WLPP No.	Item 2
DA No.	DA-2018/473
Proposal	Commercial - Demolition of existing buildings and construction of mixed use building containing 2 levels of basement car parking (94 cars), three ground floor commercial / retail spaces, and 84 residential units above with a roof terrace
Property	49-51 Denison Street, Wollongong; Lot 1 DP 1108504
Applicant	Wollongong Investments No 2 Pty Ltd
Responsible Team	Development Assessment and Certification - City Centre Team (TW)

ADDENDUM REPORT AND RECOMMENDATION

Executive Summary

Reason for consideration by Wollongong Local Planning Panel

The proposal has been referred to the Wollongong Local Planning Panel (WLPP) for determination pursuant to Clauses 3 and 4 of Schedule 2 of the Local Planning Panels Direction of 1 March 2018. The proposal is development to which State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development applies. A variation is also sought to building separation under clause 8.6 of WLEP in excess of 10%.

Background

This matter was reported to the 22 May meeting of the WLPP for determination.

At that meeting, the WLPP resolved to defer determination of the development application pending the receipt of amended plans which address the following matters:-

- Set the building back from the rail line by a minimum of 3 metres and for this area to be landscaped and include plants that will provide an effective screen to the rail corridor;
- Re-design the development to minimise the number of units with orientation to the rail corridor;
- Reduce the number of units per floor to between 9 or 10 per floor to improve amenity;
- Provide detailed construction methodology in relation the method of excavation to minimise vibration impacts to the adjoining properties.

The reasons for the decision of the Panel were:

- To improve the amenity of the units
- To provide sufficient detail to mitigate construction impacts.

Proposal

The application seeks consent for the demolition of existing structures and the construction of a mixed use development comprising 2 levels of basement car parking (94 cars), 3 ground floor commercial / retail spaces, and 82 residential units above with a roof top terrace. It is noted that the revised plans have reduced the number of residential units from 84 to 82.

The applicant has amended the proposal in response to the concerns raised by the WLPP and additional information has been provided in support of the proposal. The amendments and additional information are outlined in this report.

Permissibility

The site is zoned B3 Commercial Core pursuant to Wollongong Local Environmental Plan 2009. The proposal is categorised as a ***shop top housing development*** and is permissible in the B3 zone with development consent.

Consultation & submissions

The proposal was notified in May 2018 and received 10 submissions, which were discussed in Section 2.8 of the assessment report. Amended plans were re-notified in October 2018 with no further submissions received. Notification of the revised plans submitted in response to the Panel recommendations was considered unnecessary.

Various internal divisions of Council were consulted as part of the assessment process. Consultation with Endeavour Energy, Sydney Trains and the NSW Roads & Maritime Service has also taken place as part of the DA assessment. The proposal was reviewed by the Design Review Panel (DRP) on several occasions both pre and post-lodgement.

The development requires the concurrence of Sydney Trains under the provisions of SEPP (Infrastructure) 2007. The concurrence of Sydney Trains was obtained prior to the matter being reported to the 22 May Panel meeting. the revised plans have been referred to Sydney Trains for comment and for any amendments to the previously issued conditions. At the time of finalising this report, no further comments had been provided.

Main Issues

The main issues are:-

- Design quality
- Compliance with State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development and the Apartment Design Guide (ADG)
- Rail related noise and amenity impacts
- Wollongong DCP 2009 variations in respect of apartment mix, building setbacks and building bulk
- Sydney Train requirements in relation to the adjacent rail corridor.

ACTION SOUGHT

The applicant has revised the plans in response to the recommendations of the Panel and it is now appropriate that the development application be determined. If the Panel is of a mind to support the proposal, it is recommended that Development Application DA-2018/473 be granted a **deferred commencement** consent subject to the conditions listed in **Attachment 6** to this report. The deferred commencement conditions are, in part, those required to be imposed by Sydney Trains and an additional deferred commencement condition in relation to vibration management.

1 OVERVIEW OF PLAN AMENDMENTS AND NEW INFORMATION PROVIDED

The applicant has provided amended plans and documentation responding to the concerns raised by the LPP. This includes:-

- Amended architectural plans
- Updated cross ventilation and solar access diagrams for the revised architectural plans
- Updated shadow diagrams and suns' eye diagrams
- Revised landscape plans
- Revised BASIX certificates
- A construction methodology letter prepared by EI Australia which outlines how excavation can be managed/ conducted to reduce vibration transmission to neighbouring properties
- Letter in support of the revised plans prepared by a planning consultant Plan Urban Services Pty Ltd.

These form part of **Attachment 2**.

The WLPP determination and statement of reasons from its meeting of 22 May 2019 forms **Attachment 1**.

The applicant has provided the following response to the concerns raised by the WLPP:-

1. Set the building back from the rail line by a minimum of 3 metres and for this area to be landscaped and include plants that will provide an effective screen to the rail corridor;

The plans originally presented to the Panel featured a 0.8m setback to all levels of the building, for the full length of the building. This was deemed insufficient by the Panel.

The revised plans provide for a setback of 0.8m to the rear (eastern) boundary of the site to the ground floor as per the previous plans. The applicant contends that an increased setback to the rear boundary could not be provided to the ground floor plate without significant changes to the vehicular access and manoeuvring/ circulation strategy proposed.

The plans have however been revised to provide for a 3m setback to most of the length of the site for Levels 1 – 8. A section of the building does however remain proposed on a 0.8m setback from the rear boundary, as illustrated in an extract of the typical floor plan below:-

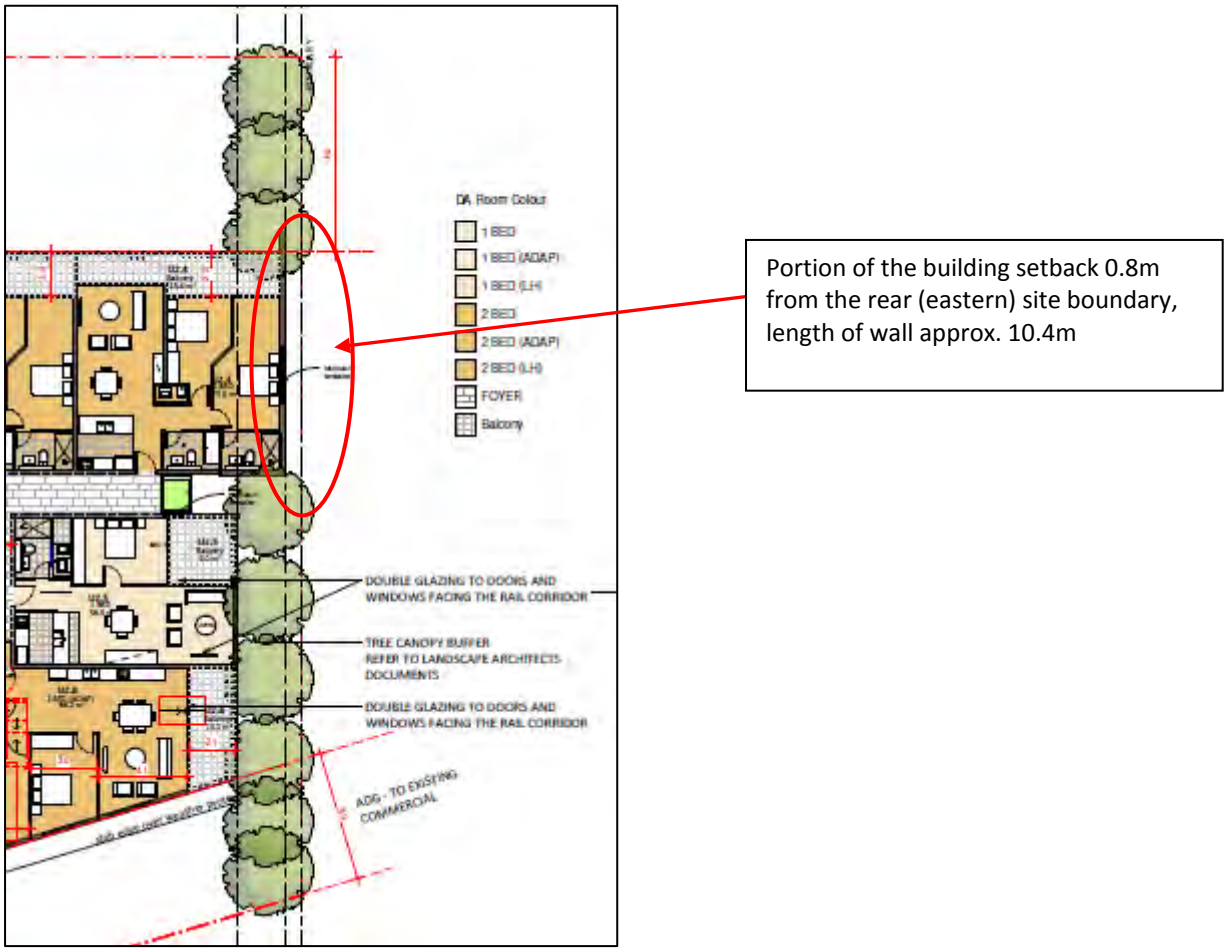

Figure 1 - Extract of Level 2 Floor Plan.

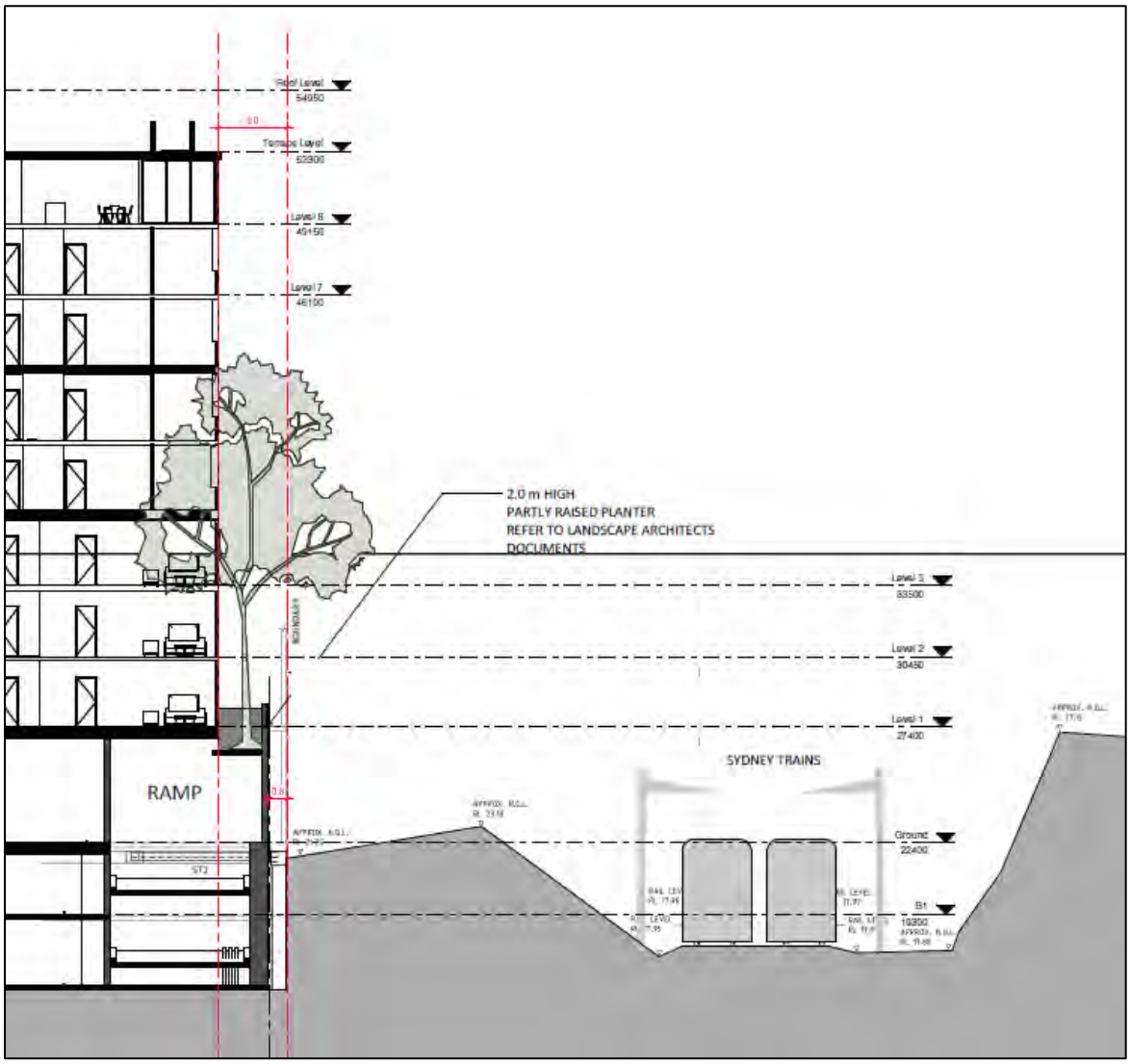

Figure 2 - Extract of Section

Figure 2 illustrates the relationship between the proposed building and the adjacent rail corridor. The section is taken through that part of the building setback 3m from the eastern (rear) property boundary and indicates where planting on structure is proposed to be provided as required by the Panel. The landscape planter will have a planting medium depth of 2m which will be sufficient for reasonable height screening plants to be planted. A revised landscape plan consistent with the amended architectural plans has been submitted which provides for the planting of Blueberry Ash trees and other under-canopy planting within the rear planter box. The Blueberry Ash is expected to reach a height of 8m at maturity which should be sufficient in offering some screening of the rail corridor up to Levels 6 and 7 for reasons of visual amenity and to improve the internal visual privacy of the rear-facing units from the east.

The applicant has provided the following justification for not providing the Panel's requested 3m rear setback to the entire length of the building:

> "There are no minimum setback requirements for residential buildings from rail corridors. As you rightly pointed out in your report the determining factor is acoustics. As you again point out in your report, we have submitted an acoustic assessment and associated report which concludes that the proposal is capable of meeting all relevant criteria as per the ***Infrastructure SEPP*** and Department of Planning's ***Guide to Development Near Rail Corridors and Busy Roads***. It is also interesting to note and again you confirm in your report, that RailCorp have provided concurrence to the proposal, subject to its standard deferred commencement conditions.
>
> Notwithstanding the above a 3 metre (m) building setback has been provided to part of the east boundary to provide for a sunken planter deep enough to facilitate 6-8m high trees to screen the rail line. This change is shown in the section drawing No. DA002F.

Drawing DA200F clearly shows the distance between the proposed building and the rail cutting and indeed that the nearest rail track is some 17.65m from the eastern wall of the proposed building. The drawing also shows the opportunity for the deep soil landscaping and that the floor level of level one (lowest residential level) is some 5m above the top of a double decker train and approximately 9.5m above the level of the tracks. These vertical and horizontal separations and inclusion of the deep soil landscaping will further enhance the acoustic separation and provide added amenity and outlook for future residents."

2. Re-design the development to minimise the number of units with orientation to the rail corridor;

The revised plans have reduced the number of units with direct single orientation to the rail corridor.

The original proposal featured a number of single aspect units with direct orientation to the rail corridor. The revised proposal has removed the studio units facing the rail corridor on levels 4, 5, 6 and 7. There remain 3 x 1 bedroom units facing onto the rail corridor (on levels 1, 2 and 3); these units are setback 3m from the rear boundary and will be screened by the proposed planting when it reaches maturity. The plans indicate that double glazing will be provided to all windows and doors on the eastern elevation of the building as per the requirements of the acoustic report submitted with the original DA. As per the original report, it is noted that there are recommended conditions requiring compliance with the recommendations of the acoustic report (Conditions 41, 78, 135) and Condition 153 which requires, prior to the issue of an Occupation Certificate, a report verifying compliance with the acoustic conditions and 'Development Near Rail Corridors and Busy Roads – Interim Guideline'.

The applicant has provided the following response to this recommendation:-

"The studio units facing the rail corridor on levels 4, 5, 6 and 7 have been removed, resulting in only one unit facing the rail corridor on those levels and level 8. The units that have not been setback are north facing and have a solid masonry wall (except for a highlight window that could be deleted) on the boundary with the rail corridor.

The units that face onto the rail corridor have in the main been setback a minimum of 3m from the boundary with that area used for deep soil planting. In some cases the living areas are setback a further 2.1m being the width of the balconies, with use of double-glazed glass to windows and doors."

3. Reduce the number of units per floor to between 9 or 10 per floor to improve amenity

The overall number of units has been reduced from 84 to 82. The number of units per floor has been reduced only on Levels 6 and 7 which previously accommodated 11 units each. These floors now accommodate 10 units each. The number of units on Levels 1 – 5 remains at 11 while Level 8 still accommodates 7 units.

The applicant has provided the following justification for not reducing the number of units per floor to 9 or 10 as per the request of the Panel:-

"As mentioned in Point 2 above, the studio units facing the rail corridor on levels 4, 5, 6 and 7 have been removed. On levels 4 and 5 a studio has been added on the Denison Street frontage, so that the loss of units is reduced to 2. As a result, the number of units on levels 6 and 7 has been reduced to 10 per floor while level 8 contains only 7 units.

On levels 1 - 5 the number of units per floor remains at 11. However, on each of these floors the foyer/ main corridor is varied in width (greater than minimum requirements), contains seating elements, planters and glazed end treatments. All of these are all examples of justifications for increasing the number of units off a circulation core as stated in objective 4F -1 of the Apartment Design Guide."

4. Provide detailed construction methodology in relation the method of excavation to minimise vibration impacts to the adjoining properties

In response to this issue, the applicant has provided a "Construction Methodology" letter from EI Australia Pty Ltd which is attached in full to this report. EI prepared the Geotechnical Investigation Report and Impact Assessment Report for Sydney Trains in respect of the proposal.

The report notes that a bulk excavation level of RL16.0m is required to be provided for the development. Excavation of low to very high strength sandstone is expected to present very hard or very heavy ripping, or "hard rock" excavation conditions and grid sawing techniques with ripping or hammering may be required to facilitate the excavation.

The construction methodology letter makes a number of recommendations to reduce vibration impacts associated with excavation at the site. Specifically, the report states that excavation using rock hammers should commence away from the adjoining structures and the transmitted vibrations monitored to assess how close the hammer can operate to the adjoining structures while maintaining transmitted vibrations within the acceptable limits.

Vibration monitoring should be undertaken at the site over the course of the excavation period. The report notes that vibration measurements can be carried out either using an attended or an unattended vibration monitoring system. An unattended monitoring system must be fitted with an alarm to alert the site supervisor to make the plant operator aware immediately when the vibration limit is exceeded. The vibration monitor must be set to trigger the alarm when the overall peak particle velocity (PPV) exceeds set limits outlined by the vibration monitoring plan.

If it were found that transmitted vibrations by the use of rock hammers are unacceptable, then it would be necessary to change to a different method of excavation such as a smaller excavator with a smaller rock hammer, or a rotary grinder, rock saws, jackhammers, ripping hooks, chemical rock splitting or milling machines. Although these are likely to be less productive, they would reduce or possibly eliminate risks of damage to adjoining properties through vibration effects transmitted via the ground.

Such equipment would also be required for detailed excavation, such as footings or service trenches and for trimming of faces. Final trimming of faces may also be completed using a grinder attachment rather than a rock breaker in order to assist in limiting vibrations.

The construction methodology has been reviewed by Council's Geotechnical Engineer who has considered the information contained in the letter dated 5 June 2019 from EI Australia and provided the following advice:

> EI Australia have identified a suite of excavation options which can be utilised that would set the maximum allowable vibration on perimeter monitors and start excavation with hammers furthest from existing structures. An alarm would sound when the peak vibration is reach in a monitor and then a hold point (Geotechnical Condition 5 – Condition 8(e) in the draft conditions at Attachment 6) would come in to force until a less intense method of excavation was commenced. Appendix C refers to safe limits for building vibration and it is assumed that Group 3 structures would be selected which are particularly sensitive to vibration as their limit.
>
> Sensitivity to vibration is not the adjoining structures but ultra-sensitive medical test equipment that needs to be protected from vibration. Geotechnical Condition 2 (Condition 8(b) in the draft conditions at Attachment 6) requires the limit of vibration to be assessed and agreed upon during the dilapidation assessment to ensure the medical equipment is not affected. The limit would be much less than that of Group 3 of Appendix C. The monitoring would be undertaken by the geotechnical consultant during the site supervision (Geotechnical Condition 12 – Condition 8(l) in the draft conditions at Attachment 6). Level 1 supervision as defined in the standard requires full time presence on site while the excavation is being done.
>
> The geotechnical consultant has not taken into account the basis for vibration management and further clarification is required to confirm what limit the medical equipment can tolerate and it is this limit that should be enforced during excavation and construction.

The key issue here is clearly how much tolerance the medical/ diagnostic equipment in the Southern IML Pathology has for vibration. Further work will need to be undertaken in consultation with Southern IML Pathology to determine what vibration limit the equipment can tolerate and this would then be the limit that should be enforced during excavation and construction. In order to address this issue, an additional deferred commencement condition is recommended for imposition, in the event that the Panel is otherwise of a mind to support the development. This condition should read:-

> The adjoining property No.45-47 Denison Street (Southern IML Pathology) provides critical medical services requiring specialist analysers sensitive to vibration, noise and dust. A detailed report shall be prepared in conjunction with Southern IML Pathology which outlines the maximum tolerable limits for vibration such that medical analysis / diagnostic operations are not impeded by the excavation and construction works.

The limits identified in this report will then be used to set the maximum allowable vibration limit on perimeter monitors to be implemented during the excavation and construction phases; this is then addressed by the

requirements of Condition 8 (note - irrelevant parts of the condition have been removed for the purposes of this discussion). An amendment to Condition 8(e) is identified in underlined text:-

"8 **Geotechnical**

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

b The adjoining property No.45-47 Denison Street (Southern IML Pathology) provides critical medical services requiring specialist analysers sensitive to vibration, noise and dust. The dilapidation report for this property is to determine maximum tolerable limits for vibration, noise and dust such that medical analysis operations are not impeded by the construction…..

d Hard bedrock where encountered will be difficult to excavate. Excavation methods need to minimise vibration, noise and dust to ensure compliance with Geotechnical Condition (b).

e An exceedance of vibration, noise or dust limits identified in the report provided in response to deferred commencement Condition 1(b) will generate a HOLD POINT on construction until advice is received from the geotechnical consultant which addresses the non-conformance generating the hold construction. …..

h All work is to be in accordance with the geotechnical recommendations contained in the report dated 12 July 2017 by EI Australia and any subsequent geotechnical report required to address unanticipated conditions encountered during construction.

i An earthworks plan is to be developed by the geotechnical consultant prior to start of earthworks.

j All recommendations of the geotechnical consultant in their geotechnical report dated 12 July 2017 are to be accommodated in the earthworks plan.

k The earthworks plan may require modification in light of any subsequent geotechnical reports commissioned to address unforeseen geotechnical conditions encountered during the site preparation earthworks.

l All earthworks including drainage, retaining wall and footing construction is to be subject to Level 1 geotechnical supervision as defined in Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Developments. This supervision is to include vibration, noise and dust monitoring for compliance to Geotechnical Condition 2. Where necessary amendments are to be made to the designs during construction based on supplementary geotechnical advice given during the supervision to ensure that the completed works accommodates all encountered geotechnical constraints.

m 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."

Further, draft Condition 18 requires the submission of a **Construction Management Plan** prior to the release of a Construction Certificate:-

"18 **Construction Management Plan**

Prior to the release of a Construction Certificate or the commencement of any works at the site, a detailed Construction Management Plan (CMP) prepared by a suitably qualified person in consultation with adjoining land owners shall be submitted to and approved by Council. The construction management plan shall include (but not be limited to) the following details:

- plan of proposed construction storage area;
- parking for construction workers during the demolition and construction phases;
- the type of materials/plant/ equipment to be transported to and stored at the site and how is it to be transported and stored;
- timing of delivery of materials;
- the proposed access points to the site during construction;
- treatment of barricading/ hoarding for construction/and restricting access;
- address all environmental aspects of the development's demolition and construction phases including soil and water management/erosion and sediment control plan; noise and vibration management plan; dust suppression/dust management plan; waste management plan and litter control;
- construction noise mitigation measures;
- timing of waste collection during construction;
- monitoring of compliance with the proposed mitigation measure and corrective actions; and

- arrangements for continuity of access to Southern IML pathology and other local businesses.

A community engagement plan be prepared and incorporated into the Construction Management Plan, including regular updates and contact numbers for complaints and consultation for schedule of works.

A Construction Certificate shall not be released by the Principal Certifying Authority and no works shall commence until such time as Council's written approval has been obtained for the construction management plan. The approved construction management plan shall be complied with at times."

2 ASSESSMENT OF REVISED PLANS

The revised plans have been assessed with regard to the principal development standards in WLEP 2009 and with regard to relevant SEPPs and the ADG and the following key assessment issues are noted: -

- The number of residential units has been reduced from 84 to 82. The number of retail spaces and the retail GFA remain unchanged.
- The GFA of the residential component of the development has been reduced. The FSR remains compliant. The maximum permitted FSR is 3.625:1 calculated in accordance with Clause 4.4A of the LEP [95% residential and 5% non-residential]. The GFA is now 7488sqm which results in an FSR of 3.6:1.
- The height of the building remains unchanged on that previously presented to the Panel and is compliant with Clause 4.3 of Wollongong LEP 2009.
- The development departure sought in respect of Clause 8.6 building separation still forms part of the application. The extent of the variation sought remains unchanged.
- The deep soil zone and communal open space areas remain compliant. There is additional planting on structure proposed adjacent to the rear boundary as required by the Panel – detailed above.
- The revised plans provide for generally compliant solar access, cross ventilation, private open space, reasonable internal unit layouts, residential storage, sufficient car, visitor, motorcycle and bicycle parking, as required by the ADG and Wollongong DCP 2009.
- The revised plans provide for 9 adaptable and 12 livable units (capable of providing compliance with the features of Silver level of Livable Housing Guidelines) as required by the ADG.
- Updated BASIX certificates have been provided with the revised plans confirming that the proposed development will achieve the required energy efficiency and thermal comfort targets of SEPP (BASIX).
- Unit mix variation sought as per the original proposal; only 2 x 3 bedroom units are proposed which is less than the 10% of the overall unit mix required by Wollongong DCP 2009. The variation was discussed within the body of the assessment report and is supported.

Sydney Trains

The proposal requires the concurrence of Sydney Trains under the provisions of SEPP (Infrastructure) 2007. Sydney Trains granted its concurrence to the development subject to deferred commencement and operational consent conditions. The revised plans have been referred to Sydney Trains to ensure that it remains satisfied with the development. At the time of finalising this report, no further comment had been provided by Sydney Trains.

3 CONCLUSION

The Panel deferred the application pending the receipt of amended plans increasing the setback of the building to the adjacent rail corridor to allow additional landscape planting; reducing the number of units per floor and minimising the number of units with orientation to the rail corridor. Revised plans and additional information in relation to construction methodology (in relation to excavation to minimise vibration impacts to adjoining properties) has been submitted. The plans and additional supporting documentation are outlined above and have been assessed with regard to relevant planning controls.

As discussed, the revised plans do not align completely with the Panel's recommendations, however the applicant has provided a written statement justifying the proposal. The revised plans are satisfactory with regard to the planning controls as outlined in Section 2 above and it is considered that the proposal as amended is an improvement to that previously presented to the Panel.

With regard to construction management, the construction methodology statement prepared by the applicant's consultant provides for some reasonable and practical ways of managing vibration impacts including the use of vibration monitoring on site and alternative excavation methods in the event the vibration

thresholds are exceeded. However, information has not been provided to identify vibration limits the medical/ diagnostic equipment within the Southern IML Pathology can tolerate. A deferred commencement condition to achieve this is recommended along with the previously recommended consent conditions pertaining to vibration management.

It is now appropriate that the application be determined.

3 ACTION SOUGHT

The applicant has revised the plans in response to the recommendations of the Panel and it is now appropriate that the development application be determined.

If the Panel is of a mind to support the proposal, it is recommended that Development Application DA-2018/473 be granted a **deferred commencement** consent subject to the conditions listed in **Attachment 6** to this report.

4 ATTACHMENTS

1 LPP Determination and Statement of Reasons 22 May 2019 (and Council officer's report to WLPP Meeting 22 May 2019)

2 Revised plans

3 The applicant's planning submission in support of the revised plans

4 Applicant's construction methodology statement

5 Aerial photograph and WLEP 2009 zoning map

6 Draft conditions

DETERMINATION AND STATEMENT OF REASONS

WOLLONGONG CITY COUNCIL – WOLLONGONG LOCAL PLANNING PANEL (WLPP)

DATE OF DETERMINATION	22 May 2019
PANEL MEMBERS	Alison McCabe (Chair), Larissa Ozog, Brendan Randles, Trish McBride (Community Representative)

Public meeting held at Wollongong City Council, Level 9 Function Room, 41 Burelli Street, Wollongong on 22 May 2019 opened at 5:00pm and closed at7:45pm.

MATTER DETERMINED

DA-2018/473 - Lot 1 DP 1108504, 49-51 Denison Street, WOLLONGONG (as described in detail in schedule 1).

PUBLIC SUBMISSIONS

The Panel heard from the applicant's architect.

PANEL CONSIDERATION AND DECISION

The Panel considered the matters listed at item 7, and the material presented at the meeting and the matters observed at site inspections listed at item 8 in Schedule 1.

The Panel determined to defer the development application as described in Schedule 1 pursuant to section 4.16 of the *Environmental Planning and Assessment Act 1979* for amended plans that:

- set the building back from the rail line by a minimum of 3 metres and for this area to be landscaped and include plants that will provide an effective screen to the rail corridor;
- re-design the development to minimise the number of units with orientation to the rail corridor;
- reduce the number of units per floor to between 9 or 10 per floor to improve amenity;
- provide detailed construction methodology in relation the method of excavation to minimise vibration impacts to the adjoining properties.

On receipt of amended plans a further report be prepared for consideration and determination by the Panel.

The decision was unanimous.

REASONS FOR THE DECISION

The reasons for the decision of the Panel were:

- To improve the amenity of the units
- To provide sufficient detail to mitigate construction impacts.

