale perspective, the clause also ensures that there is minimal overshadowing impact caused by the site's redevelopment. Accordingly, the drafting of the clause was as follows (as included in Clause 4.3A):

> *(4) In this clause:*
>
> ***building height plane** means a continuous plane commencing at a height of 1.5 metres above ground level (existing) and at a distance of 13.6 metres south of the southern boundary of Lot 22, DP 620329 (**Point A**), projecting to a position at a height of 11.7 metres above ground level (existing) and at a distance of 31.6 metres north of Point A, and continuing at that projection over the land to which this clause applies.*

Figure 39 provides an extract of the section diagram which formed the proposed building height plane within the Council resolution of 19 February 2014, illustrating its operation when viewed from Margate Street.

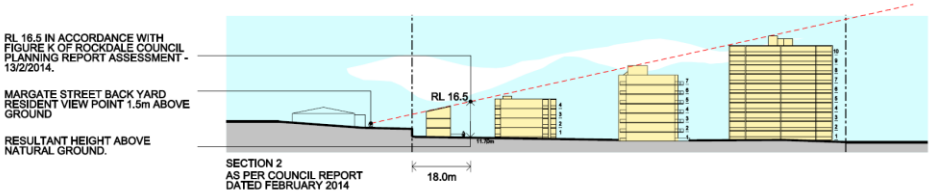

Figure 39 – Extract from Section of Council Business Paper 19 February 2014

Accordingly, the Building Height Plane ensures an appropriate graduation of building heights and that the future redevelopment does not result in a built form that is overbearing or which has unacceptable amenity impacts on existing residents in Margate Street.

As illustrated in **Figure 35** to **Figure 38**, and shown in further detail in the Architectural Drawings prepared by PTW Architects (**Appendix A**), the proposed development is wholly located beneath the building height plane and does not breach it at any point. The proposed building heights, despite exceeding the LEP height limits in parts, are considered acceptable and in accordance with the LEP controls.

4.2.4 Floor Space Ratio

Clause 4.4 Floor Space Ratio

Clause 4.4 and its associated Floor Space Ratio Map assigns a maximum FSR for the B6 zoned component of the overall site and the R4 zoned component (the subject of this application), as follows:

- B6 Enterprise Corridor: 1.8:1
- R4 High Density Residential: 2.0:1

The total GFA proposed as part of this application is as follows:

- Total residential: 44,747m^2

- Total child care centre: 495m^2

Based on the site area of 22,347m^2 identified for all land within the R4 High Density Residential zone, the proposed GFA of all development the subject of this application constitutes a total GFA of 45,242m^2, or an FSR of 2.02:1. This constitutes a variation to the maximum FSR development standard in the LEP of 494m^2 (1.1% variation).

A Clause 4.6 request (**Appendix O**) has been prepared which seeks a variation to the maximum FSR development standard.

4.2.5 Housing Mix

4.5.1 Housing Diversity and Choice (RDCP 2011)

Section 4.5.1 of the RDCP 2011 requires residential apartment buildings to comply with the following dwelling mix:

Dwelling type	Of total dwellings
3 bedroom and/or more	10-20%
2 bedroom	50-75%
1 bedroom and/or studio	10-30%

The proposed development, in providing a diversity in dwelling typology (residential apartment buildings and medium density townhouses / multi-dwelling housing) seeks to provide a dwelling mix which is reflective of the local market demand but also takes into account the objectives of the control. The proposed development, in terms of total dwellings, will accommodate the following dwelling mix:

- 109 x 1 bedroom dwellings (20.45%):
- 360 x 2 bedroom dwellings (67.54%); and
- 64 x 3 bedroom dwellings (12%).

Whilst it was identified that the market demand was lower than 10% for three bedroom dwellings, Council's desired mix has been met in terms of three bedroom dwellings. Accordingly, the proposal is compliant with regards to the mix of dwellings as part of the whole proposal. The proposed mix is consistent with the objectives of the control, as it will:

- maximise housing choice to meet the needs of diverse household types;
- make provision for equality of access to new housing; and
- promote the design of buildings that are adaptable and flexible in design to suit the changing lifecycle housing needs of residents over time.

4.2.6 Setbacks

5.2 Residential Flat Buildings (Street Setbacks) (RDCP 2011)

The setbacks of the proposal have been determined based on feedback obtained by the DRP during panel meetings to ensure the highest levels of amenity are achieved within the development and to surrounding properties.

Section 5.2 of the DCP requires that street setbacks for residential buildings be consistent with the prevailing street setback within the range of 3-9 metres. As there is no relevant established street setback for Production Lane, the proposal includes a setback of zero at the ground floor of Building E (with private courtyards located within the 3 metre setback zone fronting Production Lane). Above ground level, the building is setback 3 metres as required under the DCP. This setback is considered appropriate as the main building line is setback 3 metres as required, with the street address for the apartments at ground floor facing east to Production Lane presenting as entry points for these apartments.

The subject site is a deep shaped allotment undergoing redevelopment under this application. As such, proposed setbacks are informed by other planning provisions under the RDCP 2011 such as landscape requirements and minimal impact of adjacent dwellings.

Further discussion on the urban design elements of the proposal including building siting and setbacks is provided below.

4.3 Impact on Adjoining Properties

4.3.1 Overshadowing

PTW Architects has undertaken an overshadowing study of the proposed development (**Appendix A**). The study has examined the potential overshadowing impacts of the proposed development on surrounding properties and within the development site itself. The proposed development with building bulk largely concentrated to the north, will not result in overshadowing impacts to properties to south along Margate Street, as the proposal is compliant with the Building Height Plane under Clause 4.3A of the LEP. This height plane was specifically drafted to ensure a compliant development would not result in significant overshadowing impacts to properties located in the residential catchment to the south.

The figures below provide extracts from the shadow diagrams on 21 June which demonstrate that no impact will occur to properties to the south.

