

Wollongong Local Planning Panel Assessment Report | 15 August 2018

WLPP No.	Item 2
DA No.	DA-2017/1521
Proposal	Residential- Demolition of existing structures and construction of an eight (8) storey residential flat building over one (1) level of basement parking
Property	Lot 1 DP 995390, Lot 1 DP 193922 5-7 Keira Street, Wollongong
Applicant	Design Workshop Australia
Responsible Team	Development Assessment and Certification- City Centre Team (VD)

ASSESSMENT REPORT AND RECOMMENDATION

EXECUTIVE SUMMARY

Reason for consideration by Wollongong Local Planning Panel - Determination

The proposal has been referred to the WLPP for determination pursuant to 2.19(1) (a) of the Environmental Planning and Assessment Act 1979. Under Schedule 2 (4) of the Local Planning Panels Direction of 1 March 2018, as the development is sensitive development being more than 4 storeys in height and SEPP 65- Design Quality of Apartment Buildings applies.

Proposal

The application was lodged on November 2017 and seeks consent for the demolition of the existing structures and the construction of an eight (8) storey residential flat building, a basement car park.

Permissibility

The site is zoned R1 General Residential pursuant to Wollongong Local Environmental Plan 2009. Construction of a residential flat building is permissible with development consent.

Consultation

The proposal was notified in accordance with Council's Notification Policy and received 5 submissions which are discussed at section 1.5 of the assessment report.

The proposal has been referred to Council's Design Review Panel (DRP) on three occasions, once prior to lodgement and twice during the development assessment period.

Main Issues

The main issues arising from the development assessment process are:-

- Overshadowing impacts;
- Privacy impacts;
- View impacts.

Recommendation

It is recommended that the development application be approved subject to the draft conditions contained in Attachment 7.

1. APPLICATION OVERVIEW

1.1 PLANNING CONTROLS

The following planning controls apply to the proposal:

State Environmental Planning Policies:

- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
- SEPP 71 Coastal Protection (Applicable at time of lodgement, since repealed but did not apply to the city centre)
- SEPP Coastal Management 2016 (Draft at time of lodgement)

Local Environmental Planning Policies:

- Wollongong Local Environmental Plan (WLEP) 2009

Development Control Plans:

- Wollongong Development Control Plan (WDCP) 2009

Other policies

- Wollongong Section 94A Development Contributions Plan
- Apartment Design Guide (ADG)

1.2 DETAILED DESCRIPTION OF PROPOSAL

The proposal involves the demolition of all structures on the 2 sites, removal of a street tree to accommodate a new driveway crossing and the construction of an 8 storey residential flat building. The building is to contain 21 units comprising of 19 x 2 bedroom and 2 x 3 bedrooms. Three of these units are adaptable units (Units 501, 601 and 701). One level of basement parking is proposed for 21 car parking spaces for residents and 5 visitor car parking spaces.

Pedestrian and vehicular access to the site will be from Keira Street. A 5.8m wide ramp into the basement is proposed. Communal open space and a common room are provided at ground floor to the east. A 6m wide deep soil planting strip is located to the rear of the site. An electrical pad mount substation and fire servicing equipment is proposed along the Keira Street frontage.

1.3 BACKGROUND

Prior to lodgement, a DRP meeting took place on 3 July 2017 (DE-2017/87).

A further 2 DRP meetings were held at lodgement stage. It is considered that the matters identified throughout these meetings have been addressed and reflected in the final design as shown in Attachment 2.

Customer service actions

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

1.4 SITE DESCRIPTION

The site is located at 5-7 Keira Street, Wollongong and the title reference is Lot 1 DP 995390 and Lot 1 DP 193922. The lots have a combined area of 1366sqm, a frontage of 30.48m to Keira Street. The site has a 3m grade difference sloping downwards from the rear to the front of the site.

The site currently accommodates a single storey dwelling on each of the lots which are proposed to be demolished as part of this application.

Directly to the north of the site is a single storey detached dwelling. To the south of the site is an existing 2 storey residential flat building. To the east of the site is a single dwelling along with a 3-4 storey residential flat building. Across the road, to the west, is a mix of single detached dwellings along with a multi-unit development and residential flat buildings.

The site is located within a high density residential zone within the Wollongong City Centre and is located within close proximity to Wollongong City Beach and public recreational areas. The site has access to public transport facilities.

No restrictions on Title are apparent.

Property constraints

- Council's records indicate that the site is located within the Coastal Zone. No impacts are expected on the coastal environment as a result of the development and there are no coastal hazards that affecting the land which would preclude the development.
- Council's records indicate the site being impact by Acid Sulfate Soils – Class 5. Conditions of approval are recommended in this regard.

1.5 SUBMISSIONS

The application was exhibited in accordance with WDCP 2009 Appendix 1: Public Notification and Advertising. This included a notice in The Advertiser. Five (5) submissions were received with the following concerns:

Table 1: Submissions

Concerns	Response
<p>1. Overdevelopment/out of character</p> <p><i>The proposal development is an over-development of the site and out of character with the surrounds.</i></p>	<p>Keira Street is an area of transition. It is surrounded by large scale residential development in the adjoining streets but the Street also contains older style walk ups and two and single storey dwellings. Whilst out of character with the single dwellings it is in keeping with the development immediately to the east. The proportion of the proposed development is a function of the proposed amalgamation of two lots which is required by clause 7.14 of WLEP2009. In this context, the proposal is considered to be consistent with the desired future character of the area as identified through the development standards and controls applicable to the land which have been in place for many years.</p> <p>Although the proposal currently exceeds the heights of existing buildings within the immediate locality, the proposal is consistent with the character of the broader locality which has experienced similar development growth to the height and floor space controls applicable to this site and area.</p> <p>The development achieves compliance with current planning controls in relation to permissibly, height, site width and floor space restriction. Over time, it is envisaged that similar properties will be redevelop to a similar scale.</p>
2. View loss	Varying levels of view impacts are anticipated based on

Loss of views to the escarpment and water views.

the location of the neighbouring properties and the scale of the properties (i.e. single storey vs 3 storey flats). View impacts are mainly in relation to views obtained to the ocean and the escarpment.

A view analysis undertaken using a drone and 3D modelling has been submitted with the application showing the built form of the building from surrounding viewpoints. Specifically, the corner of Kiera and Edwards Street looking north east, the corner of Park and Edwards Street looking northwest and the corner of Bourke and Church Street looking south west at varying RLs. This analysis is found in Attachment 3.

It is anticipated that given the strategic planning controls of 32m height limit for this area, further impacts to views will occur in this locality. Views may, over time, also be obtained from new developments with higher RLs to capture lost views.

The proposed building achieves the required side and rear setback controls which assist in providing view corridors thus enabling view sharing.

When considering view impacts against the planning principles in *Tenacity Consulting v Warringah* [2004] NSWLEC140, a 4 step assessment process is applied, as outlined below.

1. Assessment of views to be affected

Corner of Kiera and Edwards Street looking north east.

At RL 30.7 (eye level) there is no view of the ocean or land water interface. At RL 36.7 (7.7m or approx. 2.5 storeys) there is minimal view of the ocean and no land water interface. The views from RLs 41.7 (12.7m or approx. 4.5 storeys)-52.7 (23.7m or approx. 8 storeys) are almost the same showing a degree of ocean views with no land water interface.

Corner of Park and Edward Street looking northwest

At RL 30.7 (eye level) and RL 36.7 (7.7m or approx. 2.5 storeys) views to the escarpment are obstructed by the existing RFB. At RL 41.7 (12.7m or approx. 4.5 storeys) approximately two storeys of the building can be seen above the RFB and breaking the line of the escarpment. Between RL 47.7 (18.7m or approx. 6.5 storeys) and RL 52.7 (23.7m or approx. 8 storeys), approximately four storeys of the building can be seen above the RFB but the line of the line of the escarpment is unbroken.

Corner of Bourke and Church Street looking south west

Between RL 25.7 (5.2m or approx. 2 storeys) and RL 30.7 (7.7m or approx. 2.5 storeys) views to the escarpment are obstructed by the existing RFB in the foreground and background. At RL 36.7 (16.2m or approx. 5.5 storeys)

	<p>approximately two storeys of the building can be seen above the RFBs and breaking the line of the escarpment. Between RL 41.7 (21.2m or approx. 7 storeys) and RL 52.7 (32.2m or approx. 10.5 storeys), approximately six storeys of the building can be seen above the RFBs but the line of the line of the escarpment is unbroken.</p> <p><i>2. What part of the property the views are to be obtained?</i></p> <p>The distant coastal and escarpment views are available across the side boundaries as identified above and in the view analyses, which are more difficult to protect.</p> <p><i>3. The extent of the impact</i></p> <p>The view analysis and assessment of the views above shows that the views towards the ocean and escarpment are available at much higher levels. Many of the views are from fairly acute angles and partially obstructed by existing buildings and vegetation. The expectation to retain views in perpetuity may be unrealistic given that the WLEP 2009 permits a height limit of 32m to the east of Keira Street. Any future residential flat buildings that are compliant with WLEP 2009 and WDCP 2009 are likely to further reduce available ocean views the proposal</p> <p><i>4. The reasonableness of the proposal creating the impact</i></p> <p>The development does not propose any variations to planning controls that contribute to view loss, and the scale of the proposed building is supported by Wollongong Local Environmental Plan 2009. It is considered reasonable with regard to view impacts.</p>
<p>3. Traffic/parking</p> <p><i>Concerns over the traffic and lack of parking provided. An additional visitor parking space should be provided. 2 levels of basement should be provided</i></p>	<p>The site and the surrounding area have been zoned for high density residential development for many years. The impact on and capacity of the area to cope with permitted development has been taken into account in the studies that have informed the planning instruments. Additionally, the proposal is considered to be consistent with the desired future character of the area as identified through the development standards and controls applicable to the land. Council's Traffic Section has assessed the application against the requirements of the DCP and found it to be satisfactory in regards to traffic generation and impacts. The application was not required to be referred to RMS or Traffic committee.</p> <p>The proposed development provides for the required amount of visitor parking (one additional space provided) and as such is considered satisfactory in regards to offsite parking impacts. A footpath exists at the frontage of the development.</p> <p>The application has compliant parking for both residents and visitors.</p>

<p>4. Overshadowing</p> <p><i>Adjoining development will be in full shadow in all seasons.</i></p>	<p>The east west orientation of the site and scale of the building will create overshadowing of adjoining buildings to the south. Overshadowing impacts are a result of the height controls of the site (i.e. 32m) and the orientation of the allotments.</p> <p>The overshadowing impact has been detailed in hourly shadow diagrams submitted with the application. The shadow impact assessment is always undertaken on the worst case scenario being the winter solstice. The shadows cast at every other time of year are less than that of the mid-June shadow. It is considered that the shadow diagrams submitted are an accurate representation of the shadow forecast for the building on the worst case scenario.</p> <p>Further discussion is provided in Section 2.3.</p>
<p>5. Privacy impacts.</p>	<p>Concerns over privacy were also initially raised by the DRP particularly in relation to the initial extensive number of balconies and glazing originally along the northern elevation.</p> <p>As a result of DRP input, visual privacy has been improved. North-western balconies have been re-orientated to the street frontage to reduce the impact on the northern elevation.</p> <p>Deep podium planting bed is proposed on level 1 along with planters on the balconies on the above units. Flexi brick screening has been introduced to obstruct views to neighbouring properties. Improvements have been made to window location and layout on the northern elevation. Setbacks have been increased and are ADG compliant.</p> <p>It is considered that the applicant has adequately addressed visual privacy concerns.</p>
<p>6. Housing choice and mix</p> <p><i>Concerns raised that housing choice and mix Housing choice do not meet requirements being less than 10% adaptable, and less than 10% 3b/r and no 1 b/r.</i></p>	<p>The proposed development provides for 2 and 3 bedroom units with no 1 bedroom apartments. As discussed below at section 2.3 the omission of 1 bedroom apartments in this location is considered acceptable in this case.</p>

1.6 CONSULTATION

INTERNAL CONSULTATION

Internal Referrals

Council's Geotechnical, Stormwater, Traffic, and Landscaping, Environment Officers have reviewed the application and provided satisfactory referral comments. Conditions of consent have been recommended and are included in the draft conditions at Attachment 7.

Design Review Panel

The application was referred to the DRP on 3 separate occasions, once prior to lodgment of the Development Application and 2 separate occasions during assessment. The last DRP meeting for this application was held on the 15 May 2018. Commentary from this meeting is found in Attachment 4 and is summarised below:

- Additional site and contextual information has been provided from applicant (requested in a previous meeting) indicating the extent of the impacts to the neighboring properties.
- The Panel noted that this information demonstrates that impacts created on this site are largely unavoidable and would be created even by a much smaller building.
- The Panel noted that the applicant was required to demonstrate mitigation of privacy impacts to the neighboring property to the east.
- Changes to the built form were submitted, however concerns remain over:
 - o NW balconies have not been rotated to the street
 - o North facing treatment of the building remains insufficiently defensive
 - o Many windows are not legible on the plans
 - o There appears to be a missed opportunity to break down the building's imposing scale
 - o Roof design should be addressed.
 - o A number of internal amenity issues were discussed with the applicant relating to layout of kitchen/living areas, bedroom locations and amenity of private open space.
 - o In terms of aesthetics, the Panel noted that there were no apparent design expressions and the no attempt to modulate the built form vertically and no consistency applied to horizontal rhythm or integration with the landscape.

Updated plans were received following this meeting including additional information on the proposed colours and materials along with more details on the window location. Changes to balcony layout and location have occurred to address privacy concerns and are ADG compliant. A number of north-western balconies have been re-orientated towards the street frontage to reduce privacy impacts along the northern elevation.

The DRP suggested the use of landscape planters on balconies to break up the built form and address privacy concerns. This has been incorporated into the design.

Adjustments have been made to the overall built form to incorporate vertical and horizontal rhythm. The Panel viewed the proposed building as a being a 'large rectangular prism'. Through the use of landscape planters, increased setbacks and changes to materials and architectural features, the building now appears to incorporate a base, middle section and top section. A number of internal room layout changes have occurred to address the concerns raised by the DRP. The internal room layouts are now satisfactory. As a result of recommendations from the DRP, changes to the layout of the basement, common room and the location of the substation have also been undertaken to improve the overall design.

On balance, the amended plans are considered to appropriately respond to the recommendations and suggestions of the DRP. Therefore, the consent authority can be satisfied that appropriate consideration has been given to the DRP matters.

EXTERNAL CONSULTATION

Endeavour Energy:

The applicant identified the need for a pad mount substation as the proposed development cannot

be serviced by the existing local network. The application was referred to Endeavour Energy who recommended conditions of approval.

Sydney Water:

The application was referred to Sydney Water who recommendation for a Section 73 Certificate to be obtained.

2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979 – 4.15 EVALUATION

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

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

7 Contamination and remediation to be considered in determining development application

The subject site is zoned for residential and is currently being used to accommodate dwelling houses. A search of the site's history indicates that the sites have been used for residential purposes. There is no previous history of other uses that could be considered to be potentially contaminating. The site is considered unlikely to be contaminated and is suitable for the proposed development. No concerns are raised in regard to contamination as relates to the intended use of the land and the requirements of clause 7. Therefore the proposal is considered to be consistent with SEPP 55.

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

SEPP 65 aims to deliver a better living environment for the residents within residential apartment developments and enhance the streetscapes and neighbourhoods in which these buildings are located.

The development meets the definition of a 'residential flat building' as it is more than 3 storeys and comprises more than 4 dwellings. As such, the provisions of SEPP 65 apply. The proposal has been considered by Council's DRP in accordance with Clause 28 and Schedule 1, as reflected at section 1.5.1 above.

A statement has been prepared by a Registered Architect addressing the requirements of SEPP 65 and was submitted with the application accordance with Clauses 50(1A) & 50(1AB) of the Environmental Planning and Environment Regulation 2000.

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) of the Policy and are discussed below.

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.

The existing character of development in the locality comprises a variety of building types including one and two storey dwellings and some medium density housing development including walk-up flats. This site appears to be one of the first to be redeveloped using the current planning controls.

This development reflects the desired future character for the area as defined by the planning controls.

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.

The bulk and scale of the development is generally consistent with the applicable planning controls for the area with the locality expected to transition over time, with larger scale developments replacing the original smaller single dwelling houses.

The development is not considered to be out of context with regard to the desired future character of the area and the R1 zone. The potential impacts of the development on the locality and adjoining development are considered to have been addressed through a number of redesigns of the proposal in response to concerns raised by the DRP.

The design of the development is considered to positively contribute to the public domain and provide amenity for the occupants by way of landscaped areas, private open space, communal open space and dwelling layout.

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. Service providers including Endeavour Energy have been consulted during the assessment process. 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.

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 sustainable design as follows:

- BASIX Certificate provided indicating minimum requirements are met.
- A Site Waste Management and Minimisation Plan have been provided indicating recycling of materials from the demolished structure.

- The proposal does not impact on any heritage items or environmentally sensitive areas
- The proposal is an efficient use of land in a location that is close to services and public open space.
- Units are provided with natural cross ventilation and internal layouts have been designed to provide for good solar access to primary living areas and POS areas.

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 provides suitable landscaped areas and communal open space that will provide for appropriate amenity to the occupants and soften the appearance of the development from adjoining properties and the public domain. Elevated planter boxes have been introduced into the design especially along the northern elevation to minimise any privacy impacts.

Deep soil planting and a common lawn planting area have been incorporated into the site design. Compensatory street planting has been recommended by Council's Landscape Division due to the need for street tree removal to accommodate the driveway access.

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.

Amenity for the units and the adjoining neighbours has been addressed in response to concerns raised during the DRP meetings. This has included maintaining a high level of amenity for existing neighbouring properties along with providing amenity for the future occupants of the building through unit design and layout.

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

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 proposal is satisfactory with regard to safety and security. A more defined pedestrian entry has been incorporated into the design from the street entrance following recommendations from the

DRP. Also, living rooms have been re-orientated to face the street frontage to assist in casual street surveillance. The design provides for minimal areas of concealment and entrapment with natural surveillance of common spaces. A clear definition between public and private space has been provided within the design.

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.

Two and three bedroom units are proposed with this development. 10% of the units are also proposed as accessible. One bedroom or studio units are not proposed. Variation to Chapter D13, Clause 6.2 – Housing Choice and Mix of Wollongong DCP2009 is proposed in response to the locality.

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 proposal is considered to be of a high quality with regard to its appearance. Improvements have been made in response to the DRP meetings. The concerns from the DRP in relation to the apparent bulk of the built form and lack of vertical or horizontal rhythm of the building have been improved. A mixture of materials and finishes is provided and articulation has been introduced into the design through deep planter and increased setbacks.

An assessment of the application against the Apartment Design Guide (ADG) was undertaken and a compliance table provided at Attachment 5.

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

In accordance with Schedule 1 of the Regulations and SEPP 2004 a BASIX Certificate has been submitted in support of the application demonstrating that the proposed scheme achieves the BASIX targets.

2.1.4 WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009

Part 2 Permitted or prohibited development

Clause 2.2 – zoning of land to which Plan applies

The zoning map identifies the land as being zoned R1 General Residential

Clause 2.3 – Zone objectives and land use table

The objectives of the zone are as follows:

- *To provide for the housing needs of the community.*
- *To provide for a variety of housing types and densities.*
- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*

The proposal is satisfactory with regard to the above objectives as the proposed residential flat building will provide for housing needs of the community.

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

Attached dwellings; Bed and breakfast accommodation; Boarding houses; Child care centres; Community facilities; Dual occupancies; Dwelling houses; Environmental facilities; Exhibition homes; Group homes; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Recreation areas; **Residential flat buildings**; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Serviced apartments; Shop top housing; Signage.

The proposal is categorised as a 'Residential flat building' as described below and is permissible in the zone with development consent.

Clause 1.4 Definitions

Residential flat building means a building containing 3 or more dwellings, but does not include an attached dwelling or multi dwelling housing.

Note. Residential flat buildings are a type of residential accommodation— see the definition of that term in this Dictionary.

Clause 2.7 Demolition requires development consent

The proposed development includes demolition of the existing dwellings and associated structures and is consistent with the requirement of clause 2.7.

Part 4 Principal development standards

Clause 4.3 Height of buildings

The proposed maximum building height of 26.5m does not exceed the maximum of 32m permitted for the site.

Clause 4.4 Floor space ratio

Maximum FSR permitted for the zone: 1.5:1

FSR provided: 2016.95sqm/1366sqm = 1.48:1

The proposal complies with the maximum allowable FSR.

Part 5 Miscellaneous provisions

Clause 5.5 Development within the coastal zone

Clause 5.5 was repealed at the commencement of SEPP (Coastal Management) 2018 however prior to this, consideration was given to matters prescribed by Clause 5.5. No concerns are raised in relation to impacts of the proposed development on the coastal zone values. The site is some distance from the foreshore and is not identified as being impacted by coastal hazards. There are not expected to be any adverse impacts on the coastal environment or public access to the foreshore as a result of the application. The consent authority can be satisfied that the development will not impede or diminish access to the coastal foreshore; will be serviced by reticulated water and sewerage services; will appropriately manage stormwater and will not be significantly affected by coastal hazards, or either have a significant impact on coastal hazards, or increase the risk of coastal hazards in relation to any other land.

Clause 5.10 Heritage conservation

The nearest listed items of environmental heritage include Item No. 6384 a Magnolia at 42 Bourke Street (Corner of Virginia Street), Item No. 6372, a house 12 Edward Street and Item No. 6244 – a House 27 Edward Street. There are not likely to be any heritage impacts upon these items.

Part 7 Local provisions – general

Clause 7.1 Public utility infrastructure

The subject site is serviced by utilities to service the proposal. Referral to Endeavour Energy and Sydney Water has taken place during the assessment process. Draft conditions are recommended requiring approval from the relevant authorities prior to the issue of the construction certificate.

Clause 7.5 Acid Sulfate Soils

The proposal is identified as being affected by class 5 acid sulphate soils. Council's Environment Officer has reviewed the application and has provided conditions relating to acid sulfate soils management.

Clause 7.6 Earthworks

The proposal comprises basement excavation. The earthworks have been considered by Council's Geotechnical and Stormwater officers in relation to site stability and drainage. Draft Conditions are recommended.

Clause 7.14 Minimum site width

This Clause requires that development for the purposes of a residential flat building be carried out only on land that has a dimension of 24m. The site has a site width of 30.48m and complies with this Clause.

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

The proposal is within the Wollongong city centre and clause 7.18 applies.

(3) 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.

It is considered that the proposal exhibits design excellence as discussed in further detail below:

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

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

It is considered that the development provides for a high standard of design, materials and detailing appropriate for the building type and its location.

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

It is considered that the form and appearance of the development will improve the quality of the public domain in place of the existing two dwellings.

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

The subject site is located just within the nominated distant panoramic view corridor identified in Figure 3.12 (Clause 3.10 of Chapter D13 of WDCP 2009) however as it is within the allowable building height and density for the site and generally provides for compliant building setbacks, the impacts on the available view corridor are not considered to be unreasonable.

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

The development will not overshadow any key site on the Map.

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

(i) the suitability of the land for development,

(ii) existing and proposed uses and use mix,

- (iii) heritage issues and streetscape constraints,*
- (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,*
- (v) bulk, massing and modulation of buildings,*
- (vi) street frontage heights,*
- (vii) environmental impacts such as sustainable design, overshadowing, wind and reflectivity,*
- (viii) the achievement of the principles of ecologically sustainable development,*
- (ix) pedestrian, cycle, vehicular and service access, circulation and requirements,*
- (x) impact on, and any proposed improvements to, the public domain.*

The site is considered to be suitable for the development. The height, form and design are considered to appropriately relate to the future desired character. The building is consistent with newer residential flat buildings within the Wollongong City Centre. There are no heritage issues or streetscape constraints. The development achieves compliance with relevant planning controls with regard to setbacks, parking and ESD principles. Amenity has been improved to address privacy concerns. Overshadowing impact to neighbouring properties is to occur due to the height of the development in relation to surrounding properties and the orientation of all allotments. The landscape plan provided with the application makes provision for public domain improvements including street tree planting

Clause 8.1 Objectives for development in Wollongong city centre

- (a) to promote the economic revitalisation of the Wollongong city centre,*
- (b) to strengthen the regional position of the Wollongong city centre as a multifunctional and innovative centre that encourages employment and economic growth,*
- (c) to protect and enhance the vitality, identity and diversity of the Wollongong city centre,*
- (d) to promote employment, residential, recreational and tourism opportunities within the Wollongong city centre,*
- (e) to facilitate the development of building design excellence appropriate to a regional city,*
- (f) to promote housing choice and housing affordability,*
- (g) to encourage responsible management, development and conservation of natural and man-made resources and to ensure that the Wollongong city centre achieves sustainable social, economic and environmental outcomes,*
- (h) to protect and enhance the environmentally sensitive areas and natural and cultural heritage of the Wollongong city centre for the benefit of present and future generations.*

The proposal would contribute to a residential unit mix through the provision of additional housing and employment opportunities during construction. The vitality of the city centre is enhanced through living within the centre where residential flat buildings are consistent with the centre identity and diversity. It is considered that the development provides for a standard of design, materials and detailing appropriate for the building type and its location and zoning. The proposal provides a mixture of 2 and 3 bedroom units that are expected to contribute towards housing choice and affordability in Wollongong.

The proposed residential flat building is considered an efficient use of space in an accessible location that is considered to encourage use of public transport and existing services.

The proposal is not expected to impact on natural or cultural heritage values.

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

Draft State Environmental Planning Policy (Coastal Management) 2016

Draft State Environmental Planning Policy (Coastal Management) 2016 and associated maps had been exhibited at the time of lodgement of the application and the policy (dated 2018) has now been gazetted.

Maps published with the SEPP indicate the land is located in an overlapping Coastal Environment area and Coastal Use area.

