WLPP No.	Item No. 4
DA No.	DA-2022/1278
Proposal	Residential - demolition of existing buildings, removal of vegetation and construction of a mixed-use development
Property	29 -31 Denison Street WOLLONGONG
Applicant	Design Workshop Australia
Responsible Team	Development Assessment and Certification - City Centre Major Development Team (NL)
Development cost	$12,823,354
Lodgement date	24 November 2022
Prior WLPP meeting	N/A

ASSESSMENT REPORT AND RECOMMENDATION

Executive Summary

Reason for consideration by Local Planning Panel - Determination

The proposal has been referred to Local Planning Panel for Determination pursuant to clause 2.19(1)(a) of the Environmental Planning and Assessment Act 1979. The application development to which SEPP 65 applies and is required to be determined by the Panel under Schedule 2(4)(b) of the Local Planning Panels Direction.

Proposal

The proposal is for demolition of all structures and construction of a 14 storey shop top housing development comprised of:

- Two levels of basement parking
- Two commercial tenancies, commercial parking and service areas on ground floor
- Residential tower above containing 36 units (3 x one bed, 31 x two bed, 2 x three bed -

Permissibility

The site is zoned MU1 Mixed use pursuant to Wollongong Local Environment Plan 2009. The proposal is categorised as a shop top housing and is permissible in the zone with development consent.

Planning controls and compliance

The following planning controls apply to the proposal:

- SEPP (Resilience and Hazards) 2021
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development
- SEPP (Transport and Infrastructure) 2021
- SEPP (Building Sustainability Index: BASIX) 2004
- Wollongong Local Environmental Plan (WLEP) 2009
- Wollongong Development Control Plan 2009
- Wollongong City Wide Development Contributions Plan

- Wollongong Community Participation Plan 2019

The proposal is satisfactory with regard to the applicable planning controls as discussed in the body of this report.

Consultation

The proposal was notified in accordance with Council's Notification Policy and received one submission which is discussed at section 2.9 of the assessment report.

Sydney Trains were consulted under Section 2.99 of the State Environmental Planning Policy (Transport and Infrastructure) 2021 (Transport and Infrastructure SEPP) as the site is adjacent the rail corridor. Their concurrence has been granted subject to a deferred commencement condition.

Internal Council staff that have provided conditions of consent include Traffic, Geotechnical, Heritage, Landscape and Stormwater Officers .

RECOMMENDATION

It is recommended that the application be approved subject to the conditions at **Attachment 7.**

1.1 DETAILED DESCRIPTION OF PROPOSAL

The proposal comprises the following:

- Demolition of a three storey building
- Excavation for two basement levels
- Construction of a 14 storey shop top housing development comprised of:
  - Basement 2: 20 residential car parking spaces, 12 secure bicycle spaces
  - Basement 1: 13 resident car parking spaces, 8 visitor car parking spaces, 2 motorbike spaces, residential waste room
  - Ground floor containing 2 commercial units, 6 commercial car parking spaces, servicing and manoeuvring area, commercial bin storage and vehicular access
  - Residential tower containing 36 units (3 x one bed (8%), 31 x two bed (86%), 2 x three bed (5.5%)). Of these, there will be 4 adaptable and 14 liveable units.
  - Communal open space on level 1 and level 13 (including swimming pool)
- Vehicular access is proposed from Hercules Street. Hercules Street is currently unformed on the eastern side of Denison Street. The proposal will provide for the reconstruction of Hercules Street east of Denison Street to its eastern termination to road standard to allow for access to the development including all road, civil engineering, drainage and associated public domain works. The carrying out of those works will be coordinated with the development of the land at Nos.25-27 Denison Street with a view to sharing the cost of those works.

1.1 BACKGROUND

Prior to submission of the current application the applicant had a pre-lodgement meeting with Council (PL-2022/98) as well as a Design Review Panel meeting (DE-2022/78). There were no fundamental concerns raised at either of those meetings and the design has not changed in any substantive way since then other than in response to recommendations made.

Customer service actions

There are no outstanding customer service requests of relevance to the development.

1.2 SITE DESCRIPTION

The site is located at 29 -31 Denison Street WOLLONGONG and the title references are Lot 26 Sec 4 DP 1258 and Lot 25 Sec 4 DP 1258.

The site is regular in shape and relatively flat with a gentle fall towards Denison Street.

Adjoining development is as follows:

- North: Approval for DA-2022/592 for Commercial - demolition of existing structures, construction and use of self-storage facility
- East: Train line
- South: Two storey commercial building with at grade parking in the front setback.
- West: Denison Street and a mixture of low to high density residential development.

The site is on the periphery of the Wollongong City Centre and adjacent to the special purpose zone containing the hospital and a variety of health services facilities. Wollongong train station is approximately 330m to the south and the city centre approximately 740m to the east.

The eastern side of Denison Street contains a mixture of commercial and mixed use developments and is an area undergoing transition to higher density development that reflects the permissible heights and FSR.

Property constraints

Council records identify the land as being impacted by the following constraints:

- Contamination: The land is identified as being potentially contaminated due to previous use for motor vehicle wrecking and storage. A Detailed Site Investigation was submitted with the DA which makes recommendations that allow Council to be satisfied the land will be made suitable for the intended use.
- Acid sulphate soils: The land is identified as potentially containing class 5 acid sulfate soils.

There are no restrictions on the title.

Figure 1: Aerial photograph

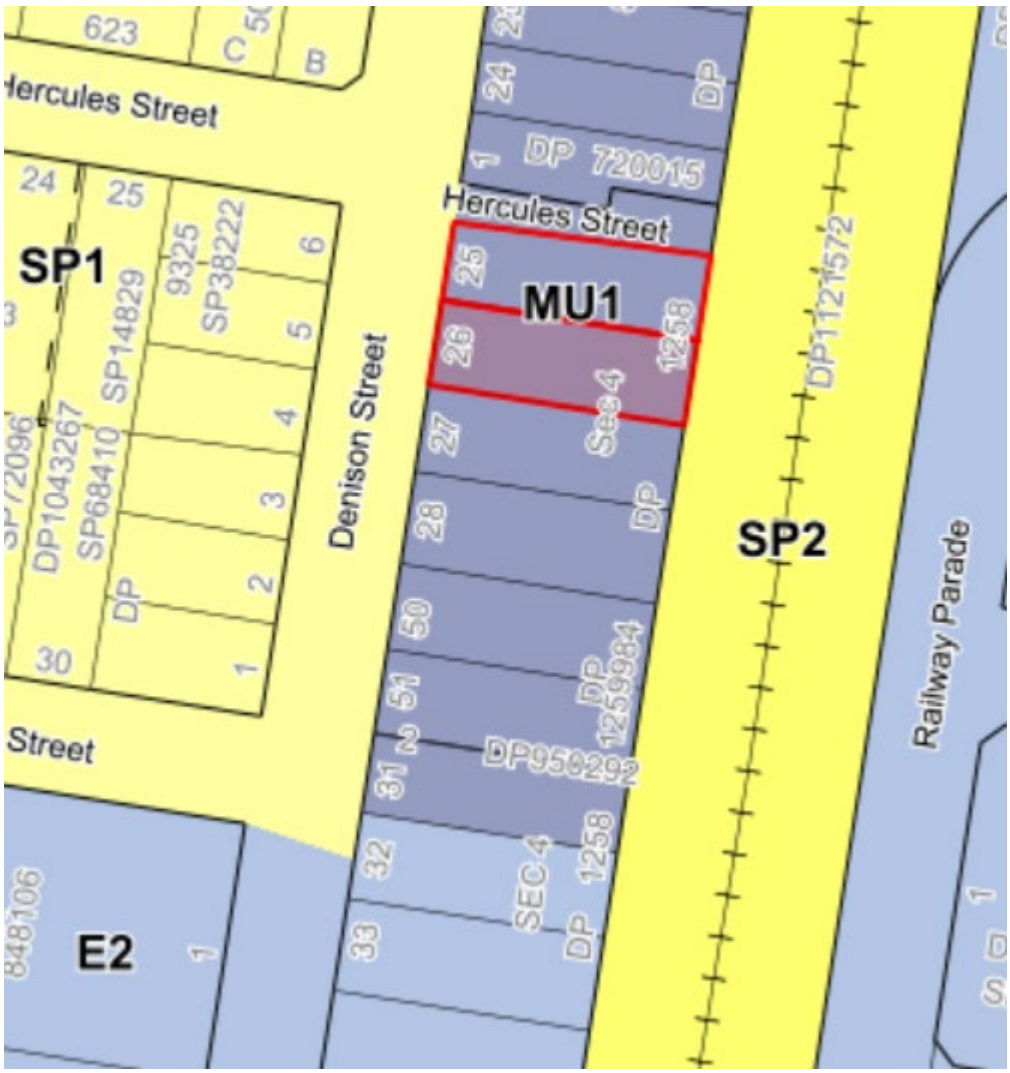


Figure 2: WLEP 2009 zoning map

1.3 SUBMISSIONS

The application was notified in accordance with Council's Community Participation Plan 2019. One submission was received and the concerns identified are discussed below.

Figure 3: Notification map

Table 1: Submissions

Concern	Comment
• non-compliant deep soil planting;	The proposal provides only a 2m wide planting strip along the eastern boundary that is unencumbered with structures. This would not satisfy the requirements of a true deep soil zone however a deep soil zone is not a prerequisite for development in the MU1 mixed use zone.
• non-compliant unit mix;	The proposal has a 3 x one bed (8%), 31 x two bed (86%), 2 x three bed (5.5%). The DCP recommends a minimum of 10% one and three bedroom. The justification provided by the applicant is that The location of the development in proximity to the town centre and public transport makes the precinct attractive to working couples or singles in a share situation. Further, the proximity to the hospital makes apartments in the precinct attractive to nurses and other medical professionals. 2 bedroom apartments are in high demand and as a result, the development has been geared toward those markets.
• non-compliant car parking;	The proposal complies with the applicable car parking rate as detailed at Chapter E3 of this report.
• non-compliant setbacks	The proposal seeks minor variations to the side setback controls as detailed at Chapter A1. These are not considered to be to the detriment of adjoining development or the form of the proposal.

1.4 CONSULTATION

1.4.1 INTERNAL CONSULTATION

Geotechnical Engineer

Council's Geotechnical Officer has reviewed the application and has provided a satisfactory referral. Conditions of consent were recommended and are included in the consent.

Stormwater Engineer

Council's Stormwater Officer has reviewed the application and given a satisfactory referral. Conditions of consent were recommended and are included in the consent.

Landscape Architect

Council's Landscape Officer has reviewed the application and given a satisfactory referral. Conditions of consent were recommended and are included in the consent.

Traffic Engineer

Council's Traffic Officer has reviewed the application and given a satisfactory referral. Conditions of consent were recommended and are included in the consent.

Heritage Officer

Council's Heritage Officer has reviewed the proposal and the submitted Preliminary Historic archaeological Assessment. A variety of conditions were suggested in relation to the provisions of clause 5.10(7) of the LEP with regard to potential archaeological finds however the following comments are made in regard to heritage considerations for the site under clause 5.10(7) of the LEP:

- The assessment provided to Council merely provides that there is "low-moderate potential for evidence of the residential structures and outbuildings identified in the 1938 aerial to remain sub-surface".
- By contrast, to constitute an Archaeological Site, the relevant land must contain a relic. In other words, there must be at least some certainty that structures or items that can be characterised as relics will be (or have been) found.
- A relic is defined as a deposit, artefact, object or material evidence that must both (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance. The reference to a settlement comprising New South Wales suggests a time period pre-federation (1901). If a different meaning was sought, a reference to European settlement or Australian settlement would have been more apt.
- The site is not an identified heritage item under the LEP nor is it located within a conservation area and is not identified as having a relic in accordance with the definitions invited in the LEP.

In consideration of the above, clause 5.10(7) is not considered to be engaged and no specific conditions considered reasonable in this instance.

Environment Officer

Council's Environment Officer has reviewed the application and given a satisfactory referral subject to conditions of consent.

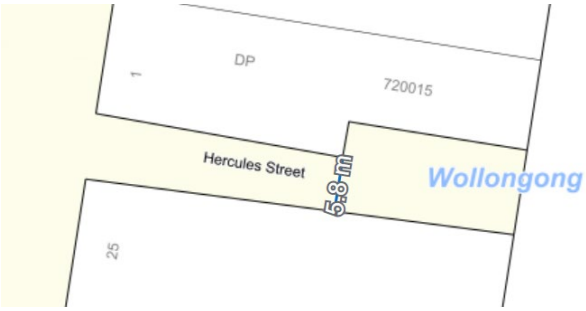
1.4.2 EXTERNAL CONSULTATION

Sydney Trains and Endeavour Energy

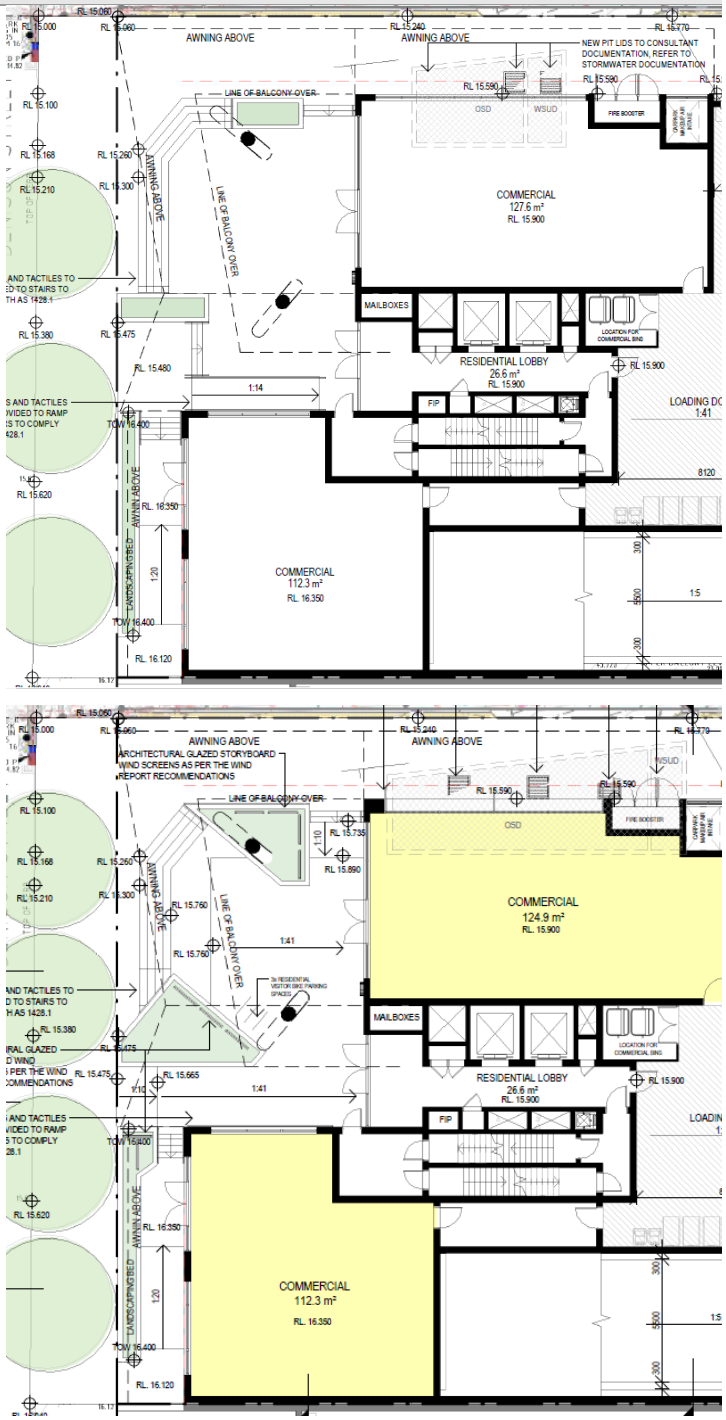
Sydney Trains have granted concurrence by way of a deferred commencement.

Design Review Panel

The application was reviewed by the Design Review Panel on 31 August 2022 (prior to lodgement) and 31 January 2023 (following DA lodgement). The notes from the 31 January meeting are contained at **Attachment 4**. Matters that required further attention raised by the Panel at that meeting are addressed below:

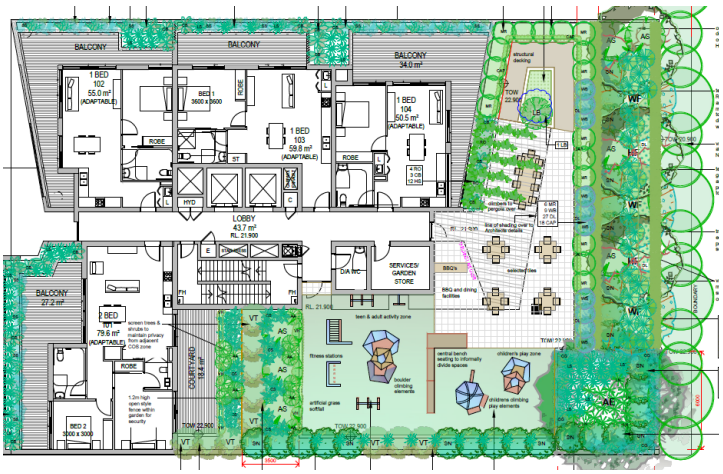
Concern	Comment
Separation to the northern boundary and future built form on the northern side of Hercules Street	The proposed building has a setback of 3.6 to Hercules Street which has a minimum width of approximately 5.8m, widening out to 7m at the Denison Street and widening out to greater than 9m to the eastern end.  This equates to a setback of approximately 9.4m at the narrowest point. The approved development on the land to the north is of approximately 5 storey in height and set back 3m from Hercules Street resulting in a separation of over 12m in compliance with the ADG. If the approved development were not to proceed and a shop top housing development to replace it, that building would need to provide a minimum setback of between 6-9m for a tower form above, which would result in compliance building separation under the ADG.

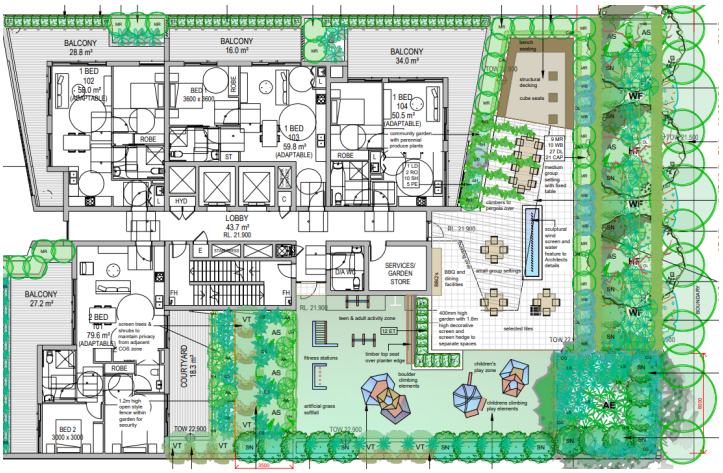
Concern	Comment
The southern façade requires greater articulation and visual interest.	 
Recommendation for a more prominent pergola/roof element that related to both the uses at the COS and the visual form of the street level entry canopy may be incorporated at roof level.	The roof form has been altered to mirror the angled awning structure over the ground floor commercial tenancy.

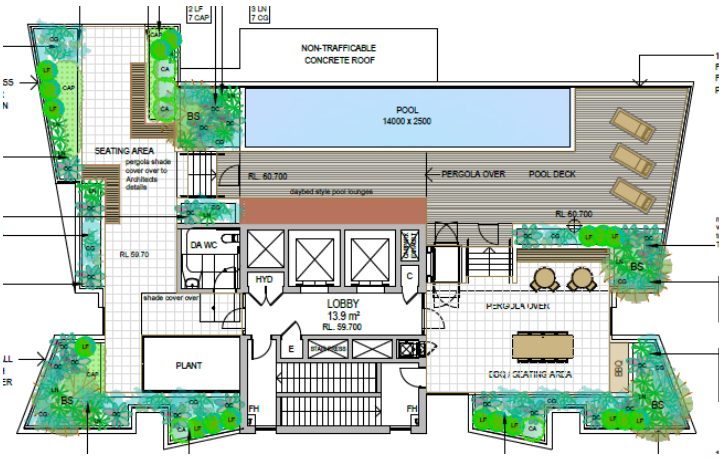
Concern	Comment
Further detailed refinement could be considered to eliminate the need for a 1:14 ramp and improve the quality of the residential entry space and its connection to the commercial forecourt.	
Consideration should also be given to providing some street trees to Hercules Street.	Opportunity for street trees in Hercules Street is constrained by services . The development provides street trees along the primary frontage that on Denison Street.

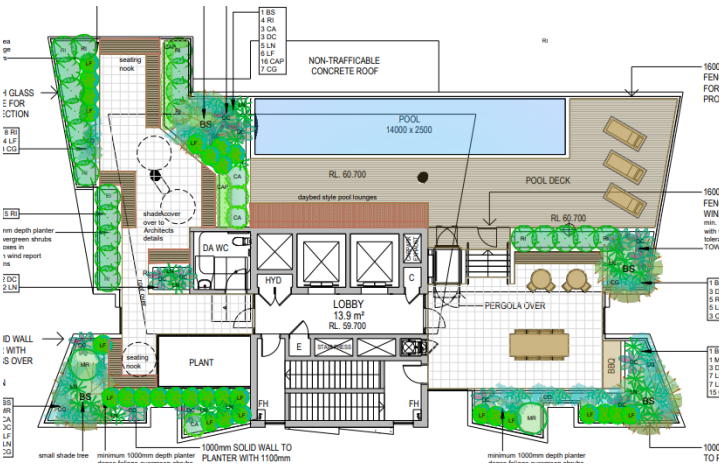
Concern	Comment
Sustainability	
• Opportunities to harvest rainwater for use in maintaining any plantings established on the building and site should be explored. Other water minimisation measures (reuse of rainwater for toilet flushing and washing machines) should also be considered.	Rainwater is to be captured for reuse in landscaped areas.
• The use of solar power and solar water heating as well as general electrification is strongly encouraged, particularly to service communal circulation and parking areas.	The proposal incorporates a rooftop PV system.
• Low embodied energy should be a consideration in material and finish selections.	This is not a matter that is suitably addressed in the planning controls in a way that can be enforced in the assessment.
• Landscape plantings should address aims for biodiversity protection, weed minimisation and low water use.	The landscaped areas have been reviewed by Council's Landscape Officer as meeting the requirements of Council's landscaping controls.
• The Panel strongly recommends that electric vehicle charging stations be provided in the different carpark levels.	Electric car-charging is proposed in residential parking bays.
Question the proposed tree planting to Denison Street	Council's Landscape Officer has reviewed the proposal in regard to the proposed tree plantings and consistency with Council's public domain policy and has advised of conditions of consent.
The design and alignment of landscape elements within the entry landscape should complement the aesthetic of the canopy feature over. Instead of squared off planters and alignments, perhaps this area could reflect the angular design of the folded canopy.	See images above

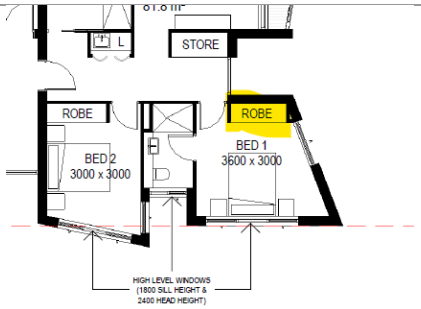
Suggested improvements in functionality of the level 1 COS area and rooftop COS









Concern	Comment
bedrooms B1 within the two apartments on the south façade appear to have reduced robe lengths due to the shaping of the room	 The ADG recommends 1.5m minimum width for robes. The robes in question are compliant with this requirement.
suns eye diagrams provided do not appear to align with the position of north as depicted in the floor plans submitted with this application. Further clarification is required to determine if the solar access studies and/or if the north point is accurate.	Suns eye diagrams have been amended to consistently show the north point.
Furthermore: the solar access diagram for the 7 storey neighbour to the north appear to be in error for 103 and 202 by indicating greater solar access than may be achieved between 10am and 1pm mid-winter. It does look though that they will achieve 2 hours minimum required.	The development complies with solar access requirements.
Detail sections through the southern edge of the level 1 podium (COS) are required to demonstrate that the podium will be secured from an adjoining podium on the neighbouring site. The sections must also demonstrate that potential privacy issues with the neighbouring development are minimised. Detailed sections should also be provided between the courtyards of level 1 units adjoining the COS.	Provided.

Concern	Comment
The entry canopy is a strong identifier for the site. It is encouraged to refine this element further, with some proportional adjustment (when viewed from the Northwest corner - this distortion may be the perspective) and detail to ensure a quality soffit is provided as envisaged in the design.	Addressed
To ensure the architect's design intent is realised, the applicant I encouraged to provide larger scale detail sections (minimum 1:20) to assist in providing a better understanding of the quality of finishes being proposed. The sections should show balcony / balustrade details, screens, soffit finishes and material junctions. All materials finishes must be clearly documented.	Provided.
The Panel remains concerned with the quality and detail finish of the proposed precast concrete panels with stack bonded brick finish. A traditional face brick is preferred in all locations visible from the public domain.	Addressed
The location of service risers, car park exhausts, AC condensers, down pipes, substations and fire hydrant boosters should be shown.	Provided

Endeavour Energy

Standard conditions have been provided from Endeavour Energy.

2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

2.1 SECTION 4.15(1)(A)(1) ANY ENVIRONMENTAL PLANNING INSTRUMENT

1.7 Application of Part 7 of Biodiversity Conservation Act 2016 and Part 7A of Fisheries Management Act 1994

The proposal does not involve any vegetation removal.

2.1.1 STATE ENVIRONMENTAL PLANNING POLICY (RESILIENCE AND HAZARDS) 2021

Chapter 4 Remediation of land

4.6 Contamination and remediation to be considered in determining development application

The land is identified as being potentially contaminated due to previous use for motor vehicle wrecking and storage. A Detailed Site Investigation was submitted with the DA that has been reviewed

by Council's Environment Officer. A number of recommendations are made to enable the land to be made suitable for the intended use and Council can be satisfied that the requirements of this clause are met.

2.1.2 STATE ENVIRONMENTAL PLANNING POLICY NO 65—DESIGN QUALITY OF RESIDENTIAL APARTMENT DEVELOPMENT

The development meets the definition of a 'residential flat building' as it is more than 3 storeys in height and comprises more than 4 dwellings. As such, the provisions of SEPP 65 apply.

Schedule 1 of SEPP 65 sets out the design quality principles for residential apartment development. These must be considered in the assessment of the proposal pursuant to clause 30(2)(a) of the Policy and are discussed below.

Principle 1: Context and neighbourhood character

The proposal is considered to be consistent with the desired future character of the area as identified through the development standards and controls applicable to the land. The locality is one undergoing transition to higher density mixed use development such as that proposed. Future context studies have been prepared that demonstrate the proposal will fit into a future streetscape.

Principle 2: Built form and scale

Whilst the development is significantly larger than adjoining developments and some others in the locality, the bulk and scale of the development is consistent with the applicable planning controls for the area. No variations to development standards are proposed and proposed variations to setbacks are minor. The development is consistent with the desired future character of the area. The likely impacts of the development on the locality and adjoining development are acceptable.

Principle 3: Density

The density of the development complies with the maximum FSR permitted for the land. The development is not of a scale that is expected to place unreasonable strain on local infrastructure. Contributions applicable to the development will go towards local infrastructure and facilities. The site is well situated with regard to services.

Principle 4: Sustainability

The proposal is considered acceptable with regard to sustainable design as follows:

- BASIX Certificates provided indicating minimum requirements are exceeded.
- A Site Waste Management and Minimisation Plan has been provided indicating recycling of materials from the demolished dwellings.
- Suitable facilities are provided for separation of waste streams to minimise waste going to landfill
- A PV system is provided on the roof
- Car spaces are designed to be EV ready
- The general layout and orientation of units maximises opportunities for natural ventilation and light to reduce reliance on mechanical heating and cooling
- The proposal does not impact on any heritage items or environmentally sensitive areas
- The proposal is an efficient use of land in a location that is close to services and public open space.

Principle 5: Landscape

The proposal provides suitable landscaped areas and communal open space that will improve the amenity of the occupants. Landscaping in the public domain including street tree planting and a deep soil strip along the eastern boundary will soften the appearance of the development from adjoining properties and the public domain.

Principle 6: Amenity

The design of the development is considered to positively contribute to the public domain and provide high level of amenity for the occupants.

The proposal meets or exceeds the minimum requirements for solar access, cross ventilation, private and communal open space, storage, visual and acoustic privacy, access and the like.

Principle 7: Safety

The design of the building provides for clear and legible entries, secure access points and good surveillance of public areas without obvious opportunities for concealment.

Principle 8: Housing diversity and social interaction

The proposal provides a suitable mix of unit sizes and layouts including accessible and universal units. A variety of communal open space areas are provided to facilitate social interaction of residents.

Principle 9: Aesthetics

The proposal is considered to be of a high quality with regard to its appearance. A mixture of materials and finishes is provided and the bulk of the development is suitably articulated. The design has been reviewed by the Design Review Panel and their recommendations for aesthetic improvements have been incorporated into the scheme.

A full assessment of the application against the Apartment Design Guide (*ADG*) is contained at **Attachment 5**. Variations are discussed below.

3F Visual privacy

Objective 3F-1

Adequate building separation distances are shared equitabl between neighbouring sites, to achieve reasonable levels o external and internal visual privacy

Design criteria

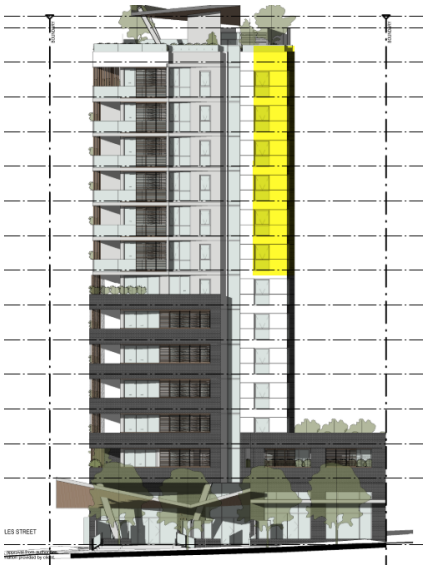
1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

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

Note: Separation distances between buildings on the sam site should combine required building separations depending on the type of room (see figure 3F.2)

Gallery access circulation should be treated as habitable space when measuring privacy separatio distances between neighbouring properties

The proposal involves a variation to the separation at the upper portion of the tower on the southern façade as illustrated below.



The portion of the building that is non-compliant whilst having habitable rooms, either has windows angled away from the boundary or high sill windows.

	No concerns are raised in regard to impacts to privacy.

2.1.3 STATE ENVIRONMENTAL PLANNING POLICY (TRANSPORT AND INFRASTRUCTURE) 2021

2.98 Development adjacent to rail corridors

(1) This section applies to development on land that is in or adjacent to a rail corridor, if the development—

(a) is likely to have an adverse effect on rail safety, or

(b) involves the placing of a metal finish on a structure and the rail corridor concerned is used by electric trains, or

(c) involves the use of a crane in air space above any rail corridor, or

(d) is located within 5 metres of an exposed overhead electricity power line that is used for the purpose of railways or rail infrastructure facilities.

(2) Before determining a development application for development to which this section applies, the consent authority must—

(a) within 7 days after the application is made, give written notice of the application to the rail authority for the rail corridor, and

(b) take into consideration—

(i) any response to the notice that is received within 21 days after the notice is given, and

(ii) any guidelines that are issued by the Planning Secretary for the purposes of this section and published in the Gazette.

(3) Despite subsection (2), the consent authority is not required to comply with subsection (2)(a) and (b)(i) if the development application is for development on land that is in or adjacent to a rail corridor vested in or owned by ARTC or the subject of an ARTC arrangement.

(4) Land is adjacent to a rail corridor for the purpose of this section even if it is separated from the rail corridor by a road or road related area within the meaning of the Road Transport Act 2013.

Sydney Trains have reviewed the proposal in regard to this clause and have recommended deferred commencement conditions.

2.99 Excavation in, above, below or adjacent to rail corridors

(1) This section applies to development (other than development to which section 2.101 applies) that involves the penetration of ground to a depth of at least 2m below ground level (existing) on land—

(a) within, below or above a rail corridor, or

(b) within 25m (measured horizontally) of a rail corridor, or

(c) within 25m (measured horizontally) of the ground directly below a rail corridor, or

(d) within 25m (measured horizontally) of the ground directly above an underground rail corridor.

(2) Before determining a development application for development to which this section applies, the consent authority must—

(a) within 7 days after the application is made, give written notice of the application to the rail authority for the rail corridor, and

(b) take into consideration—

(i) any response to the notice that is received within 21 days after the notice is given, and

(ii) any guidelines issued by the Planning Secretary for the purposes of this section and published in the Gazette.

(3) Subject to subsection (5), the consent authority must not grant consent to development to which this section applies without the concurrence of the rail authority for the rail corridor to which the development application relates.

(4) In deciding whether to provide concurrence, the rail authority must take into account—

(a) the potential effects of the development (whether alone or cumulatively with other development or proposed development) on—

(i) the safety or structural integrity of existing or proposed rail infrastructure facilities in the rail corridor, and

(ii) the safe and effective operation of existing or proposed rail infrastructure facilities in the rail corridor, and

(b) what measures are proposed, or could reasonably be taken, to avoid or minimise those potential effects.

Sydney Trains have reviewed the proposal in regard to this clause and have recommended deferred commencement conditions.

2.100 Impact of rail noise or vibration on non-rail development

(1) This section applies to development for any of the following purposes that is on land in or adjacent to a rail corridor and that the consent authority considers is likely to be adversely affected by rail noise or vibration—

(a) residential accommodation,

(b) a place of public worship,

(c) a hospital,

(d) an educational establishment or centre-based child care facility.

(2) Before determining a development application for development to which this section applies, the consent authority must take into consideration any guidelines that are issued by the Planning Secretary for the purposes of this section and published in the Gazette.

(3) If the development is for the purposes of residential accommodation, the consent authority must not grant consent to the development unless it is satisfied that appropriate measures will be taken to ensure that the following LAeq levels are not exceeded—

(a) in any bedroom in the residential accommodation—35 dB(A) at any time between 10.00 pm and 7.00 am,

(b) anywhere else in the residential accommodation (other than a garage, kitchen, bathroom or hallway)—40 dB(A) at any time.

The proposal has been accompanied by a Railway Noise and Vibration Assessment report that addresses the requirements of this clause. Conditions of consent are recommended regarding compliance with the recommendations of this report.

2.1.4 STATE ENVIRONMENTAL PLANNING POLICY (BUILDING SUSTAINABILITY INDEX: BASIX) 2004

The proposal is BASIX affected development to which this policy applies. In accordance with Schedule 1, Part 1, 2A of the Environmental Planning and Assessment Regulation 2000, a BASIX Certificate has

been submitted in support of the application demonstrating that the proposed scheme achieves the BASIX targets.

The BASIX certificate was issued no earlier than 3 months before the date on which the development application was lodged.

2.1.5 WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009

Clause 1.4 Definitions

shop top housing means one or more dwellings located above the ground floor of a building, where at least the ground floor is used for commercial premises or health services facilities.

gross floor area means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes—

(a) the area of a mezzanine, and

(b) habitable rooms in a basement or an attic, and

(c) any shop, auditorium, cinema, and the like, in a basement or attic,

but excludes—

(d) any area for common vertical circulation, such as lifts and stairs, and

(e) any basement—

(i) storage, and

(ii) vehicular access, loading areas, garbage and services, and

(f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and

(g) car parking to meet any requirements of the consent authority (including access to that car parking), and

(h) any space used for the loading or unloading of goods (including access to it), and

(i) terraces and balconies with outer walls less than 1.4 metres high, and

(j) voids above a floor at the level of a storey or storey above.

Part 2 Permitted or prohibited development

Clause 2.2 – zoning of land to which Plan applies

The zoning map identifies the land as being zoned B4 Mixed Use.

Clause 2.3 – Zone objectives and land use table

The objectives of the zone are as follows:

- *To provide a mixture of compatible land uses.*
- *To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling.*
- *To support nearby or adjacent commercial centres without adversely impacting on the viability of those centres.*

The proposal is satisfactory with regard to the above objectives.

The land use table permits the following uses in the zone.

> *Advertising structures; Amusement centres; Boarding houses; Car parks; Centre-based child care facilities; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Environmental facilities; Exhibition homes; Function centres; Home businesses; Hostels; Hotel or motel accommodation; Information and education facilities; Medical centres; Multi dwelling housing; Oyster aquaculture; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Registered clubs; Residential flat buildings; Respite day care centres; Restricted premises; Roads; Self-storage units; Seniors housing; Service stations; Shop top housing; Tank-based aquaculture; Tourist and visitor accommodation; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Wholesale supplies*

The proposal is categorised as a shop top housing as defined above and is permissible in the zone with development consent.

Part 4 Principal development standards

Clause 4.3 Height of buildings

The proposed building height of ~49m does not exceed the maximum of 60m permitted for the site.

Clause 4.4A Floor space ratio – Wollongong city centre

Site area: 1,394m²

Residential GFA: 3338.23 (93.3%)

Commercial GFA: 239.7 (6.7%)

Total GFA: 3,577.96

Proposed FSR: 3,577.96/1,394 = 2.57:1

(4) The maximum floor space ratio for a building on land within a business zone under this Plan, that is to be used for a mixture of residential purposes and other purposes, is—

$$(NRFSR \times NR/100) + (RFSR \times R/100):1$$

where—

NR is the percentage of the floor space of the building used for purposes other than residential purposes. (6.7)

NRFSR is the maximum floor space ratio determined in accordance with this clause if the building was to be used only for purposes other than residential purposes (3.5).

R is the percentage of the floor space of the building used for residential purposes (93.3).

RFSR is the maximum floor space ratio determined in accordance with this clause if the building was to be used only for residential purposes (2.5).

Maximum permitted FSR: (3.5 x 0.067) + (2.5 x 0.933) = 0.2345 + 2.3325 = 2.57:1

Part 5 Miscellaneous provisions

Clause 5.10 Heritage conservation

Council's Heritage Officer has reviewed the proposal and the submitted Preliminary Historic archaeological Assessment. A variety of conditions were suggested in relation to the provisions of clause 5.10(7) of the LEP with regard to potential archaeological finds however the following comments are made in regard to heritage considerations for the site under clause 5.10(7) of the LEP:

- The assessment provided to Council merely provides that there is "low-moderate potential for evidence of the residential structures and outbuildings identified in the 1938 aerial to remain sub-surface".
- By contrast, to constitute an Archaeological Site, the relevant land must contain a relic. In other words, there must be at least some certainty that structures or items that can be characterised as relics will be (or have been) found.
- A relic is defined as a deposit, artefact, object or material evidence that must both (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance. The reference to a settlement comprising New South Wales suggests a time period pre-federation (1901). If a different meaning was sought, a reference to European settlement or Australian settlement would have been more apt.
- The site is not an identified heritage item under the LEP nor is it located within a conservation area and is not identified as having a relic in accordance with the definitions invited in the LEP.

In consideration of the above, clause 5.10(7) is not considered to be engaged and no specific conditions considered reasonable in this instance.

Clause 5.21 Flood planning

The site is not identified as being flood affected.

Part 7 Local provisions – general

Clause 7.1 Public utility infrastructure

Endeavour Energy have reviewed the proposal and have provided recommended conditions.

A substation is proposed.

Clause 7.5 Acid Sulfate Soils

The land is partly within an area of Class 5 acid sulphate soils and is within 500 metres of adjacent Class 4 land. However, the works are not expected to lower the water table on these Class 4 lands.

Clause 7.6 Earthworks

The proposal comprises excavation for two levels of basement car parking. The earthworks are not expected to have a detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features surrounding land.

Clause 7.13 Certain land within business zones

The proposal provides an active use at ground floor level in accordance with this control.

Clause 7.18 Design excellence in Wollongong city centre and at key sites

(4) In considering whether development to which this clause applies exhibits design excellence, the consent authority must have regard to the following matters:

(a) whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved,

The Design Review Panel have provided commentary on the proposal on two occasions, once prior to submission and the other following lodgement of the DA. Their commentary has been incorporated into the design and a suitable level of architectural design is considered to be demonstrated.

(b) whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain,

Satisfactory

(c) whether the proposed development detrimentally impacts on view corridors,

No.

(d) whether the proposed development detrimentally overshadows an area shown distinctively coloured and numbered on the Sun Plane Protection Map,

N/A

(e) how the proposed development addresses the following matters:

(i) the suitability of the land for development,

The land is zone to permit the use and the character and scale of the proposal is considered to be compatible with existing and likely future uses.

(ii) existing and proposed uses and use mix,

As above.

(iii) heritage issues and streetscape constraints,

The site is not a heritage item nor is it in close proximity to a heritage item or heritage precinct that would be adversely impacted by the proposal.

(iv) the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,

The tower is relatively slender in form and setbacks are acceptable. .

(v) bulk, massing and modulation of buildings,

Acceptable.

(vi) street frontage heights,

N/A

(vii) environmental impacts such as sustainable design, overshadowing, wind and reflectivity,

Suitable measures are incorporated into the design with regard to sustainability

Overshadowing impacts are acceptable.

The submitted wind … indicates pedestrian wind comfort levels will be achieved and wind impacts to the balconies, communal open spaces and public areas will be acceptable.

(viii) the achievement of the principles of ecologically sustainable development,

The proposal is considered to address the principles of ecologically sustainable development in so far as it can be applied to the proposal under current controls as follows:

The BASIX report now identifies a 7kW PV system, whereas it was previously a 20kW system.

The development has now gone from a 5.8 NatHERS rating to a 7.2. Council considers this to now reflect the intent of design excellence for sustainability.

For the residential towers and apartments, a BASIX Energy target of 30 is proposed, exceeding the minimum BASIX requirements as required in Section 5.2.2 of DCP Chapter D13.

For the residential towers and apartments, a BASIX Water target of 50 is proposed, exceeding the minimum BASIX requirements as required in Section 5.2.3 of DCP Chapter D13.

Other than a gas boosted hot water system, the development is now only using electric appliances etc as requested.

A number of car spaces are proposed to EV ready.

(ix) pedestrian, cycle, vehicular and service access, circulation and requirements,

The layout and design of access, parking and servicing areas satisfies Council controls.

(x) impact on, and any proposed improvements to, the public domain.

The proposal involves upgrading the frontage in accordance with Council's Public Domain Technical Manual.

Part 8 Local provisions—Wollongong city centre

Clause 8.1 Objectives for development in Wollongong city centre

The proposal satisfies this clause.

Clause 8.6 – Building separation

Complies.

2.2 SECTION 4.15(1)(A)(II) ANY PROPOSED INSTRUMENT

None applicable.

2.3 SECTION 4.15(1)(A)(III) ANY DEVELOPMENT CONTROL PLAN

2.3.1 WOLLONGONG DEVELOPMENT CONTROL PLAN 2009

Full compliance tables addressing the relevant sections of the DCP are contained at **Attachment 6**. Variations proposed to controls are discussed at Chapter A1 below.

CHAPTER A1 – INTRODUCTION

8 Variations to development controls in the DCP

Side setbacks

(a) The control being varied;

Chapter D13, 2.5 Side and rear building setbacks and building separation.

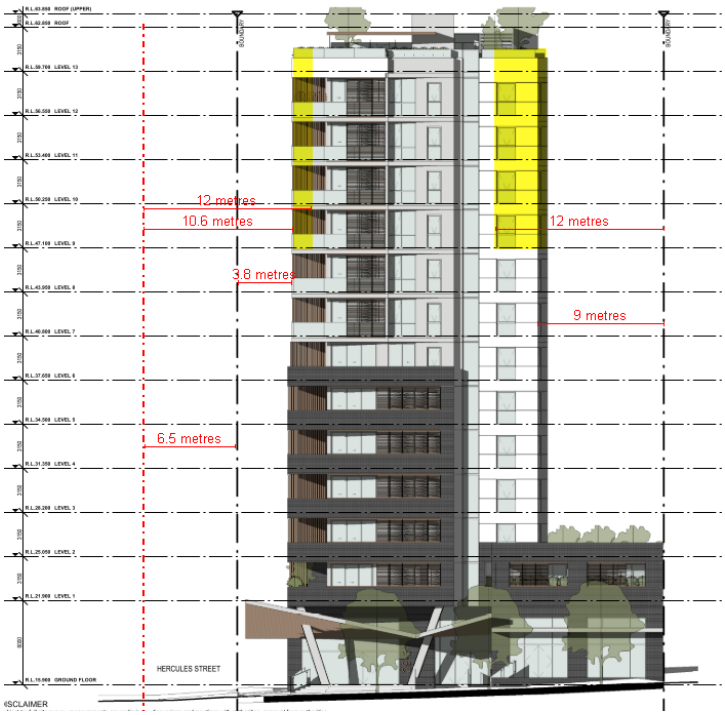
(b) The extent of the proposed variation and the unique circumstances as to why the variation is requested; and

Building condition	Minimum side setback	Minimum rear setback
Residential uses up to 12m in height		
- habitable rooms with openings and balconies	6m	6m
- non-habitable rooms and habitable rooms without openings	3m	4.5m
Residential uses between 12m & 24m		
- habitable rooms with openings and balconies	9m	9m
-non-habitable rooms and habitable rooms without openings	4.5m	4.5m
Residential uses above 24m		
- habitable rooms with openings and balconies and up to 45m	12m	12m
- non-habitable rooms and habitable rooms without openings	6m	6m
All residential uses above 45m	14m	14m

The proposal does not meet the any setback requirements on the northern elevation.

The proposal does not meet the 12m setback requirement above 24m for the south elevation.

Proposed setbacks are illustrated below



(c) Demonstrate how the objectives are met with the proposed variations; and

The objectives

a) To ensure an appropriate level of amenity for building occupants in terms of daylight, outlook, view sharing, ventilation, wind mitigation, and privacy.