Figure 40 – 9am, midwinter
Source: PTW

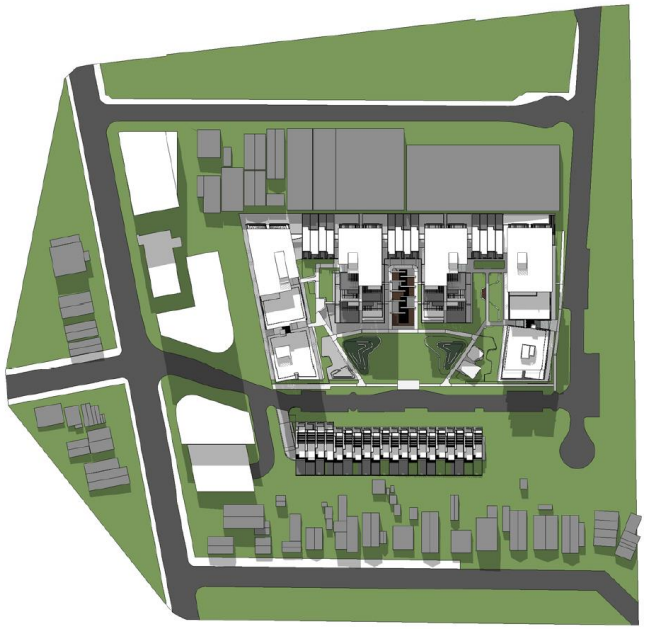

Figure 41 – Noon, midwinter
Source: PTW Architects

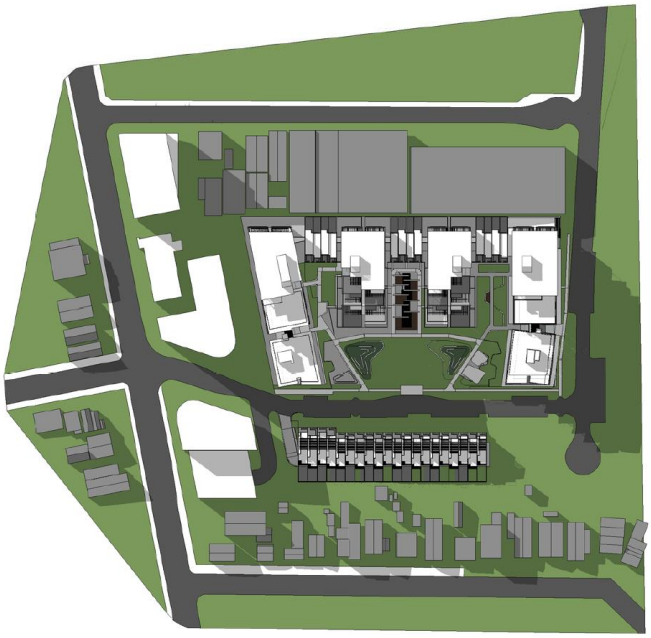

Figure 42 – 3pm, midwinter
Source: PTW Architects

4.3.2 Overlooking

For the reasons outlined above and as discussed earlier in this report, the establishment of the Building Height Plane over the site also took into consideration the potential impacts of a future development on the site with regard to overlooking. It is not anticipated, given the majority of the bulk of the development has been concentrated to the north, well away from residential properties to the south.

Furthermore, the proposed row of townhouses along the southern portion of the site, which have also been designed to comply with the Building Height Plane, are also well setback from residential properties to the immediate south, with a setback of 8 metres from the southern boundary to the building line. Accordingly, it is considered that any opportunities for overlooking have been minimised.

4.4 Residential Amenity

The proposed development has been designed to provide all dwellings with a high quality of internal amenity and outlook. As outlined in the Design Verification Statement provided in **Appendix K**, the proposal has been designed in accordance with the nine principles of *State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development* (SEPP 65).

The ADG is a guide which accompanies *State Environmental Planning Policy No. 65 (Design Quality of Residential Apartment Development)* (SEPP 65). The underlying purpose of the ADG is to provide guidance for the development of new apartment buildings, specifically in relation to achieving the design principles set out in SEPP 65. Of particular relevance to the assessment of development applications is Parts 3 and 4 of the ADG, which set out a series of objectives, design criteria and guidance in relation to residential flat buildings.

Where provided, Design Criteria are the first step in ensuring consistency with an objective. Essentially, if a proposal numerically complies with the criteria it automatically achieves the objective. There is an acknowledgment in the ADG that rigid numerical controls (the criteria) are not always able to be achieved. As such, a set of Design Guidance are provided as a starting point for an alternative solution to achieve the objective. The guidance is assessed on merit and importantly is not intended to be an exhaustive list of alternative solutions of achieving consistency with the objective.

The ADG reinforces the validity in this method of implementation by stating:

> *The design criteria set a clear measurable benchmark for how the objective can be practically achieved. If it is not possible to satisfy the design criteria, applications must demonstrate what other design responses are used to achieve the objective and the design guidance be used to assist in this.*

The Department of Planning and Environment's publication 'Better Apartment Design Frequently Asked Questions' (June 2015) also reinforces this method of implementation:

> *It may not be possible in all instances to satisfy the design criteria in the Guide, so it gives designers the flexibility to innovate and demonstrate they will achieve the same result with a different approach.*

Whilst the proposal is generally consistent with the majority of the Design Criteria, an alternative solution is proposed for objectives where strict numerical compliance with the criteria is unable to be achieved due to the constraints of the site.

An assessment of the proposal's consistency with the objectives of the ADG is provided in **Table 7** and elements that warrant consideration in respect of internal amenity are discussed below.

Table 7 – Assessment of the proposal's consistency with the objective of the ADG

Design Criteria	Proposal
Part 3 Siting the Development	
3D Communal and Public Open Space	
Objective An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping	✓
Design Criteria Communal open space has a minimum area equal to 25% of the site	✓ (30% of the site)
Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid-winter)	No. Alternate solution proposed, see discussion below.
3E Deep Soil Zones	
Objective	