Division 3 clause 13 applies to coastal environment areas. Consent must not be granted unless the consent authority has considered matters set out in subclause 1 and 2. These matters include impacts on vegetation, marine life and water quality, vegetation, Aboriginal heritage and community access. The development is designed, sited and will be managed to avoid an adverse impact referred to in subclause 1. All matters detailed in subclause 1 and 2 are considered satisfactory.

Division 4 clause 14 applies to coastal use areas. Consent must not be granted unless the consent authority has considered matters set out in subclause 1 and 2. These matters include impacts on safe public access, overshadowing, wind funnelling, and loss of views, visual amenity, Aboriginal heritage and cultural and built environment heritage. The development is designed, sited and will be managed to avoid an adverse impact referred to in subclause 1. All matters detailed in clause 1 and 2 are considered satisfactory.

Division 5 includes general provisions for development in the coastal zone. Clause 16 applies to development in the coastal zone generally and states that development consent must not be granted to development on land within the coastal zone unless the consent authority is satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land. As detailed elsewhere within this report, due to its location, the proposal is not expected to increase the risk of coastal hazards on the subject land or any other land.

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 WDCP2009 and found to be satisfactory. A full compliance table can be found at Attachment 6 to this report; only the variations are discussed below:

8. Variations to development controls in the DCP

The applicant has submitted a variation request in relation to housing choice and mix and overshadowing

Clause 6.2 Housing Choice and mix

The objectives of the Clause are:

- 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 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.*

This clause requires that studio and one bedroom units must not be less than 10% of the total mix of units within each development. There are no one bedroom units proposed. The application proposes a mix of 2 and 3 bedroom units.

Applicant's submission

Research into current market expectations for the area show that one bedroom and studio sized apartments are not desirable for such a location; the immediate area is best suited (from a demand perspective) to large unit sizes. The range of variations in apartment layout and orientation per floor provides an appropriate dwelling mix.

Comment

The objectives of 6.2.1 have been considered. In relation to a) and b) the applicant proposes dwelling types (2 and 3 bedroom) and 3 adaptable units. With regard to c), each unit is of a sufficient size and layout to allow for changing resident needs over time. In relation to d) units 501, 601 and 701 will meet adaptable unit requirements. In summary, although the numerical requirements of this Clause have not been strictly met in this circumstance it is considered that the objectives of this Clause have been met and the proposed variations have been reasonably justified.

Clause 6.9 Overshadowing

The objective of the Clause is:

- e) *a) Minimise the extent of loss of sunlight to living areas and private open space areas of adjacent dwellings.*

This Clause requires that adjacent buildings and their public spaces receive at least 3 hours of direct sunlight between 9am and 3pm on 21 June.

Comment

The proposed development will create overshadowing impact upon the adjoining unit windows and balconies to the south, 9 Keira Street during the winter solstice. Only the eastern part of the building will receive sunlight during the hours of 9am to 11am. The western part will achieve sunlight after 2pm. As part of assessing overshadowing impact, the most recent Planning Principle on solar access is *The Benevolent Society v Waverly Council* [2010] NSWLEC 1082. The Principles includes the following:

- *The ease with which sunlight access can be protected is inversely proportional to the density of development. At low densities, there is a reasonable expectation that a dwelling and some of its open space will retain its existing sunlight. (However, even at low densities there are sites and buildings that are highly vulnerable to being overshadowed.) At higher densities sunlight is harder to protect and the claim to retain it is not as strong.*

Comment

The site currently occupies single storey buildings. However, Council's LEP 2009 permits a building height of 32m and an FSR of 1.5:1. It is considered that this proposal is at a level which can be expected for the subject site having regard to the high-density controls.

- *The amount of sunlight lost should be taken into account, as well as the amount of sunlight retained. Overshadowing arising out of poor design is not acceptable, even if it satisfies numerical guidelines. The poor quality of a proposal's design may be demonstrated by a more sensitive design that achieves the same amenity without substantial additional cost, while reducing the impact on neighbours.*

Comment

The applicant's justification statement claims that a four-storey development on this site would have a similar overshadowing impact to the adjoining properties due to the orientation of the site. There is a significant degree of sunlight lost as a result of this development. However, this is not a result of poor design as the development is situated over 2 parcels of land and complies with required setback distances. Modulating the building further with increased setbacks at upper levels would not significantly reduce the amount of overshadowing impact to the neighbouring dwellings. The notes issued from the final DRP meeting states that 'the impacts created on this site are largely unavoidable and would be created by a much smaller building'.

- *For a window, door or glass wall to be assessed as being in sunlight, regard should be had not only to the proportion of the glazed area in sunlight but also to the size of the glazed area itself. Strict mathematical formulae are not always an appropriate measure of solar amenity. For larger glazed areas, adequate solar amenity in the built space behind may be achieved by the sun falling on comparatively modest portions of the glazed area.*
- *For private open space to be assessed as receiving adequate sunlight, regard should be had of the size of the open space and the amount of it receiving sunlight. Self-evidently, the smaller the open space, the greater the proportion of it requiring sunlight for it to have adequate solar amenity. A useable strip adjoining the living area in sunlight usually provides better solar amenity, depending on the size of the space. The amount of sunlight on private open space should ordinarily be measured at ground level but regard should be had to the size of the space as, in a smaller private open space, sunlight falling on seated residents may be adequate.*

Comment

Hourly shadow diagrams have been submitted with the application showing the impact on the north facing windows and balconies of adjoining property to the south. The balcony appears to be the private open space for the ground floor and upper floor units.

- *Overshadowing by fences, roof overhangs and changes in level should be taken into consideration. Overshadowing by vegetation should be ignored, except that vegetation may be taken into account in a qualitative way, in particular dense hedges that appear like a solid fence.*

Comment

There is no overshadowing impact by fences, roof overhangs or vegetation.

- *In areas undergoing change, the impact on what is likely to be built on adjoining sites should be considered as well as the existing development.*

Comment

The site is situated in an R1 zone with similar zoning and height controls applying to the immediate area. The applicant submitted a Solar Access Report (Steve King 18 June 2018) with the application which models future redevelopment on this site of a similar height and scale to this application. The outcome of the modelling concludes that the hypothetical building would receive a minimum 2 hours solar access for 76.2% of the apartments.

2.3.2 WOLLONGONG SECTION 94A DEVELOPMENT CONTRIBUTIONS PLAN 2017

The estimated cost of works is \$5, 000, 000 and 1% section 94A levy is applicable under this plan as the threshold value is \$200,000. This is accounted for in the draft conditions.

2.4 SECTION 4.15 1(A)(IIIA) ANY PLANNING AGREEMENT THAT HAS BEEN ENTERED INTO UNDER SECTION 93F, OR ANY DRAFT PLANNING AGREEMENT THAT A DEVELOPER HAS OFFERED TO ENTER INTO UNDER SECTION 93F

There are no planning agreements entered into or any draft agreement offered to enter into under S93F which affect the development.

2.5 SECTION 4.15 1(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?

The application involves demolition and as such the provisions of AS 2601-2001: The Demolition of Structures applies. Draft conditions are recommended in this regard.

The site is located within the coastal zone as discussed at section 2.1.5 above.

93 Fire safety and other considerations

Not applicable.

94 Consent authority may require buildings to be upgraded

Not applicable.

2.6 SECTION 4.15 1(A)(V) ANY COASTAL ZONE MANAGEMENT PLAN (WITHIN THE MEANING OF THE COASTAL PROTECTION ACT

On 30 October 2017, Council endorsed the final draft of the Wollongong Coastal Zone Management Plan for resubmission to the NSW Minister for Environment for certification under the Coastal Protection Act (1979). The draft Plan was certified on 20 December 2017. For the Plan to take effect, the Act requires that the certified draft Plan be adopted by Council and published in the NSW Gazette. The Plan was published in the NSW Government Gazette on 23 March 2018. The proposal does not raise any issues having regard to this plan. The site is not located in close proximity to the coast or other watercourses or public areas leading to the coast. Minimal to nil adverse impact on the coastal environment is anticipated as a result of the proposed development.

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

Context and Setting:

The site is located in a residential zone which is transitioning from small scale residential dwellings to residential flat buildings. The proposal is appropriate with regard to its context with regard to matters including overshadowing, privacy concerns, bulk, scale, height and setbacks. The development will result in some overshadowing of the adjoining dwellings to the immediate south of the site, as expected. This is not however considered unacceptable given the circumstances of the case as the development is within the allowable height and FSR for the site and having regard to the orientation of the land. Context and neighbourhood character have been addressed above in relation to SEPP 65 and the development is considered to be acceptable in this regard.

It is noted that the area is one in transition and whilst the development may not reflect the scale and design of current developments nearby, it does reflect the character of more recent surrounding development and is acceptable with regard to the desired future character of the neighbourhood reflected in the applicable planning controls. In summary, the proposal has been assessed with regard to the amenity impacts from the development, the zoning, permissible height and FSR for the land, and existing and future character of the area, and is considered to be compatible with the local area.

It is considered that the impacts have been addressed during the assessment process and in depth during the DRP meetings. This has resulted in design changes to ensure the proposed building fits into the existing and future context and setting of the immediate and broader locality.
<u>Access, Transport and Traffic:</u> The proposal is satisfactory with regard to carparking, access and traffic matters.
<u>Public Domain:</u> The proposal is not expected to have adverse impacts on the public domain. Appropriate conditions of consent are recommended to address required public domain works
<u>Utilities:</u> The proposal is not envisaged to place an unreasonable demand on utilities supply. Existing utilities are generally adequate to service the proposal. The plans make provision for a pad mounted substation at the street frontage. The location indicated on the plans is acceptable.
<u>Heritage:</u> There are not anticipated to be any impacts upon nearby heritage items.
<u>Other land resources:</u> The proposal is considered to contribute to orderly development of the site, the desired future character of the locality and is not envisaged to impact upon valuable land resources
<u>Water:</u> The site is presently serviced by Sydney Water. The proposal is not envisaged to have unreasonable water consumption. BASIX considerations have been met and draft conditions have been recommended in relation to this matter.
<u>Soils:</u> It is expected that, with the use of appropriate erosion and sedimentation controls during construction, soil impacts will not be unreasonably adverse. Council records indicate that the site contains acid sulphate soils. Conditions are recommended.
<u>Air and Microclimate:</u> The proposal is not expected to result in negative impacts on air or microclimate.
<u>Flora and Fauna:</u> There is no significant vegetation removal required.
<u>Waste:</u> A condition is proposed that an appropriate receptacle be in place for any waste generated during the construction. Garbage storage is located within the basement area. Neither of these areas will be able to be viewed from the street or communal open space area. Separate areas for recycling and general rubbish are provided in both areas. Kerbside collection once a week is proposed and is considered acceptable for the residential units. The residents will need to arrange for the bins to be moved from the storage room to the kerbside on collection day.
<u>Energy:</u> The proposal is not envisaged to have unreasonable energy consumption. A BASIX Certificate has been submitted which indicates that the proposal meets the objectives of SEPP (BASIX).

<p><u>Noise and vibration:</u></p> <p>Draft conditions have been recommended to ensure that noise nuisance is minimised during demolition and construction.</p>
<p><u>Natural hazards:</u></p> <p>Council's land information records do not indicate that the site is affected by natural hazards that would prevent the proposal.</p>
<p><u>Technological hazards:</u></p> <p>Council's land information records do not indicate that the site is affected by technological hazards that would prevent the proposal.</p>
<p><u>Safety, Security and Crime Prevention:</u></p> <p>CPTED matters have been considered as discussed in attachment 6. This application does not result in any opportunities for criminal or antisocial behaviour.</p>
<p><u>Social Impact:</u></p> <p>The proposal is not expected to result in negative social impacts.</p>
<p><u>Economic Impact:</u></p> <p>The proposal is not expected to result in negative economic impacts.</p>
<p><u>Site Design and Internal Design:</u></p> <p>The application does not result in any departures from development standards. The applicant proposes variation to Wollongong Development Control Plan, 2009, as discussed in Section 2.3 of this report. A condition is recommended that all works are to be in compliance with the Building Code of Australia.</p>
<p><u>Construction:</u></p> <p>Draft conditions are recommended in relation to construction impacts for hours of work, erosion and sedimentation controls, works in the road reserve, excavation, demolition and use of any crane, hoist, plant or scaffolding.</p>
<p><u>Cumulative Impacts:</u></p> <p>The proposal is not expected to result in negative cumulative impacts.</p>

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

Does the proposal fit in the locality?

The proposal is considered appropriate with regard to the zoning of the site and the desired future character of the neighbourhood as reflected in the relevant development controls and is not expected to have any unreasonably deleterious impacts on the amenity of the locality or adjoining developments. Consideration has been given to potential amenity impacts arising from the proposed development and no concerns are raised that cannot be managed by conditions where appropriate.

Are the site attributes conducive to development?

There are no site constraints that would prevent the proposal.

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

Refer to discussion in Section 1.5 of this report.

2.10 SECTION 4.15 1(E) THE PUBLIC INTEREST

The development is not expected to result in unreasonable impacts on the environment or the amenity of the locality. It is considered appropriate with consideration to the zoning and the expected future character of the locality and is therefore considered to be in the public interest.

3 CONCLUSION

This application has been assessed as satisfactory having regard to the Heads of Consideration under Section 4.15 of the Environmental Planning and Assessment Act 1979, The proposed development is permissible with consent and has regard to the objectives of the zone and is consistent with the applicable provisions of the relevant planning instruments including Wollongong LEP 2009 and SEPP 65, ADG, Council DCPs, Codes and Policies.

The design of the development is appropriate with regard to the controls outlined in these instruments. The proposal involves minor variations to housing choice and mix and overshadowing under WDCP2009. Variation request statements and justification have been provided for the non-compliances in accordance with Chapter A1 of WDCP2009. The variations have been considered and are supported in this instance. Internal referrals are satisfactory and submissions have been considered in the assessment. It is considered that the proposed development has otherwise been designed appropriately given the nature and characteristics of the site and is unlikely to result in significant adverse impacts on the character or amenity of the surrounding area. Recommendations of the Design Review Panel have been incorporated into revised plans

4 RECOMMENDATION

It is recommended that development application DA-2017/1521 be approved subject to the draft conditions contained in Attachment 7.

5 ATTACHMENTS

- 1 Aerial photograph and WLEP 2009 zoning map
- 2 Plans
- 3 View Analysis
- 4 Design Review Panel notes of 15 May 2018
- 5 Apartment Design Guide Assessment
- 6 Wollongong DCP 2009 Assessment
- 7 Draft conditions

Attachment 1- Zoning Map and Aerial Photograph

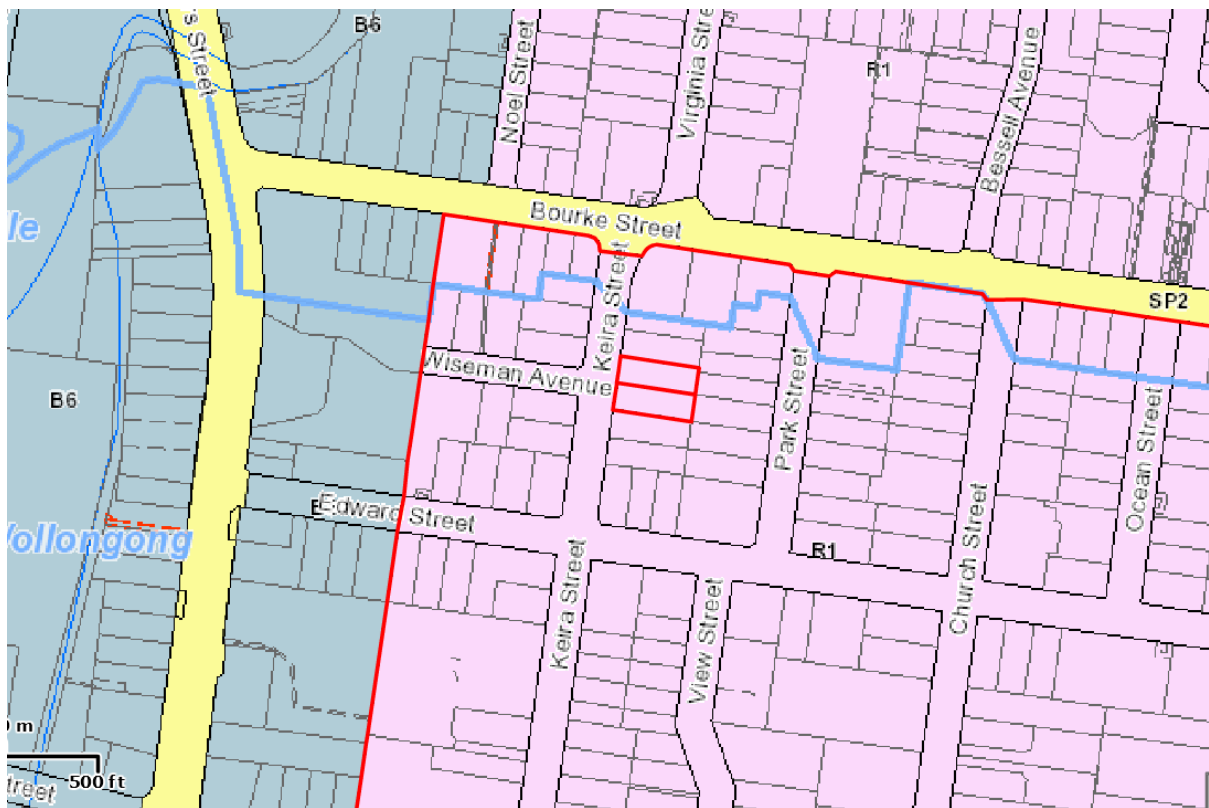
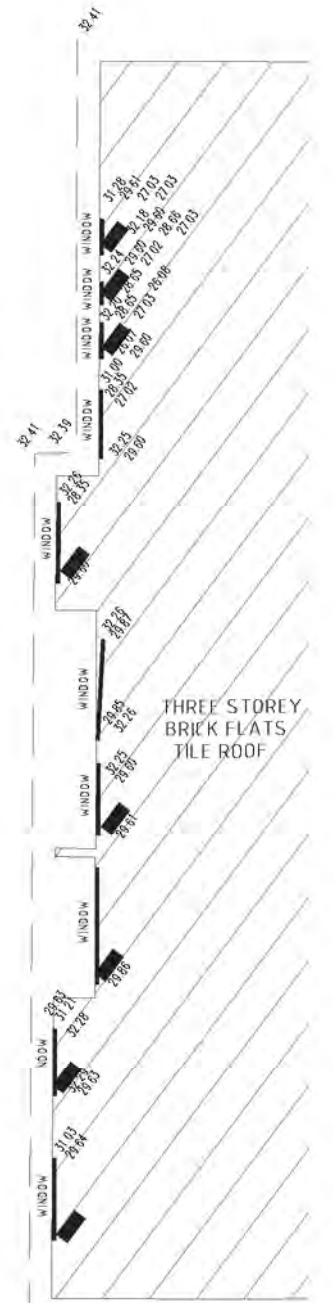


Figure 1- WLEP 2009 Zoning Map



Figure 2 – Aerial Photograph

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DP 1103072

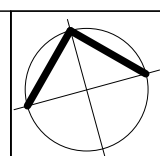
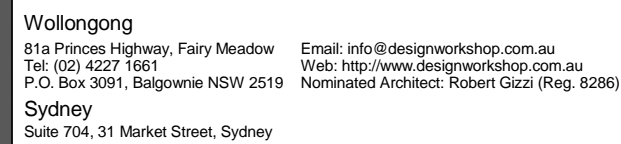


1 : 200

ORIGINAL SURVEY SUPPLIED BY C. ROBSON & ASSOCIATES PTY LTD
UNIT 1, LEVEL 6, 85-87 SMITH STREET, WOLLONGONG

Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

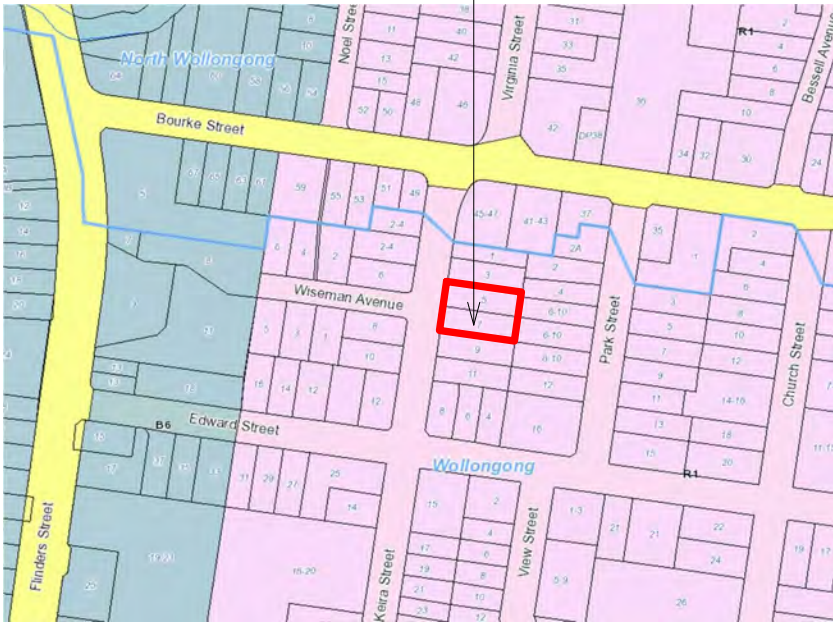
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F803	FACE BRICKWORK TYPE 2	TB	TIMBER BATTENS	AW	AWNING WINDOW	CPT	CARPET
BL	BLOCKWORK	D	DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL01	CLADDING	GD	GARAGE DOOR	WH	WINDOW/DOOR	SP	FEATURE SCREENING
CL02	CLADDING	SL	SLIDING DOOR	LV	LOUVRES	IWS	INTERGRAL WALL
RW	RETAINING WALL	BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE: 27 OCT 2017	PROJECT No.1600 DWG No. 04 AA
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN: TN, NT SCALE: 1 : 200	
DRAWING NAME:	EXISTING SURVEY	QA: RG	

3

EXISTING SITE



ZONING MAP

R1 - GENERAL RESIDENTIAL

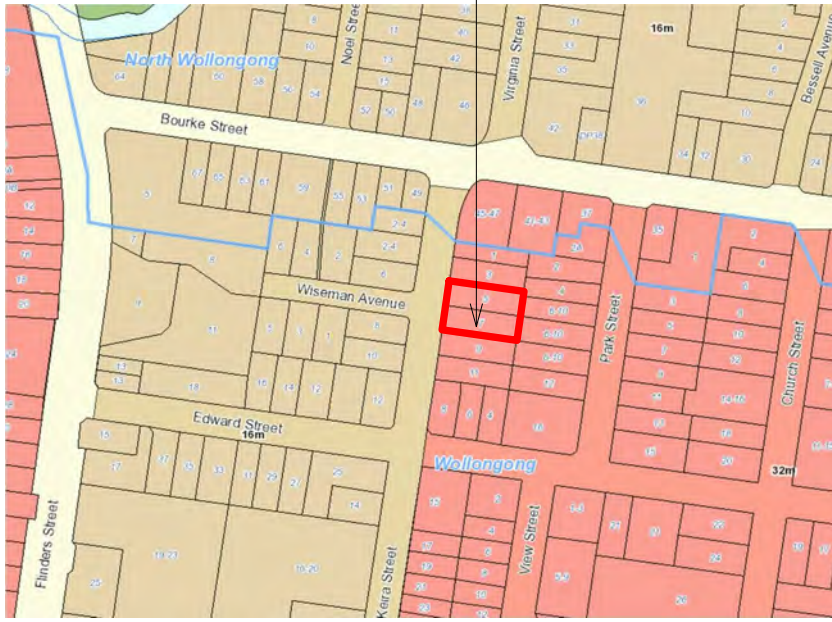
EXISTING SITE



FSR MAP

1.5 : 1 ALLOWED

EXISTING SITE



BUILDING HEIGHT MAP

32 METRE LIMIT

EXISTING SITE

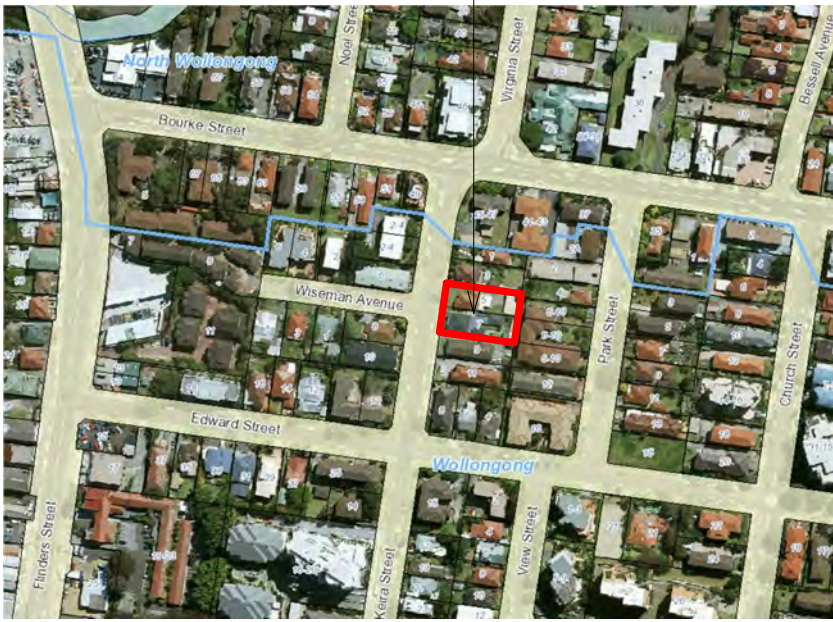


FIGURE / GROUND MAP

5-7 KEIRA STREET, WOLLONGONG



STREET VIEW

5 KEIRA STREET, WOLLONGONG



STREET VIEW

7 KEIRA STREET, WOLLONGONG

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

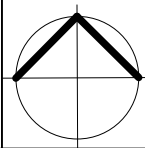
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Legend:			
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FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	RWT	RAINWATER TANK
P	POST	T	TIMBER FLOORS
CT	CERAMIC TILES	CPT	CARPET
PC	POLISHED CONCRETE	SP	FEATURE SCREENING
IWS	INTEGRAL WALL		