PANEL MEMBERS	
 Alison McCabe (Chair)	 Larissa Ozog
 Brendan Randles	 Trish McBride (Community Representative)

SCHEDULE 1		
1	DA NO.	DA-2018/473
2	PROPOSED DEVELOPMENT	Commercial - Demolition of existing buildings and construction of mixed use building containing 2 levels of basement car parking (94 cars), three ground floor commercial / retail spaces, and 84 residential units above with a roof terrace
3	STREET ADDRESS	Lot 1 DP 1108504, 49-51 Denison Street, WOLLONGONG
4	APPLICANT/OWNER	Applicant/ Owner - Wollongong Investments No 2 Pty Ltd
5	REASON FOR REFERRAL	The proposal has been referred to the Wollongong Local Planning Panel for determination pursuant to Clauses 3 and 4 of Schedule 2 of the Local Planning Panels Direction of 1 March 2018. The proposal is development to which State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development applies. A variation is also sought to building separation under clause 8.6 of WLEP in excess of 10%.
6	RELEVANT MANDATORY CONSIDERATIONS	· Environmental planning instruments: o State Environmental Planning Policy (Infrastructure) 2007 o State Environmental Planning Policy No 55 – Remediation of Land o State Environmental Planning Policy No 65 – Design Quality of Residential Flat Development o State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004 o Wollongong Local Environment Plan 2009 · NSW Apartment Design Guide · Wollongong Development Contributions Plan 2018 · Draft environmental planning instruments: Nil of relevance · Development control plans: o Wollongong Development Control Plan 2009 · Planning agreements: Nil · Provisions of the *Environmental Planning and Assessment Regulation 2000*: Clause 92 – AS2901-1991 in respect of demolition works · Coastal zone management plan: N/A · The likely impacts of the development, including environmental impacts on the natural and built environment and social and economic impacts in the locality · The suitability of the site for the development · Any submissions made in accordance with the *Environmental Planning and Assessment Act 1979* or regulations · The public interest, including the principles of ecologically sustainable development
7	MATERIAL CONSIDERED BY THE PANEL	· Council assessment report dated 22 May 2019 · Written submissions during public exhibition: ten (10) · Verbal submissions at the public meeting: 0
8	SITE INSPECTIONS BY THE PANEL	Site inspection 22 May 2019. Attendees: o Panel members: Alison McCabe (Chair), Larissa Ozog, Brendan Randles, Trish McBride (Community Representative) o Council assessment staff: Pier Panozzo, Theresa Whittaker
9	COUNCIL RECOMMENDATION	Defer
10	DRAFT CONDITIONS	Attachment 7 to the Council assessment report

WLPP No.	Item No. 1
DA No.	DA-2018/473
Proposal	Commercial - Demolition of existing buildings and construction of mixed use building containing 2 levels of basement car parking (94 cars), three ground floor commercial / retail spaces, and 84 residential units above with a roof terrace
Property	Lot 1 DP 1108504, 49-51 Denison Street, WOLLONGONG
Applicant	Wollongong Investments No 2 Pty Ltd
Responsible Team	Development Assessment and Certification - City Centre Team (TW)

ASSESSMENT REPORT AND RECOMMENDATION

Executive Summary

Reason for consideration by Local Planning Panel - Determination

The proposal has been referred to the Wollongong Local Planning Panel for determination pursuant to Clauses 3 and 4 of Schedule 2 of the Local Planning Panels Direction of 1 March 2018. The proposal is development to which State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development applies. A variation is also sought to building separation under clause 8.6 of WLEP in excess of 10%.

Proposal

The application seeks consent for the demolition of existing structures and the construction of a mixed use development comprising 2 levels of basement car parking (94 cars), 3 ground floor commercial / retail spaces, and 84 residential units above with a roof top terrace.

Permissibility

The site is zoned B3 Commercial Core pursuant to Wollongong Local Environmental Plan 2009. The proposal is categorised as a ***shop top housing development*** and is permissible in the B3 zone with development consent.

Consultation

The proposal was notified in May 2018 and received 10 submissions, which are discussed at Section 2.8 of this report. Amended plans were re-notified in October 2018 with no further submissions received.

Various internal divisions of Council were consulted as part of the assessment process. Consultation with Endeavour Energy, Sydney Trains and the NSW Roads & Maritime Service has also taken place as part of the DA assessment. The proposal was reviewed by the Design Review Panel (DRP) on several occasions both pre and post-lodgement.

Main issues

The main issues are:

- Design quality
- Compliance with State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development and the Apartment Design Guide (ADG);
- Wollongong DCP 2009 variations in respect of apartment mix, building setbacks and building bulk;
- Sydney Train requirements in relation to the adjacent rail corridor.

RECOMMENDATION

It is recommended that Development Application DA-2018/473 be granted a **deferred commencement** consent subject to the conditions listed in **Attachment 7** to this report. The deferred commencement conditions are those required to be imposed by Sydney Trains.

1.1 PLANNING CONTROLS

The following planning controls apply to the development:

State Environmental Planning Policies:

- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development
- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- State Environmental Planning Policy (Infrastructure) 2007

Local Environmental Planning Policies:

- Wollongong Local Environmental Plan (WLEP) 2009

Development Control Plans:

- Wollongong Development Control Plan 2009

Other policies

- Wollongong City Wide Development Contributions Plan 2018
- Apartment Design Guide

1.2 DETAILED DESCRIPTION OF PROPOSAL

The proposal comprises the demolition of the existing structures on the site and the construction of a shop top housing development comprising 2 basement levels, 3 retail/ commercial spaces and car parking at ground level and 84 residential units over the remaining eight (8) levels of the building. Of the units, 4 are studio apartments, and there are 36 x 1 bedroom, 42 x 2 bedroom and 2 x 3 bedroom units. The proposal will contain 9 adaptable units and 10 Liveable Housing apartments.

Car parking, motorcycle and bicycle parking is provided at ground and in 2 basement levels to be accessed via a single driveway sited adjacent to the northern boundary of the site. The development provides car parking for 94 cars, along with motorbike and bicycle spaces. Resident store rooms are also provided on the carparking levels. Bins will be stored within the ground floor bin rooms situated at the rear of the retail/ commercial spaces and will be collected from the loading zone on the ground floor.

The development is in part setback from the street edge to accommodate a large existing street tree which is to be retained. The 3 retail/ commercial tenancies will be individually accessed from the street frontage, along with the residential foyer. Lift access will be provided from ground floor to the floors above.

There are pockets of deep soil zone planting within the site totalling approximately 150sqm including an area beneath the existing large street tree which is to be retained, a portion along the rear (eastern) boundary adjacent to the rail corridor and a portion adjacent to the southern boundary. Planting on structure is proposed on sections of exposed rooftop. Each unit will have access to a private open space in the form of a balcony or rooftop terrace. Communal open space is provided on the rooftop, with a total area of 553sqm. This includes a large paved area with perimeter landscaping beds.

The plans form **Attachment 1**.

1.3 BACKGROUND

Development History

The development history of the site is as follows:

Application	Description	Date	Decision
DA-1994/224/A	Proposed modification to operating hours of the existing Methadone clinic, drug and alcohol counselling centre.	5/12/97	Approved

	(16 March 2006)		
BA-1995/834	Alterations To Doctors Surgery	5/05/95	Approved
DA-224/94	Proposed Methadone Clinic, drug and alcohol counselling centre locality and alterations to doctor's surgery	6/06/94	Approved
1994	Wollongong Line Depot Existing Building Layout development Plan completed 6 June 1994, as part of the development consent for Methadone Clinic. The Plan indicated that a petrol bowser and an oil and fuel store were previously located on the concrete slabs present today behind the Methadone Clinic.		
Prior to 1994	Prior to 1994 the site was used as a Telecom Line Depot		

Pre-lodgement meetings

A pre-lodgement meeting and pre-lodgement Design Review Panel were held for the proposal.

Customer service actions

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

1.4 SITE DESCRIPTION

The site is located at 49-51 Denison Street, Wollongong. The site comprises a single large allotment, situated on the eastern side of Denison Street near its intersection with Crown Street. The legal description of the site is Lot 1 DP 1108504.

The site is slightly irregular in shape with a total area of 2080.3sqm and a frontage length of 50.585m. The rear boundary of the site abuts the Illawarra Railway line.

The site slopes south to north across the property. The topography slopes gently towards the north, with site levels ranging from RL 23.7m at the south end to 22.8m at the north end of the site.

The site is zoned B3 Commercial Core and is located in a mixed use area characterised by a variety of development types and building typologies including some commercial office buildings, a fire station, medical suites, and, to the immediate north, a large single storey brick building housing Southern Pathology. To the north-west of the site, the zoning changes to SP1 (Hospitals Medical Research & Development). In this area there are currently predominantly medium density residential housing developments. To the north of the site, the zoning is B4 Mixed Use.

The planning controls permit much larger development than currently exists and the area is therefore likely to undergo significant change to higher density development in future.

The site is currently occupied a brick building used as a methadone clinic along with an open carpark and a vacant garage, all of which are to be demolished to facilitate the proposed development. There is a large Liquid Amber street tree at the front of the site which is to be retained.

Council's records identify the following site constraints:-

- Acid sulphate soils class 5 affectation;
- Easement for access across the southern portion of the allotment as per the deposited plan;
- Proximity to the railway corridor.

An aerial photograph of the site and locality and zoning extract form **Attachment 2**.

1.5 SUBMISSIONS

The application was initially notified in May 2017 in accordance with Wollongong DCP 2009 Appendix 1: Public Notification and Advertising Procedures. Notification letters were sent and a notice was placed in the local newspaper. At the conclusion of the notification period, there were 10 submissions received, one of which was in support of the application; the remainder raised objections to the proposal. The issues identified are discussed in the table below. It is noted that, following the receipt of amended plans, the proposal was again

notified to neighbours and a notice placed in the local newspaper in November 2018. Following this second notification period, there were no submissions received.

Concern	Comment
1. Insufficient car parking provision within the development, which will result in impacts on on-street car parking in the locality which is already heavily utilised. The current operator of the site offers some car parking for nearby workers and this will be lost as a result of the development	The car parking provision within the site is compliant with relevant requirements. The development also provides the required visitor car parking, motorcycle and bicycle parking and is within very close proximity of Wollongong Train station and other public transport nodes. The availability of on-street car parking is not expected to be further compromised by the development.
2. The provided BASIX certificate does not relate to this development	BASIX certificates have been provided for the proposal which are consistent with applicable requirements.
3. The acoustic design should ensure that railway, traffic and other noise does not affect residential amenity within the development	The application was accompanied by an acoustic report which examines all likely external noise sources. The development will be required to be designed and constructed to ensure that internal noise levels within the dwellings will comply with SEPP (Infrastructure) 2007 and the noise guidelines for development adjacent to rail "Development Near Rail Corridors and Busy Roads – Interim Guideline" referred to in Clause 87 of that SEPP. Conditions of consent are recommended for imposition in relation to this matter.
4. The development will have significant overshadowing impacts. The shadow diagrams indicate that the development will cast shadows in the afternoon in mid- winter across Crown Street which may affect business including outdoor dining areas. The height and footprint of the building should be reduced.	The shadow diagrams supplied with the application indicate overshadowing of the neighbouring commercial properties over the course of the day in mid-Winter. A shadow section has not been supplied; if it were, it is expected that it would illustrate that the morning shadowing impacts of the proposed building would not be unreasonably significant. The development will cast a shadow extending towards the southern side of Crown Street from approximately 2pm. It is noted that the building complies with the applicable height and floor space ratio controls for the site and it is expected that higher / bulkier building forms will occur within the B3 zone as provided for by the current planning controls. The overshadowing impacts of the development are not considered to be unreasonable in the context.
5. Impact of the development on the neighbouring property to the north - the adjacent property to the immediate north of the site has been continuously used as a pathology laboratory since 1982 and is now the largest pathology laboratory in the Illawarra. Southern-IML Pathology has invested heavily in sensitive laboratory technology worth millions of dollars, to ensure accurate and reliable results for patients throughout the Illawarra - Shoalhaven region. The lab operates 24 hours / 7 days. Any adjacent development must ensure that this vital work is not jeopardised by either vibration, noise, loss of continuity of services, (such as	All construction work has the potential to give rise to impacts in the locality by way of noise, vibration, car parking impacts and the like. In terms of nearby sensitive land uses, the developer will be required to ensure that construction impacts are managed to a reasonable degree. The geotechnical report states that high to very high strength sandstone (Unit 4 and 5) is present within part of the site at levels to RL17.8 and RL13.8. The depth of excavation at the northern boundary is RL16.2. The report states that options to excavate unit 4 & 5 rock include D10 bulldozer, hydraulic rock breakers, rock saws and/ or rotary grinders. Given the sensitivity of the neighbouring land use, it is recommended that conditions be imposed in relation to vibration limitation and excavation management. It may be that alternative excavation techniques are required to be

Concern	Comment
water and electricity) impacts on access, dust, security, construction workers' parking, etc. 6. Southern-IML Pathology generates significant traffic and parking demands in the locality; many of the visitors to this and adjacent medical services have limited mobility. It is critical that access not be compromised by the proposed development in any way. Southern-IML Pathology requires assurance that their operations, sensitive equipment and diagnostic staff's work will not be compromised by the proposed development. A complaints management process should be implemented	employed at the site to minimise vibration impacts on Southern IML Pathology. In addition, a detailed construction management plan will be required to be prepared and submitted to Council for approval prior to the issue of the Construction Certificate and compliance with this CMP will be required throughout all stages of the development. Conditions of consent are recommended for imposition in regards to a raft of construction related matters to ensure that construction impacts are not unreasonable; refer to the list at **Attachment 7**.
7. The carpark wall located along the north boundary is sited on the boundary (ie. 0m setback). The minimum required side setback of 3.5m, as per Wollongong DCP Chapter B3 - Mixed Use Development. As the land falls towards the rear, the wall increases in height to more than 5m at the rear. The height of the wall and its location will have a detrimental impact on the any future development on the adjoining site. The basement or carpark wall is to be set back from the boundary to comply with the code or located underground.	In the B3 zone, a zero setback is accepted and required by Wollongong LEP and DCP 2009 to that part of the building built to the street frontage height (being 12m – 24m). The development has adopted a lower height built element to the northern boundary of the site to minimise impacts on the immediately adjacent property to the north. Above the car park wall, the building then steps back 6m from the northern boundary. This is considered to be a suitable outcome and was supported by the DRP.
8. The development will compromise solar access to access to a pleasant outlook currently available across the site from nearby commercial spaces. The scale and footprint of the building should be reduced.	The site has significant redevelopment potential based on the allowable height and density provisions of Wollongong LEP 2009. The development complies with most of the applicable planning controls including setback controls with the exception of a variation in respect of the south-facing level 1 terraces and building separation which is discussed in detail below.
9. The development does not comply with the cross ventilation requirements of the ADG.	The plans have been revised to ensure compliance with the cross ventilation requirements of the ADG as discussed below.
10. The placement habitable rooms at 0m setback to railway will impact negatively on the amenity of the occupants. A landscape/ deep soil zone setback would be more appropriate and improve visual and acoustic privacy to the railway. Overall landscape provision is insufficient	The building is setback 0.8m from the rear boundary which has been deemed acceptable by Sydney Trains and the DRP. The DA was accompanied by an acoustic report which examines external noise sources. The development will be required to be designed and constructed to ensure that internal noise levels within the dwellings will comply with SEPP (Infrastructure) 2007 and the "Development Near Rail Corridors and Busy Roads – Interim Guideline" (as required by Clause 87 of SEPP (Infrastructure) 2007). Conditions of consent are recommended for imposition in relation to this matter. Residential units will be sited much higher than the rail line

Concern	Comment
	itself and consequently visual privacy is not expected to be compromised by the rail corridor.
11. Rear setback is non-compliant; this results in a wider building footprint width which does not meet ADG requirements.	The building is setback 0.8m from the rear boundary which has been deemed acceptable by Sydney Trains and the DRP. The development is compliant with the applicable FSR for the site.
12. Non-compliances with the Apartment Design Guide and DCP including building separation/ setback requirements	The building has been redesigned in part to ensure compliance with the setback/ building separation requirements of the ADG as discussed below in relation to SEPP 65/the ADG. One area of non-compliance exists on Level 1 adjacent to the southern boundary; this is discussed below and is considered supportable in this instance. No concerns have been raised in relation to this issue by Council's Traffic Engineer.

1.6 CONSULTATION

1.6.1 INTERNAL CONSULTATION

Council's Stormwater, Geotechnical, Environmental, Heritage and Landscape Officers have reviewed the application and provided satisfactory referrals including recommended conditions to be imposed if the development is approved.

1.6.2 EXTERNAL CONSULTATION

Design Review Panel (DRP)

The proposal has been considered by the Wollongong Design Review Panel (DRP) on four (4) occasions, the first being prior to formal lodgement of the application on 14 November 2017 under DE-2017/159. The application was initially considered post-lodgement on firstly on 12 June and again on 14 November 2018 and on 5 March 2019 where amended plans were tabled.

Amended plans were submitted by the applicant responding to the outstanding issues identified by the DRP at its meeting in March (and other matters). These have been reviewed by the Chair of the DRP who has advised that the plans now satisfactorily resolve all previously identified issues and in conclusion, the proposal as amended is now appropriate with regard to the ADG and the design quality principles of SEPP 65 and exhibits design excellence as required by Clause 7.18 of Wollongong LEP 2009. A full copy of the DRP minutes form **Attachment 3**.

Endeavour Energy

The proposal was referred to Endeavour Energy for comment. Endeavour Energy advised that it had no objection to the DA subject to recommended conditions of consent which are included in those at **Attachment 7**.

Roads and Maritime Services

The proposal was referred to the RMS under the provisions of SEPP (Infrastructure) 2007 as it is traffic generating development, with the nearest classified road being Crown Street. The RMS advised that it had no objection to the proposed development.

Sydney Trains

The proposal requires the concurrence of Sydney Trains under the provisions of SEPP (Infrastructure) 2007. Following the submission of amended plans and further supporting documents, the proposal is now satisfactory to Sydney Trains who has issued its concurrence to the development subject to deferred commencement and operational consent conditions which are included in the conditions at **Attachment 7**.

2. ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 – 4.15 EVALUATION

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

2.1.1 STATE ENVIRONMENTAL PLANNING POLICY NO. 55 – REMEDIATION OF LAND

Clause 7 - Contamination and remediation to be considered in determining development application

A detailed site investigation accompanied the development application which indicates that, on the basis of the site history and search findings, that there are potential sources of contamination including imported fill material of unknown origin and quality; weathering of metallic and painted exteriors in structures currently present on the site; potential application of pesticides beneath building footprints; hazardous materials, including potential asbestos-containing materials (ACM) in building products used in existing site structures; uncontrolled demolition of former site structures which may have contained asbestos; potential contamination from onsite UPSS and other storages; and previous industrial activities onsite (e.g: 1960s to 1970s when the warehouse was evident on site). There are constraints to undertaking a full analyses of potential site contamination including the presence of the existing structures on the site.

The DSI makes a number of recommendations to ensure that the site can be rendered suitable for the proposed use. This includes the following: -

- Prior to site demolition, carry out a Hazardous Materials Survey on existing site structures to identify potentially hazardous building products;
- Preparation and implementation of a Remedial Action Plan (RAP);
- Provide a SAQP for the validation of remediation activities performed on-site;
- Undertake supplementary investigations, and subsequent remediation and validation works for the site;
- Classification of waste materials to be removed from the site for off-site disposal;
- final site validation certifying site suitability of soils and groundwater for the proposed land use.

Subject to the site being suitably remediated and validated, it will be suitable for the proposed development.

A remediation action plan (RAP) was also submitted with the DA. The proposed remediation strategy will involve the removal of UPSS and fill from the site (along with excess residual soil). The required work stages are outlined as follows:

• Stage 1 – Site Preparation
• Stage 2 – UPSS Removal & Validation
• Stage 3 – Supplementary Investigation
• Stage 4 – Excavation and Soil Material Management
• Stage 5 – Validation of Imported Soils (*if required)*

Both the RAP and the detailed site investigation have been reviewed by Council's Environmental Officer and are considered to be satisfactory. Subject to conditions of consent the site is suitable for the intended use of the land with regard to Clause 7 of this policy. A number of consent conditions have been recommended for imposition; these are included in those listed in **Attachment 7.**

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

The provisions of the SEPP apply as the development includes a 'residential flat building', is more than 3 storeys in height and houses more than 4 dwellings.

The application was accompanied by a statement by a qualified designer in accordance with Clauses 50(1A) & 50(1AB) of the Environmental Planning and Environment Regulation 2000.

Clause 28 provides that the application must be referred to the relevant design review panel (if any) for advice concerning the design quality of the development while Clause 28(2) provides that a consent authority is to take into consideration (in addition to any other matters that are required to be, or may be, taken into consideration):-

(a) the advice (if any) obtained from the design review panel, and

(b) the design quality of the development when evaluated in accordance with the design quality principles, and

(c) the Apartment Design Guide.

The proposal has been reviewed by a Design Review Panel convened for the purposes of the SEPP as outlined above in Section 2.5.2 of this report. As discussed, at its last meeting on 5 March 2019, the DRP raised some concerns with regard to outstanding matters; the notes from this review are attached to this report at **Attachment 4**. The applicant submitted revised plans in response to these comments which have been reviewed by the Chair of the DRP. The Chair has advised that the revised plans satisfactorily address all outstanding issues raised by the DRP at its meeting on 5 March 2019. It is noted that some further minor plan amendments have bene made to resolve matters of ADG non-compliance.

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 28(2)(a) of the Policy: -

Principle 1: Context and neighbourhood character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood.

Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

Comment:

The locality is characterised by a mixture of development types and densities, being close to the periphery of the B3 zone and adjacent B4 and SP1 zoned land. Nearby development is largely commercial in nature and of a predominantly medium density. The height and FSR permitted for the locality under the planning controls will likely see substantial transformation of the area in future towards higher density development. The current proposal will in part set the tone for that development, particularly in respect of street wall height and bulk and scale. The proposal is considered to be satisfactory with regard to these matters, noting the DRP were satisfied of these matters, and to create an acceptable guide for future development on adjoining land and in the locality.

The DRP advised that the Applicant has made a number of positive changes, especially with regards to the interface with the public domain on the ground level facing Denison Street. At the time of the 5 March meeting of the DRP, the Panel had some outstanding concerns with the north and south elevations which have been address through the submission of revised plans. As noted above, the revised plans have been reviewed by the DRP Chair who considers this issue to now be resolved.

Principle 2: Built form and scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements.

Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

Comment:

The proposal is considered to be of a suitable bulk and scale considering the applicable controls and likely development on adjoining land.

The articulation and materials and colour palette are considered to positively contribute to the streetscape. The setbacks to accommodate the existing street tree assist in improving the building's mass.

Residential amenity in respect of outlook is acceptable.

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

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 pressure on local infrastructure. The site is well situated with regard to existing public open space, public transport and services. Adequate parking facilities have been provided on site to cater for the number of units proposed. Contributions applicable to the development will go towards local infrastructure and facilities.

The FSR of the development is compliant with WLEP 2009 and the design of the development provides for an appropriate built scale measured in terms of floor space, height and setbacks. The proposal is therefore satisfactory when considered with regards to Principle 3.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes.

Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and reuse of materials and waste, use of sustainable materials and deep soil zones for groundwater recharge and vegetation.

The proposal is considered acceptable with regard to sustainability. The proposal is satisfactory with regard to solar access and natural ventilation and is accompanied by BASIX certificates which indicate that the BASIX thermal comfort, water and energy efficiency targets can be achieved. The development is considered to be an efficient use of land in an appropriate location.

The most recent review by the DRP Chair advised that the development is satisfactory with regard to ADG solar access and natural ventilation compliance. There is sufficient deep soil planting, planting on structure including roof terraces and retention of the large existing street tree which will offer some urban greening.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values and preserving green networks.

Good landscape design optimises useability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity and provides for practical establishment and long term management.

The proposal is satisfactory in respect of landscaping. The proposal involves renewal of the footpath and retention of an existing large street tree. A large landscaped communal area is provided on the roof of the building and there is also landscaping proposed on top of other exposed rooftops.

The development is considered to therefore be satisfactory with regard to Principle 5.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours.

Achieving good amenity contributes to positive living environments and resident well being.

Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas and ease of access for all age groups and degrees of mobility.

The development is acceptable in regard to controls relating to residential amenity. There were numerous initial concerns raised by the DRP in regards to the internal amenity of a number of the apartments. These have been resolved in the amended plans provided; with improved internal layouts, compliant solar access, compliant cross ventilation and acceptable balcony and communal open space areas now being provided. Setbacks to the southern boundary have been increased to achieve compliance with the ADG.

The development is acceptable in regard to controls relating to residential amenity.

Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

The design of the development is considered satisfactory with regard to the principles of CPTED and it is considered that the development is unlikely to result in additional criminal or antisocial behaviour in the locality.

Access to the carpark and residential entry points will be secured.

The development is considered to therefore be satisfactory with regard to Principle 7.

Principle 8: Housing diversity and social interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix.

Good design involves practical and flexible features, including different types of communal spaces for a broad range of people and providing opportunities for social interaction among residents.

The proposal is considered to be acceptable with regard to this Principle. It is noted that the development incorporates only two (2) x 3 bedroom units (where the minimum requirement is 10% of the overall unit mix). The applicant has provided supporting information prepared by a real estate agent which advises that there is less demand for 3 bedroom units in this part of the city centre.

The development provides for 9 adaptable units and 10 Livable units designed to achieve compliance with the features of Silver level of the Livable Housing Guidelines.

The development is considered to therefore be satisfactory with regard to Principle 8.

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of a well designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

The building is considered to incorporate suitable articulation and a mix of materials and finishes and is acceptable in regard to aesthetics. The proposal has been significantly modified by the applicant at the request of the DRP and the form and finishes proposed are now considered to be appropriate.

The development is considered to therefore be satisfactory with regard to Principle 9.

Apartment Design Guide

A full assessment of the proposal against the ADG is provided at **Attachment 5**. The development has been assessed against the provisions of the ADG and was found to be compliant, with the exception of a variation in respect of 3F Visual Privacy in regards to the terraces provided on the southern side of Level 1. In this location, a setback of 6m is required to be provided. The terraces are setback 2.3m from the southern boundary of the site. It is noted that these terraces, which will form part of the private open space of the adjacent units (4 in total) are a recent addition to the plans which was made at the recommendation of the DRP. The DRP recommended that this previously un-trafficable roof be utilised for additional private open space for the adjacent units as it was considered that this would improve the amenity of those units without compromising the amenity of either the future occupants or the neighbouring developments to the south. The plans provide for a landscape bed along the edge of the terraces as well as a fence which will preclude overlooking and achieve compliance with the objectives of 3F despite the non-compliance.

This variation is discussed within the table at **Attachment 5** and is considered to be supportable.

2.1.3 STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

Clause 45

The development application was referred to Endeavour Energy for comment in accordance with Clause 45 as it may involve works within proximity of electricity infrastructure.

Endeavour Energy has advised that it has no objection to the proposed development subject to a number of matters being addressed. Standard conditions of consent could be imposed in regards to matters including the requirement to obtain approval from the relevant authorities for the connection of electricity and confirmation of the suitability of the substation design.

Clause 85 - Development immediately adjacent to rail corridors

This clause applies to development on land that is in or immediately 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.

Before determining a development application for development to which this clause applies, the consent authority must:

(a) within 7 days after the application is made, give written notice of the application to the chief executive officer of 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 Director-General for the purposes of this clause and published in the Gazette.

The proposal was referred to State Rail in accordance with the above clause. The comments provided are detailed above in Section 1.6.2.

Clause 86 Excavation in, above, below or adjacent to rail corridors

Pursuant to this clause, the matter was referred to Sydney Trains (as the relevant rail authority) for its concurrence. After the receipt of further information, Sydney Trains has provided its concurrence to the development subject to Council imposing deferred commencement conditions and operational conditions. These conditions are included in the draft conditions at Attachment 7.

Clause 87 - Impact of rail noise or vibration on non-rail development

This clause 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) a building for residential use,….

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

(3) If the development is for the purposes of a building for residential use, 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 building—35 dB(A) at any time between 10.00 pm and 7.00 am,

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

Consideration has been given to the Guidelines issued by the Director-General, being the "Development near rail corridors and busy roads – interim guideline". The applicant has provided an acoustic report in support of the DA which indicates that the building will be designed and constructed to achieve the required noise

attenuation. Conditions of consent are recommended in regards to acoustic attenuation to ensure compliance with the Guideline; these are included in those listed at **Attachment 7**.

Clause 104

Clause 104 'Traffic Generating development' refers to certain development of a certain size or capacity that requires referral to the Roads and Maritime Services (RMS). The site does not have frontage to a classified road (with the nearest classified road being Crown Street to the south) and the development is not of a size that would necessitate formal referral to the RMS. The proposal was nonetheless referred to the RMS for comment and the RMS advised that it had no objection or concerns with the proposal.

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

Part 2 Permitted or prohibited development

Clause 2.2 – zoning of land to which Plan applies

The zoning map indicates that the site is zoned B3 Commercial Core.

Clause 2.3 – Zone objectives and land use table

Clause 2.3 of Wollongong LEP 2009 specifies:

> *(a) the objectives for development, and*
> *(b) development that may be carried out without development consent, and*
> *(c) development that may be carried out only with development consent, and*
> *(d) development that is prohibited*

The objectives of the B3 zone are as follows:

- *To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.*
- *To encourage appropriate employment opportunities in accessible locations.*
- *To maximise public transport patronage and encourage walking and cycling.*
- *To strengthen the role of the Wollongong city centre as the regional business, retail and cultural centre of the Illawarra region.*
- *To provide for high density residential development within a mixed use development if it:*
  (a) is in a location that is accessible to public transport, employment, retail, commercial and service facilities, and
  (b) contributes to the vitality of the Wollongong city centre.

The proposal is consistent with each of the above objectives.

The land use table permits the following uses in the zone:-

> Advertising structures; Amusement centres; Boarding houses; Car parks; Child care centres; **Commercial premises**; Community facilities; Educational establishments; Entertainment facilities; Exhibition homes; Function centres; Helipads; Hostels; Hotel or motel accommodation; Information and education facilities; Medical centres; Passenger transport facilities; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Self-storage units; Seniors housing; Service stations; Sex services premises; **Shop top housing**; Tourist and visitor accommodation; Veterinary hospitals; Wholesale supplies

The proposal is categorised as ***Shop top housing*** as defined below. The proposal is permissible in the zone with development consent.

Clause 1.4 Definitions

The following definitions are relevant to the proposed development:-

shop top housing *means one or more dwellings located above ground floor retail premises or business premises.*

business premises *means a building or place at or on which*:

(a) an occupation, profession or trade (other than an industry) is carried on for the provision of services directly to members of the public on a regular basis, or

(b) a service is provided directly to members of the public on a regular basis,

and includes a funeral home and, without limitation, premises such as banks, post offices, hairdressers, dry cleaners, travel agencies, internet access facilities, betting agencies and the like, but does not include an entertainment facility, home business, home occupation, home occupation (sex services), medical centre, restricted premises, sex services premises or veterinary hospital.

Clause 2.7 Demolition requires development consent

Approval for the demolition of the existing structures on the site to facilitate the construction of the proposed development is sought under this clause.

Part 4 Principal development standards

Clause 4.3 Height of buildings

This clause prescribes a maximum height of 32 metres for the Site, as shown on the Height of Buildings Map. The proposal has a maximum overall height of less than 32m which is compliant.

Clause 4.4 Floor space ratio

Clause 4.4A applies to the site as the site is located within the B3 Commercial Core Zone within the Wollongong City Centre. Clause 4.4A is considered below.

Clause 4.4A Floor space ratio – Wollongong city centre

Clause 4.4A of Wollongong LEP "Floor space ratio—Wollongong city centre" applies to land within the Wollongong city centre and provides formulae for determining the allowable maximum floor space ratio for sites depending on the site area, site frontage width, zoning and proportion of non-residential and residential gross floor area.

In the case of the Site and the proposal, subclause (4) applies.

The maximum FSR for a mixed use building is (NRFSR X NR/100) + RFSR x R/100):1.

Using this formula and the proportions of the building to be used for residential (95%) and non-residential purposes (5%) arrives at a maximum allowable FSR of (6 x 5/100) + (3.5 x 95/100) = **3.625:1.**

The proposed FSR is **3.617:1** which is compliant with Clause 4.4A.

Clause 4.6 Exceptions to development standards

Clause 4.6 of the Wollongong LEP "Exceptions to development standards" provides that development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument, where certain matters are met.