Daylight, outlook, view sharing, ventilation, wind impacts and privacy are not compromised by the variation.

b) To achieve usable and pleasant streets and public domain areas in terms of wind mitigation and daylight access.

The variation is not considered to contribute to adviser impacts to the street in terms of wind or daylight access.

(d) Demonstrate that the development will not have additional adverse impacts as a result of the variation.

See above.

2.3.2 WOLLONGONG CITY WIDE DEVELOPMENT CONTRIBUTIONS PLAN

Wollongong City-Wide Development Contributions Plan - City Centre

The Wollongong City-Wide Development Contributions Plan applies to the subject property. This Plan levies a contribution based on the estimated cost of development.

- The proposed cost of development is over $200,001 – a levy rate of 1% applies:

  Contribution Amount = Cost of Works $12,823,354 x 2% levy rate = $128,234

2.4 SECTION 4.15(1)(A)(IIIA) ANY PLANNING AGREEMENT THAT HAS BEEN ENTERED INTO UNDER SECTION 7.4, OR ANY DRAFT PLANNING AGREEMENT THAT A DEVELOPER HAS OFFERED TO ENTER INTO UNDER SECTION 7.4

There are no planning agreements entered into or any draft agreement offered to enter into under S7.4 which affect the development.

2.5 SECTION 4.15(A)(IV) THE REGULATIONS (TO THE EXTENT THAT THEY PRESCRIBE MATTERS FOR THE PURPOSES OF THIS PARAGRAPH)

Environmental Planning and Assessment Regulation 2021

61 Additional matters that consent authority must consider

Conditions of consent are recommended with regard to demolition.

2.6 SECTION 4.15(1)(B) THE LIKELY IMPACTS OF DEVELOPMENT

The proposal is considered acceptable with regard to the likely impacts.

2.7 SECTION 4.15(1)(C) THE SUITABILITY OF THE SITE FOR THE DEVELOPMENT

Does the proposal fit in the locality?

The proposal is considered appropriate with regard to the zoning of the site and is not expected to have unreasonable impacts on the amenity of the locality or adjoining developments.

Are the site attributes conducive to development?

There are no site constraints that would prevent the proposal.

2.8 SECTION 4.15(1)(D) ANY SUBMISSIONS MADE IN ACCORDANCE WITH THIS ACT OR THE REGULATIONS

See discussion at section 1.3.

2.9 SECTION 4.15(1)(E) THE PUBLIC INTEREST

The proposal is acceptable with regard to the likely impacts and suitably responds to the zoning, applicable planning controls and character of the area. Submissions have been addressed and internal referral commentary is satisfactory. The proposal is in the public interest.

3 CONCLUSION

This application has been assessed as satisfactory having regard to the Heads of Consideration under Section S4.15(1) of the Environmental Planning and Assessment Act 1979, the provisions of Wollongong Local Environmental Plan 2009 and all relevant Council DCPs, Codes and Policies. The proposal is supportable in its current form.

4 RECOMMENDATION

It is recommended that the development application be approved subject to appropriate conditions of consent.

5 ATTACHMENTS

1 Aerial photograph

2 WLEP zoning map

3 Plans

4 DRP comments (January 2022)

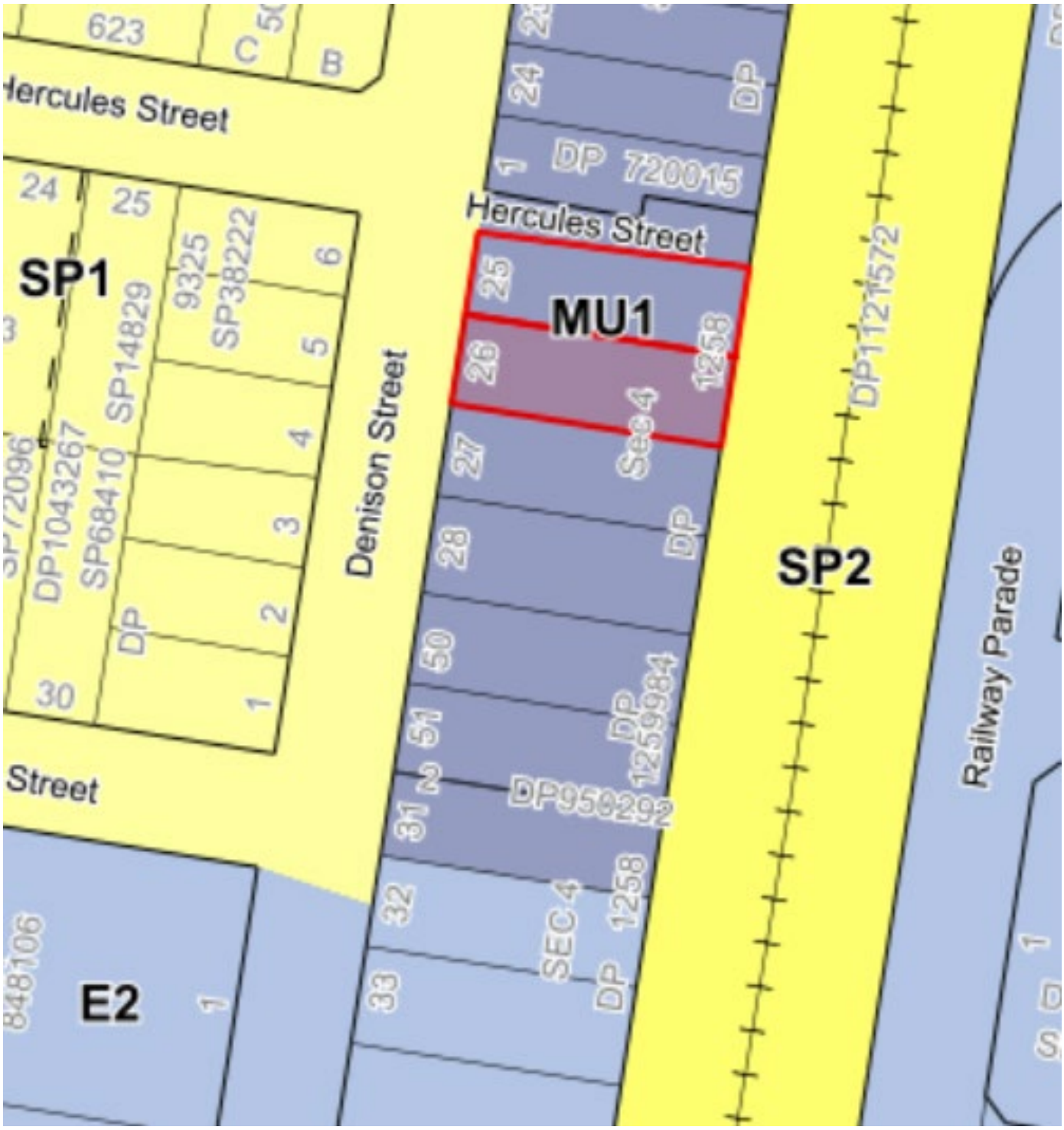
5 Apartment Design Guide assessment

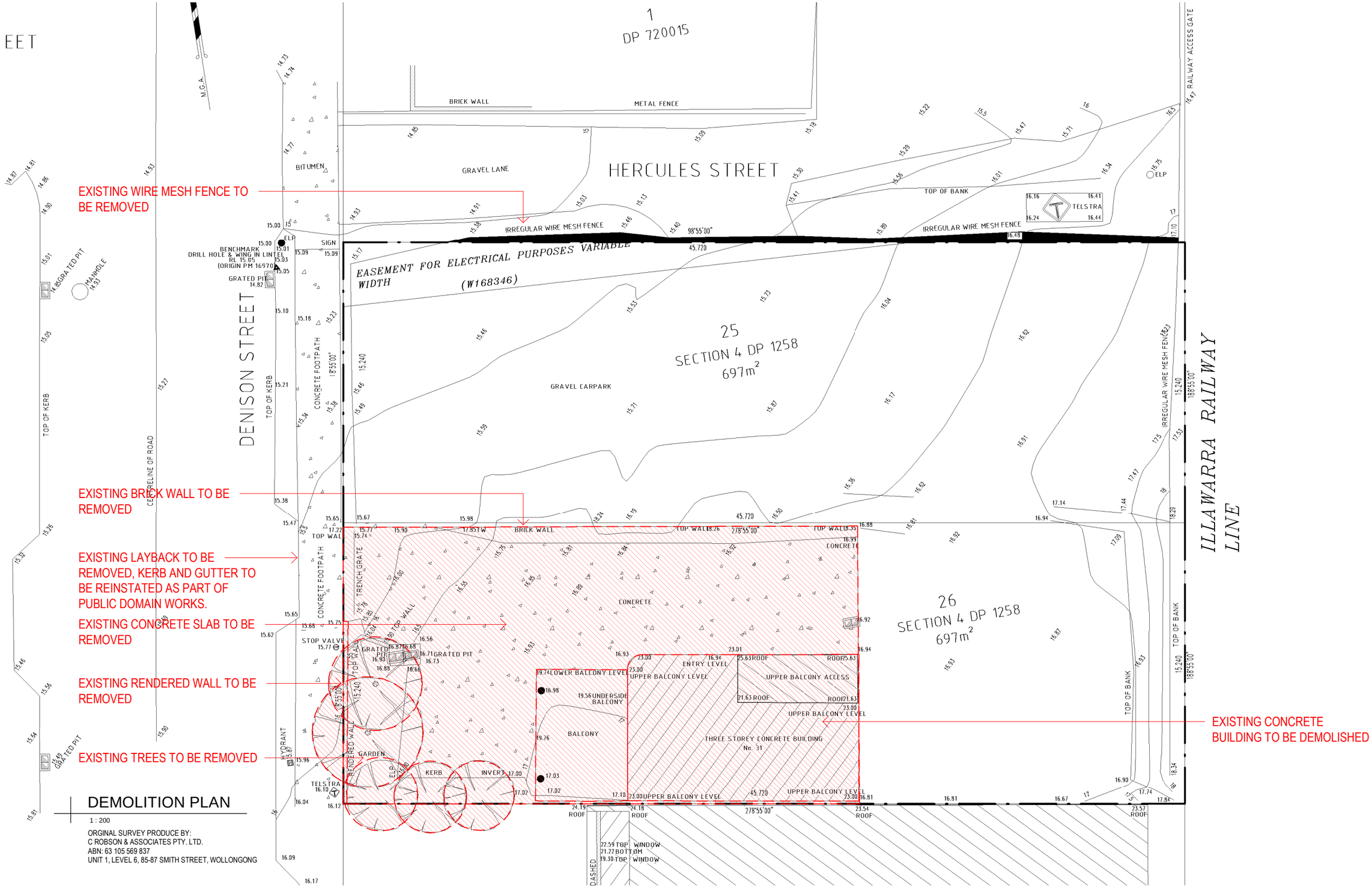
6 Development Control Plan 2009 assessment

7 Draft conditions of consent

Attachment 1 – Aerial photograph

Attachment 2 – WLEP 2009 zoning map





DEMOLITION PLAN

1 : 200

ORGINAL SURVEY PRODUCE BY:
C ROBSON & ASSOCIATES PTY. LTD.
ABN: 63 105 569 837
UNIT 1, LEVEL 6, 85-87 SMITH STREET, WOLLONGONG

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
Drawings are not are not suitable for purchase of property.
All parking and ramps to traffic engineers details. (Subject to Approval)

PRELIMINARY

REF.	DATE	AMENDMENT
Y	05.05.2023	ADDITIONAL INFORMATION

DESIGN WORKSHOP AUSTRALIA

Wollongong
81a Princes Highway,
Fairy Meadow NSW 2519
Tel: (02) 4227 1661
Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205

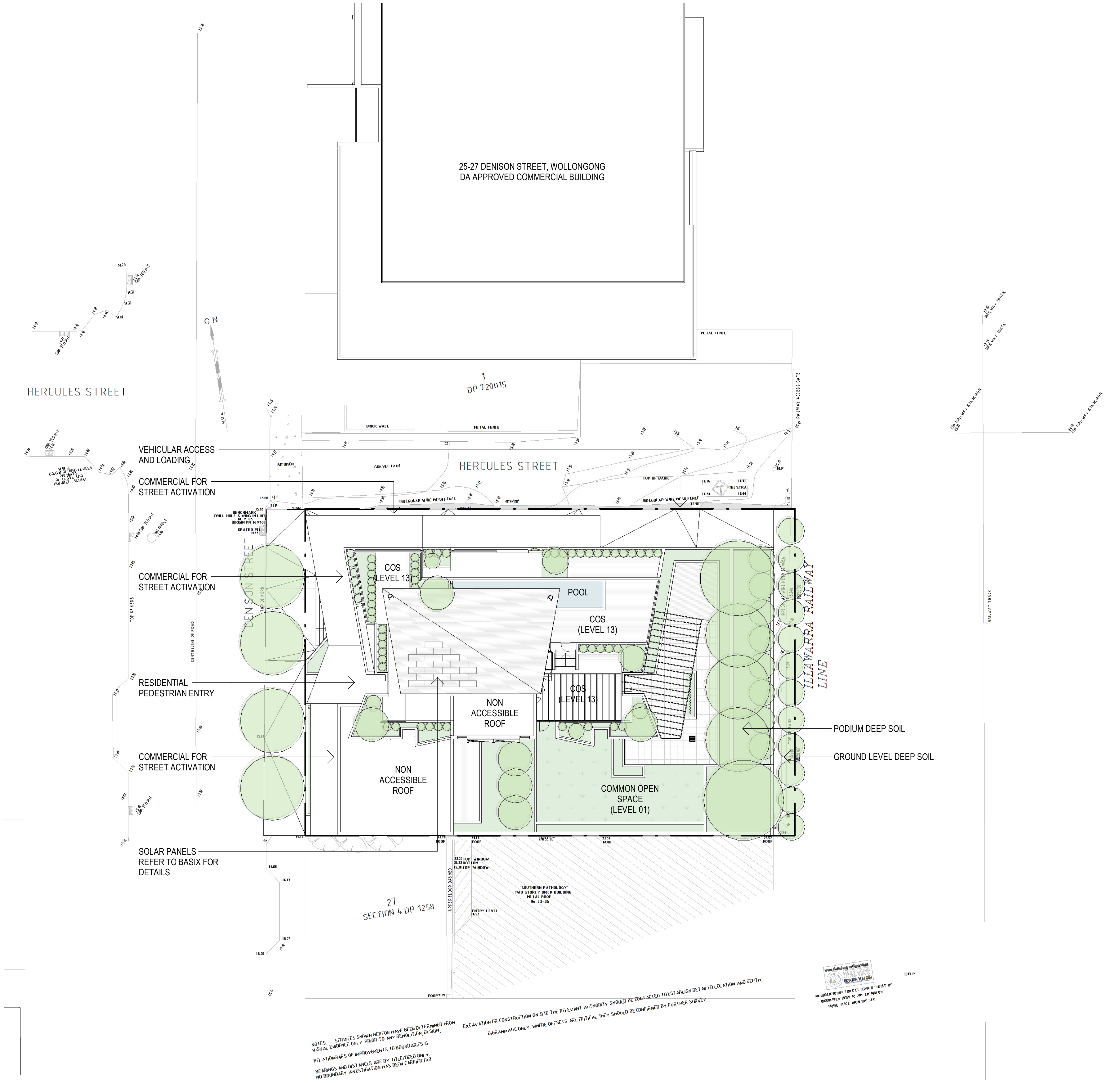
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT:	RM DEVELOPMENTS PTY LTD MIXED USE
ADDRESS:	29-31 DENISON STREET, WOLLONGONG, NSW
DRAWING NAME:	DEMOLITION PLAN

SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE:	05.05.2023
DRAWN:	NT
SCALE:	1:200
QA:	RG
PROJECT No.	2415
DWG No.	015
Rev.	Y

A3



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DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work.

DWA
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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

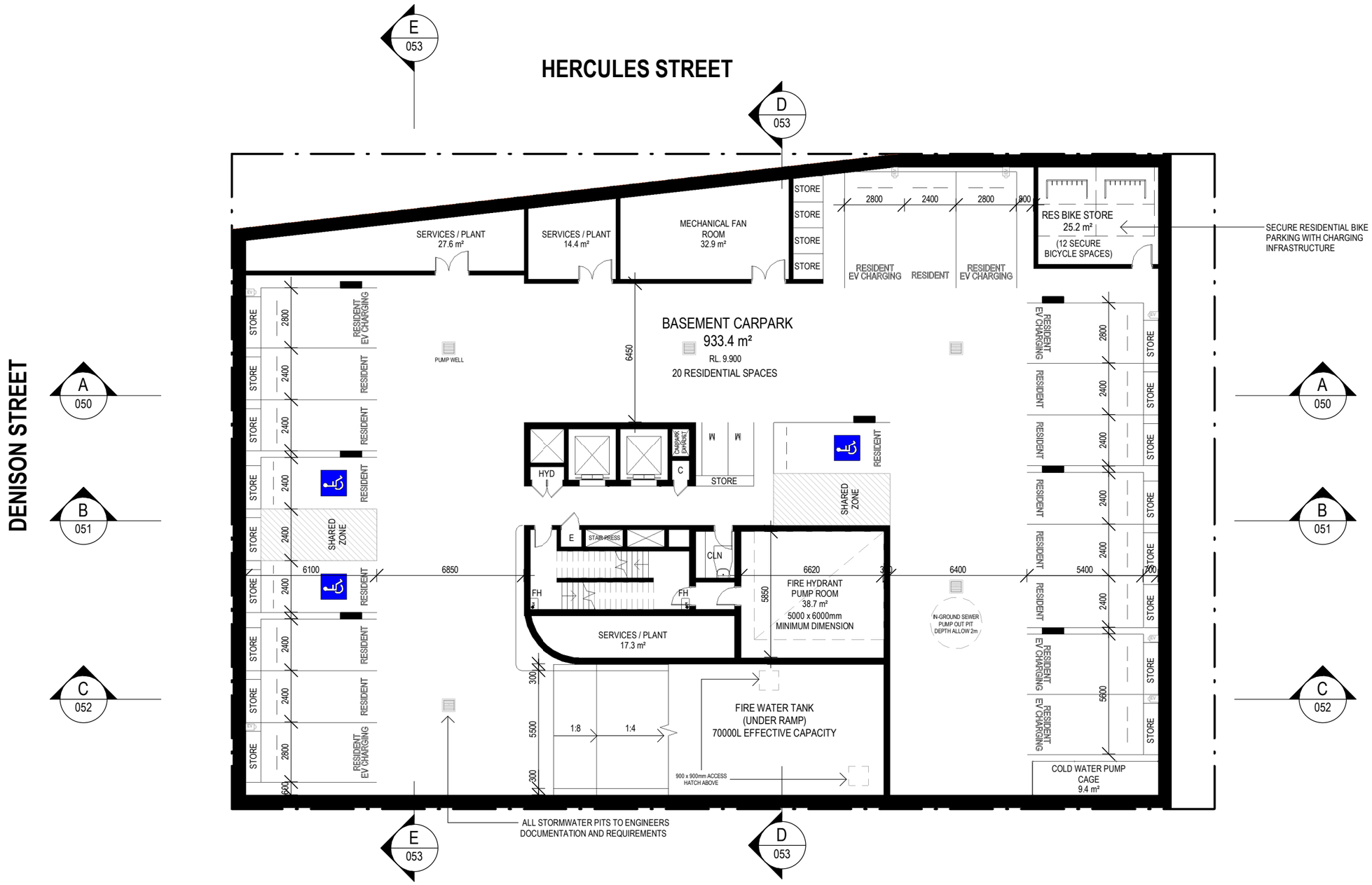
DRAWING NAME: SITE PLAN

SCALE BAR: 0 10 20m

ISSUE DATE: 07.07.2023
DRAWN: NT
SCALE: 1:400
QA: RG

PROJECT No. 2415
DWG No. 016
Rev. AA

A3



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Sydney
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Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: BASEMENT 2

SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE: 07.07.2023
DRAWN: NT
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 019
Rev. AA

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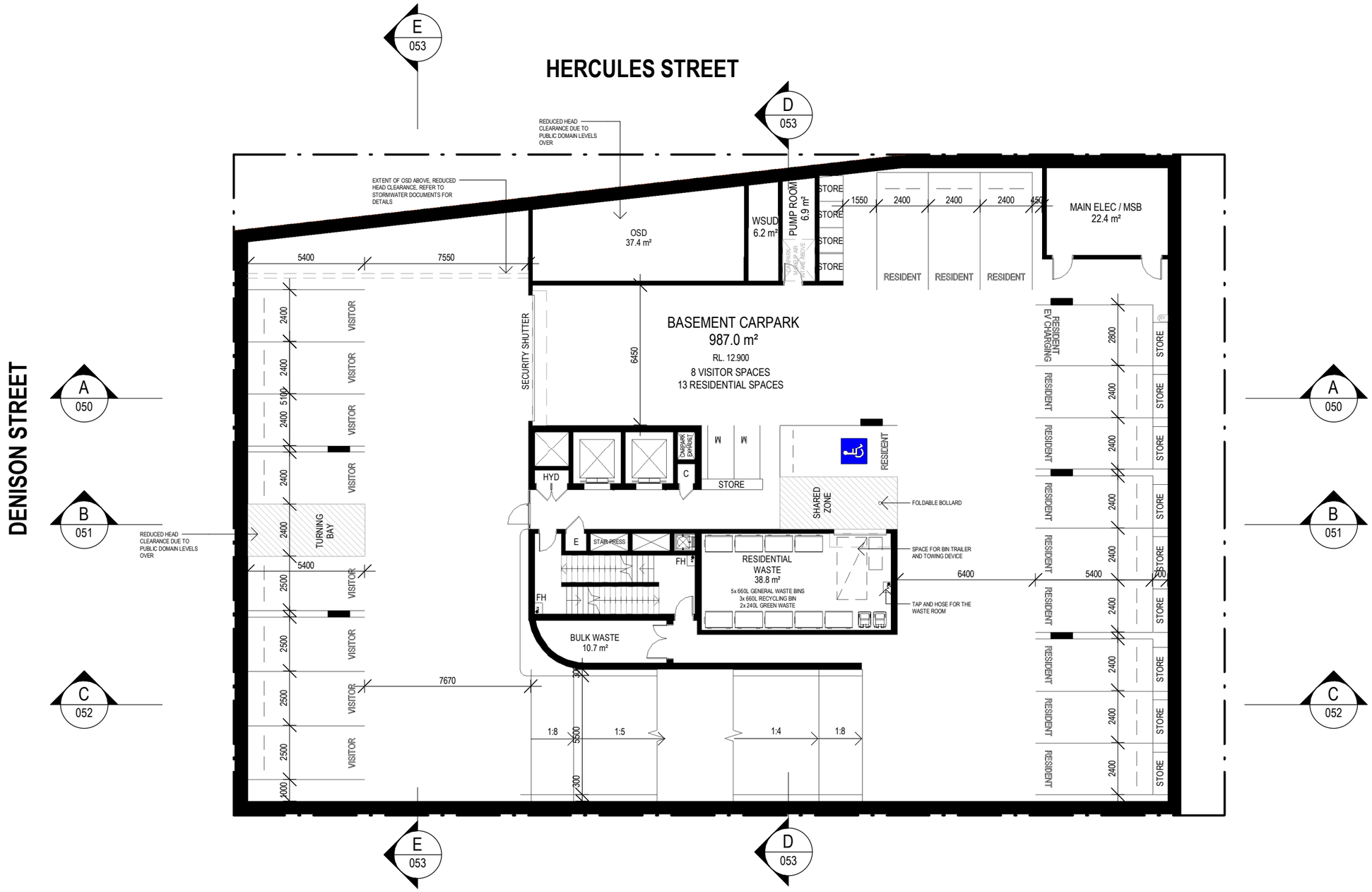

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Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE
ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW
DRAWING NAME: BASEMENT 1

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 07.07.2023
DRAWN: NT
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 020
Rev. AA

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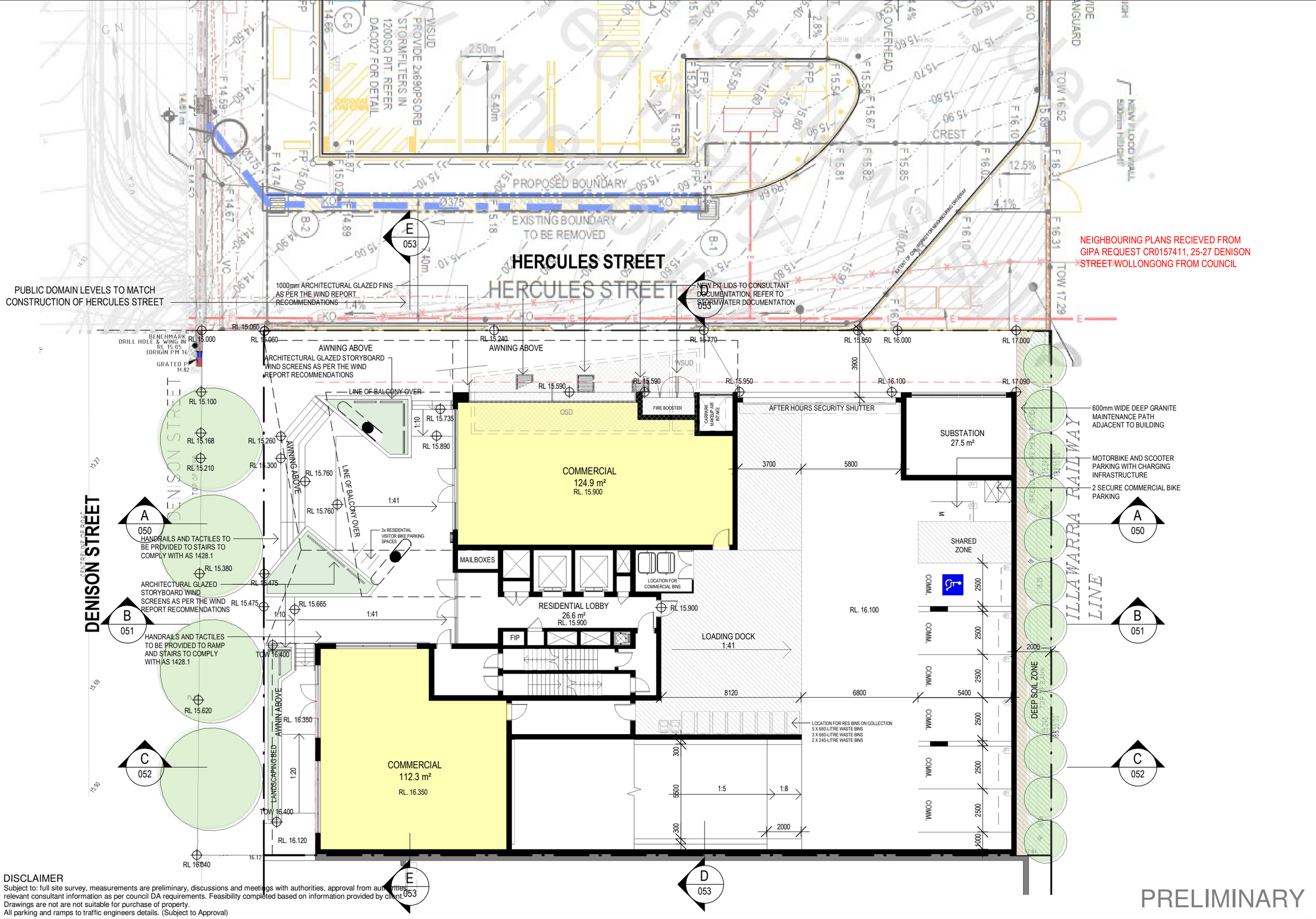

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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT:	RM DEVELOPMENTS PTY LTD MIXED USE
ADDRESS:	29-31 DENISON STREET, WOLLONGONG, NSW
DRAWING NAME:	GROUND FLOOR PLAN

SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE:	07.07.2023
DRAWN:	NT
SCALE:	1:200
QA:	RG
PROJECT No.	2415
DWG No.	021
Rev.	AA

A3

STORAGE UNITS

ACCESS CORRIDOR

STORAGE UNITS

1900

1560

3019

3000

ALUMINIUM VENTILATION LOUVRES

SITE BOUNDARY

E 053

HERCULES STREET

D 053

NEIGHBOURING PLANS RECIEVED FROM GIPA REQUEST CR0157411, 25-27 DENISON STREET WOLLONGONG FROM COUNCIL

DENISON STREET

A 050

B 051

C 052

AWNING BELOW

AWNING BELOW

AWNING BELOW

AWNING BELOW

3600

3600

3000

BALCONY 28.8 m²

BALCONY 16.0 m²

BALCONY 34.0 m²

1 BED 102 55.0 m² (ADAPTABLE)

BED 1 3600 x 3600

ROBE

1 BED 103 59.8 m² (ADAPTABLE)

1 BED 104 50.5 m² (ADAPTABLE)

ST

HYD

LOBBY 43.7 m² RL. 21.900

BALCONY 27.2 m²

2 BED 101 79.6 m² (ADAPTABLE)

BED 2 3000 x 3000

COURTYARD 18.3 m²

E

STAIR PRESS

FH

D/A WC

SERVICES/ GARDEN STORE

RL. 21.900

TOW 22.900

TOW 21.500

PODIUM PLANTER (1M SOIL DEPTH)

COMMUNITY PRODUCE GARDEN

TERRACED 3.5m WIDE DEEP SOIL PLANTER TO REAR (1500mm SOIL DEPTH)

PERGOLA LINE OVER

BUILDING LINE OVER

SCULPTURAL WIND SCREEN AND PLANTER, SEE LANDSCAPE PLANS FOR DETAILS

COMMUNAL OPEN SPACE 221.2 m²

(REFER LANDSCAPE ARCHITECTS DRAWINGS FOR DETAILS)

NOTE: ALL DOOR TO ADAPTABLE UNITS CAPABLE OF COMPLIANCE, DETAILS TO BE VERIFIED AT CC STAGE

10% OF UNITS (4 UNITS) REQUIRED TO BE ADAPTABLE
20% OF UNITS (8 UNITS) REQUIRED TO ACHIEVE SILVER (LIVABLE HOUSING)

TOTAL ADAPTABLE PROVIDED - 4 UNITS (101, 102, 103, 104)
TOTAL LIVABLE PROVIDED - 14 UNITS (101, 102, 103, 104, 203, 303, 403, 503, 603, 703, 803, 903, 1003, 1103)

(NOTE: SINCE 10% OF THE UNITS ALREADY COMPLY WITH ADAPTABLE UNIT REQUIREMENTS THESE UNITS ARE ALSO CAPABLE OF SATISFYING THE INTENT OF SILVER LEVEL OF LIVABLE HOUSING GUIDELINES).

PRELIMINARY

DISCLAIMER
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Sydney
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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET, WOLLONGONG, NSW

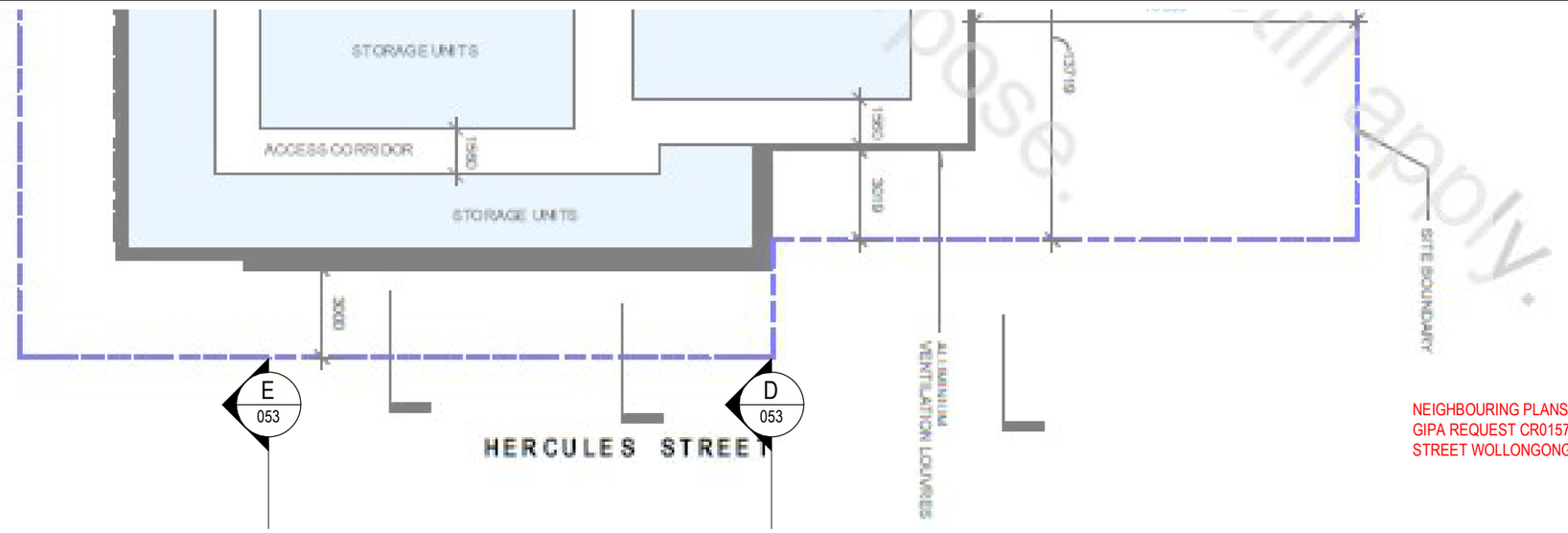
DRAWING NAME: LEVEL 1

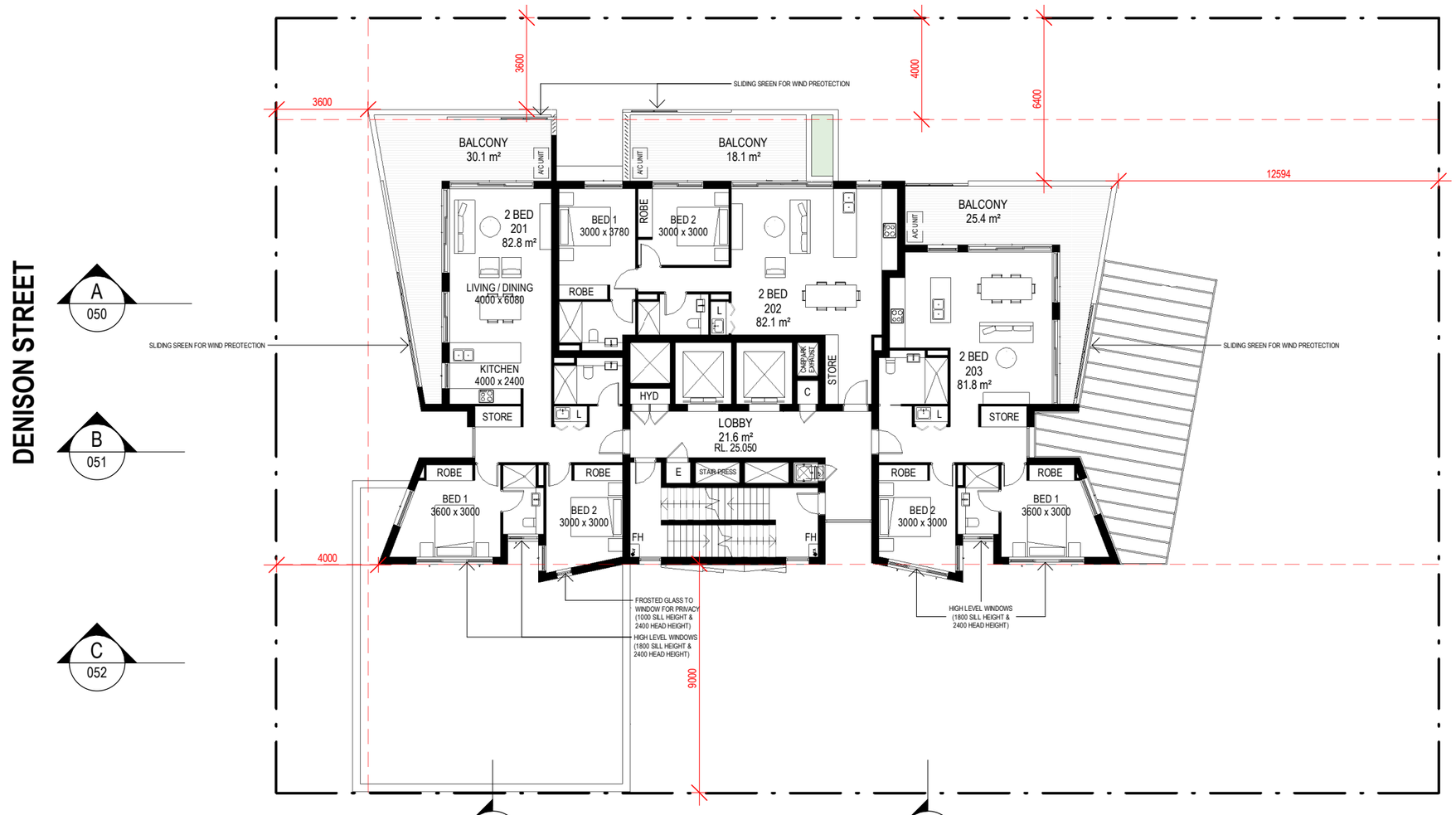
SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 022
Rev. Y

A3





10% OF UNITS (4 UNITS) REQUIRED TO BE ADAPTABLE
20% OF UNITS (8 UNITS) REQUIRED TO ACHIEVE SILVER (LIVABLE HOUSING)

TOTAL ADAPTABLE PROVIDED - 4 UNITS (101, 102, 103, 104)
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Nominated Architect:
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CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

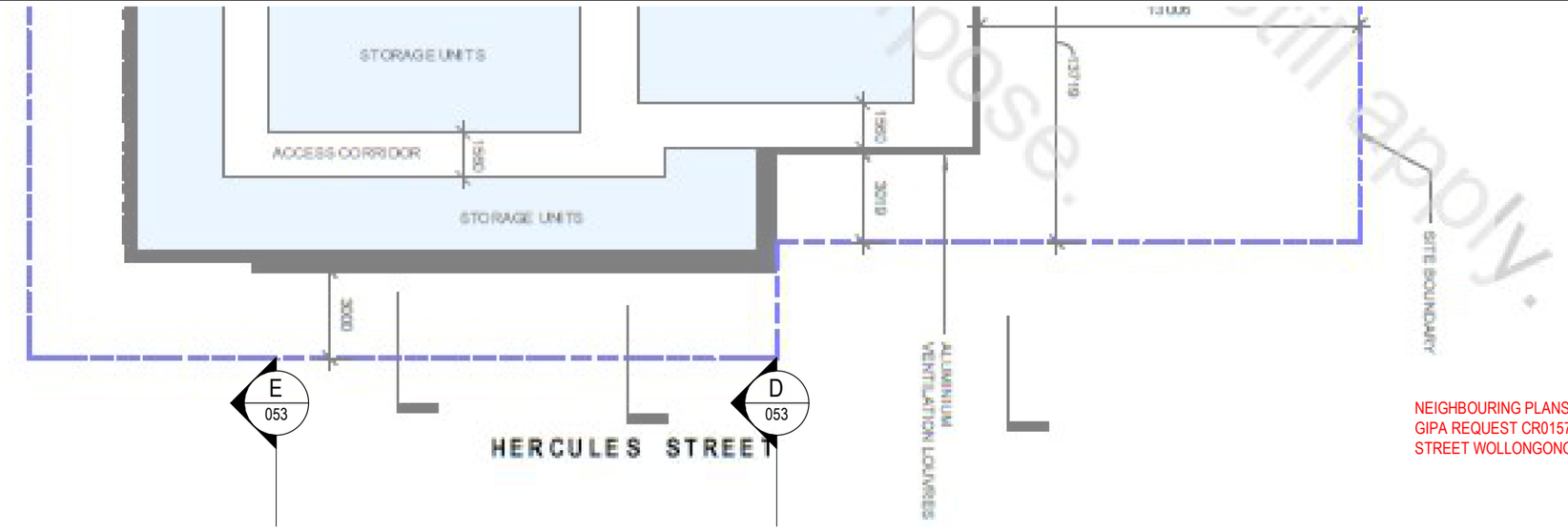
DRAWING NAME: LEVEL 2

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

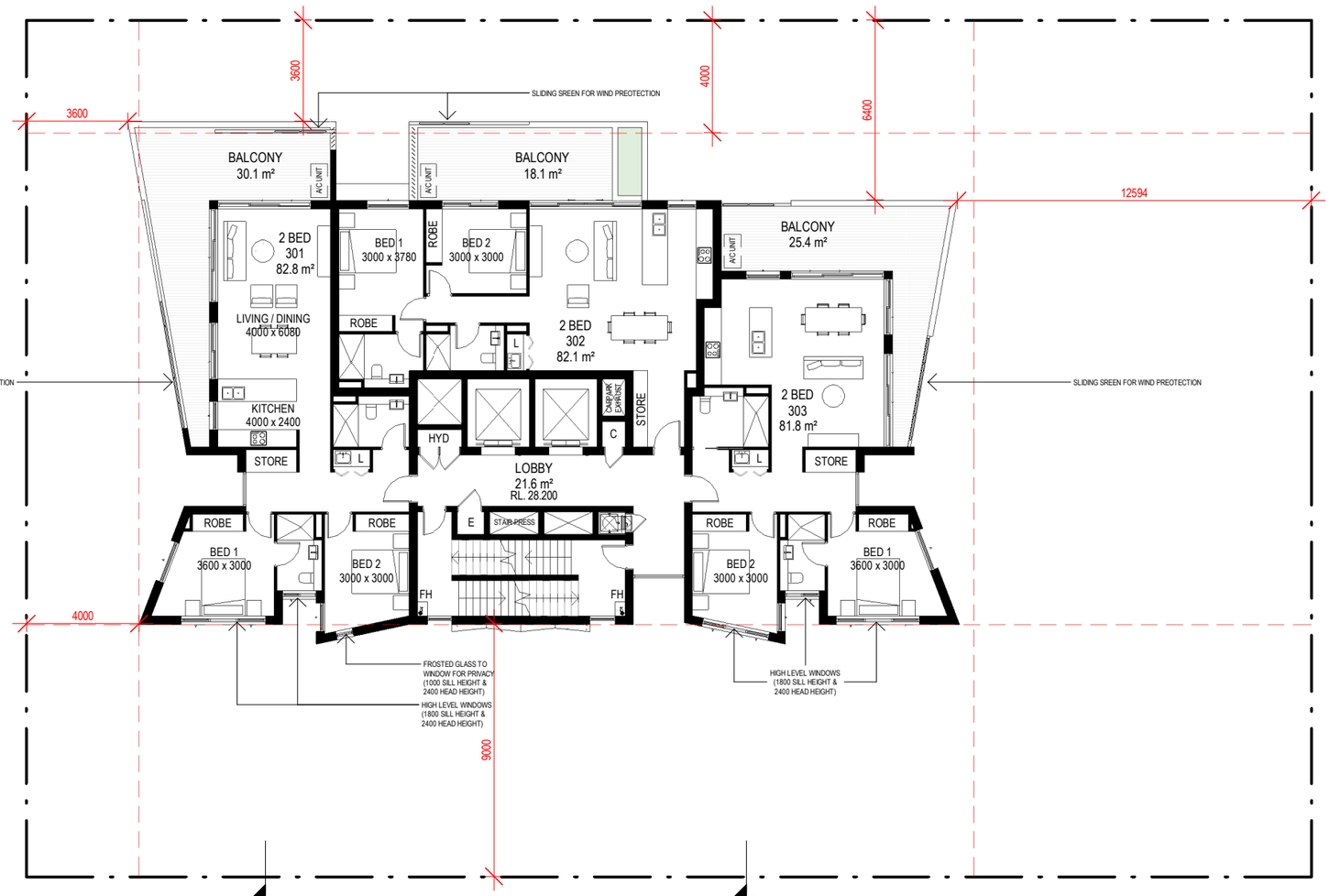
PROJECT No. 2415
DWG No. 023
Rev. Y

A3



NEIGHBOURING PLANS RECIEVED FROM GIPA REQUEST CR0157411, 25-27 DENISON STREET WOLLONGONG FROM COUNCIL

DENISON STREET



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TOTAL LIVABLE PROVIDED - 14 UNITS (101, 102, 103, 104, 203, 303, 403, 503, 603, 703, 803, 903, 1003, 1103)

(NOTE: SINCE 10% OF THE UNITS ALREADY COMPLY WITH ADAPTABLE UNIT REQUIREMENTS THESE UNITS ARE ALSO CAPABLE OF SATISFYING THE INTENT OF SILVER LEVEL OF LIVABLE HOUSING GUIDELINES).