Design Criteria	Proposal
Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.	✓ (15.08% proposed)
Design Criteria Deep soil zones are to meet the following minimum requirements: Site Area / Minimum Dimensions / Deep Soil Zone (% of site area) Less than 650m^2 / - / 7% 650m^2 – 1,500m^2 / 3m Greater than 1,500m^2 / 6m Greater than 1,500m^2 with significant existing tree cover / 6m	
3F Visual Privacy	
Objective Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy.	✓
Design Criteria Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows: Building Height / Habitable rooms and balconies / Non-habitable rooms Up to 12m (4 storeys) / 6m / 3m Up to 25m (5-8 storeys) / 9m / 4.5m Over 25m (9+ storeys) / 12m / 6m	Generally complies, apart from two minor variations. See discussion below.
3K Bicycle and Car Parking	
Objective Car Parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	✓
Design Criteria For development in the following locations: ▪ on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or ▪ on land zoned, and sites within 400 metres of land zoned, B3 Commercial Core, B4 Mixed Use or equivalent in a nominated regional centre The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments, or the car parking requirement prescribed by the relevant council, whichever is less. The car parking needs for a development must be provided off street.	✓ Parking has been provided in accordance with the requirements of the Rockdale DCP 2011 as the site is not within 800m of a railway station or light rail stop in the Sydney Metropolitan Area.
Part 4 Designing the Buildings	
4A Solar and Daylight access	
Objective To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space	✓
Design Criteria Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.	✓ (73.7%)
A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.	✓ (36 out of 533 dwellings receive no direct sunlight, constituting 6.8% of the overall development)
4B Natural Ventilation	
Objective The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents	✓

Design Criteria	Proposal
Design Criteria At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.	✓ (60.7%)
Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	✓
4C Ceiling Height	
Objective Ceiling height achieves sufficient natural ventilation and daylight access	✓
Design Criteria Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height Habitable rooms — 2.7m Non-habitable — 2.4m For 2 storey apartments — 2.7m for main living area floor; 2.4m for second floor, where its area does not exceed 50% of the apartment area Attic spaces — 1.8m at edge of room with a 30 degree minimum ceiling slope If located in mixed use areas — 3.3m for ground and first floor to promote future flexibility of use These minimums do not preclude higher ceilings if desired.	✓
4D Apartment Size and Layout	
Objective The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity	✓
Design Criteria Apartments are required to have the following minimum internal areas: Studio — 35m^2 1 bedroom — 50m^2 2 bedroom — 70m^2 3 bedroom — 90m^2 The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m^2 each. A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m^2 each.	✓
Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms.	✓
Objective Environmental performance of the apartment is maximised	✓
Design Criteria Habitable room depths are limited to a maximum of 2.5 x the ceiling height.	✓
In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	✓
Objective Apartment layouts are designed to accommodate a variety of household activities and needs	✓
Design Criteria Master bedrooms have a minimum area of 10m^2 and other bedrooms 9m^2 (excluding wardrobe space).	✓
Bedrooms have a minimum dimension of 3m (excluding wardrobe space).	✓
Living rooms or combined living/dining rooms have a minimum width of: ▪ 3.6m for studio and 1 bedroom apartments ▪ 4m for 2 and 3 bedroom apartments	✓
▪ The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts.	✓
4E Private Open Space and Balconies	
Objectives	✓

Design Criteria	Proposal
Apartments provide appropriately sized private open space and balconies to enhance residential amenity	
Design Criteria All apartments are required to have primary balconies as follows: Dwelling Type — Minimum Area — Minimum internal area Studio apartment — 4m² — - 1 bedroom apartment — 8m² — 2m 2 bedroom apartment — 10m² — 2m 3+ bedroom apartment — 12m² — 2.4m The minimum balcony depth to be counted as contributing to the balcony area is 1m.	✓
For apartments at ground level or on a podium or similar structure, a private open space is provided instead of a balcony. It must have a minimum area of 15m² and a minimum depth of 3m.	✓
4F Common Circulation and Spaces	
Objective Common circulation spaces achieve good amenity and properly service the number of apartments	✓
Design Criteria The maximum number of apartments off a circulation core on a single level is eight.	No. See discussion below.
For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40.	No. See discussion below.
4G Storage	
Objective Adequate, well designed storage is provided in each apartment	✓
Design Criteria In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling Type — Minimum Area Studio apartment — 4m² 1 bedroom apartment — 6m² 2 bedroom apartment — 8m² 3+ bedroom apartment — 10m² At least 50% of the required storage is to be located within the apartment.	✓

4.4.1 3D Communal and Public Open Space

The proposed communal open space area will benefit all future residents from the development (including residents of the row of townhouses along the southern boundary) and provide a distinct communal area which reduces the overall perceived bulk and scale of the proposal. **Figure 43** is a photomontage of the proposed communal open space.

The proposed communal open space has been designed to take into account the recommendations of the Design Review Panel by providing:

- Substantial tree planting on the internal road;
- Provision of a co-located deep soil zone in the communal space area and the planting of large trees within the deep soil zone; and
- Simplification of the ground level landscapes spaces by incorporating gathering zones within a central communal 'park' and the simplification of secondary access spaces.

The proposal provides four communal open spaces on the rooftops of each of the building wings, providing for alternative communal open space areas with scenic outlooks. **Figure 44** is a photomontage of the proposed communal open spaces on the rooftops of each of the building wings.

Figure 43 – Photomontage view of the proposed principal communal open space
Source: PTW Architects

Figure 44 – Photomontage view of the proposed principal communal open space
Source: PTW Architects

Figure 45 – Photomontage of the proposed rooftop communal open space on Building E
Source: Arcadia

Objective 3D-1 of the Apartment Design Guide requires an adequate area of communal open space be provided to enhance residential amenity and to provide opportunities for landscaping. The Design Criteria to Objective 3D-1 requires:

- Communal open space has a minimum area equal to 25% of the site;
- Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid-winter).

The proposal's compliance with these two Design Criteria is discussed below.

Communal Open Space Size and Layout

As discussed in earlier sections, the built form strategy of the proposal provides for a central communal open space component which is integral to the design strategy of the proposed redevelopment. Building bulk has, in conjunction with the Building Height Plane and the desire to accommodate a large central communal open space as a defining characteristic of the development, been distributed largely to the north of the site through buildings which align north-south, leaving a centralised communal space.

The design and siting of the development in this manner has resulted in a significant amount of communal space located between the wings of Buildings B, C, D and E, and within the centre of the site as distinguished by the R4 zone boundary.

The proposal, as a result, achieves a combined communal open space area of 6,755m^2, constituting (30%) of the site. As such, the proposal achieves well in excess of the recommended 25% of the site area as communal open space. **Figure 46** below provides a breakdown of the total communal space of the site as calculated at ground level.

When factoring in the communal rooftop open space components on Buildings B, C, D and E, the total amount of communal open space is equal to 933m^2. **Figure 47** below provides a breakdown of the total communal space of the site as calculated on the rooftops of Buildings B – E.