In this instance, a departure is sought in respect of Clause 8.6 Building Separation which is detailed below in the discussion around Clause 8.6.

Part 5 Miscellaneous provisions

Clause 5.10 Heritage Conservation

The site is not heritage listed nor is it located within a heritage conservation area. there are no listed items of environmental heritage within the vicinity of the site.

Part 7 Local provisions – general

Clause 7.1 Public utility infrastructure

This clause seeks to ensure that sufficient infrastructure is available to service development and requires that consent not be granted for development unless the consent authority is satisfied that any public utility infrastructure that is essential for the proposed development is available or that adequate arrangements have been made to make that infrastructure available when it is required.

The land has previously been serviced by electricity, water and sewerage services. It is expected that the existing services can be readily augmented to facilitate the proposed development. If consent is granted, conditions should be imposed requiring approval from the relevant authorities for the connection of electricity, water and sewerage to service the site.

It is noted that provision has been made for a substation within the site to service the building; if approved conditions should be imposed in relation to the satisfaction of Endeavour Energy's substation design requirements.

Clause 7.3 Flood planning area

The site is not identified as being located at or below the "flood planning level".

Clause 7.4 Riparian lands

The site is not identified in the Riparian Land Map as containing "riparian land".

Clause 7.5 Acid Sulfate Soils

The northern portion of the site is mapped as containing Class 5 acid sulfate soils. The application was accompanied by an Acid Sulfate Soils report which including details of testing within the site which indicated that there was little risk of encountering acid sulfate soils. On this basis, an acid sulfate soils management plan is not required. This matter has been considered by Council's Environmental Officers and no concerns are raised in regards to acid sulfate soils management during construction.

Clause 7.6 Earthworks

The proposal involves excavation to facilitate the construction of the proposed development inclusive of the 2 level basement car park. The proposed earthworks have been considered with regard to the prescribed matters for consideration. Suitable geotechnical and environmental conditions should be imposed in the event consent is granted. The earthworks in themselves are not expected to have a detrimental impact on environmental functions and processes or neighbouring uses subject to adequate management. Sydney Trains has reviewed the proposal with regard to potential impacts on the neighbouring rail corridor and no concerns are raised.

Council's Geotechnical Engineer has reviewed the application and advised that supplementary investigations will be required to support the design of site preparation earthworks; conditions could be imposed in relation to this matter if the application is supported.

Clause 7.13 Ground floor development on land within business zones

The objective of Clause 7.13 is to ensure active uses are provided at the street level to encourage the presence and movement of people. The clause requires that development consent must not be granted for development for the purpose of a building on land to which this clause applies unless the consent authority is satisfied that the ground floor of the building:

(a) will not be used for the purpose of residential accommodation, and

(b) will have at least one entrance and at least one other door or window on the front of the building facing the street other than a service lane.

The requirements of this clause are satisfied.

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

As the site is positioned within the Wollongong city centre, it is subject to this clause, the objective of which is to deliver the highest standard of architectural and urban design.

Development consent must not be granted to development to which this clause applies unless, in the opinion of the consent authority, the proposed development exhibits design excellence. 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, materials and detailing are considered to be of high quality and are appropriate to the building type and location.

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

The development is considered to positively contribute to the public domain through providing an appropriate scale and form, appropriate street setbacks and street frontage height, good resolution of levels between the site and the pedestrian footpath, appropriate landscaping, retention of existing street trees and provision of new street trees, and upgraded footpaths to the street frontage of the site.

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

No significant view corridors are impacted. The site is located within the nominated distant panoramic view corridor identified in Figure 3.12 (Clause 3.10) of Chapter D13 of Wollongong DCP 2009 however the building does not exceed either the maximum height or floor space ratio permitted for the site and accordingly is considered to be generally appropriate with regard to the maintenance of significant public view corridors.

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

The proposal will not overshadow an area identified on the Sun Plane Protection Map.

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

(i) the suitability of the land for development,

The land is zoned for the type of development proposed and the development complies with the relevant planning controls with the exception of some minor variations which are supported. There are no site constraints that would prevent the proposal.

(ii) existing and proposed uses and use mix,

The development is considered to be consistent with current and desired future development in the locality. The proposed uses are consistent with the B3 zone objectives.

(iii) heritage issues and streetscape constraints,

There are no significant streetscape constraints and no nearby heritage items.

(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,

Setbacks, amenity and urban form matters have been satisfactorily addressed as discussed elsewhere in this report. The proposal provides for an appropriate relationship with the existing neighbouring commercial buildings to the north and south of the site, with suitable separation distances provided to these buildings.

(v) bulk, massing and modulation of buildings,

The bulk and scale of the development is considered to be acceptable when measured in terms of building height, floor space ratio and setbacks. The Design Review Panel made numerous recommendations with regard to the bulk, massing and modulation of the buildings; these have been addressed in the revised plans and the proposal is now satisfactory with regard to these matters.

(vi) street frontage heights,

The proposed building provides for a compliant street frontage height to Denison Street as required by Chapter D13 of Wollongong DCP 2009.

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

The development incorporates some sustainable design measures as outlined below. The proposal will not give rise to unreasonable overshadowing impacts in the locality (having regard to allowable building heights and densities) and is not expected to result in uncomfortable wind conditions for pedestrians. Conditions have been recommended in relation to limitations on material reflectivity.

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

The proposal is considered satisfactory with regard to objectives of ESD. The site is well placed with regard to access to key transport nodes, within ready walking distance of bus stops and Wollongong train station, the main retail/ commercial core. The development has been designed to provide for good internal amenity with appropriate provision for energy and water efficiency and thermal comfort. BASIX certificates accompanied the DA in relation to the residential units and the development satisfies the ADG requirements for cross ventilation and solar access.

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

The proposal provides the necessary car parking, motorcycle and bicycle parking and suitable manoeuvring areas. Satisfactory waste servicing arrangements have been provided, with all waste to be managed from within the site. Provision has also been made for appropriate delivery/ loading facilities within the building along with adequate vehicular manoeuvring areas.

Appropriate arrangements have been made for safe, direct, practical and equitable pedestrian access to and throughout the building.

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

Street trees and footpath upgrades are to be provided to the street frontage of the site in compliance with the requirements of the Public Domain Technical Manual. The development provides for a good resolution of site levels between the public footpath and the building on the street frontages as well as retention of the significant large street tree on the Denison Street frontage.

A review of the design of the proposed development has been undertaken in accordance with the requirements of Clause 7.18(5) and SEPP 65 as detailed above in **Section 1.6.2** of this report.

Clause 8.4 Minimum building street frontage

This clause requires that consent must not be granted to the erection of a building that does not have at least one street frontage of 20 metres or more on land within Zone B3 Commercial Core. This site satisfies this standard, with a street frontage width exceeding 20m.

Clause 8.6 Building separation within Zone B3 Commercial Core or Zone B4 Mixed Use

The proposed development does not comply in full with Clause 8.6 and an exception to the standard has been provided by the applicant addressing Clause 4.6 of the LEP. The submission forms **Attachment 2**.

The objective of this clause is to ensure sufficient separation of buildings for reasons of visual appearance, privacy and solar access.

(2) Buildings on land within Zone B3 Commercial Core or B4 Mixed Use must be erected so that:

(a) there is no separation between neighbouring buildings up to the street frontage height of the relevant building or up to 24 metres above ground level whichever is the lesser, and

(b) there is a distance of at least 12 metres from any other building above the street frontage height and less than 45 metres above ground level, and

(c) there is a distance of at least 28 metres from any other building at 45 metres or higher above ground level.

(3) Despite subclause (2), if a building contains a dwelling, all habitable parts of the dwelling including any balcony must not be less than:

(a) 20 metres from any habitable part of a dwelling contained in any other building, and

(b) 16 metres from any other part of any other building.

(4) For the purposes of this clause, a separate tower or other raised part of the same building is taken to be a separate building.

(5) In this clause:

***street frontage height** means the height of that part of a building that is built to the street alignment.*

For the purpose of considering compliance with the separation controls, only buildings to the north and south of the site are relevant.

The proposed building is required to have:

- A zero separation to neighbouring buildings to the north and south up to the 'street frontage height';
- 12m separation between buildings to the north and south (commercial buildings with no dwellings) for the commercial component of the building; and
- 16m separation between neighbouring buildings measured from any dwellings.

The development cannot provide for a compliant setback to the buildings to the south of the site (where no separation between neighbouring buildings up to the street frontage height is required) as the closest buildings in that direction are sited some distance from the common (southern) boundary. The space between the southern boundary and the nearest adjacent building to the south comprises an access driveway. This coupled with the existing easement inside the southern property boundary precludes a continuous street wall being achieved along this part of Denison Street. The building is built to the northern boundary and to the northern extent of the easement adjacent to the southern boundary at least at ground level. The development therefore departs from Clause 8.6(2)(a).

The building provides for a street frontage height of six storeys, however this does not continue across the whole width of the site to the northern boundary, so as to reduce the bulk of the building where it interfaces with the neighbouring Southern Pathology building which is under consideration for a possible future heritage listing. A single storey portion of the proposed building abuts the northern boundary which is considered to provide for an appropriate transition in building height to the neighbouring part single / part double storey building. Above that, the residential units and their balcony/ private open space areas are setback a minimum of 6m from the northern boundary as required by the ADG, however there is no adjacent building at the same height and accordingly there is no separation issue at this height.

Further, variation to the 16m separation [clause 8.6(3)(b)] to the buildings to the south is also sought from the dwellings in levels 1 – 5 of the proposed building, which are setback 6m from the southern site boundary. The neighbouring buildings to the south are commercial in nature and are setback a variable distance from the common boundary with the site, with the minimum being approximately 3.9m.

The development departure in relation to Clause 8.6 is dealt with in the table below:-

Clause 4.6 proposed development departure assessment	
Development departure	Clause 8.6 Building Separation
Is the planning control in question a development standard?	Yes
4.6 (3) Written request submitted by applicant contains a justification:	
(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, **and**	Yes. The applicant's request contains this justification. In summary the justification relies on compliance with the building separation standard in this instance being unnecessary as there are no unreasonable impacts arising from the non-compliance and the development is consistent with the objectives of the standard despite the non-compliance. Heavy reliance is placed on compliance with the ADG building separation controls at 3F which the applicant contends prevail over the building separation controls in Clause 8.6 of the LEP.
(b) that there are sufficient environmental planning grounds to justify contravening the	Yes, the applicant's request contains this justification.

development standard.	
4.6 (4) (a) Consent authority is satisfied that:	
(i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and	The applicant's request has adequately addressed the matters required to be addressed by subclause (3). The applicant's request is based on the rationale that the variation to Clause 8.6 is considered to be consistent with the objectives of the clause and that a better development outcome is achieved by allowing flexibility to the development standard.
(ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and	The proposed development will be in the public interest because (a) it is consistent with the objectives of the building separation standard; (b) the objectives for development within the B3 zone will be achieved; (c) the development is not expected to compromise the development potential of neighbouring sites. The objectives of the standard are to ensure sufficient separation of buildings for reasons of visual appearance, privacy and solar access. The development, despite the non-compliance with the building separation standard, will be consistent with the objectives of that standard. The visual appearance of the building is considered satisfactory. A suitable degree of articulation is provided as well as a mixture of materials and finishes which add visual interest to the building and reduce the perception of bulk. The facades are articulated to ensure there are no undesirable expanses of one material. The building facade is also articulated to ensure the retention of the large existing street tree, which will further offer some visual relief. No concerns are raised in regard to visual privacy. The adjoining development to the south comprises commercial buildings fronting Crown Street with minimal openings on their northern side and some setback from the common boundary. The land to the north similarly contains a single commercial building with minimal openings on its southern elevation. The residential component of the building will be at a higher level than the neighbouring commercial building to the north. No concerns are raised in respect of acoustic privacy to either the southern or northern boundaries of the site. Solar access to the units within the development or adjoining buildings is not compromised by the variation. Further, in relation to visual appearance, the building setbacks to the boundaries reflect the prevailing built form character of development in this section of Denison Street where buildings are predominantly setback from their side boundaries. There is no continuous street wall to this section of Denison Street and insistence on adherence with the separation controls in Clause 8.6 would result in a built form outcome at odds with nearby buildings. The departure will not have any adverse impacts on the amenity of nearby developments, the streetscape or public domain. There will be no additional overshadowing impacts arising from the development departure, no view impacts, no privacy impacts and no adverse impacts on the streetscape. The non-compliance arises in part due to the position of the neighbouring buildings to the immediate south of the site so strict

	compliance could not be achieved in any event. There is not considered to be a public benefit served in this instance by insisting on strict compliance with the standard. The Design Review Panel and Council's Heritage Officers support the proposed setback to the northern elevation as it provides for a better relationship between the proposed development and that neighbouring (to the immediate north) being a part single/ part double storey building occupied by Southern Pathology. As outlined in section 2.1.5 the proposed development has regard to the objectives for development within the zone. The development will remain consistent with the objectives of the B3 zone despite the non-compliance with Clause 8.6.
(b) the concurrence of the Secretary has been obtained.	Yes; Council can exercise its assumed concurrence in this instance.

In conclusion, it is considered that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case, there are sufficient environmental planning grounds to justify contravention of the standard, the objectives of the standard and the B3 zone will be maintained despite the non-compliance, and the public interest will be served despite the non-compliance with Clause 8.6.

This being the case, the development departure is supported.

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

CHAPTER A1 – INTRODUCTION

The development has been assessed against the relevant chapters of WDCP 2009 and found to be satisfactory. The full table of compliance can be found at **Attachment 6** to this report. It is noted that the development departs from some of the design controls in Chapter D13. These are dealt with in the compliance tables and in detail below and are supported.

Chapter A1, Clause 8 Variations to development controls in the DCP

The applicant has sought variations in respect of the following matters:-

- Building depth and bulk (Clause 2.4 of Chapter D13)
- Side and rear building setbacks and building separation (Clause 2.5 of Chapter D13)
- Unit mix – reduced number of 3 bedroom units (Clause 6.2 of Chapter D13)

The variations are discussed below:-

1. Clause 2.4 of Chapter D13 - Building depth and bulk

The control being varied:-

Clause 2.4 of Chapter D13 - Building depth and bulk

Objectives

a) To promote the design and development of sustainable buildings.

b) To achieve the development of living and working environments with good internal amenity and minimise the need for artificial heating, cooling and lighting.

c) To provide viable and useable commercial floor space.

d) To achieve usable and pleasant streets and public domain at ground level by controlling the size of upper level floor plates of buildings.

e) To achieve a city skyline sympathetic to the topography and context.

f) To allow for view sharing and view corridors.

g) To reduce the apparent bulk and scale of buildings by breaking up expanses of building wall with modulation of form and articulation of facades.

The control seeks to limit the depth of buildings above street frontage height (24m) to 18m. The depth of the proposed building measured across the shortest axis, being north-south, exceeds 18m for that part of the building above street frontage height (24m). This is in part a direct result of the size and width of the allotment which allows a wider building to be achieved with compliant ADG setbacks and compliant FSR. The height limit is 32m. If the height limit were greater, a taller slimmer building form could be accommodated. Despite the wider form, the building is generally satisfactory with regard to internal amenity, solar access, cross ventilation, building setbacks and built form/ massing. The proposal as revised is acceptable to the DRP and is considered to be acceptable with regard to the objectives of the control.

The variation is supported.

2. Clause 2.5 Side and Rear Building Setbacks and Building Separation

The control being varied:-

Clause 2.5 Side and Rear Building Setbacks and Building Separation

Objectives

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

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

The controls require 0m side and rear setbacks to that part of the building up to street frontage height and 12m setbacks to the side and rear boundaries for that part of the site between street frontage height and 45m.

The requirements in this clause reflect the separation distances outlined in Clause 8.6 of Wollongong LEP 2009. The controls require zero setbacks to the properties to the south and north up to the street frontage height (12-24m) and a 12m setback from the street frontage height for the residential component of the building. The development provides for a zero setback to the ground floor of the building to the northern and southern boundaries (i.e. to the commercial component) and increased setbacks there above to the residential units which occupy floors 1 – 8. Above Level 1, the building is setback in accordance with the ADG building setback/ separation requirements.

There are residential units within the podium (i.e. below street frontage height) which are setback a minimum distance of 6m to the northern boundary (as is required by the ADG) 4.5m at the southern corner of the building (to non-habitable/ blank wall on Level 1) and 6m to the remainder as required by the ADG. Above Level 1, all setbacks are compliant with the ADG which prevails in this instance.

It is noted that the rear setback is 0.8m. The site does not abut a residential or other commercial property to its rear and accordingly a greater setback is not required for reasons of building separation. The rail corridor occurs at the rear of the site and, as illustrated by the aerial photographs at Attachment 1, there is some distance between the rear boundary of the site and the rail line itself. The building has been designed to achieve compliance with the internal acoustic amenity requirements of SEPP (Infrastructure) and is satisfactory to Sydney Trains. The variation in respect of the rear setback is considered to be acceptable.

Clause 6.2 of Chapter D13 – Housing Choice and Mix

Objectives

a) Ensure that residential development provides a mix of dwelling types and sizes to cater for a range of household types.

b) Ensure that dwelling layout is sufficiently flexible for residents' changing needs over time.

c) Ensure a sufficient proportion of dwellings include accessible layouts and universally designed features to accommodate changing requirements of residents.

d) Ensure the provision of housing that will, in its adaptable features, meet the access and mobility needs of any occupant.

The control requires that, in order to achieve a mix of living styles, sizes and layouts within each residential development, the following mix and size is required to be provided within a residential flat building:

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,

The development complies with (i) however does not provide for the required number of 3 or more bedroom units as per (ii). The development provides 2 x 3 bedroom units which represents 2.4% of the total number of units. The applicant has provided a letter prepared by a real estate group in support of the variation which states:

> "We confirm that based on our development and marketing activity over the last 7 years in Wollongong and having been involved in over 1000 transactions in the last few years, our market analysis of the Wollongong CBD demographics and buyer profile has identified demand patterns particularly in Wollongong CBD for smaller apartments mainly 1 and 2 bedroom apartments.
>
> This analysis has been accumulated with over 20,000 enquiries in Wollongong and the Illawarra region.
>
> We have identified minimal 3 or 4 bed enquiries with (sic) most feedback being preference to be in smaller and more boutique developments that offer them exclusivity, a high level or amenity and water views, all of which we believe are not the target market for the development on Denison Street, Wollongong."

It is noted that the development otherwise provides a good mix of unit types which will meet the needs of a variety of possible future occupants, with the unit mix comprising 4 studios, 36 x 1 BR units, 42 x 2 BR units and 2 x 3BR units. Of these, there are 9 adaptable units across a mix of unit sizes and a further 10 units have been designed to achieve the Livable Housing Guideline as required by the ADG.

The unit mix proposed is considered to be acceptable and satisfies the objectives of the control. The variation in respect of Clause 6.2 is supported.

2.3.2 WOLLONGONG CITY WIDE DEVELOPMENT CONTRIBUTIONS PLAN 2018

A detailed cost estimate report accompanied the DA which indicates that the estimated capital investment value of the project is $27,361,818. The cost of works on which the applicable Section 7.12 levy is to be applied is $30,098,000 and a levy of 2% is applicable under this plan.

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)

92 What additional matters must a consent authority take into consideration in determining a development application?

(1) For the purposes of section 4.15(1)(a)(iv) of the Act, the following matters are prescribed as matters to be taken into consideration by a consent authority in determining a development application:

(a) in the case of a development application for the carrying out of development:

(i) in a local government area referred to in the Table to this clause, and

(ii) on land to which the Government Coastal Policy applies, the provisions of that Policy,

(b) in the case of a development application for the demolition of a building, the provisions of AS 2601.

Demolition is proposed and accordingly consideration must be given to the provisions of AS2601. If approved, conditions should be imposed in regards to demolition including compliance with AS2601-1991.

The site is located outside of the NSW Coastal Zone.

93 Fire safety and other considerations

N/A.

94 Consent authority may require buildings to be upgraded

N/A.

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

Context and Setting:

As discussed above in relation to SEPP 65 and the ADG, the proposal is generally appropriate with regard to its context in relation to matters including bulk, scale, height, setbacks and density.

Access, Car parking, Traffic and Servicing:

The proposal provides for sufficient car parking and satisfactory vehicular access, manoeuvring and waste management arrangements in compliance with the requirements of Chapter E3 of WDCP 2009. There are no concerns raised with regard to traffic generation from the development, which can be readily absorbed into the local road network. The proposal is satisfactory to the RMS and Council's traffic officers.

Public Domain:

The development is not expected to have an adverse impact on the public domain, noting that significant improvements have been made to the scheme in this regard. The development makes provision for the retention of a large significant street tree and reasonably good resolution of levels from the footpath into the ground floor commercial spaces whilst still providing for an active retail presence within the streetscape. The driveway width is acceptable and the driveway is well placed. Public domain improvements will be required in accordance with the requirements of the Wollongong City Centre Public Domain Technical Manual; conditions are recommended for imposition in this regard.

Utilities:

The site is serviced and it is expected that existing utilities are capable of augmentation to service the proposal. If approved, it is recommended that conditions be imposed on the consent requiring the developer to make appropriate arrangements with the relevant servicing authorities prior to construction. A substation is proposed.

Heritage:

There are no nearby heritage items or conservation areas.

Water:

The site is presently serviced by Sydney Water's reticulated water and sewerage services. It is expected that these services can be extended/ augmented to meet the requirements of the proposed development.

The proposal is not expected to involve unreasonable water consumption. The BASIX certificates provided in relation to the units demonstrate compliance with the water efficiency targets contained within the BASIX SEPP.

Soils:

It is expected that, with the use of appropriate erosion and sedimentation controls during construction, soil impacts will not be unreasonably adverse. Conditions should be imposed in this regard if the application is approved. As noted above, site remediation will be required in order to render the site suitable for the development.

Air and Microclimate:

The proposal is not expected to have any negative impact on air or microclimate subject to appropriate dust mitigation controls being implemented during construction.

Flora/ Fauna and Landscaping:

The existing large street tree will be retained and incorporated into the landscaping scheme for the site. There is no other vegetation of significance within the site and accordingly the impact on potential fauna habitat is expected to be minimal. There is deep soil zone planting and planting on structure proposed which is will assist in offering amenity to the future residents of the development, softening the bulk and scale of the building and providing a contribution to the streetscape.

Waste:

The proposed waste management arrangements are satisfactory as discussed above in relation to Chapter E3 of DCP 2009.

A SWMMP was provided with the DA in relation to demolition and construction waste, as required.

Energy:

The BASIX certificates provided with the application demonstrate compliance with the energy efficiency and thermal comfort targets of the BASIX SEPP.

Noise and vibration:

Conditions could be imposed if the DA was approved to minimise noise and nuisance during the course of works and in relation to restricted working hours to reduce impacts on neighbours.

An acoustic report was provided with the application which considers the impact of significant external noise sources on the future amenity of the proposed apartments, being railway and road noise. The acoustic report provides a number of recommendations which should be reflected in consent conditions.

Natural hazards:

There are no known natural hazards that are likely to preclude the development from occurring in the manner proposed.

Technological hazards:

There are no technological hazards affecting the site that would prevent the proposal.

Safety, Security and Crime Prevention:

This development is not expected to create any additional opportunities for criminal or antisocial behaviour. As noted above, the development is considered to be acceptable with regard to CPTED principles.

Social Impact:

There are not expected to be any adverse social impacts arising from the proposed development.

Economic Impact:

There are not expected to be any adverse economic impacts arising from the proposed development.

Site Design and Internal Design:

The development features some departures from development standards and controls within the ADG, WLEP and WDCP 2009 as outlined above. The departures sought are considered to have merit in this instance and are supported.

Construction:

Construction impacts have the potential to impact on the amenity of the neighbourhood and the public domain inclusive of traffic and pedestrian impacts. If the development were to be approved, conditions could be imposed in relation to hours of work, tree protection, traffic controls, erosion and sedimentation controls, works in the road reserve, excavation, demolition and use of any crane, hoist, plant or scaffolding.

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

Does the proposal fit in the locality?

The proposal is considered generally appropriate with regard to the desired future character of the precinct, being consistent with most of the significant development controls relating to height and scale. The scheme as amended is supported by the DRP.

Are the site attributes conducive to development?

There are no site constraints that would preclude the proposal.

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

Refer to discussion at Section 1.5 of this report.

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

The development as revised is now satisfactory to the Design Review Panel and is considered to be satisfactory with regard to the design quality principles of SEPP 65, the requirements the ADG and Wollongong LEP and DCP 2009. The development is not expected to have adverse impacts on the amenity and character of the area. On this basis, it is concluded that the public interest would be served if the application is approved.

3. CONCLUSION

The proposed development has been assessed with regard to the relevant prescribed matters for consideration outlined in Section 4.15(1) of the Environmental Planning & Assessment Act 1979. The proposed development is permissible with consent in the B3 Commercial Core and is consistent with the zone objectives and the provisions of applicable EPIs with the exception of the building separation departure sought in relation to Clause 8.6 of Wollongong LEP 2009 and variations to WDCP 2009.

It is considered that the development as amended appropriately responds to the design principles espoused in SEPP 65 and now addresses the requirements of the ADG. Across the course of assessment of the application, the Design Review Panel raised numerous concerns in regards to the proposal which have warranted substantial redesign of the development which has now occurred. The revised plans are now satisfactory to the Chair of the DRP.

The submissions received in relation to the proposal have been discussed within the body of the report. All internal and external referrals are now satisfactory subject to conditions including the deferred commencement conditions recommended by Sydney Trains.

The social, economic and environmental impacts of the proposed development have been examined in detail and the proposal is acceptable, again subject to conditions.

There being no outstanding issues, the application should now be determined.

4. RECOMMENDATION

It is recommended that the Wollongong Local Planning Panel determine DA-2018/473 by way of deferred commencement consent pursuant to Section 4.16(3) of the Environmental Planning & Assessment Act 1979 subject to the conditions contained within Attachment 7.

5. ATTACHMENTS

1 Plans

2 Aerial photograph and WLEP 2009 zoning map

3 Applicant's Clause 4.6 submission in relation to Clause 8.6 of Wollongong LEP 2009

4 Design Review – Wollongong Design Review Panel minutes and latest review

5 Apartment Design Guide Assessment

6 Wollongong DCP 2009 Assessment

7 Recommended conditions

Development Application for a **RESIDENTIAL DEVELOPMENT** 49-51 Denison Street Wollongong NSW

11-06-2019

Drawing Number	Sheet Name	Current Revision	Current Revision Date
DA000	COVER SHEET	H	11-06-19
DA001	CALCULATIONS	H	11-06-19
DA002	SITE ANALYSIS	H	11-06-19
DA003	DEMOLITION PLAN	H	11-06-19
DA004	SITE MANAGEMENT PLAN	H	11-06-19
DA005	AERIAL CONTEXT MASSING	H	11-06-19
DA006	STREET VIEW ANALYSIS	H	11-06-19
DA007	CONTEXT ANALYSIS FUTURE DEVELOPMENTS	H	11-06-19
DA008	SITE PLAN	H	11-06-19
DA050	BASEMENT 2	H	11-06-19
DA051	BASEMENT 1	H	11-06-19
DA200	GROUND LEVEL	H	11-06-19
DA201	LEVEL 1	H	11-06-19
DA202	LEVEL 2	H	11-06-19
DA203	LEVEL 3	H	11-06-19
DA204	LEVEL 4	H	11-06-19
DA205	LEVEL 5	H	11-06-19
DA206	LEVEL 6	H	11-06-19
DA207	LEVEL 7	H	11-06-19
DA208	LEVEL 8	H	11-06-19
DA209	TERRACE LEVEL	H	11-06-19
DA210	ROOF LEVEL	H	11-06-19
DA212	SECTION 1	H	11-06-19
DA216	STREET ELEVATION	H	11-06-19
DA221	SOUTH ELEVATION	H	11-06-19
DA222	NORTH ELEVATION	H	11-06-19
DA223	EAST ELEVATION	H	11-06-19
DA224	WEST ELEVATION	H	11-06-19
DA302	SHADOW DIAGRAMS	H	11-06-19
DA303	SHADOW DIAGRAMS	H	11-06-19
DA304	SUN VIEWS	H	11-06-19
DA305	SUN VIEWS	H	11-06-19
DA306	SUN VIEWS	H	11-06-19
DA307	SUN VIEWS	H	11-06-19
DA501	GFA	H	11-06-19
DA502	DEEP SOIL	H	11-06-19
DA510	CROSS VENTILATION	H	11-06-19
DA511	SOLAR ACCESS	H	11-06-19
DA600	PARKING SCHEDULE	G	11-06-19
DA601	STORAGE CALCULATION	H	11-06-19
DA710	PRE & POST ADAPTABLE UNITS	H	11-06-19
DA715	LIVEABLE UNITS	H	11-06-19
DA810	NORTH - FINISHES	H	11-06-19
DA811	EAST - FINISHES	G	11-06-19
DA812	WEST - FINISHES	H	11-06-19
DA813	SOUTH - FINISHES	H	11-06-19
DA815	3 D VIEWS	H	11-06-19
DA900	HEIGHT CONTROL DIAGRAM	H	11-06-19

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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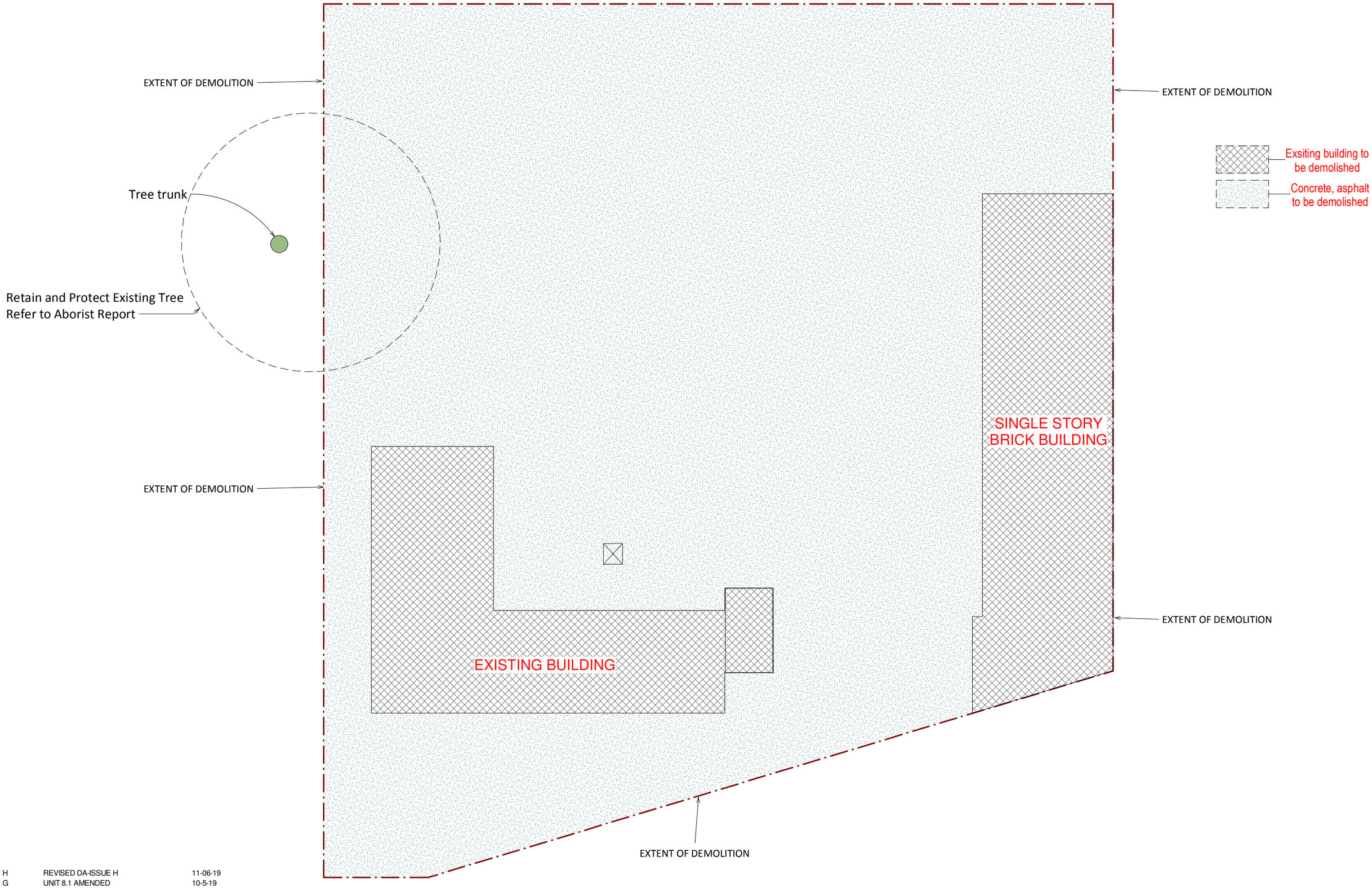
LEVEL ARCHITECTURAL DIVISION