PRELIMINARY

DISCLAIMER
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All parking and ramps to traffic engineers details. (Subject to Approval)

REF.	DATE	AMENDMENT
Y	05.05.2023	ADDITIONAL INFORMATION

DWA
DESIGN WORKSHOP AUSTRALIA

Wollongong
81a Princes Highway,
Fairy Meadow NSW 2519
Tel: (02) 4227 1661
Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205

Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

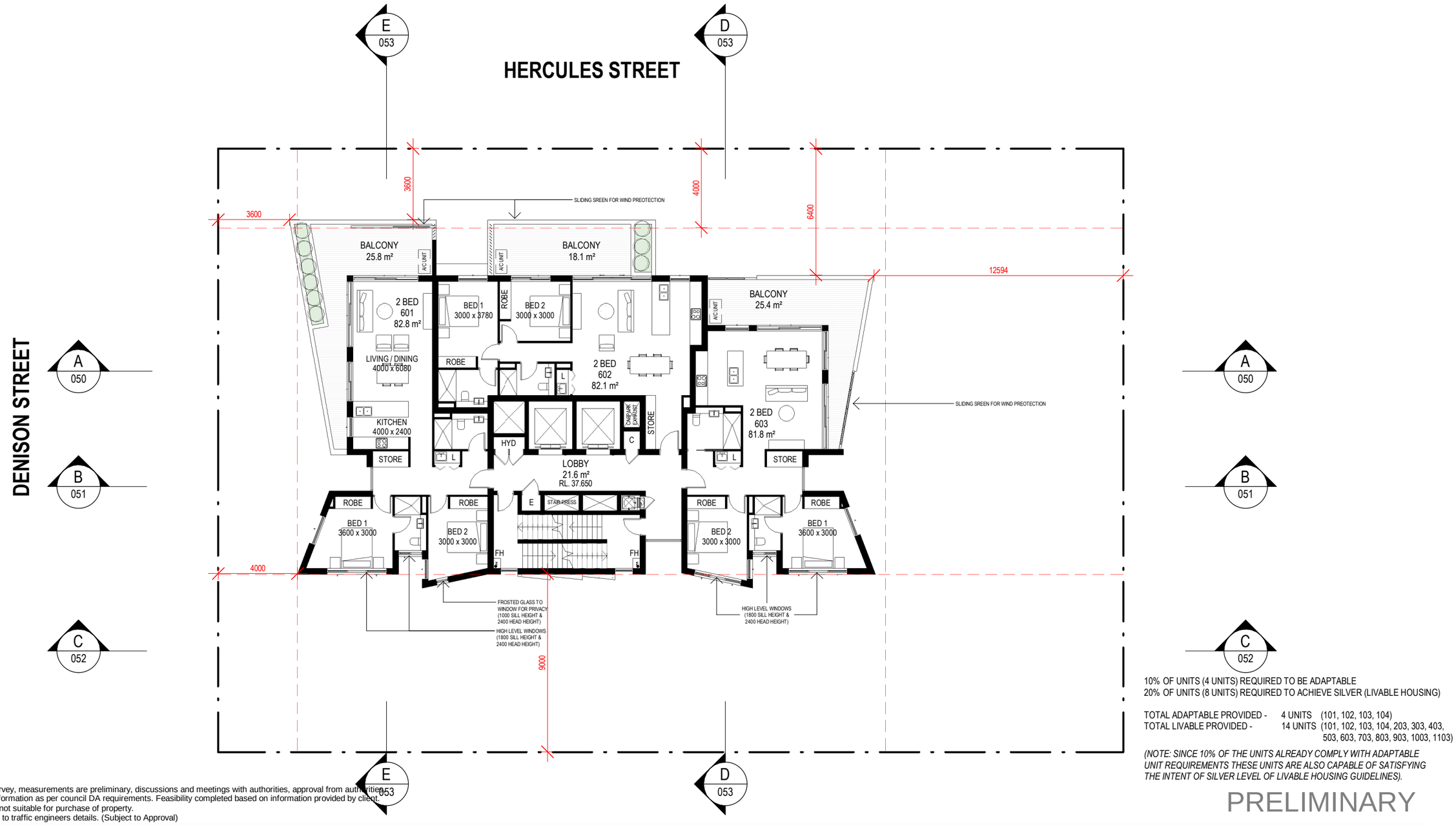
DRAWING NAME: LEVEL 03-05 (TYPICAL)

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 024
Rev. Y

A3



10% OF UNITS (4 UNITS) REQUIRED TO BE ADAPTABLE
20% OF UNITS (8 UNITS) REQUIRED TO ACHIEVE SILVER (LIVABLE HOUSING)

TOTAL ADAPTABLE PROVIDED - 4 UNITS (101, 102, 103, 104)
TOTAL LIVABLE PROVIDED - 14 UNITS (101, 102, 103, 104, 203, 303, 403, 503, 603, 703, 803, 903, 1003, 1103)

(NOTE: SINCE 10% OF THE UNITS ALREADY COMPLY WITH ADAPTABLE UNIT REQUIREMENTS THESE UNITS ARE ALSO CAPABLE OF SATISFYING THE INTENT OF SILVER LEVEL OF LIVABLE HOUSING GUIDELINES).

PRELIMINARY

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Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

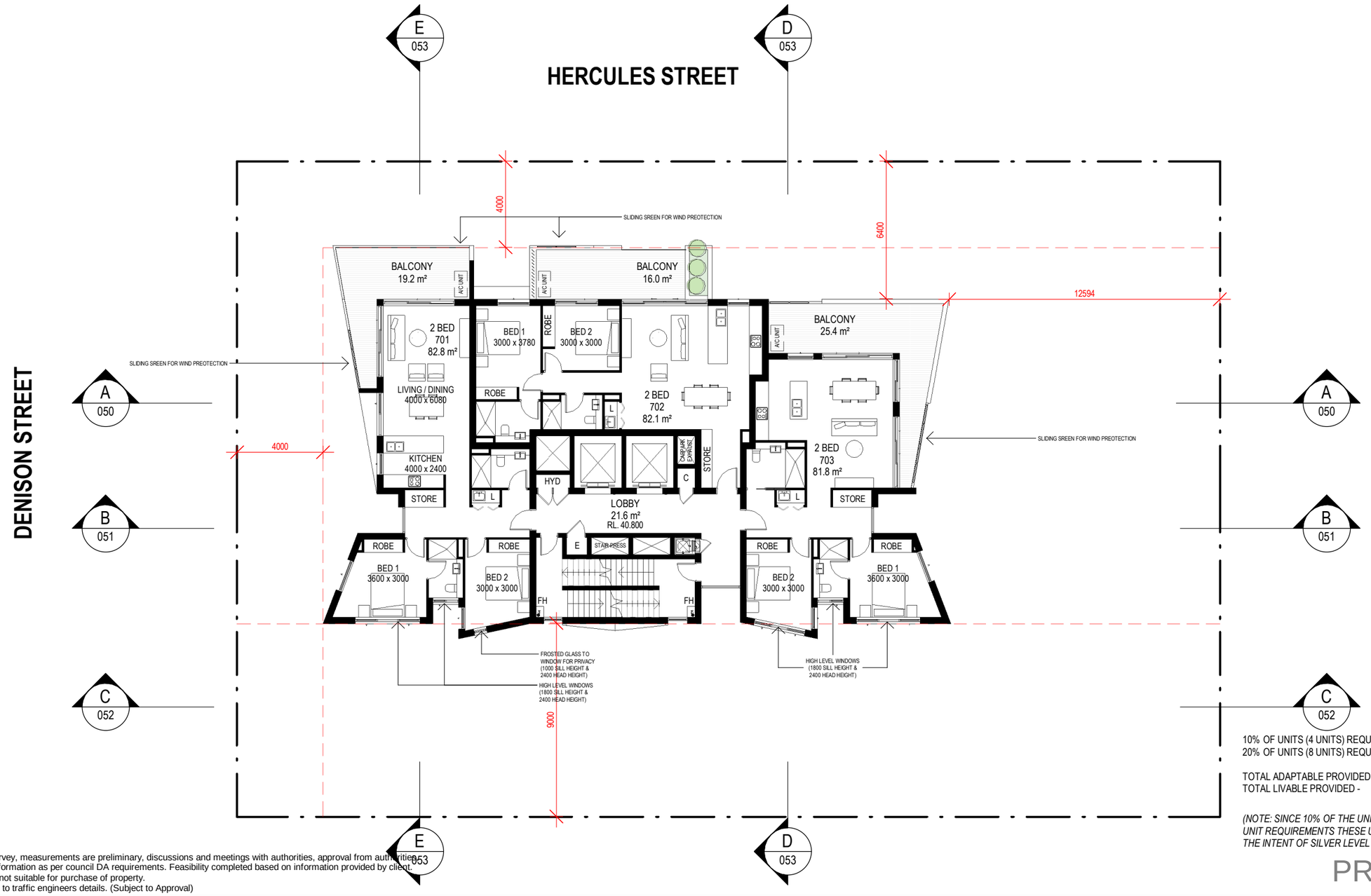
DRAWING NAME: LEVEL 06

SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 025
Rev. Y

A3



10% OF UNITS (4 UNITS) REQUIRED TO BE ADAPTABLE
20% OF UNITS (8 UNITS) REQUIRED TO ACHIEVE SILVER (LIVABLE HOUSING)

TOTAL ADAPTABLE PROVIDED - 4 UNITS (101, 102, 103, 104)
TOTAL LIVABLE PROVIDED - 14 UNITS (101, 102, 103, 104, 203, 303, 403, 503, 603, 703, 803, 903, 1003, 1103)

(NOTE: SINCE 10% OF THE UNITS ALREADY COMPLY WITH ADAPTABLE UNIT REQUIREMENTS THESE UNITS ARE ALSO CAPABLE OF SATISFYING THE INTENT OF SILVER LEVEL OF LIVABLE HOUSING GUIDELINES).

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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

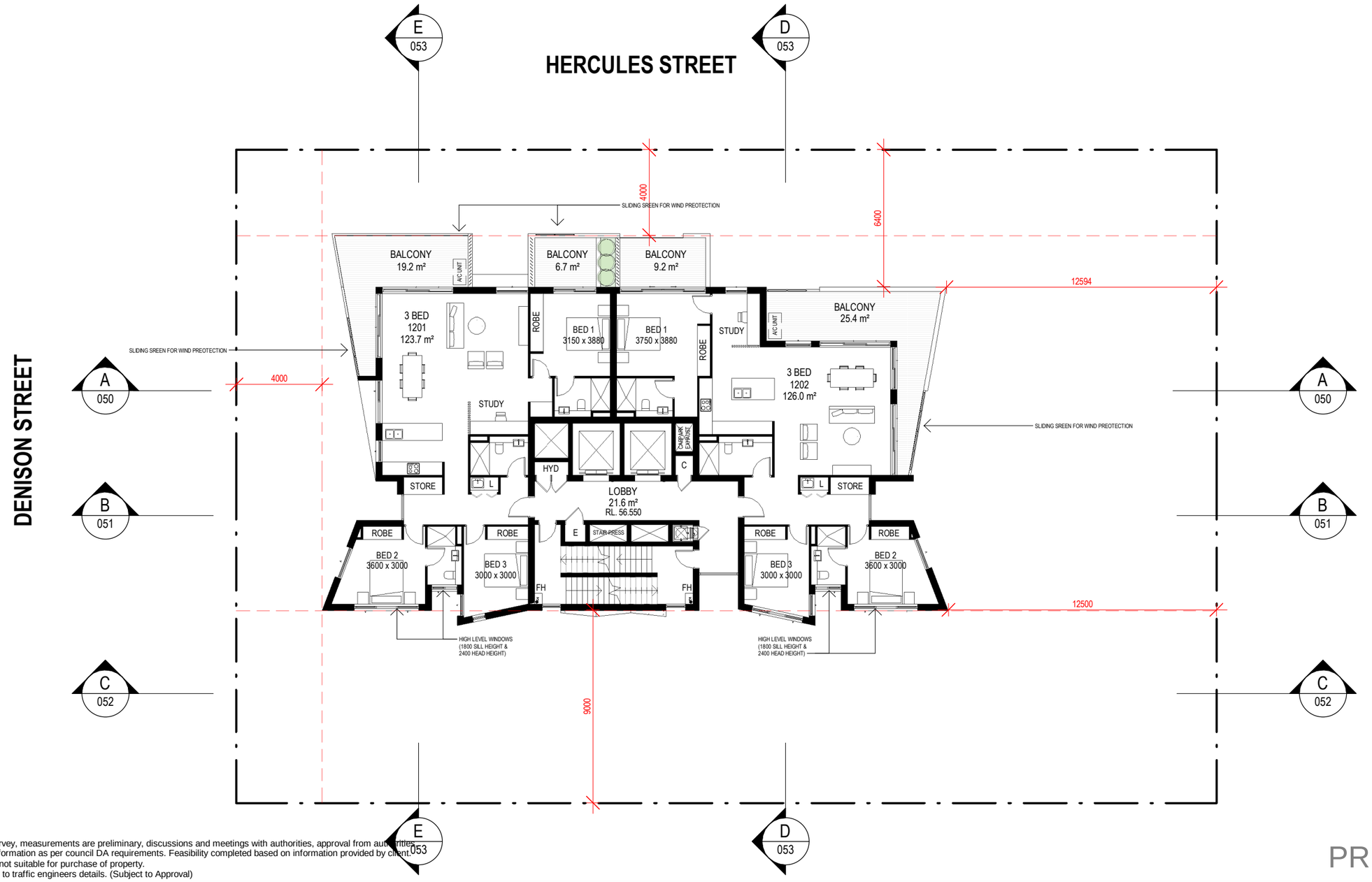
CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE
ADDRESS: 29-31 DENISON STREET, WOLLONGONG, NSW
DRAWING NAME: LEVEL 07-11 (TYPICAL)

SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 026
Rev. Y

A3



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Sydney
Level 10, 6 Mount
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Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

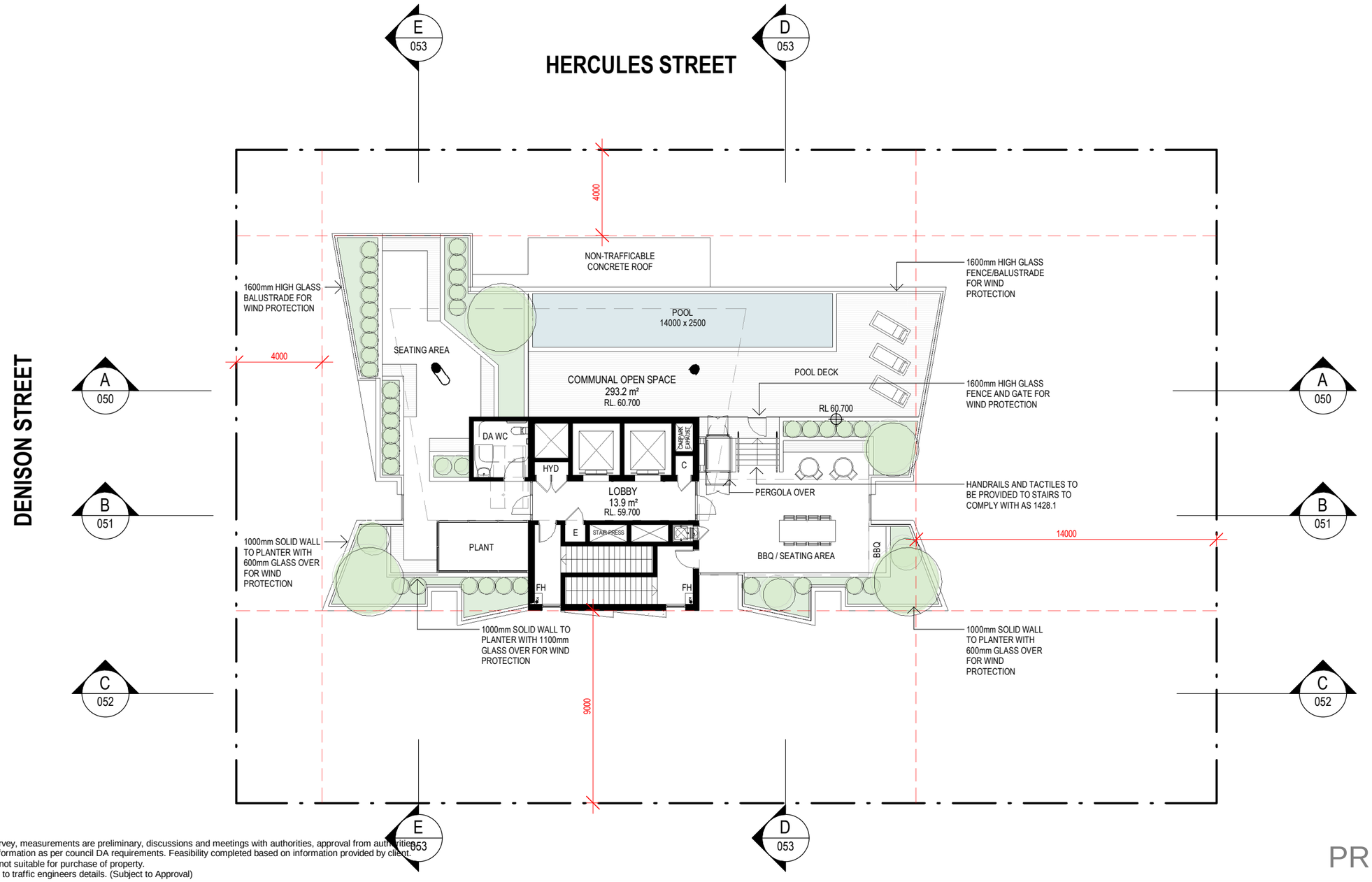
DRAWING NAME: LEVEL 12

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 027
Rev. Y

A3



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Level 10, 6 Mount Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET, WOLLONGONG, NSW

DRAWING NAME: LEVEL 13

SCALE BAR: 0 2.5 5 7.5 10m

ISSUE DATE: 05.05.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 028
Rev. Y

A3

SC01 – TIMBER LOOK SCREENS
EQUAL TO EVER ART WOOD CLADDING
BURAUN GUREI

WF – WINDOW FRAME
ALUMINIUM POWDERCOAT
COLOUR - 'WHITE'

PC01 - PRECAST PANEL
CONCRETE FINISH 1
NAWKAW WHITE WITH AGGREGATE FINISH

PC02 - PRECAST PANEL
CONCRETE FINISH 2
NAWKAW GREY WITH AGGREGATE FINISH

FB01 FACEBRICKWORK
STACKED CHARCOAL BRICKWORK WITH
MATCHING MOTAR

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Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: WEST ELEVATION

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 07.07.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 042
Rev. AA

A3

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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

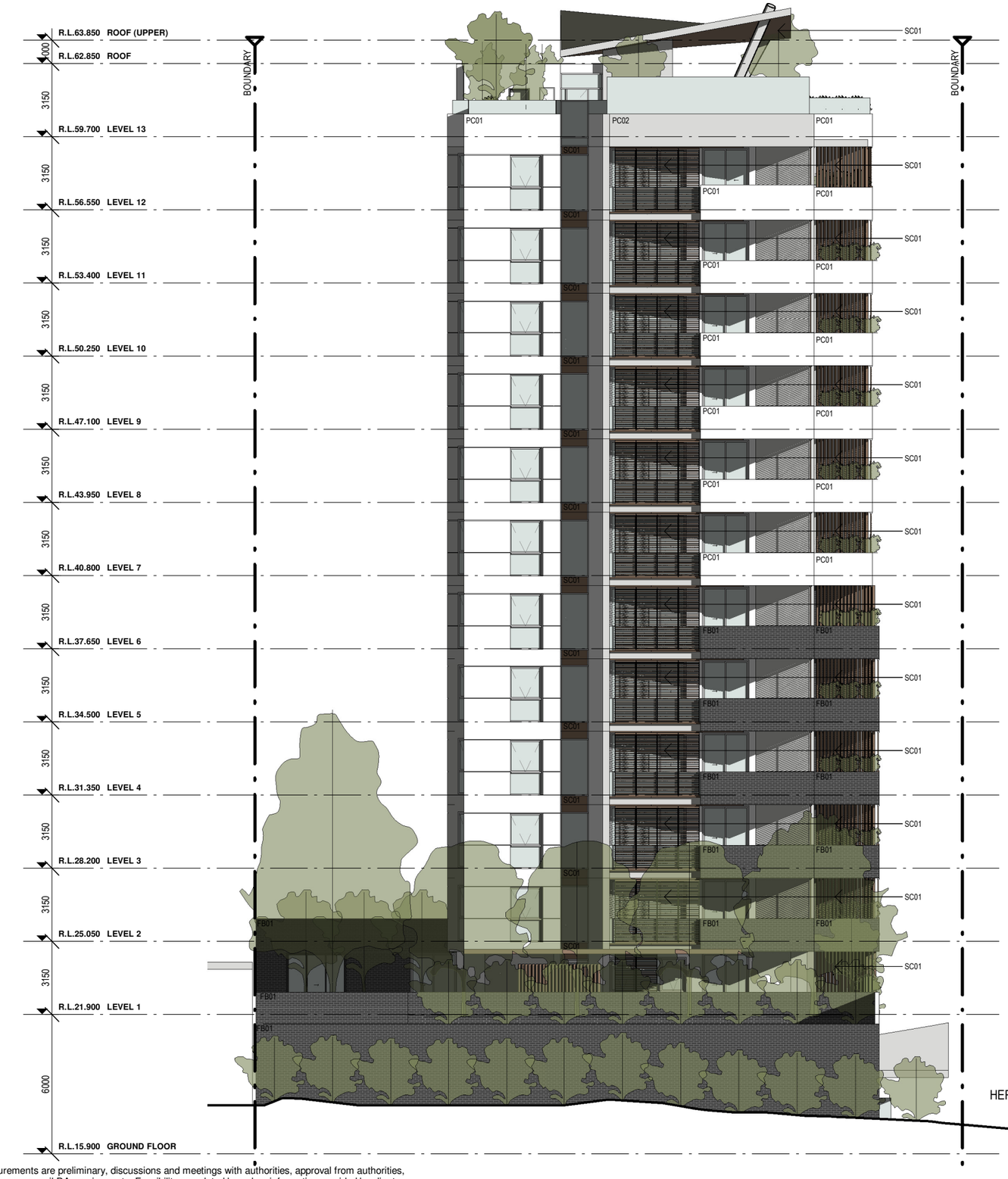
DRAWING NAME: NORTH ELEVATION

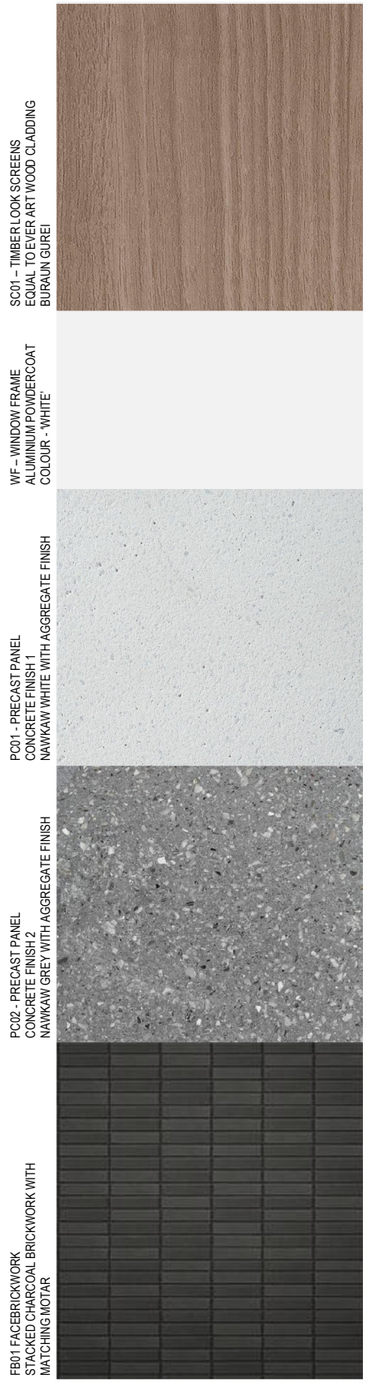
SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 07.07.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 043
Rev. AA

A3





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Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: EAST ELEVATION

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 07.07.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 044
Rev. AA

A3

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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

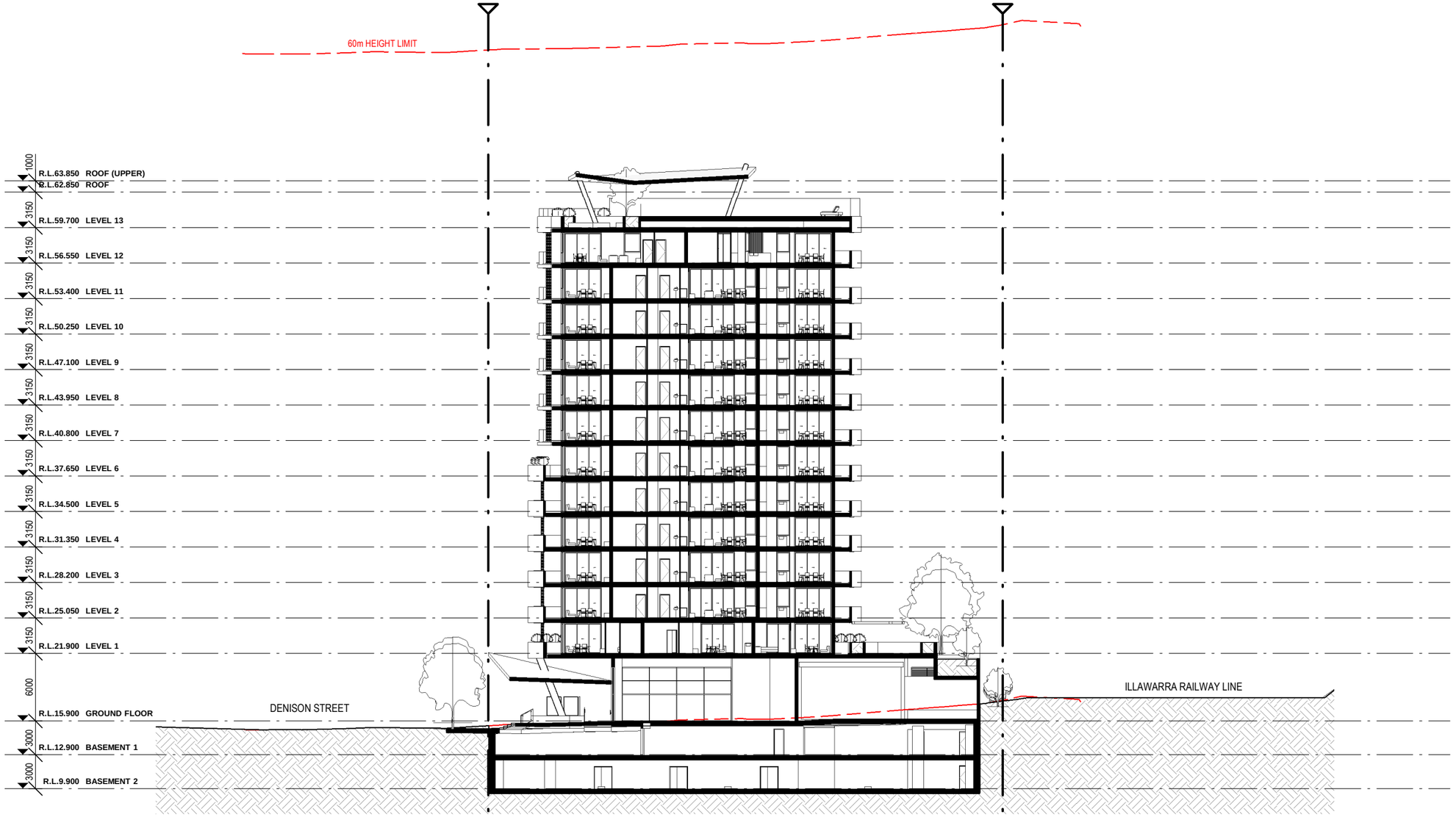
DRAWING NAME: SOUTH ELEVATION

SCALE BAR:
0 2.5 5 7.5 10m

ISSUE DATE: 07.07.2023
DRAWN: NT / AK
SCALE: 1:200
QA: RG

PROJECT No. 2415
DWG No. 045
Rev. AA

A3



SECTION A

1 : 400

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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: SECTIONS

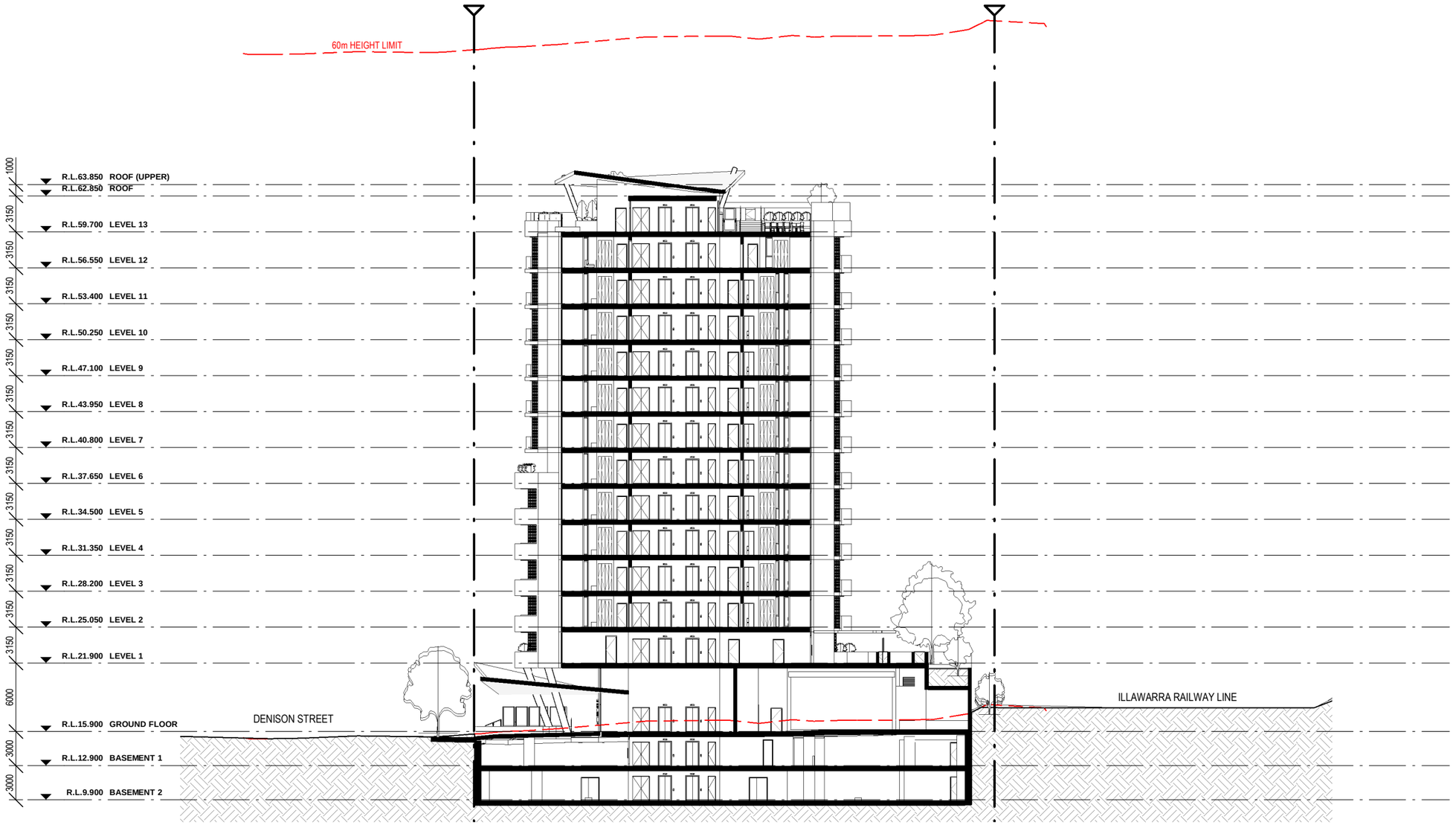
SCALE BAR:

0 10 20m

ISSUE DATE: 05.05.2023
DRAWN: NT
SCALE: 1:400
QA: RG

PROJECT No. 2415
DWG No. 050
Rev. Y

A3



SECTION B

1 : 400

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DWA
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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: SECTIONS

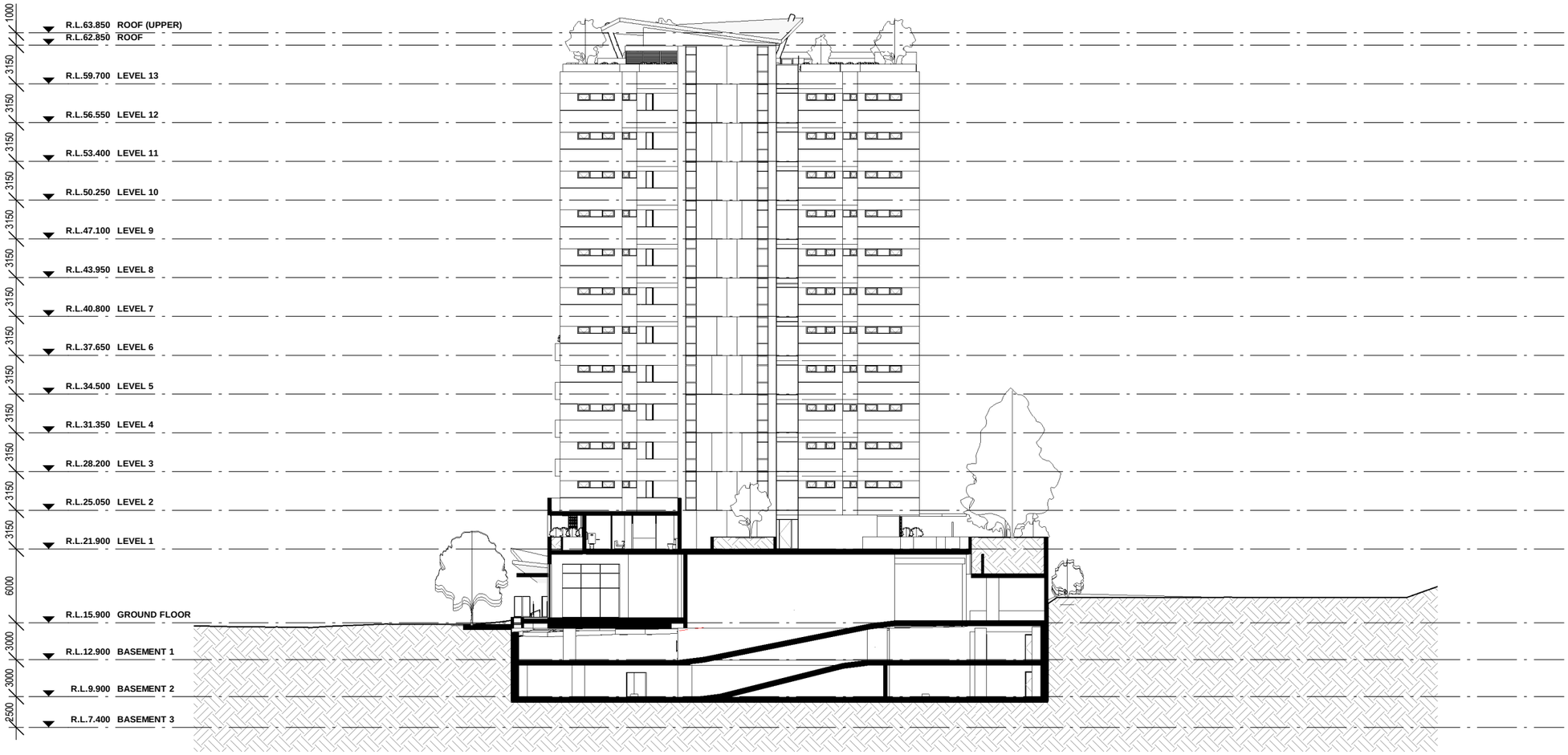
SCALE BAR:

0 10 20m

ISSUE DATE: 05.05.2023
DRAWN: NT
SCALE: 1:400
QA: RG

PROJECT No. 2415
DWG No. 051
Rev. Y

A3



SECTION C

1 : 400

DISCLAIMER

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Web: www.designworkshop.com.au

Sydney
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Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: SECTIONS

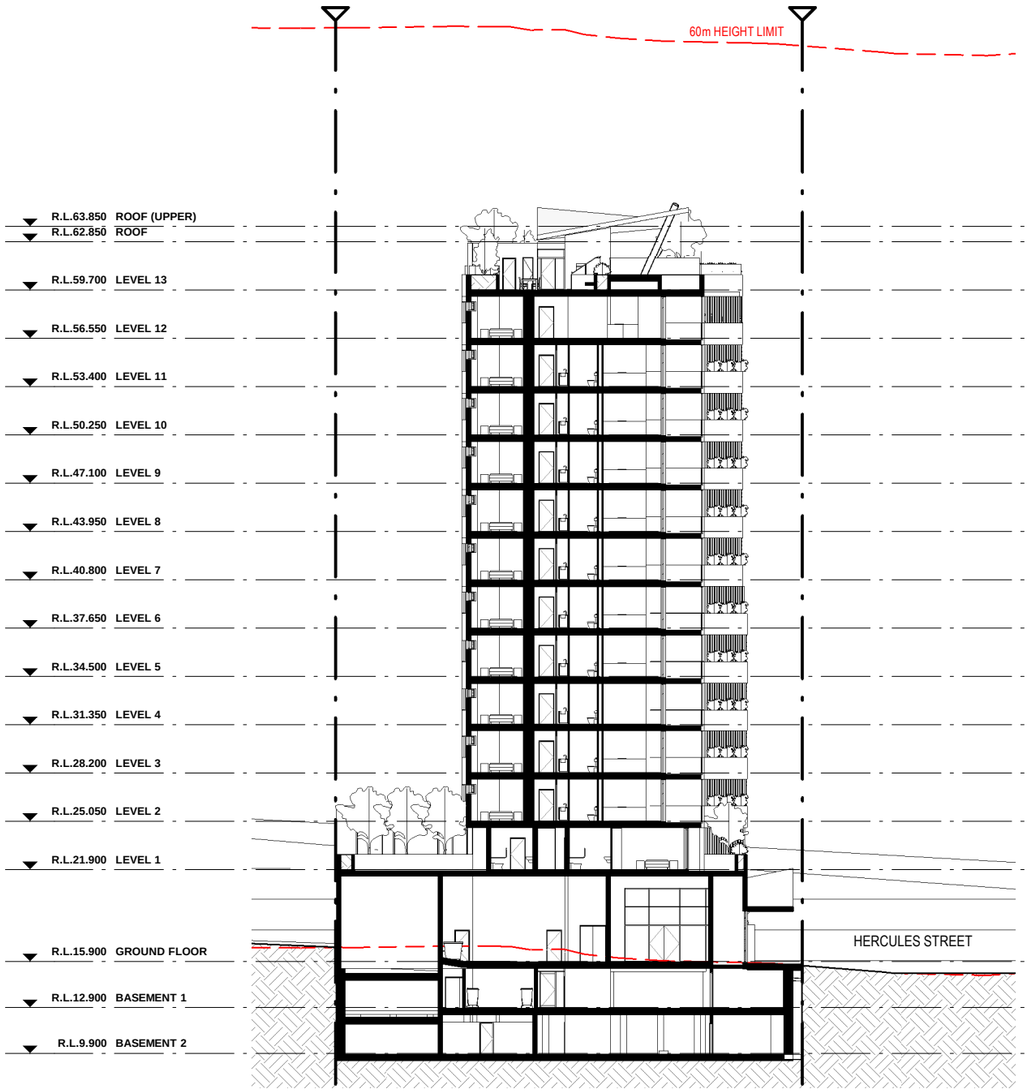
SCALE BAR:

0 10 20m

ISSUE DATE: 05.05.2023
DRAWN: NT
SCALE: 1:400
QA: RG

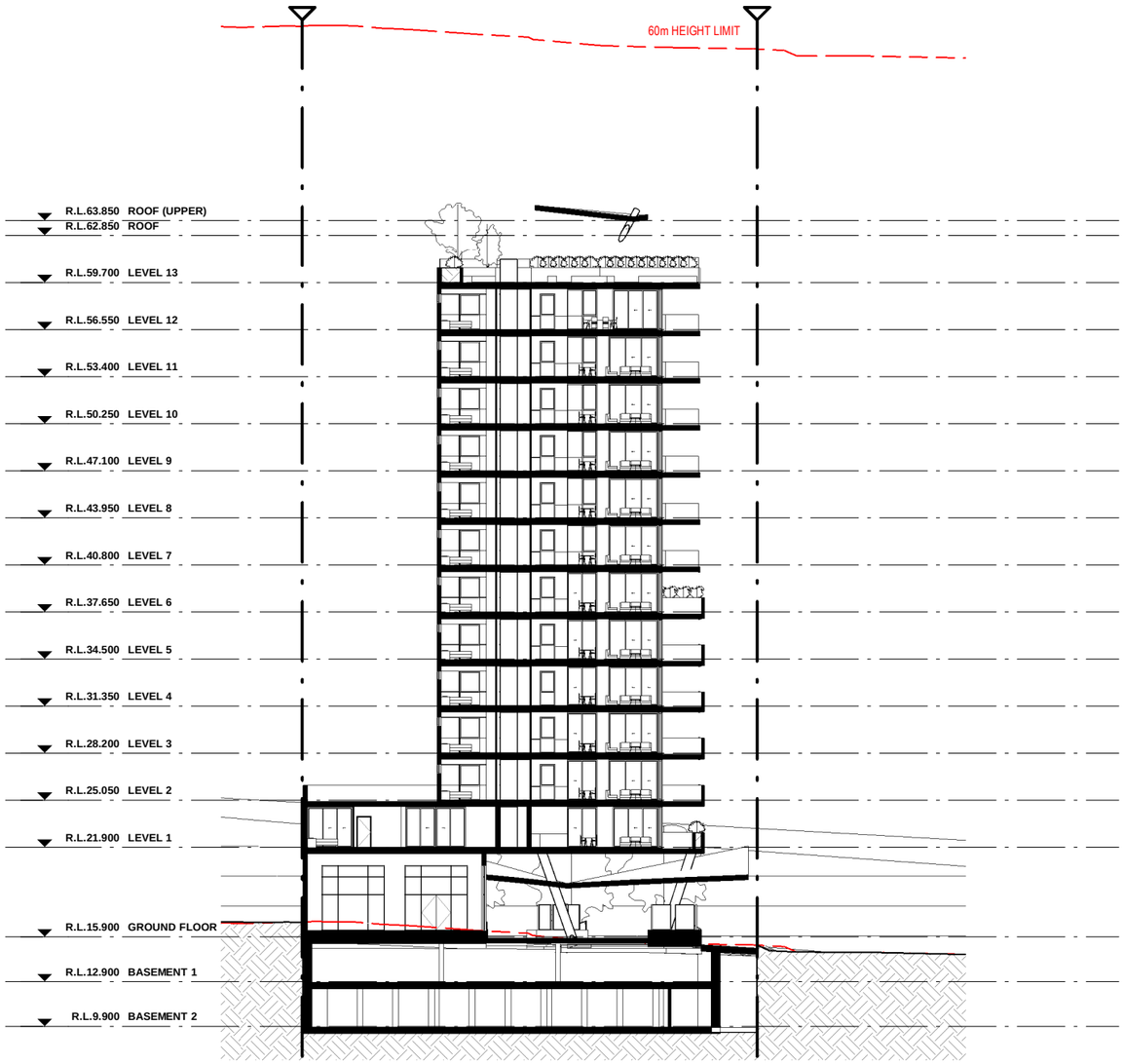
PROJECT No. 2415
DWG No. 052
Rev. Y

A3



SECTION D

1 : 400



SECTION E

1 : 400

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Web: www.designworkshop.com.au

Sydney
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Olympus Boulevard,
Wolli Creek NSW 2205

Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET,
WOLLONGONG, NSW

DRAWING NAME: SECTIONS

SCALE BAR:

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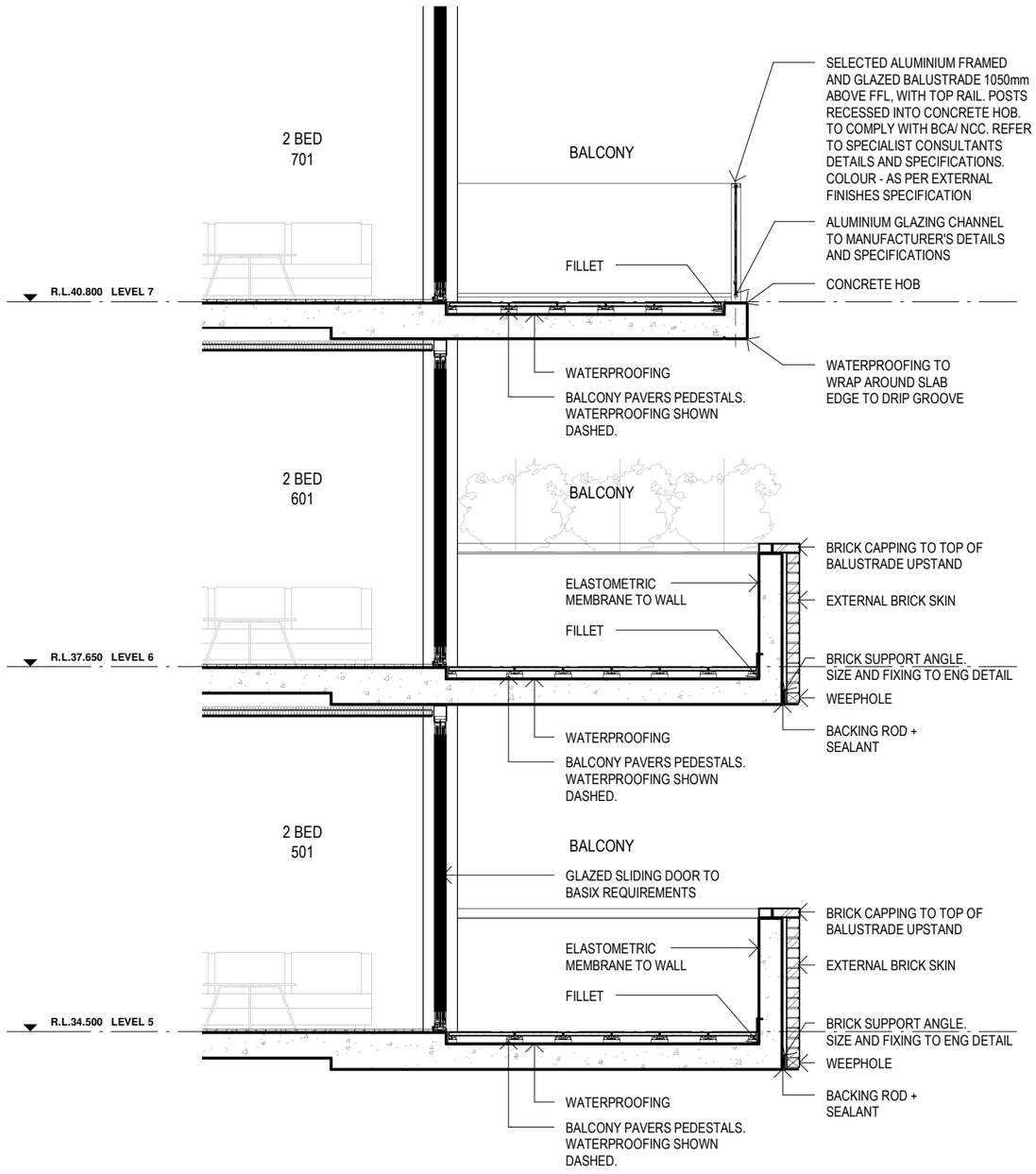
ISSUE DATE: 05.05.2023
DRAWN: NT
SCALE: 1:400
QA: RG