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Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: ILLAWARRA STAR
MULTI-RESIDENTIAL DEVELOPMENT
ADDRESS: 5-7 KEIRA STREET, WOLLONGONG
DRAWING NAME: SITE ANALYSIS

DATE: 27 OCT 2017
DRAWN: TN, NT
SCALE:
QA: RG

PROJECT No.1600
DWG No. 01 AA



DEMOLITION PLAN

1 : 200

DISCLAIMER

Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF. AA DATE 22/06/2018 AMENDMENT ADDITIONAL INFORMATION

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FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
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RW	RETAINING WALL	SLD	SLIDING DOOR	LW	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



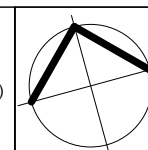
Wollongong

81a Princes Highway, Fairy Meadow
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P.O. Box 3091, Balgownie NSW 2519

Sydney

Suite 704, 31 Market Street, Sydney

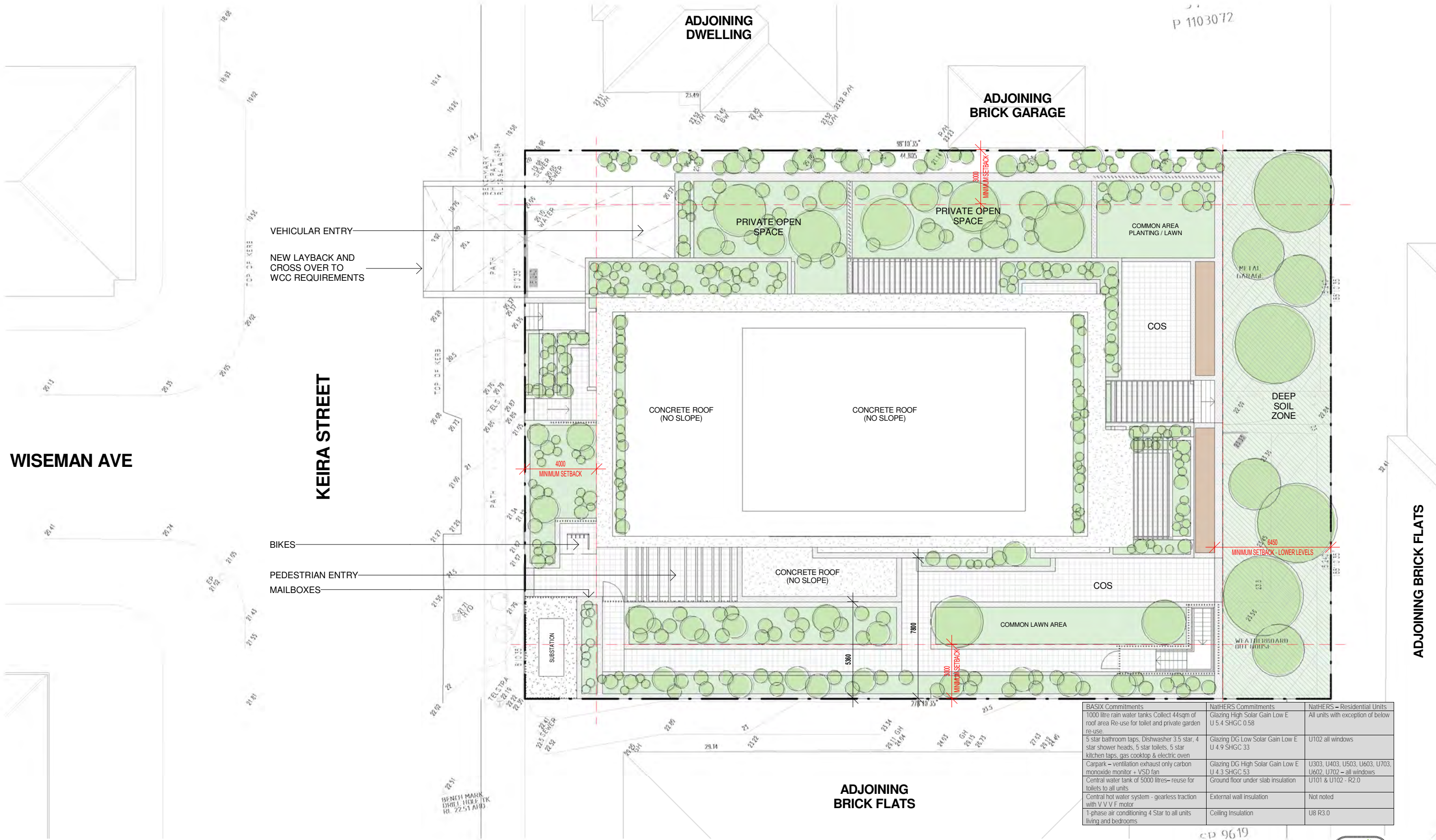
Email: info@designworkshop.com.au
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Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT
ADDRESS: 5-7 KEIRA STREET, WOLLONGONG
DRAWING NAME: DEMOLITION PLAN

DATE: 27 OCT 2017
DRAWN: TN, NT
SCALE: 1 : 200
QA: RG

PROJECT No.1600
DWG No. 05 AA



SITE PLAN

1 : 200

DISCLAIMER
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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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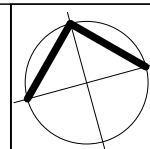
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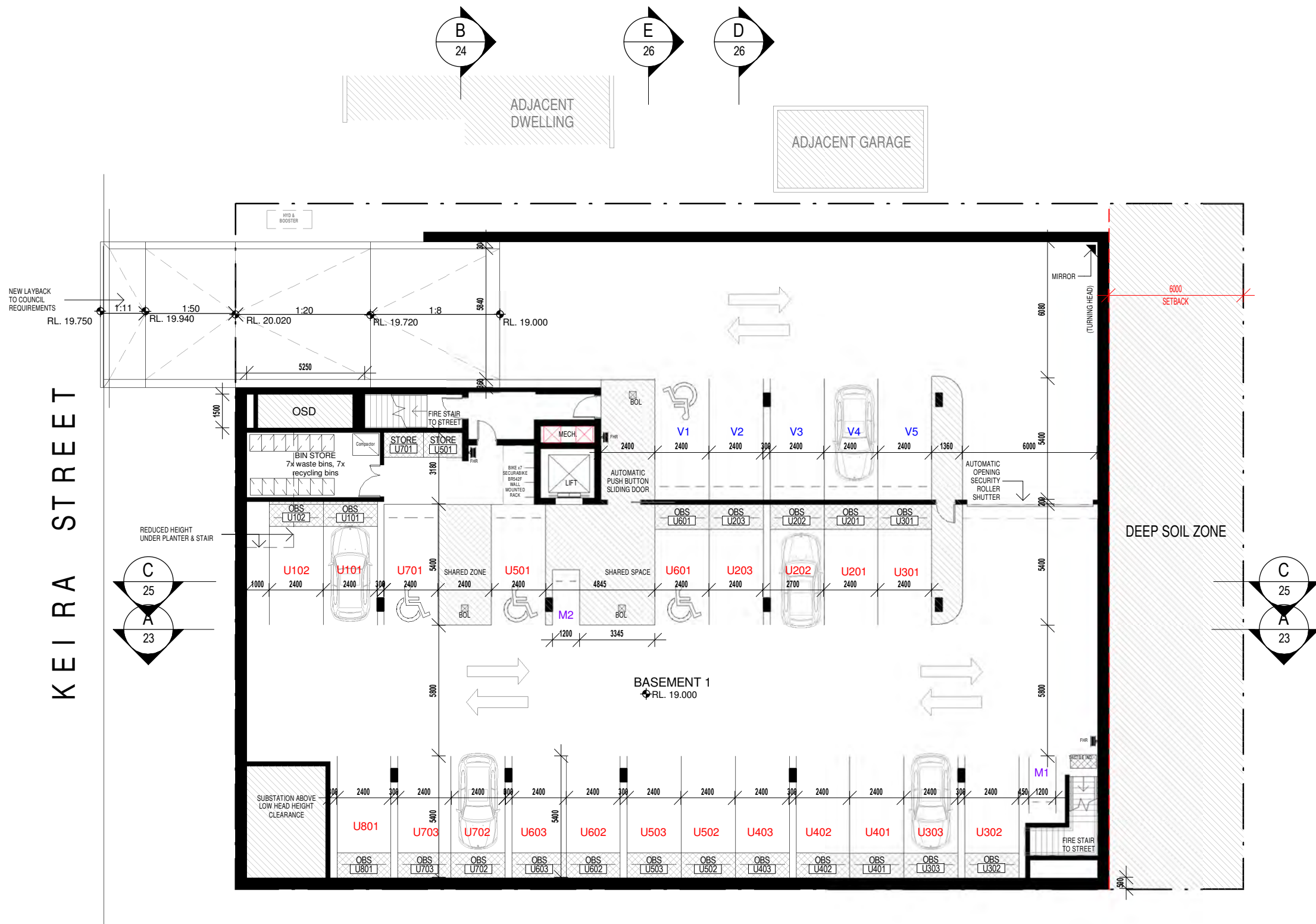


CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 10 AA
DRAWING NAME:	SITE/ROOF PLAN	SCALE:	1 : 200	
		QA:	RG	

ADDITIONAL INFORMATION

BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
5 star bathroom taps, Dishwasher 3.5 star, 4 star shower heads, 5 star toilets, 5 star kitchen taps, gas cooktop & electric oven	Glazing DG Low Solar Gain Low E U 4.9 SHGC 33	U102 all windows
Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V V V F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0





BASEMENT FLOOR PLAN

1 : 200

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

DISCLAIMER
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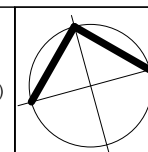
Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET
CL01	CLADDING	GD	GARAGE DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL02	CLADDING	SLD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	LV	LOUVRES	LV	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



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Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)

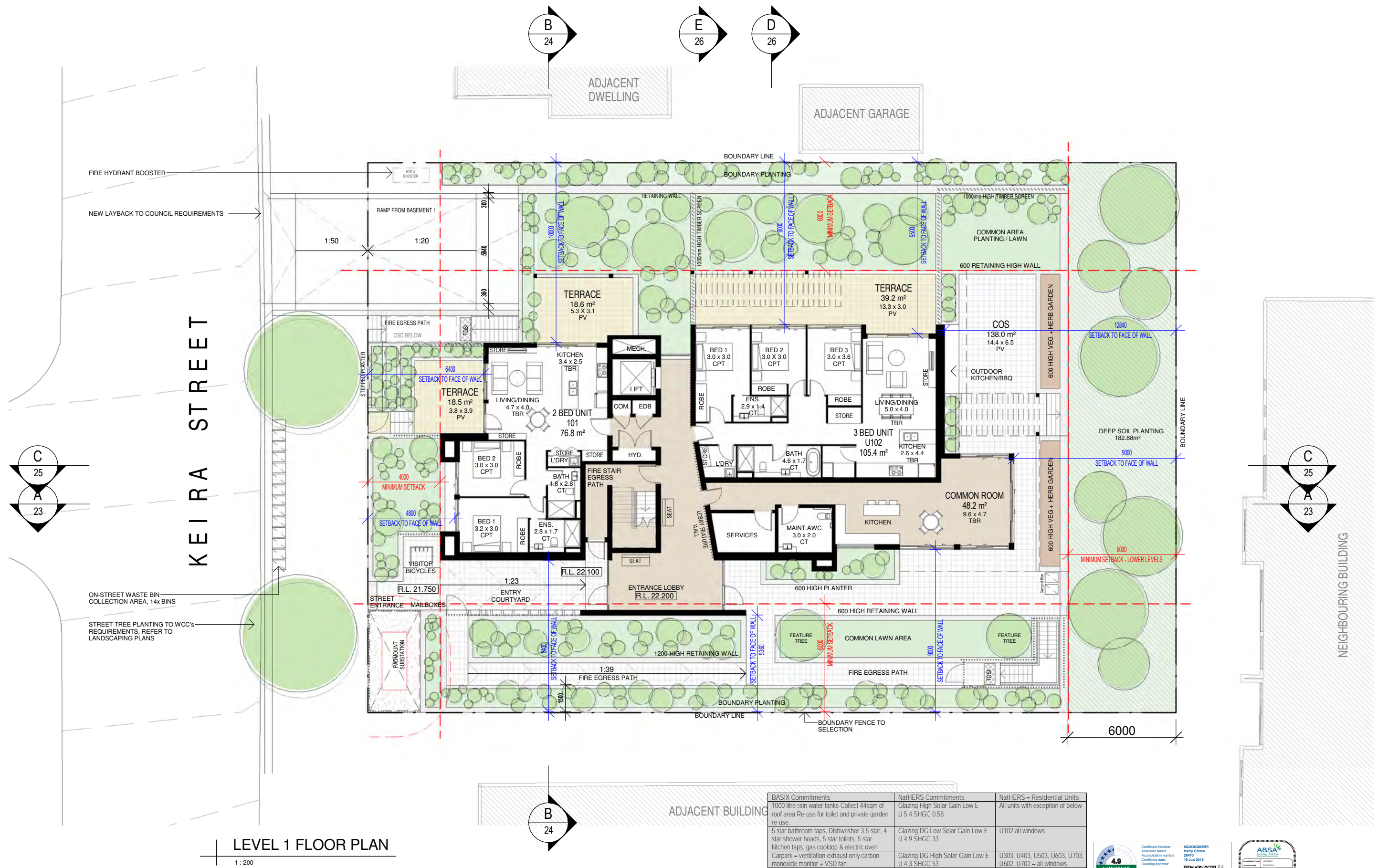


CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 11 AA
DRAWING NAME:	BASEMENT FLOOR PLAN	SCALE:	1 : 200	
		QA:	RG	

BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
5 star bathroom taps, Dishwasher 3.5 star, 4 star shower heads, 5 star toilets, 5 star kitchen taps, gas cooktop & electric oven	Glazing DG Low Solar Gain Low E U 4.9 SHGC 33	U102 all windows
Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V.V.V.F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



ADDITIONAL INFORMATION



LEVEL 1 FLOOR PLAN

1 : 200

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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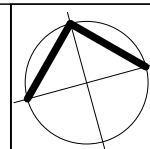
Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	AW	AWNING WINDOW	SK	SKYLIGHT	CPT	CARPET
CL01	CLADDING	D	DOOR	WH	WINDOW HOOD	PC	POLISHED CONCRETE
CL02	CLADDING	SLD	SLIDING DOOR	LV	LOUVRES	SP	FEATURE SCREENING
RW	RETAINING WALL	BFD	BI-FOLD DOOR	RWT	RAINWATER TANK	IWS	INTEGRAL WALL



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Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)



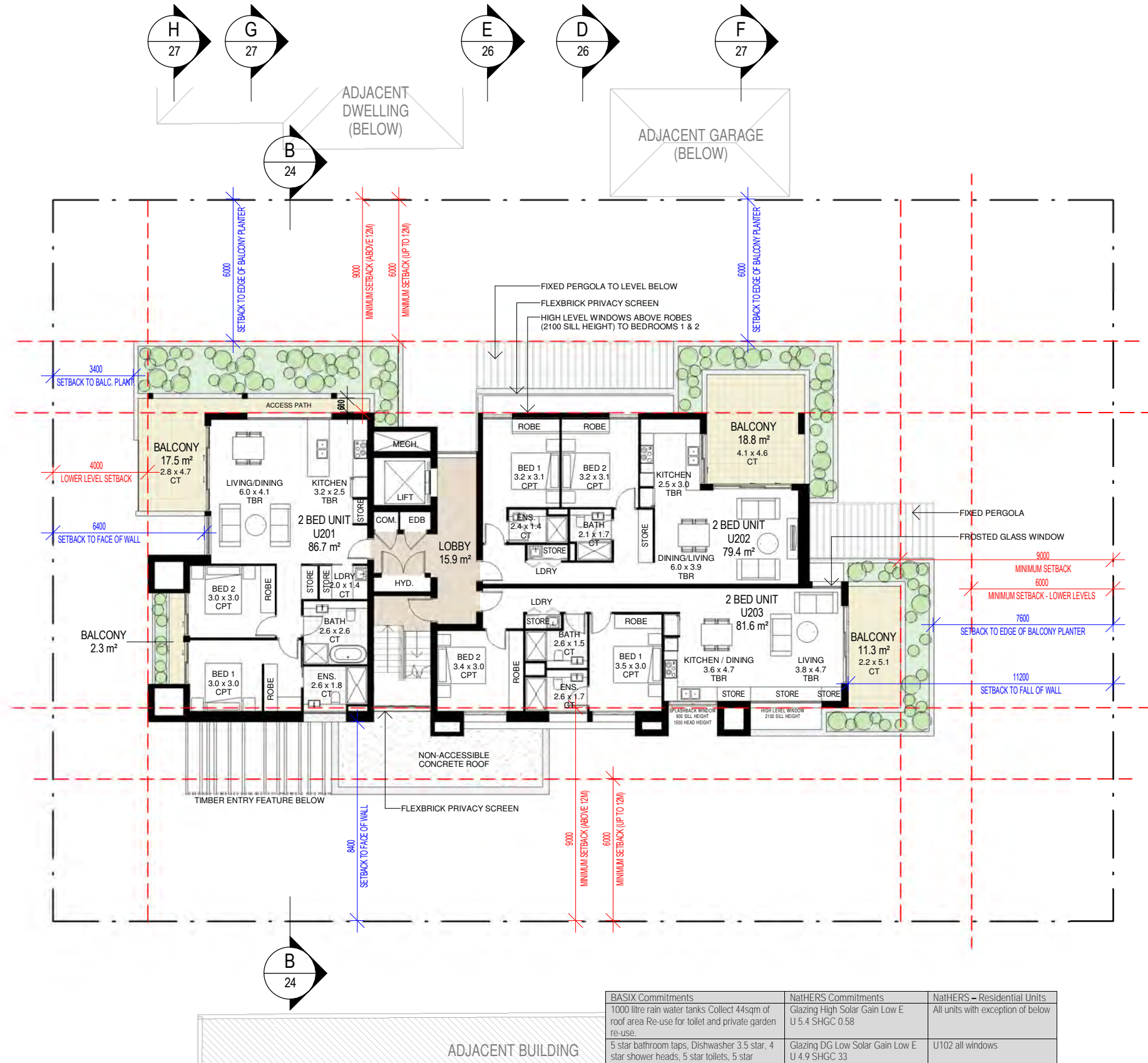
CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 12 AA
DRAWING NAME:	LEVEL 1 FLOOR PLAN	SCALE:	1 : 200	
		QA:	RG	

BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
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Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V V V F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



ADDITIONAL INFORMATION

KEIRA STREET



TYPICAL FLOOR PLAN - LEVEL 2-4

1 : 200

DISCLAIMER

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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Legend:

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FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOLETE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET
CL01	CLADDING	GD	GARAGE DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL02	CLADDING	SLD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	LV	LOUVRES	LV	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



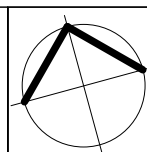
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Sydney

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Email: info@designworkshop.com.au
Web: http://www.designworkshop.com.au
Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT
ADDRESS: 5-7 KEIRA STREET, WOLLONGONG
DRAWING NAME: TYPICAL LEVEL 2-4 FLOOR PLAN

DATE: 27 OCT 2017
DRAWN: AK, NT
SCALE: 1 : 200
QA: RG

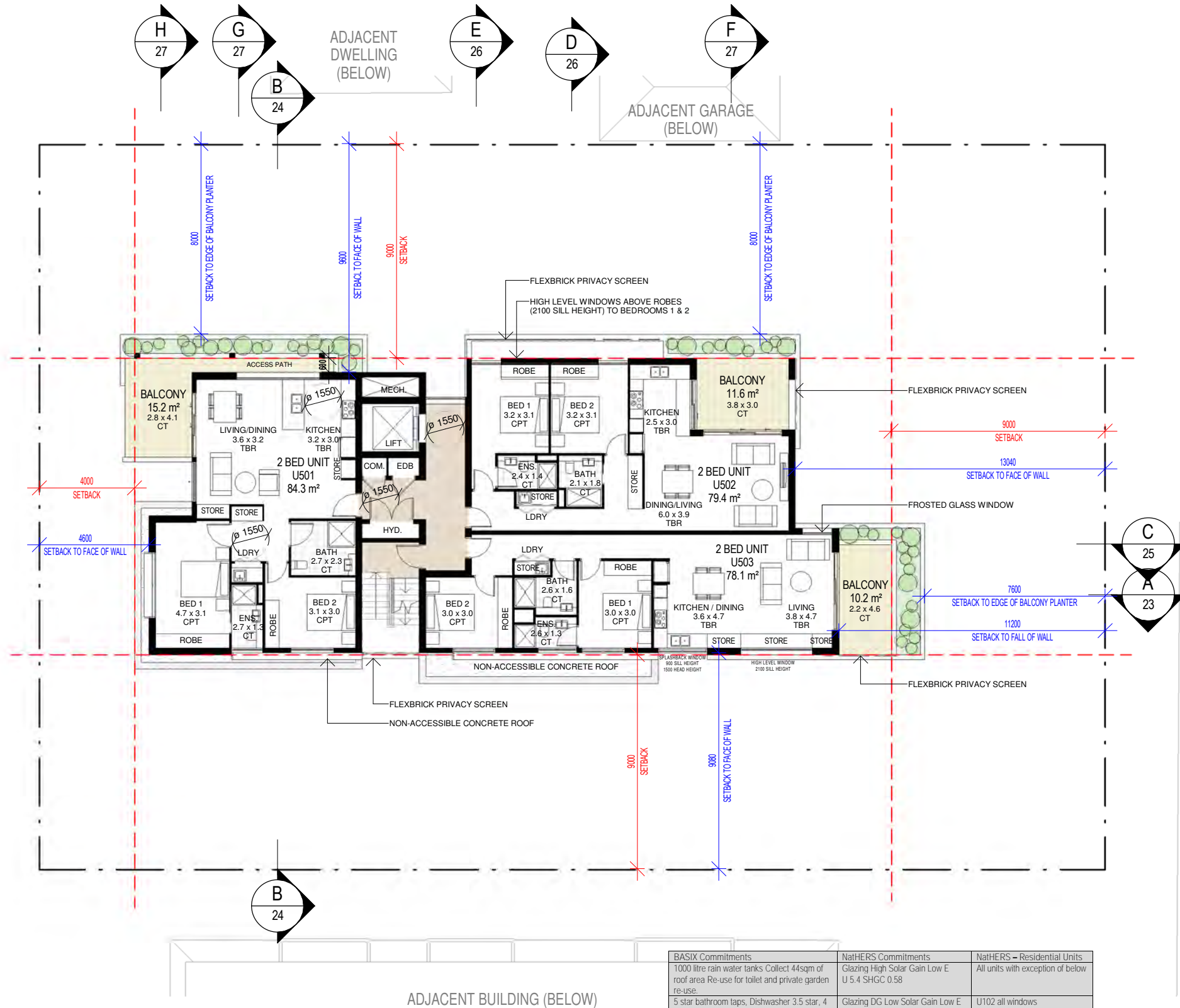
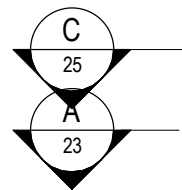
PROJECT No.1600
DWG No. 13 AA

BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
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Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V V V F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



ADDITIONAL INFORMATION

KEIRA STREET



TYPICAL FLOOR PLAN - LEVEL 5-7

1 : 200

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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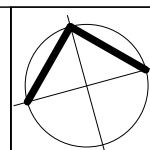
Legend:

FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSCURE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET
CL01	CLADDING	GD	GARAGE DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL02	CLADDING	SLD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	BFD	BI-FOLD DOOR	LV	LOUVRES	IWS	INTEGRAL WALL
		RWT	RAINWATER TANK				



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Nominated Architect: Robert Gizzi (Reg. 8286)