Accordingly, the proposal provides a more than adequate amount of communal open space over and above the ADG requirement.

Figure 46 – Proposed communal open space area at ground level (shaded green)
Source: PTW Architects

Figure 47 – Proposed communal open space on Buildings B, C, D and E rooftops
Source: PTW Architects

Communal Open Space – Solar Access

The Design Criteria also requires that developments achieve direct sunlight to at least 50% of the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid-winter). The ADG defines 'principal usable part of communal open space' as follows:

> ***Principal usable part of communal open space***
>
> *A consolidated part of the communal open space that is designed as the primary focus of recreational activity and social interaction*

The principal usable part of the proposed communal open space is, logically, located to the north of the proposed internal access road, being a rectangular section of land to the immediate south of Buildings C and D and between the southernmost wings of Buildings B and E, as shown in **Figure 48**.

Figure 48 – Overshadowing of the principal usable part of the communal open space
Source: Arcadia

During the design development, design input was received from the Design Review Panel which recommended redistributing bulk shown on earlier versions of the scheme further north on the site, above the building height limits but below the Building Height Plane under Clause 4.3A of the LEP to provide as much direct sunlight to the principal usable part of the communal open space area during the winter months.

By redistributing height in Buildings B, C, D and E, reducing the setback of the townhouses and siting them further south, and by removing the originally proposed swimming pool, the proposal now provides greater levels of solar access to the principal usable parts of the various communal open space components of the overall design. Accordingly, the central communal open space (principal part) achieves 42.5% achieves 2 hours of direct sunlight on 21 June (it is noted that the earlier versions of the scheme achieved approx. 23%, and therefore, this revised scheme constitutes a significant improvement).

Whilst this is short of the recommended 50%, the proposed solution is considered justified for the following reasons:

- 2 hours of direct sunlight is achieved for 695m^2 of communal open space area in mid-winter, which is considered a reasonable amount of space at ground level;
- The proposal achieves solar access for 2 hours to 50% of the principal usable component of the communal open space for 10 months of the year, between 24 July and 24 May the following year, as shown on the shadow diagrams in **Appendix A**;
- Four alternative generous rooftop communal open spaces achieve well in excess of the minimum 50% identified in the ADG throughout the year and therefore provide an additional area of communal open space which achieves direct sunlight in winter;
- The development as a whole provides a significant amount of communal open space well in excess of the minimum requirement. This communal open space is distributed across six separate areas providing people with a wide choice of spaces at any one time;
- The dimensions of the communal open space are much larger than the minimum;

- The amount of communal open space provided within the development will ensure that residents are afforded a high level of recreation and leisure amenity throughout the year; and
- The site is located in close proximity to a significant public open space corridor to the immediate east, with parks and reserves including Leo Smith Reserve and Scarborough Park.

On balance and given the difficulties in designing a development on the site which provides an internal access road / through site link and which achieves solar access in an arrangement where the building bulk and height is concentrated to the north (and hence the communal space to the south), it is considered that the proposed variation and alternative solution are acceptable and represent a good design solution. The figures below demonstrate the provision of solar access to 42.5% of the principal usable part of the communal open space on 21 June.

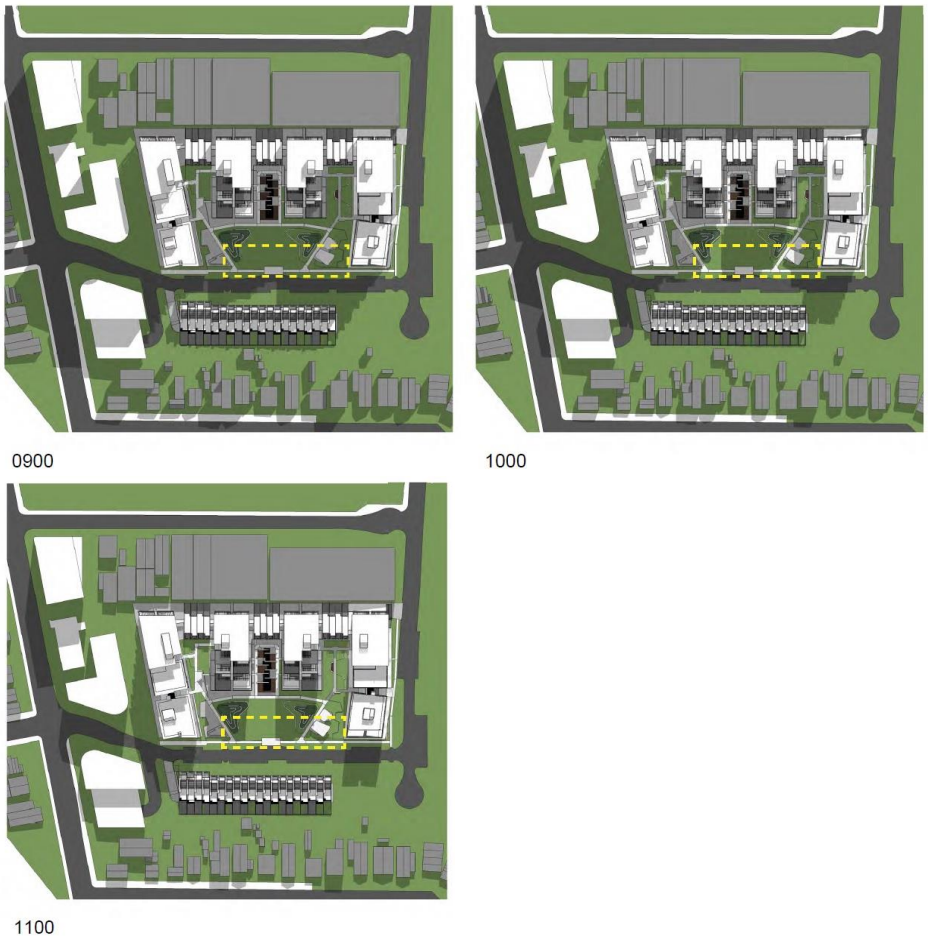

Figure 49 – Overshadowing of the principal part of the communal open space, 21 June, 9am, 10am and 11am
Source: PTW Architects