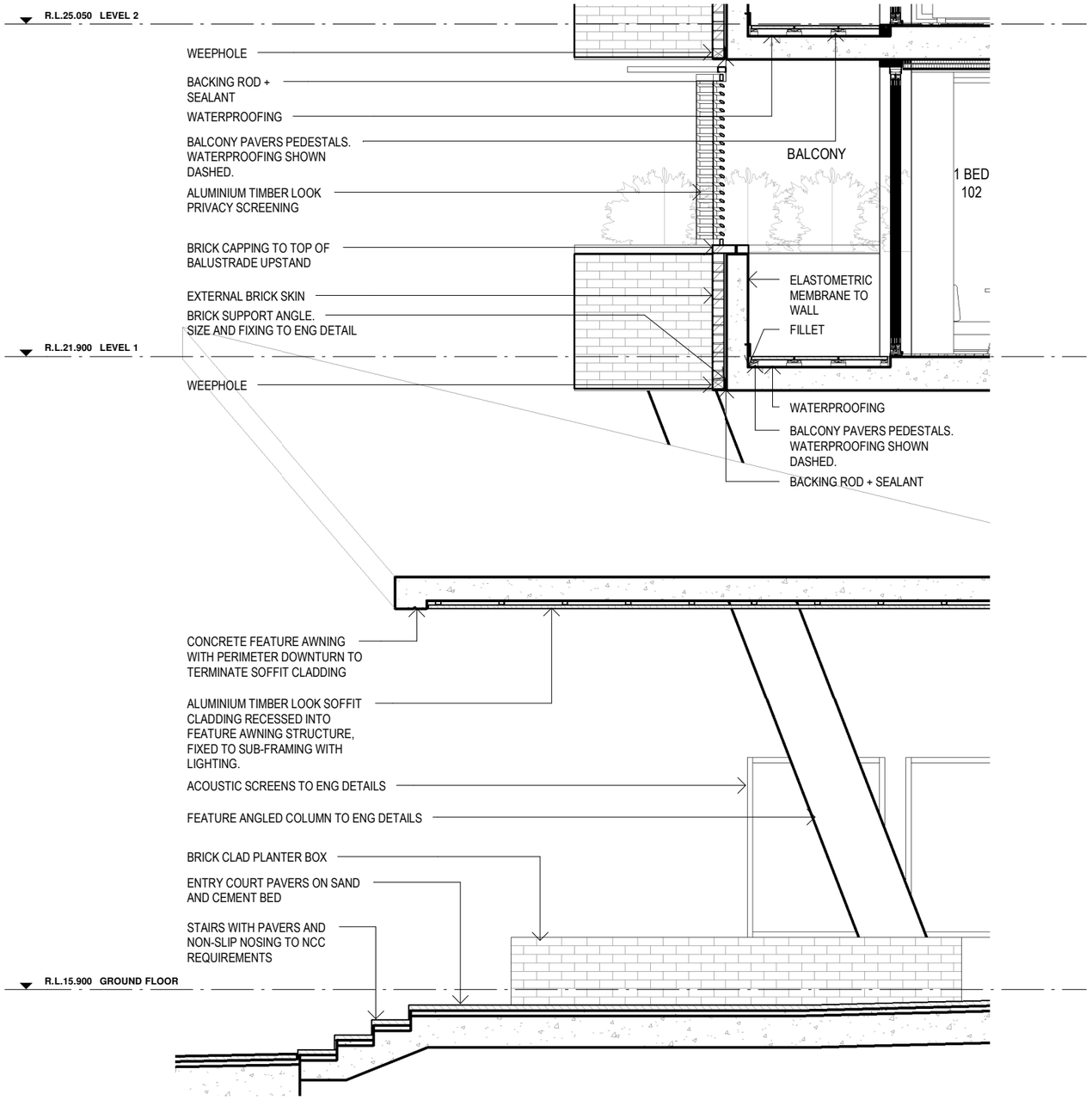
PROJECT No. 2415
DWG No. 053
Rev. Y

A3



DETAIL SECTION - BALCONY DETAILS

1 : 50



DETAIL SECTION - AWNING DETAIL

1 : 50

DISCLAIMER

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PRELIMINARY

REF.	DATE	AMENDMENT
AA	07.07.2023	ADDITIONAL INFORMATION

DESIGN WORKSHOP AUSTRALIA

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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: RM DEVELOPMENTS PTY LTD
MIXED USE

ADDRESS: 29-31 DENISON STREET, WOLLONGONG, NSW

DRAWING NAME: DETAIL SECTIONS

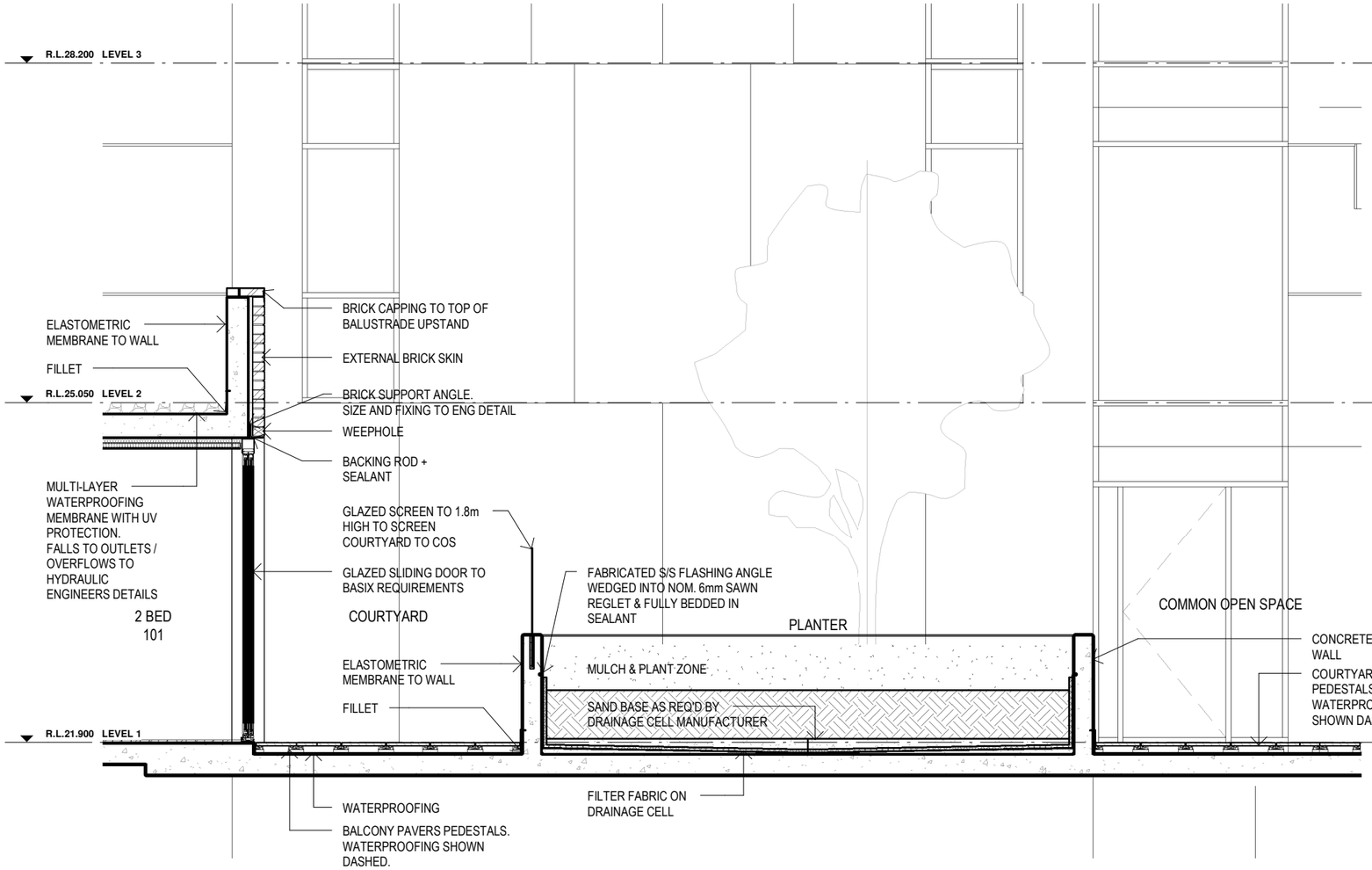
SCALE BAR:

0 0.5 1 1.5 2 2.5m

ISSUE DATE: 07.07.2023
DRAWN: NT/SL
SCALE: 1:50
QA: RG

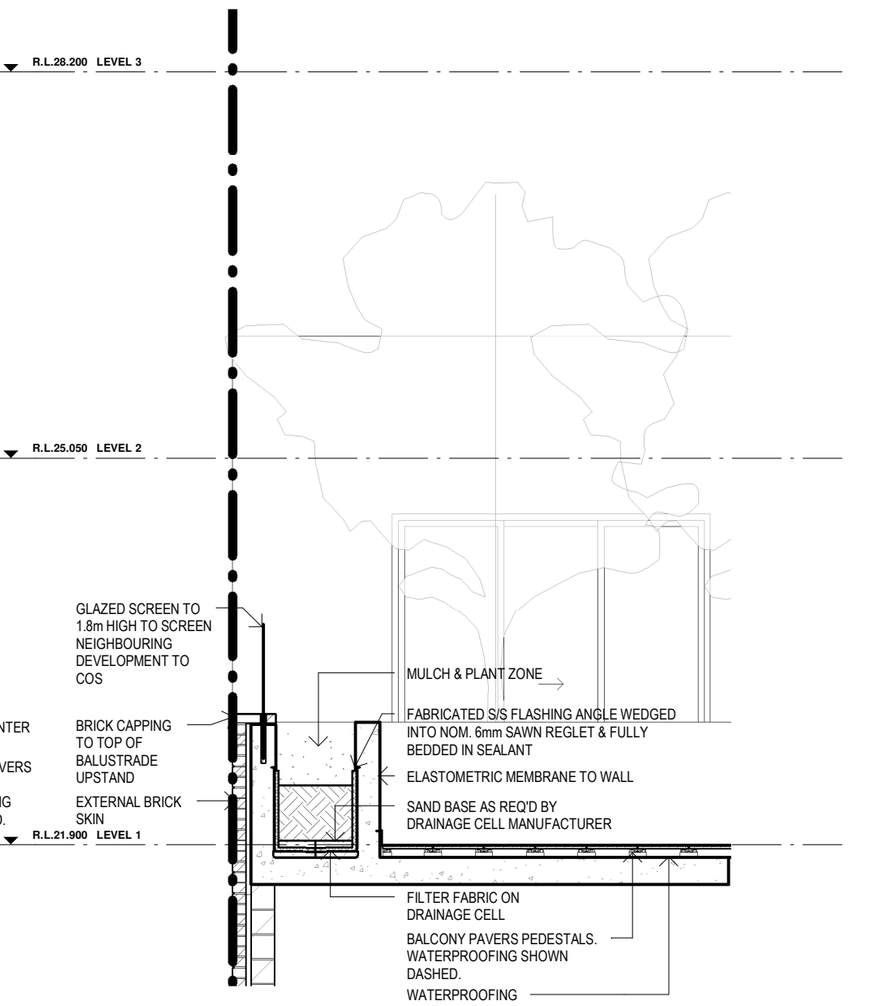
PROJECT No. 2415
DWG No. 054
Rev. AA

A3



DETAIL SECTION - COMMON OPEN SPACE

1 : 50



DETAIL SECTION - BOUNDARY INTERFACE

1 : 50

DISCLAIMER

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PRELIMINARY

REF.	DATE	AMENDMENT
AA	07.07.2023	ADDITIONAL INFORMATION

DWA
DESIGN WORKSHOP AUSTRALIA

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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT:	RM DEVELOPMENTS PTY LTD MIXED USE
ADDRESS:	29-31 DENISON STREET, WOLLONGONG, NSW
DRAWING NAME:	DETAIL SECTIONS

SCALE BAR:

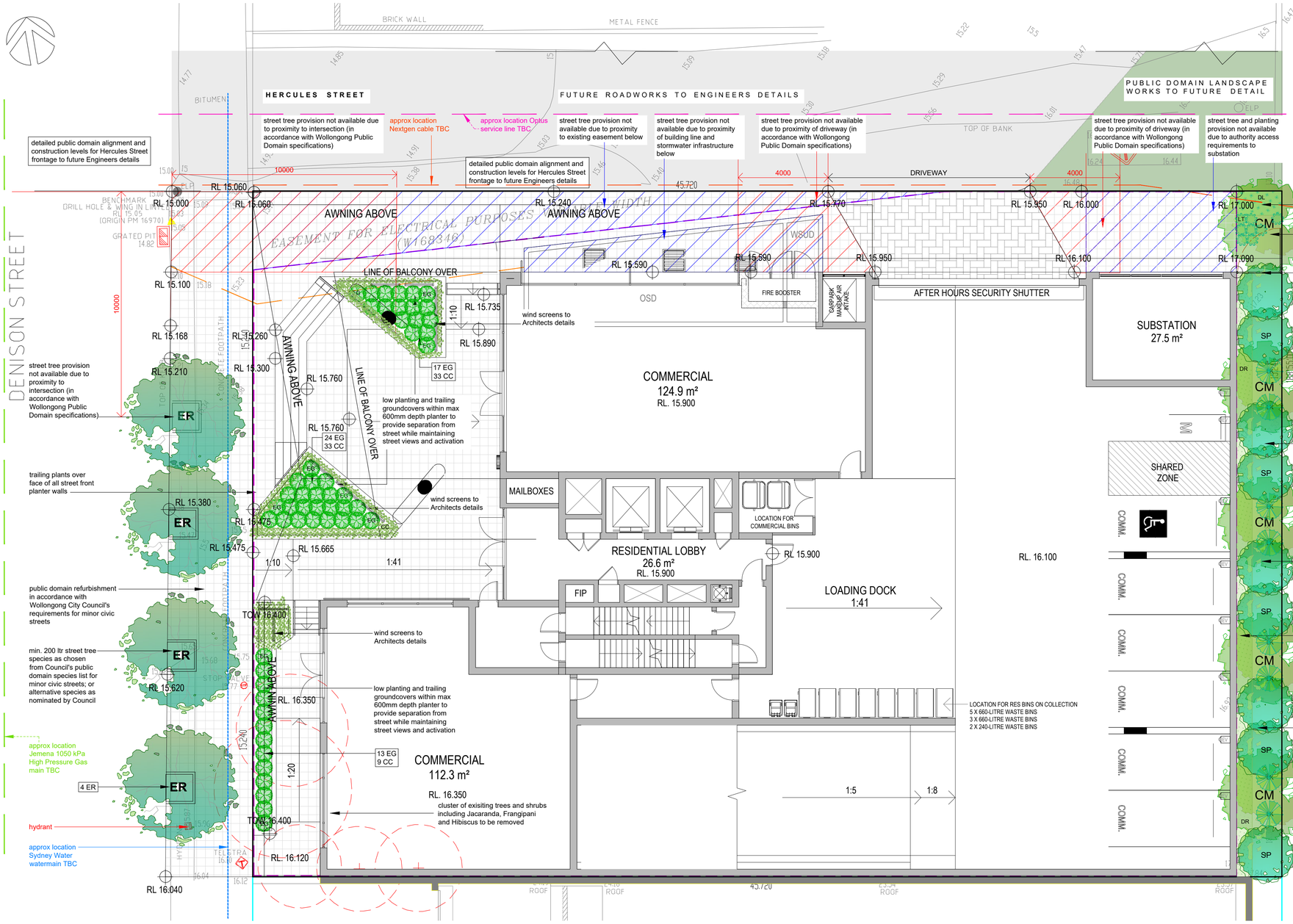
0 0.5 1 1.5 2 2.5m

ISSUE DATE:	07.07.2023
DRAWN:	NT/SL
SCALE:	1:50
QA:	RG
PROJECT No.	2415
DWG No.	055
Rev.	AA

A3

A1

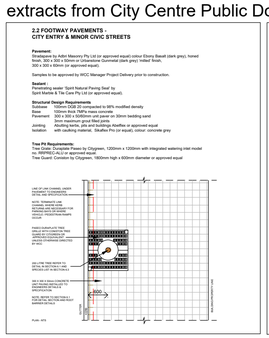
DIAL 1100 BEFORE YOU DIG www.1100.com.au

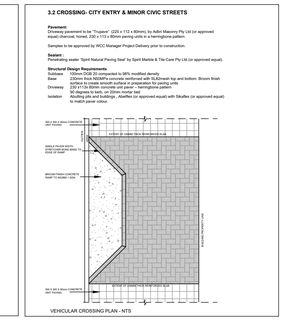


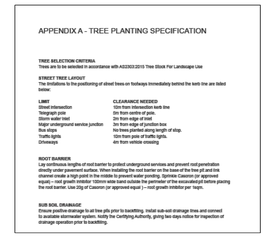
GROUND FLOOR 1:100

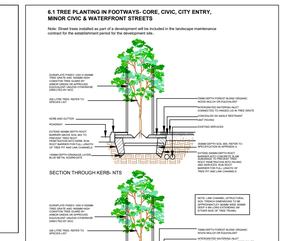
0 1 2 3 4 5 10m

extracts from City Centre Public Domain Manual









Legend

- Jemena Gas
- Sydney Water
- Nextgen Cable
- Optus Service Line
- Hercules St - precluded street tree/planting zone due to Council Public Domain restrictions
- Hercules St - precluded street tree/planting zone due to essential site services restrictions

PLANT CODES
(refer also to plant schedule)

CC	Casuarina 'Cousin It'
CM	Corymbia maculata 'Gamai'
DL	Dianella caerulea 'Lucia'
DR	Dichondra repens
EG	Eremophila 'Blue Horizon'
ER	Elaeocarpus reticulatus
LK	Lomandra hystrix 'Katie Belles'
LT	Lomandra longifolia 'Tanika'
SP	Syzygium australe 'Pinnacle'

IRRIGATION NOTE
1. All mass planted beds will require a fully automated irrigation system which is to be designed and installed by an appropriately qualified irrigation consultant, Landscape Contractor or tredesperson prior to planting.
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5. The site superintendent and all other relevant personnel shall be fully conversant with the operational requirements of the system prior to planting taking place.

SAMPLE IMAGES

street trees to denison street

SAMPLE PLANT IMAGES

Blueberry Ash | Narrow Spotted Gum | Narrow Brush Cherry | Mat Rush | Tanika Mat Rush | Flax Lily | Emu Bush | Groundcover She Oak | Native Kidney Plant

DISCLAIMER
Every effort is made to ensure the accuracy of these documents, however they should be thoroughly checked before being issued to any other persons or authority or used for construction purposes. Any inaccuracies, omissions or discrepancies should be referred back to Zenith Landscape Designs immediately.

These drawings maybe printed in whole. The drawings and parts thereof remain the intellectual property of Zenith Landscape Designs and may not be used in part or whole for any other purpose without the prior permission of Zenith Landscape Designs.

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9. It is recommended that an approved root barrier be installed to manufacturers recommendations to all tree planting in the vicinity of structures, walls and hard pavement areas.

NOT FOR CONSTRUCTION

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B	REVISED ARCHITECTURAL DESIGN	06.07.2022	E	REVISED ARCHITECTURAL DESIGN	08.05.2023
C	REVISED ARCHITECTURAL DESIGN	17.10.2022			

AILDM

ARBORIST:
SURVEY: C ROBSON & ASSOC
HYDRAULIC: ATB
ARCHITECT: DWA

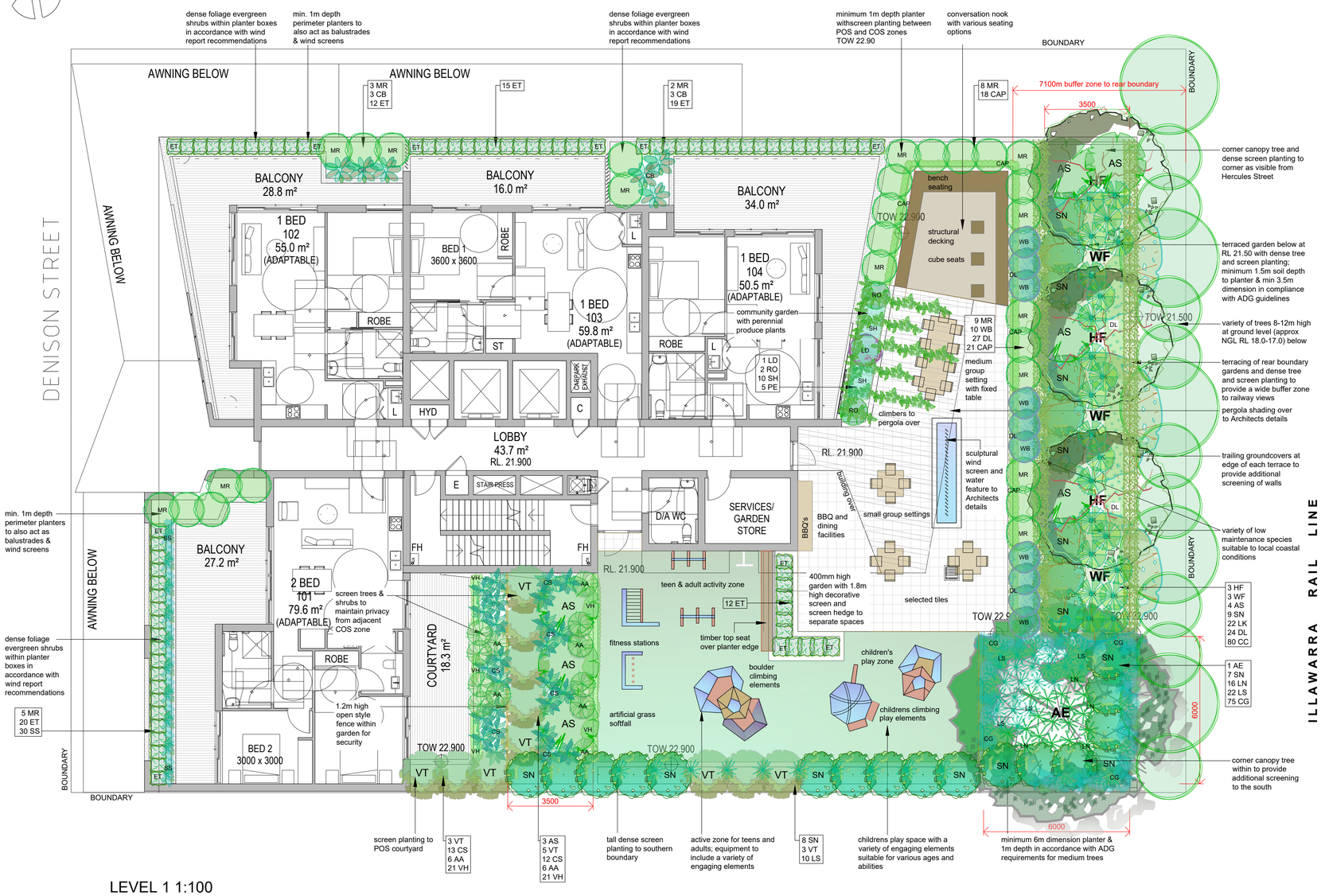
ZENITH LANDSCAPE DESIGNS
Ph: 9545 5200 info@zenithlandscapes.com.au

29-31 DENISON STREET WOLLONGONG

CLIENT: RRM DEVELOPMENT PTY LTD

TITLE: LANDSCAPE PLAN
STATUS: DA
SCALES: 1:100
CHECKED: MFG
SHEET 1 OF 4
DRAWN: MAG
DRAWING No. 21-4592 LO1
DATE: 24.11.2021
REVISION: E

DIAL 1100 BEFORE YOU DIG www.1100.com.au



LEVEL 1 1:100

0 1 2 3 4 5 10m

PLANT CODES
(refer also to plant schedule)

AA	Asplenium australisicum
AE	Alphitonia excelsa
AS	Acmena smithii 'Sublime'
CAP	Chrysocephalum apiculatum
CB	Crassula ovata 'Bluebird'
CC	Casuarina 'Cousin It'
CG	Carpobrotus glaucescens
CS	Cordyline stricta 'Congesta'
DL	Dianella caerulea 'Lucia'
ET	Euonymous 'Tom Thumb'
HF	Hymenosporum flavum
LD	Lavendula dentata 'Super French'
LK	Lomandra hystrix 'Katie Belles'
LN	Lomandra longifolia 'Nyalla'
LS	Lomandra 'Seascape'
MR	Metrosideros 'Red Baby'
PE	Passiflora edulis
RP	Rosmarinus officiinalis
SH	selected herbs
SN	Syzygium 'Straight and Narrow'
SS	Senecio serpens
VH	Viola hederacea
VT	Viburnum tinus
WB	Westringia 'Blue Gem'
WF	Waterhousia floribunda

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NOT FOR CONSTRUCTION

SAMPLE IMAGES - LEVEL 1

dining & BBQ area | group dining options | seating nook & deck area | play equipment | boulder climbers | fitness circuit

SAMPLE PLANT IMAGES

Red Ash | Native Frangipani | Weeping Lilly Pilly | Laurustinus | Slender Palm Lily | Mat Rush | NZ Christmas Bush | Super French Lavender | Rosemary | Coastal Rosemary

Birds Nest Fern | Blubird Jade | Blue Mat Rush | Seascape Mat Rush | Flax Lily | Groundcover She Oak | Yellow Buttons | Native Pigface | Blue Chalk Sticks | various herbs

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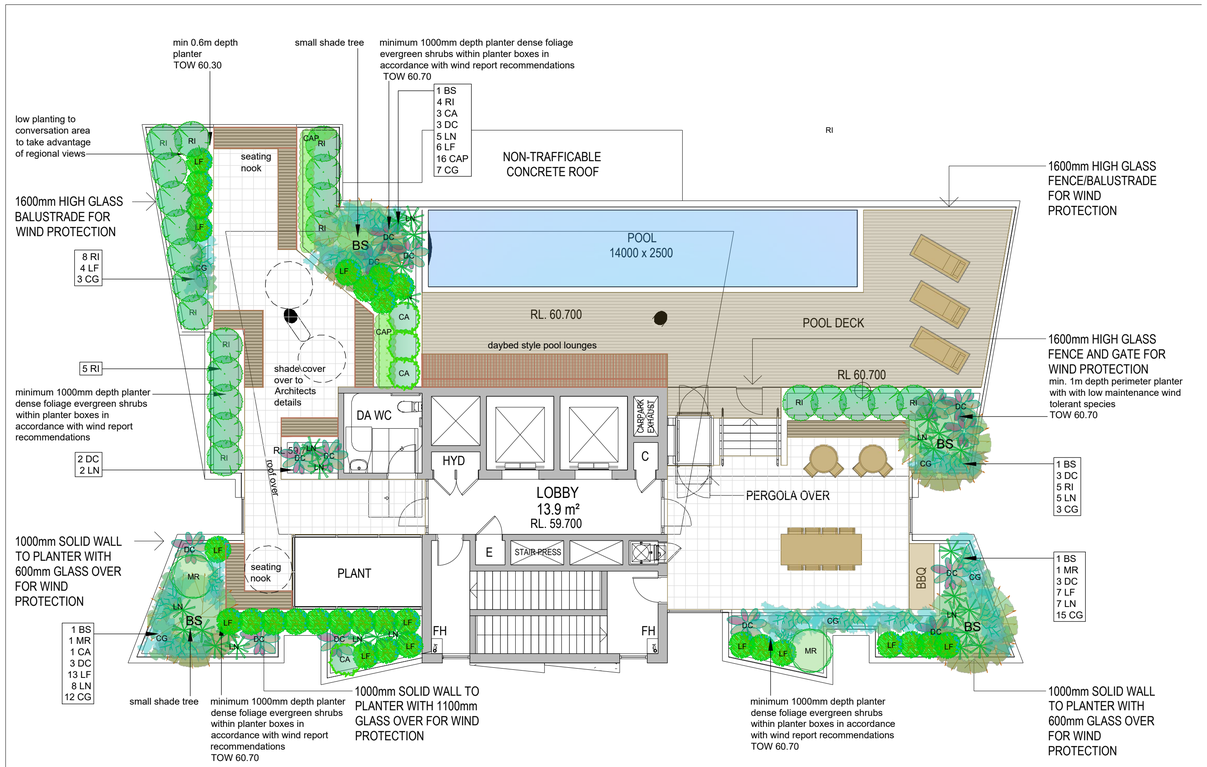
HERCULES STREET

DENISON STREET



LEVEL 13 1:100

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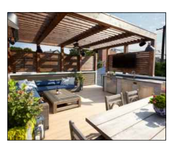
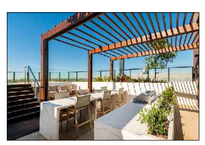
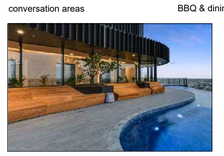
SAMPLE IMAGES - LEVEL 13


conversation areas


BBQ & dining area below pool level

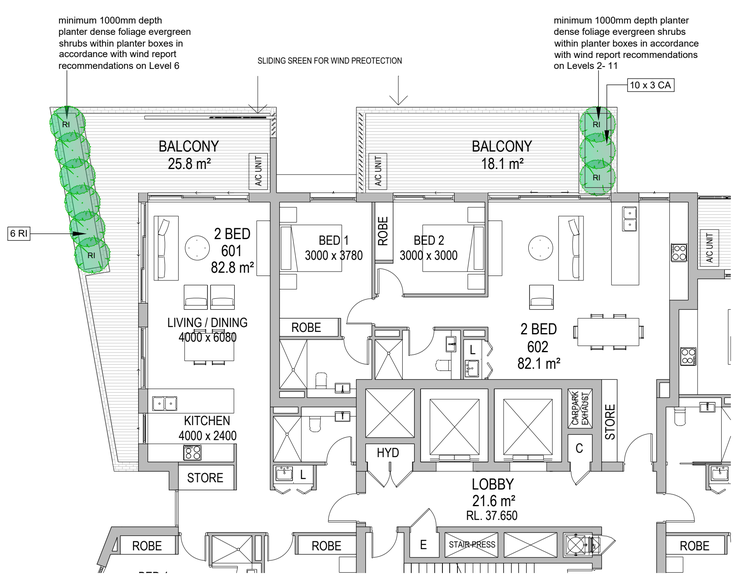

glass wind barriers


contemporary coastal plant palette


pool seating and pool zone

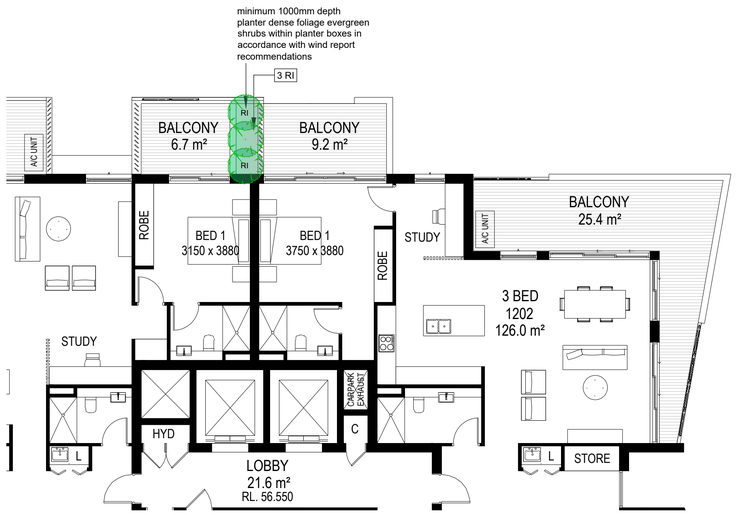

pool seating and pool zone

HERCULES STREET



LEVEL 2-11 1:100

HERCULES STREET



LEVEL 12 1:100

SAMPLE PLANT IMAGES


Sentinel Coast Banksia


NZ Christmas Bush


Coastal Correa


Lemon Darwinia


White Hawthorn


Blue Mat Rush


Dwarf Coastal Tea Tre

PLANT CODES

(refer also to plant schedule)

BS	Banksia 'Sentinel'
CA	Correa alba
CAP	Chrysocephalum apiculatum
CG	Carpobrotus glaucescens
DC	Darwinia citriodora 'Seaspray'
LF	Leptospermum 'Foreshore'
LN	Lomandra longifolia 'Nyalla'
MR	Metrosideros 'Red Baby'
RI	Raphiolepis indica 'Oriental Pearl'

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SHEET 3 OF 4
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DATE: 24.11.2021
REVISION: E

A1

PLANT SCHEDULE - GROUND FLOOR

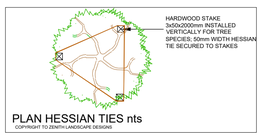
SYMBOL	SPECIES	No.	Pot Size	Mat. Hgt.	Stake	COMMON NAME
ER	Elaeocarpus reticulatus	4	200ltr	8m+	yes	Blueberry Ash
CM	Corymbia maculata 'Gamai'	5	75ltr	12m	yes	Narrow Spotted Gum
SP	Syzygium australe 'Pinnacle'	9	25ltr	8m	no	Narrow Brush Cherry
LK	Lomandra hystrix 'Katie Belles'	8	150mm	1.5m	no	Mat Rush
LT	Lomandra longifolia 'Tanika'	8	150mm	0.5m	no	Tanika Mat Rush
DL	Dianella caerulea 'Lucia'	9	150mm	0.4m	no	Flax Lily
EG	Eremophila 'Blue Horizon'	54	150mm	0.25m	no	Emu Bush
CC	Casuarina 'Cousin It'	75	150mm	g/cover	no	Groundcover She Oak
DR	Dichondra repens	54	150mm	g/cover	no	Native Kidney Plant

PLANT SCHEDULE - LEVEL 2-13

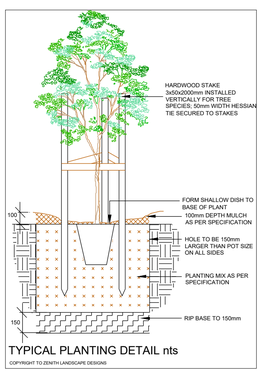
SYMBOL	SPECIES	No.	Pot Size	Mat. Hgt.	Stake	COMMON NAME
BS	Banksia 'Sentinel'	4	25ltr	2.5m	no	Sentinel Coast Banksia
MR	Metrosideros 'Red Baby'	2	5ltr	1.5m	no	NZ Christmas Bush
CA	Correa alba	4	5ltr	1m	no	Coastal Correa
DC	Darwinia citriodora 'Seaspray'	14	150mm	1m	no	Lemon Darwinia
RI	Raphiolepis indica 'Oriental Pearl'	61	5ltr	1m	no	White Hawthorn
LN	Lomandra longifolia 'Nyalla'	27	150mm	0.8m	no	Blue Mat Rush
LF	Leptospermum 'Foreshore'	30	5ltr	0.5m	no	Dwarf Coastal Tea Tree
CAP	Chrysocephalum apiculatum	16	150mm	g/cover	no	Yellow Buttons
CG	Carpobrotus glaucescens	40	150mm	g/cover	no	Native Pigface

PLANT SCHEDULE - LEVEL 1

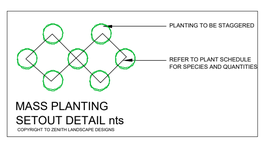
SYMBOL	SPECIES	No.	Pot Size	Mat. Hgt.	Stake	COMMON NAME
AE	Alphitonia excelsa	1	75ltr	12m+	yes	Red Ash
HF	Hymenosporum flavum	3	75ltr	8m+	yes	Native Frangipani
WF	Waterhousia floribunda 'Whisper'	3	75ltr	8m+	yes	Weeping Lilly Pilly
AS	Acmena smithii 'Sublime'	7	45ltr	5m	no	Sublime Lilly Pilly
SN	Syzygium 'Straight and Narrow'	24	25ltr	4m+	no	Narrow Brush Cherry
VT	Viburnum tinus	11	25ltr	3.5m	no	Laurustinus
CS	Cordyline stricta 'Congesta'	25	5ltr	2.5m	no	Slender Palm Lily
LK	Lomandra hystrix 'Katie Belles'	22	150mm	1.5m	no	Mat Rush
MR	Metrosideros 'Red Baby'	27	5ltr	1.5m	no	NZ Christmas Bush
LD	Lavendula dentata 'Super French'	1	150mm	1.2m	no	Super French Lavender
RO	Rosmarinus officinalis	2	150mm	1.2m	no	Rosemary
WB	Westringia 'Blue Gem'	10	5ltr	1.2m	no	Coastal Rosemary
AA	Asplenium australisicum	12	5ltr	1m	no	Birds Nest Fern
CB	Crassula ovata 'Bluebird'	6	5ltr	1m	no	Blubird Jade
LN	Lomandra longifolia 'Nyalla'	16	150mm	0.8m	no	Blue Mat Rush
ET	Euonymus 'Tom Thumb'	78	150mm	0.6m	no	Tom Thumb Eounymus
LS	Lomandra 'Seascape'	32	150mm	0.6m	no	Seascape Mat Rush
DL	Dianella caerulea 'Lucia'	51	150mm	0.4m	no	Flax Lily
CC	Casuarina 'Cousin It'	80	150mm	g/cover	no	Groundcover She Oak
CAP	Chrysocephalum apiculatum	39	150mm	g/cover	no	Yellow Buttons
CG	Carpobrotus glaucescens	75	150mm	g/cover	no	Native Pigface
SS	Senecio serpens	30	150mm	g/cover	no	Blue Chalk Sticks
SH	selected herbs eg Chives, Oregano, Thyme, Sage, Mint	10	100mm	g/cover	no	various herbs
VH	Viola hederacea	42	150mm	g/cover	no	Native Violet
PE	Passiflora edulis	5	5ltr	climber	trellis	Passionfruit



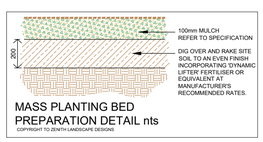
PLAN HESSIAN TIES nts



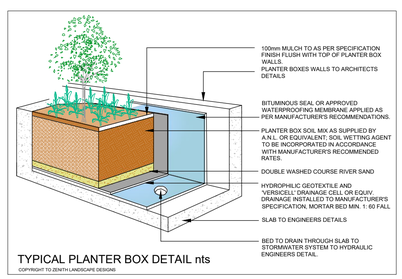
TYPICAL PLANTING DETAIL nts



MASS PLANTING SETOUT DETAIL nts



MASS PLANTING BED PREPARATION DETAIL nts



TYPICAL PLANTER BOX DETAIL nts

LANDSCAPE GUIDELINES

1. GENERAL
1.1 The Contractor shall familiarise themselves with the site prior to tender.
1.2 The Contractor will be held responsible for any damage to utility services, pipes, building structures, paving surfaces, fencing, footways, kerbs, roads and existing plant material.
1.3 The site is to be left in a clean and tidy condition at the completion of works to the satisfaction of the Superintendent.
1.4 No work involving an extra shall be undertaken unless approval is first obtained from the Superintendent.
1.5 No substitute of material shall be made unless approval is given by the Superintendent.
1.6 The Contractor shall continuously maintain all areas of the Contract during progress of the works specified.
2. SITE PREPARATION
2.1 Prepared sub-grade is to be free of stones larger than 100mm diameter, cement, rubbish and any other foreign matter that could hinder plant growth.
3. MASS PLANTED AREAS
3.1 Once clear of weed growth, grass and debris, sub-grade should be cultivated to a minimum depth of 150mm incorporating 'Dynamic Lifter' or equivalent at the manufacturers recommended rates.
3.2 Weeds shall be controlled by a combination of chemical and hand removal techniques.
4. PLANTING
4.1 All plant material is to be hardened off, disease and insect free and true to species, type and variety. Plants are to be well grown but not root bound and shall comply with Natspec - "Guide to Purchasing Landscape Trees".
4.2 All plants are to be removed from their containers prior to planting with as little disturbance to the root system as possible.
4.3 Planting shall not be carried out in dry soil or extreme weather conditions.
4.4 Plants should be planted at the same depth as the plants were in the containers and allow for a shallow saucer of soil to be formed around the plant to aid the penetration of water.
4.5 All plant material should be watered thoroughly immediately after planting.
4.6 The Contractor shall be responsible for the failure of plants during construction, except for acts of vandalism.
4.7 Labels shall be removed entirely from the plants.
5. STAKING
5.1 Ties should be firmly attached to the stakes, in a way to avoid damage to the stem while allowing a small degree of movement.
6. TURF AREAS
6.1 Turf areas should be cultivated before turfing by ripping or harrowing.
6.2 At the completion of turfing the whole area shall be thoroughly soaked and kept moist till the completion of landscape works.
7. MULCH
7.1 Mulch for all general mass planted beds shall be 'Droughtmaster' mulch as supplied by A.N.L. or similar.
7.2 Mulch for OSD basin garden beds shall be 20mm Nepean River Gravel or similar laid to a minimum 50mm depth.
8. SOIL MIXES
8.1 Soil mix for mass planted areas shall be 3 parts site soil to 1 part 'Organic Garden Mix' as supplied by A.N.L. or equivalent.
8.2 Soil mix for street tree planting shall be 1 part site soil to 1 part 'Organic Garden Mix' as supplied by A.N.L. or equivalent
8.3 Soil mix for planter boxes and planting over slab shall be 'Planter Box Mix' as supplied by A.N.L. or equivalent.

MAINTENANCE

1. These works shall be in addition to the construction contract.
2. The Contractor shall commence and fully implement the short term maintenance after Practical Completion has been confirmed by the Superintendent.
3. The Contractor shall carry out maintenance works for a minimum period of 26 weeks
4. Maintenance works shall include the following works :

   a. Mow lawns and trim edges each 10 days in summer and each 14 days in winter.
   b. Water all planting and lawn areas in order to ensure adequate soil moisture at all times.
   c. Remove any weed growth from all planting areas.
   d. Spray and control pests and diseases as required.
   e. Replace plants which fail with plants of similar size and quality as originally planted.
   f. Adjust ties to trees as necessary.
   g. Make good any erosion or soil subsidence which may occur.
   h. Maintain all mulched areas in a clean and tidy condition to the depth as originally specified.
   i. Make good any defects or faults arising from defective workmanship.

   Note: The Contractor is not to be held responsible for the theft or vandalism of any plants during the maintenance period
5. Advanced trees shall be individually inspected at least once a month in order to determine their health and vigour. Should the trees exhibit any signs of disease, pest infestation or poor growth then a qualified arborist shall be consulted within 14 days in order to determine the most appropriate course of action. Recommended treatment shall then be commenced within 7 days and shall continue until the problem is eliminated.
6. When the maintenance period is completed the Contractor shall notify the Superintendent. The site shall then be inspected and if to the satisfaction of the Superintendent the responsibility will be handed over to the Client for on-going maintenance.

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3. The design of the irrigation system shall only be carried out after water pressure testing has been undertaken.
4. The irrigation system shall be installed and in full working order prior to any planting works taking place.
5. The site superintendent and all other relevant personnel shall be fully conversant with the operational requirements of the system prior to planting taking place.

DISCLAIMER

Every effort is made to ensure the accuracy of these documents, however they should be thoroughly checked before being issued to any other persons or authority or used for construction purposes. Any inaccuracies, omissions or discrepancies should be referred back to Zenith Landscape Designs immediately.

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NOTES

1. Vehicular pavement, fencing and built structure details shall be to Architect's specification.
2. All surface and sub-surface drainage requirements shall be to Engineers details.
3. Numeric dimensions should be taken in preference to scaling.
4. All dimensions should be checked on-site prior to commencing construction.
5. Contractors shall verify the location of all site features prior to commencing works.
6. Soil testing has not been undertaken as part of the preparation of this design; Contractors shall determine the need for soil testing prior to any planting works.
7. A search of underground services has not been undertaken as part of the preparation of this design; it is recommended that Contractors contact DIAL BEFORE YOU DIG ON 1100 prior to commencing any works.
8. This plan is to be read in conjunction with the architectural and engineering plans
9. It is recommended that an approved root barrier be installed to manufacturers recommendations to all tree planting in the vicinity of structures, walls and hard pavement areas.