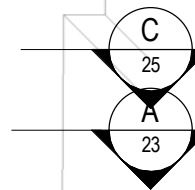
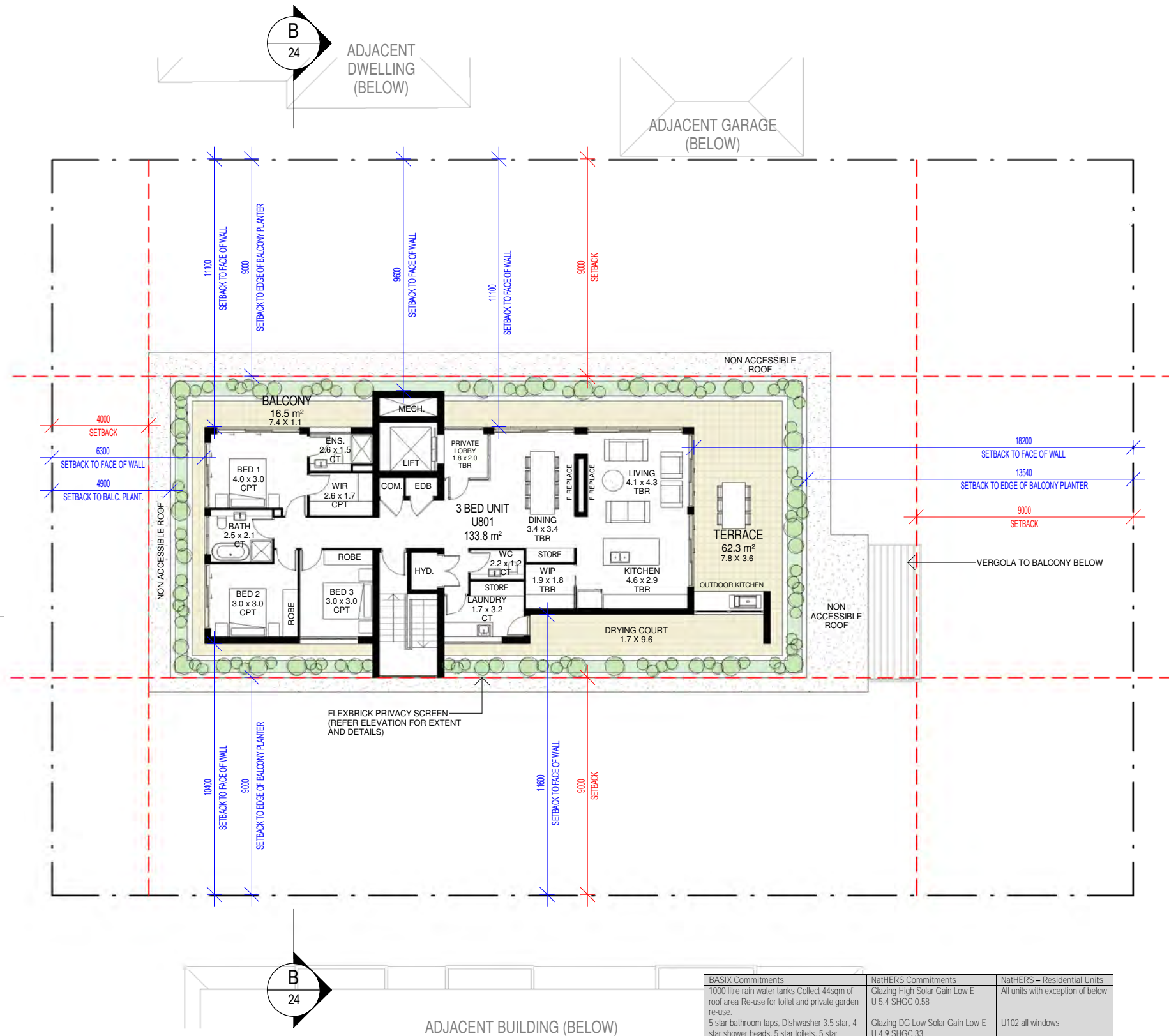
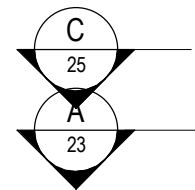
CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 14 AA
DRAWING NAME:	TYPICAL LEVEL 5-7 FLOOR PLAN	SCALE:	1 : 200	
		QA:	RG	

BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
5 star bathroom taps, Dishwasher 3.5 star, 4 star shower heads, 5 star toilets, 5 star kitchen taps, gas cooktop & electric oven	Glazing DG Low Solar Gain Low E U 4.9 SHGC 33	U102 all windows
Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V.V.V.F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



ADDITIONAL INFORMATION

KEIRA STREET



NEIGHBOURING BUILDING (BELOW)

LEVEL 8 FLOOR PLAN

1 : 200

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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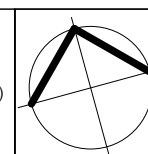
Legend:

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FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOLETE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	AW	AWNING WINDOW	AW	AWNING WINDOW	CPT	CARPET
CL01	CLADDING	D	DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL02	CLADDING	GD	GARAGE DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	SLD	SLIDING DOOR	LV	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



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Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 15 AA
DRAWING NAME:	LEVEL 8 FLOOR PLAN	SCALE:	1 : 200	
		QA:	RG	

BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
5 star bathroom taps, Dishwasher 3.5 star, 4 star shower heads, 5 star toilets, 5 star kitchen taps, gas cooktop & electric oven	Glazing DG Low Solar Gain Low E U 4.9 SHGC 33	U102 all windows
Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V V V F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



ADDITIONAL INFORMATION



U501/601/701 - ADAPTABLE UNIT

1 : 100

NOTE TYPICAL LAYOUT FOR
U501 / U601 / U701

FUTURE ADAPTATION WORKS INCLUDE MINOR CHANGES ONLY, SUCH AS THE INSTALLATION OF GRABRAILS TO THE MAIN BATHROOM, AND INSTALLATION OF ADJUSTABLE HEIGHT KITCHEN BENCHES AND SINKS. CIRCULATION SPACES ARE ACCESSIBLE WITHOUT ADAPTION.

GENERAL NOTES:

- DOOR LEVEL HANDLES AND HARDWARE TO AS 1428.1
- DOOR HARDWARE AND SWITCHES TO BE LOCATED 1000mm ABOVE THE FFL AND NOT LESS THAN 500mm FROM INTERNAL CORNERS.
- 920mm WIDE DOOR LEAF TO ENTRY, BEDROOM 1 AND BATHROOM.
- 870mm WIDE DOOR LEAF TO ALL OTHER DOORS.
- LAUNDRY FACILITIES TO COMPLY WITH AS 4299-1995
- DOUBLE GPO ADJACENT TO LAUNDRY APPLIANCES 1000mm ABOVE FFL.
- RE-FIT BATHROOM TO COMPLY WITH AS 1428.1
- PROVIDE CAPPED OFF WASTE PIPE FOR REPOSITIONED WC.
- PROVIDE REINFORCEMENT IN WALLS OF ADAPTABLE BATHROOM FOR FUTURE GRAB RAIL INSTALLATION AROUND THE WC PAN AND SHOWER.
- RECESS IN ACCORDANCE WITH AS 4299 AND FIGURES 4.5 TO 4.7
- SOAP HOLDER IN SHOWER TO BE RECESSED AND POSITIONED 1000mm ABOVE FFL.
- TAPS IN SHOWER RECESS TO BE POSITIONED 1000mm ABOVE FFL
- DOUBLE GPO BESIDE BATHROOM MIRROR TO BE LOCATED 1000mm FROM FFL AND MINIMUM 500mm FROM INTERNAL CORNERS.
- GPO'S AND ANCILLARY SOCKETS MUST BE LOCATED MINIMUM 500mm FROM INTERANL CORNERS UNLESS OTHERWISE SPECIFIED.
- PROVIDE TELEPHONE SOCKET ADJACENT TO GPO IN LIVING AREA.
- RE-FIT KITCHEN TO COMPLY WITH 1428.1
- COOK TOP TO INCLUDE ISOLATING SWITCH
- PROVIDE AT LEAST ONE (1) DOUBLE GPO WITH 300mm OF THE FRONT OF A KITCHEN WORK SURFACE.
- GPO FOR THE REFRIDGERATOR TO BE LOCATED 1000mm ABOVE FFL AND WITHIN 300mm FROM THE FRONT OF THE REFRIDGERATOR WHEN IN ITS OPERATING POSITION.
- FLOOR TILES TO EXTEND UNDER ALL KITCHEN CARCASSES.
- REFRIDGERATOR, COOK TOP AND WALL OVEN LOCATED ADJACENT TO A WORK SURFACE MIINIMUM 800mm IN LENGTH. WALL OVEN WITH A RETRACTABLE DOOR OR SWINGING DOOR THAT OPENS OPPOSITE TO THE ADJAENT WORK SURFACE.
- SLIP RESISTANT FLOOR SURFACE TO KITCHEN AND BATHROOMS.

DISCLAIMER

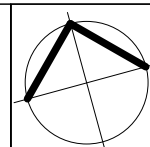
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF. AA	DATE 22/06/2018	AMENDMENT ADDITIONAL INFORMATION	Legend:												Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)			CLIENT: ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE: 27 OCT 2017	PROJECT No.1600
DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright © DWA.			FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST			DRAWN: AK, NT	SCALE: 1 : 100	DWG No. 16 AA					
			FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS										
			FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOLETE WINDOW	CT	CERAMIC TILES										
			BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET			ADDRESS: 5-7 KEIRA STREET, WOLLONGONG							
			CL01	CLADDING	GD	GARAGE DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE										
			CL02	CLADDING	SLD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING										
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							RWT	RAINWATER TANK												
			</																	

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Sydney
Suite 704, 31 Market Street, Sydney



CLIENT: ILLAWARRA STAR
MULTI-RESIDENTIAL DEVELOPMENT
ADDRESS: 5-7 KEIRA STREET, WOLLONGONG
DRAWING NAME: ADAPTABLE UNIT LAYOUTS



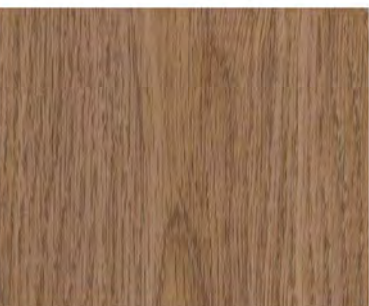
NORTH ELEVATION

1 : 200

BASIX Commitments	NatHERS Commitments	NatHERS – Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
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Carpark – ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 53	U303, U403, U503, U603, U703, U602, U702 – all windows
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Central hot water system - gearless traction with V V V F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



KEIRA STREET



LEGEND

CL01	CLADDING - TYPE 01
FB01	FACE BRICK - TYPE 01
FB02	FACE BRICK - TYPE 02
FG	FIXED GLASS
GB	GLAZED BALUSTRADE
PF01	PAINT FINISH 01
PF02	PAINT FINISH 02

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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Legend:

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FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOLETE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	AW	AWNING WINDOW	SK	SKYLIGHT	CPT	CARPET
CL01	CLADDING	D	DOOR	WH	WINDOW HOOD	PC	POLISHED CONCRETE
CL02	CLADDING	GD	GARAGE DOOR	LV	LOUVRES	SP	FEATURE SCREENING
RW	RETAINING WALL	SLD	SLIDING DOOR	RWT	RAINWATER TANK	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR				



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Email: info@designworkshop.com.au
Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT: ILLAWARRA STAR
MULTI-RESIDENTIAL DEVELOPMENT

ADDRESS: 5-7 KEIRA STREET, WOLLONGONG

DRAWING NAME: ELEVATIONS

DATE: 27 OCT 2017

DRAWN: AK, NT

SCALE: 1 : 200

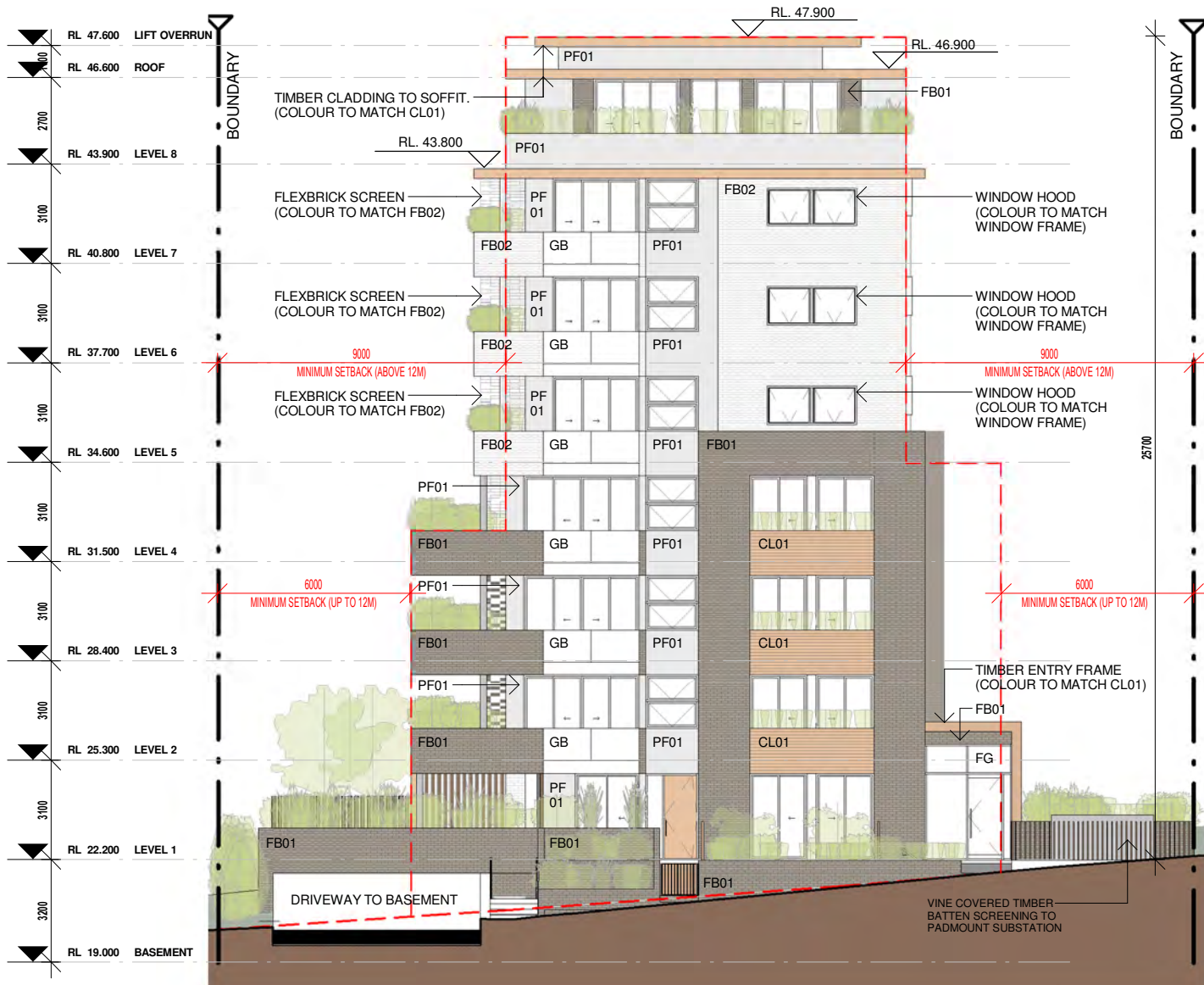
QA: RG

PROJECT No.1600

DWG No. 21 AA

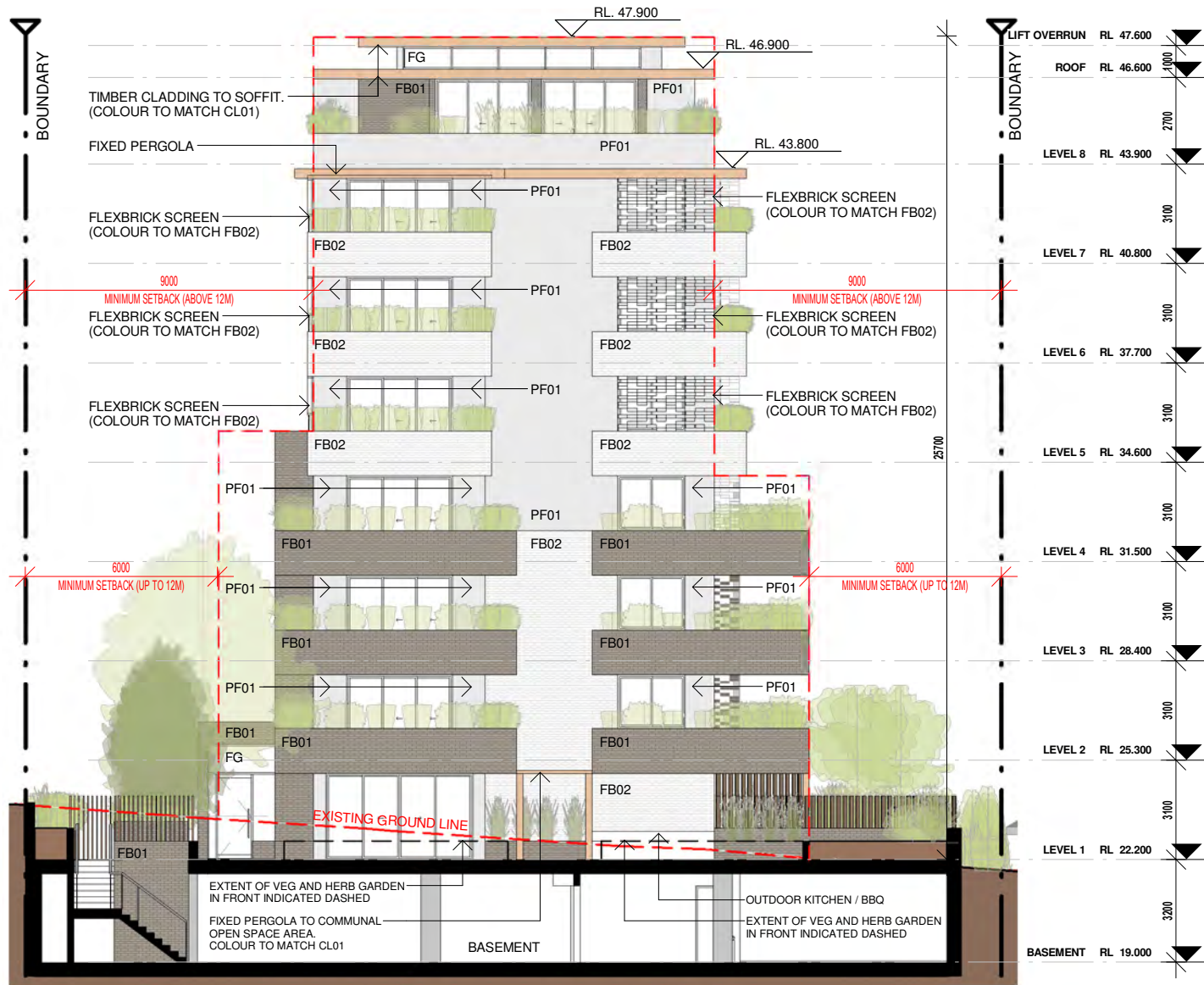


BASIX Commitments	NatHERS Commitments	NatHERS - Residential Units
1000 litre rain water tanks Collect 44sqm of roof area Re-use for toilet and private garden re-use.	Glazing High Solar Gain Low E U 5.4 SHGC 0.58	All units with exception of below
5 star bathroom taps, Dishwasher 3.5 star, 4 star shower heads, 5 star toilets, 5 star kitchen taps, gas cooking & electric oven.	Glazing DG Low Solar Gain Low E U 4.9 SHGC 3.3	U102 all windows
Carpark - ventilation exhaust only carbon monoxide monitor + VSD fan	Glazing DG High Solar Gain Low E U 4.3 SHGC 5.3	U303, U403, U503, U603, U703, U602, U702 - all windows
Central water tank of 5000 litres- reuse for toilets to all units	Ground floor under slab insulation	U101 & U102 - R2.0
Central hot water system - gearless traction with V.V.V.F motor	External wall insulation	Not noted
1-phase air conditioning 4 Star to all units living and bedrooms	Ceiling Insulation	U8 R3.0



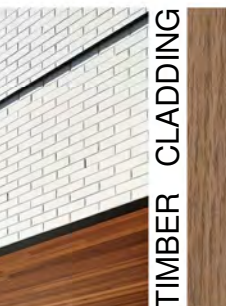
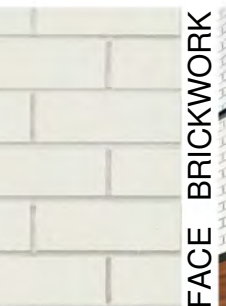
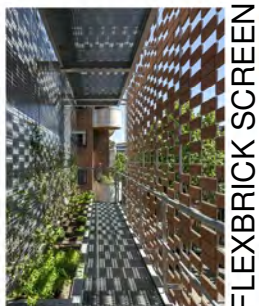
WEST ELEVATION

1 : 200



EAST ELEVATION

1 : 200



LEGEND

CL01	CLADDING - TYPE 01
FB01	FACE BRICK - TYPE 01
FB02	FACE BRICK - TYPE 02
FG	FIXED GLASS
GB	GLAZED BALUSTRADE
PF01	PAINT FINISH 01
PF02	PAINT FINISH 02

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

Legend:

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FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS
BL	BLOCKWORK	OB	OBSCURE WINDOW	CT	CERAMIC TILES	CPT	CARPET
CL01	CLADDING	AW	AWNING WINDOW	PC	POLISHED CONCRETE	SP	FEATURE SCREENING
CL02	CLADDING	SK	SKYLIGHT	WH	WINDOW HOOD	IWS	INTEGRAL WALL
RW	RETAINING WALL	LV	LOUVRES				
		RFW	RAINWATER TANK				



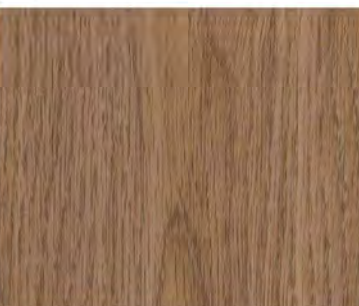
Wollongong
81a Princes Highway, Fairy Meadow
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DRAWING NAME: ELEVATIONS

DATE: 27 OCT 2017
DRAWN: AK, NT
SCALE: 1 : 200
QA: RG

PROJECT No.1600
DWG No. 20 AA



LEGEND

CL01	CLADDING - TYPE 01
FB01	FACE BRICK - TYPE 01
FB02	FACE BRICK - TYPE 02
FG	FIXED GLASS
GB	GLAZED BALUSTRADE
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RW	RETAINING WALL	GD	GARAGE DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
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CLIENT: ILLAWARRA STAR
MULTI-RESIDENTIAL DEVELOPMENT