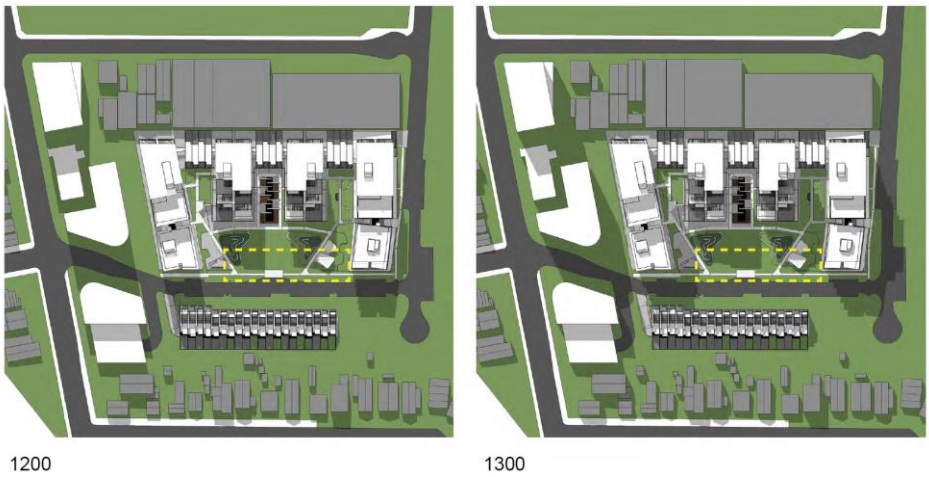

Figure 50 – Overshadowing of the principal usable part of the communal open space, 21 June, 12pm and 1pm
Source: PTW Architects

Figure 51 – Overshadowing of the of the principal usable part of the communal open space, 21 June, 2pm and 3pm
Source: PTW Architects

4.4.2 3F Visual Privacy

Objective 3F-1 of the Apartment Design Guide recommends that adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy. The Design Criteria to the objective state as follows:

- Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

Building height	Habitable rooms and balconies	Non-habitable rooms
Up to 12m (4 storeys)	6m	3m
Up to 25 (5-8 storeys)	9m	4.5m
Over 25m (9+ storeys)	12m	6m

The proposed development complies with these controls, with the exception of two instances where a minor variation is sought to the Design Criteria for building separation. These are discussed below.

Building Separation to the Northern Boundary

Whilst the land to the immediate north of the site, fronting Production Avenue, is zoned and used for industrial purposes, the Design Review Panel during the design development process recommended creating a reasonable setback on the northern boundary and providing a landscape strategy along the length of that boundary to ensure better amenity for apartments at the ground level, and apartments above in terms of separation to the industrial sites to the north.

Buildings B, C, D and E all provide a 6-metre setback from the northern boundary for the first four storeys, and above that, a 9-metre setback for the remainder of the building. All levels above the 4th storey have been set back 9 metres from the northern boundary to ensure increased separation from the industrial sites to the north and resultant improved amenity from this separation. This change will break up the massing northern frontages of these buildings, effectively creating a podium structure, which will also provide adequate separation in the event that land to the north is ever rezoned to permit residential development.

The proposed separation to the north is consistent with the recommended separation distances in the Apartment Design Guide (ADG) on all levels apart from the levels above 8 storeys in each of the buildings. A minor 3 metre variation is sought to the ADG Design Criteria in this instance, and is considered justified for the following reasons:

- The existing zoning to the north is industrial, with a maximum permissible height limit of 14.5m. These upper levels would therefore be well above any future industrial development to the north;
- In the event that the site to the north is rezoned to permit residential development, it is unlikely that the height along the boundary with the subject site would be equal to 33 metres (being the height limit for the northernmost portion of the site), on the basis that the site's to the north are much narrower, the height limit on the subject site is site specific, and the potential maximum height of any future residential development to the north is unlikely to be concentrated to south of those sites.

Figure 52 provides an illustration of the proposed setback from the northern elevation for Building B (which is replicated in Buildings C, D and E).

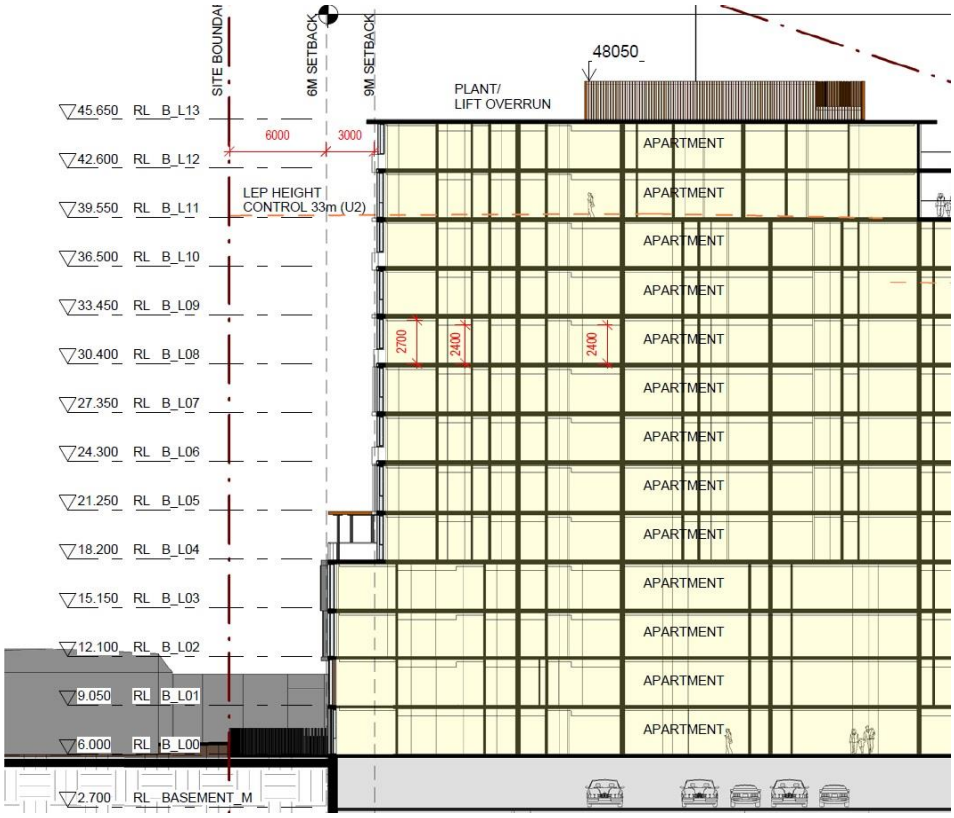

Figure 52 – Extract from Building B Section demonstrating proposed separation distance to the north on upper levels
Source: PTW Architects

Building separation between Building B and Building C

The proposed development layout has been designed to provide high levels of amenity to the proposed dwellings and create buildings which respond appropriately to the site context. As discussed earlier, in consultation with the Design Review Panel and in response to the Building Height Plane and vision for the site, the bulk of the development has been sited to the north of the site to minimise impacts and benefit from the significant outlook opportunities to the north and east.