NOT FOR CONSTRUCTION

Rev. no.	Description:	Date:	Rev. no.	Description:	Date:
A	REVISED ARCHITECTURAL DESIGN	27.01.2022	D	REVISED ARCHITECTURAL DESIGN	27.03.2023
B	REVISED ARCHITECTURAL DESIGN	06.07.2022	E	REVISED ARCHITECTURAL DESIGN	08.05.2023
C	REVISED ARCHITECTURAL DESIGN	17.10.2022			

ARBORIST:
SURVEY: C ROBSON & ASSOC
HYDRAULIC: ATB
ARCHITECT: DWA

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29-31 DENISON STREET WOLLONGONG

CLIENT: RRM DEVELOPMENT PTY LTD

TITLE: LANDSCAPE PLAN
STATUS: DA
SCALES: AS SPEC.
CHECKED: MFG
SHEET 4 OF 4
DRAWN: MAG
DRAWING No. 21-4592 LO4
DATE: 24.11.2021
REVISION: E

ATTACHMENT 4

Wollongong Design Review Panel
Meeting minutes and recommendations

Date	31 January 2023
Meeting location	Wollongong City Council Administration Offices
Panel members	(Chair) David Jarvis
	(Member) Marc Deuschle
	(Member) Stephen Pearse
Apologies	Pier Panozzo – City Centre & Major Development Manager
Council staff	Nigel Lamb – Senior Development Project Officer
Guests/ representatives of the applicant	Robert Gizzi – Design Workshop Australia Stewart Levee– Design Workshop Australia Sonny Embleton – Gyde Nell O'Brien - Gyde Goran Ugrinovski – ABT Consulting Megan Geddes – Zenith Landscapes Glenn Apps – Planning Consultant Richard Azar – Lord Built Constructions Robert Azar – Lord Built Constructions
Declarations of Interest	None
Item number	2
DA number	DA-2022/1278
Reason for consideration by DRP	SEPP 65, WLEP 2009 Clause 7.18 Design Excellence
Determination pathway	WLPP
Property address	29-31 Denison Street, Wollongong
Proposal	Demolition of existing buildings, removal of vegetation and the construction of a mixed-use development
Applicant or applicant's representative address to the design review panel	The meeting was conducted in person and by video link between the Panel and the applicants' team.
Background	The site was Inspected by the Panel on 31 January 2023. The Panel previously reviewed the proposal as a pre-DA submission (DE-2022/78) on 31st August 2022. At the meeting held on the 31st August 2022 the Panel reviewed two applications on Denison Street that have been submitted by the same applicant (29-31 Denison Street and 41- 47 Denison Street). The sites located between these two sites (33 – 39 Denison Street) are likely to be developed as a single site. In response to the Panels previous comments a concept design has been provided for 33-39 Denison Street. The intent of this study is to demonstrate how the remaining sites relate to one another to contribute to a cohesive streetscape with good amenity provided to all developments.
Design Quality Principles SEPP 65	
Context and Neighbourhood Character	The proposal is located within a B4 mixed use zone, which accommodates a variety of uses including commercial and residential. The street is currently in a state of transition with several sites in close proximity currently seeking development approvals to realise the potential afforded by Council controls. Proposed new developments within the street consist predominantly of shop top housing, with a single level of commercial at street level and a residential tower above. The site's northern boundary adjoins a 6m wide unformed lane (Hercules Street) that provides access to the subject site and its northern neighbour. The Panel recently reviewed an application for a storage facility on the neighbouring site to the north. The storage

	facility consisted of a comparatively squat, slab block building form (5 storeys high). At the time of writing that application remains undertermined. The proposal's eastern boundary adjoins the south coast railway line. This will be a highly visible façade viewed by commuters and visitors to Wollongong.
Built Form and Scale	<u>Street wall height</u> The proposal provides a two-storey street wall, at a nil set back from the southern neighbour. The street wall accommodates an appropriate transition with the southern neighbour and is consistent with the emerging desired future scale of Denison Street. <u>Northern setback</u> The proposal has provided a nominal setback of 3.3m from the site's northern boundary. When the width of the lane (Hercules Street) is taken into account, the 13-storey residential tower achieves only 6.6m of separation from the site to the north. This is less than the minimum separation recommended by the ADG (12m from windows to habitable rooms / balconies over 9 storeys). If the proposal is considered in the context of the recent development application to the north (storage facility), the proposed setback is a reasonable response to the context of the site that would not compromise the amenity of either the northern neighbour or the subject site. A built form study has also been provided to demonstrate how the proposal could relate to the neighbouring site, if developed as shop top housing. The study demonstrates that the generous proportions of the neighbouring site (25-27 Denison Street) allow it to be developed to the full extent of its permissible FSR whilst maintaining adequate separation from the subject site and accommodating a reasonable level of amenity to both developments. <u>Southern interface</u> The proposal is set back 9m from the site's southern boundary. The ADG requires a minimum 12m setback to be provided to windows of habitable rooms of buildings in excess of 9 storeys. The upper levels of the building do not comply with ADG building separation requirements. In response to the Panel's previous comments the southern façade has been developed to orientate primary windows to habitable rooms east and west. Any windows to habitable rooms orientated towards the southern boundary are now high-level windows that will not compromise visual privacy. The southern façade is a relatively broad facade that will be highly visible from both the railway line and surrounding streets. Though recent developments have provided an increased level of articulation, the façade still lacks the more refined expression / composition of the other facades. The Panel suggested that the façade be treated more as an artwork or special design element to recognize its scale and impact upon the future neighbours in any apartment block to its south, and its prominence when viewed from the south generally. The Panel suggested that a more prominent pergola/roof element that related to both the uses at the COS and the visual form of the street level entry canopy may be incorporated at roof level. This

	would assist in building upon the unique character of this building and create a destination marker. Due to its high visibility, it would also demonstrate/highlight the COS. Street interface In response to the Panel's previous comments the ground floor interface has been developed to provide a more rational entry sequence with a stronger connection to the street. However, further detailed refinement could be considered to eliminate the need for a 1:14 ramp and improve the quality of the residential entry space and its connection to the commercial forecourt. The residential entry lobby is elevated 425mm above the street. If a 1:20 entry path was to start at the site boundary and extend to the base of the column (adjacent to the mailboxes), it would accommodate a change in level of approximately 400mm. The remaining 25mm elevation could comfortably be accommodated within the fall of the landing located between the top of the ramp and the entry doors. The landing would be approximately 3m wide and provide a level transition between the residential entry and the commercial forecourt. To accommodate this strategy, it is suggested that the steps between the southern commercial tenancy and the residential entry are removed / replaced with a planter. Steps to the southern commercial tenancy can be located directly in front of the door to the tenancy, providing a clear and direct connection between the commercial space and the street. Consideration should also be given to providing some street trees to Hercules Street. This may be facilitated by limiting the eastern extent of the awning to align with the windows of the northern commercial tenancy and creating deep soil zones within the eastern end of the street (refer to comments below, Landscape).
Density	The proposal complies with the maximum FSR for the site and is consistent with the future desired scale and character of the area.
Sustainability	Opportunities to harvest rainwater for use in maintaining any plantings established on the building and site should be explored. Other water minimisation measures (reuse of rainwater for toilet flushing and washing machines) should also be considered. The use of solar power and solar water heating as well as general electrification is strongly encouraged, particularly to service communal circulation and parking areas. Low embodied energy should be a consideration in material and finish selections. Landscape plantings should address aims for biodiversity protection, weed minimisation and low water use. The Panel strongly recommends that electric vehicle charging stations be provided in the different carpark levels.
Landscape	Streetscape The relationship of the development to Hercules Street needs further consideration. The proposed 'civic' feel on this street is reliant upon a paved setback between the street and the development. While it is constrained by easements, sub-station access, and services, it appears opportunities do exist to add at least some trees to this zone. Considerations include:

	- Adding a tree to the DSZ at the Hercules Street end, - Reviewing the extent of front awning/side canopy to allow for tree planting adjacent to the building, - Reviewing the location of the carpark air intake (perhaps relocating it to the rear of the development) to allow the OSD, boosters, and services, to be relocated to allow for additional trees along the façade, - Any inclusion of trees should attempt to make these flush with the adjacent paving by dropping the slab within these zones. Alternatively, a partial drop with seating wall to planting could be considered if well planned. The tree choice along Denison Street is questioned. *Elaeocarpus reticulatus* often has a poor form as a street tree. It was explained that of the available choices this was the most viable species. If a suitable substitute is not available, the Panel suggests a closer density (perhaps 5m) should be introduced to improve the urban tree canopy and aesthetics along this street. <u>GF Street Interface</u> Levels should be reviewed to resolve the utilitarian nature of the entry to the development. The 1:14 is restricted by the NS stair starting on the same corner. If this was removed, and a 1:40 landing / 1:20 walkway / 1:40 landing arrangement adopted, this would improve the situation (refer to detail comments above, Built form). The design and alignment of landscape elements within the entry landscape should complement the aesthetic of the canopy feature over. Instead of squared off planters and alignments, perhaps this area could reflect the angular design of the folded canopy. <u>Level 1</u> The general arrangement of L1 provides a variety of spaces with different uses. Considerations to improve this further include: - The communal garden presented as a central planter with path around it would be better designed as a small destinational nook space. The communal garden beds may also be better located adjacent to the kitchen area. The concern is that if residents do not engage with the communal garden idea, the planter and circulation will become a dead space. - The area dedicated to outdoor kitchen/socialising would benefit from more built-in elements as opposed to the current reliance on loose furniture. Consideration should be given to providing for small to medium sized groups. - The playground feels like an addition to the kitchen / BBQ space which seems appropriate. The gym however is divided from this by only a low seating wall. A better threshold between the gym and playground / social space would make each space more private and comfortable. Adding a vertical division via a screen, hedge, to both, would assist this. <u>Level 6</u> Similar to L1, the arrangement of spaces on L6 provides good variety suitable to the rooftop condition. Considerations to improve this further include:

	- Removal of the western stair to the pool. Replacing this with planting allow the pool lounge zone to be uninhibited by circulation and would create more privacy for the NW space. - The NW and SW corner spaces should both be engaging as much as possible with the view. The NW space could have the western planter pulled back to open the view to the west. The SW space could have planting just to the northern and eastern edges and be open to the south and west. The smaller 'L-shaped' seat from the NW space may be better located in the south. - Both the NW and SW spaces would benefit from solar protection, preferably by canopy trees. - A roof element protecting the western part of the COS should be added. There is an opportunity for this to reflect this at the entry on the ground floor.
Amenity	The proposal provides functional unit layouts that will provide a high level of amenity for its occupants. The bedrooms B1 within the two apartments on the south façade appear to have reduced robe lengths due to the shaping of the room. Ensure minimum ADG sizes are achieved. The proposal generally appears to meet ADG requirements for both solar access and cross ventilation. However, the suns eye diagrams provided do not appear to align with the position of north as depicted in the floor plans submitted with this application. Further clarification is required to determine if the solar access studies and/or if the north point is accurate. Furthermore: the solar access diagram for the 7 storey neighbour to the north appear to be in error for 103 and 202 by indicating greater solar access than may be achieved between 10am and 1pm mid-winter. It does look though that they will achieve 2 hours minimum required. Check/adjust solar compliance table where necessary. Note: the solar access studies are an essential part of the site analysis, amendments to this study may impact the Panel's commentary in relation to context, built form and scale.
Safety	Detail sections through the southern edge of the level 1 podium (COS) are required to demonstrate that the podium will be secured from an adjoining podium on the neighbouring site. The sections must also demonstrate that potential privacy issues with the neighbouring development are minimised. Detailed sections should also be provided between the courtyards of level 1 units adjoining the COS.
Housing Diversity and Social Interaction	The proposal will provide an appropriate mix of uses for this neighbourhood.
Aesthetics	The design is clear and well controlled in its realisation of form. The entry canopy is a strong identifier for the site. It is encouraged to refine this element further, with some proportional adjustment (when viewed from the Northwest corner - this distortion may be the perspective) and detail to ensure a quality soffit is provided as envisaged in the design.

	The Panel also suggested that the COS pergola structures and canopies on the roof may be developed to reflect the entry canopy in some related form. The buildings design and location mean it has the potential to create a strong identity from distant and street views and this could be enhanced by stronger roof top element. Similarly, the southern façade can evolve to be a more distinct artistic outcome and deliver greater public and identity benefits than the current architectural expression. To ensure the architect's design intent is realised, the applicant is encouraged to provide larger scale detail sections (minimum 1:20) to assist in providing a better understanding of the quality of finishes being proposed. The sections should show balcony / balustrade details, screens, soffit finishes and material junctions. All materials finishes must be clearly documented. The Panel remains concerned with the quality and detail finish of the proposed precast concrete panels with stack bonded brick finish. A traditional face brick is preferred in all locations visible from the public domain. Servicing of the building must be considered at this stage of the design process. The location of service risers, car park exhausts, AC condensers, down pipes, substations and fire hydrant boosters should be shown.
Design Excellence WLEP2009	
Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	Further development / detail information required, refer to detail comment above (Aesthetics).
Whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain,	Further refinements recommended, , refer to detail comment above (Aesthetics and Building form).
Whether the proposed development detrimentally impacts on view corridors,	No impacts are apparent.
Whether the proposed development detrimentally overshadows an area shown distinctively coloured and numbered on the Sun Plane Protection Map,	N/A
How the development addresses the following:	
the suitability of the land for development,	The size and location of the site are well suited to the proposed mixed-use development.
existing and proposed uses and use mix	The proposed mix of uses will provide an appropriate contribution to this emerging neighbourhood.
heritage issues and streetscape constraints,	Minor refinement of the proposal's interface with the street is recommended.
the location of any tower proposed, having regard to	Generally acceptable. However, the accuracy of solar studies must be confirmed to finalise this issue.

the need to achieve an acceptable relationship with other towers (existing or proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,	
bulk, massing and modulation of buildings	Generally acceptable. However, the accuracy of solar studies must be confirmed to finalise this issue.
street frontage heights	Acceptable.
environmental impacts such as sustainable design, overshadowing, wind and reflectivity	Further information required.
the achievement of the principles of ecologically sustainable development	Further information required.
pedestrian, cycle, vehicular and service access, circulation and requirements	Further refinement pedestrian access is recommended.
impact on, and any proposed improvements to, the public domain	Further refinement of street interface recommended.
Key issues, further Comments & Recommendations	The revised proposal generally responds appropriately to its immediate context and provides a good level of amenity to its future occupants. However, accurate solar studies must be provided / confirmed to establish if further refinements to the built form are required. Detail issues that require further consideration / refinement include: - Refinement of the southern façade. - Development of roof expression - Refinement of street interface and access. - The introduction of street trees to Hercules Street. - Adoption of environmental initiatives. - Refinements to the COS. - Detail sections to be provided.

ATTACHMENT 5 – APARTMENT DESIGN GUIDE ASSESSMENT

Standards/controls	*Comment*
Part 3 Siting the development	
3A Site analysis	
Site analysis uses the following key elements to demonstrate that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context: - Site location plan - Aerial photograph - Local context plan - Site context and survey plan - Streetscape elevations and sections - Analysis A written statement explaining how the design of the proposed development has responded to the site analysis must accompany the development application.	A suitable level of detail has been provided to demonstrate how context analysis has informed the design of the proposal.
3B Orientation	
Objective 3B-1 Building types and layouts respond to the streetscape and site while optimising solar access within the development ***Design guidance*** Buildings along the street frontage define the street, by facing it and incorporating direct access from the street (see figure 3B.1) Where the street frontage is to the east or west, rear buildings should be orientated to the north Where the street frontage is to the north or south, overshadowing to the south should be minimised and buildings behind the street frontage should be orientated to the east and west (see figure 3B.2)	The orientation of the building makes sense taking into account solar access, outlook and noise sources.

Standards/controls	*Comment*
Objective 3B-2 Overshadowing of neighbouring properties is minimised during mid winter	The tower form is relatively slender and shadow diagrams provided are considered to demonstrate it will not compromise the ability of development on adjoining land to the south from achieving compliant solar access outcomes.
Design guidance	
Living areas, private open space and communal open space should receive solar access in accordance with sections 3D Communal and public open space and 4A Solar and daylight access	
Solar access to living rooms, balconies and private open spaces of neighbours should be considered	
Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20%	
If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy	
Overshadowing should be minimised to the south or down hill by increased upper level setbacks	
It is optimal to orientate buildings at 90 degrees to the boundary with neighbouring properties to minimise overshadowing and privacy impacts, particularly where minimum setbacks are used and where buildings are higher than the adjoining development	
A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	

Standards/controls	*Comment*
3C Public domain interface *Objective 3C-1* Transition between private and public domain is achieved without compromising safety and security ***Design guidance*** Terraces, balconies and courtyard apartments should have direct street entry, where appropriate Changes in level between private terraces, front gardens and dwelling entries above the street level provide surveillance and improve visual privacy for ground level dwellings (see figure 3C.1) Upper level balconies and windows should overlook the public domain Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m Length of solid walls should be limited along street frontages Opportunities should be provided for casual interaction between residents and the public domain. Design solutions may include seating at building entries, near letter boxes and in private courtyards adjacent to streets In developments with multiple buildings and/or entries, pedestrian entries and spaces associated with individual buildings/entries should be differentiated to improve legibility for residents, using a number of the following design solutions: • architectural detailing • changes in materials • plant species • colours Opportunities for people to be concealed should be minimised	The ground floor of the development provides an active frontage and legible and accessible entry points with secure access. Landscaped beds and street trees will improve the amenity of those spaces and the appearance of the development. An outdoor terrace area would facilitate use of one of the ground floor tenancies for a food and drink offering.

Standards/controls	*Comment*
Objective 3C-2 Amenity of the public domain is retained and enhanced	Suitable landscaping is provided. Mail boxes are in a legible and accessible location. Above ground car parking and service areas are located at the rear and generally screened from the public domain. The substation is located to the rear away from the primary frontage. Ramping is minimised with changes in levels generally accommodated through gentle grade changes.
Design guidance	
Planting softens the edges of any raised terraces to the street, for example above sub-basement car parking	
Mail boxes should be located in lobbies, perpendicular to the street alignment or integrated into front fences where individual street entries are provided	
The visual prominence of underground car park vents should be minimised and located at a low level where possible	
Substations, pump rooms, garbage storage areas and other service requirements should be located in basement car parks or out of view	
Ramping for accessibility should be minimised by building entry location and setting ground floor levels in relation to footpath levels	
Durable, graffiti resistant and easily cleanable materials should be used	
Where development adjoins public parks, open space or bushland, the design positively addresses this interface and uses a number of the following design solutions: • street access, pedestrian paths and building entries which are clearly defined • paths, low fences and planting that clearly delineate between communal/private open space and the adjoining public open space • minimal use of blank walls, fences and ground level parking	
On sloping sites protrusion of car parking above ground level should be minimised by using split levels to step underground car parking	

Standards/controls	*Comment*
3D Communal and public open space *Objective 3D-1* An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping ***Design criteria*** 1. Communal open space has a minimum area equal to 25% of the site (see figure 3D.3) 2. 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) ***Design guidance*** Communal open space should be consolidated into a well designed, easily identified and usable area Communal open space should have a minimum dimension of 3m, and larger developments should consider greater dimensions Communal open space should be co-located with deep soil areas Direct, equitable access should be provided to communal open space areas from common circulation areas, entries and lobbies Where communal open space cannot be provided at ground level, it should be provided on a podium or roof Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: • provide communal spaces elsewhere such as a landscaped roof top terrace or a common room • provide larger balconies or increased private open space for apartments • demonstrate good proximity to public open space and facilities and/or provide contributions to public open space	The proposal provides two communal open spaces, one on level 1 and the other on the rooftop. The overall area of approximately 660m² (or 39% of site area).

Standards/controls	*Comment*
Objective 3D-2 Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting ***Design guidance*** Facilities are provided within communal open spaces and common spaces for a range of age groups (see also 4F Common circulation and spaces), incorporating some of the following elements: • seating for individuals or groups • barbecue areas • play equipment or play areas • swimming pools, gyms, tennis courts or common rooms The location of facilities responds to microclimate and site conditions with access to sun in winter, shade in summer and shelter from strong winds and down drafts Visual impacts of services should be minimised, including location of ventilation duct outlets from basement car parks, electrical substations and detention tanks	The communal open space area is broken up into a number of zones that facilitate a variety of activities. This includes undercover and open areas, a pool, seating, communal garden.
Objective 3D-3 Communal open space is designed to maximise safety ***Design guidance*** Communal open space and the public domain should be readily visible from habitable rooms and private open space areas while maintaining visual privacy. Design solutions may include: • bay windows • corner windows • balconies Communal open space should be well lit Where communal open space/facilities are provided for children and young people they are safe and contained	The level 1 communal open space area is overlooked by units and arranged in a way that would not create any obvious safety concerns.

Standards/controls	*Comment*
Objective 3D-4 Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood ***Design guidance*** The public open space should be well connected with public streets along at least one edge The public open space should be connected with nearby parks and other landscape elements Public open space should be linked through view lines, pedestrian desire paths, termination points and the wider street grid Solar access should be provided year round along with protection from strong winds Opportunities for a range of recreational activities should be provided for people of all ages A positive address and active frontages should be provided adjacent to public open space Boundaries should be clearly defined between public open space and private areas	N/A
3E Deep soil zones **Objective 3E-1** 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 ***Design criteria*** 1. Deep soil zones are to meet the following minimum requirements: Site area / Minimum dimensions / Deep soil zone (% of site area) less than 650m² / - / 7% 650m² - 1,500m² / 3m greater than 1,500m² / 6m greater than 1,500m² with significant existing tree cover / 6m	The site is in a location where deep soil planting is not a prerequisite for development given built form will often involve building to boundary approaches. The development does include a 2m wide deep soil area along the eastern boundary adjacent to the train line which will soften the appearance of the exposed podium wall.

Standards/controls	*Comment*
Design guidance On some sites it may be possible to provide larger deep soil zones, depending on the site area and context: • 10% of the site as deep soil on sites with an area of 650m² - 1,500m² • 15% of the site as deep soil on sites greater than 1,500m² Deep soil zones should be located to retain existing significant trees and to allow for the development of healthy root systems, providing anchorage and stability for mature trees. Design solutions may include: • basement and sub basement car park design that is consolidated beneath building footprints • use of increased front and side setbacks • adequate clearance around trees to ensure long term health • co-location with other deep soil areas on adjacent sites to create larger contiguous areas of deep soil Achieving the design criteria may not be possible on some sites including where: • the location and building typology have limited or no space for deep soil at ground level (e.g. central business district, constrained sites, high density areas, or in centres) • there is 100% site coverage or non-residential uses at ground floor level Where a proposal does not achieve deep soil requirements, acceptable stormwater management should be achieved and alternative forms of planting provided such as on structure	

Standards/controls	*Comment*

3F Visual privacy

Objective 3F-1

Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual privacy

Design criteria

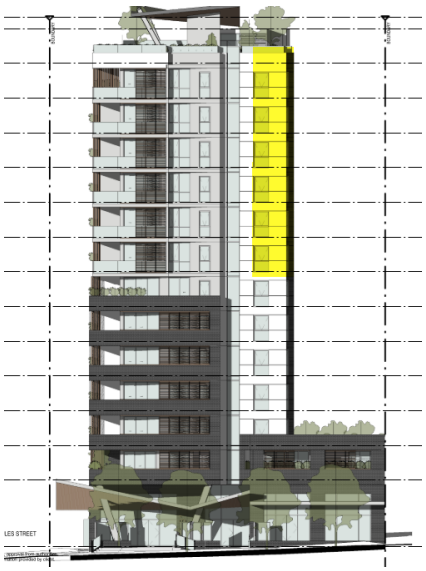
1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

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

Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)

Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties

The proposal involves a variation to the separation at the upper portion of the tower on the southern façade as illustrated below.



The portion of the building that is non-compliant whilst having habitable rooms, either has windows angled away from the boundary or high sill windows.

No concerns are raised in regard to impacts to privacy.

Standards/controls	*Comment*
Design guidance	Satisfactory
Generally one step in the built form as the height increases due to building separations is desirable. Additional steps should be careful not to cause a 'ziggurat' appearance	
For residential buildings next to commercial buildings, separation distances should be measured as follows: • for retail, office spaces and commercial balconies use the habitable room distances • for service and plant areas use the non-habitable room distances	
New development should be located and oriented to maximise visual privacy between buildings on site and for neighbouring buildings. Design solutions include: • site layout and building orientation to minimise privacy impacts (see also section 3B Orientation) • on sloping sites, apartments on different levels have appropriate visual separation distances (see figure 3F.4)	
Apartment buildings should have an increased separation distance of 3m (in addition to the requirements set out in design criteria 1) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale and increased landscaping (figure 3F.5)	
Direct lines of sight should be avoided for windows and balconies across corners	
No separation is required between blank walls	

Standards/controls	*Comment*
Objective 3F-2 Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space ***Design guidance*** Communal open space, common areas and access paths should be separated from private open space and windows to apartments, particularly habitable room windows. Design solutions may include: • setbacks • solid or partially solid balustrades to balconies at lower levels • fencing and/or trees and vegetation to separate spaces • screening devices • bay windows or pop out windows to provide privacy in one direction and outlook in another • raising apartments/private open space above the public domain or communal open space • planter boxes incorporated into walls and balustrades to increase visual separation • pergolas or shading devices to limit overlooking of lower apartments or private open space • on constrained sites where it can be demonstrated that building layout opportunities are limited, fixed louvres or screen panels to windows and/or balconies Bedrooms, living spaces and other habitable rooms should be separated from gallery access and other open circulation space by the apartment's service areas Balconies and private terraces should be located in front of living rooms to increase internal privacy Windows should be offset from the windows of adjacent buildings Recessed balconies and/or vertical fins should be used between adjacent balconies	Satisfactory

Standards/controls	*Comment*
3G Pedestrian access and entries	
Objective 3G-1 Building entries and pedestrian access connects to and addresses the public domain	The development has a clear street address and separation of commercial and residential entries.
Design guidance	
Multiple entries (including communal building entries and individual ground floor entries) should be provided to activate the street edge	
Entry locations relate to the street and subdivision pattern and the existing pedestrian network	
Building entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries	
Where street frontage is limited and multiple buildings are located on the site, a primary street address should be provided with clear sight lines and pathways to secondary building entries	
Objective 3G-2 Access, entries and pathways are accessible and easy to identify	Entries are readily identifiable and accessible with grade changes integrated to reduce any ramping.
Design guidance	
Building access areas including lift lobbies, stairwells and hallways should be clearly visible from the public domain and communal spaces	
The design of ground floors and underground car parks minimise level changes along pathways and entries	
Steps and ramps should be integrated into the overall building and landscape design	
For large developments 'way finding' maps should be provided to assist visitors and residents (see figure 4T.3)	
For large developments electronic access and audio/video intercom should be provided to manage access	

Standards/controls	*Comment*
Objective 3G-3 Large sites provide pedestrian links for access to streets and connection to destinations ***Design guidance*** Pedestrian links through sites facilitate direct connections to open space, main streets, centres and public transport Pedestrian links should be direct, have clear sight lines, be overlooked by habitable rooms or private open spaces of dwellings, be well lit and contain active uses, where appropriate	N/A
3H Vehicle access *Objective 3H-1* Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes ***Design guidance*** Car park access should be integrated with the building's overall facade. Design solutions may include: • the materials and colour palette to minimise visibility from the street • security doors or gates at entries that minimise voids in the facade • where doors are not provided, the visible interior reflects the facade design and the building services, pipes and ducts are concealed	The vehicle entry is provided away from the primary frontage off Hercules Street. The above ground car parking and servicing area is located to the rear and generally screened from the public domain.

Standards/controls	*Comment*
Car park entries should be located behind the building line	
Vehicle entries should be located at the lowest point of the site minimising ramp lengths, excavation and impacts on the building form and layout	
Car park entry and access should be located on secondary streets or lanes where available	
Vehicle standing areas that increase driveway width and encroach into setbacks should be avoided	
Access point locations should avoid headlight glare to habitable rooms	
Adequate separation distances should be provided between vehicle entries and street intersections	
The width and number of vehicle access points should be limited to the minimum	
Visual impact of long driveways should be minimised through changing alignments and screen planting	
The need for large vehicles to enter or turn around within the site should be avoided	
Garbage collection, loading and servicing areas are screened	
Clear sight lines should be provided at pedestrian and vehicle crossings	
Traffic calming devices such as changes in paving material or textures should be used where appropriate	
Pedestrian and vehicle access should be separated and distinguishable. Design solutions may include: • changes in surface materials • level changes • the use of landscaping for separation	

Standards/controls	*Comment*
3J Bicycle and car parking	
Objective 3J-1 Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas	The proposal provides the minimum residential car parking required under the Guide to Traffic Generating Development. Commercial car parking is in accordance with Council's development control plan.
Design criteria	
1. 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	
Design guidance	
Where a car share scheme operates locally, provide car share parking spaces within the development. Car share spaces, when provided, should be on site	
Where less car parking is provided in a development, council should not provide on street resident parking permits	
Objective 3J-2 Parking and facilities are provided for other modes of transport	Motorbike and bicycle parking is provided in accordance with Council's controls. All resident spaces are to be EV ready (e.g. cabling to the spaces). WHAT ABOUT SPACE FOR THE UNIT ITSELF?
Design guidance	
Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters	
Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas	
Conveniently located charging stations are provided for electric vehicles, where desirable	

Standards/controls	*Comment*
Objective 3J-3 Car park design and access is safe and secure ***Design guidance*** Supporting facilities within car parks, including garbage, plant and switch rooms, storage areas and car wash bays can be accessed without crossing car parking spaces Direct, clearly visible and well lit access should be provided into common circulation areas A clearly defined and visible lobby or waiting area should be provided to lifts and stairs For larger car parks, safe pedestrian access should be clearly defined and circulation areas have good lighting, colour, line marking and/or bollards	Satisfactory

Standards/controls	*Comment*
Objective 3J-4 Visual and environmental impacts of underground car parking are minimised ***Design guidance*** Excavation should be minimised through efficient car park layouts and ramp design Car parking layout should be well organised, using a logical, efficient structural grid and double loaded aisles Protrusion of car parks should not exceed 1m above ground level. Design solutions may include stepping car park levels or using split levels on sloping sites Natural ventilation should be provided to basement and sub basement car parking areas Ventilation grills or screening devices for car parking openings should be integrated into the facade and landscape design	The excavation is not over and above what is necessary to achieve compliance. The layout is compliant with relevant standards. Parking is all located below ground with the exception of the loading and unloading area and commercial spaces.
Objective 3J-5 Visual and environmental impacts of on-grade car parking are minimised ***Design guidance*** On-grade car parking should be avoided Where on-grade car parking is unavoidable, the following design solutions are used: • parking is located on the side or rear of the lot away from the primary street frontage • cars are screened from view of streets, buildings, communal and private open space areas • safe and direct access to building entry points is provided • parking is incorporated into the landscape design of the site, by extending planting and materials into the car park space • stormwater run-off is managed appropriately from car parking surfaces • bio-swales, rain gardens or on site detention tanks are provided, where appropriate • light coloured paving materials or permeable paving systems are used and shade trees are planted between every 4-5 parking spaces to reduce increased surface temperatures from large areas of paving	The car parking is all below ground with the exception of the commercial spaces and loading and unloading zone which is located to the rear. Where this area faces the rail line, it is screened with a deep soil planting strip.

Standards/controls	*Comment*
Objective 3J-6 Visual and environmental impacts of above ground enclosed car parking are minimised ***Design guidance*** Exposed parking should not be located along primary street frontages Screening, landscaping and other design elements including public art should be used to integrate the above ground car parking with the facade. Design solutions may include: • car parking that is concealed behind the facade, with windows integrated into the overall facade design (approach should be limited to developments where a larger floor plate podium is suitable at lower levels) • car parking that is 'wrapped' with other uses, such as retail, commercial or two storey Small Office/Home Office (SOHO) units along the street frontage (see figure 3J.9) Positive street address and active frontages should be provided at ground level	Satisfactory
4A Solar and daylight access ***Objective 4A-1*** To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space ***Design criteria*** 1. 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 2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter 3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	Complies

Standards/controls	*Comment*
Design guidance The design maximises north aspect and the number of single aspect south facing apartments is minimised Single aspect, single storey apartments should have a northerly or easterly aspect Living areas are best located to the north and service areas to the south and west of apartments To optimise the direct sunlight to habitable rooms and balconies a number of the following design features are used: • dual aspect apartments • shallow apartment layouts • two storey and mezzanine level apartments • bay windows To maximise the benefit to residents of direct sunlight within living rooms and private open spaces, a minimum of 1m² of direct sunlight, measured at 1m above floor level, is achieved for at least 15 minutes Achieving the design criteria may not be possible on some sites. This includes: • where greater residential amenity can be achieved along a busy road or rail line by orientating the living rooms away from the noise source • on south facing sloping sites • where significant views are oriented away from the desired aspect for direct sunlight Design drawings need to demonstrate how site constraints and orientation preclude meeting the design criteria and how the development meets the objective	There are no single aspect south facing units within the development. Single aspect units are all north facing. Internal layout of units is satisfactory. The tower form is limited to three units per floor which affords greater opportunity for outlook, cross ventilation and light.

Standards/controls	*Comment*
Objective 4A-2 **Daylight access is maximised where sunlight is limited** ***Design guidance*** Courtyards, skylights and high level windows (with sills of 1,500mm or greater) are used only as a secondary light source in habitable rooms Where courtyards are used : • use is restricted to kitchens, bathrooms and service areas • building services are concealed with appropriate detailing and materials to visible walls • courtyards are fully open to the sky • access is provided to the light well from a communal area for cleaning and maintenance • acoustic privacy, fire safety and minimum privacy separation distances (see section 3F Visual privacy) are achieved Opportunities for reflected light into apartments are optimised through: • reflective exterior surfaces on buildings opposite south facing windows • positioning windows to face other buildings or surfaces (on neighbouring sites or within the site) that will reflect light • integrating light shelves into the design • light coloured internal finishes	N/A
Objective 4A-3 **Design incorporates shading and glare control, particularly for warmer months** ***Design guidance*** A number of the following design features are used: • balconies or sun shading that extend far enough to shade summer sun, but allow winter sun to penetrate living areas • shading devices such as eaves, awnings, balconies, pergolas, external louvres and planting • horizontal shading to north facing windows • vertical shading to east and particularly west facing windows • operable shading to allow adjustment and choice • high performance glass that minimises external glare off windows, with consideration given to reduced tint glass or glass with a reflectance level below 20% (reflective films are avoided)	Projecting balconies provide shade to windows to units below. West facing windows are ???

Standards/controls	*Comment*
4B Natural ventilation	
Objective 4B-1 **All habitable rooms are naturally ventilated** ***Design guidance*** The building's orientation maximises capture and use of prevailing breezes for natural ventilation in habitable rooms Depths of habitable rooms support natural ventilation The area of unobstructed window openings should be equal to at least 5% of the floor area served Light wells are not the primary air source for habitable rooms Doors and openable windows maximise natural ventilation opportunities by using the following design solutions: • adjustable windows with large effective openable areas • a variety of window types that provide safety and flexibility such as awnings and louvres • windows which the occupants can reconfigure to funnel breezes into the apartment such as vertical louvres, casement windows and externally opening doors	Complies
Objective 4B-2 **The layout and design of single aspect apartments maximises natural ventilation** ***Design guidance*** Apartment depths are limited to maximise ventilation and airflow (see also figure 4D.3) Natural ventilation to single aspect apartments is achieved with the following design solutions: • primary windows are augmented with plenums and light wells (generally not suitable for cross ventilation) • stack effect ventilation / solar chimneys or similar to naturally ventilate internal building areas or rooms such as bathrooms and laundries • courtyards or building indentations have a width to depth ratio of 2:1 or 3:1 to ensure effective air circulation and avoid trapped smells	Complies

Standards/controls	*Comment*
Objective 4B-3 **The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents**	Complies
Design criteria	
1. 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	
2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	
Design guidance	
The building should include dual aspect apartments, cross through apartments and corner apartments and limit apartment depths	
In cross-through apartments external window and door opening sizes/areas on one side of an apartment (inlet side) are approximately equal to the external window and door opening sizes/areas on the other side of the apartment (outlet side) (see figure 4B.4)	
Apartments are designed to minimise the number of corners, doors and rooms that might obstruct airflow	
Apartment depths, combined with appropriate ceiling heights, maximise cross ventilation and airflow	

Standards/controls	*Comment*
4C Ceiling heights	
Objective 4C-1 Ceiling height achieves sufficient natural ventilation and daylight access ***Design criteria*** 1. Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height for apartment and mixed use buildings 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 used areas: 3.3m for ground and first floor to promote future flexibility of use These minimums do not preclude higher ceilings if desired ***Design guidance*** Ceiling height can accommodate use of ceiling fans for cooling and heat distribution	Complies
Objective 4C-2 Ceiling height increases the sense of space in apartments and provides for well proportioned rooms ***Design guidance*** A number of the following design solutions can be used: • the hierarchy of rooms in an apartment is defined using changes in ceiling heights and alternatives such as raked or curved ceilings, or double height spaces • well proportioned rooms are provided, for example, smaller rooms feel larger and more spacious with higher ceilings • ceiling heights are maximised in habitable rooms by ensuring that bulkheads do not intrude. The stacking of service rooms from floor to floor and coordination of bulkhead location above non-habitable areas, such as robes or storage, can assist	Satisfactory

Standards/controls	*Comment*
Objective 4C-3 Ceiling heights contribute to the flexibility of building use over the life of the building ***Design guidance*** Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses (see figure 4C.1)	The site is not in a peripheral CBD location where ensuring adaptability of above ground level space to non-residential uses is necessary.
4D Apartment size and layout	
Objective 4D-1 The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity ***Design criteria*** 1. Apartments are required to have the following minimum internal areas: Apartment type / Minimum internal area Studio / 35m² 1 bedroom / 50m² 2 bedroom / 70m² 3 bedroom / 90m² The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each 2. 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 ***Design guidance*** Kitchens should not be located as part of the main circulation space in larger apartments (such as hallway or entry space) A window should be visible from any point in a habitable room Where minimum areas or room dimensions are not met apartments need to demonstrate that they are well designed and demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. These circumstances would be assessed on their merits	The apartment sizes comply with suitable window sizes and kitchens that do not also serve as circulation space.

Standards/controls	*Comment*
Objective 4D-2 Environmental performance of the apartment is maximised ***Design criteria*** 1. Habitable room depths are limited to a maximum of 2.5 x the ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window ***Design guidance*** Greater than minimum ceiling heights can allow for proportional increases in room depth up to the permitted maximum depths All living areas and bedrooms should be located on the external face of the building	Habitable room depths do not exceed 8m from a window.
Where possible: • bathrooms and laundries should have an external openable window • main living spaces should be oriented toward the primary outlook and aspect and away from noise sources	Bathrooms have external windows where possible. Laundries are all internal in order to free up external facades for habitable rooms.

Standards/controls	*Comment*
Objective 4D-3 **Apartment layouts are designed to accommodate a variety of household activities and needs** ***Design criteria*** 1. Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space) 2. Bedrooms have a minimum dimension of 3m (excluding wardrobe space) 3. 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 4. The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts ***Design guidance*** Access to bedrooms, bathrooms and laundries is separated from living areas minimising direct openings between living and service areas All bedrooms allow a minimum length of 1.5m for robes The main bedroom of an apartment or a studio apartment should be provided with a wardrobe of a minimum 1.8m long, 0.6m deep and 2.1m high Apartment layouts allow flexibility over time, design solutions may include: • dimensions that facilitate a variety of furniture arrangements and removal • spaces for a range of activities and privacy levels between different spaces within the apartment • dual master apartments • dual key apartments *Note: dual key apartments which are separate but on the same title are regarded as two sole occupancy units for the purposes of the Building Code of Australia and for calculating the mix of apartments* • room sizes and proportions or open plans (rectangular spaces (2:3) are more easily furnished than square spaces (1:1)) • efficient planning of circulation by stairs, corridors and through rooms to maximise the amount of usable floor space in rooms	Master bedrooms are a minimum of 10m² and other bedrooms have minimum dimensions of 3m. Living rooms have compliant widths. All bedrooms have minimum 1.5m or 1.8m robes.

Standards/controls	*Comment*
4E Private open space and balconies *Objective 4E-1* **Apartments provide appropriately sized private open space and balconies to enhance residential amenity** ***Design criteria*** 1. All apartments are required to have primary balconies as follows: The minimum balcony depth to be counted as contributing to the balcony area is 1m 2. 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 ***Design guidance*** Increased communal open space should be provided where the number or size of balconies are reduced Storage areas on balconies is additional to the minimum balcony size Balcony use may be limited in some proposals by: • consistently high wind speeds at 10 storeys and above • close proximity to road, rail or other noise sources • exposure to significant levels of aircraft noise • heritage and adaptive reuse of existing buildings In these situations, juliet balconies, operable walls, enclosed wintergardens or bay windows may be appropriate, and other amenity benefits for occupants should also be provided in the apartments or in the development or both. Natural ventilation also needs to be demonstrated	All units have compliant private open space areas.

Dwelling type	Minimum area	Minimum depth
Studio apartments	4m²	-
1 bedroom apartments	8m²	2m
2 bedroom apartments	10m²	2m
3+ bedroom apartments	12m²	2.4m

Standards/controls	*Comment*
Objective 4E-2 **Primary private open space and balconies are appropriately located to enhance liveability for residents**	Satisfactory
Design guidance	
Primary open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space	
Private open spaces and balconies predominantly face north, east or west	
Primary open space and balconies should be orientated with the longer side facing outwards or be open to the sky to optimise daylight access into adjacent rooms	
Objective 4E-3 **Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building**	Satisfactory
Design guidance	
Solid, partially solid or transparent fences and balustrades are selected to respond to the location. They are designed to allow views and passive surveillance of the street while maintaining visual privacy and allowing for a range of uses on the balcony. Solid and partially solid balustrades are preferred	
Full width full height glass balustrades alone are generally not desirable	
Projecting balconies should be integrated into the building design and the design of soffits considered	
Operable screens, shutters, hoods and pergolas are used to control sunlight and wind	
Balustrades are set back from the building or balcony edge where overlooking or safety is an issue	
Downpipes and balcony drainage are integrated with the overall facade and building design	
Air-conditioning units should be located on roofs, in basements, or fully integrated into the building design	
Where clothes drying, storage or air conditioning units are located on balconies, they should be screened and integrated in the building design	
Ceilings of apartments below terraces should be insulated to avoid heat loss	
Water and gas outlets should be provided for primary balconies and private open space	

Standards/controls	*Comment*
Objective 4E-4 Private open space and balcony design maximises safety ***Design guidance*** Changes in ground levels or landscaping are minimised Design and detailing of balconies avoids opportunities for climbing and falls	Satisfactory
4F Common circulation and spaces	
Objective 4F-1 Common circulation spaces achieve good amenity and properly service the number of apartments ***Design criteria*** 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	Complies

Standards/controls	*Comment*
Design guidance Greater than minimum requirements for corridor widths and/ or ceiling heights allow comfortable movement and access particularly in entry lobbies, outside lifts and at apartment entry doors Daylight and natural ventilation should be provided to all common circulation spaces that are above ground Windows should be provided in common circulation spaces and should be adjacent to the stair or lift core or at the ends of corridors Longer corridors greater than 12m in length from the lift core should be articulated. Design solutions may include: • a series of foyer areas with windows and spaces for seating • wider areas at apartment entry doors and varied ceiling heights Design common circulation spaces to maximise opportunities for dual aspect apartments, including multiple core apartment buildings and cross over apartments Achieving the design criteria for the number of apartments off a circulation core may not be possible. Where a development is unable to achieve the design criteria, a high level of amenity for common lobbies, corridors and apartments should be demonstrated, including: • sunlight and natural cross ventilation in apartments • access to ample daylight and natural ventilation in common circulation spaces • common areas for seating and gathering • generous corridors with greater than minimum ceiling heights • other innovative design solutions that provide high levels of amenity Where design criteria 1 is not achieved, no more than 12 apartments should be provided off a circulation core on a single level Primary living room or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces to any other rooms should be carefully controlled	Complies

Standards/controls	*Comment*
Objective 4F-2 **Common circulation spaces promote safety and provide for social interaction between residents**	Satisfactory
Design guidance	
Direct and legible access should be provided between vertical circulation points and apartment entries by minimising corridor or gallery length to give short, straight, clear sight lines	
Tight corners and spaces are avoided	
Circulation spaces should be well lit at night	
Legible signage should be provided for apartment numbers, common areas and general wayfinding	
Incidental spaces, for example space for seating in a corridor, at a stair landing, or near a window are provided	
In larger developments, community rooms for activities such as owners corporation meetings or resident use should be provided and are ideally co-located with communal open space	
Where external galleries are provided, they are more open than closed above the balustrade along their length	

Standards/controls	*Comment*
4G Storage	
Objective 4G-1 **Adequate, well designed storage is provided in each apartment** ***Design criteria*** 1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided: Dwelling type / Storage size volume Studio apartments / 4m³ 1 bedroom apartments / 6m³ 2 bedroom apartments / 8m³ 3+ bedroom apartments / 10m³ At least 50% of the required storage is to be located within the apartment ***Design guidance*** Storage is accessible from either circulation or living areas Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proof and screened from view from the street Left over space such as under stairs is used for storage	Complies
Objective 4G-2 **Additional storage is conveniently located, accessible and nominated for individual apartments** ***Design guidance*** Storage not located in apartments is secure and clearly allocated to specific apartments Storage is provided for larger and less frequently accessed items Storage space in internal or basement car parks is provided at the rear or side of car spaces or in cages so that allocated car parking remains accessible If communal storage rooms are provided they should be accessible from common circulation areas of the building Storage not located in an apartment is integrated into the overall building design and is not visible from the public domain	Complies

Standards/controls	*Comment*
4H Acoustic privacy	
Objective 4H-1 Noise transfer is minimised through the siting of buildings and building layout	The building generally complies with building separation requirements or where there are variations, would not contribute to acoustic concerns.
Design guidance	
Adequate building separation is provided within the development and from neighbouring buildings/adjacent uses (see also section 2F Building separation and section 3F Visual privacy)	
Window and door openings are generally orientated away from noise sources	
Noisy areas within buildings including building entries and corridors should be located next to or above each other and quieter areas next to or above quieter areas	
Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources	
The number of party walls (walls shared with other apartments) are limited and are appropriately insulated	
Noise sources such as garage doors, driveways, service areas, plant rooms, building services, mechanical equipment, active communal open spaces and circulation areas should be located at least 3m away from bedrooms	
Objective 4H-2 Noise impacts are mitigated within apartments through layout and acoustic treatments	Layout of the dwellings within the tower separates noise generating areas from bedrooms.
Design guidance	
Internal apartment layout separates noisy spaces from quiet spaces, using a number of the following design solutions: • rooms with similar noise requirements are grouped together • doors separate different use zones • wardrobes in bedrooms are co-located to act as sound buffers	
Where physical separation cannot be achieved noise conflicts are resolved using the following design solutions: • double or acoustic glazing • acoustic seals • use of materials with low noise penetration properties • continuous walls to ground level courtyards where they do not conflict with streetscape or other amenity requirements	

Standards/controls	*Comment*
4J Noise and pollution *Objective 4J-1* **In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings** ***Design guidance*** To minimise impacts the following design solutions may be used: • physical separation between buildings and the noise or pollution source • residential uses are located perpendicular to the noise source and where possible buffered by other uses • non-residential buildings are sited to be parallel with the noise source to provide a continuous building that shields residential uses and communal open spaces • non-residential uses are located at lower levels vertically separating the residential component from the noise or pollution source. Setbacks to the underside of residential floor levels should increase relative to traffic volumes and other noise sources • buildings should respond to both solar access and noise. Where solar access is away from the noise source, non-habitable rooms can provide a buffer • where solar access is in the same direction as the noise source, dual aspect apartments with shallow building depths are preferable (see figure 4J.4) • landscape design reduces the perception of noise and acts as a filter for air pollution generated by traffic and industry Achieving the design criteria in this Apartment Design Guide may not be possible in some situations due to noise and pollution. Where developments are unable to achieve the design criteria, alternatives may be considered in the following areas: • solar and daylight access • private open space and balconies • natural cross ventilation	The site is located immediately adjacent the rail corridor and a Railway Noise and Vibration Assessment has been provided. That report makes recommendations for glazing and other openings to achieve compliance with noise criteria. This is reflected in the conditions of consent.