ADDRESS: 5-7 KEIRA STREET, WOLLONGONG

DRAWING NAME: SECTIONS

DATE: 27 OCT 2017

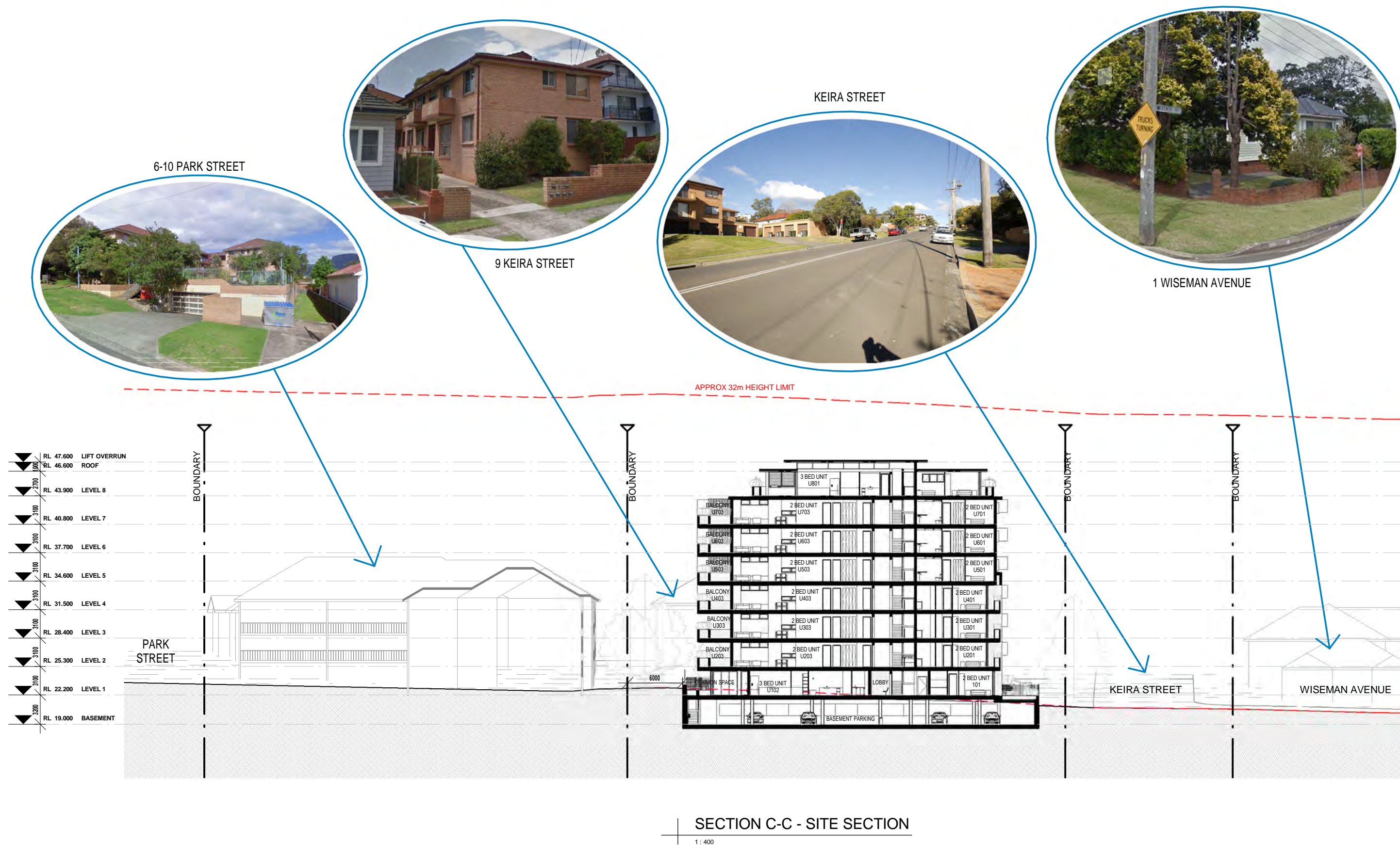
DRAWN: AK, NT

SCALE: 1 : 200

QA: RG

PROJECT No.1600

DWG No. 23 AA



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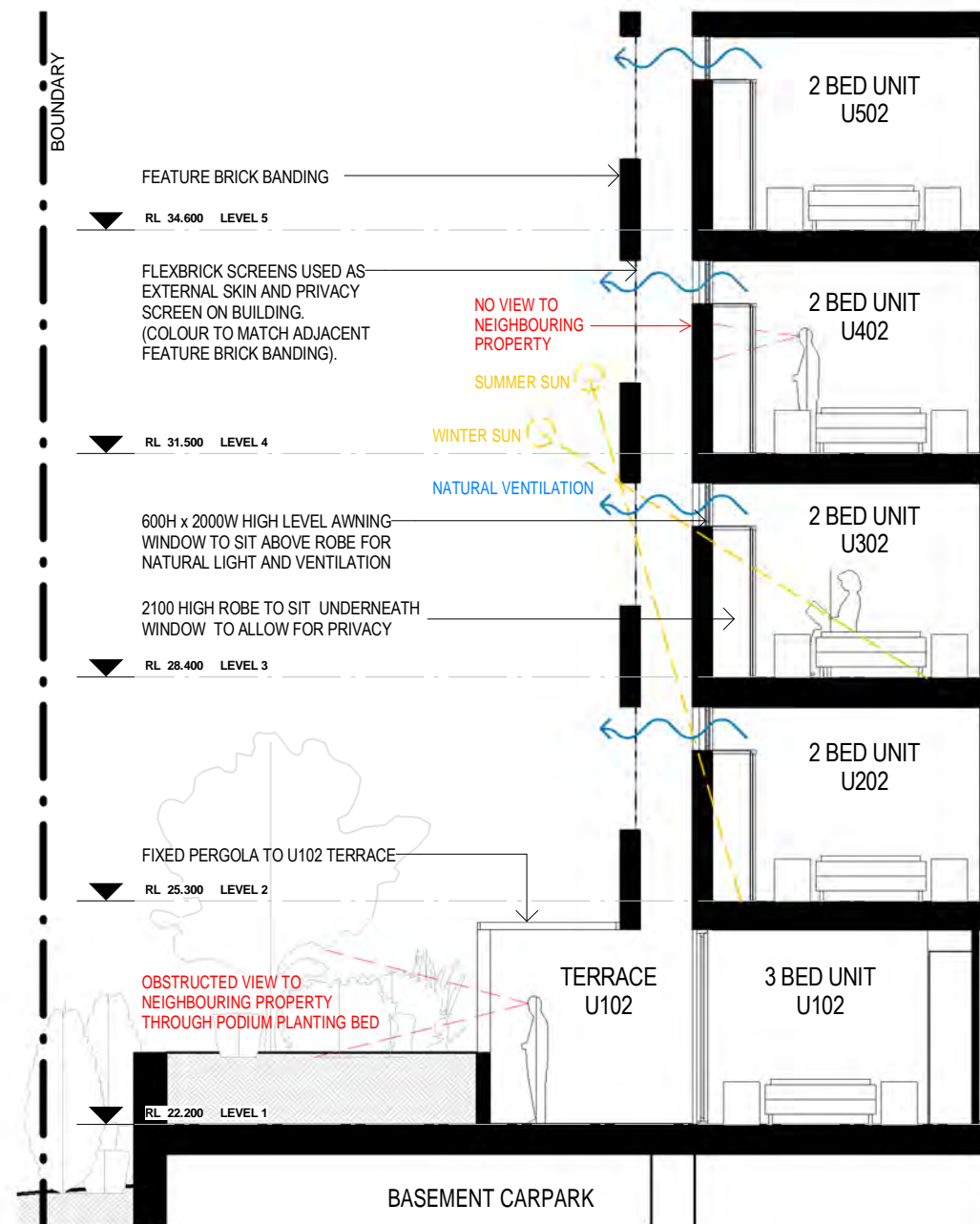
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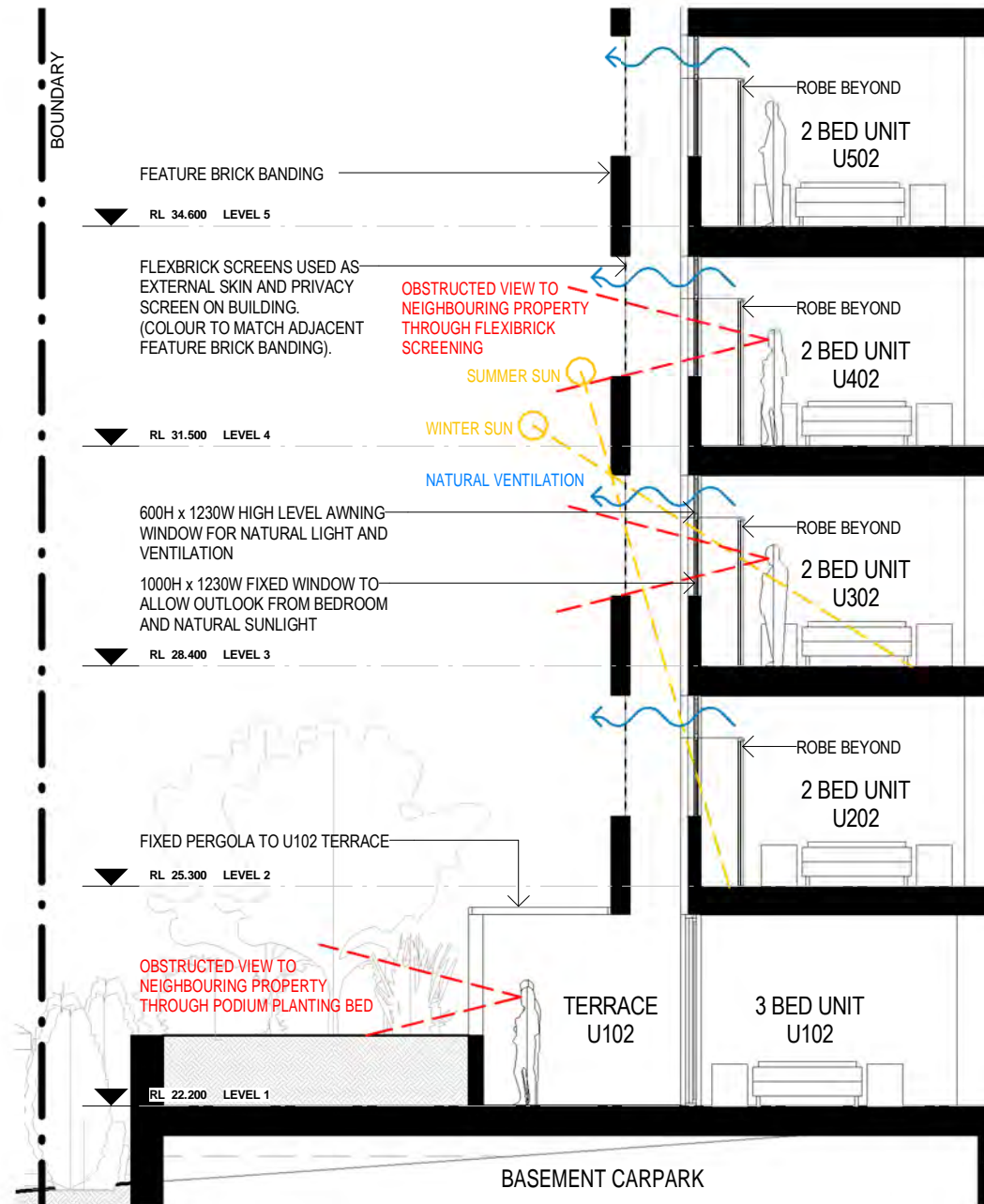
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CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 25 AA
		SCALE:	1 : 400	
		QA:	RG	
DRAWING NAME: SITE SECTION				



SECTION D-D - BEDROOM WINDOW TREATMENT (ROBE)

1:100

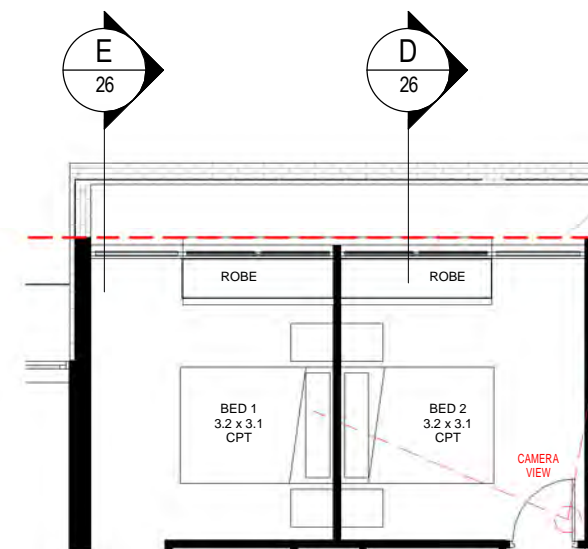


SECTION E-E - BEDROOM WINDOW TREATMENT (WINDOW)

1:100

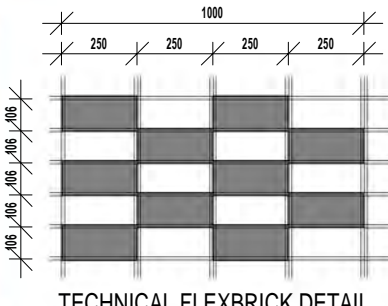
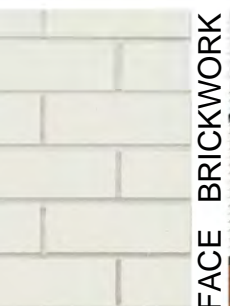


VIEW FROM BEDROOM



LEVEL 4 (BEDROOMS) - KEY PLAN

1:100



TECHNICAL FLEXBRICK DETAIL

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Legend:

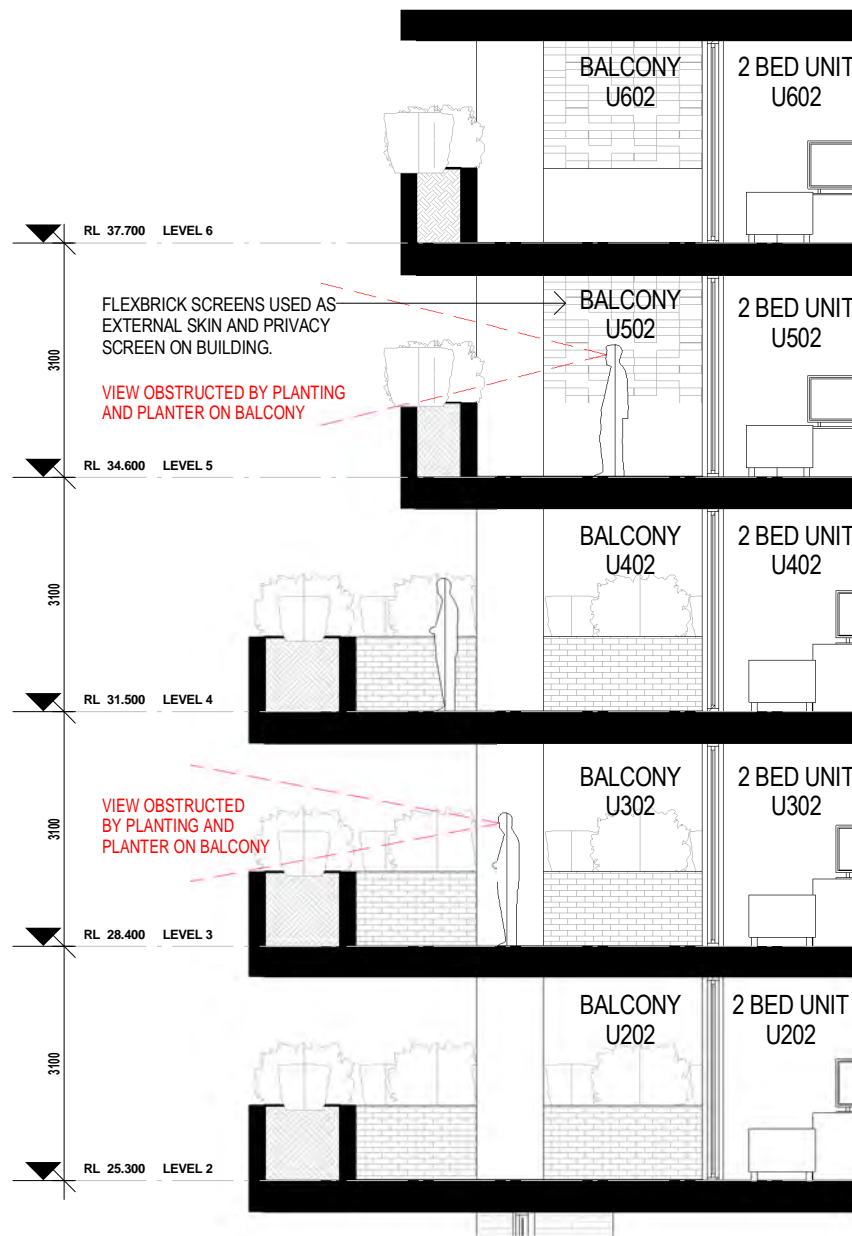
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FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS
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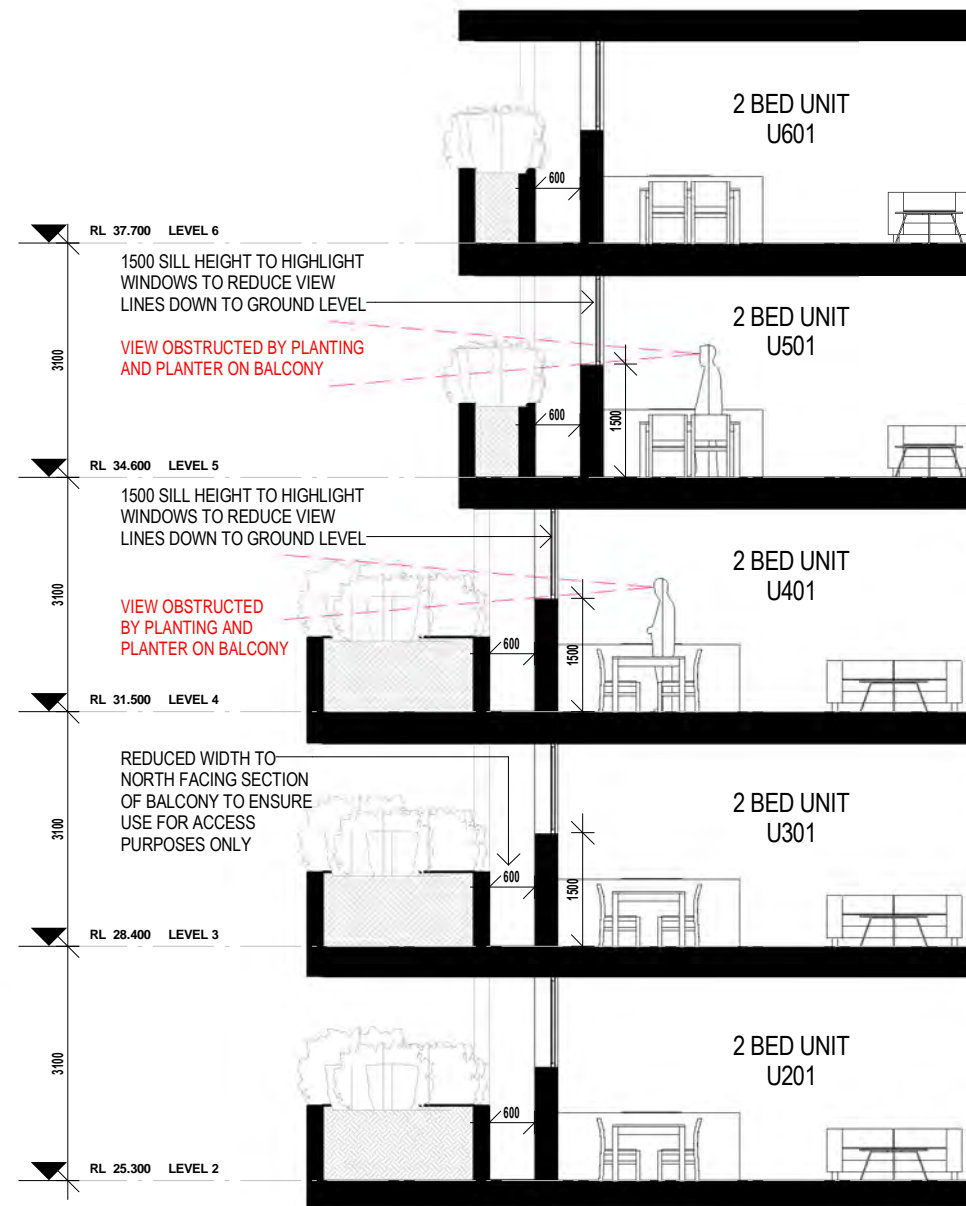
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Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 26 AA
		SCALE:	As indicated	
		QA:	RG	
DRAWING NAME: DETAIL SECTIONS - NORTH BEDROOMS				



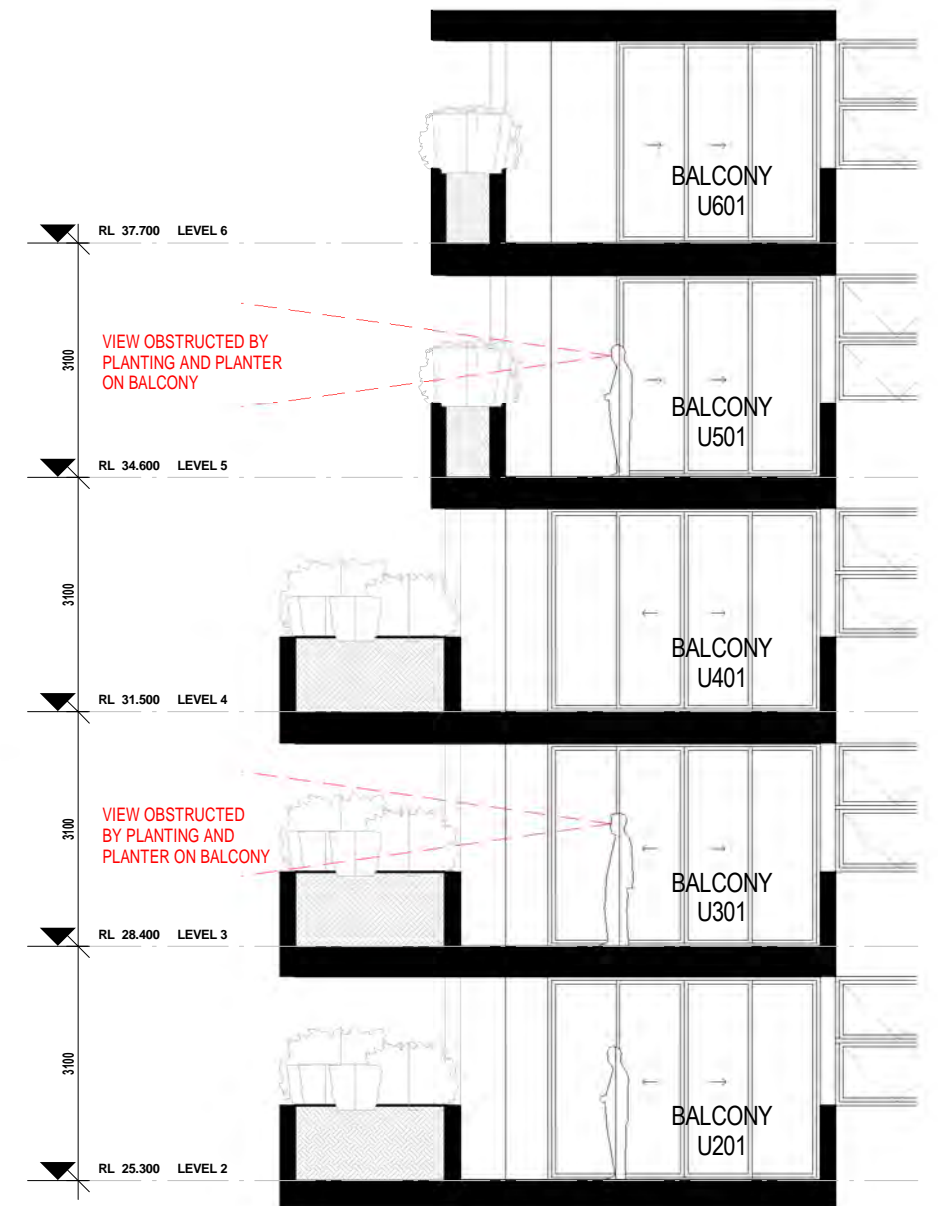
SECTION F-F - PLANTER (NORTH BALCONY)

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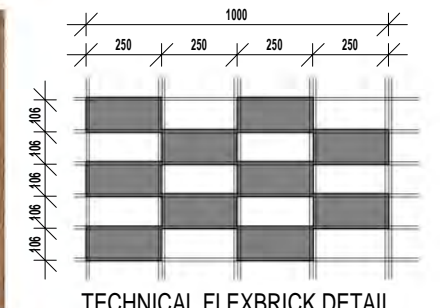
SECTION G-G - PLANTER (NORTH-WEST BALCONY)

1 : 100



SECTION H-H - BALCONY (NORTH-WEST)

1 : 100



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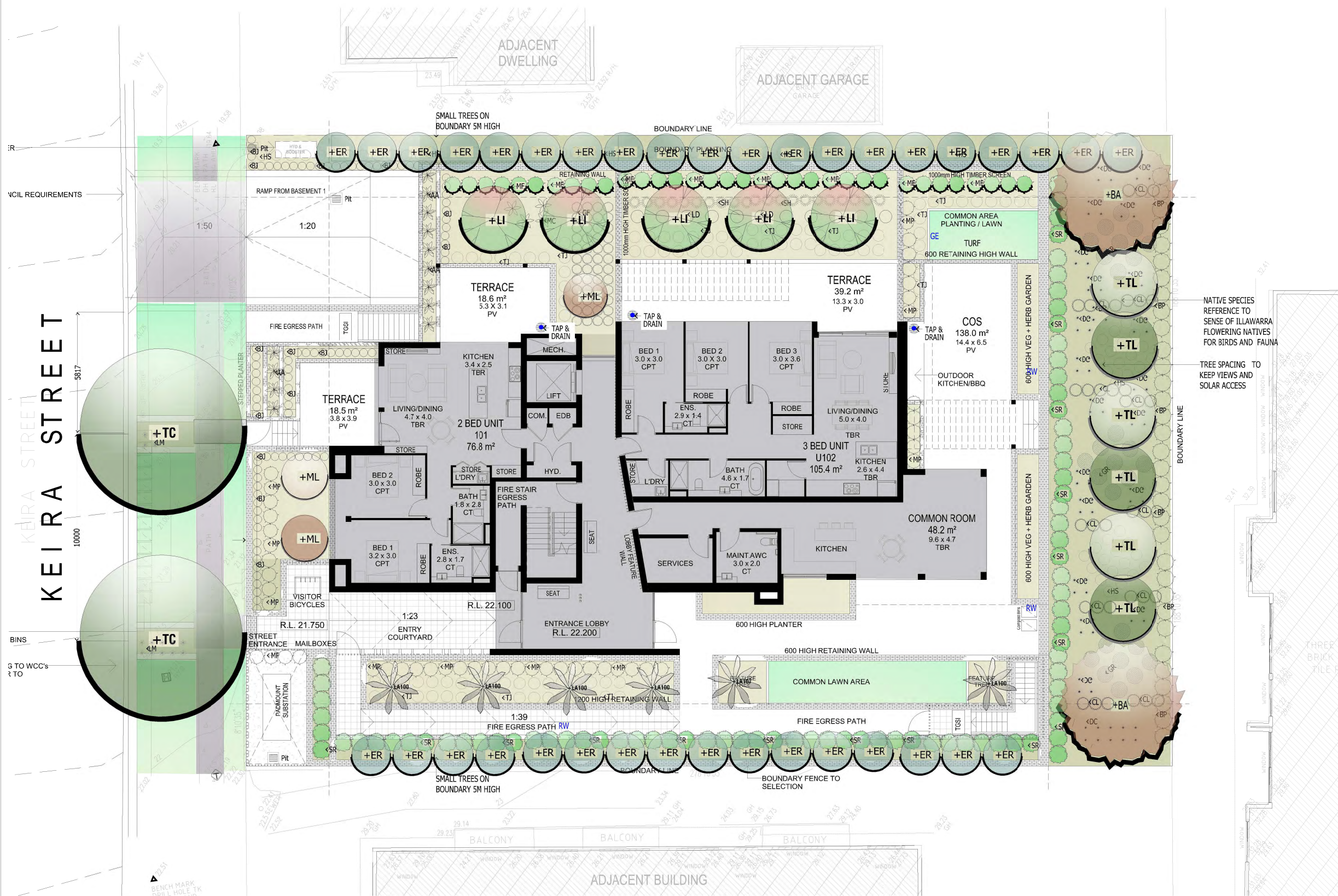
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ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 27 AA
DRAWING NAME:	DETAIL SECTIONS - BALCONY PLANTERS	SCALE:	As indicated	
		QA:	RG	



LEVEL 1 PLANTING SCHEDULE

TREES				
Symb.	Botanical Name	Common Name	Size	No.
EA	Brachychiton acerifolium	Illawarra flame	75 Litre	2
ER	Elaeocarpus reticulatus	Blueberry Ash	25 Litre	16
LA45	Livistona australia	Cabbage Tree Palm	100 Litre	6
LI	Lagerstroemia indica	Crepe Myrtle	100 Litre	3
ML	Magnolia sp.	Little Gem	45 Litre	7
TC	Tristanopsis conferta	Brush Box	200 Litre	2
TL	Tristanopsis laurina x Luscious	Water Gum	25 Litre	6
SHRUBS				
AA	Agave attenuata	Fox Tail Agave	5 Litre	13
BJ	Buxus japonica	Japanese Buxus	5 Litre	92
BP	Banksia Praemorsa	Lemon Lantern	5 Litre	33
CL	Callistemon viminalis	Little John Bottlebrush	5 Litre	36
GF	Gardenia sp.	Florida	5 Litre	48
LD	Lavendula dentata	French Lavenda	5 Litre	11
MC	Macrozamia communis	Burrawang	5 Litre	4
MF	Metrosideros collina	Fiji Fire	5 Litre	34
MP	Murraya paniculata	Mock Orange	5 Litre	48
SC	Syzgium wilsonii 'Cascade'	Cascade Lilly Pilly	5 Litre	22
SH	Salvia sp.	Hot Lips	5 Litre	21
SR	Syzgium australe	Resilience	5 Litre	82
GROUND COVERS				
DC	Dianella Caerulea	Breeze	140mm	94
FP	Ficus pumila 'Minimus'	Climbing Fig	140mm	3
GR	Grevillea poorinda	Grevillea Royal Mantle	140mm	27
HS	Hibbertia scandens	Guinea Gold	140mm	96
LM	Liriope munro	White Liriope	140mm	223
m	Ophiopogon japonicus	Mini Mondo	100mm	130