Compliance with the ADG separation requirements between each of the building wings is achieved for the large majority of the site; the proposed separation distances between Buildings C, D and E all comply with the minimum separation distance requirements of the ADG on all levels. Whilst the minimum recommended separation between Building B and C is achieved for the first 8 storeys, the proposal seeks a minor variation to the separation distance requirement for the 9th and 10th storeys between these two buildings.

The extent of the variation relates to a minor portion of Apartment C0807 on Level 8, Apartment C0906 on Level 9 and a very minor portion of Apartment C0801 on Level 8 and Apartment C0901 on Level 9. These minor variations to the Design Criteria are considered acceptable for the following reasons:

- The shape of the R4 High Density Residential zoned land is irregular, with the western boundary of the zone protruding at an acute angle from the corner of the northern boundary. Accordingly, to accommodate Building B which runs parallel to the western boundary, and maintain compliant separation distances between buildings within the remainder of the site, a minor encroachment into the 24m separation distance requirement for Levels 8 and 9 is required;
- The variation is considered minor, being encroachment at the south-western corner of Apartments C0807 and Apartment C0801 in Building C. However, this is considered acceptable given the affected apartments are generally orientated away

from each other, and are located at a range of between 21m and 24m, which is considered an acceptable distance in order to provide a good level of amenity for the apartments in both buildings;

- The minor variation is isolated to just a select number (4) of apartments within the development and is only marginally non-compliant with the ADG requirements, separation distances are compliant across the remainder of the development;
- The proposal despite the minor variations achieves in excess of the required number of apartments which achieve 2 hours of solar access on 21 June and which achieve natural ventilation.

The extent of the variation is depicted in **Figure 53** below.

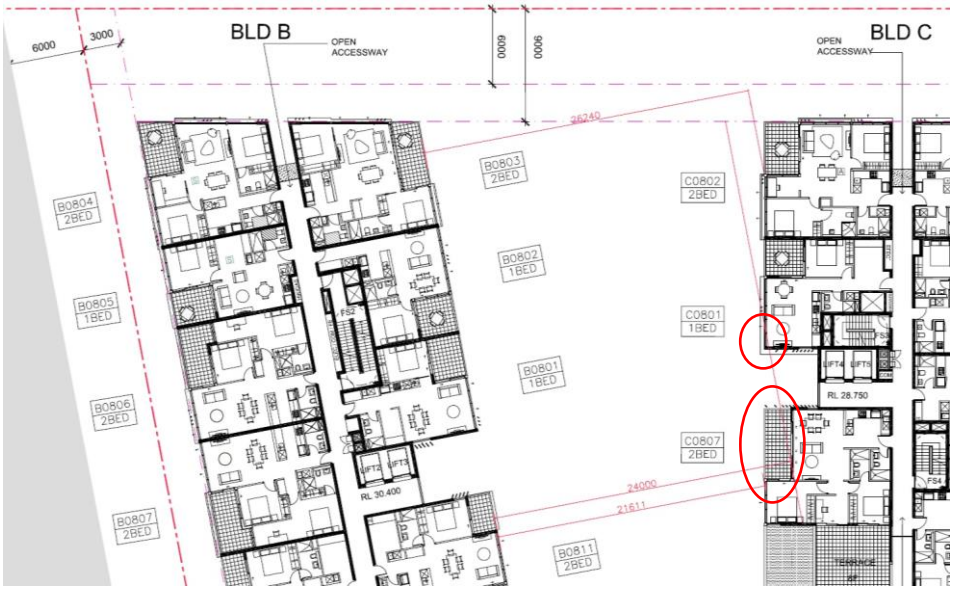

Figure 53 – Separation distance proposed for Level 8 and 9 between Buildings B and C
Source: PTW Architects

4.4.3 4F Common Circulation Spaces

Objective 4F-1 of the Apartment Design Guide requires that common circulation spaces achieve good amenity and properly service the number of apartments. The Design Criteria states as follows:

- The maximum number of apartments off a circulation core on a single level is eight
- For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40

Design Criteria 1

Building B
Building B will accommodate 17 apartments per floor plate on Levels 1, 2, 3, 4, 5, 6 and 7, which are serviced by 3 lifts over two cores. A dual lift core is proposed towards the northern side of the building which will service 9 apartments. A single lift core is proposed for the southern side of the building, which will service 8 apartments.

The proposal seeks a minor variation to the Design Criteria on these levels, given the northern core is proposed to service 9 apartments, one more than recommended in the ADG, but three less than the maximum 12 reference in the Design Guidance.

Building C and D
The floor plates in Buildings C and D are arranged off a single circulation core, servicing 10 apartments. This is two more than the recommended eight, but less than the maximum 12 referenced in the Design Guidance.

Building E

Building E will accommodate 16 apartments per floor plate on levels 1, 2, 3, 4, 5 and 6, which are serviced by 3 lifts over two cores. A dual lift core is proposed towards the northern side of the building which will service 8 apartments and a single lift core is proposed for the southern side of the building which will also service 8 apartments. Accordingly, Building E achieves the recommended number of apartments off a circulation core in the ADG.

The ADG identifies that achieving the design criteria for the number of apartments off a circulation core may not be possible, and that where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated. The design of these elements of the common circulation and apartments is such that it ensure good levels of amenity, in that:

- sunlight and natural cross ventilation to apartments is provided; and
- access to ample daylight and natural ventilation in common circulation spaces is provided through articulation in building facades.