Standards/controls	*Comment*
Objective 4J-2 **Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission** ***Design guidance*** Design solutions to mitigate noise include: • limiting the number and size of openings facing noise sources • providing seals to prevent noise transfer through gaps • using double or acoustic glazing, acoustic louvres or enclosed balconies (wintergardens) • using materials with mass and/or sound insulation or absorption properties e.g. solid balcony balustrades, external screens and soffits	Satisfactory
4K Apartment mix	
Objective 4K-1 **A range of apartment types and sizes is provided to cater for different household types now and into the future** ***Design guidance*** A variety of apartment types is provided The apartment mix is appropriate, taking into consideration: • the distance to public transport, employment and education centres • the current market demands and projected future demographic trends • the demand for social and affordable housing • different cultural and socioeconomic groups Flexible apartment configurations are provided to support diverse household types and stages of life including single person households, families, multi-generational families and group households	The development provides the following unit mix. 1 bed 3 8.3% 2 bed 31 86.1% 3 bed 2 5.6% adaptat 4 11.1%
Objective 4K-2 **The apartment mix is distributed to suitable locations within the building** ***Design guidance*** Different apartment types are located to achieve successful facade composition and to optimise solar access (see figure 4K.3) Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available	Satisfactory

Standards/controls	*Comment*
4L Ground floor apartments	
Objective 4L-1 Street frontage activity is maximised where ground floor apartments are located	N/A
Design guidance	
Direct street access should be provided to ground floor apartments	
Activity is achieved through front gardens, terraces and the facade of the building. Design solutions may include: • both street, foyer and other common internal circulation entrances to ground floor apartments • private open space is next to the street • doors and windows face the street	
Retail or home office spaces should be located along street frontages	
Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion	
Objective 4L-2 Design of ground floor apartments delivers amenity and safety for residents	N/A
Design guidance	
Privacy and safety should be provided without obstructing casual surveillance. Design solutions may include: • elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) • landscaping and private courtyards • window sill heights that minimise sight lines into apartments • integrating balustrades, safety bars or screens with the exterior design	
Solar access should be maximised through: • high ceilings and tall windows • trees and shrubs that allow solar access in winter and shade in summer	

Standards/controls	*Comment*
4M Facades	
Objective 4M-1 Building facades provide visual interest along the street while respecting the character of the local area	Satisfactory
Design guidance	
Design solutions for front building facades may include: • a composition of varied building elements • a defined base, middle and top of buildings • revealing and concealing certain elements • changes in texture, material, detail and colour to modify the prominence of elements	
Building services should be integrated within the overall facade	
Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. Design solutions may include: • well composed horizontal and vertical elements • variation in floor heights to enhance the human scale • elements that are proportional and arranged in patterns • public artwork or treatments to exterior blank walls • grouping of floors or elements such as balconies and windows on taller buildings	
Building facades relate to key datum lines of adjacent buildings through upper level setbacks, parapets, cornices, awnings or colonnade heights	
Shadow is created on the facade throughout the day with building articulation, balconies and deeper window reveals	
Objective 4M-2 Building functions are expressed by the facade	Satisfactory
Design guidance	
Building entries should be clearly defined	
Important corners are given visual prominence through a change in articulation, materials or colour, roof expression or changes in height	
The apartment layout should be expressed externally through facade features such as party walls and floor slabs	

Standards/controls	*Comment*
4N Roof design	
Objective 4N-1 Roof treatments are integrated into the building design and positively respond to the street	The rooftop communal area is provided with a roof that mirrors the form of the awning at ground level to provide visual interest to the skyline. This also provides shade and weather protection for users of that space.
Design guidance	
Roof design relates to the street. Design solutions may include: • special roof features and strong corners • use of skillion or very low pitch hipped roofs • breaking down the massing of the roof by using smaller elements to avoid bulk • using materials or a pitched form complementary to adjacent buildings	
Roof treatments should be integrated with the building design. Design solutions may include: • roof design proportionate to the overall building size, scale and form • roof materials compliment the building • service elements are integrated	
Objective 4N-2 Opportunities to use roof space for residential accommodation and open space are maximised	The roof space contains a communal open space.
Design guidance	
Habitable roof space should be provided with good levels of amenity. Design solutions may include: • penthouse apartments • dormer or clerestory windows • openable skylights	
Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations	

Standards/controls	*Comment*
Objective 4N-3 **Roof design incorporates sustainability features** ***Design guidance*** Roof design maximises solar access to apartments during winter and provides shade during summer. Design solutions may include: • the roof lifts to the north • eaves and overhangs shade walls and windows from summer sun Skylights and ventilation systems should be integrated into the roof design	Satisfactory
4O Landscape design ***Objective 4O-1*** **Landscape design is viable and sustainable** ***Design guidance*** Landscape design should be environmentally sustainable and can enhance environmental performance by incorporating: • diverse and appropriate planting • bio-filtration gardens • appropriately planted shading trees • areas for residents to plant vegetables and herbs • composting • green roofs or walls Ongoing maintenance plans should be prepared Microclimate is enhanced by: • appropriately scaled trees near the eastern and western elevations for shade • a balance of evergreen and deciduous trees to provide shading in summer and sunlight access in winter • shade structures such as pergolas for balconies and courtyards Tree and shrub selection considers size at maturity and the potential for roots to compete (see Table 4)	The proposal provides suitable landscaped areas considering the high density nature of the locality. This includes planting on structure, a deep soil planting strip to the eastern boundary along with street trees. These elements provide amenity to occupants of the building and positively contribute to the aesthetic appearance of the building as viewed from the public domain. The Landscape Concept plan was prepared by a suitably qualified consultant and has been reviewed by Council's Landscape Officer as satisfactory subject to conditions.

Standards/controls	*Comment*
Objective 4O-2 **Landscape design contributes to the streetscape and amenity** ***Design guidance*** Landscape design responds to the existing site conditions including: • changes of levels • views • significant landscape features including trees and rock outcrops Significant landscape features should be protected by: • tree protection zones (see figure 4O.5) • appropriate signage and fencing during construction Plants selected should be endemic to the region and reflect the local ecology	See above
4P Planting on structures ***Objective 4P-1*** **Appropriate soil profiles are provided** ***Design guidance*** Structures are reinforced for additional saturated soil weight Soil volume is appropriate for plant growth, considerations include: • modifying depths and widths according to the planting mix and irrigation frequency • free draining and long soil life span • tree anchorage Minimum soil standards for plant sizes should be provided in accordance with Table 5	See above

Standards/controls	*Comment*
Objective 4P-2 **Plant growth is optimised with appropriate selection and maintenance** ***Design guidance*** Plants are suited to site conditions, considerations include: • drought and wind tolerance • seasonal changes in solar access • modified substrate depths for a diverse range of plants • plant longevity A landscape maintenance plan is prepared Irrigation and drainage systems respond to: • changing site conditions • soil profile and the planting regime • whether rainwater, stormwater or recycled grey water is used	See above.
Objective 4P-3 **Planting on structures contributes to the quality and amenity of communal and public open spaces** ***Design guidance*** Building design incorporates opportunities for planting on structures. Design solutions may include: • green walls with specialised lighting for indoor green walls • wall design that incorporates planting • green roofs, particularly where roofs are visible from the public domain • planter boxes Note: structures designed to accommodate green walls should be integrated into the building facade and consider the ability of the facade to change over time	See above
4Q Universal design	
Objective 4Q-1 **Universal design features are included in apartment design to promote flexible housing for all community members** ***Design guidance*** Developments achieve a benchmark of 20% of the total apartments incorporating the Livable Housing Guideline's silver level universal design features	38% or 14 units (102, 102, 103, 104, 203, 303, 403, 503, 603, 703, 803, 903, 1003, 1103) are proposed to meet the silver level universal design guidelines.

Standards/controls	*Comment*
Objective 4Q-2 **A variety of apartments with adaptable designs are provided** ***Design guidance*** Adaptable housing should be provided in accordance with the relevant council policy Design solutions for adaptable apartments include: • convenient access to communal and public areas • high level of solar access • minimal structural change and residential amenity loss when adapted • larger car parking spaces for accessibility • parking titled separately from apartments or shared car parking arrangements	11% of the units are adaptable (102, 102, 103 and 104)
Objective 4Q-3 **Apartment layouts are flexible and accommodate a range of lifestyle needs** ***Design guidance*** Apartment design incorporates flexible design solutions which may include: • rooms with multiple functions • dual master bedroom apartments with separate bathrooms • larger apartments with various living space options • open plan 'loft' style apartments with only a fixed kitchen, laundry and bathroom	Satisfactory

Standards/controls	*Comment*
4R Adaptive reuse *Objective 4R-1* New additions to existing buildings are contemporary and complementary and enhance an area's identity and sense of place ***Design guidance*** Design solutions may include: • new elements to align with the existing building • additions that complement the existing character, siting, scale, proportion, pattern, form and detailing • use of contemporary and complementary materials, finishes, textures and colours Additions to heritage items should be clearly identifiable from the original building New additions allow for the interpretation and future evolution of the building	N/A

Standards/controls	*Comment*
Objective 4R-2 **Adapted buildings provide residential amenity while not precluding future adaptive reuse** ***Design guidance*** Design features should be incorporated sensitively into adapted buildings to make up for any physical limitations, to ensure residential amenity is achieved. Design solutions may include: • generously sized voids in deeper buildings • alternative apartment types when orientation is poor • using additions to expand the existing building envelope Some proposals that adapt existing buildings may not be able to achieve all of the design criteria in this Apartment Design Guide. Where developments are unable to achieve the design criteria, alternatives could be considered in the following areas: • where there are existing higher ceilings, depths of habitable rooms could increase subject to demonstrating access to natural ventilation, cross ventilation (when applicable) and solar and daylight access (see also sections 4A Solar and daylight access and 4B Natural ventilation) • alternatives to providing deep soil where less than the minimum requirement is currently available on the site • building and visual separation – subject to demonstrating alternative design approaches to achieving privacy • common circulation • car parking • alternative approaches to private open space and balconies	N/A

Standards/controls	*Comment*
4S Mixed use	
Objective 4S-1 **Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement**	The proposal provides an active ground floor use.
Design guidance	
Mixed use development should be concentrated around public transport and centres	
Mixed use developments positively contribute to the public domain. Design solutions may include: • development addresses the street • active frontages are provided • diverse activities and uses • avoiding blank walls at the ground level • live/work apartments on the ground floor level, rather than commercial	
Objective 4S-2 **Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents**	Satisfactory
Design guidance	
Residential circulation areas should be clearly defined. Design solutions may include: • residential entries are separated from commercial entries and directly accessible from the street • commercial service areas are separated from residential components • residential car parking and communal facilities are separated or secured • security at entries and safe pedestrian routes are provided • concealment opportunities are avoided	
Landscaped communal open space should be provided at podium or roof levels	

Standards/controls	*Comment*
4T Awnings and signage	
Objective 4T-1 **Awnings are well located and complement and integrate with the building design**	The site is not in a locality that requires a continuous street awning however an awning is provided to the entry and above the terrace area to the ground level commercial space.
Design guidance	
Awnings should be located along streets with high pedestrian activity and active frontages	
A number of the following design solutions are used: • continuous awnings are maintained and provided in areas with an existing pattern • height, depth, material and form complements the existing street character • protection from the sun and rain is provided • awnings are wrapped around the secondary frontages of corner sites • awnings are retractable in areas without an established pattern	
Awnings should be located over building entries for building address and public domain amenity	
Awnings relate to residential windows, balconies, street tree planting, power poles and street infrastructure	
Gutters and down pipes should be integrated and concealed	
Lighting under awnings should be provided for pedestrian safety	
Objective 4T-2 **Signage responds to the context and desired streetscape character**	N/A
Design guidance	
Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	
Legible and discrete way finding should be provided for larger developments	
Signage is limited to being on and below awnings and a single facade sign on the primary street frontage	

Standards/controls	*Comment*
4U Energy efficiency	
Objective 4U-1 Development incorporates passive environmental design ***Design guidance*** Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) Well located, screened outdoor areas should be provided for clothes drying	The proposal exceeds the minimum requirements for solar access and cross ventilation which will lessen the need for mechanical heating or cooling. Units are well laid out with a combination of shaded areas and access to sun.
Objective 4U-2 Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer ***Design guidance*** A number of the following design solutions are used: • the use of smart glass or other technologies on north and west elevations • thermal mass in the floors and walls of north facing rooms is maximised • polished concrete floors, tiles or timber rather than carpet • insulated roofs, walls and floors and seals on window and door openings • overhangs and shading devices such as awnings, blinds and screens Provision of consolidated heating and cooling infrastructure should be located in a centralised location (e.g. the basement)	As above.
Objective 4U-3 Adequate natural ventilation minimises the need for mechanical ventilation ***Design guidance*** A number of the following design solutions are used: • rooms with similar usage are grouped together • natural cross ventilation for apartments is optimised • natural ventilation is provided to all habitable rooms and as many non-habitable rooms, common areas and	As above.

Standards/controls	*Comment*
4V Water management and conservation	
Objective 4V-1 Potable water use is minimised ***Design guidance*** Water efficient fittings, appliances and wastewater reuse should be incorporated Apartments should be individually metered Rainwater should be collected, stored and reused on site Drought tolerant, low water use plants should be used within landscaped areas	Satisfactory
Objective 4V-2 Urban stormwater is treated on site before being discharged to receiving waters ***Design guidance*** Water sensitive urban design systems are designed by a suitably qualified professional A number of the following design solutions are used: • runoff is collected from roofs and balconies in water tanks and plumbed into toilets, laundry and irrigation • porous and open paving materials is maximised • on site stormwater and infiltration, including bio-retention systems such as rain gardens or street tree pits	Water sensitive urban design features are incorporated into the stormwater system.
Objective 4V-3 Flood management systems are integrated into site design ***Design guidance*** Detention tanks should be located under paved areas, driveways or in basement car parks On large sites parks or open spaces are designed to provide temporary on site detention basins	The site is not flood affected.

Standards/controls	*Comment*
4W Waste management	
Objective 4W-1 Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents	Waste servicing will occur on site and suitable areas for waste storage are provided within the basement and ground floor parking areas.
Design guidance	
Adequately sized storage areas for rubbish bins should be located discreetly away from the front of the development or in the basement car park	
Waste and recycling storage areas should be well ventilated	
Circulation design allows bins to be easily manoeuvred between storage and collection points	
Temporary storage should be provided for large bulk items such as mattresses	
A waste management plan should be prepared	
Objective 4W-2 Domestic waste is minimised by providing safe and convenient source separation and recycling	Method of separation / delivery to waste rooms?
Design guidance	
All dwellings should have a waste and recycling cupboard or temporary storage area of sufficient size to hold two days worth of waste and recycling	
Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core	
For mixed use developments, residential waste and recycling storage areas and access should be separate and secure from other uses	
Alternative waste disposal methods such as composting should be provided	

Standards/controls	*Comment*
4X Building maintenance	
Objective 4X-1 Building design detail provides protection from weathering ***Design guidance*** A number of the following design solutions are used: • roof overhangs to protect walls • hoods over windows and doors to protect openings • detailing horizontal edges with drip lines to avoid staining of surfaces • methods to eliminate or reduce planter box leaching • appropriate design and material selection for hostile locations	Satisfactory
Objective 4X-2 Systems and access enable ease of maintenance ***Design guidance*** Window design enables cleaning from the inside of the building Building maintenance systems should be incorporated and integrated into the design of the building form, roof and facade Design solutions do not require external scaffolding for maintenance access Manually operated systems such as blinds, sunshades and curtains are used in preference to mechanical systems Centralised maintenance, services and storage should be provided for communal open space areas within the building	Satisfactory
Objective 4X-3 Material selection reduces ongoing maintenance costs ***Design guidance*** A number of the following design solutions are used: • sensors to control artificial lighting in common circulation and spaces • natural materials that weather well and improve with time such as face brickwork • easily cleaned surfaces that are graffiti resistant • robust and durable materials and finishes are used in locations which receive heavy wear and tear, such as common circulation areas and lift interiors	Satisfactory

ATTACHMENT 6 - WOLLONGONG DEVELOMENT CONTROL PLAN 2009 ASSESSMENT

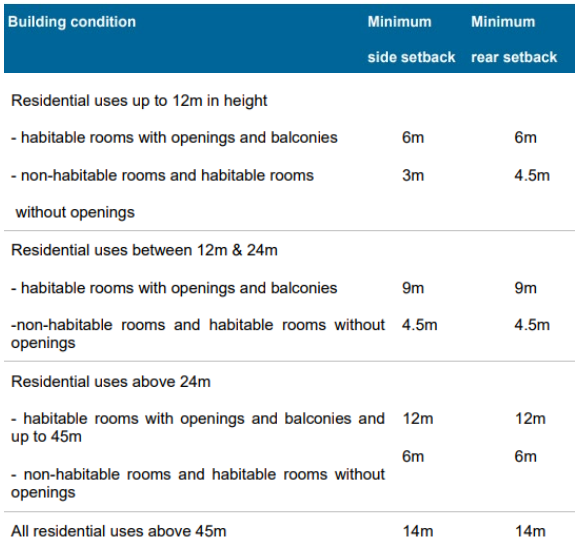
CHAPTER A2 – ECOLOGICALLY SUSTAINABLE DEVELOPMENT

Development controls to improve the sustainability of development throughout Wollongong are integrated into the relevant chapters of this DCP.

Generally speaking, the proposal is considered to be consistent with the principles of Ecologically Sustainable Development.

CHAPTER D13 – WOLLONGONG CITY CENTRE

2 Building form

Objectives/controls	*Comment*
2.2 Building to street alignment and street setbacks	
3m setback	Complies
2.3 Street frontage heights in commercial core	
N/A	
2.4 Building depth and bulk	
18m maximum for residential	Complies
2.5 Side and rear building setbacks and building separation	
	Above 24m, the building does not provide 12m as recommended by this control. See variation request at Chapter A1.
2.6 Mixed used buildings	
a) Provide flexible building layouts which allow variable tenancies or uses on the first two floors of a building above the ground floor.	N/A
b) Minimum floor to ceiling heights are 3.3 metres for commercial office and 3.6 metres for active public uses, such as retail and restaurants in the B3 Commercial Core zone. In the B4 Mixed Use zone, the ground floor and first levels of a building shall incorporate a minimum 3 metre floor to ceiling height clearance, to maximise the flexibility in the future use of the building.	Complies
c) Separate commercial service requirements, such as loading docks, from residential access, servicing needs and primary outlook.	Complies
d) Locate clearly demarcated residential entries directly from the public street.	Complies

Building condition	Minimum side setback	Minimum rear setback
Residential uses up to 12m in height		
- habitable rooms with openings and balconies	6m	6m
- non-habitable rooms and habitable rooms without openings	3m	4.5m
Residential uses between 12m & 24m		
- habitable rooms with openings and balconies	9m	9m
-non-habitable rooms and habitable rooms without openings	4.5m	4.5m
Residential uses above 24m		
- habitable rooms with openings and balconies and up to 45m	12m	12m
- non-habitable rooms and habitable rooms without openings	6m	6m
All residential uses above 45m	14m	14m

Objectives/controls	*Comment*
e) Clearly separate and distinguish commercial and residential entries and vertical circulation.	Complies
f) Provide security access controls to all entrances into private areas, including car parks and internal courtyards.	Complies
g) Provide safe pedestrian routes through the site, where required.	N/A
h) Front buildings onto major streets with active uses.	Complies
i) Avoid the use of blank building walls at the ground level.	Complies
j) For mixed use buildings that include food and drink premises uses, the location of kitchen ventilation systems shall be indicated on plans and situated to avoid amenity impacts to residents.	The proposal does not specify ground floor uses however there is space for provision for services in the event a food and drink operator occupies the space.
2.7 Deep soil zone	
For residential components in mixed use developments in the Commercial Core, Mixed Use (city edge) and Enterprise zones, the amount of deep soil zone may be reduced commensurate with the extent of non-residential uses. Where non-residential components result in full site coverage and there is no capacity for water infiltration, the deep soil component must be provided on structure, in accordance with the provisions of Section 2.8 and 2.9. In such cases, compensatory stormwater management measures must be integrated within the development to minimise stormwater runoff.	No true deep soil zone is provided however the development is essentially a build to boundary podium form. There is a 2m wide landscape strip along the boundary with the train line to screen the podium from the rail corridor and planting on podium is provided to provide amenity to the communal open space areas.
2.8 Landscape design	
a) The following documents must be considered for site planning and landscape design:	Satisfactory
i) Chapter E6 – Landscaping in the DCP.	
ii) Wollongong City Centre Public Domain Technical Manual.	
b) Remnant vegetation must be maintained throughout the site wherever practicable, particularly significant trees.	
c) A long-term landscape management plan must be provided for all landscaped areas, in particular the deep soil landscape zone.	
d) The plan must outline how landscaped areas are to be maintained for the life of the development.	
e) Chapter E17 Preservation and Management of Trees and Other Vegetation in this DCP provides for the protection of all trees with a girth greater than 200mm or a height over three metres, or a spread over three metres.	
2.9 Green roofs, green walls and planting on structures	
a) Design for optimum conditions for plant growth by:	Complies
i) Providing soil depth, soil volume and soil area appropriate to the size of the plants to be established,	
ii) Providing appropriate soil conditions and irrigation methods, and	
iii) Providing appropriate drainage.	
b) Design planters to support the appropriate soil depth and plant selection by:	

Objectives/controls	*Comment*
i) Ensuring planter proportions accommodate the largest volume of soil possible and soil depths to ensure tree growth, and ii) Providing square or rectangular planting areas rather than narrow linear areas. c) Increase minimum soil depths in accordance with: i) The mix of plants in a planter for example where trees are planted in association with shrubs, groundcovers and grass, ii) The level of landscape management, particularly the frequency of irrigation, iii) Anchorage requirements of large and medium trees, and iv) Soil type and quality. d) Provide sufficient soil depth and area to allow for plant establishment and growth.	
2.10 Sun access planes	N/A
2.11 Development on classified roads	N/A

3 Pedestrian amenity

Objectives/controls	*Comment*
3.2 Permeability	N/A
3.3 Active street frontages a) In commercial and mixed use development, active street fronts are encouraged in the form of nonresidential uses on ground level. b) Active street fronts in the form of non-residential uses on ground level are required along streets, lanes and through site links shown in Figure 3.4 for all buildings in the Commercial Core and Tourist zones, and for mixed use buildings in the Mixed Use (city edge) and Enterprise zones. c) Active ground floor uses are to be at the same general level as the footpath and be accessible directly from the street. d) For all non-residential ground floor frontages outside the streets shown in Figure 3.4, provide clear glazing where ever possible to promote passive surveillance and contribute to street activity. e) Restaurants, cafes and the like are to consider providing openable shop fronts. f) Residential developments are to provide a clear street address and direct pedestrian access off the primary street front, and allow for residents to overlook all surrounding streets. g) Provide multiple entrances for large developments including an entrance on each street frontage.	

Objectives/controls	*Comment*
3.4 Safety and security	
a) Ensure that the building design allows for casual surveillance of accessways, entries and driveways.	Satisfactory
b) Avoid creating blind corners and dark alcoves that provide concealment opportunities in pathways, stairwells, hallways and carparks.	
c) Provide entrances which are in visually prominent positions and which are easily identifiable, with visible numbering.	
d) Where private open space is located within the front building alignment any front fencing must be of a design and/or height which allows for passive surveillance of the street.	
e) Provide adequate lighting of all pedestrian access ways, parking areas and building entries. Such lighting should be on a timer or movement detector to reduce energy consumption and glare nuisance.	
f) Provide clear lines of sight and well-lit routes throughout the development.	
g) Where a pedestrian pathway is provided from the street, allow for casual surveillance of the pathway.	
h) For large scale retail and commercial development with a GFA of over 5,000m², provide a 'safety by design' assessment in accordance with the CPTED principles.	
i) Provide security access controls where appropriate.	
j) Ensure building entrance(s) including pathways, lanes and arcades for larger scale retail and commercial developments are directed to signalised intersections rather than mid-block in the Commercial zone, Mixed Use (city edge) and Enterprise Corridor zones.	
3.5 Awnings	
	N/A
3.6 Vehicular footpath crossings	
Location of Vehicle Access	Complies
a) No additional vehicle entry points will be permitted into the parking or service areas of development along those streets identified as significant pedestrian circulation routes in Figure 3.7.	
b) In all other areas, one vehicle access point only (including the access for service vehicles and parking for non-residential uses within mixed use developments) will be generally permitted.	
c) Where practicable, vehicle access is to be from lanes and minor streets rather than primary street fronts or streets with major pedestrian and cyclist activity.	
d) Where practicable, adjoining buildings are to share or amalgamate vehicle access points. Internal on-site signal equipment is to be used to allow shared access. Where appropriate, new buildings should provide vehicle access points so that they are capable of shared access at a later date.	

Objectives/controls	*Comment*
e) Vehicle access may not be required or may be denied to some heritage buildings.	
Design of Vehicle Access	Complies
a) Wherever practicable, vehicle access is to be a single lane crossing with a maximum width of 2.7 metres over the footpath, and perpendicular to the kerb alignment. In exceptional circumstances, a double lane crossing with a maximum width of 5.4 metres may be permitted for safety reasons (refer Figure 3.8).	
b) Vehicle access ramps parallel to the street frontage will not be permitted.	
c) Doors to vehicle access points are to be roller shutters or tilting doors fitted behind the building façade.	
d) Vehicle entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street.	
<u>3.7 Pedestrian overpasses, underpasses and encroachments</u>	
	N/A
<u>3.8 Building exteriors</u>	
a) Adjoining buildings (particularly heritage buildings) are to be considered in the design of new buildings in terms of:	Complies / satisfactory
i) Appropriate alignment and street frontage heights.	
ii) Setbacks above street frontage heights.	
iii) Appropriate materials and finishes selection.	
iv) Façade proportions including horizontal or vertical emphasis.	
v) The provision of enclosed corners at street intersections.	
b) Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings are encouraged.	Complies
c) Articulate facades so that they address the street and add visual interest.	Complies
d) External walls should be constructed of high quality and durable materials and finishes with ‘selfcleaning’ attributes, such as face brickwork, rendered brickwork, stone, concrete and glass.	Satisfactory
e) Finishes with high maintenance costs, those susceptible to degradation or corrosion from a coastal or industrial environment or finishes that result in unacceptable amenity impacts, such as reflective glass, are to be avoided.	Complies
f) To assist articulation and visual interest, avoid expanses of any single material.	Complies
g) Limit opaque or blank walls for ground floor uses to 30% of the street frontage.	Complies
h) Maximise glazing for retail uses, but break glazing into sections to avoid large expanses of glass.	Complies
i) Highly reflective finishes and curtain wall glazing are not permitted above ground floor level (see Section 5.3).	Complies

Objectives/controls	*Comment*
j) A materials sample board and schedule is required to be submitted with applications for development over $1 million or for that part of any development built to the street edge.	A materials and finishes schedule has been provided.
k) Minor projections up to 450mm from building walls in accordance with those permitted by the Building Code of Australia may extend into the public space providing it does not fall within the definition of gross floor area and there is a public benefit, such as:	N/A
i) Expressed cornice lines that assist in enhancing the streetscape,	
ii) Projections such as entry canopies that add visual interest and amenity, and	
iii) Provided that the projections do not detract from significant views and vistas (see Figure 3.12).	
l) The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building	A rooftop feature obscures the lift overrun.
<u>3.9 Advertising and signage</u>	
	N/A
<u>3.10 Views and view corridors</u>	
a) Existing views shown in Figure 3.12 are to be protected to the extent that is practical in the planning and design of development.	The proposal will not impact on identified key view corridors.
b) The redevelopment of sites with potential to open a blocked view shown in Figure 3.12 must take into account the restoration of that view.	The tower form is slender and not excessively bulky and not expected to unreasonably impact on views between buildings.
c) Align buildings to maximise view corridors between buildings.	
d) Remove or avoid installation of built elements that obstruct significant views.	
e) Carefully consider tree selection to provide views along streets in Figure 3.12 and keep under storey planting low where possible.	
f) Site analysis must address views with the planning and design of building forms taking into account existing topography, vegetation and surrounding development.	

4 Access, parking and servicing

Objectives/controls	*Comment*
<u>4.2 Pedestrian access and mobility</u>	
a) Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage or high quality architectural features that improve clarity of building address and contribute to visitor and occupant amenity.	Complies
b) The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard (AS 1428 Pt 1 and 2, AS 2890 Pt 1, or as amended) and the Disability Discrimination Act 1992 (as amended).	

Objectives/controls	*Comment*
c) The development must provide at least one main pedestrian entrance with convenient barrier free access in all developments to at least the ground floor.	
d) The development must provide continuous access paths of travel from all public roads and spaces as well as unimpeded internal access.	
e) Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain (street) with appropriate slip resistant materials, tactile surfaces and contrasting colours in accordance with Council's Public Domain Technical Manual.	
f) Building entrance levels and footpaths must comply with the longitudinal and cross grades specified in AS 1428.1:2001, AS/NZS 2890.1:2004 and the Disability Discrimination Act.	
<u>4.3 Vehicular driveways and manoeuvring areas</u>	
a) Driveways should be:	Complies
i) Provided from lanes and secondary streets rather than the primary street, wherever practical.	
ii) Located taking into account any services within the road reserve, such as power poles, drainage pits and existing street trees.	
iii) Located a minimum of 6 metres from the perpendicular of any intersection of any two roads.	
iv) If adjacent to a residential development setback a minimum of 1.5m from the relevant side property boundary.	
b) Vehicle access is to be designed to:	
i) Minimise the impact on the street, site layout and the building façade design; and	
ii) If located off a primary street frontage, integrated into the building design.	
<u>4.4 On-site parking</u>	
General (all development)	Complies
a) On-site parking must meet the relevant Australian Standard (AS2890.1 2004 – Parking facilities, or as amended).	
b) Council may require the provision of a supporting geotechnical report prepared by an appropriately qualified professional as information to accompany a development application to Council.	
c) Car parking and associated internal manoeuvring areas which are surplus to Council's specified parking requirements will count towards the gross floor area, but not for the purpose of determining the necessary parking.	
d) Any car parking provided in a building above ground level is to have a minimum floor to ceiling height of 2.8m so it can be adapted to another use in the future.	
e) On-site vehicle, motorcycle and bicycle parking is to be provided in accordance with Part E of this DCP	
f) To accommodate people with disabilities, provide a minimum of 1% of the required parking spaces, or minimum	

Objectives/controls	*Comment*
of 1 space per development, (whichever is the greater) as an appropriately designated and signed disabled parking space.	
Residential flat buildings	Complies
a) On-site parking is to be accommodated underground, or otherwise integrated into the design of the building.	
Commercial developments within the commercial core and city edge zones	Complies
a) On-site parking is to be accommodated underground, or otherwise integrated into the design of the building.	
Commercial developments and mixed use developments in all other zones	Complies
a) The impact of any on-grade car parking must be minimised by:	
i) Locating parking on the side or rear of the lot away from the street frontage;	
ii) Provision of fencing or landscape to screen the view of cars from adjacent streets and buildings;	
iii) Allowing for safe and direct access to building entry points; or	
iv) Incorporating car parking into landscape design of the site (such as plantings between parking bays to improve views, selection of paving material and screening from communal and open space areas).	
b) Natural ventilation should be provided to underground parking areas where possible, with ventilation grilles and structures;	
i) integrated into the overall façade and landscape design of the development,	
ii) not located on the primary street façade, and	
iii) oriented away from windows of habitable rooms and private opens space areas	
<u>4.5 Site facilities and services</u>	
Mail boxes	Complies
a) Provide letterboxes for residential building and/or commercial tenancies in one accessible location adjacent to the main entrance to the development.	
b) They should be integrated into a wall where possible and be constructed of materials consistent with the appearance of the building.	
c) Letterboxes shall be secure and large enough to accommodate articles such as newspapers.	

Objectives/controls	*Comment*
Communication structures, air conditioners and service vents	Complies
a) Locate satellite dish and telecommunication antennae, air conditioning units, ventilation stacks and any ancillary structures:	
i) Away from the street frontage,	
ii) Integrated into the roof scape design and in a position where such facilities will not become a skyline feature at the top of any building, and	
iii) Adequately setback from the perimeter wall or roof edge of buildings.	
b) A master antennae must be provided for residential apartment buildings. This antenna shall be sited to minimise its visibility from surrounding public areas.	
Waste (garbage) storage and collection	Complies
General (all development)	
a) All development is to adequately accommodate waste handing and storage on-site. The size, location and handling procedures for all waste, including recyclables, is to be determined in accordance with Council waste policies and advice from relevant waste handling contractors.	
b) Access for waste collection and storage is preferred from rear lanes, side streets or rights of ways.	
c) Waste storage areas are to be designed to:	
i) Ensure adequate driveway access and manoeuvrability for any required service vehicles,	
ii) Located so as not to create any adverse noise impacts on the existing developments or sensitive noise receptors such as habitable rooms of residential developments, and	
iii) Screened from the public way and adjacent development that may overlook the area.	
d) The storage facility must be well lit, easily accessible on grade for movement of bins, free of obstructions that may restrict movement and servicing of bins or containers and designed to minimise noise impacts.	

Objectives/controls	*Comment*
Location requirements for Waste Storage Areas and Access	Complies
a) Where waste volumes require a common collection, storage and handling area, this is to be located:	
i) For residential flat buildings, enclosed within a basement or enclosed carpark,	
ii) For multi-housing, at ground behind the main building setback and façade, or within a basement or enclosed carpark,	
iii) For commercial, retail and other development, on-site in basements or at ground within discrete service areas not visible from main street frontages.	
b) Where above ground garbage collection is prohibitive or impractical due to limited street frontage, or would create an unsafe environment, an on-site basement storage area must be provided.	
c) Where a mobile compaction vehicle is required to enter the site, the access and circulation area shall be designed to accommodate a vehicle	
Service docks and loading/unloading areas	Complies
a) Provide adequate space within any new development for the loading and unloading of service/delivery vehicles.	
b) Preferably locate service access off rear lanes, side streets or rights of way.	
c) Screen all service doors and loading docks from street frontages and from active overlooking from existing developments.	
d) Design circulation and access in accordance with AS2890.1	
Fire service and emergency vehicles	Complies
a) For developments where a fire brigade vehicle is required to enter the site, vehicular access, egress	
and manoeuvring must be provided to, from and on the site in accordance with the NSW Fire Brigades Code of Practice – Building Construction – NSWFB Vehicle Requirements.	
b) Generally, provision must be made for NSW Fire Brigade vehicles to enter and leave the site in a forward direction where:	
i) NSW Fire Brigade cannot park their vehicles within the road reserve due to the distance of hydrants from the building or restricted vehicular access to hydrants; or	
ii) The site has an access driveway longer than 15m.	

Objectives/controls	*Comment*
Utility Services The provision of utility services and access for regular servicing and maintenance must be considered at the concept stage of site development. a) Development must ensure that adequate provision has been made for all essential services including water, sewerage, electricity and telecommunications and stormwater drainage to the satisfaction of all relevant authorities. b) The applicant must liaise with the relevant power authority with regard to the need for a conduit to be installed within the foot way area for the future provision of an underground power supply and extension of the conduit up to the wall of the existing or proposed building. c) The development must ensure that ready connection of the building(s) can be made in future when underground power is installed and the overhead connection is replaced with a connection to the underground line. d) The applicant must liaise with the power authority with regard to the retention, relocation, or removal of any existing power pole.	Complies

5 Environmental management

Objectives/controls	*Comment*
5.2 Energy efficiency and conservation	
Residential New dwellings, including multi-unit development within a mixed use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with State Environmental Planning Policy – Building Sustainability Index (BASIX). Council encourages all applicants to go beyond minimum BASIX requirements incorporating passive solar design and energy efficiency measures for residential development. Non-Residential For all non-residential development: a) Improve the control of mechanical space heating and cooling by: i) Designing heating/cooling systems to target only those spaces which require heating or cooling, not the whole building. b) Improve the efficiency of hot water systems by: i) Insulating hot water systems, and ii) Installing water saving devices, such as flow regulators, 3.5 stars rated shower heads, dual flush toilets and tap aerators. c) Reduce reliance on artificial lighting and designing lighting systems to target only those spaces which require lighting at any particular 'off peak' time, not the whole building. An energy efficiency report from a suitably qualified consultant is to accompany any development application for non-residential development with a construction cost of $1million or greater. This report must demonstrate commitment to achieving a minimum of 4 stars Green Star rating (design and as built tool) or 4 stars NABERS rating (energy tool) for the development.	Suitable measures are provided to address energy efficiency including • The BASIX report identifies a 7kW PV system • The development has a NatHERS rating of 7.2. • For the residential towers and apartments, a BASIX Energy target of 30 is proposed, exceeding the minimum BASIX requirements. • For the residential towers and apartments, a BASIX Water target of 50 is proposed, exceeding the minimum BASIX requirements. • Other than a gas boosted hot water system, the development is now only using electric appliances. • All car spaces are now proposed to EV ready.
5.3 Water conservation	
Residential New dwellings, including a residential component within a mixed use building and serviced apartments intended or capable of being strata titled, are to demonstrate compliance with State Environmental Planning Policy – Building Sustainability Index (BASIX). Council encourages all residential development to go beyond the minimum BASIX requirements and enhance the water efficiency for their development. Non-residential a) The following water saving measures are to be incorporated into non-residential building. Water fixtures (shower heads, taps, toilets, urinals etc) are to be 3 stars 3.5 stars or better rated. i) Appliances (dishwashers, clothes washers etc) are to be 3 stars 3.5 stars or better rated with respect to water use efficiency. Demonstrate, if necessary, how these requirements will be achieved for replacement appliances,	See above.

appliances not installed at construction or bought in by occupants following construction,	
ii) Stormwater runoff control, capture and reuse, including water quality management in accordance with Council's guidelines,	
iii) Select water efficient plants and/or, indigenous vegetation for landscape in accordance with Council's recommendations,	
iv) Use non-potable water for watering gardens and landscape features, and	
v) Operating details for swimming pools and water features including filling, draining and maintenance activities. Covers are to be included in the design and operational aspects of swimming pool installations.	
b) Alternatives to the above water savings methods can be presented to Council and they will be assessed on merit.	
5.4 Reflectivity	
a) New buildings and facades should not result in glare that causes discomfort or threatens safety of pedestrians or drivers.	Complies
b) Visible light reflectivity from building materials used on facades of new buildings should not exceed 20%.	
c) Subject to the extent and nature of glazing and reflective materials used, a Reflectivity Report that analyses potential solar glare from the proposed development on pedestrians or motorists may be required	
5.5 Wind mitigation	
a) To ensure public safety and comfort the following maximum wind criteria are to be met by new buildings:	Complies
i) 10 metres/second in retail streets,	
ii) 13 metres/second along major pedestrian streets, parks and public places, and	
iii) 16 metres/second in all other streets.	
b) Site design for tall buildings (towers) should:	
i) Set tower buildings back from lower structures built at the street frontage to protect pedestrians from strong wind downdrafts at the base of the tower,	
ii) Ensure that tower buildings are well spaced from each other to allow breezes to penetrate city centre,	
iii) Consider the shape, location and height of buildings to satisfy wind criteria for public safety and comfort at ground level, and	
iv) Ensure usability of open terraces and balconies.	
c) A Wind Effects Report is to be submitted with the DA for all buildings greater than 32m in height,	
d) For buildings over 50m in height, results of a wind tunnel test are to be included in the report.	
5.6 Waste and recycling	
Non-residential development	Complies

a) Development applications for all non-residential development must be accompanied by a waste management plan that addresses: i) Best practice recycling and reuse of construction and demolition materials, ii) Use of sustainable building materials that can be reused or recycled at the end of their life, iii) Handling methods and location of waste storage areas in accordance with the provisions of Section 4.4.3 of this DCP, such that handling and storage has no negative impact on the streetscape, building presentation or amenity of occupants and pedestrians, and iv) Procedures for the on-going sustainable management of green and putrescible waste, garbage, glass, containers and paper, including estimated volumes, required bin capacity and on-site storage requirements. The waste management plan is to be prepared by a specialist waste consultant and is subject to approval by Council. Residential development Provision must be made for the following waste generation: a) In developments not exceeding six dwellings, individual waste storage facilities may be permitted. b) In development of more than six units or dwellings, or where the topography or distance to the street collection point makes access difficult for individual occupants, a collection and storage area is required. The storage area must be located in a position which is; i) Not visible from the street, ii) Easily accessible to dwelling occupants, iii) Accessible by collection vehicles (or adequately managed by the body corporate to permit relocation of bins to the approved collection point), iv) Has water and drainage facilities for cleaning and maintenance, and v) Does not immediately adjoin private open space, windows or clothes drying areas. c) Subject to Council collection policy, common garbage storage areas must be sized to either accommodate the number of individual bins required or to accommodate sufficient larger bins	

6 Residential development standards

The proposal does not include a residential component.

Objectives/controls	*Comment*
<u>6.1 SEPP 65</u> See assessment elsewhere. <u>6.2 Housing choice and mix</u> a) Where residential units are proposed at ground level within the Mixed Use (City Edge) and Special Activities zone, a report must be provided with the development application demonstrating how future commercial uses can be accommodated within the ground level design. The report must address:	Complies

Objectives/controls	*Comment*
i) Access requirements including access for persons with a disability (Compliance with Disability Discrimination Act 1992), ii) Any upgrading works necessary for compliance with the Building Code of Australia, and iii) Appropriate floor to ceiling heights. b) To achieve a mix of living styles, sizes and layouts within each residential development, comply with the following mix and size: i) Studio and one bedroom units must not be less than 10% of the total mix of units within each development, ii) Three or more bedroom units must not be less than 10% of the total mix of units within each development, and iii) For smaller developments (less than six dwellings) achieve a mix appropriate to locality. c) For development built by (or on behalf of) the Department of Housing, an alternative mix of unit types may be approved, subject to housing needs being demonstrated by the Department. d) For residential apartment buildings and multi-unit housing, 10% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes “pre-adaptation” design details to ensure visitability is achieved. e) Where possible, adaptable dwellings shall be located on the ground floor, for ease of access. Dwellings located above the ground level of a building may only be provided as adaptable dwellings where lift access is available within the building. The lift access must provide access from the basement to allow access for people with disabilities. f) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995). g) Car parking and garages allocated to adaptable dwellings must comply with the requirements of the relevant Australian Standard for disabled parking spaces. h) For all residential apartment / flat buildings, 10% of all dwellings (or at least 1 dwelling) must be designed to achieve the Silver Standards of the Livable Housing Design Guideline (Livable Housing Australia 2015). All proposed livable dwellings must be clearly identified on the submitted DA plans. i) Ceiling heights of apartments must be selected to encourage the penetration of natural sunlight into all areas of the building. Provide the following minimum floor to ceiling heights, for residential zones, as required by the Residential Flat Design Code: i) 2.7m minimum for all habitable rooms on all floors; ii) 2.25m to 2.4m minimum for non-habitable rooms on all floors; iii) for two storey apartments, 2.4m minimum for the second storey if 50% or more of the apartment has 2.7m minimum ceiling heights; iv) for two storey units with a two storey void space, 2.4m minimum ceiling heights; v) attic spaces, 1.5 minimum wall heights at edge of room with a 30 degree minimum ceiling slope.	