COVER SHEET

49-51 Denison St Wollongong
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:50:53 AM
1:100 @ A1
1:200 @ A3

DA000 H



No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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DEMOLITION PLAN

49-51 Denison St Wollongong

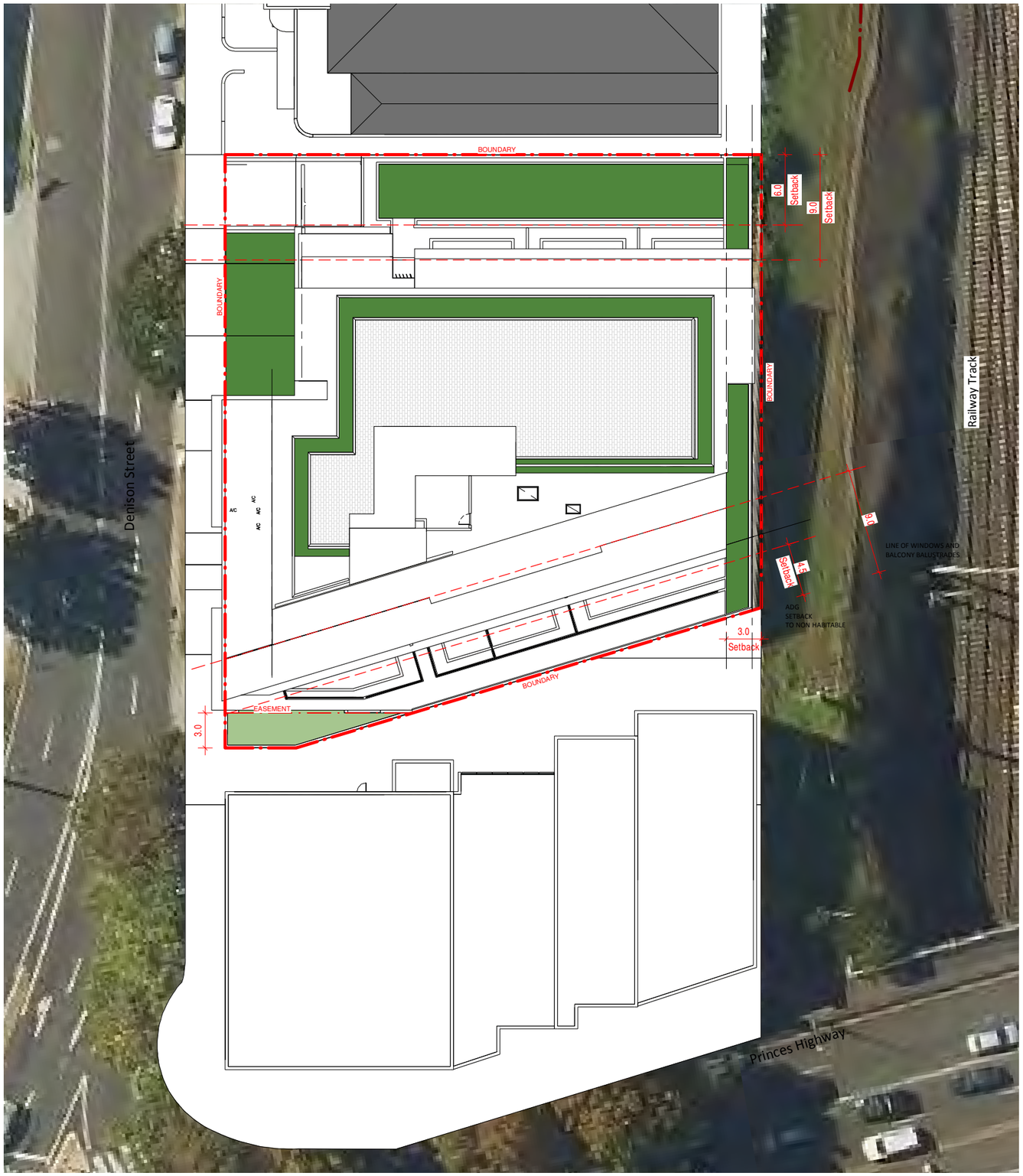
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:50:59 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA003 H



No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

SITE PLAN

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:52:44 AM
1:200 @ A1
1:400 @ A3

North

0 1 2 5 10m

DA008 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

BASEMENT 2

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:52:45 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA050 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

BASEMENT 1

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:52:47 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA051 H

DENISON STREET

BOUNDARY

5590

ROLLER SHUTTER OPEN DURING BUSINESS HOURS

1 DA212

EXIT SENSOR

RAMP UP 1:20

RAMP UP 1:8

5500

6170

SWIPE CARD ACCESS SYSTEM / INTERCOM

SECURE RESIDENTIAL ROLLER SHUTTER

Sydney Trains Fence

20.79 x

21.12 x

21.27 x

21.72 x

22.07 x

22.33 x

22.86 x

23.06 x

23.21 x

6.3

3.0

6.2

5.5

4.3

7.0

2.7

2.2

13.0

2000 visibility splay

Existing tree crown

Tree trunk

Retain Existing Tree Refer to Aborist Report

DEEP SOIL

LEVEL 1 SHOWN DASHED

Carpark Fire Exit 1

RETAIL No1

FFL 22280

OUTDOOR SEATING AREA

750

1

2

14

2500

SRV SPACE FOR GARBAGE PICKUP

ramp 1:14

FFL 22400

2350

1100

40 Mailboxes

ramp 1:20

ENTRY LOBBY

50 Mailboxes

ramp 1:30

FFL 22280

Resi Fire Exit 1

To L1

LIFT A

LIFT B

CP EXHAUST

ceiling compactor

2-660 L Bin Carousel

4.5m headroom

Resi Fire Exit 2

UP

To L1

6 x 660 L bins (garbage compacted)

3 x 240 L bins (Recycling) Residential

Garbage room area: 20m²

3-240 L Bin Linear

Residential Garbage Room

AWNING SHOWN DASHED

RETAIL No2

FFL 22640

RL 24.274

S.P.02

1000

13

3

11

12

Substation 4200x4600 FFL 23150

12 m³ bulky goods

5805 aisle

FFL 22400

RL 23150

Carpark Fire Exit 2

RL 23350

FFL 23.620

RETAIL No3

FFL 23620

Commercial Garbage Room

5 x 660 L bins (garbage) Commercial

2 x 660 L bins (recycling) Commercial

Garbage room area: 17 m²

HYDRANT BOOSTER CUPB

EASEMENT

DEEP SOIL PLANTER

3000

Air Supply

FFL 23.260

FFL 22.830

BOUNDARY

FOOTPATH

0.8

RL 22400

4

5

6

7

8

9

10

18

C 7

C 8

C 1

C 2

C 3

C 4

5

INCLINE

Motorbike

PLANTER OVER

RL 22.40

RL 22.15

RAMP 1:8

RAMP 1:5 FROM B1

295

5500

300

2 DA002

DEEP SOIL

BOUNDARY

RAILWAY CORRIDOR

DP 1121572

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
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LEVEL ARCHITECTURAL DIVISION

GROUND LEVEL

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:52:53 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

North

DA200 H

BOUNDARY

BOUNDARY

PLANTING TO LANDSCAPE ARCHITECTS DETAILS

PASSIVE GREEN ROOF

NOT ACCESSIBLE TO PUBLIC
MAINTENANACE ACCESS
PROVIDED OFF FOYER

1.1 m HIGH
RAISED PLANTER
REFER TO LANDSCAPE ARCHITECTS
DOCUMENTS

DA Room Colour

- 1 BED
- 1 BED (LH)
- 2 BED
- 2 BED (ADAP)
- 2 BED (LH)
- FOYER
- POS
- Balcony

Sydney Trains Fence

HIGHLIGHT WINDOW

ACCESS FOR MAINTENACE OF GREEN ROOF

FOYER

RL 27400

DOUBLE GLAZING TO DOORS AND
WINDOWS FACING THE RAIL CORRIDOR

2.0 m HIGH
PARTLY RAISED PLANTER
REFER TO LANDSCAPE ARCHITECTS
DOCUMENTS

DOUBLE GLAZING TO DOORS AND
WINDOWS FACING THE RAIL CORRIDOR

ADG - TO EXISTING
COMMERCIAL

slab edge over weather protection

LANDSCAPED COURTYARDS
REFER TO LANDSCAPE ARCHITECTS DRAWINGS
1m high planter

1.8 m high FENCE

NON TRAFFICABLE ROOF

MAINTENANCE ACCESS

AWNING

EASEMENT

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

LEVEL 1

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:53:20 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA201 H

DA Room Colour

- 1 BED
- 1 BED (ADAP)
- 1 BED (LH)
- 2 BED
- 2 BED (ADAP)
- 2 BED (LH)
- FOYER
- Balcony

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

LEVEL 2

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:53:47 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

North

DA202 H

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.05.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

LEVEL 3

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:54:17 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

North

DA203 H

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

LEVEL 4

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:54:36 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA204 H

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

LEVEL 5

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:54:56 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA205 H

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

LEVEL 6

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:55:15 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA206 H

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

LEVEL 7

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:55:32 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA207 H

ADG - 9 storeys and above
(over 25m)
24m between habitable
rooms / balconies

DA Room Colour

- 1 BED
- 2 BED
- FOYER
- Balcony

DOUBLE GLAZING TO DOORS AND WINDOWS FACING THE RAIL CORRIDOR

1
SK 02

TREE CANOPY BUFFER
REFER TO LANDSCAPE ARCHITECTS DOCUMENTS

No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

LEVEL 8

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:55:49 AM
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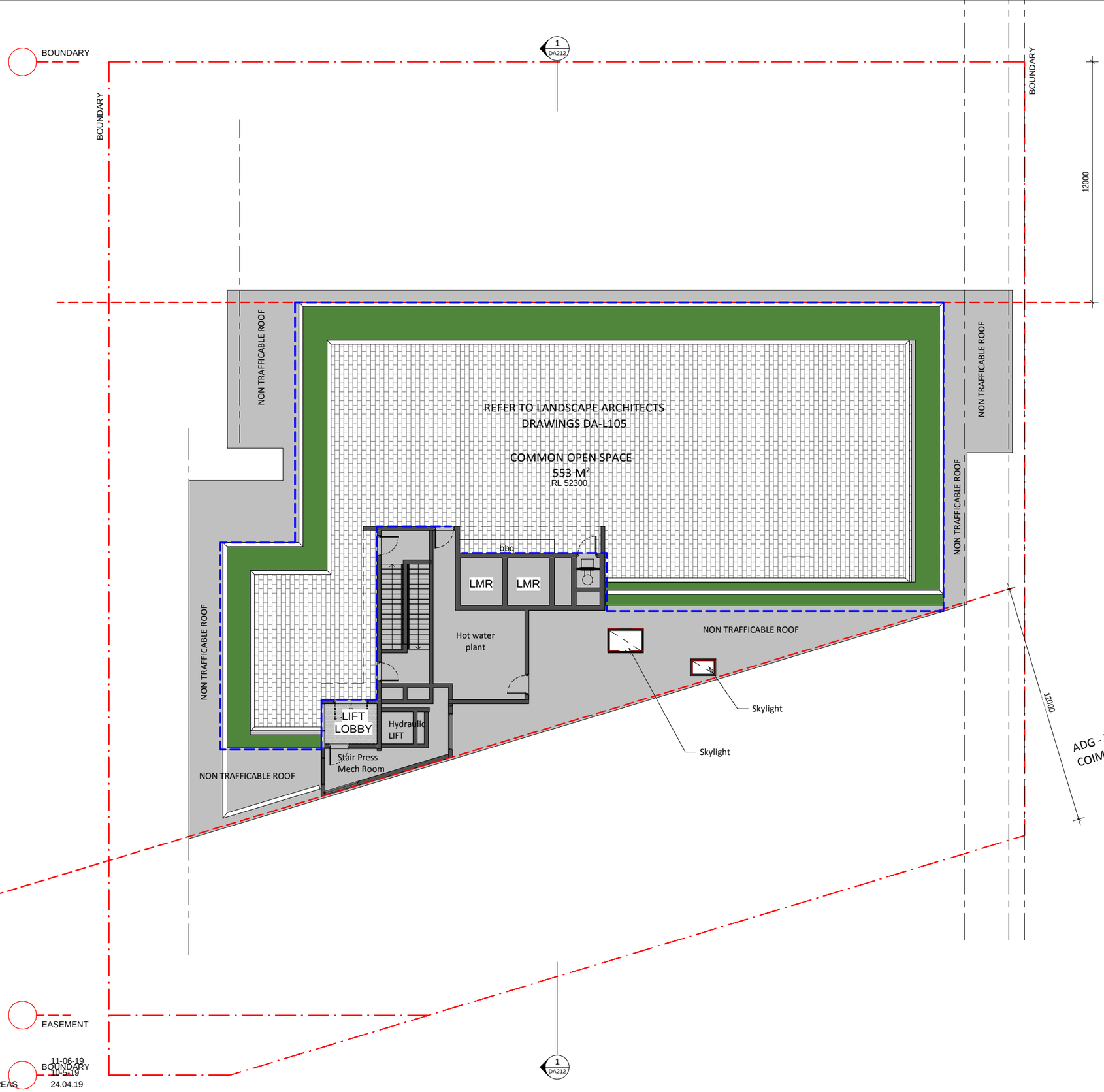
1:200 @ A3

North

0 1 2 5m

DA208 H



ADG - TO
COMMERCIAL/RETAIL

Boundary of common open space

COMMON OPEN SPACE REQUIRED	520m²

Required
25% of site area
25% of 2080.3m² = 520m²

Provided = 520m²

COMMON OPEN SPACE PROVIDED	520m²

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

TERRACE LEVEL

49-51 Denison St Wollongong

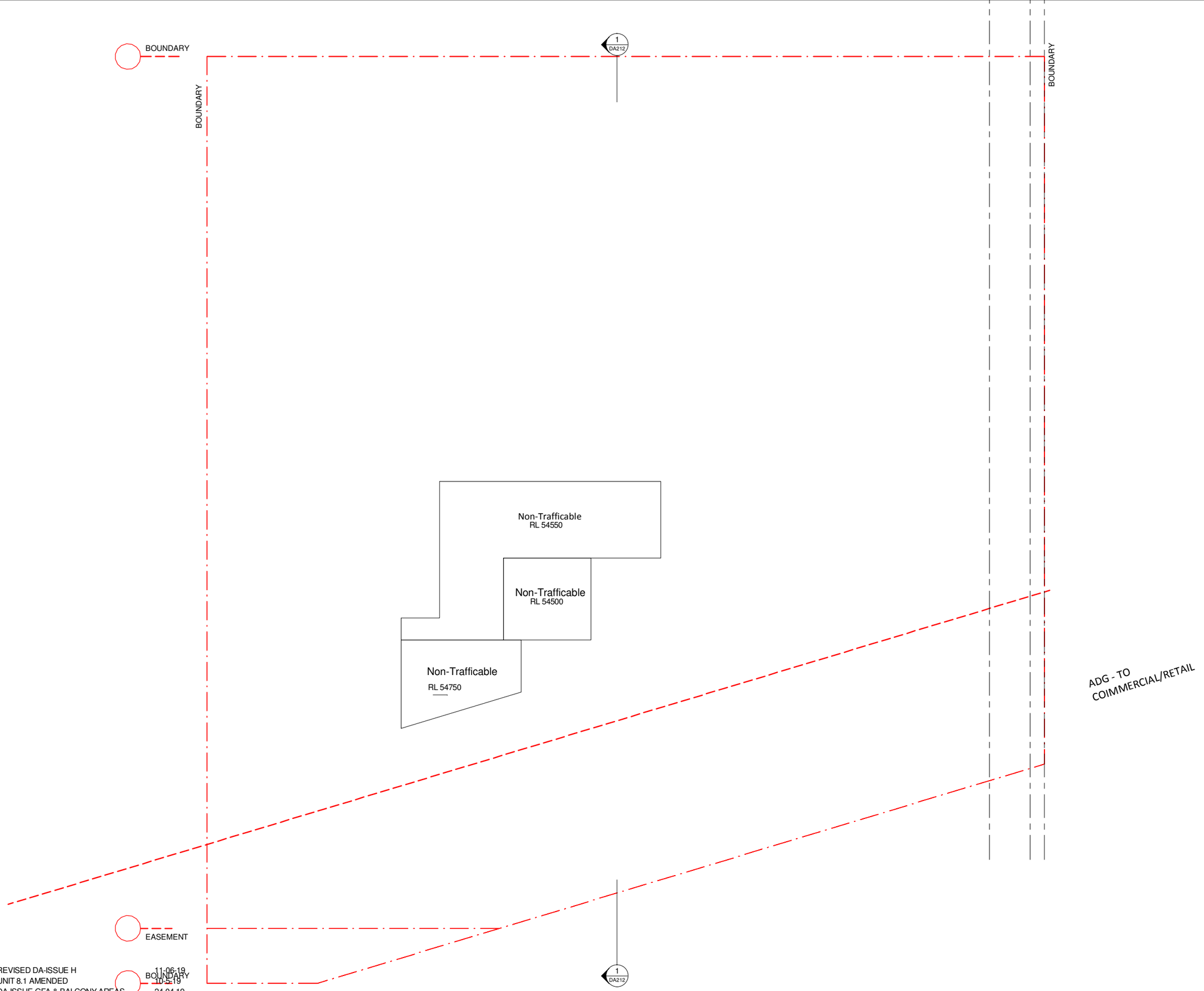
RETAIL & RESIDENTIAL DEVELOPMENT

11/06/2019 9:05:11 AM
1:100 @ A1
1:200 @ A3

North

0 1 2 5m

DA209 H



No.	Description	Date
H	REVISED DA-ISSUE H	11.06.19
G	UNIT 8.1 AMENDED	10.5.19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

ROOF LEVEL

49-51 Denison St Wollongong

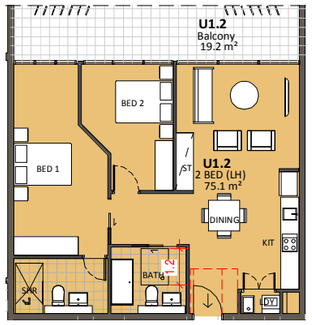
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:55:50 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

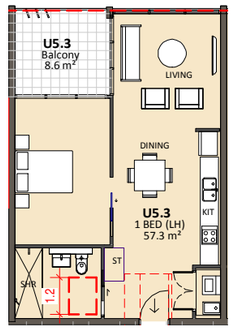
North

DA210 H



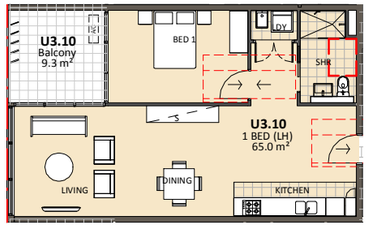
1 LIVABLE HOUSING UNIT
1 : 100

LIVABLE UNIT UNIT 1.2
LIVABLE UNIT UNIT 2.2
LIVABLE UNIT UNIT 3.2



3 LIVABLE HOUSING 3
1 : 100

LIVABLE UNIT UNIT 5.3
LIVABLE UNIT UNIT 5.4
LIVABLE UNIT UNIT 6.3
LIVABLE UNIT UNIT 6.4



2 LIVABLE HOUSING 2
1 : 100

LIVABLE UNIT UNIT 1.10
LIVABLE UNIT UNIT 2.10
LIVABLE UNIT UNIT 3.10

Liveable Required	Liveable Provided
20% of 82 Units = 18 18 Liveable Units required	9 Adaptable Units Provided

Accessible Units Provided	9
Liveable Units Provided	9
Total Units Provided	18

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

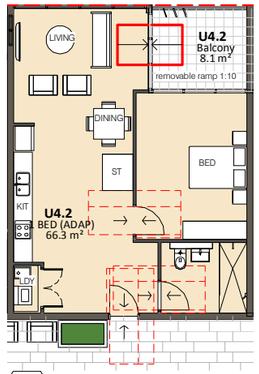
LIVEABLE UNITS

49-51 Denison St Wollongong

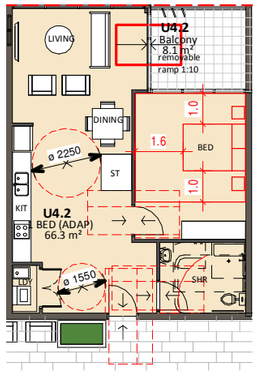
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:59:47 AM
1:50 @ A1
1:100 @ A3

DA715 H



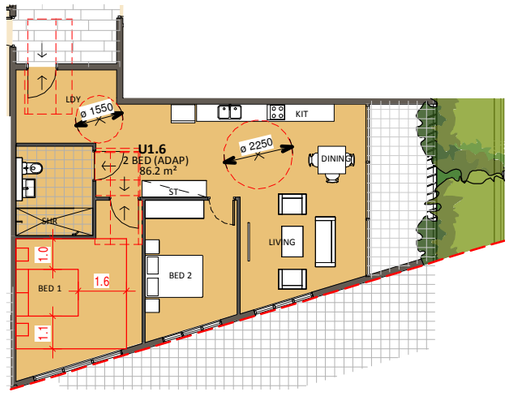
1 PRE ADAPTABLE
1 : 100



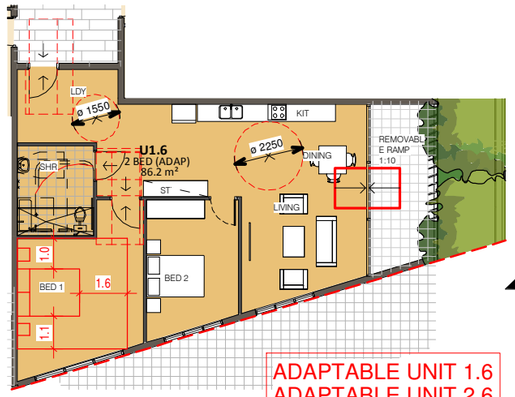
2 POST ADAPTABLE 1
1 : 100

ADAPTABLE UNIT 4.2
ADAPTABLE UNIT 4.3
ADAPTABLE UNIT 5.2
ADAPTABLE UNIT 6.2
ADAPTABLE UNIT 7.2

SHR

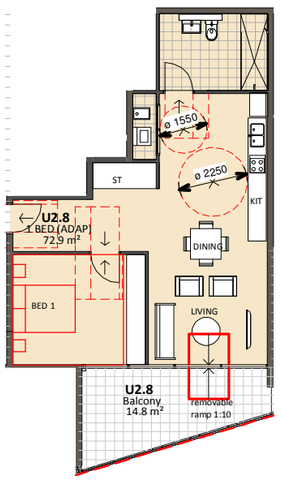


3 PRE ADAPTABLE 2
1 : 100

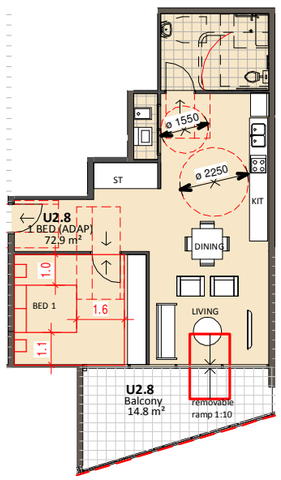


4 POST ADAPTABLE 2
1 : 100

ADAPTABLE UNIT 1.6
ADAPTABLE UNIT 2.6
ADAPTABLE UNIT 3.6

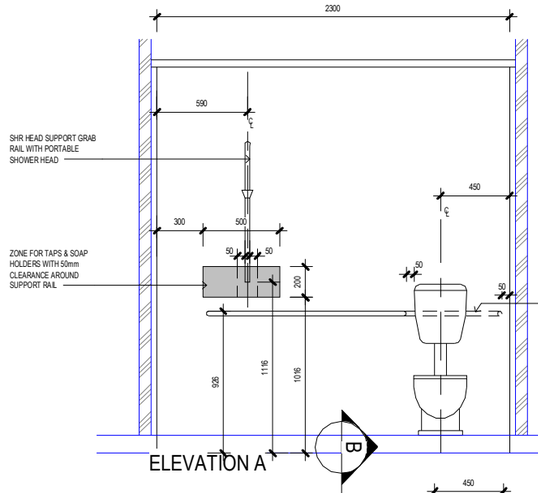


7 PRE ADAPTABLE 3
1 : 100

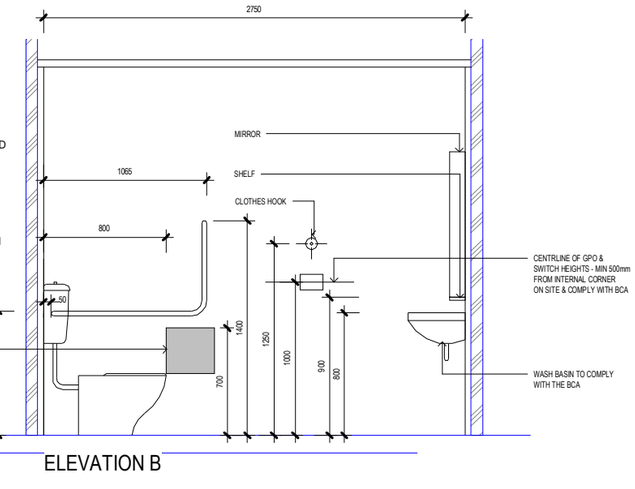


8 POST ADAPTABLE 3
1 : 100

ADAPTABLE UNIT 2.8



ELEVATION A



ELEVATION B

GENERAL NOTES:

ALL TAPS TO BE LEVER ACTION

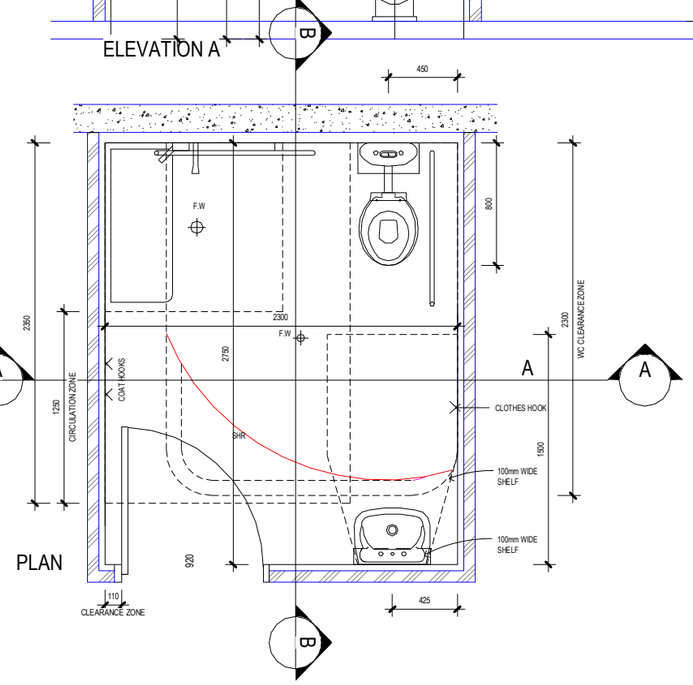
FLOOR TILES TO BE SLIP RESISTANT

CLOTHES HOOKS SHALL BE INSTALLED 1250mm HIGH ABOVE FFL AND NOT LESS THAN 500mm FROM CORNER

MIRRORS TO BE NOT LESS THAN 350mm WIDE & BETWEEN 900 - 1850mm HIGH ABOVE FFL

DOOR HANDLES TO BE LEVER ACTION

FIXED SHELF TO BE NOT LESS THAN 900mm HIGH AND 100mm DEEP



PLAN

Adaptable Required	Adaptable Provided
10% of 82 Units = 9 9 Adaptable Units required	9 Adaptable Units Provided

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH AS1482.1 - 2009 DESIGN FOR ACCESS AND MOBILITY

ALL SERVICES INFORMATION SHOWN IS DESIGN INTENT ONLY. FOR ALL SERVICES CONSTRUCTION INFORMATION PLEASE REFER TO RELEVANT SUBCONTRACTORS DRAWINGS AND SPECIFICATIONS.

APARTMENT NOTES (RESIDENTIAL & SERVICED)
ACCESSIBLE WCs / SHOWERS WILL REQUIRE:

1. ENSURE THE PAN SEAT TO HAVE 30% LUMINANCE CONTRAST AGAINST BACKGROUND TILED FLOOR SURFACE;
2. LEVER CONTROLS FOR SHOWER AND BASIN (BASIN LEVER TO BE NO GREATER THAN 300mm FROMT FRONT OF TAPS);
3. 1 x CLOTHING HANGING DEVICE TO BE INSTALLED BETWEEN 1200mm - 1350mm FROM FFL AND AT LEAST 500mm FROM AN INTERNAL CORNER FOR WC;
4. DOOR TO INCLUDE AN IN-USE INDICATOR AND A BOLT / CATCH THAT CAN BE OPENED FROM OUTSIDE IN AN EMERGENCY. IF SNIB TURN IS USED THE HANDLE IS TO 45mm FROM CENTRE;
5. DOOR OPERATION TO BE LIGHTWEIGHT;
6. LIGHT SWITCHES TO BE INSTALLED BETWEEN 900 - 1100mm ABOVE FFL AND 500mm MININUM FROM INTERNAL CORNER;
7. GPOs TO BE INSTALLED BETWEEN 600 - 1100mm ABOVE FFL AND 500mm MINIMUM FROM INTERNAL CORNER;
8. ROCKER ACTION / TOGGLE TYPE SWITCHES AT LEAST 30 x 30mm DIMENSIONS ARE REQUIRED TO ASSIST PEOPLE WITH DEXTERITY IMPAIRMENT;
9. ENSURE ALL ACCESSIBLE SHOWERS TO HAVE SHOWER RAIL / CURTAIN INSTALLED;
10. ENSURE HEIGHT OF THE HOSE WALL OUTLET TO BE 700mm HEIGHT ABOVE FFL, COMPLIANT WITH AS1428.1 - fig.48 TO ENSURE SUITABLE HOSE LENGTH WHEN SHOWERING. TO ALSO INCLUDE SUITABLE BACK-FLOW PREVENTION DEVICE;
11. SLIP-RESISTANCE OF FLOORS TO HAVE MINIMUM CLASS 'X' RATING.