NATIVE SPECIES
REFERENCE TO
SENSE OF ILLAWARRA
FLOWERING NATIVES
FOR BIRDS AND FAUNA

TREE SPACING TO
KEEP VIEWS AND
SOLAR ACCESS

NOTES

- FOR DRAINAGE POINTS IN PAVING AND PLANTER BOXES - SEE HYDRAULIC DWGS
- 800mm SOIL COVER MINIMUM OVER ALL CONCRETE STRUCTURES IN LANDSCAPE AREAS. GREATER WHERE INDICATED ON PLANS AND DETAILS
- INSTALL DRIPPER FEED IRRIGATION TO PLANTING BEDS, PLANTING BOXES, AND TURF AREAS. SHOP DWG BY CONTRACTOR.
- FOR ALL HARD SURFACES AND DETAILING REFER TO ARCH. DRAWINGS.
- LANDSCAPE AND DRAINAGE DRAWINGS ARE COMPATIBLE

rev. no	description	date	drawn
03	Floor Plan Revision	12/06/2018	
02	For DA	02-04-2018	WJM
01	Preliminary	00-00-2014	WJM

Project: Residential Development
5-7 Keira Street, Wollongong

Client:

BILL MUIR LA LANDSCAPE ARCHITECT
16/105 Corimal Street, WOLLONGONG
MOBILE: 0411 774051
bill.la@optusnet.com.au

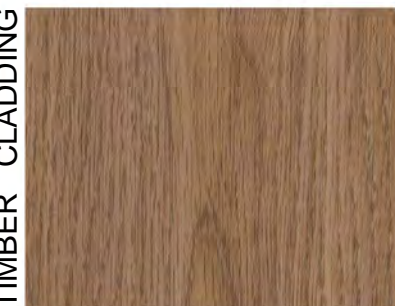
SCALE 1:100 @A1, 1:200 @ A3
September 2017
SHEET 1 OF 4
LA.DA.01 PLANTING PLAN - LEVEL 1



3D PERSPECTIVE - SOUTH-WEST VIEW



3D PERSPECTIVE - NORTH-WEST VIEW



LEGEND

- CL01 CLADDING - TYPE 01
- FB01 FACE BRICK - TYPE 01
- FB02 FACE BRICK - TYPE 02
- FG FIXED GLASS
- GB GLAZED BALUSTRADE
- PF01 PAINT FINISH 01
- PF02 PAINT FINISH 02

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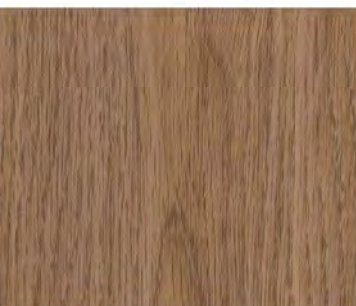
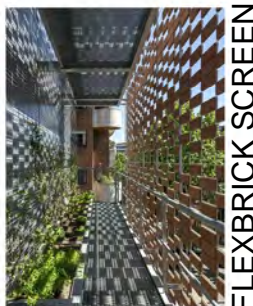
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ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	AK, NT	DWG No. 50 AA
		SCALE:	1 : 200	
DRAWING NAME:	3D PERSPECTIVES	QA:	RG	



3D PERSPECTIVE - NORTH-EAST VIEW



3D PERSPECTIVE - SOUTH-EAST VIEW



LEGEND

CL01	CLADDING - TYPE 01
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		SCALE:	1 : 200		
		QA:	RG		
DRAWING NAME: 3D PERSPECTIVES					



PHOTO MONTAGE - NORTH VIEW

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REF. AA	DATE 22/06/2018	AMENDMENT ADDITIONAL INFORMATION	Legend: <table><tr><td>FB01</td><td>FACE BRICKWORK TYPE 1</td><td>R</td><td>ROOF</td><td>SLW</td><td>SLIDING WINDOW</td><td>P</td><td>POST</td></tr><tr><td>FB02</td><td>FACE BRICKWORK TYPE 2</td><td>DP</td><td>DOWNPIPES</td><td>FW</td><td>FIXED WINDOW</td><td>T</td><td>TIMBER FLOORS</td></tr><tr><td>FB03</td><td>FACE BRICKWORK TYPE 3</td><td>TB</td><td>TIMBER BATTENS</td><td>OB</td><td>OBSOURE WINDOW</td><td>CT</td><td>CERAMIC TILES</td></tr><tr><td>BL</td><td>BLOCKWORK</td><td>D</td><td>DOOR</td><td>AW</td><td>AWNING WINDOW</td><td>CPT</td><td>CARPET</td></tr><tr><td>CL01</td><td>CLADDING</td><td>GD</td><td>GARAGE DOOR</td><td>WH</td><td>WINDOW HOOD</td><td>SP</td><td>FEATURE SCREENING</td></tr><tr><td>CL02</td><td>CLADDING</td><td>SLD</td><td>SLIDING DOOR</td><td>LV</td><td>LOUVRES</td><td>IWS</td><td>INTEGRAL WALL</td></tr><tr><td>RW</td><td>RETAINING WALL</td><td>BFD</td><td>BI-FOLD DOOR</td><td>RWT</td><td>RAINWATER TANK</td><td></td><td></td></tr></table>										FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST	FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS	FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOURE WINDOW	CT	CERAMIC TILES	BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET	CL01	CLADDING	GD	GARAGE DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING	CL02	CLADDING	SLD	SLIDING DOOR	LV	LOUVRES	IWS	INTEGRAL WALL	RW	RETAINING WALL	BFD	BI-FOLD DOOR	RWT	RAINWATER TANK			 Wollongong 81a Princes Highway, Fairy Meadow Tel: (02) 4227 1661 P.O. Box 3091, Balgownie NSW 2519 Sydney Suite 704, 31 Market Street, Sydney		Email: info@designworkshop.com.au Web: http://www.designworkshop.com.au Nominated Architect: Robert Gizzi (Reg. 8286)	CLIENT: ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT ADDRESS: 5-7 KEIRA STREET, WOLLONGONG DRAWING NAME: PHOTOMONTAGE	DATE: 27 OCT 2017 DRAWN: AK, NT SCALE: QA: RG	PROJECT No.1600 DWG No. 52 AA
FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST																																																																			
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS																																																																			
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOURE WINDOW	CT	CERAMIC TILES																																																																			
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RW	RETAINING WALL	BFD	BI-FOLD DOOR	RWT	RAINWATER TANK																																																																					

DISCLAIMER

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PHOTO MONTAGE - SOUTH WEST VIEW

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FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST																																																																						
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES	FW	FIXED WINDOW	T	TIMBER FLOORS																																																																						
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CL02	CLADDING	SLD	SLIDING DOOR	LV	LOUVRES	IWS	INTEGRAL WALL																																																																						
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DISCLAIMER

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SOLAR ANALYSIS - JUNE - 10am

1 : 500



SOLAR ANALYSIS - JUNE - 11am

1 : 500

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

DISCLAIMER
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Legend:

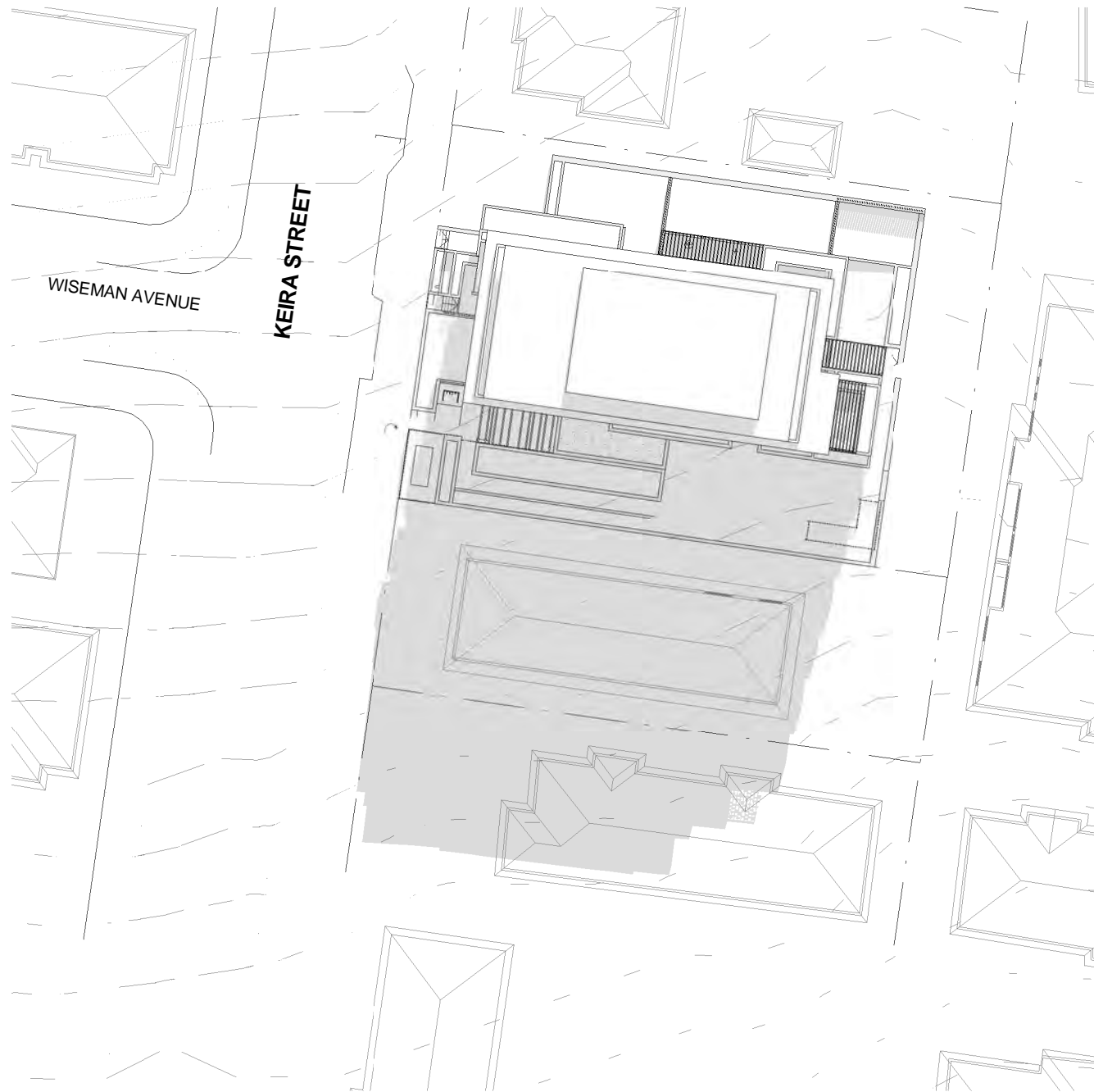
FB01	FACE BRICKWORK TYPE 1	R	ROOF	SLW	SLIDING WINDOW	P	POST
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes	FW	FIXED WINDOW	T	TIMBER FLOORS
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS	OB	OBSOLETE WINDOW	CT	CERAMIC TILES
BL	BLOCKWORK	D	DOOR	AW	AWNING WINDOW	CPT	CARPET
CL01	CLADDING	GD	GARAGE DOOR	SK	SKYLIGHT	PC	POLISHED CONCRETE
CL02	CLADDING	SLD	SLIDING DOOR	WH	WINDOW HOOD	SP	FEATURE SCREENING
RW	RETAINING WALL	LV	LOUVRES	LV	LOUVRES	IWS	INTEGRAL WALL
		BFD	BI-FOLD DOOR	RWT	RAINWATER TANK		



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Nominated Architect: Robert Gizzi (Reg. 8286)

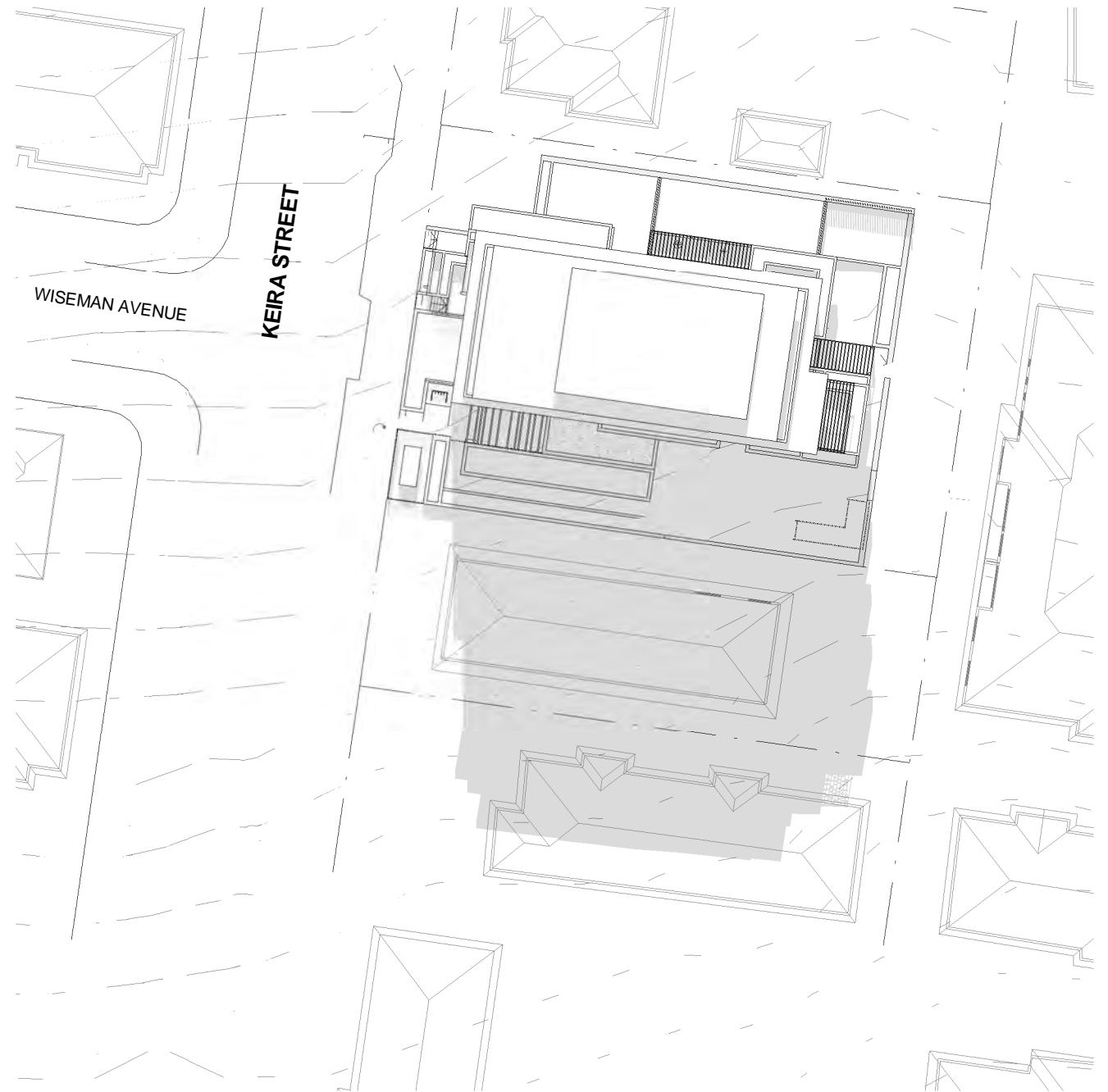
ADDITIONAL INFORMATION

CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.	1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	NT	DWG No.	41 AA
		SCALE:	1 : 500		
DRAWING NAME:	SHADOW DIAGRAMS - WINTER	QA:	RG		



SOLAR ANALYSIS - JUNE - 12pm

1 : 500



SOLAR ANALYSIS - JUNE - 1pm

1 : 500

DISCLAIMER
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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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Legend:			
FB01	FACE BRICKWORK TYPE 1	R	ROOF
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPipes
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	LV	LOUVRES
RWT	RAINWATER TANK		
P	POST	T	TIMBER FLOORS
CT	CERAMIC TILES	CPT	CARPET
PC	POLISHED CONCRETE	SP	FEATURE SCREENING
IWS	INTEGRAL WALL		

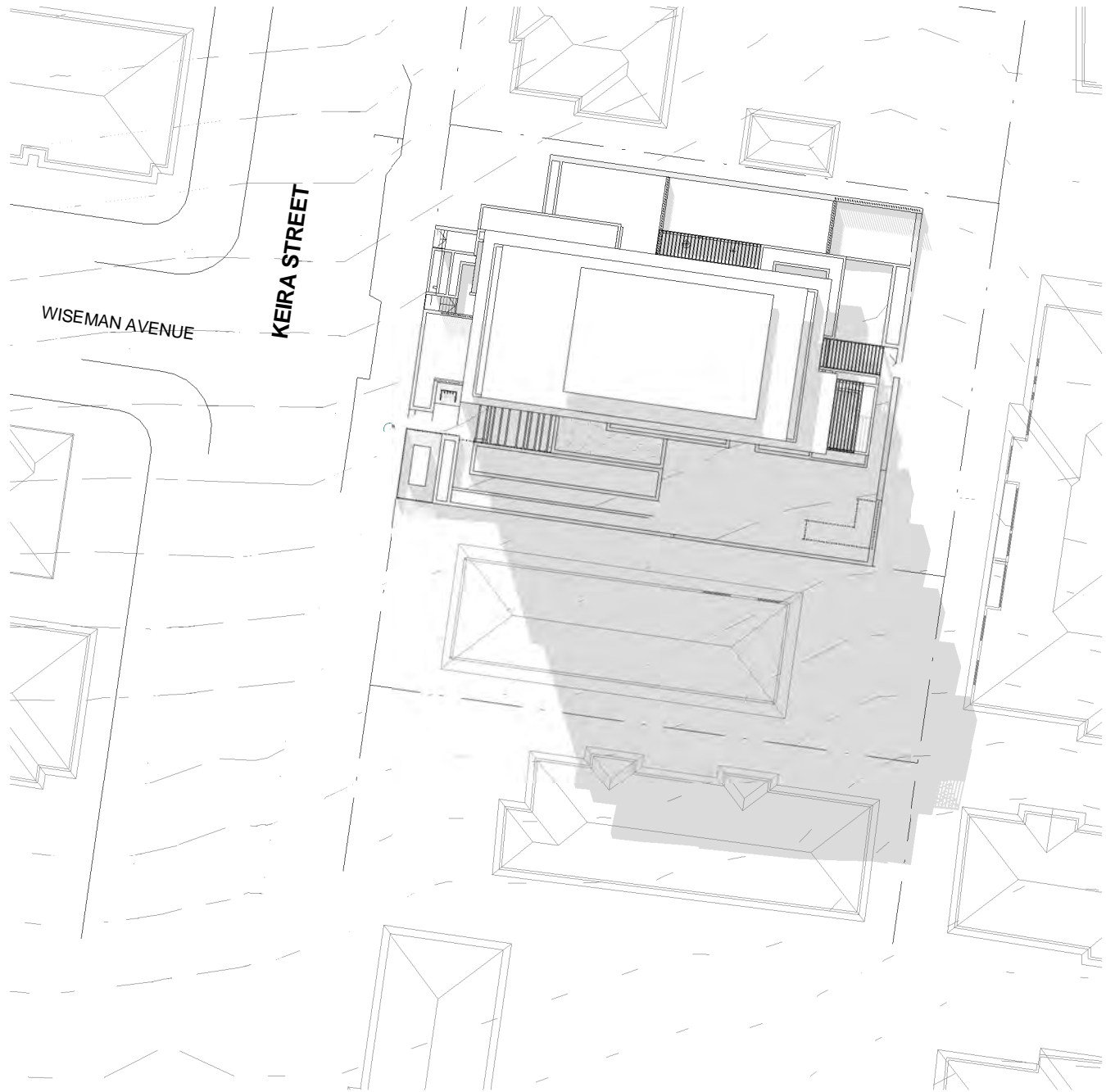


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Web: <http://www.designworkshop.com.au>
Nominated Architect: Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.	1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	NT	DWG No.	42 AA
		SCALE:	1 : 500		
DRAWING NAME:	SHADOW DIAGRAMS - WINTER	QA:	RG		



SOLAR ANALYSIS - JUNE - 2pm

1 : 500

SOLAR ANALYSIS - JUNE - 3pm

1 : 500

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

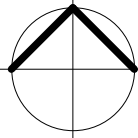
DISCLAIMER
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Legend:			
FB01	FACE BRICKWORK TYPE 1	R	ROOF
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	RWT	RAINWATER TANK
P	POST	T	TIMBER FLOORS
CT	CERAMIC TILES	CPT	CARPET
PC	POLISHED CONCRETE	SP	FEATURE SCREENING
IWS	INTEGRAL WALL		



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Nominated Architect: Robert Gizzi (Reg. 8286)



CLIENT: ILLAWARRA STAR
MULTI-RESIDENTIAL DEVELOPMENT
ADDRESS: 5-7 KEIRA STREET, WOLLONGONG
DRAWING NAME: SHADOW DIAGRAMS - WINTER

DATE: 27 OCT 2017
DRAWN: NT
SCALE: 1 : 500
QA: RG

PROJECT No.1600
DWG No. 43 AA



VIEW CORRIDOR ANALYSIS
NO SCALE

DISCLAIMER
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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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Legend:	
FB01	FACE BRICKWORK TYPE 1
FB02	FACE BRICKWORK TYPE 2
FB03	FACE BRICKWORK TYPE 3
BL	BLOCKWORK
CL01	CLADDING
CL02	CLADDING
RW	RETAINING WALL
R	ROOF
DP	DOWNPIPES
TB	TIMBER BATTENS
D	DOOR
GD	GARAGE DOOR
SLD	SLIDING DOOR
BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW
FW	FIXED WINDOW
OB	OBSCURE WINDOW
AW	AWNING WINDOW
SK	SKYLIGHT
WH	WINDOW HOOD
LV	LOUVRES
RWT	RAINWATER TANK
P	POST
T	TIMBER FLOORS
CT	CERAMIC TILES
CPT	CARPET
PC	POLISHED CONCRETE
SP	FEATURE SCREENING
IWS	INTEGRAL WALL



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Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.	1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	NT	DWG No.	60 AA
		SCALE:	NO SCALE		
		QA:	RG		
DRAWING NAME: VIEW ANALYSIS - LOCATION MAP					



VIEW FROM APPROXIMATE RL OF 30.700 AT CORNER OF KEIRA AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 36.700 AT CORNER OF KEIRA AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 41.700 AT CORNER OF KEIRA AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 47.700 AT CORNER OF KEIRA AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 52.700 AT CORNER OF KEIRA AND EDWARDS STREET



CORNER OF KEIRA AND EDWARDS STREET KEY

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FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	LV	LOUVRES
RWT	RAINWATER TANK		



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CLIENT: ILLAWARRA STAR
MULTI-RESIDENTIAL DEVELOPMENT
ADDRESS: 5-7 KEIRA STREET, WOLLONGONG
DRAWING NAME: VIEW ANALYSIS - CNR KEIRA & EDWARDS

DATE: 27 OCT 2017
DRAWN: NT
SCALE: NO
SCALE
QA: RG

PROJECT No.1600
DWG No. **61** **AA**

ADDITIONAL INFORMATION



PROPOSED VIEW FROM APPROXIMATE RL OF 30.700
AT CORNER OF KEIRA AND EDWARDS STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 36.700
AT CORNER OF KEIRA AND EDWARDS STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 41.700
AT CORNER OF KEIRA AND EDWARDS STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 47.700
AT CORNER OF KEIRA AND EDWARDS STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 52.700
AT CORNER OF KEIRA AND EDWARDS STREET



CORNER OF KEIRA AND EDWARDS STREET KEY

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Legend:			
FB01	FACE BRICKWORK TYPE 1	R	ROOF
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	LV	LOUVRES
RWT	RAINWATER TANK		
P	POST	T	TIMBER FLOORS
CT	CERAMIC TILES	CPT	CARPET
PC	POLISHED CONCRETE	SP	FEATURE SCREENING
IWS	INTEGRAL WALL		



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Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	NT	DWG No. 61A AA
DRAWING NAME:	VIEW ANALYSIS - CNR KEIRA & EDWARDS	SCALE:	NO SCALE	
		QA:	RG	



VIEW FROM APPROXIMATE RL OF 31.700 AT CORNER OF PARK AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 36.700 AT CORNER OF PARK AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 41.700 AT CORNER OF PARK AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 47.700 AT CORNER OF PARK AND EDWARDS STREET



VIEW FROM APPROXIMATE RL OF 52.700 AT CORNER OF PARK AND EDWARDS STREET



CORNER OF EDWARD AND PARK STREET KEY

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION
Legend:		
FB01	FACE BRICKWORK TYPE 1	R ROOF
FB02	FACE BRICKWORK TYPE 2	DP DOWNPIPES
FB03	FACE BRICKWORK TYPE 3	TB TIMBER BATTENS
BL	BLOCKWORK	D DOOR
CL01	CLADDING	GD GARAGE DOOR
CL02	CLADDING	SLD SLIDING DOOR
RW	RETAINING WALL	BFD BI-FOLD DOOR
SLW	SLIDING WINDOW	FW FIXED WINDOW
OB	OBSCURE WINDOW	AW AWNING WINDOW
SK	SKYLIGHT	WH WINDOW HOOD
LV	LOUVRES	LV LOUVRES
RWT	RAINWATER TANK	
P	POST	T TIMBER FLOORS
CT	CERAMIC TILES	CPT CARPET
PC	POLISHED CONCRETE	SP FEATURE SCREENING
IWS	INTEGRAL WALL	