Objectives/controls	*Comment*
6.3 Dwelling houses	
	N/A
6.4 Multi dwelling housing	
	N/A
6.5 Dual occupancy	
	N/A
6.6 Basement Carparks	
a) The scale and siting of the basement car park must not impact upon the ability of the development to satisfy minimum landscaping and deep soil zone requirements.	Satisfactory
b) The roof of any basement podium, measured to the top of any solid wall located on the podium, must not be greater than 1.2m above natural or finished ground level, when measured at any point on the outside walls of the building. On sloping sites, a change in level in the basement must be provided to achieve this maximum 1.2m height.	
Generally variation to this 1.2m height will not be supported however Council recognises that there may be occasions where this standard cannot be achieved. Should such a circumstance arise, the additional portion of the basement podium above 1.2m height must be included in the total gross floor area calculation for the development.	
c) In addition, the following must be satisfied:	
i) Landscaped terraces are provided in front of the basement podium to reduce the overall visual impact;	
ii) The height of the basement does not result in the building having a bulk and scale which dominates the streetscape; and	
iii) The main pedestrian entry to the building is identifiable and readily accessible from the street frontage.	
d) The following setbacks from front, side and rear boundaries apply to basement podiums	
i) Where the height of the basement podium (measured to the top of any solid wall located on the podium) is less than 1.2m above natural or finished ground level (whichever distance is greater), the basement podium may extend to the property boundary. A minimum 1.5m wide landscaped planter must be provided on the perimeter of any section of the basement podium which is located on a side or rear property boundary. Such planter must prevent direct access to the outer edge of the podium, to minimise direct overlooking of adjacent dwellings and open space areas.	
ii) Any portion of the basement which exceeds 1.2m above natural or finished ground level (whichever distance is greater) must be setback from the property boundaries by a ratio 1:1 (height: setback). A minimum setback of 1.5m applies in this instance, with this area to be landscaped. For the purpose of determining the height of the basement, any solid walls located on the podium shall be included in the overall height calculation.	
e) Where parking is provided in a basement, ventilation structures for the basement parking and air conditioning units must be orientated away from windows of habitable rooms and private open space areas. Ventilation grills must be integrated into the design of the façade of the building to minimise their visual impact.	
f) The visual impact of all basement walls must be minimised through the use of various design techniques including well proportioned ground	

Objectives/controls	*Comment*
level articulation and relief, mixed finishes and materials, terracing and/or dense landscaping.	
g) Basements must be protected from inundation from 100-year ARI flood levels (or greater).	
6.7 Communal open space	
a) Developments with more than 10 dwellings must incorporate communal open space. The minimum size of this open space is to be calculated at 5m2 per dwelling. Any area to be included in the communal open space calculations must have a minimum dimension of 5m.	Complies
b) The communal open space must be easily accessible and within a reasonable distance from apartments, be integrated with site landscaping, allow for casual social interaction and be capable of accommodating recreational activities.	
c) Where a minimum of 15% of the site is provided as a deep soil zone, combined use of part of the deep soil zone as communal open space may occur. The combined communal open space/deep soil area may be grassed but must not contain significant shade trees. A maximum of 1/3 of the required communal open space area may be combined with the deep soil zone.	
d) Areas of the communal open space which are to be paved or which will contain shade structures, swimming pools or the like cannot be located within the deep soil zone.	
e) The communal open space area must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on June 21.	
6.8 Private open space	
a) Private open space must be provided for each dwelling within a residential apartment building in the form of a balcony, courtyard, terrace and/or roof garden.	Complies
b) Private open space for each dwelling within a residential apartment building must comply with the following:	
c) Where private open space is provided in the form of a balcony, the following requirements must also be met:	
i) Avoid locating the primary balconies where they address side setbacks.	
ii) The balcony must have a minimum area of 12m2 open space a minimum depth of 2.4 metres.	
iii) The primary balcony of at least 70% of the dwellings within a multi dwelling housing development shall receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm on June 21.	
iv) Balconies must be designed and positioned to ensure sufficient light can penetrate into the building at lower levels.	
v) Individual balcony enclosures are not supported. Balcony enclosures must form part of an overall building façade design treatment and should not compromise the functionality of a balcony as a private open space area.	

Objectives/controls	*Comment*
6.9 Overshadowing	
a) The design of the development must have regard to the existing and proposed level of sunlight which is received by living areas and private open space areas of adjacent dwellings. Sensitive design must aim to retain the maximum amount of sunlight for adjacent residents. Council will place greatest emphasis on the retention of sunlight within the lower density residential areas.	The proposal is acceptable with regard to the overshadowing of current and likely future development.
b) Adjacent residential buildings and their public spaces must receive at least 3 hours of direct sunlight between 9.00am and 3.00pm on 21 June.	
c) In determining access to sunlight, overshadowing by fences, roof overhangs and changes in level must be taken into consideration. Overshadowing by vegetation should also be considered, where dense vegetation appears as a solid fence. Refer to Land and Environment Court Planning Principles – Parsonage vs Ku-Rin-Gai Council (2004).	
d) In areas undergoing change, the impact of overshadowing on development likely to be built on adjoining sites must be considered, in addition to the impacts on existing development.	
6.10 Solar access	
a) Residential apartment buildings must aim to maximise their level of northern exposure to optimise the number of dwellings having a northern aspect. Where a northern aspect is available, the living spaces and balconies of such apartments must typically be orientated towards the north.	The proposal exceeds the minimum requirement for solar access to units under the ADG. There are no single aspect south facing units and dual aspect units are maximised through minimising the number of units per floor.
b) The development must maximise the number of apartments with a dual orientation. Single aspect, single storey apartments should preferably have a northerly or easterly aspect and a reduced depth to allow for access of natural light to all habitable spaces.	
c) Shading devices should be utilised where necessary, particularly where windows of habitable rooms are located on the western elevation.	
d) The living rooms and private open space of at least 70% of apartments should receive a minimum of three hours of direct sunlight between 9.00am and 3.00pm.	
e) The number of single aspect apartments with a southerly aspect (south-westerly to south-easterly) is limited to a maximum of 10% of the total number of apartments proposed.	
f) Provide vertical shading to eastern and western windows. Shading can take the form of eaves, awnings, colonnades, balconies, pergolas, external louvres and planting.	

Objectives/controls	*Comment*
6.11 Natural ventilation	
a) Provide residential apartment buildings with a building depth of between 10 and 18m. The depth is measured across the shortest dimension of the building. Dwellings should be a maximum depth of 21m measured from the outside of the balcony.	Building depth does not exceed 18m. The proposal satisfies the natural ventilation requirements under the ADG.
b) Variation to this standard will only be considered where it can be demonstrated that apartments will achieve the minimum requirements with regard to natural ventilation. This may be achieved where apartments have a wider frontage, or increased ceiling and window height to allow for greater penetration of natural light. The building depth is measured across the shortest access, excluding the depth of any unenclosed balconies.	Single aspect units do not exceed 8m in depth.
c) A minimum of sixty percent (60%) of all residential apartments shall be naturally cross ventilated.	
d) Twenty five percent (25%) of kitchens within a development must have access to natural ventilation. Where kitchens do not have direct access to a window, the back of the kitchen must be no more than 8m from a window.	
e) Single aspect apartments must be limited in depth to 8m from a window.	
6.12 Visual privacy	
1. New buildings should be sited and oriented to maximise visual privacy between buildings through compliance with minimum front, side and rear setback / building separation requirements	Satisfactory.
2. The internal layout of buildings should be designed to minimise any direct overlooking impacts occurring upon habitable rooms and private balcony / open space courtyards, wherever possible by separating communal open space and public domain areas from windows of rooms, particularly sleeping room and living room areas.	
3. Buildings are to be designed to increase privacy without compromising access to sunlight and natural ventilation through the following measures:	
(a) Off-setting of windows in new buildings from windows in existing adjoining building(s).	
(b) Recessed balconies and / or vertical fin elements between adjoining balconies to improve visual privacy.	
(c) Provision of solid, semi-solid or dark tinted glazed balustrading to balconies.	
(d) Provision of louvers or screen panels to windows and / or balconies.	
(e) Provision of perimeter landscaped screen / deep soil planting.	
(f) Incorporating planter boxes onto apartment balconies to improve visual separation between apartments within the development and adjoining buildings.	
(g) Provision of pergolas or shading devices to limit overlooking of lower apartments or private open space courtyards / balconies	
6.13 Acoustic Privacy	
1. Residential apartments should be arranged in a mixed use building, to minimise noise transition between apartments by:	The layout of the units provides suitable separation of bedrooms from noisier areas.
(a) Locating busy, noisy areas next to each other and quieter areas, next to other quieter areas (eg living rooms with living rooms and bedrooms with bedrooms);	Acoustic impacts from the rail corridor are addressed in the Acoustic Report.

Objectives/controls	*Comment*
(b) Using storage or circulation zones within an apartment to buffer noise from adjacent apartments, mechanical services or corridors and lobby areas; and (c) Minimising the amount of party (shared) walls with other apartments. 2. All residential apartments within a mixed use development should be designed and constructed with double-glazed windows and / or laminated windows, solid walls, sealing of air gaps around doors and windows as well as insulating building elements for doors, walls, roofs and ceilings etc; to provide satisfactory acoustic privacy and amenity levels for occupants within the residential and / or serviced apartment(s). 3. Noise transmission from common corridors or outside the building is to be minimised by providing seals at entry doors. 6.14 Storage **Dwelling** / **Storage Area** / **Storage Volume** One bedroom apartments / $3m^2$ / $3m^3$ Two bedroom apartments / $4m^2$ / $8m^3$ Three or more bedroom apartments / $5m^2$ / $10m^3$	Complies

7 Planning controls for special areas

The site is not located within a special area.

8 Works in the public domain

The proposal will involve upgrades to the footpath for the frontage and street trees in accordance with Council's Public Domain Technical Manual.

CHAPTER E1: ACCESS FOR PEOPLE WITH A DISABILITY

The proposal provides level access and travel into and within the development.

Accessible car parking is provided in accordance with Council controls along with accessible units.

CHAPTER E2: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

The proposal does not raise any concerns with regard to the principles of CPTED.

CHAPTER E3: CAR PARKING, ACCESS, SERVICING/LOADING FACILITIES AND TRAFFIC MANAGEMENT

6 Traffic impact assessment and public transport studies

6.1 Car Parking and Traffic Impact Assessment Study

A traffic impact assessment was submitted with the proposal which assessed a variety of aspects of the proposal including parking, manoeuvring, servicing and traffic generation. The traffic impact assessment has been reviewed by Council's Traffic Officer who has not raised any concerns subject to conditions of consent.

6.2 Preliminary Construction Traffic Management Plan

A condition of consent requires preparation of a Construction Environmental Management Plan prior to the issue of the CC.

7 Parking demand and servicing requirements

7.1 Car Parking, Motor Cycle, Bicycle Requirements and Delivery / Servicing Vehicle Requirements

The Guide to Traffic Generating Development is the lesser rate and applies in this instance.

		Rate	Required	Proposed
Residential				
Car parking				
1 bed	3	0.6	1.8	
2 bed	31	0.9	27.9	
3 bed	2	1.4	2.8	
Total units	36			
Total			32.5 (33)	33
Visitor		0.2 per dwelling	7.2 (8)	8
Motorbike		1 / 15 dwellings	3	4
Bicycle		1 / 3 dwellings	12	12
Commercial				
Car parking	237	1/60	4	6
Motorbike		1/25 car spaces	1	1
Bicycle		1/200m² GFA (staff)	1	2
		1/750m² GFA (visitor)	1	

7.2 Disabled Access and Parking

A compliant number of accessible car parking spaces are provided.

7.3 Bicycle Parking / Storage Facilities and Shower and Change Facilities

Secure bicycle parking has been provided for the commercial tenants and residents.

7.7 Car Parking Layout and Design

Council's Traffic Officer has reviewed the basement design with regard to dimensions and layout and given a satisfactory referral subject to conditions.

7.8 Basement Car Parking

A minimum 2.4 metre headroom height is provided to basement levels.

A geotechnical report has been provided with regard to excavation and has been reviewed as satisfactory by Council's Geotechnical Officer.

Conditions of consent are also recommended with regard to construction management during excavation.

The waste collection area is compliant with Australian Standard AS 2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities.

Wheel stops are provided to all parking spaces.

8 Vehicular access

Driveway grades and sight distances comply.

9 Loading / unloading facilities and service vehicle manoeuvring

The development complies with AS 2890.2.

Waste servicing will occur on site and compliant manoeuvring areas and clearances are provided.

10 Pedestrian access

The proposal is satisfactory with regard to pedestrian access into the site and along the frontage.

11 Safety & security (Crime Prevention through Environmental Design) measures for car parking areas

The proposal is satisfactory with regard to the principles of CPTED.

CHAPTER E6: LANDSCAPING

The proposal is supported by a landscape plan prepared by a suitably qualified consultant. That plan has been reviewed by Council's Landscape Officer as being satisfactory subject to conditions of consent.

CHAPTER E7: WASTE MANAGEMENT

A Site Waste Minimisation and Management Plan (SWMMP) has been provided.

A demolition plan has been provided for the building to be removed.

Accessible waste rooms are provided for residents and commercial tenants.

Satisfactory volumes and servicing arrangements are provided. This includes FOGO waste and on-site collection. This includes a bin towing facility to collection area on the ground floor.

Units	General waste	Recyclable	Green / FOGO
Required	36 x 80L/wk = 2880	40L / wk = 1440	No rate in DCP
Proposed	3300	1980	2 x 240L

CHAPTER E11 - HERITAGE CONSERVATION

See discussion under Clause 5.10 of the LEP in regard to heritage considerations.

CHAPTER E12 GEOTECHNICAL ASSESSMENT

The application has been reviewed by Council's Geotechnical Engineer in relation to excavation and site stability and conditions have been recommended.

CHAPTER E13 FLOODPLAIN MANAGEMENT

The site is not identified as flood affected.

CHAPTER E14 STORMWATER MANAGEMENT

Council's Stormwater Officer has reviewed the proposed stormwater management for the development and is satisfied it meets Council requirements subject to appropriate conditions.

- Increase of Peak Stormwater Discharge to Receiving System: This proposal will increase peak stormwater rates to the kerb inlet pit on Denison Street within the site frontage due to a redirection of catchment that is currently conveyed to the next kerb inlet pit downslope. This does not satisfy the following sections of Chapter E14 the WDCP 2009:
  - Section 9.3.6(e)
  - Objective 1.1(1) (b)

  The stormwater design needs to be amended such that peak discharge rates from the site to receiving kerb inlet pit will not exceed pre-development levels, via an 'oversized' OSD storage. The following information will need to be submitted with the amended stormwater design to demonstrate this outcome:
  - Quantification of the peak stormwater discharge rates from the site to receiving kerb inlet pit in the pre and post development condition for each the 5 and 100 year storm event.
  - Details of the stormwater calculations used to quantify the peak pre and post development stormwater discharge rates including detailed pre and post development catchment plans and model files (e.g. DRAINS '.drn' files).
- The methodology for OSD design presented Section 10.2.4 of Chapter E14 of the WDCP 2009 is not suitable in this instance due to the stormwater diversion. An alternative method (e.g. DRAINS modelling or similar) will be necessary to determine the required OSD storage volume.

CHAPTER E15 WATER SENSITIVE URBAN DESIGN

A water sensitive urban design report has been provided that details appropriate stormwater runoff treatment prior to discharge to the stormwater system.

CHAPTER E19 EARTHWORKS (LAND RESHAPING WORKS)

The objectives of this chapter are as follows:

a) Provide guidelines for land filling, excavation and land reshaping works;

b) Prevent land filling, excavation or land reshaping works which create or contribute to environmental problems both on and off site;

c) Ensure the future use of land is not adversely affected by land reshaping works;

d) Ensure that no adverse impact occurs to local drainage systems (including groundwater systems), overland flow characteristics and flood storage;

e) Ensure that appropriate environmental management measures are applied to conserve the landscape and protect water quality;

f) Promote appropriate rehabilitation and revegetation of the site;

g) Protect human safety and the integrity of existing buildings and assets;

h) Minimise amenity impacts upon surrounding neighbourhoods;

i) Facilitate the regulated disposal / use of excavated material;

j) Ensure that buildings are designed to fit the lot and ensure that the nature, extent and depth of land reshaping works are kept to appropriate levels; and

k) Ensure compliance with the legal requirements regarding the removal of excess materials and importation of fill materials in accordance with the NSW EPA Waste Classification Guidelines (2014).

l) Promote the beneficial reuse of VENM and ENM where appropriate (as defined in the Protection of the Environment Operations (Waste) Regulation 2014).

The proposed excavations are acceptable with regard to these objectives subject to appropriate conditions.

Suitable supporting documentation has been provided with regard to excavation including a geotechnical report and advice from a structural engineer confirming rock anchors into adjoining sites will not be required.

Conditions of consent are recommended with regard to other aspects of excavation such as hours of work, dust, sediment and stormwater management.

CHAPTER E20 CONTAMINATED LAND MANAGEMENT

See discussion at SEPP 55.

CHAPTER E21 DEMOLITION AND HAZARDOUS BUILDING MATERIALS MANAGEMENT

Conditions of consent are recommended in regard to demolition.

CHAPTER E22 SOIL EROSION AND SEDIMENT CONTROL

Conditions of consent are recommended in regard to appropriate sediment and erosion control measures to be in place during works.

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WOLLONGONG CITY COUNCIL

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Attachment 7 - DRAFT CONDITIONS FOR: DA-2022/1278

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This development application has been determined by granting deferred commencement consent subject to the following conditions:

A. The Development Consent shall not operate until Council has been satisfied as to the following matters:

(i) **Deferred commencement condition:**
Approval/certification is required from Sydney Trains as to the following matters and the approval/certification must be forwarded to the Council:

The Applicant/Developer shall prepare and provide to Sydney Trains for review, comment, and written endorsement the following final version items in compliance with the relevant ASA Standards (https://www.transport.nsw.gov.au/industry/asset-management-branch):

1. Geotechnical and Structural report/drawings that meet Sydney Trains' requirements. The Geotechnical Report must be based on actual borehole testing conducted on the site closest to the rail corridor.
2. Construction methodology with construction details pertaining to structural support during excavation. The Applicant is to be aware that Sydney Trains will not permit any rock anchors/bolts (whether temporary or permanent) within its land or easements.
3. Cross sectional drawings showing the rail corridor, sub soil profile, proposed basement excavation and/or structural design of sub ground support adjacent to the rail corridor. All measurements are to be verified by a Registered Surveyor.
4. Detailed Survey Plan showing the relationship of the proposed development with respect to Sydney Trains' easement and rail corridor land.
5. If required by Sydney Trains, an FE analysis which assesses the different stages of loading-unloading of the site and its effect on the rock mass surrounding the rail corridor.
6. If required by Sydney Trains, a Monitoring Plan.

Any conditions issued as part of Sydney Trains' endorsement of the above documents will also form part of the consent conditions that the Applicant/Developer is required to comply with.

B. The developer must satisfy Council, within 12 months of the date shown on the top of this consent, that the matters specified in condition number (i) have been complied with. Failure to satisfy Council within that time period will lapse this development consent.

C. If compliance with the matters contained in condition number (i) results in a substantial variation to the development approved deferred commencement, a new development application must be submitted.

Once Council is satisfied that the matters contained in condition number (i) have been complied with and the developer has been notified in writing of such compliance, the following conditions shall apply in respect of the approved development:

Conditions imposed by Council as part of this Consent are:

1. Approved Plans and Supporting Documentation

Development must be carried out in accordance with the following approved plans and supporting documentation (stamped by Council), except where the conditions of this consent expressly require otherwise.

Plan No	Revision No	Plan Title	Drawn By	Dated
015	Y	Demolition Plan	Design Workshop Australia	5 May 2023
016	AA	Site Plan	Design Workshop Australia	7 July 2023
019	AA	Basement 2	Design Workshop Australia	7 July 2023
020	AA	Basement 1	Design Workshop Australia	7 July 2023
021	AA	Ground Floor Plan	Design Workshop Australia	7 July 2023
022	Y	Level 1	Design Workshop Australia	5 May 2023
023	Y	Level 2	Design Workshop Australia	5 May 2023
024	Y	Level 03-05 (typical)	Design Workshop Australia	5 May 2023
025	Y	Level 06	Design Workshop Australia	5 May 2023
026	Y	Level 07-11 (typical)	Design Workshop Australia	5 May 2023
027	Y	Level 12	Design Workshop Australia	5 May 2023
028	Y	Level 13	Design Workshop Australia	5 May 2023
042	AA	West Elevation	Design Workshop Australia	7 July 2023
043	AA	North Elevation	Design Workshop Australia	7 July 2023
044	AA	East Elevation	Design Workshop Australia	7 July 2023
045	AA	South Elevation	Design Workshop Australia	7 July 2023
050	Y	Sections	Design Workshop Australia	5 May 2023
051	Y	Sections	Design Workshop Australia	5 May 2023
052	Y	Sections	Design Workshop Australia	5 May 2023
053	Y	Sections	Design Workshop Australia	5 May 2023
054	AA	Detail Sections	Design Workshop Australia	7 July 2023
055	AA	Detail Sections	Design Workshop Australia	7 July 2023
21-4592 LO1	E	Landscape Plan	Zenith Landscape Designs	8 May 2023
21-4592 LO2	E	Landscape Plan	Zenith Landscape Designs	8 May 2023
21-4592 LO3	E	Landscape Plan	Zenith Landscape Designs	8 May 2023
21-4592 LO4	E	Landscape Plan	Zenith Landscape Designs	8 May 2023

In the event of any inconsistency between the approved plans and the supporting documentation, the approved plans prevail. In the event of any inconsistency between the approved plans and a condition of this consent, the condition prevails.

Note: an inconsistency occurs between an approved plan and supporting documentation or between an approved plan and a condition when it is not possible to comply with both at the relevant time.

General Conditions

2. Compliance with the Building Code of Australia

Building work must be carried out in accordance with the requirements of the BCA.

3. **Construction Certificate**
A Construction Certificate must be obtained from Council or a Registered Certifier prior to work commencing.

A Construction Certificate certifies that the provisions of Part 3 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 have been satisfied, including compliance with all relevant conditions of Development Consent and the Building Code of Australia.

Note: The Certifier must cause notice of its determination to be given to the consent authority, and to the Council, by forwarding to it, within two (2) days after the date of the determination, the plans and documentation referred to in Section 13 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021.

4. **Occupation Certificate**
An Occupation Certificate must be issued by the Principal Certifier prior to occupation or use of the development. In issuing an Occupation Certificate, the Principal Certifier must be satisfied that the requirements of section 6.9 of the Environmental Planning and Assessment Act 1979, have been complied with as well as all of the conditions of the Development Consent.

5. **Transport for NSW (TfNSW)**
Requirements issued by Sydney Trains letter dated 23 December 2022 as attached to this consent shall form part of this Notice of Determination.

6. **Earthworks Plan Development**
An earthworks plan is to be developed by the geotechnical consultant prior to start of earthworks.

7. **Earthworks Plan Modifications**
The earthworks plan may require modification considering any subsequent geotechnical reports commissioned to address unforeseen geotechnical conditions encountered during the site preparation works.

8. **Earthworks Plan Recommendations**
All recommendations of EI Australia Pty Ltd in their geotechnical report dated 23 November 2022 are to be accommodated in the earthworks plan.

9. **Ground Disturbance**
No disturbance of ground is to occur beyond site boundaries. A minimum buffer between site boundaries and the construction of retaining structures is to be recommended by the geotechnical consultant to ensure adjoining property is not adversely impacted upon by this development.

10. **Structural Design Amendments**
The structural designs are to be confirmed or amended by the structural engineer based on the works-as-executed (WAE) geotechnical report.

11. **WAE**
At the completion of site preparation earthworks, the geotechnical consultant is to prepare a WAE report detailing encountered geotechnical conditions and how the remedial works addressed these conditions so that the residual geotechnical constraints can be accommodated within the structural designs for the development.

12. **Excavation Support**
All excavations need to be supported during and after construction particularly to protect adjoining property with nearby existing development.

13. **Hard Bedrock**
Hard bedrock where encountered will be difficult to excavate. Alternative excavation methods should be considered to minimise noise and vibration.

14. **Retaining Wall Design**
Retaining wall design is not to include anchors extending on to adjoining property without the written consent of the adjoining property owner.

15. Work in Accordance with Report
All work is to be in accordance with the geotechnical recommendations contained in the report dated 23 November 2022 by EI Australia Pty Ltd and any subsequent geotechnical report required to address unanticipated conditions encountered during construction.

16. Demolition and Construction Noise and Vibration Management
Prior to the commencement of any site works, the Proponent shall undertake a noise and vibration assessment to identify all sensitive receivers where the construction noise and vibration levels exceed the NSW Interim Construction Noise Guidelines for that receiver.

The findings, recommendations and management controls from the assessment shall be documented in a Noise and Vibration Management Plan prepared by a suitably qualified and experienced acoustic engineer (who is a member of either the Australian Acoustical Society or the Association of Australasian Acoustical Consultants) and submitted to the Certifying Authority for approval prior to the release of the Construction Certificate. The Plan shall be incorporated into the site CEMP.

For the duration of the site works noise and vibration must be managed in accordance with this approved Construction Noise and Vibration Management Plan

17. Construction Environmental Management Plan
A Construction Environmental Management Plan (CEMP) must be prepared and implemented, including Unexpected Finds Protocol and construction noise and vibration management, prior to the commencement of demolition works on the site. The CEMP must address how the proponent will manage any foreseeable environmental risk during the demolition, excavation and construction phase. This includes but is not limited to documenting measures to ensure there is no pollution to waters, and dust and noise are minimised as far as practicable.

18. Restricted Vegetation Removal
This consent permits the removal of trees and other vegetation from the site within three (3) metres of the approved buildings. This consent also permits the pruning of trees within three (3) metres of approved buildings in accordance with AS 4373:2007 Pruning of Amenity Trees. No other trees or vegetation shall be removed or pruned, without the prior written approval of Council.

19. Development Contributions
In accordance with Section 4.17(1)(h) of the Environmental Planning and Assessment Act 1979 and the Wollongong City Wide Development Contributions Plan (2022), a monetary contribution of $128,230.00 (subject to indexation) must be paid to Council towards the provision of public amenities and services, prior to the release of any associated Construction Certificate.

This amount has been calculated based on the proposed cost of development and the applicable percentage levy rate.

The contribution amount will be indexed quarterly until the date of payment using Consumer Price Index; All Groups, Sydney (CPI) based on the formula show in the Contributions Plan.

To request an invoice to pay the contribution amount go www.wollongong.nsw.gov/contributions and submit a contributions enquiry. The following will be required:

- Application number and property address.
- Name and address of who the invoice and receipt should be issue to.
- Email address where the invoice should be sent.

A copy of the Contributions Plan and accompanying information is available on Council's website www.wollongong.gov.au.

Before the Issue of a Construction Certificate

20. Universal Design Features
Seven (7) units must incorporate the Livable Housing Guideline's silver level universal design features. This detail is to be shown on the Construction Certificate.

21. Flows from Adjoining Properties

Flows from adjoining properties shall be accepted and catered for within the site. Finished ground and top of retaining wall levels on the boundary shall be no higher than the existing upslope adjacent ground levels. The above requirements must be clearly shown on Construction Certificate plans prior to the release of the Construction Certificate.

22. Basement Waterproofing

Full engineering details of the proposed wall around the basement car park shall be submitted to the Principal Certifier prior to the issue of the Construction Certificate. These shall include construction details indicating that no ingress of stormwater is possible into the basement levels other than from sub-soil drainage, vehicle wash water and runoff from the driveway that drains towards the basement. This applies to any proposed opening such as doors or ventilation louvres.

23. Protection of Basement from Ingress of Floodwater

The basement car park shall be protected from inundation during a 1 % AEP flood, ensuring all vehicular access, doors and ventilation points are a minimum of 0.2 metres above the 1 % AEP flood level. Evidence that these requirements have been satisfied shall be submitted to the Principal Certifier prior to the issue of a Construction Certificate.

24. Pump System

A pump system shall be provided in association with the detailed drainage design for the site to cater for stormwater from a prolonged/extreme storm event entering the basement. The pump system shall be designed by a suitably qualified and experienced civil engineer and reflected on the Construction Certificate plans and supporting documentation. Measures shall be included in the design of the pump system (e.g. flap gate or one-way valve system) where necessary to ensure backwater flow from the stormwater system into the basement car park level is not possible.

25. Ground Anchors

Permanent ground anchors are not permitted within the road. Temporary ground anchors can only be used where the Road Authority has provided written confirmation to the applicant for their use. Temporary anchors must be designed in accordance with RMS Technical Direction GTD 2020/001. If temporary anchors are proposed within the road reserve an application must be submitted to and approved by Wollongong City Council prior to the issue of any Construction Certificate. The application must be made via Council's website www.wollongong.nsw.gov.au through the "Frontage Works" application, and must be supported by:

a A geotechnical report prepared in accordance with the requirements of the RMS Technical direction GTD 2020/001.

b A dilapidation survey of the existing Council infrastructure within the zone of influence of the proposed excavation including CCTV of all stormwater pits and pipes and a photographic record of the road pavement, footpath area and associated civil assets.

c A dial before you dig confirming all service providers in the road.

d A letter from Sydney Water, Telstra, Endeavour, Jemena, and any other service providers with services in the road, providing written support of the proposed temporary anchors which references the relevant structural plans which they support.

e A detailed structural design of the proposed temporary anchors prepared by a Charted Civil Engineer (Structural) that referenced the relevant geotechnical investigation, and includes cross sections every 5m within the road frontage that shows the depth and clearance of the temporary anchors to all services, road pavements, stormwater pits and pipes and related assets based on surveyed levels.

26. Excavation and Retaining Structures Adjacent to Public Roads

The design of all permanent and temporary retaining structures within the zone of influence of any Council assets including the road pavement, stormwater pipes and pits, must be submitted to and approved by the Principal Certifier prior to the issue of any Construction Certificate. The design must be prepared in accordance with the RMS Technical direction GTD 2020/001, by a qualified Civil Engineer, NPER 3 accreditation with the Institute of Engineers Australia and experienced in

structural design. The plan must clearly show that all components of the retaining structure and associated drainage is wholly located within the subject site. The design must be supported by:

a A geotechnical report prepared in accordance with the requirements of the RMS Technical direction GTD 2020/001.

b A dilapidation survey of the existing Council infrastructure

c Details of the proposed monitoring program for the excavation and retaining structures, and relevant threshold actions prepared in accordance with RMS Technical direction GTD 2020/001

d A copy of the approved documentation satisfying this condition of consent and referencing this development application must also be provided to Wollongong City Council prior to works commencing.

27. Integration with Proposed Reconstruction of Hercules Street
The northern property boundary levels must be set to integrate with the Hercules Street upgrade approved under DA-2022/592. Any variations to approved levels must be accommodated within the subject site. Evidence that the design of the northern boundary is consistent with the approved Hercules Street upgrade must form part of the Construction Certificate application.

28. Depth and Location of Services
The depth and location of all services (ie gas, water, sewer, electricity, telephone, traffic lights, etc) must be ascertained and reflected on the Construction Certificate plans and supporting documentation.

29. Details of Proposed Pit and Pipeline
Details of the proposed connecting pipeline to the Council pit, within the existing drainage system shall be provided in conjunction with the detailed drainage design for the site. Connection is to be made in accordance with Wollongong City Council Standard Drawings. This requirement shall be reflected on the Construction Certificate plans and supporting documentation.

30. Certification for Landscape and Drainage
The submission of certification from a suitably qualified and experienced landscape designer and drainage consultant to the Principal Certifier prior to the release of the Construction Certificate, confirming that the landscape plan and the drainage plan are compatible.

31. Engineering Plans and Specifications - Retaining Wall Structures Greater than One (1) Metre
The submission of engineering plans and supporting documentation of all proposed retaining walls greater than one (1) metre to the Principal Certifier for approval prior to the issue of the Construction Certificate. The retaining walls shall be designed by a suitably qualified and experienced civil and/or structural engineer. The required engineering plans and supporting documentation shall include the following:

a. A plan of the wall showing location and proximity to property boundaries;

b. An elevation of the wall showing ground levels, maximum height of the wall, materials to be used and details of the footing design and longitudinal steps that may be required along the length of the wall;

c. Details of fencing or handrails to be erected on top of the wall;

d. Sections of the wall showing wall and footing design, property boundaries, subsoil drainage and backfill material. Sections shall be provided at sufficient intervals to determine the impact of the wall on existing ground levels. The developer shall note that the retaining wall, subsoil drainage and footing structure must be contained wholly within the subject property;

e. The proposed method of subsurface and surface drainage, including water disposal. This is to include subsoil drainage connections to an inter-allotment drainage line or junction pit that discharges to the appropriate receiving system;

f. The assumed loading used by the engineer for the wall design.

g. Flows from adjoining properties shall be accepted and catered for within the site. Finished ground and top of retaining wall levels on the boundary shall be no higher than the existing upslope adjacent ground levels.

32. Sizing of Drainage

All roof gutters, downpipes, pits, and pipelines draining roof areas and other impervious surfaces with no deliberate overflow path to the on-site stormwater detention (OSD) facility, shall be designed to cater for a 1 in 100 year ARI storm event in accordance with AS 3500.3: Plumbing and Drainage (Stormwater Drainage). Details of gutter/downpipe/pipeline sizes and locations shall be reflected on the Construction Certificate plans.

33. Stormwater Drainage Design

A detailed drainage design for the development must be submitted to and approved by the Principal Certifier prior to the release of the Construction Certificate. The detailed drainage design must satisfy the following requirements:

a. Be prepared by a suitably qualified civil engineer in accordance with Chapter E14 of Wollongong City Council's Development Control Plan 2009, Subdivision Policy, conditions listed under this consent, and generally in accordance with the concept plan/s lodged for development approval, prepared by ATB Consulting Engineers Civil and Structural, including:

   i. Plan: Ground Floor Concept Stormwater Layout, Reference No. 21147_SW4, issue C, dated 15/06/2023.

   ii. Plan: Basement 1 Concept Stormwater Layout, Reference No. 21147_SW3, issue C, dated 15/06/2023.

b. Include details of the method of stormwater disposal. Stormwater from the development must be piped to the new proposed kerb inlet pit in Hercules Street within the site frontage.

c. Engineering plans and supporting calculations for the stormwater drainage system are to be prepared by a suitably qualified engineer and be designed to ensure that stormwater runoff from upstream properties is conveyed through the site without adverse impact on the development or adjoining properties. The plan must indicate the method of disposal of all stormwater and must include rainwater tanks, existing ground levels, finished surface levels on all paved areas, estimated flow rates, invert levels and sizes of all pipelines.

d. Overflow paths shall be provided to allow for flows of water in excess of the capacity of the pipe/drainage system draining the land, as well as from any detention storage on the land. Blocked pipe situations with 1 in 100 year ARI events shall be incorporated in the design. Overflow paths shall also be provided in low points and depressions. Each overflow path shall be designed to ensure no entry of surface water flows into any building and no concentration of surface water flows onto any adjoining property. Details of each overflow path shall be shown on the detailed drainage design.

e. The impervious area of the proposed awning over ground level along Denison and Hercules Streets must be conveyed to the proposed OSD system. The OSD calculations, volume, and orifice diameter shall be designed to allow for this catchment.

f. The detailed drainage design shall include measures (e.g. non-return valve) within the proposed drainage system to prevent the possibility of stormwater held in the receiving stormwater pit entering the proposed OSD system.

34. Flood Level Requirements

The following requirements shall be reflected on the Construction Certificate plans, prior to the release of the Construction Certificate:

a. Habitable floor levels must be constructed at a minimum of the highest adjacent level of the 1% AEP as determined by a suitably qualified engineer plus a freeboard of 300mm.

b. Any portion of the building or structure up to and including the highest adjacent level of the 1% AEP as determined by a suitably qualified engineer plus a freeboard of 300mm should

be built from flood compatible materials. Where materials are proposed and not listed in Appendix B of Chapter E13 of the Wollongong DCP2009, relevant documentation from the manufacturer shall be provided demonstrating that the materials satisfy the definition of 'flood compatible materials' as stated in Chapter E13 of the Wollongong DCP2009.

c. The proposed building shall be designed to withstand the forces of floodwater, debris and buoyancy up to and including the highest adjacent level of the PMF as determined by a suitably qualified engineer plus a freeboard of 300mm.

35. OSD Design

The developer must provide OSD storage for stormwater runoff from the development. The design and details of the OSD system must be provided in conjunction with the detailed drainage design and approved by the Principal Certifier prior to the release of the Construction Certificate. The OSD design and details must satisfy the following requirements:

a. Must be prepared by a suitable qualified engineer in accordance with Chapter E14 of the Wollongong DCP 2009.

b. Must include details of the Site Storage Requirement (SSR) and Permissible Site Discharge (PSD) values for the site in accordance with Section 10.2.4 of Chapter E14 of the Wollongong DCP 2009.

c. The OSD facility must be designed to withstand the maximum loadings occurring from any combination of traffic (with consideration to residential and heavy vehicles), hydrostatic, earth, and buoyancy forces. Details must be provided demonstrating these requirements have been achieved.

d. The OSD facility shall incorporate a minimum 900mm x 900mm square lockable grate for access and maintenance purposes, provision for safety, debris control screen, and a suitably graded invert to the outlet to prevent ponding.

e. Must include discharge control calculations (i.e. orifice/weir calculations) generally in accordance with Section 10.2.6 and 10.4.4 of Chapter E14 of the Wollongong DCP 2009.

f. Details of the orifice plate including diameter of orifice and method of fixing shall be provided.

g. Must include details of a corrosion resistant identification plaque for location on or close to the OSD facility. The plaque shall include the following information and shall be installed prior to the issue of the Occupation Certificate:

   i. The structure is an OSD facility, being part of the stormwater drainage network, and is not to be tampered with.

   ii. Identification number DA-2023/1278;

   iii. Any specialist maintenance requirements.

h. Must include a maintenance schedule for the OSD system, generally in accordance with Chapter E14 of the Wollongong DCP 2009.

36. Site Filling

Filling on the site being within the floodplain shall be restricted to within the proposed building footprint and ramped areas immediately adjacent to the garage only. No wholesale filling of the site within the floodplain is permitted. This requirement shall be reflected on the Construction Certificate plans.

37. Council Footpath Reserve Works – Driveways and Crossings

All redundant vehicular crossings and laybacks rendered unnecessary by this development must be reconstructed to normal kerb and gutter or existing edge of carriageway treatment to match the existing. The verge from the back of kerb to the boundary must be restored and the area appropriately graded, topsoiled and turfed in a manner that conforms with adjoining road reserve. The area forward of the front boundary must be kept smooth, even and free from any trip hazards. All alterations of public infrastructure where necessary are at the developer's expense.

All new driveway laybacks and driveway crossings must be designed in accordance with Wollongong City Council Standards. Any redundant linemarking such as 'marked parking bays' are adjusted/removed at the developer's expense by a Council recognised contractor with the relevant insurances. Details and locations are to be shown on the Construction Certificate Plans.

38. Detailed Civil Engineering Design - Denison Street

A detailed civil engineering design shall be provided for the footpath and drainage works proposed under the application DA-2022/1278 (including modifications) within the road reserve and/or Council Land. The details must be submitted to and approved by Council's Development Engineering Manager. The detailed drainage design shall be generally in accordance with the drawing entitled Plan: Ground Floor Concept Stormwater Layout by ATB Consulting Engineers Civil and Structural, Drawing No. 21147_SW4, Revision C, dated 15/06/2023. The detailed civil engineering design shall be prepared by a suitably qualified practicing civil engineer in accordance with the relevant Council engineering standards. The plans shall include:

a. Levels and details of all existing and proposed infrastructure/services such as kerb and gutter, public utility, pits, poles, fencing, stormwater drainage, adjacent road carriageway crown, street signs (clearly identifying the type of sign) and footpath levels - and shall extend a minimum of 5 metres beyond the limit of works.

b. Footpath longitudinal sections, and cross-sections at 10 metre intervals as well as including building entrance points and transitions to existing at the property boundary demonstrating compliance with the latest versions of AS 1428.1, AS/NZS 2890.1, the Disability Discrimination Act and the AUSTROAD road design standards.

c. Engineering details of the proposed pit and pipe stormwater drainage system within Council's road reserve, including longitudinal section of the proposed system showing pits, pipe size/class, grade, inverts and ground levels. Each proposed pit must be constructed generally in accordance with Wollongong City Council's Engineering Standard Drawings.

d. Where any adjustments to public utilities are proposed the applicant shall submit documentary evidence that they have the consent of the owner of the public utility authority.

e. All construction must be in accordance with the requirements of Council's Subdivision Code. Evidence that this requirement has been met must be detailed on the engineering drawings.

f. Details are to be provided regarding the type of materials used for construction. They should conform to the adjacent road reserves. Pavement designs must be provided for road reconstruction works, the pavement must be designed by a suitably qualified engineer to the expected traffic loadings and type.

Evidence that the above requirements have been met must be detailed on the engineering drawings. The detailed civil engineering and drainage designs, along with supporting documentation, shall be submitted to and approved by Wollongong City Council's Development Engineering Manager prior to the issue of any Construction Certificate. The application must be made via Wollongong City Council's Frontage Works Application Process with details available on www.wollongong.nsw.gov.au. It is recommended that where the development also may include landscaping in the public domain or other works such as temporary anchors that information be included with the frontage works application.

39. Hercules Street – Detailed Civil Engineering Design – Council Land

A detailed civil engineering design shall be provided for the proposed footpath and drainage works within the road reserve and/or Council Land. The detailed civil engineering design shall be prepared by a suitably qualified practicing civil engineer in accordance with the relevant Council engineering standards. The design plans shall be generally in accordance with the DA-approved Ground Floor Plan by BN Group, Drawing Number A01.01, Issue A, dated 18.05.2022, and the Siteworks and Stormwater Drainage Plan by AT&L Civil Engineers and Project Managers, Drawing Number 21-3164-DAC020, Issue D, dated 14/11/2022 which are both from DA-2022/592, and shall include:

a. Levels and details of all existing and proposed infrastructure/services such as kerb and gutter, public utility, pits, poles, fencing, stormwater drainage, adjacent road carriageway crown, street signs (clearly identifying the type of sign) and footpath levels, and shall extend a minimum of 5 metres beyond the limit of works.

b. Footpath longitudinal sections, and cross-sections at 5 metre intervals as well as including building entrance points and transitions to existing at the property boundary demonstrating compliance with the latest versions of AS 1428.1, AS/NZS 2890.1, the Disability Discrimination Act and the AUSTROAD road design standards.

c. Engineering details of the proposed pit and pipe stormwater drainage system within Council's road reserve, including a hydraulic grade line analysis and longitudinal section of the proposed system showing calculated flows, velocity, pits, pipe size/class, grade, inverts and ground levels. Each proposed pit must be constructed generally in accordance with Wollongong City Council's Engineering Standard Drawings.

d. Where any adjustments to public utilities are proposed the applicant shall submit documentary evidence that they have the consent of the owner of the public utility authority.

e. All construction must be in accordance with the requirements of Council's Subdivision Code. Evidence that this requirement has been met must be detailed on the engineering drawings.

f. Details are to be provided regarding the type of materials used for construction. They should conform to the adjacent road reserves.

The detailed civil engineering design and supporting documentation shall be submitted to and approved by Wollongong City Council's Development Engineering Manager prior to the issue of a Construction Certificate.

40. Backwash of Swimming Pool Water
The discharge of water from the pool should only be carried out after chlorine levels in the water have been depleted. Swimming pool water should not be discharged to a watercourse.

41. Wind Mitigation Measures
All wind attenuation measures outlined in the *Pedestrian Wind Environment Statement* prepared by Windtech Consultants and dated 9 May 2023 are to be shown on the Construction Certificate Plans.

42. Airborne Rail Noise and Rail Vibration for Residential Units
Noise Mitigation Measures as outlined in the Rail noise and Vibration Assessment, prepared by Acoustic Logic and dated 26 September 2022, shall be implemented to ensure that the following noise goals are achieved at the site boundaries:

a. LAeq 35dBA in any bedroom in the building at any time between 10pm and 7am.

b. LAeq 40dBA anywhere else in the building (other than a garage, kitchen, bathroom or hallway): at any time between 10pm and 7am.

c. LAMax 50dBA in any bedroom in the building between 10pm and 7.am.

This requirement shall be reflected on the Construction Certificate plans and supporting documentation for the endorsement by the Principal Certifier, prior to the issue of the Construction Certificate.

43. Environmental Management Plan
The submission of a detailed Environmental Management Plan which addresses but is not limited to, the following issues:

a. Introduction.

b. Project Description.
This section should include:

i. Timing and duration of works.

ii. location of work sites offices, compounds, stockpiles and refuelling areas.

iii. a description of the site and surrounds and location of environmentally sensitive areas.

c. Objectives of the CEMP.
This section should state what the CEMP is trying to achieve.

d. Context of the CEMP.
This section should specify how the CEMP fits into the planning process of the project.

e. Planning Project Environmental Actions.

f. Environmental Impact Assessment (EIA) Obligations.
This section should identify all EIA documentation related to this project.

g. Environmental Aspects.
This section should reference or describe the aspects and impacts associated with the construction activities. Each impact should be assigned a risk ranking of low, medium or high. Control measures should be selected for all impacts ranked as medium or high. Low risk impacts should be monitored to ensure that they do not increase.

h. Legal and Other Requirements.
This section should detail the legislative requirements of the work, and all other specifications.

i. Supplementary Environmental Plans.
These include:

i. Erosion and Sediment Control Plan (ESCP) or Soil and Water Management Plan (SWMP).

ii. Note: Requirements for ESCPs and SWMPs are provided in “Managing Urban Stormwater: Soils and Construction” Landcom, 2004.

iii. Noise and Vibration Management Plan.

iv. Landscaping and Revegetation Plan.

v. Flora and Fauna Management Plan.

vi. Traffic Management Plan/Traffic Control Plan (TCP).

vii. Air Quality Management Plan.

viii. Waste Management Plan.

ix. Acid Sulfate Soil Management Plan (ASSMP).

x. Indigenous and European Heritage Plan.

xi. Contaminated Soil Management Plan.

j. Implementation.

k. On-site Structure and Responsibility.
This section should state the duties and responsibilities of all contractors and sub-contractors working on site and the relationship between these parties.

l. Training, Awareness and Competence.
This section should detail the environmental training that all site personnel are required to undertake. Environmental training should include:

i. Knowledge and understanding of the CEMP.

ii. Site induction, and may include:

- Emergency response training.
- Familiarisation with site environmental controls.
- Erosion and sediment control training.

m. Communication.
This section should include how the contractor plans to keep affected residents informed as to the nature and scope of works, the type of consultation and frequency. This section should identify and list details for relevant external stakeholders such as:

i. EPA.

ii. NPWS.

iii. NSW Fisheries.

iv. DPE.

v. Aboriginal Groups.

vi. Council.