GENERAL NOTES.

- PROVIDE DOOR PEEPHOLE AT 1220mm ABOVE FFL.
- SLIP-RESISTANCE OF FLOORS TO HAVE MINIMUM CLASS 'X' RATING TO BATHROOM, KITCHENETTE, LAUNDRY AND BALCONY AS REQUIRED IN AS4299 CLAUSE 4.5.4
- AT LEAST ONE GPO IN EACH KEY ROOM / AREA TO BE INSTALLED BETWEEN 600 - 1100mm ABOVE FFL AND 500mm MINIMUM FROM CORNER.
- PROVIDE 1 x DOUBLE GPO WITHIN 300mm OF FRONT OF KITCHEN WORK SURFACE, TO BE REACHABLE BY A PERSON USING A WHEELCHAIR.
- ALL LIGHT SWITCHES TO BE INSTALLED BETWEEN 900 - 1100mm ABOVE FFL & 500mm MINIMUM FROM INTERNAL CORNER.
- ALL OTHER ELECTRICAL CONTROLS TO KEY FEATURES (EG. INTERCOM, SECURITY SWIPE, A/C UNIT,SAFE SOUND SYSTEM ETC.)TO BE INSTALLED WITH OPERATIVE PART BETWEEN 900 - 1250mm ABOVE AFFL AND 500mm MINIMUM FROM INTERNAL CORNER.
- PROVIDE 1 x DOUBLE GPO BESIDE ADAPTABLE UNIT BATHROOM MIRROR AND ALSO WITHIN LAUNDRY IN ACCORDANCE WITH AS4299.
- ENSURE ANY PARTITION WALLS / FIXTURES TO BE RELOCATED / REMOVED AT POST ADAPTATION DO NOT HAVE ANY ELECTRICAL / GAS OR PLUMBING SERVICES INSTALLED AT PRE-ADAPTATION FOR EASE OF ADAPTATION IN ACCORDANCE WITH AS4299.
- PROVIDE EXTRA CAPPED OFF SERVICES WITH SUITABLE SET-OUTS AND CLEARANCES TO ALLOW FOR RELOCATION OF FIXTURES IN POST-ADAPTATION LOCATIONS, COMPLIANT WITH AS1428.1.
- WALL STRENGTHENING AROUND PAN, SHOWER AND BATH AND WATERPROOFING OF WALLS TO BE PROVIDED AT PRE-ADAPTATION STAGE IN ACCORDANCE WITH AS1428.1, CLAUSE 4.4.4h.
- WHERE APPLICABLE, ENSURE CARPET PILE HEIGHT IS NO MORE THAN 11mm WITH 4mm MAXIMUM BACKING SURFACE (COMPLIANT WITH DDA PREMISES STANDARD).

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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www.level33.com.au
Nominated Registered Architect: George O'Donovan NSW 6763

LEVEL ARCHITECTURAL DIVISION

PRE & POST ADAPTABLE UNITS

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:59:44 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

DA710 H

1 STREET ELEVATION
1 : 150

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

STREET ELEVATION

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:56:03 AM
1:150 @ A1
1:300 @ A3

DA216 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

WEST ELEVATION

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:57:00 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

DA224 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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Nominated Registered Architect: George O'Donovan NSW 6763

LEVEL
ARCHITECTURAL DIVISION

NORTH ELEVATION

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:56:32 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

DA222 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

EAST ELEVATION

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:56:49 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

DA223 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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Nominated Registered Architect: George O'Donovan NSW 6763

LEVEL
ARCHITECTURAL DIVISION

SOUTH ELEVATION

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:56:19 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

DA221 H

WALL & CONCRETE PAINT COLOURS

1 DULUX VIVID WHITE PW1H9

2 DULUX WAYWARD GREY PG1G8

ALUMINIUM POWDERCOTE

3 DULUX POWDERCOAT ARMOURSPRAY AG BLACK SATIN 9109024S

ALUMINIUM WINDOWS AND SLIDING DOORS

4 ALUMINIUM FRAMED GLAZING CLEAR DULUX POWDERCOAT ARMOUR SPRAY AG BLACK SATIN 91090248

ALUMINIUM WINDOWS AND SLIDING DOORS

5 SIMPSON, DESERT, TAN, BRICK

BALUSTRADES

6 ALUMINIUM FRAMED GLASS BALUSTRADE CLEAR DULUX POWDERCOAT ARMOUR SPRAY AG BLACK SATIN 91090248

LOUVRES

7 FIXED ALUMINIUM LOUVRES (AS ANTI THROW MEASURES) DULUX POWDERCOAT ARMOUR SPRAY AG BLACK SATIN 91090248 ALSO FIXED HORIZONTAL LOUVRES TO LEVEL 8 NORTH FACE IN SAME FINISH

DETAIL VERTICAL BLADES - NORTH FACADE

8 PAINT FINISH DULUX RED TERRA

DETAIL VERTICAL BLADES - NORTH FACADE

9 PAINT FINISH DULUX RED TERRA

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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Nominated Registered Architect: George O'Donovan NSW 6763

LEVEL ARCHITECTURAL DIVISION

WEST - FINISHES

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 11:00:04 AM
1:100 @ A1
1:200 @ A3

0 1 2 5m

DA812 H

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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Nominated Registered Architect: George O'Donovan NSW 6763

LEVEL ARCHITECTURAL DIVISION

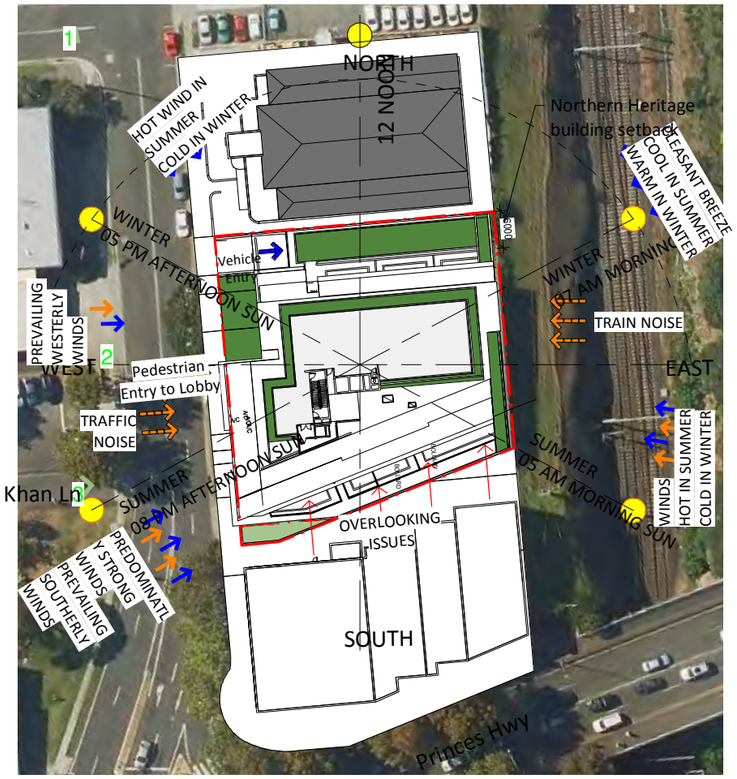
SECTION 1

49-51 Denison St Wollongong

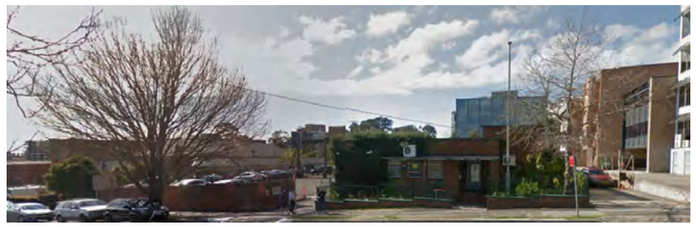
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:55:53 AM
1:100 @ A1
1:200 @ A3

DA212 H

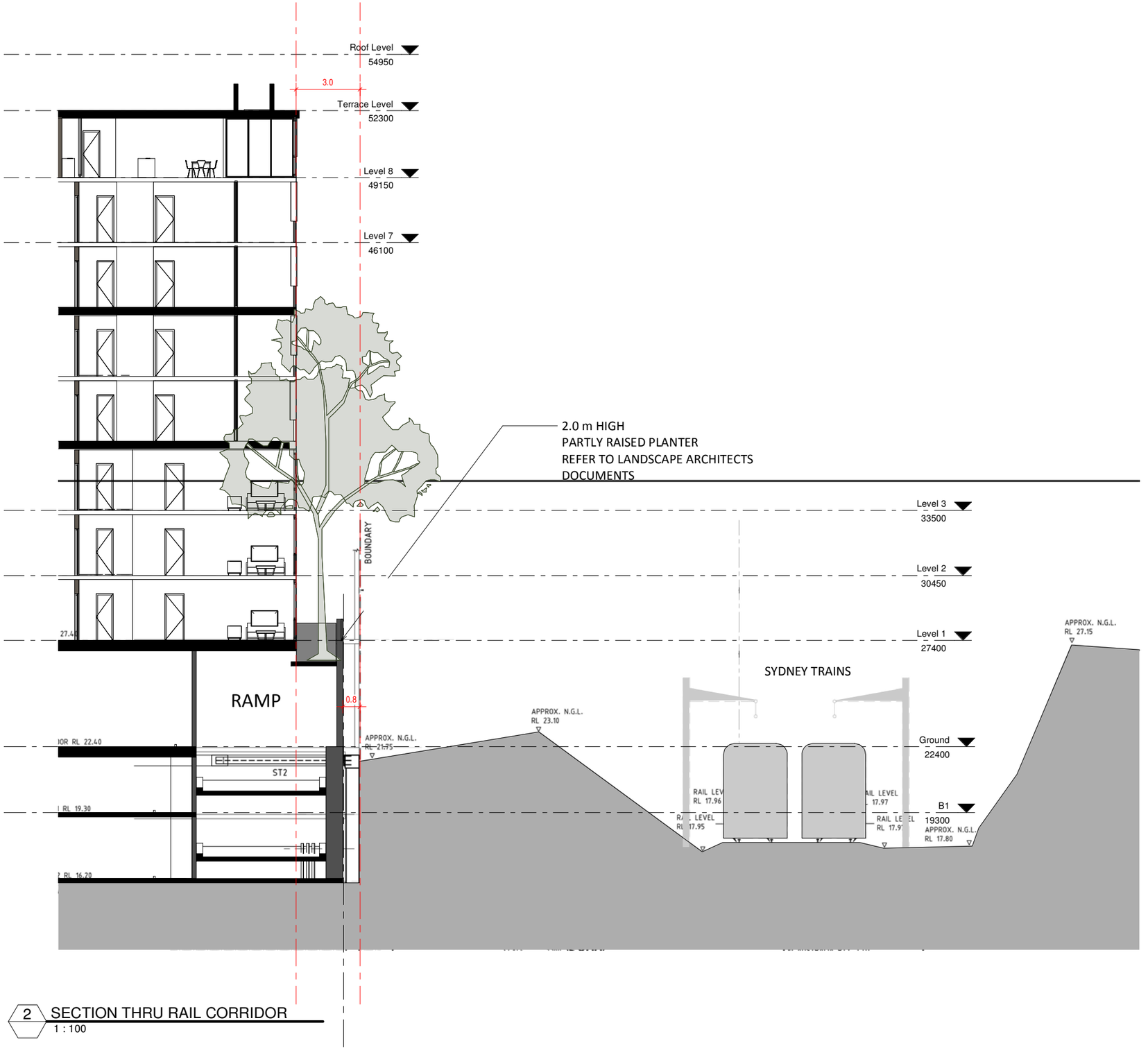


1. Corner of Loftus Street and Denison Street



2. Denison Street front view

3. Corner of Khan Lane and Denison Street



2 SECTION THRU RAIL CORRIDOR
1 : 100

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL ARCHITECTURAL DIVISION

SITE ANALYSIS

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:50:58 AM
1:250 @ A1
1:500 @ A3

0 2 5 10 15m

North

DA002 H

New driveway crossing (refer to WCC, PDTM 3.2 & Detail 02)

Existing tree to be retained & protected (refer to Arborist's report)

New footway pavement (Refer to WCC, PDTM 2.2 & Detail 01)

New tree planting (refer to WCC, PDTM 2.2, 6.1 & 6.3 & Detail 01, 03 & 04)

Existing conc. kerb & gutter to be retained

New tree planting (refer to WCC, PDTM 2.2, 6.1 & 6.3 & Detail 01, 03 & 04)

New conc. kerb & gutter to match existing adjacent (refer to Civil Eng's detail)

Proposed accent planting *(refer to indicative plant schedule)*

Proposed small tree planting *(refer to indicative plant schedule)*

On-structure planter *(refer to Detail 01)*

Proposed groundcover planting *(refer to indicative plant schedule)*

Proposed shrub planting *(refer to indicative plant schedule)*

DENISON STREET

DRIVEWAY (conc. paving)

DRIVEWAY (conc. paving)

DRIVEWAY (conc. paving)

maintenance path (turf)

T1

T2

TURF on existing levels

OUTDOOR SEATING AREA

RETAIL 01 22.28

RETAIL 02 22.64

RETAIL 03 23.62

SUBSTATION 23.15

ENTRY LOBBY 22.435

RESIDENTIAL GARBAGE ROOM

COMMERCIAL GARBAGE ROOM

LIFT A

LIFT B

ramp @ 1:30

ramp @ 1:20

MAIL BOXES

FIRE EGRESS

ENTRY

HYD

AIR SUPPLY

TK 21.34 EGU EK

TK 21.96 22.05

TK 22.10 22.22

22.32

TK 22.46 22.54 EGU EK

TK 22.74

TK 22.82

TK 23.03 23.12

TK 23.14 23.23

TK 23.25

TK 23.47 23.56 EGU NGU

TK 23.67 23.76

TK 23.85 23.96

22.40

22.40

22.28

TW 23.96

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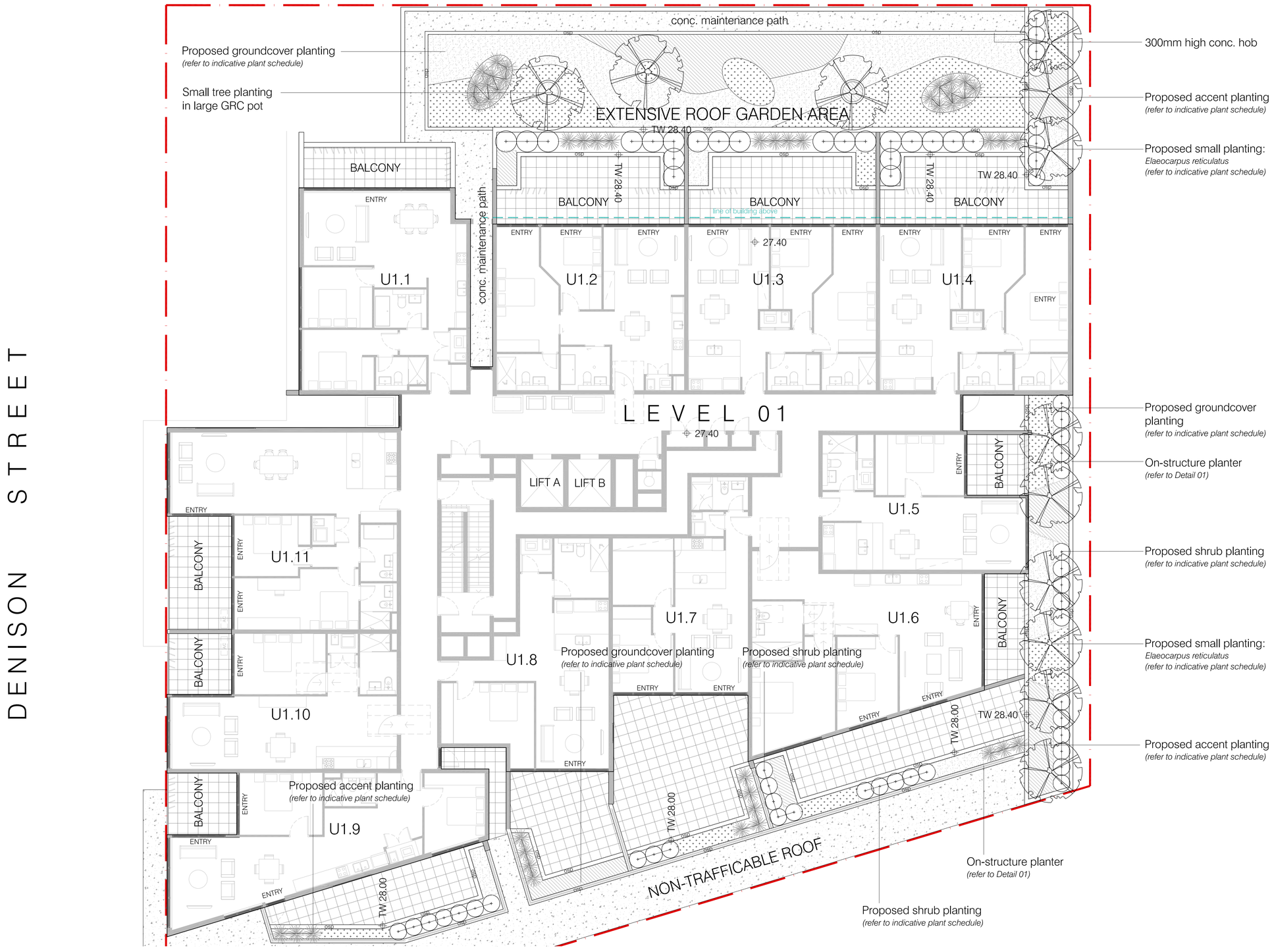
49-51 Denison Street, WOLLONGONG NSW

0 1 2 5 10 scale @1:100A1 @1:200A3

north

dwg title	scale: 1:100 @a1/1:200@a3
landscape plan: ground fr	dwg no.: DA-L101
	Client: Wollongong Investments No. 2 Pty Ltd

revision		date
A	da submission	03/04/18
B	da amendments	21/05/18
C	da amendments	10/07/18
D	da amendments	03/12/18
E	da amendments	01/04/19
F	da amendments	07/06/19



LANDSCAPE PLAN: level 1 scale: 1:100

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email:bobby@canvaslandscape.com.au

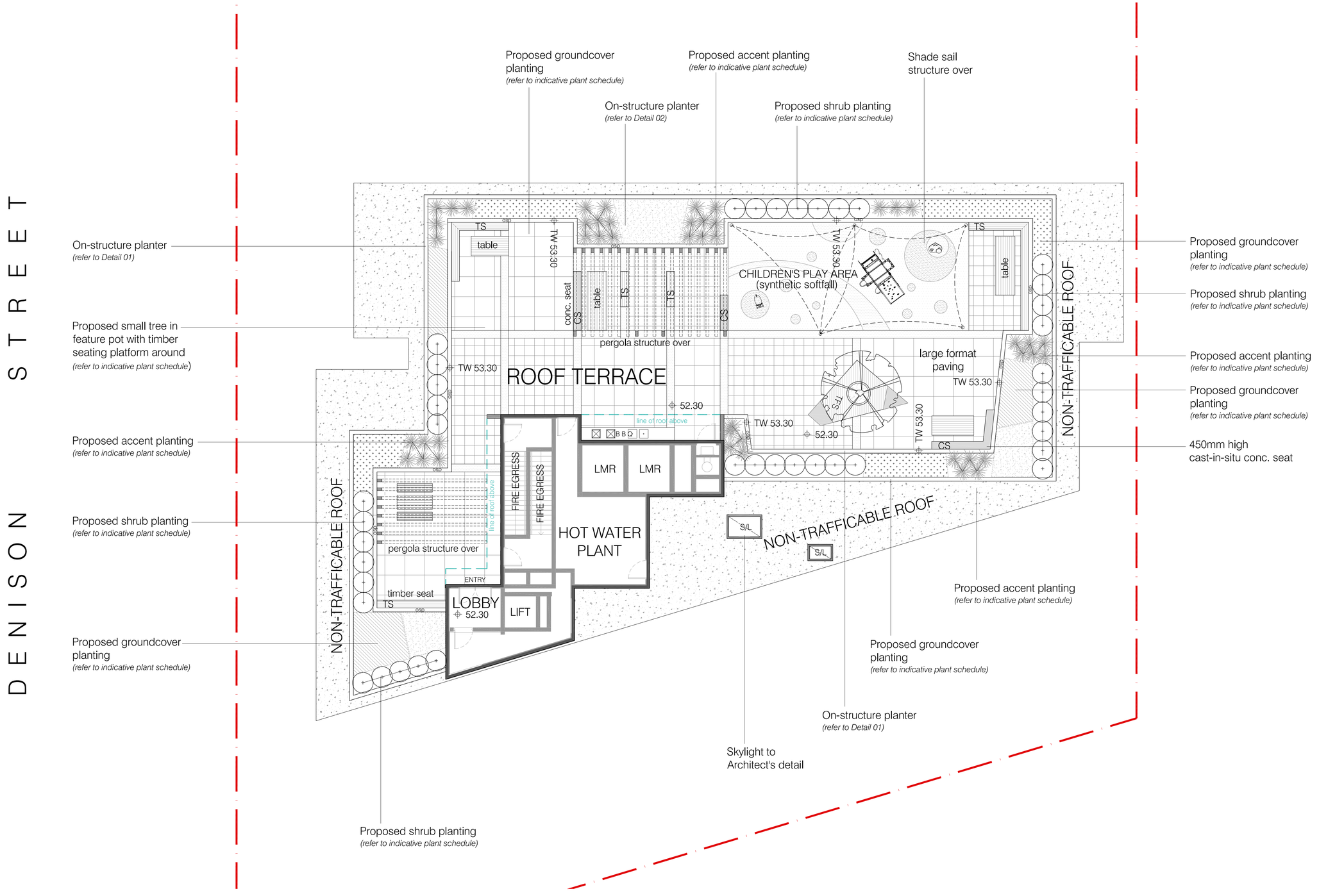
49-51 Denison Street, WOLLONGONG NSW

0 1 2 5 10 scale @1:100A1 @1:200A3

north

dwg title	scale: 1:100 @a1/1:200@a3
landscape plan: level 01	dwg no.: DA-L102
	Client: Wollongong Investments No. 2 Pty Ltd

revision		date
A	da submission	03/04/18
B	da amendments	21/05/18
C	da amendments	10/07/18
D	da amendments	03/12/18
E	da amendments	01/04/19
F	da amendments	07/06/19



LANDSCAPE PLAN:roof terrace scale: 1:100

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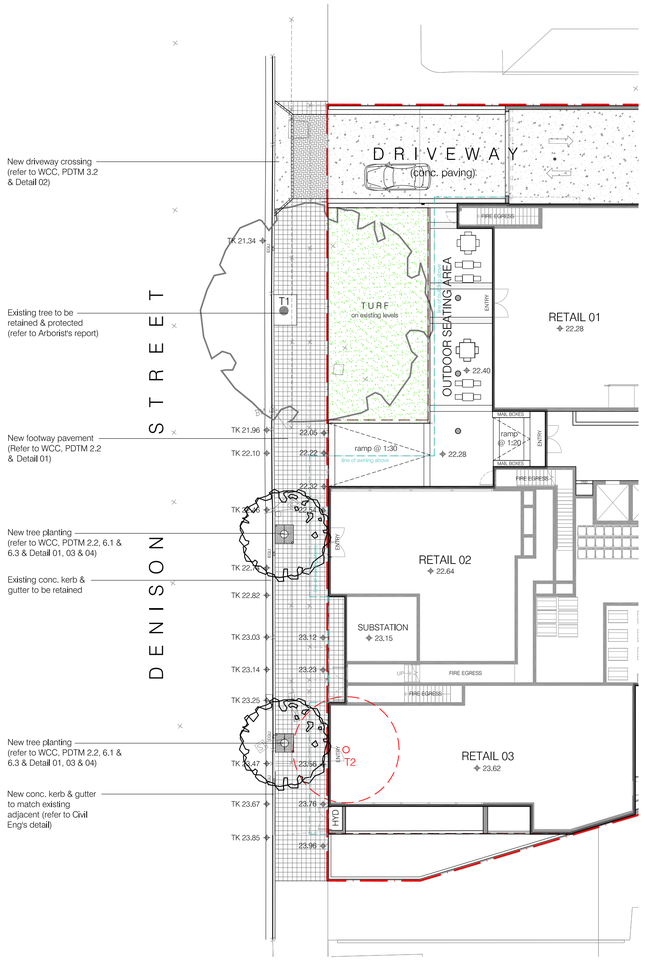
49-51 Denison Street, WOLLONGONG NSW

0 1 2 5 10 scale @1:100A1 @1:200A3

north

dwg title	scale: 1:100 @a1/1:200@a3
landscape plan: roof terrace	dwg no.: DA-L103
	Client: Wollongong Investments No. 2 Pty Ltd

revision		date
A	da submission	03/04/18
B	da amendments	21/05/18
C	da amendments	10/07/18
D	da amendments	04/12/18
E	da amendments	01/04/19
F	da amendments	07/06/19



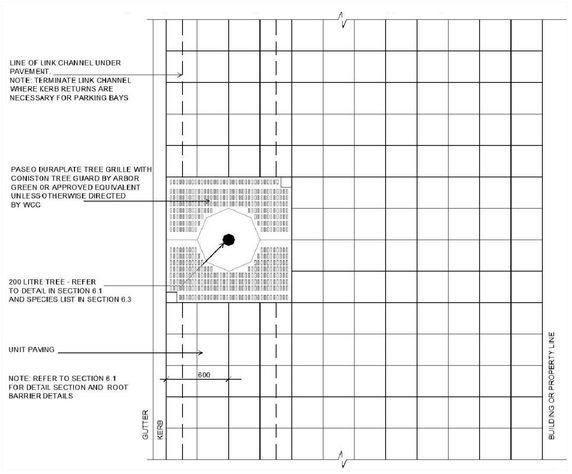
PUBIC DOMAIN PLAN: denison street scale: 1:200

PROPOSED PLANT SCHEDULE

CODE	BOTANICAL NAME	COMMON NAME	POT SIZE	MATURE HEIGHT	NO
	STREET TREE				
ELR	*Elaeocarpus reticulatus*	Blue-berry Ash	200L	7m	2

LEGEND

- Proposed street tree planting *(refer to proposed plant schedule)*
- Existing trees to be protected & retained *(refer to arborist's report)*
- Existing trees to be removed *(refer to arborist's report)*
- Proposed conc. unit paver (300x300x50mm) (as per WCC, PDTM 2.2)
- Proposed conc. unit paver (230x113x80mm) (as per WCC, PDTM 3.2)
- Proposed tree grate (1200x1200mm) (as per WCC, PDTM 2.2)
- Proposed turf area on exiting levels
- Proposed conc. in-situ kerb & gutter to Eng's Detail
- Existing conc. in-situ kerb & gutter to be retained
- Site boundary



TYPICAL DETAIL 01: footway pavements scale: nts

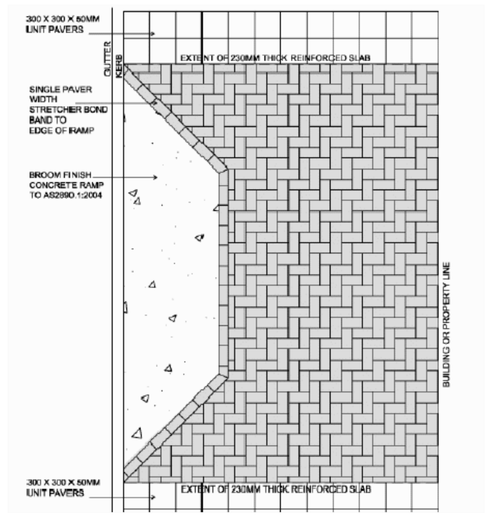
PAVEMENT:
'Sante Fe, Illiad' by Adbri Masonry Pty Ltd (or approved equivalent) dark grey, honed finish, 300 x 300 x 50mm (see Section 3.2 for driveway crossing details).
Samples to be approved by WCC Manager Project Delivery prior to construction.

SEALANT :
Penetrating sealer 'Spirit Natural Paving Seal' by
Spirit Marble & Tile Care Pty Ltd (or approved equivalent).

STRUCTURAL DESIGN REQUIREMENTS:

Subbase	100mm DGB 20 compacted to 98% modified density
Base	100mm thick 7MPa mass concrete
Pavement	300 x 300 x 50mm unit paver on 30mm bedding sand
	3mm maximum grout filled joints
Jointing	Abutting kerbs, pits and buildings Abelflex or approved equivalent

TREE PIT REQUIREMENTS:
Tree Grate: Duraplate Paseo by Arborgreen, 1200mm x 1200mm with integrated watering inlet model no. RRPREC-ALU or approved equivalent.
Tree Guard: Coniston by Arborgreen, 1800mm high x 600mm diameter or approved equivalent.



TYPICAL DETAIL 02: driveway crossing scale: nts

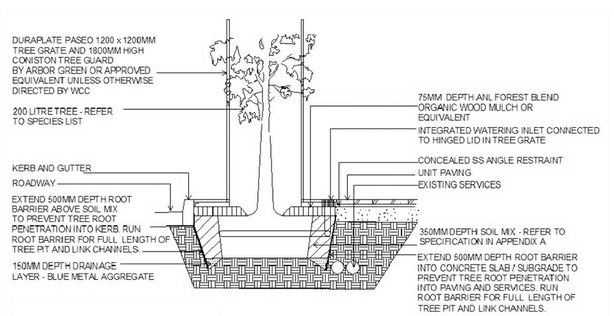
PAVEMENT:
Driveway pavement to be "Trupave" (225 x 112 x 80mm), by Adbri Masonry Pty Ltd (or approved equal) charcoal, honed, 230 x 113 x 80mm paving units in a herringbone pattern.

Samples to be approved by WCC Manager Project Delivery prior to construction.

SEALANT:
Penetrating sealer 'Uni Seal' by Spirit Marble & Tile Care Pty Ltd (or approved equivalent).

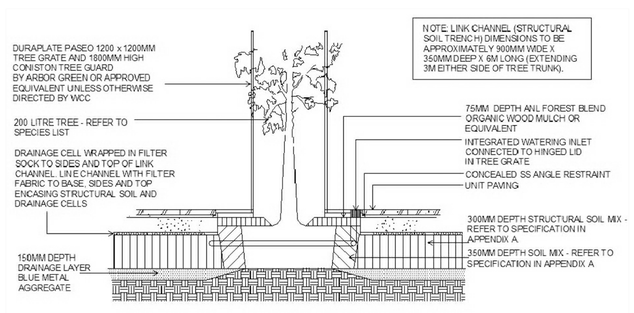
STRUCTURAL REQUIREMENTS:

Subbase	100mm DGB 20 compacted to 98% modified density
Base	230mm thick N50MPa concrete reinforced with SL82mesh top and bottom. Broom finish surface to create smooth surface in preparation for paving units
Driveway	230 x113x 80mm concrete unit paver - herringbone pattern at 90 degrees to kerb, on 20mm bedding sand
Isolation	Abutting pits and buildings , Abelflex (or approved equal) with Sikaflex (or approved equal) to match paver colour.



scale: nts

TYPICAL DETAIL 03: tree planting-section through kerb



scale: nts

TYPICAL DETAIL 04: tree planting-section parallel to kerb

TYPICAL TREE PIT IMAGE

TREE SELECTION CRITERIA
Trees are to be selected in accordance with NATSPEC - A Guide to Assessment of Tree Quality.