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CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	NT	DWG No. 62 AA
DRAWING NAME:	VIEW ANALYSIS - CNR PARK & EDWARDS	SCALE:	NO SCALE	
		QA:	RG	



PROPOSED VIEW FROM APPROXIMATE RL OF 31.700 AT CORNER OF PARK AND EDWARDS STREET
(BUILDING NOT VISIBLE AT THIS HEIGHT)



PROPOSED VIEW FROM APPROXIMATE RL OF 36.700 AT CORNER OF PARK AND EDWARDS STREET
(BUILDING NOT VISIBLE AT THIS HEIGHT)



PROPOSED VIEW FROM APPROXIMATE RL OF 41.700 AT CORNER OF PARK AND EDWARDS STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 47.700 AT CORNER OF PARK AND EDWARDS STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 52.700 AT CORNER OF PARK AND EDWARDS STREET



CORNER OF EDWARD AND PARK STREET KEY

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REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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Legend:			
FB01	FACE BRICKWORK TYPE 1	R	ROOF
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	LV	LOUVRES
RWT	RAINWATER TANK		



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Nominated Architect: Robert Gizzi (Reg. 8286)

CLIENT:	ILLAWARRA STAR MULTI-RESIDENTIAL DEVELOPMENT	DATE:	27 OCT 2017	PROJECT No.1600
ADDRESS:	5-7 KEIRA STREET, WOLLONGONG	DRAWN:	NT	DWG No. 62A AA
DRAWING NAME:	VIEW ANALYSIS - CNR PARK & EDWARDS	SCALE:	NO SCALE	
		QA:	RG	



VIEW FROM APPROXIMATE RL OF 25.700 AT CORNER OF BOURKE AND CHURCH STREET



VIEW FROM APPROXIMATE RL OF 30.700 AT CORNER OF BOURKE AND CHURCH STREET



VIEW FROM APPROXIMATE RL OF 36.700 AT CORNER OF BOURKE AND CHURCH STREET



VIEW FROM APPROXIMATE RL OF 41.700 AT CORNER OF BOURKE AND CHURCH STREET



VIEW FROM APPROXIMATE RL OF 47.700 AT CORNER OF BOURKE AND CHURCH STREET



VIEW FROM APPROXIMATE RL OF 52.700 AT CORNER OF BOURKE AND CHURCH STREET



CORNER OF BOURKE AND CHURCH STREET KEY

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

REF.	DATE	AMENDMENT
AA	22/06/2018	ADDITIONAL INFORMATION

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

Legend:			
FB01	FACE BRICKWORK TYPE 1	R	ROOF
FB02	FACE BRICKWORK TYPE 2	DP	DOWNPIPES
FB03	FACE BRICKWORK TYPE 3	TB	TIMBER BATTENS
BL	BLOCKWORK	D	DOOR
CL01	CLADDING	GD	GARAGE DOOR
CL02	CLADDING	SLD	SLIDING DOOR
RW	RETAINING WALL	BFD	BI-FOLD DOOR
SLW	SLIDING WINDOW	FW	FIXED WINDOW
OB	OBSCURE WINDOW	AW	AWNING WINDOW
SK	SKYLIGHT	WH	WINDOW HOOD
LV	LOUVRES	RWT	RAINWATER TANK
P	POST	T	TIMBER FLOORS
CT	CERAMIC TILES	CPT	CARPET
PC	POLISHED CONCRETE	SP	FEATURE SCREENING
IWS	INTEGRAL WALL		



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DRAWING NAME: VIEW ANALYSIS - CNR BOURKE & CHURCH



PROPOSED VIEW FROM APPROXIMATE RL OF 25.700
AT CORNER OF BOURKE AND CHURCH STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 30.700
AT CORNER OF BOURKE AND CHURCH STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 36.700
AT CORNER OF BOURKE AND CHURCH STREET



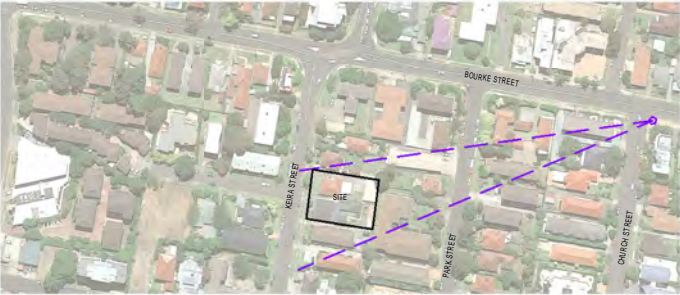
PROPOSED VIEW FROM APPROXIMATE RL OF 41.700
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PROPOSED VIEW FROM APPROXIMATE RL OF 47.700
AT CORNER OF BOURKE AND CHURCH STREET



PROPOSED VIEW FROM APPROXIMATE RL OF 52.700
AT CORNER OF BOURKE AND CHURCH STREET



CORNER OF BOURKE AND CHURCH STREET KEY

ADDITIONAL INFORMATION

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Wollongong Design Review Panel
Meeting minutes and recommendations DA-2017/1521

Date	15 May 2018
Meeting location	Wollongong City Council Administration offices
Panel members	Brendan Randles
	Tony Quinn
	Iain Stewart
Apologies	
Council staff	Pier Panozzo, Manager City Centre & Major Development Vanessa Davis - Senior Development Project Officer
Guests/ representatives of the applicant	Robert Gizzi, Design Workshop Australia Luke Rollinson – MMJ Wollongong
Declarations of Interest	Nil
Item number	3
DA number	DA-2017/1521
Reasons for consideration by DRP	Clause 28 SEPP 65 – Residential Flat Building
Determination pathway	Local Planning panel (IHAP) Section 4(b) of Schedule 2 of the Local Planning Panels Direction of 1 March 2018, as the Development is sensitive development.
Property address	5-7 Keira Street Wollongong
Proposal	Residential Flat Building
Applicant or applicant's representative address to the design review panel	
Background	<p>The site was previously inspected by the Panel 3 July 2017 under DE-2017/87 pre-lodgement and 6 December 2017 post lodgement.</p> <p>The Panel have now seen the proposal three times. At the last Panel meeting, a comprehensive site analysis was sought to inform a more sensitive address to adjoining properties and better consideration of built form so as to minimize the apparent impacts on all adjoining properties.</p>
Design quality principals SEPP65	
Context and Neighbourhood Character	<p>More site and contextual information has been provided, including numerous site photographs and montages showing where the proposal will be seen from – which is helpful. However, this material has not appeared to positively impact on the proposed built form, which is highly prominent and seemingly indifferent to its context.</p> <p>Comparative impacts on the site to the south have also been provided. These demonstrate that impacts created on this site are largely unavoidable and would be created even by a much smaller building.</p> <p>The proposal needs to demonstrate mitigation of privacy impacts to neighbour on east.</p>
Built Form and Scale	There have been changes to the built form which are all positive. However, the built form remains problematic as follows:

	<ul style="list-style-type: none"> - NW balconies have not been rotated to face the street as required - While spandrels have been made solid, north facing windows are still insufficiently defensive or protected by landscaped planters as suggested - Many windows are not legible on the plans submitted, making assessment very difficult - Without any distinction in the design of built form between the below four storeys and above four storeys (especially in terms of ADG), an opportunity has been missed to break down the building's imposing scale – especially its northern aspect. - The lean-to penthouse roof contradicts the orthogonal form of the building; extending the full plan. It is again a missed opportunity to reduce apparent scale by stepping back the penthouse level. - Kitchens on street facing elevation from level 1 upwards create poor interface and streetscape; it may be better to relocate the kitchen to the east of the living room and create living and dining spaces around a street facing corner balcony, as suggested at the last panel meeting. - Ground floor rear facing unit unnecessarily incorporates a non-compliant snorkel arrangement, has a living room that is too deep and fails to achieve cross ventilation - The highly unusual arrangement of east facing balconies prevents the North east unit on each level from achieving natural ventilation without introducing adverse acoustic privacy impacts
Density	While the density complies, it has still not been demonstrated that the GFA proposed can actually fit on the site without creating adverse physical and visual impacts on streetscape, locality generally and adjoining properties.
Sustainability	See comments above regarding restricted natural ventilation.
Landscape	<p>Acceptable; however the lack of well conceived landscaped planters to balconies – integrated into a well resolved built form – results in a large building impacting adversely on adjoining properties.</p> <p>Reconsider the location of the vegetable and herb garden to the building's south, which is overshadowed as proposed.</p>
Amenity	<p>See comments above regarding :</p> <ul style="list-style-type: none"> - snorkel bedroom at ground level - excessively long living room at ground floor level - location of street facing kitchens - impact of visual bulk on streetscape and locality - privacy impacts on northern property - privacy impacts between east facing units - the amenity of the terrace of the ground floor unit facing the street is compromised by the proximity and overlooking of

	<p>the kiosk substation. Consider the relocation and improved concealment of the substation.</p> <ul style="list-style-type: none"> - The common room would benefit from a larger kitchenette counter
Safety	Acceptable
Housing Diversity and Social Interaction	Acceptable
Aesthetics	<p>Sections 1 and 2 demonstrate that there has been almost no attention given to resolving the form of the proposal. This is born out by the numerous views provided, which illustrate that the large rectangular prism is awkward and clearly out of scale with its context. There appears to have been no attempt to modulate the form vertically and no consistently applied horizontal rhythm or integration with landscape.</p> <p>With no apparent design expression, the proposal appears too preliminary and schematic to assess.</p>
Design Excellence WLEP2009	
Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	N
Whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain,	N
Whether the proposed development detrimentally impacts on view corridors,	Y
Whether the proposed development detrimentally overshadows an area shown distinctively coloured and numbered on the Sun Plane Protection Map,	N/A
How the development addresses the following:	
the suitability of the land for development,	Y
existing and proposed uses and use mix	Y
heritage issues and streetscape constraints,	N
the location of any tower proposed, having regard to the need to achieve an acceptable relationship with other towers (existing or	N

proposed) on the same site or on neighbouring sites in terms of separation, setbacks, amenity and urban form,	
bulk, massing and modulation of buildings	N
street frontage heights	Y – however, integration with streetscape and context is not achieved
environmental impacts such as sustainable design, overshadowing, wind and reflectivity	N
the achievement of the principles of ecologically sustainable development	N
pedestrian, cycle, vehicular and service access, circulation and requirements	Y
impact on, and any proposed improvements to, the public domain	N
Recommendations	For the reasons noted above, the Panel cannot support the proposal in its current form.

Attachment 5

Apartment Design Guide Assessment

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
Part 1 – Identifying the context		
<p><u>1A Apartment building types</u></p> <p>Generic apartment building types can be used to:</p> <ul style="list-style-type: none"> - Determine the appropriate scale of future built form - Communicate the desired character of an area - Assist when testing envelope and development controls to achieve high amenity and environmental performance. 	<p>The proposal is a Residential flat development.</p> <p>The development consists of one level of basement parking and 21 residential units.</p>	Yes
<p><u>1B Local character and context</u></p> <p>This guideline outlines how to define the setting and scale of a development, and involves consideration of the desired future character, common settings and the range of scales.</p>	<p>The strategic desired future character of the area is set by Wollongong LEP 2009 and accompanying DCPs particularly Chapter D13 Wollongong City Centre. Detailed site analysis information has been submitted.</p>	Yes
<p><u>1C Precincts and individual sites</u></p> <p>Individual sites:</p> <p>New development on individual sites within an established area should carefully respond to neighbouring development, and also address the desired future character at the neighbourhood and street scales. Planning and design considerations for managing this include:</p> <ul style="list-style-type: none"> - Site amalgamation where appropriate - Corner site and sites with multiple frontages can be more efficient than sites with single frontages - Ensure the development potential for adjacent sites is retained - Avoid isolated sites that are unable to realise the development potential. 	<p>The application proposes the amalgamation of 2 sites (5 and 7 Keira Street) with a single frontage to Keira Street.</p>	Yes
Part 2 – Developing the controls		
<p>These guidelines include tools to support the strategic planning process when preparing planning controls, and aren't relevant to the development assessment of</p>	<p>Strategic Planning controls have been established and incorporated into the DCP and LEP.</p>	

Standards/controls	Comment	Compliance
individual proposals.		
<i>Part 3 Siting the development</i>		
<u>3A Site analysis</u>	Relevant site analysis plans have been provided with the DA.	Yes
<u>3B Orientation</u>		
Buildings must be oriented to maximise norther orientation, response to desired character, promote amenity for the occupant and adjoining properties, retain trees and open spaces and respond to contextual constraints such as overshadowing and noise.	The building has been orientated to maximise solar access to indoor and outdoor living spaces.	Yes
<u>Objective 3B-1:</u> <i>Building types and layouts respond to the streetscape and site while optimising solar access within the development</i>	The proposal addresses the street frontage and improvements have been made to orientate the balconies to the street and to more clearly define the front entry.	
<u>Design Guidance</u> - Buildings should define the street by facing it and providing direct access.		
<u>Objective 3B-2</u> <i>Overshadowing of neighbouring properties is minimised during mid- winter</i>		
<u>Design Guidance</u> - Overshadowing should be minimised to the south or down hill by increased upper level setbacks - Refer sections 3D & 4A below for solar access requirements - A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings	Setbacks are compliant with ADG requirements. Variation requested with regard to solar access.	
<u>3C Public domain interface</u>		
<u>Objective 3C-1:</u> <i>Transition between private and public domain is achieved without compromising safety and security</i>		
<u>Design Guidance</u> - Terraces, balconies and courtyards should have direct street entry, where appropriate - Changes in level between private terraces etc above street level provide surveillance and improved visual privacy for ground level dwellings. - Front fences and walls along street	Street entry is available to Unit 101 Clear definition has been provided between private and public domain. Direct pedestrian entry is provided from street level. Improved visual surveillance has been	Yes

Standards/controls	Comment	Compliance
<p>frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m.</p> <ul style="list-style-type: none"> - Opportunities should be provided casual interaction between residents and the public domain eg seating at building entries, near letterboxes etc <p><u>Objective 3C-2:</u></p> <p><i>Amenity of the public domain is retained and enhanced</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Planting softens the edges of any raised terraces to the street (eg basement podium) - Mailboxes should be located in lobbies perpendicular to street alignment or integrated into front fences. - Garbage storage areas, substations, pump rooms and other service requirements should be located in basement car parks. - Durable, graffiti resistant materials should be used - Where development adjoins public parks or open space the design should address this interface. <p><u>3D Communal and public open space</u></p> <p><u>Objective 3D-1</u></p> <p><i>An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping</i></p> <p><u>Design Criteria</u></p> <ol style="list-style-type: none"> 1. Communal open space has a minimum area of 25% of the site area 2. 50% direct sunlight provided to principal usable part of communal open space for a minimum of 2 hours between 9am and 3pm on 21 June <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Communal open space should be consolidated into a well designed, usable area. <p><u>Objective 3D-2</u></p> <p><i>Communal open space is designed to allow for a range of activities, respond to site</i></p>	<p>incorporated into the design with living/dining rooms facing the street.</p> <p>Entrance to the lobby area has been redesigned to be made more visually apparent from the street.</p> <p>Planting has been incorporated into the design to soften the impact on the streetscape.</p> <p>Mailboxes in a suitable location and bin storage is located in basement.</p> <p>Substation has been relocated to a more suitable location towards the southern boundary (was initially proposed in front of Unit 101).</p> <p>Communal open space has been provided in the form of common lawn area around the site, common room and landscaping with seating around the site with a total area of 359.98sqm representing (26.35%) of the total site area.</p> <p>Appropriate landscape treatment has been provided.</p>	<p>Yes</p>

Standards/controls	Comment	Compliance												
<p>conditions and be attractive and inviting</p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Facilities to be provided in communal open spaces for a range of age groups, and may incorporate seating, barbeque areas, play equipment, swimming pools <p><u>Objective 3D-3</u></p> <p><i>Communal open space is designed to maximise safety</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Communal open space should be visible from habitable rooms and POS areas and should be well lit. <p><u>Objective 3D-4</u></p> <p><i>Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood</i></p> <p><u>3E Deep soil zones</u></p> <p><u>Objective 3E-1</u></p> <p><i>3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.</i></p> <p><u>Design Criteria:</u></p> <ol style="list-style-type: none"> 1. Deep soil zones are to meet the following minimum requirements: <table border="1"> <thead> <tr> <th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr> </thead> <tbody> <tr> <td>less than 650m²</td><td>-</td><td rowspan="4">7%</td></tr> <tr> <td>650m² - 1,500m²</td><td>3m</td></tr> <tr> <td>greater than 1,500m²</td><td>6m</td></tr> <tr> <td>greater than 1,500m² with significant existing tree cover</td><td>6m</td></tr> </tbody> </table> <p><u>Design guidance:</u></p> <ul style="list-style-type: none"> - Deep soil zones should be located to retain existing significant trees. <p><u>3F Visual privacy</u></p> <p><u>Objective 3F-1</u></p> <p><i>Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of</i></p>	Site area	Minimum dimensions	Deep soil zone (% of site area)	less than 650m ²	-	7%	650m ² - 1,500m ²	3m	greater than 1,500m ²	6m	greater than 1,500m ² with significant existing tree cover	6m	<p>Facilities are considered appropriate for the site.</p> <p>Minimum dimension of 3.0m required, with minimum area of 95.62m² (7%)</p> <p>A 6m wide deep soil zone extends along the rear (eastern) boundary of the site with a total area of 182.88sqm (13.5%).</p>	<p>Yes</p>
Site area	Minimum dimensions	Deep soil zone (% of site area)												
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Standards/controls	Comment	Compliance												
<p><i>external and internal visual amenity.</i></p> <p><u>Design Criteria:</u></p> <p>1. Minimum required separation distances from buildings to the side and rear boundaries are as follows:</p> <table border="1"> <thead> <tr> <th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr> </thead> <tbody> <tr> <td>up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr> <tr> <td>up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr> <tr> <td>over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr> </tbody> </table> <p><u>Objective 3F-2:</u></p> <p><i>Site and building design elements increase privacy without compromising access to light and air and balance outlook and views from habitable rooms and private open space</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Communal open space, common areas and access paths should be separated from private open space and windows to apartments. <p><u>3G Pedestrian access and entries</u></p> <p><u>Objective 3G-1</u></p> <p><i>Building entries and pedestrian access connects to and addresses the public domain</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Multiple entries should be provided to activate the street edge. - Buildings entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries. <p><u>Objective 3G-2</u></p> <p><i>Access, entries and pathways are accessible and easy to identify</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Building access areas should be clearly visible from the public domain and communal spaces - Steps and ramps should be integrated into the overall building and landscape design. - 	Building height	Habitable rooms and balconies	Non-habitable rooms	up to 12m (4 storeys)	6m	3m	up to 25m (5-8 storeys)	9m	4.5m	over 25m (9+ storeys)	12m	6m	<p>Refer to Clause 2.5 of Chapter D13</p> <p>The development achieves the required building separation distances for side and rear boundaries</p> <p>COS and common areas are separated from private open space and windows.</p> <p>A pedestrian entry to the ground floor unit 101 is provided and a separate entry is proposed from the street frontage to the entrance lobby.</p> <p>Building entry is clearly visible from public domain.</p>	<p>Yes</p> <p>Yes</p>
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over 25m (9+ storeys)	12m	6m												

Standards/controls	Comment	Compliance
<p><u>3H Vehicle access</u></p> <p><u>Objective 3H-1</u></p> <p><i>Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</i></p> <p><u>3J Bicycle and car parking</u></p> <p><u>Objective 3J-2</u></p> <p><i>Parking and facilities are provided for other modes of transport</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters - Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas. <p><u>Objective 3J-3</u></p> <p><i>Car park design and access is safe and secure</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Supporting facilities within car parks (garbage rooms, storage areas, car wash bays) can be accessed without crossing parking spaces - A clearly defined and visible lobby or waiting area should be provided to lifts and stairs. - Permeable roller doors allow for natural ventilation and improve the safety of car parking areas by enabling passive surveillance. <p><u>Objective 3J-4</u></p> <p><i>Visual and environmental impact of underground car parking are minimised</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Excavation should be minimised through efficient carpark layouts and ramp design. - Protrusion of carparks should not exceed 1.0m above ground level. 	<p>Car park entry is provided behind the building line.</p> <p>Garbage collection located in the basement.</p> <p>The vehicular entry does not dominate the streetscape.</p> <p>Adequate vehicular parking, motor bike and bicycle parking proposed. No concerns raised from Traffic Engineer.</p> <p>Appropriate resident bicycle arrangements proposed.</p> <p>Supporting facilities adequately located.</p> <p>Lobby is defined. Roller Shutter doors proposed within the basement.</p> <p>All parking below street level in basement. Ventilation incorporated into the design.</p> <p>Basement design is efficient in layout and does not protrude more than 1m above ground level.</p>	<p>Yes</p>

Standards/controls	Comment	Compliance
<p>PART 4 – DESIGNING THE BUILDING - AMENITY</p> <p><u>4A Solar and daylight access</u></p> <p><u>Objective 4A-1</u></p> <p><i>To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space</i></p> <p><u>Design Criteria</u></p> <p>1. Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of two (2) hours direct sunlight between 9am and 3pm in mid-winter in Wollongong LGA.</p> <p>A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter</p> <p><u>4B natural ventilation</u></p> <p><u>Objective 4B-1</u></p> <p><i>All habitable rooms are naturally ventilated.</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - A building's orientation should maximise the prevailing winds for natural ventilation in habitable rooms - The area of unobstructed window openings should be equal to at least 5% of the floor area served. - Doors and openable windows should have large openable areas to maximise ventilation. <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Single aspect apartments should use design solutions to maximise natural ventilation. <p><u>Objective 4B-3</u></p> <p><i>The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents</i></p> <p><u>Design Criteria:</u></p> <p>1. 60% of apartments are naturally cross ventilated in the first nine storeys</p> <p>2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.</p>	<p>16 of the 21 units proposed are able to comply with the required 2 units of sunlight (76%).</p> <p>Units have been adequately designed to achieve cross ventilation requirements through window/balcony/terrace openings.</p> <p>One unit on the ground floor (Unit 102) does not achieve cross ventilation requirements. The remain units achieve cross ventilation requirements (95.2%).</p>	<p>Yes</p> <p>Yes</p>

Standards/controls	Comment	Compliance
<p><u>4C Ceiling heights</u></p> <p><u>Objective 4C-1</u></p> <p><i>Ceiling height achieves sufficient natural ventilation and daylight access</i></p> <p><u>Design Criteria</u></p> <p>1. Minimum 2.7m for habitable rooms and 2.4m for non-habitable rooms</p> <p><u>4D Apartment size and layout</u></p> <p><u>Objective 4D-1</u></p> <p><i>The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity</i></p> <p><u>Design Criteria:</u></p> <p>1. Minimum internal areas:</p> <p>Studio – 35m²</p> <p>1 bed – 50m²</p> <p>2 bed – 70m²</p> <p>3 bed – 90m²</p> <p>The minimum internal areas include only 1 bathroom. Additional bathrooms increase the minimum internal areas by 5m² each.</p> <p>2. Every habitable room must have a window in an external wall with a total minimum glass area of at least 10% of the floor area of the room</p> <p>- circulation areas.</p> <p><u>Objective 4D-2</u></p> <p><i>Environmental performance of the apartment is maximised</i></p> <p><u>Design Criteria:</u></p> <p>1. Habitable room depths are limited to a maximum of 2.5 x ceiling height</p> <p>2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.</p> <p><u>Design Guidance:</u></p> <p>- Greater than the minimum ceiling heights can allow proportionate increases in room depths.</p> <p>- Where possible, bathrooms and laundries should have an external openable window.</p>	<p>Minimum ceiling height of 3.1m achieved for all habitable rooms.</p> <p>Room layout is functional and well organised and will provide amenity to residents.</p> <p>The 2 BR units with ensuite has a minimum area of 76.8sqm.</p> <p>The 3 BR units with ensuite have a minimum area of 105.4sqm.</p> <p>All units habitable rooms have adequate amount of glass area.</p> <p>3.1m ceiling heights proposed which requires a maximum depth of 7.75m.</p>	<p>YEs</p>