This section should also detail the procedures for the notification of complaints and identify the person responsible for its maintenance and follow up action.

n. Emergency Planning and Response.
This section should detail the procedure to be followed in the event of an environmental emergency. An environmental emergency is any event that causes or has the potential to cause environmental damage. The procedure needs to include:

i. The names of key emergency response personnel.

ii. Personnel responsibilities and contact details.

iii. Contact details for emergency services (ambulance, fire brigade, spill clean up services).

iv. The location of on-site information on hazardous materials, including SDSs and spill containment material.

v. The procedure to follow to minimise/control the emergency.

vi. Procedures for notifying the Superintendent, the public and/or EPA.

Emergency Response Contacts should be listed in table form.

o. Auditing and Monitoring.

p. Environmental Action Monitoring.
This section should detail how all environmental actions identified in Section 2 are going to monitored and verified. This section should also detail or refer to a procedure to ensure that all monitoring results that exceed set criteria are acted on quickly and that the appropriate regulatory authorities are notified.

q. Auditing.
This section should detail audit criteria, frequency and scope.

r. Non-Conformance and Corrective and Preventive Action.
This section should state how these items should be addressed.

s. Review of CEMP.
This section should detail the procedure and frequency of reviewing the CEMP and how those using it will be aware of changes.

t. Appendix 1 - Environmental Action Table.
The Environmental Action Table should provide sufficient information to ensure effective and efficient on-site environmental management. The Environmental Actions Table should include all environmental actions that were identified in Section 2.0 of the CEMP. The Environmental Actions Table must clearly convey what action is required, when it needs to be done and who is supposed to do it.

u. Appendix 2 - Environmental Action Monitoring Table.
This section should detail how all of the environmental actions listed in Appendix 1 are going to be monitored and verified. The monitoring must clearly convey what monitoring is required, when the monitoring is to take place and who is to do it.

44. Car Parking and Access

The development shall make provision for the following:

Residential

- 33 residential car parking spaces (including 4 car parking spaces capable of adaption for people with disabilities)
- 8 residential visitor car parking spaces
- 4 residential motorcycle parking spaces
- A minimum of 12 secure (Security Class B) residential bicycle spaces
- A minimum of 3 visitor bicycle spaces (Security Class C)

Commercial

- 6 car parking spaces (including 1 car parking space for people with disabilities)
- 1 commercial motorcycle parking space
- A minimum of 1 secure (Security Class B) staff bicycle space
- A minimum of 1 commercial visitor bicycle space (Security Class C)

This requirement shall be reflected on the Construction Certificate plans. Any change in above parking numbers shown on the approved DA plans shall be dealt with via a section 4.55 modification to the development. The approved car parking spaces shall be maintained to the satisfaction of Council, at all times.

45. Parking Dimensions

The parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking areas are to be in conformity with the current relevant Australian Standard AS 2890.1, except where amended by other conditions of this consent. Details of such compliance are to be reflected on the Construction Certificate plans.

46. Disabled Person Parking Space Dimensions

Each disabled person's parking space must comply with the current relevant Australian Standard AS 2890.6 – Off-street parking for people with disabilities. This requirement shall be reflected on the Construction Certificate plans.

47. Designated Loading/Unloading Facility

The designated loading/unloading facility must be clearly delineated with appropriate signage and or line marking to ensure the area is kept clear at all times. The designated loading/unloading facility shall be shown on the Construction Certificate plans.

48. Vehicular Flow Signage

The provision of suitable barriers, line-marking and painted signage delineating vehicular flow movements within the car parking areas. These details shall be reflected on the Construction Certificate plans.

49. Structures Adjacent to Driveway

Any proposed structures adjacent to the driveway shall comply with the requirements of the current relevant Australian Standard AS 2890.1 (figure 3.2 and 3.3) to provide for adequate pedestrian and vehicle sight distance. This includes, but is not limited to, structures such as signs, letterboxes, retaining walls, dense planting etc. This requirement shall be reflected on the Construction Certificate plans.

50. Bicycle Parking Facilities

Bicycle parking facilities must have adequate weather protection and provide the appropriate level of security as required by the current relevant Australian Standard AS2890.3 - Bicycle Parking Facilities. This requirement shall be reflected on the Construction Certificate plans.

51. Council Footpath Reserve Works – Driveways and Crossings

All redundant vehicular crossings and laybacks rendered unnecessary by this development must be reconstructed to normal kerb and gutter or existing edge of carriageway treatment to match the existing. The verge from the back of kerb to the boundary must be restored and the area appropriately graded, topsoiled and turfed in a manner that conforms with adjoining road reserve. The area forward of the front boundary must be kept smooth, even and free from any trip hazards. All alterations of public infrastructure where necessary are at the developer's expense.

All new driveway laybacks and driveway crossings must be designed in accordance with Wollongong City Council Standards. Any redundant linemarking such as 'marked parking bays' are adjusted/removed at the developer's expense by a Council recognised contractor with the relevant insurances. Details and locations are to be shown on the Construction Certificate Plans.

52. Hercules Street – Detailed Civil Engineering Design – Council Land

A detailed civil engineering design shall be provided for the proposed footpath and drainage works within the road reserve and/or Council Land. The detailed civil engineering design shall be prepared by a suitably qualified practicing civil engineer in accordance with the relevant Council engineering standards. The design plans shall be generally in accordance with the DA-approved Ground Floor Plan by BN Group, Drawing Number A01.01, Issue A, dated 18.05.2022, and the Siteworks and Stormwater Drainage Plan by AT&L Civil Engineers and Project Managers, Drawing Number 21-3164-DAC020, Issue D, dated 14/11/2022 which are both from DA-2022/592, and shall include:

a. Levels and details of all existing and proposed infrastructure/services such as kerb and gutter, public utility, pits, poles, fencing, stormwater drainage, adjacent road carriageway crown, street signs (clearly identifying the type of sign) and footpath levels, and shall extend a minimum of 5 metres beyond the limit of works.

b. Footpath longitudinal sections, and cross-sections at 5 metre intervals as well as including building entrance points and transitions to existing at the property boundary demonstrating compliance with the latest versions of AS 1428.1, AS/NZS 2890.1, the Disability Discrimination Act and the AUSTROAD road design standards.

c. Engineering details of the proposed pit and pipe stormwater drainage system within Council's road reserve, including a hydraulic grade line analysis and longitudinal section of the proposed system showing calculated flows, velocity, pits, pipe size/class, grade, inverts and ground levels. Each proposed pit must be constructed generally in accordance with Wollongong City Council's Engineering Standard Drawings.

d. Where any adjustments to public utilities are proposed the applicant shall submit documentary evidence that they have the consent of the owner of the public utility authority.

e. All construction must be in accordance with the requirements of Council's Subdivision Code. Evidence that this requirement has been met must be detailed on the engineering drawings.

f. Details are to be provided regarding the type of materials used for construction. They should conform to the adjacent road reserves.

The detailed civil engineering design and supporting documentation shall be submitted to and approved by Wollongong City Council's Development Engineering Manager prior to the issue of a Construction Certificate.

53. Denison Street Frontage Upgrade

The applicant must upgrade the property frontage to provide a full width path, paved from the property boundary to the kerb as per the Public Domain Technical Manual.

54. Hercules Street Road Design

Hercules Street to be designed as a Driveway Crossover The intersection of Hercules Street must be designed as a driveway 'crossover', where pedestrians travelling along Denison Street have right of way, and vehicles are required to cross over the footpath on entry to Hercules Street. These details shall be reflected on the Construction Certificate plans.

55. Crime Prevention Through Environmental Design (CPTED) - Design Measures

The development shall incorporate appropriate design measures to minimise any crime risk to patrons or staff and motor vehicles within the car parking areas, including (but not limited to) the following:

a. Landscape treatment which allows visibility from the road way and other public areas;

b. landscaping at ground level provided which is difficult or uncomfortable to hide in or traverse,

c. provide clearly marked and sign posted visitor car parking signs (including security/intercom system);

d. ensure that fire rated doors in the car park have a clear glass panel located no more than 1.5m from the floor. The panel shall have a minimum dimension of 300 mm x 300 mm to allow visual surveillance within the stairwell and/or next room/space.

This requirement shall be reflected on the Construction Certificate plans.

56. Landscaping

The submission of a final Landscape Plan will be required in accordance with the requirements of Wollongong City Council DCP 2009 Chapter E6 and the approved Landscape Plan (ie as part of this consent) for the approval by the Principal Certifier, prior to the release of the Construction Certificate.

57. Certification for Landscape and Drainage

The submission of certification from a suitably qualified and experienced landscape designer and drainage consultant to the Principal Certifier prior to the release of the Construction Certificate, confirming that the landscape plan and the drainage plan are compatible.

58. Landscape Maintenance Plan

The implementation of a landscape maintenance program in accordance with the approved Landscape Plan for a minimum period of 12 months to ensure that all landscape work becomes well established by regular maintenance. Details of the program must be submitted with the Landscape Plan to the Principal Certifier prior to release of the Construction Certificate.

59. Footpath Paving City Centre

The developer is responsible for the construction of footpath paving for the entire frontage of the development for the full width of the verge. The type of paving for this development shall be in accordance with the Wollongong City Council Public Domain Technical Manual.

A nominal two percent (2%) minimum one percent (1%), maximum two and a half percent (2.5%) cross fall to be provided from property line to back of kerb. Any changes of level, ramps or stairs and associated tactile markers and handrails are to be contained with the property boundary.

The driveway entry threshold from the property boundary line to the face of kerb is to match the footpath material and be designed to withstand predicted traffic loadings.

The driveway threshold finish within property boundary line is to contrast with driveway entry.

The footpath and driveway entry on the Council property must be installed to the satisfaction of WCC Manager of Works.

A Landscape Plan is to be submitted to Council for approval prior to the issue of the Construction Certificate showing proposed paving, footpath design levels, street tree details and location of all services.

60. Street Trees City Centre

The developer must address the street frontage by installing street tree planting. The number and species for this development is/are four (4) Eleaocarpus reticulatus 200 litre container size in accordance with AS 2303:2018: Tree stock for landscape use. Tree pit detailing is to be in accordance with the Wollongong City Council Public Domain Technical Manual. Dial Before You Dig must be consulted prior to any excavation on site. Pot holing must be carried out to determine service location. Location of street tree plantings to be sited to ensure no conflict occurs with street light poles.

Tree pits must be adequately mulched, plants installed and tree guard/staking/tree grille/edging installed to the satisfaction of WCC Manager of Works.

These requirements shall be reflected on the Construction Certificate plans and any supporting documentation.

Before the Commencement of Building Work

61. Enclosure of Site

The site must be enclosed with a suitable security fence to prohibit unauthorised access, to be approved by the Principal Certifier. No building work is to commence until the fence is erected.

62. Appointment of Principal Certifier

Prior to commencement of work, the person having the benefit of the Development Consent and a Construction Certificate must:

a appoint a Principal Certifier and notify Council in writing of the appointment irrespective of whether Council or a Registered Certifier is appointed; and

b notify Council in writing of their intention to commence work (at least two [2] days notice is required).

The Principal Certifier must determine when inspections and compliance certificates are required.

63. Adjustment to Public Utility Service

The arrangements and costs associated with any adjustment to a public utility service shall be borne by the applicant/developer. Any adjustment, deletion and/or creation of public utility easements associated with the approved works are the responsibility of the applicant/developer. The submission of documentary evidence to the Principal Certifier which confirms that satisfactory arrangements have been put in place regarding any adjustment to such services is required prior to any works commencing on site.

64. Dilapidation Report

A dilapidation report is required for all structures located within the zone of influence of the proposed earthworks as determined by the geotechnical consultant.

65. Demolition Works

The demolition of the existing structures shall be carried out in accordance with the conditions Hazardous Materials Survey and the *Australian Standard AS 2601-2001: The Demolition of Structures*, the *Hazardous Building Materials Survey* prepared by EI Australia and dated 31 January 2022, or any other subsequent relevant Australian Standard and the requirements of the SafeWork NSW.

No demolition materials shall be burnt or buried on-site. The person responsible for the demolition works shall ensure that all vehicles leaving the site carrying demolition materials have their loads covered and do not track soil or waste materials onto the road. Hazardous and/or intractable wastes shall be disposed of in accordance with the Hazardous Materials Assessment and to the satisfaction of Council. In the event that the demolition works may involve the obstruction of any road reserve/footpath or other Council owned land, a separate application shall be made to Council to enclose the public place with a hoarding or fence over the footpath or other Council owned land.

66. Unexpected Finds Procedure

The consent holder must ensure an Unexpected Contaminated Land, Acid Sulfate Soils and Asbestos Finds Procedure is prepared and submitted to the Principal Certifier before the

commencement of any works. The Unexpected Contaminated Land and Asbestos Finds Procedure must be followed should unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) be excavated or otherwise discovered during excavation and construction. This shall be incorporated into the CEMP.

67. Works in Road Reserve - Minor Works

Approval, under Section 138 of the Roads Act must be obtained from Wollongong City Council's Development Engineering Team prior to any works commencing or any proposed interruption to pedestrian and/or vehicular traffic within the road reserve caused by the construction of this development.

The application form for Works within the Road Reserve – Section 138 Roads Act can be found on Council's website. The form outlines the requirements to be submitted with the application, to give approval to commence works under the Roads Act. It is advised that all applications are submitted and fees paid, five (5) days prior to the works within the road reserve are intended to commence. The Applicant is responsible for the restoration of all Council assets within the road reserve which are impacted by the works/occupation. Restoration must be in accordance with the following requirements:

a. All restorations are at the cost of the Applicant and must be undertaken in accordance with Council's standard document, "Specification for work within Council's road reserve".

b. Any existing damage within the immediate work area or caused as a result of the work/occupation, must also be restored with the final works.

While Building Work is Being Carried Out

68. Support for Excavations Geotechnical

There is to be no unsupported excavations with all cuts to be immediately supported by retaining wall construction.

69. Comply with Geotech Report

Any construction conditions including works methodology and temporary works recommended in the geotechnical report must be carried out during construction to ensure the works incorporate the encountered site geotechnical constraints to achieve an acceptable risk level.

70. Guarding of Excavations and Backfilling

All excavations and backfilling associated with the erection of a building must be properly guarded and protected to prevent them from being dangerous to life or property.

71. Demolition Works

Demolition shall be carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures or any other subsequent relevant Australian Standard and the requirements of SafeWork NSW.

No demolition materials shall be burnt or buried on-site. The person responsible for the demolition works shall ensure that all vehicles leaving the site carrying demolition materials have their loads covered and do not track soil or waste materials onto the road. Any unforeseen hazardous and/or intractable wastes shall be disposed of to the satisfaction of the Principal Certifier. In the event that the demolition works may involve the obstruction of any road reserve/footpath or other Council owned land, a separate application shall be made to Council to enclose the public place with a hoarding or fence over the footpath or other Council owned land.

72. Hours of Work

The Principal Certifier must ensure that building work, demolition or vegetation removal is only carried out between:

- 7:00am to 5:00pm on Monday to Saturday.

The Principal Certifier must ensure building work, demolition or vegetation removal is not carried out on Sundays and public holidays, except where there is an emergency.

Unless otherwise approved within a construction site management plan, construction vehicles, machinery, goods or materials must not be delivered to the site outside the approved hours of site works.

Any variation to the hours of work requires Council's approval.

Any request to vary the approved hours shall be submitted to the Council in writing detailing:

a The variation in hours required (length of duration);

b the reason for that variation (scope of works;

c the type of work and machinery to be used;

d method of neighbour notification;

e supervisor contact number; and

f any proposed measures required to mitigate the impacts of the works

Note: The developer is advised that other legislation, such as Noise Guidelines for Local Government January 2023, may control the activities for which Council has granted consent, including but not limited to, the Protection of the Environment Operations Act 1997.

73. Implementation of BASIX Commitments
While building work is being carried out, the applicant must undertake the development strictly in accordance with the commitments listed in the BASIX certificate(s) approved by this consent, for the development to which the consent applies.

74. No Adverse Run-off Impacts on Adjoining Properties
The design and construction of the development shall ensure there are no adverse effects to adjoining properties, as a result of flood or stormwater run-off. Attention must be paid to ensure adequate protection for buildings against the ingress of surface run-off.

Allowance must be made for surface run-off from adjoining properties. Any redirection or treatment of that run-off must not adversely affect any other property.

75. Flows from Adjoining Properties
Flows from adjoining properties shall be accepted and catered for within the site. Finished ground and top of retaining wall levels on the boundary shall be no higher than the existing upslope adjacent ground levels.

76. Survey Report for Floor Levels
A Survey Report must be submitted to the Principal Certifier verifying that each floor level accords with the floor levels as per the approved plans under this consent.

The survey shall be undertaken after the formwork has been completed and prior to the pouring of concrete for each respective level of the building (if the building involves more than one level). Where a timber/steel frame supports the floor, the survey shall be undertaken after the piers have been installed and prior to the laying of the bearers/joists and installation of the wall frames for each respective ground floor level of the building.

All levels shall relate to Australian Height Datum.

77. Piping of Stormwater to Existing Stormwater Drainage System
Stormwater for the land must be piped to Council’s existing stormwater drainage system.

78. No Adverse Run-off Impacts on Adjoining Properties
The design and construction of the development shall ensure there are no adverse effects to adjoining properties, as a result of flood or stormwater run-off. Attention must be paid to ensure adequate protection for buildings against the ingress of surface run-off.

Allowance must be made for surface run-off from adjoining properties. Any redirection or treatment of that run-off must not adversely affect any other property.

79. Fences
Any new fences constructed on the site and located in the flood plain shall be of a type that will not obstruct the free flow of floodwaters and not cause damage to surrounding land in the event of a flood.

80. Level 1 Supervision
Due to the sensitivity of the site to changing geotechnical conditions, all work must be undertaken with Level 1 geotechnical supervision as defined in Australian Standard AS 3798 Guidelines for Earthworks for Commercial and Residential Developments.

81. Foundation Inspections
All excavations for foundations are to be inspected by the geotechnical consultant and certified that the ground has been suitably prepared for the placement of footings.

82. PCB Containing Electrical Equipment
If any metal cased capacitors are found during demolition works that were previously identified or unidentified they shall be treated as containing Polychlorinated Biphenyls (PCBs). Details on storing, conveying and disposing of PCB material or PCB wastes can be found in *Polychlorinated Biphenyls Management Plan*, Environmental Protection & Heritage Council, Revised Edition April 2003.

83. Synthetic Mineral Fibre (SMF) Materials
All Synthetic Mineral Fibre (SMF) containing materials must be removed in accordance with the National Standard for the Safe Use of Synthetic Mineral Fibres [National Occupational Health and Safety Commission:1004 (1990)] and the National Code of Practice for the Safe Use of Synthetic Mineral Fibres [National Occupational Health and Safety Commission:2006 (1990)].

84. Demolition Materials - Disposal
All demolition materials not being reused on-site shall be disposed of only at a recycling or waste management facility that may lawfully receive that waste.

85. Unexpected Finds Procedure
The consent holder must ensure the Unexpected Contaminated Land, Acid Sulfate Soils and Asbestos Finds Procedure is implemented throughout the excavation and construction phases of the development.

86. Waste Classification and Disposal of Contaminated Soil and Material(s), Solid and Liquid

a. All soils and material(s), liquid and solid, to be removed from the site must be analysed and classified by an appropriately qualified and experienced environmental consultant, in accordance with the *Protection of the Environment (Waste) Regulation 2014* and related guidelines, in particular NSW EPA *Waste Classification Guidelines* (2014), prior to off-site disposal.

b. The waste classification report, including the results of testing, must be compiled, or reviewed and approved by an appropriately qualified and certified consultant, and must be submitted to and approved by Council before off-site disposal. The front cover of the report must include the details of the consultant's certification. A certified contaminated land consultant is a contaminated land consultant certified under either:

    i. the Environment Institute of Australia and New Zealand's (EIANZ) Certified Environmental Practitioner (Site Contamination) (CEnvP(SC)) scheme; or

    ii. the Soil Science Australia (SSA) Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme.

c. All waste material(s) must be disposed of at an appropriately licensed waste facility that may lawfully receive that waste.

d. Receipts for the disposal of the waste must be submitted to Council within 14 days of the waste being disposed.

e. All waste must be transported by a contractor licenced to transport the specific waste, and in vehicles capable of carting the waste without spillage, and meeting relevant requirements and standards. All loads must be covered prior to vehicles leaving the site.

87. Imported Fill Material

Any imported fill material brought onto the site shall be virgin excavated natural material as defined by the NSW Environment Protection Authority, that is natural material such as clay, gravel, sand, soil or rock fines that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities, and that does not contain sulfidic ores or soils, or any other waste including fragments or filaments of asbestos. A certificate from a suitably qualified environmental consultant confirming the fill material is not contaminated shall be submitted to Council for its records.

88. Asbestos - Removal, Handling and Disposal Measures/Requirements Asbestos Removal by a Licensed Asbestos Removalist

The removal of any asbestos material must be carried out by a licensed asbestos removalist if over 10 square metres in area of non-friable asbestos, or if any type of friable asbestos in strict accordance with SafeWork NSW requirements (https://www.safework.nsw.gov.au).

89. Asbestos Waste Collection, Transportation and Disposal

Asbestos waste must be prepared, contained, transported and disposed of in accordance with SafeWork NSW and NSW Environment Protection Authority requirements. Asbestos waste must only be disposed of at a landfill site that can lawfully receive this this type of waste. A receipt must be retained and submitted to the Principal Certifier, and a copy submitted to Council (in the event that Council is not the Principal Certifier), prior to commencement of the construction works.

90. Lead Based Paint

To prevent contamination of the soil and human health risks associated with lead dust, safeguards must be used when removing flaking paint or sanding paint surfaces that are suspected to contain lead.

91. Dust Suppression Measures

Activities occurring during the construction phase of the development must be carried out in a manner that will minimise the generation of dust.

92. Discharge of Accumulated Water

Any water accumulating in excavations on-site or in the settlement ponds shall not be discharged to Council's stormwater system, unless all the following criteria are met:

a. The concentration of suspended solids in the water to be discharged does not exceed 50 mg/L; and

b. The turbidity of the water to be discharged does not exceed 50 NTUs/FTUs; and

c. The pH of the water to be discharged is between 6.5 and 8.5; and

d. The water to be discharged contains no visible oil or grease; and

e. If alum has been used to reduce suspended solids, the concentration of aluminium in the water to be discharged does not exceed 0.055 mg/L; and

f. The water to be discharged does not contain any substances known to be toxic to aquatic life; and

g. The flow rate of discharged water does not exceed 55 litres per second in dry weather conditions, or is less than the capacity of the receiving stormwater drain; and

h. A copy from a NATA accredited laboratory of sample test results for suspended solids and pH (and aluminium if applicable) confirming the water to be discharged meets criteria 1 and 2 (and criteria 4 if applicable) as stated above is submitted to Council's Environment Planning Team (phone 4227 7111; fax 4227 7277; email records@wollongong.nsw.gov.au, attention Environment Planning Team Manager); and

i. Written permission is obtained from Council's Environment Planning Team prior to any discharge.

Alternatively, such waters are to be removed by tanker for disposal at a NSW Environment Protection Authority licensed waste facility.

93. Copy of Consent in the Possession of Person carrying out Tree Removal
The Developer/Applicant must ensure that any person carrying out tree removal is in possession of this development consent and/or the approved landscape plan, in respect to the tree(s) which has/have been given approval to be removed in accordance with this consent.

94. Provision of Taps/Irrigation System
The provision of common taps and/or an irrigation system is required to guarantee that all landscape works are adequately watered. The location of common taps and/or irrigation system must be implemented in accordance with the approved Landscape Plan.

95. Podium Planting
All podium planting areas are to have a waterproofing membrane that can provide a minimum 10 year warranty on product. Protective boarding is to be installed to protect membrane from damage.

All podium planting areas to be provided with an adequate drainage system connected to the stormwater drainage system. The planter box is to be backfilled with free draining planter box soil mix.

If selected mulch is decorative pebbles/gravel, the maximum gravel pebble size is 10mm diameter.

96. Responsibility for Changes to Public Infrastructure
While building work is being carried out, the applicant must pay any costs incurred as a result of the approved removal, relocation or reconstruction of infrastructure (including ramps, footpaths, kerbs and gutter, light poles, kerb inlet pits, service provider pits, street trees or any other infrastructure in the street footpath area).

Before the Issue of an Occupation Certificate

97. BASIX - Final Occupation
An Occupation Certificate must not be issued unless accompanied by the BASIX Certificate applicable to the development. The Principal Certifier must not issue the Occupation Certificate unless satisfied that selected commitments have been complied with as specified in the relevant BASIX Certificate.

NOTE: Clause 44 of the Environmental Planning and Assessment (Development Certification and Fire Safety) Regulation 2021 provides for independent verification of compliance in relation to certain BASIX commitments.

98. Upgrade of Hercules Street
To ensure safe access to the site the upgrade of the portion of Hercules Street within Council's Road Reserve extending from Denison Street and up to at least 1m past the eastern edge of the proposed driveway cross over to the basement carpark must be completed generally in accordance with the plans approved under DA-2022/592 and must have a satisfactory final inspection by the Development Engineering Manager of Wollongong City Council prior to the issue of any Occupation Certificate.

99. Completion Report for Excavation Adjacent to a Public Road
A report be provided to Wollongong City Council and Principal Certifier, prepared by a qualified Civil Engineer, with Chartered accreditation with the Institute of Engineers Australia and experienced in structural design that:

a. Certifies that all proposed retaining structures within the zone of influence of any Council assets including the road pavement, stormwater pipes and pits was constructed in accordance with the approved plans prepared in accordance with the requirements of RMS Technical direction GTD 2020/001.

b. Certifies that the monitoring of the site was carried out in accordance with the requirements of RMS Technical direction GTD 2020/001.

c. Provides a post construction dilapidation survey.

The report must be provided to and approved by Wollongong City Council prior to the issue of any final Occupation Certificate associated with the building.

100. Drainage

The developer must obtain a certificate of Hydraulic Compliance (using Council's M19 form) from a suitably qualified civil engineer, to confirm that all stormwater drainage and on-site detention works have been constructed in accordance with the approved plans. In addition, full WAE plans, prepared and signed by a Registered Surveyor must be submitted. These plans and certification must satisfy all the stormwater requirements stated in Chapter E14 of the Wollongong DCP 2009. This information must be submitted to the Principal Certifier prior to the issue of the final Occupation Certificate.

101. Restriction on Use - OSD System

The applicant must create a restriction on use under the Conveyancing Act 1919 over the OSD system. The following terms must be included in an appropriate instrument created under the Conveyancing Act 1919 for approval of Council:

"The registered proprietor of the lot burdened must not make or permit or suffer the making of any alterations to any on-site detention system on the lot(s) burdened without the prior consent in writing of the authority benefited. The expression 'on-site detention system' shall include all ancillary gutters, pipes, drains, walls, kerbs, pits, grates, tanks, chambers, basins and surfaces designed to temporarily detain stormwater as well as all surfaces graded to direct stormwater to those structures.

Name of the authority having the power to release, vary or modify the restriction referred to is Wollongong City Council."

The instrument, showing the restriction, must be submitted to the Principal Certifier for endorsement prior to the issue of the Occupation Certificate and the use of the development.

102. Retaining Wall Certification

The submission of a certificate from a suitably qualified and experienced structural engineer or civil engineer to the Principal Certifier is required, prior to the issue of the Occupation Certificate or commencement of the use. This certification is required to verify the structural adequacy of the retaining walls and that the retaining walls have been constructed in accordance with plans approved by the Principal Certifier.

103. Positive Covenant - On-Site Detention Maintenance Schedule

A positive covenant shall be created under the Conveyancing Act 1919, requiring the property owner(s) to undertake maintenance in accordance with the Construction Certificate approved OSD System and Maintenance Schedule (Application Number to be referenced).

The instrument, showing the positive covenant must be submitted to the Principal Certifier for endorsement prior to the issue of the Occupation Certificate and the use of the development.

104. OSD - Structural Certification

The submission of a certificate from a suitably qualified practising civil and/or structural engineer to the Principal Certifier is required prior to the issue of the Occupation Certificate. This certification is required to verify the structural adequacy of the OSD facility and that the facility has been constructed in accordance with the approved Construction Certificate plans.

105. Structural Soundness Certification

The submission of a report from a suitably qualified and experienced structural engineer to the Principal Certifier is required, prior to the issue of the Occupation Certificate and commencement of use. This report is required to verify that the proposed building can withstand the forces of floodwater, debris and buoyancy up to and including the highest adjacent level of the PMF as determined by a suitably qualified engineer plus a freeboard of 300mm.

106. Flood Affectation Certification

The submission of a report from a suitably qualified and experienced civil (hydrology) engineer to the Principal Certifier is required, prior to the issue of the Occupation Certificate and commencement of use. This report is required to certify that the 'as-constructed' development will not have any detrimental effects to adjoining properties or upon the subject land with respect to the loss of flood storage, changes in flood levels and alteration of flood conveyance, as a result of flooding or stormwater runoff.

107. WAE Plans - Works within Council Land or Road Reserve

The submission of a WAE plan for approved works in Council land and or road reserve must be submitted to and approved by Council's Development Engineering Manager, prior to the release of the Occupation Certificate. The WAE plans shall be certified by a registered surveyor indicating that the survey is a true and accurate record of the works that have been constructed. The WAE dimensions and levels must also be shown in red on a copy of the approved Construction Certificate plans. The WAE plans must include:

a. Final locations and levels for all works associated with the development within Council land.

b. The plan(s) must include, but not be limited to, the requirements stated in Chapter E14 of the Wollongong DCP 2009.

108. CCTV of Works in Existing Road

All stormwater pipes within road reserves intended to be dedicated to Council must be inspected by CCTV. A copy of the CCTV inspection must be submitted to Council's Development Engineering Manager for assessment prior to the issue of the Occupation Certificate. Below standard work must either be replaced or repaired to Council's satisfaction prior to the issuing of the Occupation Certificate.

109. Before the Issue of an Occupation Certificate - Acoustic Design Compliance Report

A final acoustic design compliance report confirming compliance with the Rail Noise and Vibration Assessment, prepared by Acoustic Logic and dated 26 September 2022 (or additional measures required to satisfy any other condition of this consent) shall be prepared by a suitably qualified and experienced acoustic engineer (who is a member of either the Australian Acoustical Society or the Association of Australasian Acoustical Consultants) and submitted to the Certifying Authority for approval prior to the release of the Occupation Certificate.

110. Completion of Landscape and Tree Works

Before the issue of an Occupation Certificate, the Principal Certifier must be satisfied that all landscape and tree works, including pruning in accordance with *AS 4373-2007 Pruning of amenity trees* and the removal of all noxious weed species, have been completed in accordance with the approved plans and any relevant conditions of this consent.

111. Completion of Landscape Works on Council Owned or Controlled Land

The Developer must complete all landscape works required within Council's road reserve, or other Council owned or controlled land, in accordance with the conditions of this consent. The total cost of all such landscape works shall be fully borne by the Developer and any damage to Council's assets shall be the subject of restoration works sufficient to restore the asset to its previous state and configuration previous to the commencement of works. Evidence that this requirement has been met must be satisfied prior to the issue of the Occupation Certificate.

112. Arborist Verification – Street Tree Installation

Prior to the issue of Occupation Certificate, the developer must supply certification in the form of a report, including photographic evidence, from an AQF Level 5 Arborist to the Principal Certifier and Wollongong City Council to verify:

a. The tree stock complies with AS 2203:2018 Tree Stock for Landscape Use.

b. The tree pits have been constructed and the trees installed in accordance with the requirements of the Wollongong City Council City Centre Public Domain Technical Manual and arboricultural best practice.

Occupation and Ongoing Use

113. Occupation and Ongoing Use - Mechanical Plant and Equipment Noise

The operation of all mechanical plant including exhaust and supply fans, air conditioning units, condensers, pool pumps, etc singly and /or collectively, etc., shall not emit:

a. a noise level that is more than 5dBA above the ambient background noise level between 7:00 am and 10:00 pm on any day including Saturday, Sunday or public holiday measured at any property boundary or external apartment façade, and

b. a noise level that is audible in habitable rooms of a residences between 10.pm and 7.00 am on any day including Saturday, Sunday or public holiday.

114. Swimming Pool - Discharging Water

Discharge and/or overflow pipes from the swimming pool and filtration unit must be connected to the sewer where available. All backwash water from the filtration unit is to be similarly disposed.

115. Loading/Unloading Operations/Activities

All loading/unloading operations are to take place at all times wholly within the confines of the site or within the road reserve under an approved traffic control plan.

116. Site Waste Collection

All waste collection is to be undertaken from within the site. On-street collection of waste is not permitted at any time.

Reasons

The reasons for the imposition of the conditions are:

1. To minimise any likely adverse environmental impact of the proposed development.
2. To ensure the protection of the amenity and character of land adjoining and in the locality.
3. To ensure the proposed development complies with the provisions of Environmental Planning Instruments and Council's Codes and Policies.
4. To ensure the development does not conflict with the public interest.

Transport for NSW

General Manager
Wollongong City Council
Locked Bag 8821
Wollongong DC NSW 2500

Attention: Nigel Lamb 23 December 2022

STATE ENVIRONMENTAL PLANNING POLICY (TRANSPORT AND INFRASTRUCTURE) 2021
DEVELOPMENT APPLICATION – DA-2022/1278 (CNR-49382)
29-31 Denison Street, Wollongong NSW 2500

Dear Sir/Madam,

I refer to Council's referral requesting concurrence for the above development application in accordance with Section 2.99 of the *State Environmental Planning Policy (Transport and Infrastructure) 2021* (**Transport and Infrastructure SEPP**).

Council is advised that TfNSW (Sydney Trains), via Instruments of Delegation, has been delegated to act as the rail authority for the heavy rail corridor, including infrastructure, and to process the concurrence for this development application.

As such, TfNSW (Sydney Trains) advises that the proposed development has been assessed in accordance with the requirements of Section 2.99(4) of the Transport and Infrastructure SEPP being:

a) *the potential effects of the development (whether alone or cumulatively with other development or proposed development) on:*
    i) *the safety or structural integrity of existing or proposed rail infrastructure facilities in the rail corridor, and*
    ii) *the safe and effective operation of existing or proposed rail infrastructure facilities in the rail corridor, and*
b) *what measures are proposed, or could reasonably be taken, to avoid or minimise those potential effects.*

TfNSW (Sydney Trains) has taken the above requirements into consideration and has decided to grant its concurrence to the development proposed in development application **DA-2022/1278** subject to Council imposing the Deferred Commencement condition as written in Attachment A, and operational conditions as written in Attachment B that will need to be complied with upon satisfaction of the Deferred Commencement condition.

Should Council choose not to impose the Deferred Commencement condition as written in Attachment A and the operational conditions as written in Attachment B, then concurrence from TfNSW (Sydney Trains) has not been granted to the proposed development.

In the event that this proposed development is the subject of a Land and Environment Court appeal, Council's attention is drawn to Section 8.12 of the Environmental Planning and Assessment Act 1979 which requires Council to give notice of that appeal to a concurrence authority. TfNSW (Sydney Trains) therefore requests that Council comply with this requirement should such an event occur.

Council is also advised that this concurrence is not to be amended, replaced, or superseded by any concurrence issued by any other rail authority, without further agreement from TfNSW (Sydney Trains).

Please contact TfNSW (Sydney Trains) Town Planning Management via email to DA_sydneytrains@transport.nsw.gov.au should you wish to discuss this matter. Finally, it is requested that when the proposed development's Determination is issued by the Council, a copy of the Notice of Determination and conditions of consent are provided.

Sincerely,

Anthony Moeller
Digitally signed by Anthony Moeller
Date: 2022.12.23 11:01:30 +11'00'

Anthony Moeller
Director, Property & Commercial Services
Transport for NSW

Attachment A

Deferred Commencement Condition

This consent is not to operate until the Applicant/Developer satisfies the Council, within 12 months of the date of this consent, that it has obtained approval/certification from Sydney Trains as to the following matters and the approval/certification has been forwarded to the Council:

- The Applicant/Developer shall prepare and provide to Sydney Trains for review, comment, and written endorsement the following final version items in compliance with the relevant ASA Standards (https://www.transport.nsw.gov.au/industry/asset-management-branch):

    1. Geotechnical and Structural report/drawings that meet Sydney Trains' requirements. The Geotechnical Report must be based on actual borehole testing conducted on the site closest to the rail corridor.
    2. Construction methodology with construction details pertaining to structural support during excavation. The Applicant is to be aware that Sydney Trains will not permit any rock anchors/bolts (whether temporary or permanent) within its land or easements.
    3. Cross sectional drawings showing the rail corridor, sub soil profile, proposed basement excavation and/or structural design of sub ground support adjacent to the rail corridor. All measurements are to be verified by a Registered Surveyor.
    4. Detailed Survey Plan showing the relationship of the proposed development with respect to Sydney Trains' easement and rail corridor land.
    5. If required by Sydney Trains, an FE analysis which assesses the different stages of loading-unloading of the site and its effect on the rock mass surrounding the rail corridor.
    6. If required by Sydney Trains, a Monitoring Plan.

    Any conditions issued as part of Sydney Trains' endorsement of the above documents will also form part of the consent conditions that the Applicant/Developer is required to comply with.

Attachment B

- All plans/documentation(s) provided and endorsed by Sydney Trains as part of the Sydney Trains Deferred Commencement Conditions will form part of this Consent, unless said plans/documentation(s) are otherwise superseded and confirmed in writing by Sydney Trains as a result of compliance with any Sydney Trains related conditions of consent. All recommendations, final findings, and subsequent requirements (including where specified in the written endorsement letter from Sydney Trains) of such plans/documentation(s) are to be reflected in the Construction Certificate construction plans/documentation(s) where relevant, and compliance with those plans/documentation(s) must be certified prior to the issue of any Occupation Certificate.

- Prior to the commencement of any works a Registered Surveyor shall peg-out the common property boundary between the development site and TAHE (Transport Asset Holding Entity) land and easements. A copy of the survey report indicating the location of pegs must be provided to Sydney Trains prior to the commencement of works.

- The Applicant shall prepare an acoustic assessment demonstrating how the proposed development will comply with the Department of Planning's document titled "Development Near Rail Corridors and Busy Roads- Interim Guidelines". The Applicant must incorporate in the development all the measures recommended in the report. A copy of the report is to be provided to the Principal Certifying Authority and Council prior to the issuing of a Construction Certificate. The Principal Certifying Authority must ensure that the recommendations of the acoustic assessment are incorporated in the construction drawings and documentation prior to the issuing of the relevant Construction Certificate.

- Prior to the issue of a Construction Certificate the Applicant is to engage an Electrolysis Expert to prepare a report on the Electrolysis Risk to the development from stray currents. The Applicant must incorporate in the development all the measures recommended in the report to control that risk. A copy of the report is to be provided to the Principal Certifying Authority with the application for a Construction Certificate. The Principal Certifying Authority must ensure that the recommendations of the electrolysis report are incorporated in the construction drawings and documentation prior to the issuing of the relevant Construction Certificate.

- Given the possible likelihood of objects being dropped or thrown onto the rail corridor from balconies, windows, and other external features (e.g., roof terraces and external fire escapes) that are within 20 metres of, and face, the rail corridor, the development must have measures installed, to the satisfaction of Sydney Trains (e.g., awning windows, louvres, enclosed balconies, window restrictors etc.) which prevent the throwing of objects onto the rail corridor. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

- No work is permitted within the rail corridor or any easements which benefit Sydney Trains/TAHE (Transport Asset Holding Entity), at any time, unless the prior approval of, or an Agreement with, Sydney Trains/TAHE (Transport Asset Holding Entity) has been obtained by the Applicant. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

- Prior to the issuing of a Construction Certificate the Applicant must submit to Sydney Trains a plan showing all craneage and other aerial operations for the development and must comply with all Sydney Trains' requirements. If required by Sydney Trains, the Applicant must amend the plan showing all craneage and other aerial operations to comply with all Sydney Trains' requirements. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from the Sydney Trains confirming that this condition has been satisfied.

- No scaffolding is to be used facing the rail corridor unless prior written approval has been obtained from Sydney Trains. To obtain approval the Applicant will be required to submit details of the scaffolding, the means of erecting and securing this scaffolding, the material to be used, and the type of screening to be installed to prevent objects falling onto the rail corridor. Unless agreed to by Sydney Trains in writing, scaffolding shall not be erected without isolation and protection panels.

- The design, installation and use of lights, signs, and reflective materials, whether permanent or temporary, which are (or from which reflected light might be) visible from the rail corridor must limit glare and reflectivity to the satisfaction of the rail operator. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

- Sydney Trains advises there is a 33kV High Voltage Aerial Transmission Line in close proximity to the proposed works. All works within 6 metres of the nearest transmission line conductor must comply with:

    i. ISSC 20 – Guideline for the Management of Activities within Electricity Easements and Close to Electricity Infrastructure.

    ii. The Safe Approach Distances (SADs) in the Sydney Trains Document titled "SMS-06-GD-0268 – Working Around Electrical Equipment".

    iii. "WorkCover Code of Practice – Work near Overhead Power Lines (The Code)"

- If required by Sydney Trains, prior to the issue of a Construction Certificate a Risk Assessment/Management Plan and detailed Safe Work Method Statements (SWMS) for the proposed works are to be submitted to Sydney Trains for review and comment on the impacts on rail corridor. The Principal Certifying Authority is not to issue the Construction Certificate until written confirmation has been received from Sydney Trains confirming that this condition has been satisfied.

- No metal ladders, tapes, and plant, machinery, or conductive material are to be used within 6 horizontal metres of any live electrical equipment. This applies to the train pantographs and catenary, contact and pull-off wires of the adjacent tracks, and to any aerial power supplies within or adjacent to the rail corridor.

- A risk analysis, which shall determine the required level of derailment protection (if any), shall be carried out in consultation with Sydney Trains. This risk analysis will determine the redundancy requirements or the minimum collision loads specified in Australian Standard AS5100 that needs to be complied with. The risk assessment is to be prepared in accordance with the Sydney Trains Safety Management System. The Principal Certifying Authority shall not issue the Construction Certificate until it has received written confirmation from Sydney Trains that the risk analysis has been prepared and the Principal Certifying Authority has also confirmed that the measures recommended in this risk analysis have been indicated on the Construction Drawings.

- There is a need to ensure that the roots and foliage of trees being planted beside the rail corridor do not have an impact on the rail corridor or rail operations. A final landscaping and planting plan demonstrating measures to ensure compliance with this condition must be prepared to the satisfaction of Sydney Trains. No construction certificate can be issued until written confirmation has been received from Sydney Trains confirming that this condition has been complied with.

- Prior to the commencement of any works appropriate fencing must be in place along the rail corridor to prevent unauthorised access to the rail corridor during construction works. Details of the type of fencing and the method of erection are to be to the satisfaction of Sydney Trains prior to the fencing work being undertaken.

- The development shall have appropriate fencing fit for the future usage of the development site to prevent unauthorised access to the rail corridor by future occupants of the development. Prior to the issuing of an Occupation Certificate the Applicant shall liaise with Sydney Trains regarding the adequacy of any existing fencing along the rail corridor boundary or design and construction of new fencing. Details of the type of new fencing to be installed and the method of erection are to be to the satisfaction of Sydney Trains prior to the fencing work being undertaken.

- The Applicant is to ensure that the development incorporates appropriate anti-graffiti measures, to the satisfaction of Sydney Trains.

- The Applicant must ensure that all drainage from the development is adequately disposed of and managed and not allowed to be discharged into the rail corridor unless prior written approval has been obtained from Sydney Trains.

- During all stages of the development the Applicant must take extreme care to prevent any form of pollution entering the rail corridor. Any form of pollution that arises as a consequence of the development activities shall remain the full responsibility of the Applicant.

- Excess soil is not allowed to enter, be spread, or stockpiled within the rail corridor (and its easements) and must be adequately managed/disposed of.

- The Applicant/Developer shall not at any stage block the corridor access gate on Hercules Street and should make provision for easy and ongoing 24/7 access by rail vehicles, plant, and equipment to support maintenance and emergency activities.

- Sydney Trains or Transport for NSW, and persons authorised by those entities for the purpose of this condition, must be permitted to inspect the site of the development and all structures to enable it to consider whether those structures have been or are being constructed and maintained in accordance with the approved plans and the requirements of this consent, on giving reasonable notice to the principal contractor for the development or the owner or occupier of the part of the site to which access is sought.

- The Applicant must ensure that at all times they have a representative (which has been notified to Sydney Trains in writing), who:
    - oversees the carrying out of the Applicant's obligations under the conditions of this consent and in accordance with correspondence issued by Sydney Trains;
    - acts as the authorised representative of the Applicant; and
    - is available (or has a delegate notified in writing to Sydney Trains that is available) on a 7 day a week basis to liaise with the representative of Sydney Trains, as notified to the Applicant.

- Without in any way limiting the operation of any other condition of this consent, the Applicant must, during demolition, excavation and construction works, consult in good faith with Sydney Trains in relation to the carrying out of the development works and must respond or provide documentation as soon as practicable to any queries raised by Sydney Trains in relation to the works.

- Where a condition of consent requires consultation with Sydney Trains, the Applicant shall forward all requests and/or documentation to the relevant Sydney Trains External Interface Management team. In this instance the relevant interface team is Illawarra Interface, and they can be contacted via email on Illawarra_Interface@transport.nsw.gov.au.

- Copies of any certificates, drawings, approvals/certification, or documents endorsed by, given to, or issued by Sydney Trains or TAHE (Transport Asset Holding Entity) must be submitted to Council for its records prior to the issuing of the applicable Construction Certificate or Occupation Certificate.

- Where a condition of consent requires Sydney Trains or Transport for NSW endorsement the Principal Certifying Authority is not to issue a Construction Certificate or Occupancy Certificate, as the case may be, until written confirmation has been received from those entities that the particular condition has been complied with. The issuing of staged Construction Certificates dealing with specific works and compliance conditions can be issued subject to written agreement from those entities to which the relevant conditions applies.