STREET TREE LAYOUT
The limitations to the positioning of street trees on footways immediately behind the kerb line are listed below:

LIMIT	CLEARANCE NEEDED
Street intersection	10m from intersection kerb line
Telegraph pole	5m from centre of pole.
Storm water inlet	2m from edge of inlet
Major underground service junction	3m from edge of junction box
Bus stops	No trees planted along length of stop.
Traffic lights	10m from pole of traffic lights.
Driveways	4m from vehicle crossing

ROOT BARRIER
Lay continuous lengths of root barrier to protect underground services and prevent root penetration
directly under pavement surface. When installing the root barrier on the base of the tree pit and link channel create a high point in the middle to prevent water pondling. Sprinkle Casoron (or approved equivalent) - root growth inhibitor 100mm wide band outside the perimeter of the excavated pit before placing the root barrier. Use 20g of Casoron (or approved equivalent) - root growth inhibitor per 1sqm.

SUB SOIL DRAINAGE
Ensure positive drainage to all tree pits prior to backfilling. Install sub-soil drainage lines and connect to available stormwater system. Notify the Certifying Authority, giving two days notice for inspection of drainage operation prior to backfilling.

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49-51 Denison Street, WOLLONGONG NSW

0 1 2 5 10 20 scale @1: 200A1 @1: 400A3

north

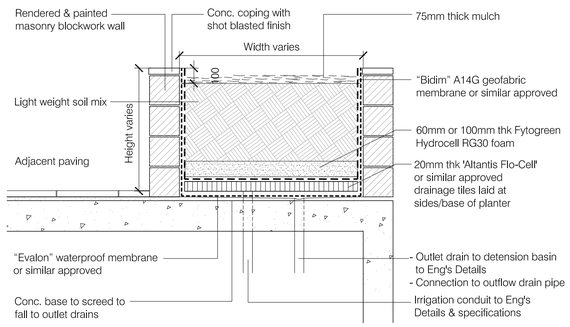
dwg title	scale: 1:200 & as shown @a1
public domain plan : denison street	dwg no.: PD-101
	Client: Wollongong Investments No. 2 Pty Ltd

revision		date
A	da submission	03/04/18
B	da amendments	21/05/18
C	da amendments	20/07/18
D	da amendments	03/12/18
E	da amendments	01/04/19
F	da amendments	07/06/19

PROPOSED INDICATIVE PLANT SCHEDULE

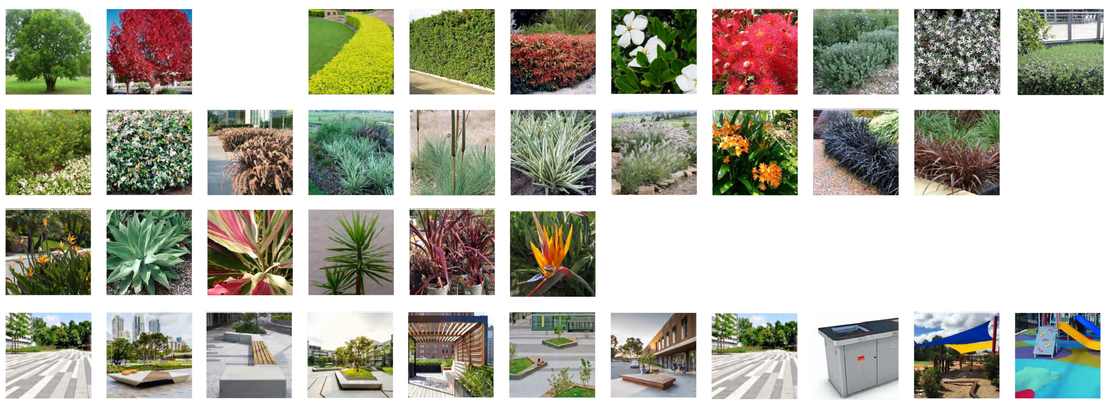
BOTANICAL NAME	COMMON NAME	POT SIZE	MATURE HEIGHT
TREES			
Fraxinus griffithi	Evergreen Ash	75L	6m
Elaeocarpus reticulatus	Blue-berry Ash	75L	8m
Tristaniopsis laurina 'Luscious'	Water Gum	45L	8m
SCREEN & BARRIER SHRUBS			
Callistemon "Great Balls of Fire"	Great Balls of Fire Bottlebrush	200mm	1.5m
Correa alba	White Correa	150mm	1.5m
Duranta "Sheena's Gold"	Golden Dew Drop {Hedge)	300mm	2m
Gardenia augusta 'Florida'	Gardenia 'Florida'	200mm	1.5m
Philotheca myoporoides	Wax Flower	200mm	1.5m
Photinia glabra 'Rubens'	Photinia	25L	2m
Raphiolepis indica 'Snow Maiden"	Indian Hawthorn	200mm	1.5m
Rhapis excelsa	Lady Palm	25L	2m
Syzygium australe 'Aussie Southern'	Syzygium 'Aussie Southern'	25L	2m
TURF GRASS			
Stenotaphrum secundatum	Sir Walter Buffalo	N/A	

BOTANICAL NAME	COMMON NAME	POT SIZE	MATURE HEIGHT
GROUND COVERS			
Alternanthera dentata	Ruby leaf alternanthera	150mm	0.5m
Clivea miniata	Kaffir Lilly	150mm	0.4m
Dianella caerulea 'little jess'	Flax Lily	150mm	0.4m
Dianella revoluta 'little rev'	Black Anther Flax Lily	150mm	0.8m
Dianella Silver Streak	Silver Streak Flax Lily	150mm	0.4m
Duranta Mini Gold	Dwraf Golden Dew Drop	200mm	0.5m
Liriope muscari	Lily Turf	150mm	0.3m
Lomandra longifolia 'Katrinus'	Spiny-headed Mat-rush 'Katrinus'	150mm	0.7m
Ophiopogon japonicus 'Black Dragon'	Mondo Grass	100mm	0.3m
Pennisetum advena 'Rubrum'	Pupple Fountain Grass	150mm	1.5m
Pennisetum alopecuroides	Black Lea	150mm	0.8m
Poa siebreiana	Grey Tussock grass)	200mm	0.8m
Themeda australis	Kangaroo Grass	200mm	0.8m
Trachelospermum jasminoides 'tricolor'	Tricolor Jasmine	150mm	0.2m
ACCENT PLANTS			
Agave attenuata	Century Plant	200mm	1.5m
Alpinia caerulea	Native ginger	5L	1.5m
Cordyline australis 'Cabernett'	Cordyline Cabernett	200mm	1.2m
Doryanthus excelsa	Gymea Lily	5L	2m
Dracaena Marginata	Dragon Tree	250mm	2m
Phormium 'Bronze Baby'	Bronze Baby Flax	200mm	0.8m
Strelitzia reginae dwarf	Dwarf Bird-of-Paradise	200mm	0.6m



TYPICAL DETAIL 01: on-structure planter scale: 1:20

PROPOSED PLANTING & LANDSCAPE ELEMENT PALETTE



MAINTENANCE PROGRAM

The typical range of maintenance tasks required over a 12 month period is summarised in the table.
Any information provided in the table must be assessed in the light of the weather and general site conditions. For example, watering frequency depends on the soil drainage and rainfall; fertiliser type and frequency needs to be adjusted to suit the plant requirements and the soil fertility and pH.

MULCH
Mulch will need be topped up periodically to maintain a min. depth of 75mm. Mulch should be kept at least 50mm away from plant stems to reduce the rick of collar rot.
WEEDS
Weeds in mulched beds will need to be controlled by hand pulling or by the use of non residual herbicides. When using herbicides be very careful to avoid spray drifting onto valuable plants. the smallest contact with the chemicals can cause damage.
PLANT MAINTENANCE
Deep watering once or twice a week is more beneficial to plants than frequent light watering. Frequent watering will produce shallow roots and make the plant less stable and susceptible to drought. Maintain moisture to the bottom of the rootball for the first 3 months.To help safeguard plants remove labels immediately after planting. Where plants are susceptible to damage by vehicles to pedestrians, maintain protective fences until plants are well established.Replace dead plants fortnightly until such time as alternative maintenance procedures are in places.
LAWN MAINTENANCE
Once lawn has been established, carry out watering and fertilising as suggested in the typical maintenance program. In summer, through watering, two or three times each week will encourage roots to go deeper in search of water. Mow grass as required to maintain an even tidy appearance.

Maintenance Task	Frequency											
	January	February	March	April	May	June	July	August	September	October	November	December
Grass												
Mowing lawn		WEEKLY			AS REQUIRED					WEEKLY		
Watering lawn		TWICE WEEKLY				AS REQUIRED					TWICE WEEKLY	
Feritilising lawn												
Weed control												
Top dressing												
Aerating				PRIOR TO RESEEDING								
Reseeding												
Trees & Shrubs												
Watering		WEEKLY				AS REQUIRED						WEEKLY
Feritilising												
Pruning												
Mulching												
Weed control												
Thinning												
Insect & disease control												

L E G E N D

- Existing trees to be protected & retained *(refer to arborist's report)*
- Proposed street tree planting *(refer to council specification)*
- Proposed small tree planting *(refer to proposed indicative plant schedule)*
- Existing trees to be removed *(refer to arborist's report)*
- Proposed shrub planting *(refer to proposed indicative plant schedule)*
- Proposed groundcover planting *(refer to proposed indicative plant schedule)*
- Proposed accent planting *(refer to proposed indicative plant schedule)*
- Proposed turf area *(refer to proposed indicative plant schedule)*
- Proposed feature tile banding
- TS Proposed timber seat
- CS Proposed cast-in-situ conc. bench
- TFS Proposed feature seating platform
- Proposed retaining wall
- Proposed on-structure planter
- Proposed title paving to Architect's details
- Proposed conc. paving
- Proposed large format paving to Architect's details
- Proposed timber+steel pergola
- T T Proposed timber-look tile to Architect's details
- BBQ Proposed Elec. BBQ
- Proposed sail structure
- Proposed S/W pits to Hydraulic eng's detail
- 16.30 Design levels
- × 16.21 Existing levels
- Site boundary
- Proposed synthetic softfall on play area

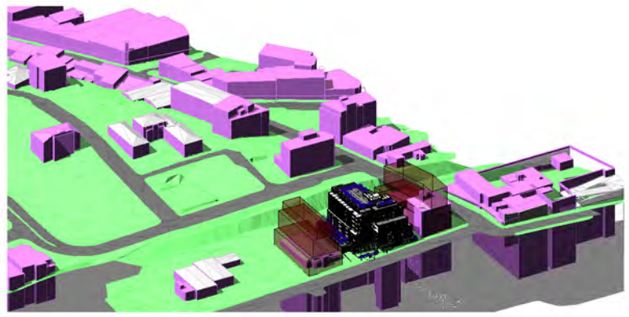
CANVAS landscape architects
membership # 001253
mob:0401 352 334
email:kobby@canvaslandscape.com.au

49-51 Denison Street, WOLLONGONG NSW

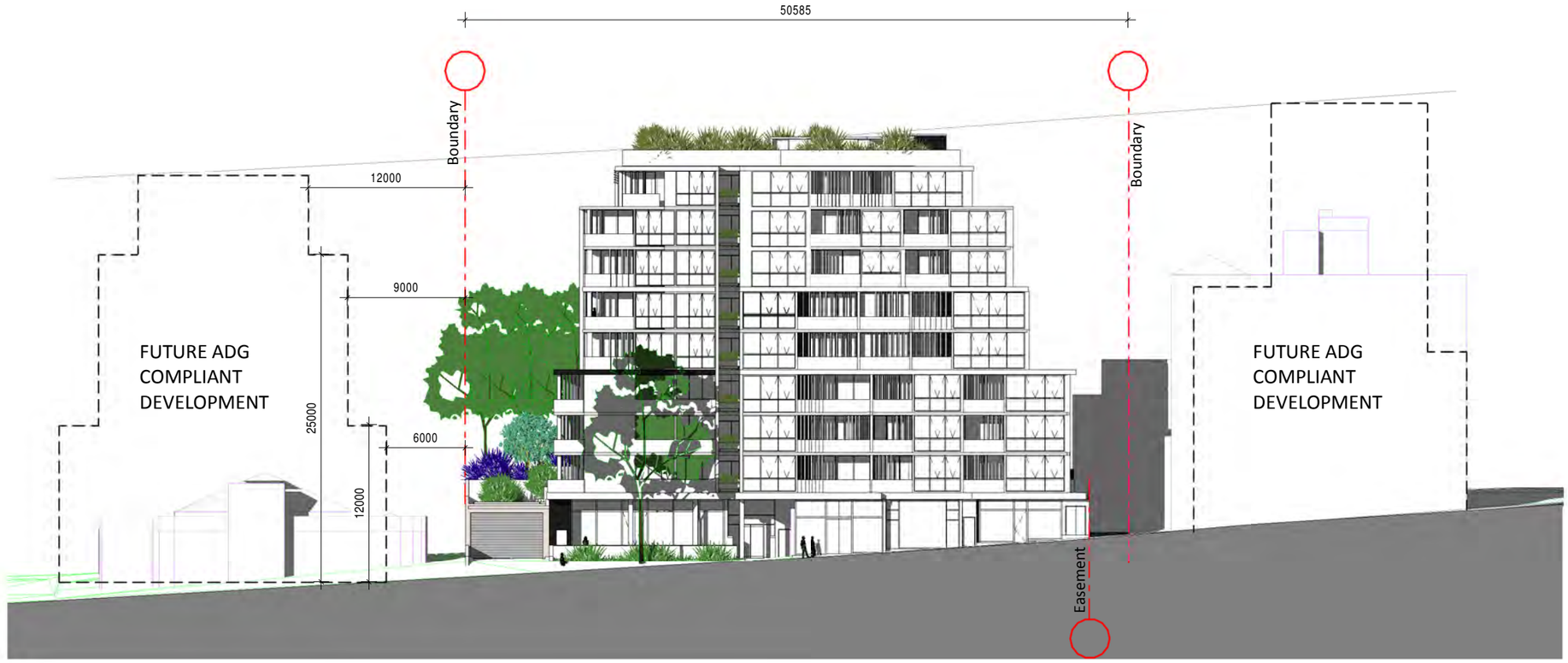
dwg title: indicative plant schedule, maintenance schedule & typical detail

scale: 1:20 @a1/1:40@a3
dwg no.: DA-L104
Client: Wollongong Investments No. 2 Pty Ltd

revision		date
A	da submission	06/03/18
B	da amendments	21/05/18
C	da amendments	10/07/18
D	da amendments	04/12/18
E	da amendments	01/04/19
F	da amendments	07/06/19



2 DESIGN VIEW - FUTURE DEVELOPMENT



1 Section 1 CONTEXT ANALYSIS WITH FUTURE DEVELOPMENT
1 : 200

D E N I S O N S T R E E T

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

T: +612 8199 1144
www.level33.com.au
Nominated Registered Architect: George O'Donovan NSW 6763

LEVEL ARCHITECTURAL DIVISION

CONTEXT ANALYSIS
FUTURE DEVELOPMENTS

49-51 Denison St Wollongong
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:52:41 AM
1:200 @ A1
1:400 @ A3

DA007 H

1 June 21 9am
1 : 500

2 June 21 10am
1 : 500

3 June 21 11am
1 : 500

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
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LEVEL
ARCHITECTURAL DIVISION

SHADOW DIAGRAMS

49-51 Denison St Wollongong

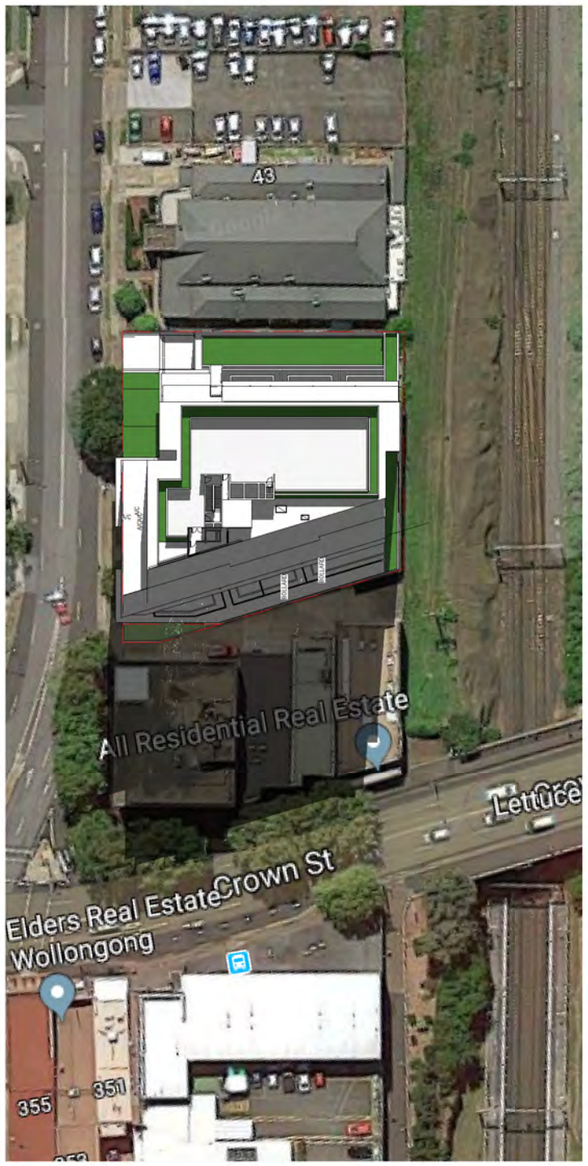
RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:57:14 AM
1:500 @ A1
1:1000 @ A3

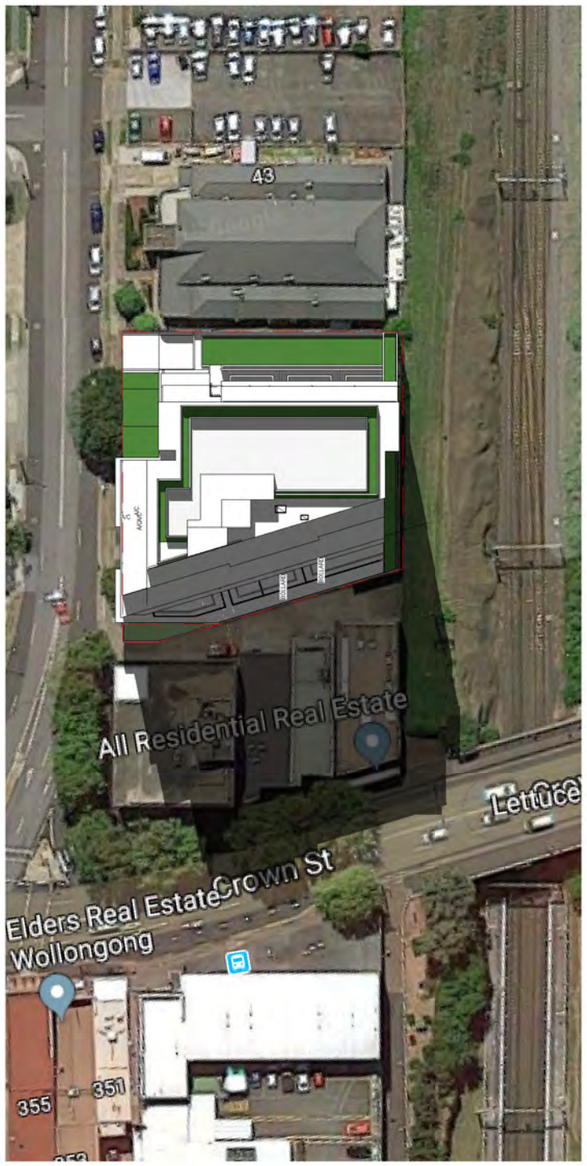
0 5 10 20 30m

North

DA302 H



1 June 21 12pm
1 : 500



2 June 21 1pm
1 : 500

3 June 21 2pm
1 : 500

4 June 21 3pm
1 : 500

No.	Description	Date
H	REVISED DA-ISSUE H	11-06-19
G	UNIT 8.1 AMENDED	10-5-19
F	DA ISSUE-GFA & BALCONY AREAS ADJUSTED	24.04.19

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LEVEL
ARCHITECTURAL DIVISION

SHADOW DIAGRAMS

49-51 Denison St Wollongong

RETAIL & RESIDENTIAL DEVELOPMENT

7/06/2019 10:57:33 AM
1:500 @ A1
1:1000 @ A3

North

0 1 2 5m

DA303 H

Plan Urban Services Pty Limited
7 Chudleigh Street
Rydalmere NSW 2116

tel/fax: 02 8812 5331
mob: 0416 233 541
abn: 91 528 083 843

5 June, 2019

The General Manager
Wollongong City Council
Locked bag 8821
Wollongong. NSW.2500

Attention: Theresa Whittaker

Dear Theresa,

Re: DA 2018/473. 49 – 51 Denison Street, Wollongong

I refer to the subject DA, its recent consideration by the Wollongong Local Planning Panel (LPP) and your letter dated 24, May, 2019. We also note your subsequent advice seeking additional plans and further justification than that in my previous letter dated 30 may, 2019. This letter seeks provide an enhanced justification of the matters previously raised in conjunction with the latest updated plans.

I note your further advice to Level 33 that you rae hopeful of submitting the DA back to the Panel in early July and the advice from George O'Donovan from Level 33 that the updated plans will be available to Council on 11 June.

The issues that the LPP were seeking to be addressed are as follows:

1. ***Set the building back from the rail line by a minimum of 3 metres and for this area to be landscaped and include plants that will provide an effective screen to the rail corridor;***

2. ***Re-design the development to minimise the number of units with orientation to the rail corridor;***

3. ***Rreduce the number of units per floor to between 9 or 10 per floor to improve amenity;***

4. ***Provide detailed construction methodology in relation the method of excavation to minimise vibration impacts to the adjoining properties.***

1. Setback to rail Line.

There are no minimum setback requirements for residential buildings from rail corridors. As you rightly point out in your report the determining factor is acoustics. As you again point out in your report, we have submitted an acoustic assessment and associated report, which concludes that the proposal is capable of meeting all relevant criteria as per the ***Infrastructure SEPP*** and Department of Planning's ***Guide to Development near Rail Corridors & Busy Roads***.

It is also interesting to note and again you confirm in your report, that Railcorp have provided concurrence to the proposal, subject to its standard deferred commencement conditions.

Notwithstanding the above a 3 metre (m) building setback has been provided to part of the east boundary to provide for a sunken planter deep enough to facilitate 6-8 m high trees to screen the rail line. This change is shown in the section n drawing No. DA002F.

Drawing DA 200F clearly shows the distance between the proposed building and the rail cutting and indeed that the nearest rail track is some 17.65m from the eastern wall of the proposed building. The drawing also shows the opportunity for the deep soil landscaping and that the floor level of level 1 (lowest residential level) is some 5m above the top of a double decker train and approximately 9.5m above the level of the tracks. These vertical and horizontal separations and inclusion of the deep soil landscaping will further enhance the acoustic separation and provide added amenity and outlook for future residents.

I understand that the updated landscape plan will confirm the plant species proposed.

2. Minimise the number of units oriented to Rail Corridor

The studio units facing the rail corridor on levels 4, 5, 6 and 7 have been removed, resulting in only one unit facing the rail corridor on those levels and level 8. The units that have not been set back are north facing and have a solid masonry wall (excepting for a highlight window that could be deleted) on the boundary with the rail corridor.

The units that face on to the rail corridor have in the main been setback a minimum of 3 metres (m) from the boundary, with that area used for deep soil planting. In some cases the living areas are set back a further 2.1m being the width of the balconies, with the use of double – glazed glass to windows and doors.

3. Reduced Number of Units per Floor to 9 – 10.

As mentioned in point 2 above, the studio units facing the rail corridor on levels 4, 5, 6 and 7 have been removed. On levels 4 and 5 a studio has been added on the Dension Street frontage, so that the loss of units is reduced to 2. As a result, the number of units on levels 6 and 7 has been reduced to 10 per floor, while level 8 contains only 7 units

On levels 1 – 5 the number of units per floor remains at 11. However, on each of these floors the foyer / main corridor is varied in width (greater than minimum requirements), contains seating elements, planters and glazed end treatments. All of these are all examples of justifications for increasing the number of units off a circulation core, as stated in Objective 4F - 1 of the Apartment Design Guide (ADG).

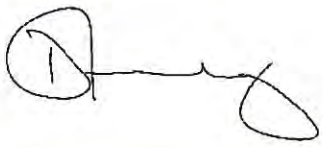
4. Detailed Construction Methodology regarding Excavation

This matter was addressed in the geotechnical Investigation and subsequently in the associated report (page 9) prepared by EI Australia, previously lodged with Council. I understand that Level 33 are providing additional detail in this regard.

I trust that the above discussion together with the amended plans, satisfactorily respond to the matters raised by the LPP and indicated in Council's correspondence and we would request that the Development Application be referred back to the Panel for determination as soon as possible.

Should you have any further enquiries please do not hesitate to contact either myself of Level 33.

Yours Sincerely,



David Furlong - Director BTP, MPIA

EI Australia
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PYRMONT, NSW 2009

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T 02 9516 0722

5 June 2019
E23401.G99

Client Company
30A Eva Street
RIVERWOOD NSW 2210
Attn: Eddy Haddad

Dear Mr. Haddad

Re: Construction Methodology in Relation to Vibration Impacts , 49-51 Denison Street, Wollongong, NSW

EI Australia (EI) have previously completed a Geotechnical Investigation Report (Ref: E23401.G03_Rev2, dated 8 March 2018), as well as an Impact Assessment Report for Sydney Trains (Ref: E23401.G06_Rev1, dated 16 January 2019) for the above mentioned site. This letter report provides comments regarding the recommended construction methodology to minimise vibration impacts to the adjoining properties, and should be read in conjunction with the above referenced reports.

As detailed within our previous geotechnical investigation report referenced above, the subsurface conditions encountered at the site comprised:

- Fill to depths ranging from about 1.0m to 1.1m below existing ground level (BEGL); overlying
- Silty clays that underlain by variably weathered, very low strength sandstone from depths ranging from 1.8m to 3.5m BEGL; overlying
- Low to medium strength sandstone from depths ranging from 4.1 to 5.1m BEGL; overlying
- High to very high strength sandstone from depths ranging from 5.9 to 9.0m BEGL.

Based on the supplied information, EI understands that the proposed development will include demolition of the existing site structures and construction of a multi-storey development over a two level basement car park. The lowest basement level (B2) is proposed to have a finished floor level (FFL) of RL 16.2m. A Bulk Excavation Level (BEL) of RL 16.0m is assumed for the construction which includes an allowance of 200mm for a concrete basement slab. Due to the sloping nature of the site, to achieve the estimated BEL, excavation depths are expected to vary between about 7.7m BEGL (RL 16.0m) in the southern half the site and 6.8m BEGL (RL 16.0m) in the northern half of the site.

Based on the results of the investigation, the proposed basement excavations will therefore extend through all units outlined above. A full excavation assessment is presented in Section 4.3.1 of the above mentioned Geotechnical Investigation report. As per this section, excavation of low to very high strength sandstone is expected to present very hard or very heavy ripping, or "hard rock" excavation conditions and grid sawing techniques with ripping or hammering may facilitate the excavation.

Excavation using rock hammers should commence away from the adjoining structures and the transmitted vibrations monitored to assess how close the hammer can operate to the adjoining structures while maintaining transmitted vibrations within the acceptable limits. The vibration measurements can be carried out using either an attended or an unattended vibration monitoring. An unattended vibration monitoring must be fitted with an alarm in the form of a strobe light or siren or alerts sent directly to the site supervisor to make the plant operator aware immediately when the vibration limit is exceeded. The vibration monitor must be set to trigger the alarm when the overall Peak Particle Velocity (PPV) exceeds set limits outlined by a vibration monitoring plan. Reference should be made to **Appendix C** of the geotechnical report for a guide to acceptable limits of transmitted vibrations.

If it were found that transmitted vibrations by the use of rock hammers are unacceptable, then it would be necessary to change to a smaller excavator with a smaller rock hammer, or to a rotary grinder, rock saws, jackhammers, ripping hooks, chemical rock splitting and milling machines. Although these are likely to be less productive, they would reduce or possibly eliminate risks of damage to adjoining properties through vibration effects transmitted via the ground. Such equipment would also be required for detailed excavation, such as footings or service trenches, and for trimming of faces. Final trimming of faces may also be completed using a grinder attachment rather than a rock breaker in order to assist in limiting vibrations.

To assist in reducing vibrations and over-break of the sandstone, we recommend that initial saw cutting of the excavation perimeter through the bedrock may be provided using rock saw attachments fitted to the excavator. Rock sawing of the excavation perimeter has several advantages as it often reduces the need for rock bolting as the cut faces generally remain more stable and require a lower level of rock support than hammer cut excavations, ground vibrations from rock saws are minimal and the saw cuts will provide a slight increase in buffer distance for use of rock hammers. However, the effectiveness of such approach must be confirmed by the results of vibration monitoring.

Vibrations induced by excavations can be reduced by alternative methods such as the following:

- Commence the rock excavation away from potentially sensitive areas;
- Keep rock hammer orientation towards the face and enlarge excavation by breaking small wedges off faces;
- Operate hammers in short bursts only;
- Use smaller equipment (resulting in low productivity); and
- Use line sawing, especially along boundaries, to assist in breaking and trimming.

For further details regarding excavation recommendations and monitoring, reference should be made to the above mentioned geotechnical investigation report.

Please do not hesitate to contact the undersigned should you have any questions.

For and on behalf of:
EI AUSTRALIA

Prepared By:

Brigitte Lovett
Engineering Geologist

Reviewed By:

Shahzada Rizvi
Principal Engineering Geologist

Attachments: Important Information

Important Information

eiaustralia

SCOPE OF SERVICES

The geotechnical report ("the report") has been prepared in accordance with the scope of services as set out in the contract, or as otherwise agreed, between the Client And EI Australia ("EI"). The scope of work may have been limited by a range of factors such as time, budget, access and/or site disturbance constraints.

RELIANCE ON DATA

EI has relied on data provided by the Client and other individuals and organizations, to prepare the report. Such data may include surveys, analyses, designs, maps and plans. EI has not verified the accuracy or completeness of the data except as stated in the report. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations ("conclusions") are based in whole or part on the data, EI will not be liable in relation to incorrect conclusions should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to EI.

GEOTECHNICAL ENGINEERING

Geotechnical engineering is based extensively on judgment and opinion. It is far less exact than other engineering disciplines. Geotechnical engineering reports are prepared for a specific client, for a specific project and to meet specific needs, and may not be adequate for other clients or other purposes (e.g. a report prepared for a consulting civil engineer may not be adequate for a construction contractor). The report should not be used for other than its intended purpose without seeking additional geotechnical advice. Also, unless further geotechnical advice is obtained, the report cannot be used where the nature and/or details of the proposed development are changed.