In addition, it is noted that each of the Buildings does not breach the recommended maximum of 12 apartments off a circulation core on a single level.

Design Criteria 2

Whilst the proposal is compliant with the first of the Design Criteria, in that each lift core services no more than 6 apartments on each level, the proposal seeks a minor variation to the maximum number of apartments sharing a single lift in each of the Buildings B, C, D and E, which are all above 10 storeys in height. A breakdown is provided below:

- **Building B:** 13 storeys, with 178 apartments proposed, serviced by 3 lifts (shortfall of 2 lifts)
- **Building C:** 11 storeys, with 93 apartments proposed, serviced by 2 lifts (shortfall of 1 lift)
- **Building D:** 11 storeys, with 93 apartments proposed, serviced by 2 lifts (shortfall of 1 lift)
- **Building E:** 11 storeys, with 137 apartments proposed, serviced by 3 lifts (shortfall of 1 lift)

If the proposal were to comply with the design criteria related to lift servicing, a total of fifteen (15) lifts would be required over and above the 10 proposed to be provided. This provision would significantly increase the proposed number of lifts, and would result in a significantly increased lift core in some of the buildings, or the creation of an additional core in others. An increase to the lift core or the addition of a new lift core would result in substantial impacts to the amenity of apartments through reduced internal areas and minimised circulation space for corridors within the building, and potentially diminish the amount of natural ventilation and solar access to circulation cores provided by the proposed design.

Given compliance is achieved with Design Criteria 1, it is considered that the core intent of the design criteria, as stated through Objective 4F-1 – being to ensure apartments are properly serviced – will be achieved by the proposed development. It is also considered acceptable given the proposed development is consistent with the following design guidance:

- Daylight and natural ventilation are provided to all common circulation spaces that are above ground;
- Windows are provided in common circulation spaces and are at the ends of the corridors;
- Common areas for seating and gathering are provided in the ground level lobby;

- Generous corridor widths are provided in front of the lifts on each level to allow a sense of openness and arrival;
- Primary living room and bedroom windows do not open directly onto common circulation spaces; and
- Visual and acoustic privacy from common circulation spaces to other rooms is carefully controlled by not locating services and circulation stairs across from apartment entries.

4.5 Transport and Accessibility

A Traffic Impact Assessment, prepared by Traffix is appended with this report at **Appendix P**. The report undertakes a detailed review of potential traffic impacts and concludes that the proposal has an acceptable impact, given that:

- The net trip generation for the proposed residential component is 174 trips/ hour (35 in, 139 out) during AM peak hours and 174 trips (139 in, 35 out) during PM peak periods respectively. Impacts of the above traffic generation across existing road networks and intersection points were assessed to demonstrate existing capacity to accommodate additional traffic.
- A holistic assessment of potential traffic impacts was further undertaken in light of future development of the commercial component (subject to a separate future DA). The overall net traffic impacts only demonstrate minor changes to average delays and degree of saturation, with no change to existing levels of service during peak periods.
- The proposal provides a total of 700 (557 resident spaces, 103 visitor spaces and 40 enclosed garages for the terraces) car parking spaces in accordance with the RDCP 2011. Of these 54 parking spaces are designed as accessible spaces, and an additional 12 visitor parking spaces are provided as disabled parking spaces.
- The development includes 73 bicycle and 47 motorcycle parking spaces, providing a surplus of spaces than the minimum requirements under the DCP 2011.
- A total of 10 visitor parking spaces are equipped with car washing facilities, providing 10 car wash bays that have been designed in accordance with the RDCP 2011.
- For the high rise residential precinct, a total of three servicing bays are proposed, comprising of two dedicated loading bays that have the capacity to accommodate Council's servicing truck, and one SRV truck. The ten visitor parking spaces are further capable of accommodating delivery van vehicles (B99).

The proposed internal access road and the resulting signalised intersection at Rocky Point Road and the proposed access road has been designed in liaison with Roads and Maritime Services.

Overall, the traffic assessment undertaken indicates that there is sufficient local capacity within the surrounding road and intersection network for the proposed development in terms of traffic demand and will not result in any unsatisfactory impacts.

4.6 Water Cycle Management

Stormwater management plans for the subject site is discussed under the Civil infrastructure and Stormwater Management Report, prepared by AT&L at **Appendix D** of this report. The following are concluded under the report:

- The proposed stormwater works are designed in accordance with Council's Stormwater Management Technical Specifications;
- Stormwater generated on site will be treated in accordance with Council's water treatment rates prior to discharge;
- A 15kL rainwater tanks will be incorporated on site in accordance with BASIX requirements; and
- One On-site Stormwater Detention (OSD) tank is proposed for the site. The tanks are proposed to be connected to existing stormwater networks located within Production Lane along the eastern boundary.

4.7 Geotechnical

Geotechnical assessment of the site was undertaken by Martens Consulting Engineers to assess the site's geotechnical capacity to undergo construction and excavation works. Findings of the assessment are discussed in detail at **Appendix N** of this report and provides appropriate recommendations and strategies to inform and guide early excavation and foundation works for the residential component of the proposal.

The report further recommends additional geotechnical assessment prior to final design and construction of the site. Recommendations further include procedures for ongoing monitoring and inspection programs during site works.

4.8 Contamination

A Phase 2 detailed site contamination assessment was undertaken by Coffey Environments Australia Pty Ltd to determine site remediation requirements for the subject site. Findings of this investigation are detailed within a report, appended as **Appendix J**, and conclude that the site is suitable for the proposed residential use, and no further investigation or remediation works are required for the site.

4.9 Wind Impact

A Wind Impact Assessment, prepared by Windtech Consultants, is provided with this application at **Appendix Q** and confirms that proposed development is generally designed to maximise comfortable wind environments at ground plane. The study includes the following recommendations to ensure desired wind speed criteria for pedestrian comfort and safety:

- *evergreen tree planting capable of growing to a height of 5m with a 5m wide canopy throughout the Central Park area, along Production Lane and along the western side of the residential component of the development;*
- *2m high densely foliating shrub planting in the planter beds currently proposed for the Level 7 and Level 8 communal terraces located on Buildings E and B respectively;*
- *1.5m to 2m high impermeable screening or hedge planting around the ground level southern corner terraces of Buildings B, C, D and E;*
- *Densely foliating planting for the Level 9 and 11 southern private terraces located on Buildings E and B respectively, similar to the proposed planting on the Building B and E communal terraces;*
- *Impermeable balustrades for all private balconies and terraces located at the corners of the various buildings of the development, and also the townhouse roof terraces.*

These requirements can generally be resolved as a condition of consent at a detailed design stage prior to the release of a Construction Certificate.