LIMITATIONS OF SITE INVESTIGATION

The investigation programme undertaken is a professional estimate of the scope of investigation required to provide a general profile of subsurface conditions. The data derived from the site investigation programme and subsequent laboratory testing are extrapolated across the site to form an inferred geological model, and an engineering opinion is rendered about overall subsurface conditions and their likely behaviour with regard to the proposed development. Despite investigation, the actual conditions at the site might differ from those inferred to exist, since no subsurface exploration program, no matter how comprehensive, can reveal all subsurface details and anomalies. The engineering logs are the subjective interpretation of subsurface conditions at a particular location and time, made by trained personnel. The actual interface between materials may be more gradual or abrupt than a report indicates.

SUBSURFACE CONDITIONS ARE TIME DEPENDENT

Subsurface conditions can be modified by changing natural forces or man-made influences. The report is based on conditions that existed at the time of subsurface exploration. Construction operations adjacent to the site, and natural events such as floods, or ground water fluctuations, may also affect subsurface conditions, and thus the continuing adequacy of a geotechnical report. EI should be kept appraised of any such events, and should be consulted to determine if any additional tests are necessary.

VERIFICATION OF SITE CONDITIONS

Where ground conditions encountered at the site differ significantly from those anticipated in the report, either due to natural variability of subsurface conditions or construction activities, it is a condition of the report that EI be notified of any variations and be provided with an opportunity to review the recommendations of this report. Recognition of change of soil and rock conditions requires experience and it is recommended that a suitably experienced geotechnical engineer be engaged to visit the site with sufficient frequency to detect if conditions have changed significantly.

REPRODUCTION OF REPORTS

 Where information from the accompanying report is to be included in contract documents or engineering specification for the project, the entire report should be included in order to minimize the likelihood of misinterpretation from logs.

REPORT FOR BENEFIT OF CLIENT

The report has been prepared for the benefit of the Client and no other party. EI assumes no responsibility and will not be liable to any other person or organisation for or in relation to any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report (including without limitation matters arising from any negligent act or omission of EI or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in the report). Other parties should not rely upon the report or the accuracy or completeness of any conclusions and should make their own inquiries and obtain independent advice in relation to such matters.

OTHER LIMITATIONS

EI will not be liable to update or revise the report to take into account any events or emergent circumstances or fact occurring or becoming apparent after the date of the report.

Attachment 5 - Aerial photograph and WLEP 2009 Zoning Map

Figure 1 – 2018 Aerial photograph (source: Wollongong Council). The site is outlined by the red line.

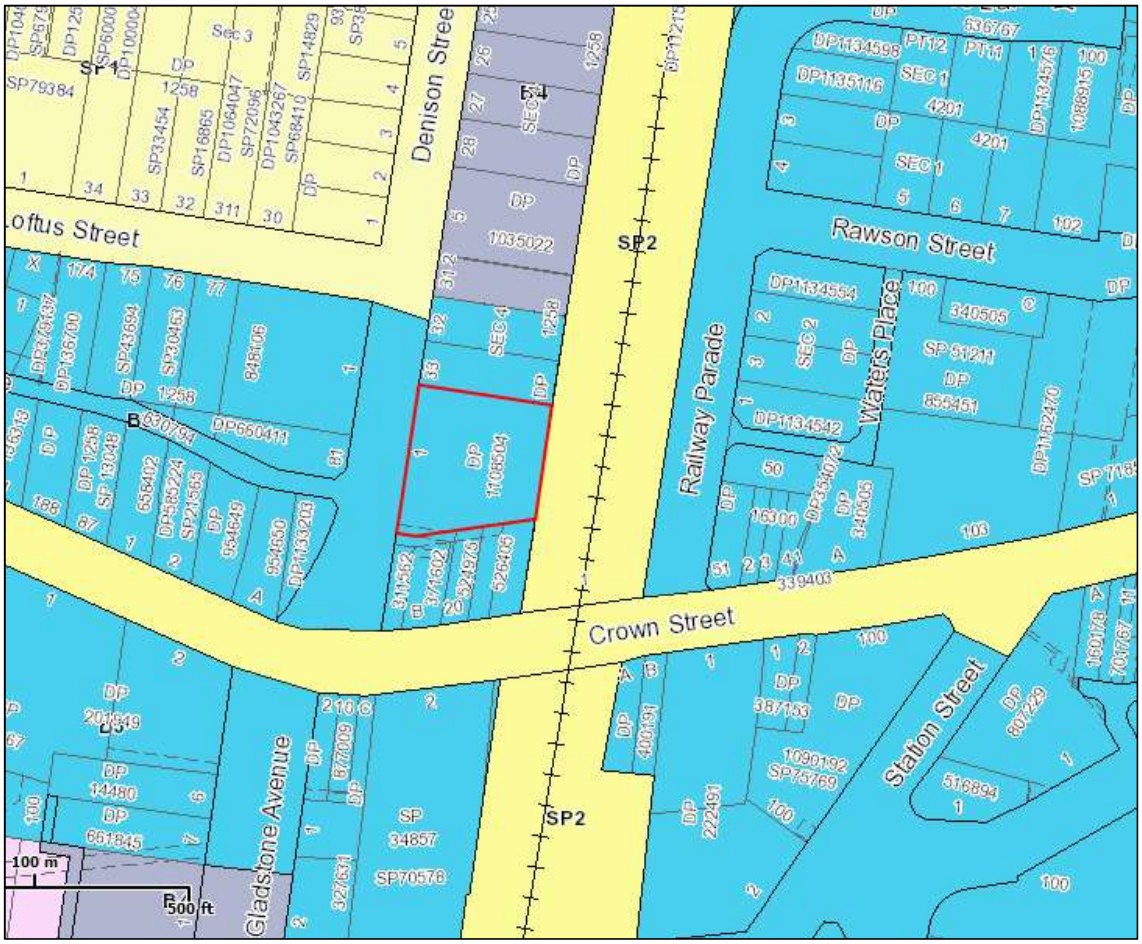

Figure 2 – Zoning Extract Wollongong LEP 2009

Attachment 6 - Recommended Consent Conditions

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

(i) **The Development Consent shall not operate until Council has been satisfied as to the following matters:**

a) **Sydney Trains Requirement**

Any conditions issued as part of Sydney Trains approval/certification of any documentation for compliance with the Sydney Trains conditions of consent, those approval/certification conditions will also form part of the consent conditions that the Applicant is required to comply with.

The Applicant shall prepare and provide to Sydney Trains for approval/certification the following final version items in compliance with relevant ASA Standards (https://www.transport.nsw.gov.au/industry/standards-and-accreditation/standards):

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 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 any 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.
7. Blowout Report and details of a continuous rigid barrier designed in accordance with clause B.5.3.4 of the SMS-06-GD-0268 Working Around Electrical Equipment Guide.
8. Details on compliance with the collision protection provisions of AS5100 - Bridge Design as outlined in ASA Standard T HR CL 12080 as the structure/supports are positioned within 20m from the centreline of the railway track.

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

b) The adjoining property No.45-47 Denison Street (Southern IML Pathology) provides critical medical services requiring specialist analysers sensitive to vibration, noise and dust. A detailed report shall be prepared in conjunction with Southern IML Pathology which outlines the maximum tolerable limits for vibration such that medical analysis / diagnostic operations are not impeded by the excavation and construction works.

(ii) The information specified in Conditions (a) and (b) must be received and must satisfactorily address the above matters within 24 months of the date of this consent. Evidence of Sydney Trains' satisfaction with the information provided in response to Condition (i)(a) shall be provided to Council within 24 months of the date of this consent.

(iii) If compliance with the matters contained in conditions (a) and (b) 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 deferred commencement 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:

Approved Plans and Specifications

1 The development shall be implemented substantially in accordance with the details and specifications set out on:

DA003 F prepared by Level 33 Architectural Division dated 24 April 2019
DA008 F prepared by Level 33 Architectural Division dated 24 April 2019
DA050 F prepared by Level 33 Architectural Division dated 24 April 2019
DA051 F prepared by Level 33 Architectural Division dated 24 April 2019
DA200 F prepared by Level 33 Architectural Division dated 24 April 2019
DA201 F prepared by Level 33 Architectural Division dated 24 April 2019
DA202 F prepared by Level 33 Architectural Division dated 24 April 2019
DA203 F prepared by Level 33 Architectural Division dated 24 April 2019
DA204 F prepared by Level 33 Architectural Division dated 24 April 2019
DA205 F prepared by Level 33 Architectural Division dated 24 April 2019
DA206 F prepared by Level 33 Architectural Division dated 24 April 2019
DA207 F prepared by Level 33 Architectural Division dated 24 April 2019
DA208 G prepared by Level 33 Architectural Division dated 10 May 2019
DA209 F prepared by Level 33 Architectural Division dated 24 April 2019
DA210 F prepared by Level 33 Architectural Division dated 24 April 2019
DA212 F prepared by Level 33 Architectural Division dated 24 April 2019
DA216 F prepared by Level 33 Architectural Division dated 24 April 2019
DA221 F prepared by Level 33 Architectural Division dated 24 April 2019
DA222 G prepared by Level 33 Architectural Division dated 10 May 2019
DA223 F prepared by Level 33 Architectural Division dated 24 April 2019
DA224 G prepared by Level 33 Architectural Division dated 10 May 2019

and any details on the application form, and with any supporting information received, except as amended by the conditions specified and imposed hereunder.

General Matters

2 **Building Work - Compliance with the Building Code of Australia**
All building work must be carried out in compliance with the provisions of the Building Code of Australia.

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

A Construction Certificate certifies that the provisions of Clauses 139-148 of the Environmental Planning and Assessment Amendment Regulations, 2000 have been satisfied, including compliance with all relevant conditions of Development Consent and the Building Code of Australia.

Note: The submission to Council of two (2) copies of all stamped Construction Certificate plans and supporting documentation is required within two (2) days from the date of issue of the Construction Certificate, in the event that the Construction Certificate is not issued by Council.

4 **Access to Premises Standards**

Access for people with disabilities must be provided as required by and in accordance with the Commonwealth Disability (Access to Premises – Buildings) Standards 2010 (the Premises Standards) and AS1428.1.

5 **Disability Discrimination Act 1992**

This consent does not imply or confer compliance with the requirements of the Disability Discrimination Act 1992.

It is the responsibility of the applicant to guarantee compliance with the requirements of the Disability Discrimination Act 1992. The current Australian Standard AS1428.1 (2009) – Design for Access and Mobility is recommended to be referred for specific design and construction requirements, in order to provide appropriate access to all persons within the building.

6 **Maintenance of Access to Adjoining Properties**

Access to all properties not the subject of this approval must be maintained at all times and any alteration to access to such properties, temporary or permanent, must not be commenced until such time as written evidence is submitted to Council or the Principal Certifying Authority indicating agreement by the affected property owners.

7 **Protection of Public Infrastructure**

Council must be notified in the event of any existing damage to any of its infrastructure such as the road, kerb and gutter, road shoulder, footpath, drainage structures and street trees fronting the development site, prior to commencement of any work.

Adequate protection must be provided for Council infrastructure prior to work commencing and during building operations.

Any damage to Council's assets shall be made good, prior to the issue of any Occupation Certificate or commencement of the operation.

8 **Geotechnical**

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

b The adjoining property No.45-47 Denison Street (Southern IML Pathology) provides critical medical services requiring specialist analysers sensitive to vibration, noise and dust. The dilapidation report for this property is to determine maximum tolerable limits for vibration, noise and dust such that medical analysis operations are not impeded by the construction.

c 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.

d Hard bedrock where encountered will be difficult to excavate. Excavation methods need to minimise vibration, noise and dust to ensure compliance with Geotechnical Condition (b).

e An exceedance of vibration, noise or dust limits identified in the report provided in response to deferred commencement Condition 1(b) will generate a HOLD POINT on construction until advice is received from the geotechnical consultant which addresses the non-conformance generating the hold construction.

f All excavations need to be supported during and after construction particularly to protect adjoining property with nearby existing development.

g Retaining wall design is not to include anchors extending on to adjoining property without the written consent of the adjoining property owner.

h All work is to be in accordance with the geotechnical recommendations contained in the report dated 12 July 2017 by EI Australia and any subsequent geotechnical report required to address unanticipated conditions encountered during construction.

i An earthworks plan is to be developed by the geotechnical consultant prior to start of earthworks.

j All recommendations of the geotechnical consultant in their geotechnical report dated 12 July 2017 are to be accommodated in the earthworks plan.

k The earthworks plan may require modification in light of any subsequent geotechnical reports commissioned to address unforeseen geotechnical conditions encountered during the site preparation earthworks.

l All earthworks including drainage, retaining wall and footing construction is to be subject to Level 1 geotechnical supervision as defined in Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Developments. This supervision is to include vibration, noise and dust monitoring for compliance to Geotechnical Condition 2. Where necessary amendments are to be made to the designs during construction based on supplementary geotechnical advice given during the supervision to ensure that the completed works accommodates all encountered geotechnical constraints.

m 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.

9 **Adaptable Units**

The nominated adaptable units within the development must be designed and constructed so as 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. Level access is required to be provided between the internal living space and balcony of the adaptable units and sufficient circulation space is required throughout.

10 **Occupation Certificate**

An Occupation Certificate must be issued by the Principal Certifying Authority prior to occupation or use of the development. In issuing an Occupation Certificate, the Principal Certifying Authority must be satisfied that the requirements of Section 109H of the Environmental Planning and Assessment Act 1979, have been complied with as well as all of the conditions of the Development Consent.

11 **Separate Consent for Retail Spaces**

Unless otherwise exempt, separate development consent shall be obtained for the use of the commercial/retail spaces within the building.

12 **Separate Consent Required for Advertising Signage**

This consent does not authorise the erection of any advertising signage. Any such advertising signage will require separate Council approval, in the event that such signage is not exempt development.

13 **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.

14 **Occupation Certificate**

An Occupation Certificate must be issued by the Principal Certifying Authority prior to occupation or use of the development. In issuing an Occupation Certificate, the Principal Certifying Authority 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.

15 **Stormwater Quality Management**

The stormwater treatment system must be designed to achieve pollutants and nutrients removal minimum: GP – 90%, TSS – 80%, TP – 55% and TN – 40%. The developer and/or future strata manager shall ensure that the stormwater filtration system is maintained in good working order to achieve these stormwater quality objectives in perpetuity.

16 **Sydney Trains Requirement**

Any conditions issued as part of Sydney Trains approval/certification of any documentation for compliance with the Sydney Trains conditions of consent, those approval/certification conditions will also form part of the consent conditions that the Applicant is required to comply with.

Prior to the Issue of the Construction Certificate

17 **Demolition Plan**

Prior to the release of a Construction Certificate or the commencement of any works at the site, a detailed demolition work plan prepared by a suitably qualified person shall be submitted to and approved by Council. The plan shall be prepared in accordance with Australian Standard AS 2601- 2001 – The Demolition of Structures, and shall include the following details:

- Identification of any hazardous materials,
- the proposed method and timing of demolition works;
- the expected duration of the demolition works;
- an outline of the machinery and equipment to be employed to undertake the demolition works;
- precautions to be employed to minimise any dust nuisance and;
- the disposal methods for hazardous materials.

A Construction Certificate shall not be released by the Principal Certifying Authority and no demolition works shall commence until such time as Council's written approval has been obtained for the demolition plan. The approved demolition plan shall be complied with at times.

18 **Construction Management Plan**

Prior to the release of a Construction Certificate or the commencement of any works at the site, a detailed Construction Management Plan (CMP) prepared by a suitably qualified person in consultation with adjoining land owners shall be submitted to and approved by Council. The construction management plan shall include (but not be limited to) the following details:

- plan of proposed construction storage area;
- parking for construction workers during the demolition and construction phases;
- the type of materials/plant/ equipment to be transported to and stored at the site and how is it to be transported and stored;
- timing of delivery of materials;
- the proposed access points to the site during construction;
- treatment of barricading/ hoarding for construction/and restricting access;
- address all environmental aspects of the development's demolition and construction phases including soil and water management/erosion and sediment control plan; noise and vibration management plan; dust suppression/dust management plan; waste management plan and litter control;
- construction noise mitigation measures;
- timing of waste collection during construction;
- monitoring of compliance with the proposed mitigation measure and corrective actions; and
- arrangements for continuity of access to Southern IML pathology and other local businesses.

A community engagement plan be prepared and incorporated into the Construction Management Plan, including regular updates and contact numbers for complaints and consultation for schedule of works.

A Construction Certificate shall not be released by the Principal Certifying Authority and no works shall commence until such time as Council's written approval has been obtained for the construction management plan. The approved construction management plan shall be complied with at times.

19 **Construction Environmental Management Plan**

Prior to the commencement of work, a construction environmental management plan shall be provided to the PCA. The plan shall address as minimum the vehicle traffic, odour and vapour, dust, plant and machinery noise, water and sediment management, surface water, subsurface seepage and accumulated excavation water, sediment from equipment and cleaning operations, site security, working hours, contact information, incident response and contingency management.

Additionally, submit an excavated soil material disposal plan to the PCA, with the batching, sampling and analysis procedures as per the DECCW (2009) Waste Classification Guidelines. The plan shall be prepared by a suitably qualified and experienced consultant. A copy of the plan shall be forwarded to Council.

The Construction Environmental Management Plan shall be implemented at all times during the course of demolition and construction.

20 **Site Validation Report**

A Validation Report (Stage IV) shall be submitted to Council prior to the commencement of building works. The Validation Report shall verify that:

a the site is not affected by soil and/or groundwater contamination above the NSW EPA threshold limit criteria; and

b the site is suitable for the proposed development.

The Validation Report must be prepared by a suitably qualified contaminated land consultant who is a member and is certified under one of the following certification schemes:

- the Site Contamination Practitioners Australia (SCPA);
- the Environment Institute of Australia and New Zealand's (EIANZ) Contaminated Land Assessment Specialist Certified Environmental Practitioner (CLA Specialist CEnvP);
- the Environment Institute of Australia and New Zealand's (EIANZ) Certified Environmental Practitioner (Site Contamination) scheme (CEnvP (SC); or
- the Soil Science Australia (SSA) Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM).

The Validation Report is to be issued by the certified contaminated land consultant directly to Council. No third party submissions will be accepted.

21 **Section 73 Compliance Certificate**

A Section 73 Compliance Certificate under the Sydney Water Act 1994 must be obtained from Sydney Water Corporation. Application must be made through an authorised Water Servicing Coordinator. Please refer to the "Builders and Developers" section of the web site www.sydneywater.com.au then search to "Find a Water Servicing Coordinator". Alternatively, telephone 13 20 92 for assistance.

Following application, a "Notice of Requirements" will advise of water and sewer infrastructure to be built and charges to be paid. Please make early contact with the Coordinator, since building of water/sewer infrastructure can be time consuming and may impact on other services and building, driveway or landscape design.

The Notice of Requirements must be submitted to the Principal Certifying Authority prior to issue of the Construction Certificate.

22 **Present Plans to Sydney Water**

Approved plans must be submitted online using Sydney Water Tap, available through www.sydneywater.com.au to determine whether the development will affect Sydney Water's sewer and water mains, stormwater drains and/or easements, and if further requirements need to be met.

The Certifying Authority must ensure that Sydney Water has issued an approval receipt prior to the issue of a Construction Certificate.

Visit www.sydneywater.com.au or telephone 13 20 92 for further information.

23 **Endeavour Energy Requirements**
The submission of documentary evidence from Endeavour Energy to the Principal Certifying Authority is required confirming that satisfactory arrangements have been made with Endeavour Energy for the provision of electricity supplies to the development, prior to the release of the Construction Certificate.

Note: Applications should be made to Customer Connections – South Coast, Endeavour Energy PO Box 811 Seven Hills NSW 1730.

24 **Substation Design**
Documentary evidence must be provided to Council of Endeavour Energy's approval of the design plans for the construction and installation of a chamber style substation within the proposed building. The substation shall be designed in accordance with Endeavour Energy's requirements and standards for access, security, drainage, ventilation and fire rating.

25 **Telecommunications**
The submission of documentary evidence from an approved telecommunications carrier to the Principal Certifying Authority confirming that underground telecommunication services are available for this development is required prior to the issue of the Construction Certificate.

26 **Utility Services**
Should a proposed Vehicular Crossing be located where it is likely to disturb or impact upon a utility installation (ie power pole, Telstra pit etc) written confirmation from the affected supplier that they have agreed to the proposed impacts shall be submitted to the Principal Certifying Authority prior to the issue of the Construction Certificate.

27 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 Certifying Authority which confirms that satisfactory arrangements have been put in place regarding any adjustment to such services is required prior to the release of the Construction Certificate.

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

29 **Dilapidation Report Prior to Construction**
A Dilapidation Report detailing the current structural condition of adjoining buildings, infrastructure and roads shall be prepared and endorsed by a qualified structural engineer. The report shall be submitted to the satisfaction of the certifying authority prior to issue of the Construction Certificate. The report shall also identify the condition of all Council assets in the vicinity of the proposed works.

A copy of the report is to be forwarded to Council and the owners of adjoining properties prior to the issue of a Construction Certificate.

30 **Groundwater Management Plan**
Prior to the release of the Construction Certificate, a groundwater management plan must be prepared. The plan must be prepared by a qualified and experienced geotechnical engineer, and must include (but not limited to):

a The necessary requirements to manage infiltration of groundwater into the basement excavation. This includes infiltration, storage, testing and pump-out requirements during construction. Water Quality targets for pump-out must be specified and be in-accordance with relevant guidelines.
b The necessary design requirements to ensure the structural and hydraulic design of the building considers long term groundwater impacts and management requirements.
c The mitigation requirements of groundwater drawdown to ensure no impacts on adjoining properties and adjacent public infrastructure as a result of potential groundwater draw down and associated settlement.

This information must be to the satisfaction of the Principal Certifying Authority.

31 **Awnings**
Awnings erected over the street frontages of the site shall comply with the specifications contained within Clause 3.5 Awnings of Chapter D13 (Wollongong City Centre) of Wollongong Development Control Plan 2009.

32 **External Finishes**
The building shall be constructed and finished in accordance with the approved schedule of finishing materials and colours except where amended by conditions of this consent. This requirement shall be reflected on the Construction Certificate plans and supporting documentation.

33 **Glass Reflectivity Index**
The reflectivity index of the glass and other finishing materials used in the external façade of the building shall not exceed 20 per cent. The details and samples of the glass to be used are to be submitted with the Construction Certificate together with written evidence that the reflectivity of the glass is 20 per cent or less.

34 Pedestrian access ways, entry paths, arcades and lobbies must be constructed with durable materials commensurate with the standard of the adjoining public domain with appropriate slip resistant materials, tactile surfaces and contrasting colours.

35 **Finish of Vehicular Entries**
Vehicular entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No ducts or pipes are to be visible from the street.

36 **Placement of Air Conditioning Units**
Air conditioning systems are to not to be located where they are visible from the public streets abutting the site. Plans submitted to the Principal Certifying Authority prior to issue of the Construction Certificate are to identify any external components of air conditioning systems to ensure they meet the requirements of this condition.

37 **Integration of Rooftop Structures in Approved Building Envelope**
All rooftop or exposed structures including lift rooms, plant rooms together with air conditioning units, ventilation and exhaust systems are to be integrated within the approved rooftop envelope. This requirement shall be reflected on the Construction Certificate plans.

38 **Mechanical Ventilation of the Car park**
The car park shall be mechanically ventilated, to be ducted to the roof. Details demonstrating compliance shall be provided with the Construction Certificate.

39 **Permeable Garage Shutter**
Any shutters provided within the basement car parks shall be permeable so as to improve basement ventilation, as per the requirements of 3J-4 of the Apartment Design Guide.

40 **External Lighting**
Any lighting of external areas within the development such as the communal open space areas, driveways and car parking entries, shall be designed and located in a manner to prevent light spill and/or glare impacts on neighbouring properties. Light placement and design shall be indicated on the construction certificate drawings.

41 **Compliance with the Recommendations of the Acoustic Report**
The recommendations for noise attenuation outlined in the Section 10.0 of the Traffic, Rail and Environmental Noise Assessment, (report number 2018-037) prepared by Acoustic, Vibration & Noise Pty Ltd, dated 14 march 2018, shall be implemented. Details demonstrating compliance shall be provided on the drawings submitted with the Construction Certificate.

42 **Stormwater Drainage Design**
A detailed drainage design for the development must be submitted to and approved by the Principal Certifying Authority 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 the Concept Stormwater Management Plans Job no. 15080, drawing nos. D1, D2, D3, D4, D5, D6, D7 and D8 rev B, by EZE Hydraulic Engineers, dated 14 March 2018.

b Include details of the method of stormwater disposal. Stormwater from the development must be piped to Council's existing stormwater drainage system.

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.

43 **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.

44 **Basement Waterproofing**

Full engineering details of the proposed wall around the basement car park shall be submitted to the Principal Certifying Authority 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. The problem of backwater from the stormwater pipeline entering the basement car park level shall be addressed by a method such as a flap gate or one-way valve system.

45 **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

46 **Protection of Buildings from Ingress of Stormwater Runoff**

Detailed design of the development shall ensure that there will be no ingress of surface stormwater runoff into the proposed buildings. All building entrances shall be provided with a suitable freeboard above the adjacent local blocked pipe situation 100 year ARI water surface level. These requirements shall be reflected on the Construction Certificate plans and supporting documentation prior to the release of the Construction Certificate.

47 **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.

48 **Roofwater Drainage**

All roof gutters and downpipes shall be designed to cater for a 1 in 100 year ARI storm event in accordance with the current version of AS 3500.3 - Plumbing and Drainage (Stormwater Drainage). Details of gutter/downpipe sizes and downpipe locations shall be reflected on the Construction Certificate plans.

49 **Retaining Wall on Common Boundary**

Retaining wall on common boundary must be located wholly within the property, including footings and agricultural drainage lines. Construction of retaining walls or associated drainage work along common boundaries must not compromise the structural integrity of any existing structures.

The maximum height of a retaining wall located within 900mm of the adjoining boundary shall be 600mm unless approved within this Development Application.

50 **Denison Street – Detailed Civil Engineering Design – Council Land**

A detailed civil engineering design shall be provided for the proposed footpath, drainage and road 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 Concept Stormwater Management Plans by EZE Hydraulic Engineers Job no. 15080 drawing nos. D1, D2, D3, D4, D5, D6, D7 and D8 rev B, dated 14 March 2018.

The design 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, Road 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 Vehicular access must be provided for the adjoining lots on Hercules Street, details of the proposed vehicular crossings to access the lots must be provided.

d 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.

e 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.

f 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.

g 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.

51 **Excavation and Retaining Structures adjacent to Public Road**

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 provided to Wollongong City Council and the Principal Certifying Authority prior to the issue of the Construction Certificate. The design must be prepared in accordance with the RMS Technical direction GTD 2012/001, 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 geotechnical report prepared in accordance with the requirements of the RMS Technical direction GTD 2012/001.

- A dilapidation survey of the existing Council infrastructure.
- Details of the proposed monitoring program for the excavation and retaining structures, and relevant threshold actions prepared in accordance with RMS Technical direction GTD 2012/001.

52 **Ground Anchors**
Permanent ground anchors are not permitted within the road reserve. 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 2012/001.

53 **Car Parking and Access**
The development shall make provision for the following:

Residential Parking
70 residential car parking spaces (including 9 spaces capable of adaption for people with disabilities)
17 residential visitor car parking spaces
28 secure (Class B) residential bicycle spaces
7 visitor (Class C) bicycle spaces for residents visitors
6 motorcycle spaces for residents

Commercial Parking
7 commercial car parking spaces
2 secure (Class B) employee bicycle spaces
1 visitor (Class C) bicycle space for the commercial premises
1 motorcycle space for commercial users

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.

54 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 AS2890.1, except where amended by other conditions of this consent. Details of such compliance are to be reflected on the Construction Certificate plans.

55 Each disabled person's parking space must comply with the current relevant Australian Standard AS2890.6 – Off-street parking for people with disabilities. This requirement shall be reflected on the Construction Certificate plans.

56 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.

57 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.

58 **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.

59 **Security Roller Shutters for Basement Car Parking Areas**
The installation of any security roller shutter for the basement car parking area shall not restrict access to any designated visitor car parking space. In the event that the approved visitor car parking spaces are located behind any proposed security roller shutter, an intercom system is required to be installed to enable visitor access into the basement car parking area. This requirement is to be reflected on the Construction Certificate plans and any supporting

documentation for the endorsement of the Principal Certifying Authority prior to the release of the Construction Certificate.

60 A change in driveway paving is required at the entrance threshold within the property boundary to clearly show motorists they are crossing a pedestrian area. Between the property boundary and the kerb, the developer must construct the driveway pavement in accordance with the conditions, technical specifications and levels to be obtained from Council's Manager Works. This requirement shall be reflected on the Construction Certificate plans and any supporting documentation.

61 **Structures Adjacent to Driveway**
Any proposed structures adjacent to the driveway shall comply with the requirements of the current relevant Australian Standard AS2890.1 (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.

62 **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 Certifying Authority, prior to the release of the Construction Certificate.

63 The submission of a final Landscape Plan to the Principal Certifying Authority, prior to the release of the Construction Certificate. The final Landscape Plan shall address the following requirements:

a the pavement must be amended to comply with the current WCC Public Domain Technical Manual detailing ;
b a schedule of proposed planting, including botanic name, common name, expected mature height and staking requirements as well as number of plants and pot sizes;
c the location of all proposed and existing overhead and underground service lines. The location of such service lines shall be clear of the dripline of existing and proposed trees; and
d any proposed hard surface under the canopy of existing trees shall be permeable and must be laid such that the finished surface levels match the existing level. Permeable paving is to be installed in accordance with the manufacturer's recommendations.

The completion of the landscaping works as per the final approved Landscape Plan is required, prior to the issue of Occupation Certificate.

64 **Landscape and Drainage Compatibility**
The submission of certification from a suitably qualified and experienced landscape designer and drainage consultant to the Principal Certifying Authority prior to the release of the Construction Certificate, confirming that the landscape plan and the drainage plan are compatible.

65 **Landscape Maintenance Program**
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 Certifying Authority prior to release of the Construction Certificate.

66 **Tree Protection and Management**
The existing trees are to be retained upon the subject property and any trees on adjoining properties shall not be impacted upon during the excavation or construction phases of the development. This will require the installation and maintenance of appropriate tree protection measures, including (but not necessarily limited to) the following:

a Installation of Tree Protection Fencing - Protective fencing shall be 1.8 metre cyclone chainmesh fence, with posts and portable concrete footings. Details and location of protective fencing must be indicated on the architectural and engineering plans to be

submitted to the Principal Certifying Authority prior to release of the Construction Certificate.

b Irrigate: Areas within the Tree Protection Zone are to be regularly watered in accordance with the arborist's recommendations.

67 **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.

68 **Street Trees City Centre**

The developer must address the street frontage by installing street tree planting. The number and species for this development four *Waterhousia floribunda*, 200 litre container size in accordance with AS 2303:2015 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 Development Engineering.

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

69 **Podium Planting**

All podium planting areas to have a waterproofing membrane that can provide a minimum 10 year warranty on product. Protective boarding to be installed to protect membrane from damage. All podium planting areas to be provided with an adequate drainage system connected to stormwater drainage system. Planter box to be backfilled with free draining planter box soil mix. Organic mulch only. Maximum decorative gravel pebble size 10mm diameter.

70 **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 1m to the Principal Certifying Authority 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 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 and footing structure must be contained wholly within the subject property;

e The proposed method of subsurface and surface drainage, including water disposal;

f Reinforcing and joining details of any bend in the wall at the passing bay of the accessway;

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

h 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.

71 **Property Addressing Policy Compliance**

Prior to the issue of any construction certificate, the developer must ensure that any site addressing complies with Council's **Property Addressing Policy** (as amended). Where appropriate, the developer must also lodge a written request to Council's **Infrastructure Systems & Support – Property Addressing (propertyaddressing@wollongong.nsw.gov.au),** for the site addressing prior to the issue of the construction certificate. Please allow up to 3-5 business days for a reply. Enquiries regarding property addressing may be made by calling 4227 8660.

72 **Site Management, Pedestrian and Traffic Management Plan (Where Works are Proposed in a Public Road Reserve)**

The submission of a Site Management, Pedestrian and Traffic Management Plan to the Principal Certifying Authority and Council (in the event that Council is not the Principal Certifying Authority) for approval of both the Principal Certifying Authority and Council is required, prior to the issue of the Construction Certificate. This plan shall address what measures will be implemented for the protection of adjoining properties, pedestrian safety and traffic management and shall be in compliance with the requirements of the latest versions of Australian Standard AS1742 - Traffic Control Devices for Works on Roads and the RMS Traffic Control at Worksites Manual.

This plan is required to maintain public safety, minimise disruption to pedestrian and vehicular traffic within this locality and to protect services, during demolition, excavation and construction phases of the development. This plan shall include the following aspects:

a proposed ingress and egress points for vehicles to/from the construction site;

b proposed protection of pedestrians, adjacent to the construction site;

c proposed pedestrian management whilst vehicles are entering/exiting the construction site;

d proposed measures to be implemented for the protection of all roads and footpath areas surrounding the construction site from building activities, crossings by heavy equipment, plant and materials delivery and static load from cranes, concrete pumps and the like;

e proposed method of loading and unloading excavation machines, building materials formwork and the erection of any part of the structure within the site;

f proposed areas within the site to be used for the storage of excavated material, construction materials and waste containers during the construction period;

g proposed traffic control measures such as advanced warning signs, barricades, warning lights, after hours contact numbers etc are required to be displayed where works are in progress in any road reserve and shall be in accordance the latest versions of the NSW Roads and Maritime Service's Specification - "Traffic Control at Work Sites Manual" and the Australian Standard AS1742. – "Manual of Uniform Traffic Control Devices" and accompanying field handbooks (SAA HB81);

h proposed method of support of any excavation, adjacent to adjoining buildings or the road reserve. The proposed method of support is to be certified by an accredited certifier in Civil Engineering; and

i proposed measures to be implemented, in order to ensure that no soil/excavated material is transported on wheels or tracks of vehicles or plant and deposited on the roadway.

The approved plan shall be implemented, prior to the commencement of any works upon the construction site.

Note: Any proposed works or placement of plant and equipment and/or materials within any road reserve will require the separate approval of Council, prior to the commencement of such works, pursuant to the provisions of the Roads Act 1993.

73 **Works in Road Reserve**

Prior to the issue of a Construction Certificate, the owner or contractor shall provide evidence to the Council of a Public Risk Insurance Policy with a minimum cover of $10 million in relation to the occupation of and works within Council's road reserve, for the full duration of the proposed works. The policy is to note Council as an interested party.

74 **Supervision of Works within Road Reserve**

The works within Council's road reserve shall be supervised by a suitably qualified and experienced Civil Engineer or Civil Engineering Foreman. The supervisor's name, address and contact details (including telephone number), together with a written construction program and anticipated duration of the construction works shall be submitted to Council's Development Engineering Manager prior to the commencement of works within the road reserve.

75 **Council Footpath Reserve Works**

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 removed 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. Details and locations are to be shown on the Construction Certificate Plans.

76 **Development Contributions - City Centre**

Pursuant to Section 4.17 of the Environmental Planning and Assessment Act 1979 and the Wollongong City-Wide Development Contributions Plan (2018), a monetary contribution of $601,960.00 (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 estimated cost of development and the applicable percentage rate as outlined in Clause 25K of the Environmental Planning and Assessment Regulation 2000.

The contribution amount will be subject to indexation until the date of payment. The formula for indexing the contribution is:

Contribution at time of payment = $C x (CP2/CP1)

Where:

$C is the original contribution as set out in the Consent

CP1 is the Consumer Price Index; All Groups CPI; Sydney at the time the consent was issued

CP2 is the Consumer Price Index; All Groups CPI; Sydney at the time of payment

Details of CP1 and CP2 can be found in the Australian Bureau of Statistics website – Catalogue No. 6401.0 - Consumer Price Index, Australia.

The following payment methods are available:

METHOD	HOW	PAYMENT TYPE
Online	http://www.wollongong.nsw.gov.au/applicationpayments Your Payment Reference: 978790	• Credit Card
In Person	Wollongong City Council Administration Building - Customer Service Centre Ground Floor 41 Burelli Street, WOLLONGONG	• Cash • Credit Card • Bank Cheque
PLEASE MAKE BANK CHEQUE PAYABLE TO: Wollongong City Council (Personal or company cheques are not accepted)		

A copy of the Wollongong City-Wide Development Contributions Plan (2018) and accompanying Fact Sheet may be inspected or obtained from the Wollongong City Council Administration Building, 41 Burelli Street, Wollongong during business hours or on Council's web site at www.wollongong.nsw.gov.au

77 **Sydney Trains Requirement - Survey**
Prior to the issue of a Construction Certificate, the Applicant shall undertake a services search to establish the existence and location of any rail services. Persons performing the service search shall use equipment that will not have any impact on rail services and signalling. Should rail services be identified within the subject development site, the Applicant must discuss with Sydney Trains as to whether these services are to be relocated or incorporated within the development site.

78 **Sydney Trains Requirement - Noise and Vibration**
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 Certifying Authority and Council prior to the issuing of a Construction Certificate. The 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.

79 **Sydney Trains Requirement - Electrolysis**
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 Certifying Authority with the application for a Construction Certificate. The 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.

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

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 light rail operator. The 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.

81 **Sydney Trains Requirement - Construction**
No metal ladders, tapes, and plant, machinery, or conductive material are to be used within six (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.

82 No work is permitted within the rail corridor, or any easements which benefit Sydney Trains/RailCorp, at any time, unless the prior approval of, or an Agreement with, Sydney Trains/RailCorp has been obtained by the Applicant. The 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.

83 No rock anchors, rock bolts, ground anchors or rock ties, piles, foundations, rock pillars, transfer structures, basement walls, slabs, columns, beams, cut rock faces, are to be installed into RailCorp/Sydney Trains property or easements. The 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.

84 Prior to the issuing of a Construction Certificate, the following rail specific items are to be submitted to Sydney Trains for review and endorsement:

- Machinery to be used during excavation/construction.
- Demolition, excavation and construction methodology and staging.

The Certifying Authority is not to issue the Construction Certificate until it has received written confirmation from Sydney Trains that this condition has been complied with.

85 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 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.

86 If required by Sydney Trains, a monitoring plan (including instrumentation and the monitoring regime during excavation and construction phases) is to be submitted to Sydney Trains for review and endorsement prior to the issuing of a Construction Certificate. The Certifying Authority is not to issue a Construction Certificate until written confirmation has been received from Sydney Trains advising of the need to undertake the track monitoring plan, and if required, that it has been endorsed.

87 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 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.

88 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. Scaffolding shall comply with "General Guide for Scaffold and Scaffolding Works" in conjunction with The 'Code of Practice – Construction Work' prepared by Safe Work Australia. Scaffolding and scaffolding work shall also comply with the applicable NSW Work Health and Safety Legislation.

89 If required, prior to the issue of a Construction Certificate the Applicant is to contact Sydney Trains Engineering Management Interfaces to determine the need for public liability insurance cover. If insurance cover is deemed necessary this insurance be for sum as determined by Sydney Trains and shall not contain any exclusion in relation to works on or near the rail corridor, rail infrastructure and must be maintained for the duration specified by Sydney Trains. The Applicant is to contact Sydney Trains Engineering Management Interfaces to obtain the level of insurance required for this particular proposal. Prior to issuing the Construction Certificate the

Principal Certifying Authority must witness written proof of this insurance in conjunction with Sydney Trains written advice to the Applicant on the level of insurance required.

90 **Sydney Trains Requirement**
If required, prior to the issue of a Construction Certificate the Applicant is to contact Sydney Trains Engineering Management Interfaces to determine the need for the lodgement of a Bond or Bank Guarantee for the duration of the works. The Bond/Bank Guarantee shall be for the sum determined by Sydney Trains. Prior to issuing the Construction Certificate the Principal Certifying Authority must witness written advice from Sydney Trains confirming the lodgement of this Bond/Bank Guarantee.

91 **Sydney Trains Requirement – Anti Throw Measures**
Given the possible likelihood of objects being dropped, thrown or blown onto the rail corridor from balconies, windows and other external features (e.g. roof terraces and external fire escapes) that face the rail corridor, the Applicant is required to install measures (e.g. awning windows, louvres, enclosed balconies etc.) which prevent the throwing of objects onto the rail corridor. The Principal Certifying Authority shall not issue the Construction Certificate until it has confirmed that these measures are to be installed and have been indicated on the Construction Drawings.

Prior to the Commencement of Works

92 **Sydney Trains Requirement - Supervision**
Unless advised by Sydney Trains in writing, all excavation, shoring and piling works within 25m of the rail corridor are to be supervised by a geotechnical engineer experienced with such excavation projects and who holds current professional indemnity insurance.

93 **Temporary Road Closure(s)**
If a road closure is required, an approval must be obtained from City of Wollongong Traffic Committee and Wollongong City Council.

Note: It may take up to eight (8) weeks for approval. An application for approval must include a Traffic Control Plan prepared by a suitably qualified person which is to include the date and times of closure and any other relevant information. The traffic control plan shall satisfy the requirements of the latest versions of Australian Standard AS1742-Traffic Control Devices for Works on Roads and the RMS Traffic Control at Worksites Manual.

94 **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.

95 **Works in Road Reserve – Major Works**
Any occupation, use, disturbance or work on the footpath or road reserve for construction purposes, which is likely to cause an interruption to existing pedestrian and/or vehicular traffic flows requires Council consent under Section 138 of the Roads Act 1993.

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. An application must be submitted must be obtained from Wollongong City Council's Development Engineering Team prior to any works commencing where it is proposed to carry out activities such as, but not limited to, the following:

a Digging or disruption to footpath/road reserve surface;
b Loading or unloading machinery/equipment/deliveries;
c Installation of a fence or hoarding;
d Stand mobile crane/plant/concrete pump/materials/waste storage containers;
e Pumping stormwater from the site to Council's stormwater drains;
f Installation of services, including water, sewer, gas, stormwater, telecommunications and power;
g Construction of new vehicular crossings or footpaths;
h Removal of street trees;
i Carrying out demolition works.

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.

96 **Application for Occupation, Use, Disturbance or Work on Footpath/Roadway**

Any occupation, use, disturbance or work on the footpath or road reserve for construction purposes, which is likely to cause an interruption to existing pedestrian and/or vehicular traffic flows requires Council consent under Section 138 of the Roads Act 1993. An application must be submitted and approved by Council prior to the works commencing where it is proposed to carry out activities such as, but not limited to, the following:

a Digging or disruption to footpath/road reserve surface;
b Loading or unloading machinery/equipment/deliveries;
c Installation of a fence or hoarding;
d Stand mobile crane/plant/concrete pump/materials/waste storage containers;
e Pumping stormwater from the site to Council's stormwater drains;
f Installation of services, including water, sewer, gas, stormwater, telecommunications and power;
g Construction of new vehicular crossings or footpaths;
h Removal of street trees;
i Carrying out demolition works.

97 **Appointment of Principal Certifying Authority**

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

a Appoint a Principal Certifying Authority (PCA) and notify Council in writing of the appointment irrespective of whether Council or an accredited private certifier is appointed; and
b notify Council in writing of their intention to commence work (at least two days notice is required).

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

98 **Sign – Supervisor Contact Details**

Before commencement of any work, a sign must be erected in a prominent, visible position:

a stating that unauthorised entry to the work site is not permitted;

b showing the name, address and telephone number of the Principal Certifying Authority for the work; and

c showing the name and address of the principal contractor in charge of the work site and a telephone number at which that person can be contacted at any time for business purposes.

This sign shall be maintained while the work is being carried out and removed upon the completion of the construction works.

99 **Temporary Toilet/Closet Facilities**

Toilet facilities are to be provided at or in the vicinity of the work site on which work involved in the erection or demolition of a building is being carried out at the rate of one toilet for every 20 persons or part of 20 persons employed at the site.

Each toilet provided must be:

a a standard flushing toilet; and

b connected to either:

i the Sydney Water Corporation Ltd sewerage system or

ii an accredited sewage management facility or

iii an approved chemical closet.

The toilet facilities shall be provided on-site, prior to the commencement of any works.

100 **Structural Engineer's Details**

Structural engineer's details for all structurally designed building works such as reinforced concrete footings, reinforced concrete slabs and structural steelwork must be submitted to the Principal Certifying Authority, prior to the commencement of any works on the site.

101 **Enclosure of the Site**

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

102 **Hoardings (within any Public Road Reserve)**

The site must be enclosed with a suitable hoarding (type A or B) or security fence of a type in accordance with the Works and Services Division Design Standard, and must satisfy the requirements of the Occupational Health and Safety Act, the Occupational Health and Safety Regulations and Australian Standard AS 2601. This application must be submitted to Council's Works and Services Division, and a permit obtained, before the erection of any such hoarding or fence.

103 **Consultation with SafeWork NSW**

Prior to any work commencing on the site it is the responsibility of the owner to contact SafeWork NSW in writing in respect to any demolition or use of any crane, hoist, plant or scaffolding.

104 **Hazardous Material Survey**

At least one week prior to demolition, the applicant must prepare a hazardous materials survey of the site and submit to Council a report of the results of the survey. **Hazardous materials** includes, but are not limited to, asbestos materials, synthetic mineral fibre, roof dust, PCB materials and lead based paint. The report must include at least the following information:

a the location of hazardous materials throughout the site;

b a description of the hazardous material;

c the form in which the hazardous material is found, eg AC sheeting, transformers, contaminated soil, roof dust;

d an estimation (where possible) of the quantity of each particular hazardous material by volume, number, surface area or weight;

e a brief description of the method for removal, handling, on-site storage and transportation of the hazardous materials, and where appropriate, reference to relevant legislation, standards and guidelines;

f identification of the disposal sites to which the hazardous materials will be taken.

105 **Asbestos Hazard Management Strategy**
An appropriate hazard management strategy shall be prepared by a suitably qualified and experienced licensed asbestos assessor pertaining to the removal of contaminated soil, encapsulation or enclosure of any asbestos material. This strategy shall ensure any such proposed demolition works involving asbestos are carried out in accordance with SafeWork NSW requirements (<http://www.safework.nsw.gov.au>). The strategy shall be submitted to the Principal Certifying Authority and Council (in the event that Council is not the Principal Certifying Authority), prior to the commencement of any works.

The approved strategy shall be implemented and a clearance report for the site shall be prepared by a licensed asbestos assessor and submitted to the Principal Certifying Authority and Council (in the event that Council is not the Principal Certifying Authority), prior to the issue of an Occupation Certificate or commencement of the development. The report shall confirm that the asbestos material has been removed or is appropriately encapsulated based on visual inspection plus sampling if required and/or air monitoring results and that the site is rendered suitable for the development.

106 **Demolition Works**
The demolition of the existing structures shall be carried out in accordance with Australian Standard AS2601 (2001): The Demolition of Structures or any other subsequent relevant Australian Standard and the requirements of the NSW WorkCover Authority.

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 Certifying Authority. 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.

107 **Contaminated Roof Dust**
Any existing accumulations of dust in ceiling voids and wall cavities must be removed prior to any demolition work commencing. Removal must take place by the use of an industrial vacuum fitted with a high efficiency particulate air (HEPA) filter.

108 **Consultation with SafeWork NSW – Prior to Asbestos Removal**
A licensed asbestos removalist must give written notice to SafeWork NSW at least five (5) days before licensed asbestos removal work is commenced.

109 **Demolition Notification to Surrounding Residents**
Demolition must not commence unless at least two (2) days written notice has been given to adjoining residents of the date on which demolition works will commence.

110 **Support for Neighbouring Buildings**
This consent requires the preservation and protection of neighbouring buildings/structures from any damage and if necessary, requires the underpinning and support of any neighbouring building/structure in an approved manner. The applicant or the contractor carrying out the work must at least seven days in advance of any excavation works below the level of the base of the footings of a building/structure on an adjoining allotment, including a public road or place, give written notice of intention to carry out such works to the property owner of the affected adjoining building/structure and furnish specific written details and supporting plans or other documentation of the proposed work.

The adjoining property owner of land is not liable for any part of the cost of work carried out for the purposes of this condition, whether carried out on the allotment of land being excavated or on the adjoining allotment of land.'

111 **Site Management Program – Sediment and Erosion Control Measures**
A site management program incorporating all sediment and erosion control measures (eg cleaning of sediment traps, fences, basins and maintenance of vegetative cover) is to be initiated prior to the commencement of any demolition, excavation or construction works and maintained throughout the demolition, excavation and construction phases of the development.

112 **Sediment Control Measures**
The developer must ensure that sediment-laden runoff from the site is controlled at all times subsequent to commencement of construction works. Sediment control measures must be maintained at all times and checked for adequacy at the conclusion of each day's work.

113 **Copy of Consent to be in Possession of Person carrying out Tree Removal**
The applicant/developer must ensure that any person carrying out tree removal/vegetation clearance is in possession of this development consent and/or the approved landscape plan, in respect to the trees/vegetation which have/has been given approval to be removed in accordance with this consent.

114 **Certification from Arborist - Adequate Protection of Trees to be Retained**
A qualified arborist is required to be engaged for the supervision of all on-site excavation or land clearing works. The submission of appropriate certification from the appointed arborist to the Principal Certifying Authority is required which confirms that all trees and other vegetation to be retained are protected by fencing and other measures, prior to the commencement of any such excavation or land clearing works.

During Demolition, Excavation or Construction

115 **Restricted Hours of Construction Work**
The developer must not carry out any work, other than emergency procedures, to control dust or sediment laden runoff outside the normal working hours, namely, 7.00 am to 5.00 pm, Monday to Saturday, without the prior written consent of the Principal Certifying Authority and Council. No work is permitted on public holidays or Sundays.

Any request to vary these 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;
f any proposed measures required to mitigate the impacts of the works.

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

116 **Minimise Nuisance**
The developer must carry out work at all times in a manner which will not cause a nuisance, by the generation of unreasonable noise, dust or other activity, to the owners and/or occupiers of adjoining and adjacent land.

117 The lighting of the premises must be directed so as not to cause nuisance to the owners or occupiers of adjoining premises or to motorists on adjoining or nearby roads.

118 **Removal of UST, Site Remediation and Validation**
The recommendations of the Remediation Action Plan prepared by ei Australia dated 8 March 2018 must be implemented for removal of UST and remediation of the site for the proposed development. The remediation works must be conducted in accordance with the requirements of the Contaminated Land Management Act 1997, Chapter E20 of Wollongong DCP 2009 and the Protection of the Environment Operations Act UPSS Reg 2008.

119 **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 Certifying Authority, and a copy submitted to Council (in the event that Council is not the Principal Certifying Authority), prior to commencement of the construction works.

120 **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 (<http://www.safework.nsw.gov.au>).

121 **Provision of Waste Receptacle**
The developer must provide an adequate receptacle to store all waste generated by the development, pending disposal. The receptacle must be regularly emptied and waste must not be allowed to lie or accumulate on the property other than in the receptacle. Consideration should be given to the source separation of recyclable and re-usable materials.

122 The building site must be kept free of rubbish at all times. All refuse capable of being wind blown must be kept in a suitable waste container.

123 Building operations such as brick cutting, the washing of tools or paint brushes, or other equipment and the mixing of mortar must not be carried out on the roadway or public footpath or any other locations which could lead to the discharge of materials into the stormwater drainage system or natural watercourse.

124 **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. All sealed surfaces intended to carry vehicular traffic must be managed with the aim of preventing windblown dust emissions.

125 **No Adverse Run-off Impacts on Adjoining Properties**
The design of the development shall ensure there are no adverse effects to adjoining properties or upon the land 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.

126 **Re-direction or Treatment of Stormwater 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.

127 **Supervision of Engineering Works**
All engineering works associated with the development are to be carried out under the supervision of a practicing engineer.

128 **Protection of Excavations**
If an excavation associated with the erection or demolition of a building extends below the level of the base of the footings of a building on adjoining allotment of land, the person causing the excavation to be made:

a must preserve and protect the adjoining building from damage; and
b if necessary, must underpin and support the building in an approved manner; and
c must, at least seven (7) days before excavation below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation.

129 All excavations and backfilling associated with the erection of a building must be executed safely and in accordance with appropriate professional standards.

130 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.

131 **Excess Excavated Material - Disposal**
Excess excavated material shall be classified according to NSW Environment Protection Authority's Waste Classification Guidelines - Part 1: Classifying Waste (2014) prior to being

transported from the site and shall be disposed of only at a location that may lawfully receive that waste.

132 **Importation of Soils to Site**
Prior to importing any soils to site for the purpose of back-filling also requires validation testing following the EPA (1995) Sampling Design Guidelines to confirm suitability for the proposed land use.

133 **Survey Report for Floor Levels**
A Survey Report must be submitted to the Principal Certifying Authority verifying that the ground floor and driveway crest accords with the plans and levels as approved under this consent. The survey shall be undertaken after the formwork has been completed and prior to the pouring of concrete for the respective component of the building. All levels shall relate to Australian Height Datum.'

134 **Water Sensitive Urban Design (WSUD) Treatment Devices Installation**
The recommendations of the WSUD Report prepared by EZE Hydraulic Engineers Pty Ltd dated 2 January 2018 shall be implemented to achieve the stormwater quality objectives of Chapter E15 of Wollongong DCP 2009.

135 **Noise Attenuation to Comply with the SEPP Infrastructure 2007**
All of the recommendations contained within the Traffic, Rail & Environmental Noise Assessment acoustic assessment report prepared by Acoustic, Vibration & Noise Pty Ltd dated 14th March 2018 for building noise compliance shall be implemented prior to the issue of the Occupation Certiticate. The acoustic attenuation shall ensure that the following LAeq levels are not exceeded:

- in any bedroom in the building : 35dB(A) at any time between 10pm and 7am.
- anywhere else in the building (other than a garage, kitchen, bathroom or hallway): 40dB(A) at any time between 10pm and 7am.
- All mechanical plant must be satisfactorily attenuated to levels complying with noise emission criteria through appropriate location and (if necessary) standard acoustic treatments such as noise screens, enclosures, in-duct treatments (silencers/lined ducting) or similar as recommended by the acoustic report.

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

137 **Copy of Consent to be in Possession of Person carrying out Tree Removal**
The applicant/developer must ensure that any person carrying out tree removal/vegetation clearance is in possession of this development consent and/or the approved landscape plan, in respect to the trees/vegetation which have/has been given approval to be removed in accordance with this consent.

138 **Provision of Taps/Irrigation System to Landscaped Areas**
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.

139 **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.

140 **BASIX**

All the commitments listed in each relevant BASIX Certificate for the development must be fulfilled in accordance with Clause 97A(2) of the Environmental Planning & Assessment Regulation 2000.

A relevant BASIX Certificate means:

- A BASIX Certificate that was applicable to the development when this development consent was granted (or, if the development consent is modified under section 4.55 of the Environmental Planning & Assessment Act 1979, a BASIX Certificate that is applicable to the development when this development consent is modified); or
- if a replacement BASIX Certificate accompanies any subsequent application for a construction certificate, the replacement BASIX Certificate; and
- BASIX Certificate has the meaning given to that term in the Environmental Planning & Assessment Regulation 2000."

141 **Sydney Trains Requirement – Consultation**

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 party interface team. In this instance the relevant interface team is Illawarra and they can be contacted via email on Illawarra_Interface@transport.nsw.gov.au.

142 **Sydney Trains Requirement - Documentation**

Copies of any certificates, drawings, approvals/certification or documents endorsed by, given to or issued by Sydney Trains or RailCorp must be submitted to Council for its records prior to the issuing of the applicable Construction Certificate or Occupation Certificate.

143 **Sydney Trains Requirement - Environmental Protection**

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

144 **Sydney Trains Requirement - Drainage**

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

145 **Sydney Trains Requirement - Inspections**

If required by Sydney Trains, prior to the commencement of works or at any time during the excavation and construction period deemed necessary by Sydney Trains, a joint inspection of the rail infrastructure and property in the vicinity of the project is to be carried out by representatives from Sydney Trains and the Applicant. These dilapidation surveys will establish the extent of any existing damage and enable any deterioration during construction to be observed. The submission of a detailed dilapidation report will be required within 10 days following the undertaking of the inspection, unless otherwise notified by Sydney Trains.

If required by Sydney Trains, the Applicant must give Sydney Trains written notice at least five (5) business days before any of the following events occur within 25 metres of the rail corridor land:

- site investigations;
- foundation, pile and anchor set out;
- set out of any other structures below ground surface level or structures which will transfer any load or bearing;
- foundation, pile and anchor excavation;
- other excavation;
- surveying of foundation, pile and anchor excavation and surveying of as-built excavations;
- other concreting; or
- any other event that Sydney Trains has notified to the Applicant.

Prior to the Issue of the Occupation Certificate

146 **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 works-as-executed 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 DCP2009. This information must be submitted to the Principal Certifying Authority prior to the issue of the final Occupation Certificate.

147 **CCTV**

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 Councils Development Engineering Manager for assessment prior to the issue of the Occupation Certificate. Below standard work must either be replaced or repaired to Councils satisfaction prior to the issuing of the Occupation Certificate.

148 **Completion Report for Excavation Adjacent to a Public Road**

A report be provided to Wollongong City Council and Principal Certifying Authority, prepared by a qualified Civil Engineer, NPER 3 accreditation with the Institute of Engineers Australia and experienced in structural design that:

- 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 to RMS Technical direction GTD 2012/001.
- Certifies that the monitoring of the site was carried out in accordance with the requirements of RMS Technical direction GTD 2012/001.
- Provides a post construction dilapidation survey.

149 **Works-as-Executed Plans – Works within Council Land**

The submission of a Works-As-Executed (WAE) plan for works within Council land must be submitted to Councils Development Engineering Manager for assessment, prior to the release of the occupation Certificate. The Works-As-Executed 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 Works-As-Executed dimensions and levels must also be shown in red on a copy of the approved Construction Certificate plans. The Works-As-Executed (WAE) plans must include:

- Final locations and levels for all works associated with the development within Council land.
- The plan(s) must include but not be limited to the requirements stated in Chapter E14 of the Wollongong DCP 2009.

150 **Completion of Engineering Works**

The completion of all engineering works within Council's road reserve or other Council owned or controlled land in accordance with the conditions of this consent and any necessary work to make the construction effective must be to the satisfaction of Council's Manager Development Engineering. The total cost of all engineering works shall be fully borne by the applicant/developer and any damage to Council's assets shall be restored in a satisfactory manner, prior to the issue of the Occupation Certificate.

151 **Redundant Crossings**

Any existing vehicular crossings rendered unnecessary by this development must be removed and the footpath and normal kerbing and guttering must be restored. This work shall be carried out by a Council recognized concrete contractor at the developer's expense.

152 **Retaining Wall Certification**

The submission of a certificate from a suitably qualified and experienced structural engineer or civil engineer to the Principal Certifying Authority 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 Certifying Authority.

153 **Acoustic Compliance**

Prior to issue of an Occupation Certificate, the PCA shall be furnished with a copy of an acoustic compliance report prepared by a consultant who is a member of the Australian Acoustic Society (AAS) or the Associated of Australian Acoustic Consultants (AAAC). The report shall confirm that each of the dwellings has been designed and constructed to achieve the internal noise levels compliant with Clause 87 of SEPP (Infrastructure) 2007 and the 'Development Near Rail Corridors and Busy Roads – Interim Guideline'.

154 **Water Sensitive Urban Design Compliance Certificate**

The developer shall submit an engineering certificate certifying that the that the recommended water sensitive urban design filtration system/treatment devices were installed as per the Jones Nicholson WSUD report to comply with WDCP Chapter E 15 water quality objectives

155 **Completion of Landscape Works**

The completion of the landscaping works as per the final approved Landscape Plan is required prior to the issue of Occupation Certificate.

156 **BASIX**

A final occupation certificate must not be issued unless accompanied by the BASIX Certificate applicable to the development. The Principal Certifying Authority must not issue the final occupation certificate unless satisfied that selected commitments have been complied with as specified in the relevant BASIX Certificate. NOTE: Clause 154B of the Environmental Planning and Assessment Regulation 2000 provides for independent verification of compliance in relation to certain BASIX commitments.

157 **Mailboxes and Street Numbering**

The developer must install mailboxes in accordance with Australia Post Guidelines and Clause 4.5.2 of Chapter D13 of Wollongong Development Control Plan 2009. The mailboxes must be provided in one accessible location adjacent to the main entrance to the development, integrated into a wall if possible and constructed of materials consistent with the appearance of the building. Letterboxes shall be secure and large enough to accommodate articles such as newspapers, parcels and the like. Prominent house numbers are to be displayed, with a minimum number size of 150 mm in height for each number and letter in the alphabet.

Prominent house numbers are to be displayed, with a minimum number size of 150 mm in height for each number and letter in the alphabet. The developer must install minimum two (2 No.) reflective paint house number on face of kerb along street frontage of the property to assist emergency services/deliveries/visitors.

Operational Phases of the Development/Use of the Site

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

159 **Waste Collection**
Waste collection is to be undertaken by a private contractor from within the site using a vehicle no larger than a Small Rigid Vehicle (max 6.4 metres in length) from the designated loading/unloading facility enabling turning and forward egress with no more than a 3-point turn.

160 **Storage of Waste Bins and Waste**
All waste and bins associated with the development shall be stored within the waste storage rooms at all times. No waste shall be allowed to accumulate or shall be stored on or adjacent to the street frontage of the site at any time.

161 **Loading/Unloading Operations/Activities and Maintenance Vehicles**
Vehicles associated with deliveries to the building and any maintenance shall park within the basement car park where possible.

162 **Storage of Goods and Materials**
All goods, materials and equipment shall be stored within the building and no part of the land shall be used for purposes of storage.

163 **Graffiti Removal**
Any graffiti shall be removed immediately from the exterior of the building or any associated structures including any fences, site services and retaining/ planter bed walls.

164 **Strata Plan Requirements**
Should a Strata Plan be prepared for this development in the future, the following matters must be addressed:

a Garbage and recycling rooms must be contained within the common area;
b Motorbike and bicycle storage areas and visitor car parking must be contained within the common area; and
c Appropriate allocation of carparking and storage areas to the dwellings.

165 **Clothes Drying on Balconies/Terrace Areas Prohibited**
The use of the balconies/terrace areas for the external drying of clothes is strictly prohibited.

166 **Residential Storage**
Each residential unit shall be allocated storage within the residential storage area provided within the building. The residential storage area shall be appropriately secured and fitted with CCTV surveillance. This requirement shall be reflected on the Construction Certificate plans.