4.10 Flooding

A part of the subject site (Lot 2 under DP 838198) is identified as a flood planning area under the RLEP 2011. Flood advice was thereby obtained from Council in relation to site's flood levels.

Cardno has undertaken a review of Council's findings and concludes that the proposed building levels sit above the flood affected AHD levels. The flood affected levels for the subject site under varying flood scenarios is detailed below:

- Under the 1% AEP scenario, the mainstream flood level for the area is 2.45m AHD plus a 500mm freeboard height, being 2.95 AHD.
- The Probable Maximum Flood level for the area is 3.0 metres plus 0.05 metres freeboard height

As illustrated in **Figure 54**Error! Reference source not found. below, the entire subject site lies above the 1% AEP flood levels with marginal extents of the site's north eastern end lying below the PMF level of 3.0 AHD.

As set out under the attached Architectural plans, the ground floor Reduced Levels (RL) for the proposed buildings are set between RL 6.00 metres to RL 4.350, well above the flood affected 3.50 AHD. In addition to this it is noted that the driveway entrance to the basement carpark has an entry level of RL 3.0, which achieves the necessary floor freeboard in accordance with Council's requirements.

Additionally, as demonstrated in the figure, the proposed building footprints do not traverse across those parts of the site identified as flood affected.

Figure 54 – Approximate mainstream flood extents, 1% AEP and PMF events
Source: Cardno

4.11 Noise and Vibration

A detailed Acoustic Report, prepared by Auroras Consultancy, has been attached at **Appendix L**. Recommendations for acoustic attenuation are achieved mostly through choice of building materiality including:

- Glazing thickness of approximately 6 mm is proposed for Living area and 6.38 mm laminated glazing is proposed for bedrooms of the residential components; and
- Building façade specifications include a minimum wall thickness of Rw 45 and a minimum roof and ceiling thickness of Rw 45.

Any mechanical, noise generating components proposed for the development will be required to comply with the maximum noise emission levels contextually assessed for the site and its surrounds in accordance with the NSW industrial Noise Policy.

4.12 Tree Removal

An Arboricultural Impact Report, prepared by Landscape Matrix, is provided at **Appendix C** of this application. Key findings of this assessment are detailed below:

- A140 trees were surveyed on site. Of these 39 is identified for removal as a result of poor tree health and unsuitability for the site;

- An additional 28 trees, identified for retention may potentially be affected by the proposed works, given their proximity to areas of construction within the site. Care and appropriate protection of these trees during construction may ensure minimal impact and retention;
- Whilst a single Willow Gum (*Eucalyptus scoparia*) tree, listed as a threatened item under the *Threatened Species Conservation Act 1995* specimen was identified on site, it is concluded that this tree is a planted specimen and is not native to the area. As such, under Section 5A of the EP&A Act 1979, removal of the single tree is not considered to have an adverse impact on the life cycle of these species and is considered to be acceptable outcome; and

Any tree loss during the construction and demolition phase is noted to be further offset under the proposed landscaping strategy for the site.

4.13 Social and Economic Impacts

The proposed development is generally well designed and is seen to facilitate several social and economic benefits, in that it

- Facilitates timely renewal of an unused and untenanted factory site;
- Provides a suitable development scheme, largely compliant with the RLEP 2011 and RDCP 2011;
- Delivers a diverse range of housing typologies, including medium density terraces, attached dwellings and high rise apartment buildings within the area;
- Provides an apposite apartment mix of one, two and three bed units to suit the varying needs of diverse households; and
- Introduces adaptable housing, and apartments designed in accordance with the silver level requirements of the Liveable Housing Design Guidelines

Provides a well-designed, functional communal open space area with several use specific zones (BBQ zone, children's play area) and alternate relaxation areas.

4.14 Construction Impacts

The proposed construction works for the development are not expected to give rise to any unacceptable detrimental impacts. A comprehensive Demolition, Construction and Waste Management Plan will be prepared prior to the issue of a Construction Certificate. This plan will set out the environmental management requirements for the following aspects of the project including access, compound management, demolition & excavation, dust and hazardous material management, traffic, waste, noise, emergency management, amongst other aspects. A Construction Management Plan is included in **Appendix S**.

4.15 Building Code Compliance

The following reports confirm that the proposed development is capable of achieving compliance with the requirements of the Building Code of Australia (BCA) and other relevant codes and standards:

- BCA Report prepared by BCA Logic (see **Appendix T**); and
- Access Report prepared by MGAC (see **Appendix F**).

5.0 Conclusion

JQZ seeks development consent for a residential apartment development at 152-200 and 202-206 Rocky Point Road, Kogarah. The proposed development is permissible in the R4 High Density Residential zone, and is consistent with the objectives of the zone and other relevant local and State strategies, plans and policies. This SEE has considered the key issues related to the proposal and it is concluded that:

- The proposed development will not result in any significant adverse amenity impacts on the neighbouring property;
- The proposed development is complementary to the character of Kogarah in which it is located, incorporating a substantial landscaping concept with significant communal open space and deep soil zones;
- The proposal integrates architecture and landscaping, including the retention of trees where possible, to help soften the building edge;
- The proposal responds to the existing topography by incorporating both building and landscaping into the natural fall of the site;
- The proposal minimises potential overlooking and privacy issues between the residential apartment building and adjacent sites through setbacks, separation, landscaping, architectural screening and the retention of existing vegetation where possible;
- The proposal has evolved based on feedback obtained pre-lodgement discussions with the St George Design Review Panel and Bayside Council; and
- The proposal is responsive to the desired character for development in the R4 High Density zone and the prominent site in which the development is located.

The variation to FSR control under Cause 4.6 of the Rockdale LEP 2011 has determined that the minor exceedance of FSR is acceptable and will not result in any undue impacts, with its primary purpose to accommodate a negligible increase in floor space in the form of the proposed child care centre.

Having regard for the above, it is recommended that the Consent Authority approve this application.