Standards/controls	Comment	Compliance															
<ul style="list-style-type: none"> - Main living spaces should be oriented towards the primary outlook. <p><u>Objective 4D-3</u></p> <p><i>Apartment layouts are designed to accommodate a variety of household activities and needs</i></p> <p><u>Design Criteria:</u></p> <ol style="list-style-type: none"> 1. Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excl wardrobe space) 2. Bedrooms have minimum dimension of 3m (excl wardrobe) 3. Living rooms have minimum width of: <ul style="list-style-type: none"> - 3.6m for studio and 1 bed apartments and - 4m for 2+ beds. <p><u>4E Private open space and balconies</u></p> <p><u>Objective 4E-1</u></p> <p><i>Apartments provide appropriately sized private open space and balconies to enhance residential amenity</i></p> <ol style="list-style-type: none"> 1. Minimum balcony depths are: <table border="1"> <thead> <tr> <th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr> </thead> <tbody> <tr> <td>Studio apartments</td><td>4m²</td><td>-</td></tr> <tr> <td>1 bedroom apartments</td><td>8m²</td><td>2m</td></tr> <tr> <td>2 bedroom apartments</td><td>10m²</td><td>2m</td></tr> <tr> <td>3+ bedroom apartments</td><td>12m²</td><td>2.4m</td></tr> </tbody> </table> <p>The minimum balcony depth to be counted as contributing to the balcony area is 1m.</p> <ol style="list-style-type: none"> 2. Ground level apartment POS must have minimum area of 15m² and min. depth of 3m <p><u>Objective 4E-2</u></p> <p><i>Primary private open space and balconies are appropriately located to enhance liveability for residents</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Primary private open space and balconies should be located adjacent to the living room, dining room or kitchen to extend the living space. - POS & Balconies should be oriented with the longer side facing outwards to 	Dwelling type	Minimum area	Minimum depth	Studio apartments	4m ²	-	1 bedroom apartments	8m ²	2m	2 bedroom apartments	10m ²	2m	3+ bedroom apartments	12m ²	2.4m	<p>Bedroom achieves the minimum dimensions.</p> <p>Living rooms achieve the minimum width.</p> <p>2 and 3 bedrooms are proposed. Requiring a minimum area of 10-12sqm and a minimum depth of 2-2.4m.</p> <p>All balconies achieve the minimum depth and area requirements.</p> <p>Ground floor units have achieve minimum area and depth requirements.</p> <p>Private open space and balconies are located adjacent to living rooms and extend the living space.</p> <p>POS optimises daylight access into rooms, utilising northern sunlight where possible.</p>	
Dwelling type	Minimum area	Minimum depth															
Studio apartments	4m ²	-															
1 bedroom apartments	8m ²	2m															
2 bedroom apartments	10m ²	2m															
3+ bedroom apartments	12m ²	2.4m															

Standards/controls	Comment	Compliance
<p>optimise daylight access into adjacent rooms.</p> <p><u>Objective 4E-3</u></p> <p><i>Primary private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - A combination of solid and transparent materials balances the need for privacy with surveillance of the public domain - Full width glass balustrades alone are not desirable - Operable screens etc are used to control sunlight and wind, and provide increased privacy for occupancy while allowing for storage and external clothes drying. <p><u>Objective 4E-4</u></p> <p><i>Private open space and balcony design maximises safety</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Changes in ground levels or landscaping are minimised. <p><u>4F Common circulation and spaces</u></p> <p><u>Objective 4F-1</u></p> <p><i>Common circulation spaces achieve good amenity and properly service the number of apartments.</i></p> <p><u>Design Criteria</u></p> <ol style="list-style-type: none"> 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40. <p><u>Objective 4F-2</u></p> <p><i>Common circulation spaces promote safety and provide for social interaction between residents</i></p> <p><u>4G Storage</u></p> <p><u>Objective 4G-1</u></p> <p><i>Adequate, well designed storage is provided in each apartment</i></p> <ol style="list-style-type: none"> 1. In addition to storage in kitchens, 	<p>Pergolas are proposed on ground floor POS providing privacy.</p> <p>Changes in ground levels are minimal.</p> <p>3 units are proposed off a circulation core. Corridor length is acceptable. There are no openings onto common circulation space from the units. There are no incidental spaces.</p>	

Standards/controls	Comment	Compliance										
<p>bathrooms and bedrooms, the following storage is provided</p> <table><tr><th>Dwelling type</th><th>Storage size volume</th></tr><tr><td>Studio apartments</td><td>4m³</td></tr><tr><td>1 bedroom apartments</td><td>6m³</td></tr><tr><td>2 bedroom apartments</td><td>8m³</td></tr><tr><td>3+ bedroom apartments</td><td>10m³</td></tr></table> <p>At least 50% of the required storage is to be located within the apartment</p> <p><u>Objective 4G-2</u></p> <p><i>Additional storage is conveniently located, accessible and nominated for individual apartments</i></p> <p><u>Design Guidance:</u></p> <ul style="list-style-type: none">- Storage not located within apartments should be allocated to specific apartments. <p><u>4H Acoustic privacy</u></p> <p><u>Objective 4H-1</u></p> <p><i>Noise transfer is minimised through the siting of buildings and building layout</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none">- Adequate building separation is required (see section 2F above).- Noisy areas within buildings should be located next to or above each other and quieter areas next to or above quieter areas.- Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources.- Noise sources such as garage doors, plant rooms, active communal open spaces and circulation areas should be located at least 3m away from bedrooms. <p><u>4J Noise and pollution</u></p> <p><u>Objective 4J-1</u></p> <p><i>In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none">- Minimise impacts through design	Dwelling type	Storage size volume	Studio apartments	4m ³	1 bedroom apartments	6m ³	2 bedroom apartments	8m ³	3+ bedroom apartments	10m ³	<p>Required Storage:</p> <p>2 bedroom: 19x 8m³: 152m³</p> <p>3 bedroom: 2x10m³: 20m³</p> <p>Total required: 172 m³</p> <p>Proposed: 190.81sqm</p> <p>Adequate building separation is proposed. There are no major external noise sources. Noise sources are located away from bedrooms.</p> <p>The proposed development is not considered to be in a noisy or hostile environment</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>
Dwelling type	Storage size volume											
Studio apartments	4m ³											
1 bedroom apartments	6m ³											
2 bedroom apartments	8m ³											
3+ bedroom apartments	10m ³											

Standards/controls	Comment	Compliance
<p>solutions such as physical separation from the noise or pollution source,</p> <p>Part 4 – Designing the building - Configuration</p> <p><u>4K Apartment mix</u></p> <p><u>Objective 4K-1</u></p> <p><i>A range of apartment types and sizes is provided to cater for different household types now and into the future</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - A variety of apartment types is provided - The apartment mix is appropriate, taking into consideration the location of public transport, market demands, demand for affordable housing, different cultural/social groups - Flexible apartment configurations are provided to support diverse household types and stages of life <p><u>Objective 4K-2</u></p> <p><i>The apartment mix is distributed to suitable locations within the building</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Larger apartment types are located on the ground or roof level where there is potential for more open space and on corners where more building frontage is available <p><u>4L Ground floor apartments</u></p> <p><u>Objective 4L-1</u></p> <p><i>Street frontage activity is maximised where ground floor apartments are located</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Direct street access should be provided to ground floor apartments - Activity is achieved through front gardens, terraces and the facade of the building. - Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion 	<p>Variation requested. Discussed in Section 2.3.</p> <p>Penthouse apartment located on level 8, top level.</p> <p>Direct street access is proposed.</p> <p>Ground level terrace located at street frontage at ground level.</p> <p>Opportunity for future small home office in the future.</p>	<p>Variation Requested</p> <p>Yes</p>

Standards/controls	Comment	Compliance
<p><u>Objective 4L-2</u></p> <p><i>Design of ground floor apartments delivers amenity and safety for residents</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - The design of courtyards should balance the need for privacy of ground floor apartments with surveillance of public spaces. Design solutions include: <ul style="list-style-type: none"> • elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) • landscaping and private courtyards • window sill heights that minimise sight lines into apartments • integrating balustrades, safety bars or screens with the exterior design - Solar access should be maximised through: <ul style="list-style-type: none"> • high ceilings and tall windows • trees and shrubs that allow solar access in winter and shade in summer <p>4M Facades</p> <p><u>Objective 4M-1</u></p> <p><i>Building facades provide visual interest along the street while respecting the character of the local area</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - To ensure that building elements are integrated into the overall building form and façade design - The front building facades should include a composition of varied building elements, textures, materials, detail and colour and a defined base, middle and top of building. - Building services should be integrated within the overall facade - Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale. - To ensure that new developments have facades which define and enhance the public domain and desired street character. <p><u>Objective 4M-2</u></p>	<p>Design of private open space, common open space and surveillance is satisfactory.</p> <p>Good solar access to these spaces are provided.</p> <p>There is no major level changes within the landscaping plan.</p> <p>The applicant has provided a colour and materials schedule with this DA. The schedule is considered acceptable and incorporates a number of elements, textures and colours. An improvement has been made the façade in response to the DRP</p>	<p>Yes</p>

Standards/controls	Comment	Compliance
<p><i>Building functions are expressed by the facade</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Building entries should be clearly defined <p><u>4N Roof design</u></p> <p><u>Objective 4N-1</u></p> <p><i>Roof treatments are integrated into the building design and positively respond to other street</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Roof design should use materials and a pitched form complementary to the building and adjacent buildings. <p><u>4O Landscape design</u></p> <p><u>Objective 4O-1</u></p> <p><i>Landscape design is viable and sustainable</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Landscape design should be environmentally sustainable and can enhance environmental performance - Ongoing maintenance plans should be prepared <p><u>Objective 4O-2</u></p> <p><i>Landscape design contributes to the streetscape and amenity</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Landscape design responds to the existing site conditions including: <ul style="list-style-type: none"> • changes of levels • views • significant landscape features <p><u>4P Planting on Structures</u></p> <p><u>Objective 4P-1</u></p> <p><i>Appropriate soil profiles are provided</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Structures are reinforced for additional saturated soil weight - Minimum soil standards for plant sizes should be provided in accordance with Table 5 <p><u>Objective 4P-2</u></p>	<p>Roof design is appropriate and has been altered in response to DPR comments.</p> <p>Landscape design is satisfactory and no concerns have been raised from Council's landscape division.</p> <p>The vegetable garden has been relocated from the southern to the northern area of the site for access to sunlight.</p> <p>There are no significant landscape features to be retained. Landscape design is satisfactory for the proposed development.</p> <p>Planter boxes have been introduced into the design in response to comments from the DRP particularly along the northern elevation to assist with privacy.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>

Standards/controls	Comment	Compliance
<p><i>Plant growth is optimised with appropriate selection and maintenance</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Plants are suited to site conditions <p><u>Objective 4P-3</u></p> <p><i>Planting on structures contributes to the quality and amenity of communal and public open spaces</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Building design incorporates opportunities for planting on structures. Design solutions may include: <ul style="list-style-type: none"> • green walls with specialised lighting for indoor green walls • wall design that incorporates planting • green roofs, particularly where roofs are visible from the public domain • planter boxes <p><u>4Q Universal design</u></p> <p><u>Objective 4Q-1</u></p> <p><i>Universal design features are included in apartment design to promote flexible housing for all community members</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - A universally designed apartment provides design features such as wider circulation spaces, reinforced bathroom walls and easy to reach and operate fixtures <p><u>Objective 4Q-2</u></p> <p><i>A variety of apartments with adaptable designs are provided</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Adaptable housing should be provided in accordance with the relevant council policy <p><u>Objective 4Q-3</u></p> <p><i>Apartment layouts are flexible and accommodate a range of lifestyle needs</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Apartment design incorporates flexible design solutions 	<p>Planter beds are proposed on balconies for levels 2 to 4 to assist in privacy.</p> <p>Ground floor terraces and landscaping proposed.</p> <p>Circulation spaces are of sufficient width.</p> <p>3 adaptable units are proposed consistent with DCP 2009 requirements.</p> <p>A Statement of Compliance for BCA Access Provisions has been lodged.</p> <p>Layout of proposed units range from 2 to 3 bedrooms.</p>	<p>Yes</p>

Standards/controls	Comment	Compliance
<p>PART 4 – DESIGNING THE BUILDING - CONFIGURATION</p> <p><u>4U Energy efficiency</u></p> <p><u>Objective 4U-1</u></p> <p><i>Development incorporates passive environmental design</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) <p><u>Objective 4U-2</u></p> <p><i>Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer</i></p> <p><u>Design Guidance</u></p> <ul style="list-style-type: none"> - Provision of consolidated heating and cooling infrastructure should be located in a centralised location <p><u>Objective 4U-3</u></p> <p><i>Adequate natural ventilation minimises the need for mechanical ventilation</i></p> <p><u>4V Water management and conservation</u></p> <p><u>Objective 4V-1</u></p> <p><i>Potable water use is minimised</i></p> <p><u>Objective 4V-2</u></p> <p><i>Urban stormwater is treated on site before being discharged to receiving waters</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Water sensitive urban design systems are designed by a suitably qualified professional <p><u>Objective 4V-3</u></p> <p><i>Flood management systems are integrated into site design</i></p> <p><u>Design guidance</u></p> <ul style="list-style-type: none"> - Detention tanks should be located under paved areas, driveways or in basement car parks <p><u>4W Waste management</u></p> <p><u>Objective 4W-1</u></p> <p><i>Waste storage facilities are designed to minimise impacts on the streetscape,</i></p>	<p>Adequate natural light can be provided to habitable rooms.</p> <p>Plant rooms are located within the basement.</p> <p>Natural ventilation can be achieved.</p> <p>A Basix Certificate has been submitted with the application in accordance with NSW requirements. Conditions to carry out the BASIX commitments have been imposed into draft consent.</p> <p>Landscape and Stormwater plan are compatible with each other. Council's stormwater engineer has advised that the stormwater layout is satisfactory.</p> <p>The applicant proposes a water storage room within the basement. Waste collection from the street is to occur and is</p>	<p>Yes</p> <p>Condition</p> <p>Yes</p>

<i>Standards/controls</i>	<i>Comment</i>	<i>Compliance</i>
<i>building entry and amenity of residents</i> <u>Design guidance</u> <ul style="list-style-type: none"> - Common waste and recycling areas should be screened from view and well ventilated 	satisfactory.	
<u>4X Building maintenance</u> <u>Objective 4X-1</u> <i>Building design detail provides protection from weathering</i> <u>Design guidance</u> <ul style="list-style-type: none"> - Design solutions such as roof overhangs to protect walls and hoods over windows and doors to protect openings can be used. 	Most windows can be accessed for maintenance.	Yes

CHAPTER D13 – WOLLONGONG CITY CENTRE

The site is located within the Wollongong City Centre, as defined in WLEP 2009 and WDCP 2009. Chapter D13 applies to the development and prevails over other parts of the DCP where there is any inconsistency. A detailed assessment table of Chapter D13 is provided in the table below. It is also noted that where there is an inconsistency between the DCP and ADG, the ADG prevails.

2 Building form

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>2.1 General</u>		
<u>2.2 Building to street alignment and street setbacks</u>		
<ul style="list-style-type: none"> 4m front setback 	4m setback proposed. Minor protrusion forward from ground level terrace and balconies.	Yes
<u>2.3 Street frontage heights in commercial core</u>	N/A	N/A
<u>2.4 Building depth and bulk</u>		
<ul style="list-style-type: none"> Max depth 18m above 12m high (L5 – L7) 	Maximum floor plate size <900m ² The building is orientated across the site (north-south axis) with a maximum depth of 12m.	Yes
<u>2.5 Side and rear building setbacks and building separation</u>		
<p><i>Up to 12m in height:-</i></p> <ul style="list-style-type: none"> - habitable rooms with openings and balconies – 6m - non-habitable rooms and habitable rooms without openings – 3m <p><i>Residential uses between 12m & 24m</i></p> <ul style="list-style-type: none"> - habitable rooms with openings and balconies – 9m - non-habitable rooms and habitable rooms without openings – 4.5m 	<p><u>Levels ,1,2, 3 & 4 (up to 12m):</u></p> <p><u>Level 1</u></p> <p>North (side): 9m building, 6m terrace</p> <p>East (rear): 9m Common Room, 12.8m building wall</p> <p>South (side): 5.36m entry lobby (no openings), 8.4m building</p> <p><u>Levels 2-4</u></p> <p>North (side): 6m balcony planter, 9m building (openings)</p> <p>East (rear): 7.6m balcony planter, 11.2m building</p> <p>South (side): 8.4m building</p> <p><u>Levels 5-8 (>12m high):</u></p> <p><u>Levels 5-7</u></p> <p>North (side):8m balcony planter, 9.6m building</p>	Yes

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
	<p>East (rear): 7.6m planter, 11.2m building</p> <p>South (side):9.090m building</p> <p><u>Level 8</u></p> <p>North (side): 9m balcony planter, 9.6m building (minimum)</p> <p>East (rear): 13.54m balcony planter 18.2m wall</p> <p>South (side): 9m balcony planter, 10.4m (minimum) building</p>	
<u>2.6 Mixed used buildings</u>	N/A	N/A
<u>2.7 Deep soil zone (DSZ)</u> <ul style="list-style-type: none"> deep soil zone shall comprise no less than 15% of the total site area preferably provided in one continuous block and shall have a minimum dimension (width or length) of 6 metres. 	<p>Total site area = 1366m²</p> <p>Total DSZ required: 15% = 204.9m²</p> <p>Provided: 182.88m² (13.5%)</p> <p>A 6m wide deep soil zone extends along the rear (eastern) boundary of the site. This does not comply with the DCP however is compliant with the 7% required by the ADG.</p>	No, but compliant with the ADG
<u>2.8 Landscape design</u>	Landscape plan is satisfactory.	Yes
<u>2.9 Green roofs, green walls and planting on structures</u>	Podium planting is proposed.	Yes
<u>2.10 Sun access planes</u>	The site is not identified as being located within a site access plane.	N/A
<u>2.11 Development on classified roads</u>	N/A	N/A

3 Pedestrian amenity

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>3.2 Permeability</u>	No identified site links affect the site.	N/A
<u>3.3 Active street frontages</u> <ul style="list-style-type: none"> Active frontage uses are defined as one or a combination of the following at street level: Entrance to retail. Shop front. Glazed entries to commercial and residential lobbies occupying less than 50% of the street frontage, to a maximum of 12m frontage. Café or restaurant if accompanied by an entry from the street. Active office uses, such as reception, if visible from the street. In commercial and mixed use development, active street fronts are encouraged in the form of non-residential uses on ground level. Active street fronts are required along streets for all buildings in the Commercial Core Active ground floor uses are to be at the same general level as the footpath and be accessible directly from the street. 	<p>Development frontage is appropriate for a residential development. The main pedestrian access and lobby accesses the building from Keira Street</p> <p>The primary entry is well defined. Entry treatment and fencing provides a clear delineation between private and public spaces.</p> <p>The primary balcony and habitable room windows to the front units overlook and address Keira Street.</p>	Yes
<u>3.4 Safety and security</u> <ul style="list-style-type: none"> Ensure that the building design allows for casual surveillance of accessways, entries and driveways. Avoid creating blind corners and dark alcoves that provide concealment opportunities in pathways, stairwells, hallways and carparks. Provide entrances which are in visually prominent positions and which are easily identifiable, with visible numbering. Provide adequate lighting of all pedestrian access ways, parking areas and building entries. Such lighting should be on a timer or movement detector to reduce energy consumption and glare nuisance. Provide clear lines of sight and well-lit routes throughout the development. Where a pedestrian pathway is provided from the street, allow for casual surveillance of the pathway. For large scale retail and commercial development with a GFA of over 5,000m², provide a 'safety by design' assessment in accordance with the CPTED principles. Provide security access controls where appropriate. 	<p>Natural surveillance will be available from upper level balconies and residential living areas.</p> <p>Secure access to the building is to be installed through security gate including intercom. Roller Shutter security proposed for basement.</p> <p>Design responds appropriately to CPTED principles; refer to Chapter E2 assessment.</p>	Yes

<ul style="list-style-type: none"> Ensure building entrance(s) including pathways, lanes and arcades for larger scale retail and commercial developments are directed to signalised intersections rather than mid-block in the Commercial zone. 		
<u>3.5 Awnings</u>	N/A	N/A
<u>3.6 Vehicular footpath crossings</u>		
<ul style="list-style-type: none"> 1 vehicle access point only (including the access for service vehicles and parking for non-residential uses within mixed use developments) will be generally permitted Double lane crossing with a maximum width of 5.4 metres may be permitted Doors to vehicle access points are to be roller shutters or tilting doors fitted behind the building façade. Vehicle entries are to have high quality finishes to walls and ceilings as well as high standard detailing. No service ducts or pipes are to be visible from the street. 	1 entry point only proposed with a 5.84m wide driveway. Driveway crossing width is acceptable.	Yes
<u>3.7 Pedestrian overpasses, underpasses and encroachments</u>	N/A	N/A
<u>3.8 Building exteriors</u>		
<ul style="list-style-type: none"> Adjoining buildings (particularly heritage buildings) are to be considered in the design of new buildings in terms of appropriate alignment and street frontage heights; setbacks above street frontage heights; appropriate materials and finishes selection; façade proportions including horizontal or vertical emphasis; Balconies and terraces should be provided, particularly where buildings overlook parks and on low rise parts of buildings. Gardens on the top of setback areas of buildings are encouraged. Articulate facades so that they address the street and add visual interest. External walls should be constructed of high quality and durable materials and finishes with 'selfcleaning' attributes, such as face brickwork, rendered brickwork, stone, concrete and glass. Finishes with high maintenance costs, those susceptible to degradation or corrosion from a coastal or industrial environment or finishes that result in unacceptable amenity impacts, such as reflective glass, are to be avoided. To assist articulation and visual interest, avoid expanses of any single material. 	<p>The proposal has been designed in response to comments/concerns raised by the DRP.</p> <p>Balconies are provided to all units; overlooking/ surveillance of the street will be available.</p> <p>Facades address the street and the building is generally considered to be well articulated and detailed to add visual interest.</p> <p>A colour & material schedule has been provided. High quality and durable materials and finishes are proposed.</p> <p>There are no encroachments into/ across the footpath</p>	Yes

- Limit opaque or blank walls for ground floor uses to 30% of the street frontage.
- Maximise glazing for retail uses, but break glazing into sections to avoid large expanses of glass.
- Highly reflective finishes and curtain wall glazing are not permitted above ground floor level
- A materials sample board and schedule is required to be submitted with applications for development over \$1 million or for that part of any development built to the street edge.
- Minor projections up to 450mm from building walls in accordance with those permitted by the BCA may extend into the public space providing it does not fall within the definition of GFA and there is a public benefit.
- The design of roof plant rooms and lift overruns is to be integrated into the overall architecture of the building.

3.9 Advertising and signage

N/A

N/A

3.10 Views and view corridors

- Existing views shown in Figure 3.12 are to be protected to an extent that is practical.

FIGURE 3.12: SIGNIFICANT VIEWS



The site is situated within the line of site where views to the escarpment are to be maintained. A view analysis has been submitted with the application.

The 3D model of this development has been loaded into Council's Mapping software (K2i) to assess the impacts of the development with nearby proposed and built developments. An analysis has been undertaken by Council's Assessment Officer which concludes that views from Flagstaff Hill to the escarpment along this corridor (traversing the subject site) are already obstructed by existing developments within the City Centre and westwards towards the railway line. The development will not obstruct any Panoramic Views from this view point.

Satisfactory

- Align buildings to maximise view corridors between buildings
- Remove or avoid installation of built elements that obstruct significant views.
- Carefully consider tree selection to provide views along streets in Figure 3.12 and keep under storey planting low where possible.

There is currently no blocked view applying to this site.

There are no tree species proposed which will impact upon views.

<ul style="list-style-type: none"> Site analysis must address views with the planning and design of building forms taking into account existing topography, vegetation and surrounding development 	A detailed site analysis including a view analysis	
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4 Access, parking and servicing

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>4.1 General</u>		
<u>4.2 Pedestrian access and mobility</u>		
<ul style="list-style-type: none"> Main building entry points should be clearly visible from primary street frontages and enhanced as appropriate with awnings, building signage or high quality architectural features that improve clarity of building address and contribute to visitor and occupant amenity. The design of facilities (including car parking requirements) for disabled persons must comply with the relevant Australian Standard and the Disability Discrimination Act 1992. The development must provide at least one main pedestrian entrance with convenient barrier free access in all developments to at least the ground floor. The development must provide continuous access paths of travel from all public roads and spaces as well as unimpeded internal access. Pedestrian access ways, entry paths and lobbies must use durable materials commensurate with the standard of the adjoining public domain. Building entrance levels and footpaths must comply with the longitudinal and cross grades specified in AS 1428.1, AS/NZS 2890.1:2004 and the DDA. 	<p>Pedestrian access is available from the street frontage with one entry point.</p> <p>Car parking for the adaptable units is provided within the basement car parking levels, with access throughout the building available via the lifts.</p> <p>The finish of pedestrian pathways and the like can be dealt with by consent conditions.</p>	Yes
<u>4.3 Vehicular driveways and manoeuvring areas</u>		
<ul style="list-style-type: none"> Driveways should be: <ul style="list-style-type: none"> i) Provided from lanes and secondary streets rather than the primary street, wherever practical. ii) Located taking into account any services within the road reserve, such as power poles, drainage pits and existing street trees. iii) Located a minimum of 6m from the nearest intersection iv) If adjacent to a residential development setback a minimum of 1.5m from the relevant side property boundary. 	<p>Appropriate driveway location is proposed; does not appear to conflict with any services in the road reserve.</p> <p>Driveway width is acceptable and manoeuvring areas appear to comply with applicable controls.</p>	Yes

<ul style="list-style-type: none"> Vehicle access is to be designed to: <p>i) Minimise the impact on the street, site layout and the building façade design; and</p> <p>ii) If located off a primary street frontage, integrated into the building design.</p> <ul style="list-style-type: none"> All vehicles must be able to enter and leave the site in a forward direction without the need to make more than a three point turn Driveway widths must comply with the relevant Australian Standards. Car space dimensions must comply with the relevant Australian Standards. Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with the relevant Australian Standard Access ways to underground parking should not be located adjacent to doors or windows of the habitable rooms of any residential development. 	<p>Vehicles can turn on site and leave in a forward direction.</p> <p>Car spaces, driveway grades and appear to generally comply with relevant standards.</p>	
<p><u>4.4 On-site parking</u></p> <ul style="list-style-type: none"> On-site parking must meet the relevant Australian Standard Council may require the provision of a supporting geotechnical report prepared by an appropriately qualified professional as information to accompany a development application to Council. Car parking and associated internal manoeuvring areas which are surplus to Council's specified parking requirements will count towards the gross floor area, but not for the purpose of determining the necessary parking. Any car parking provided in a building above ground level is to have a minimum floor to ceiling height of 2.8m so it can be adapted to another use in the future. On-site vehicle, motorcycle and bicycle parking is to be provided in accordance with Part E of this DCP. To accommodate people with disabilities, minimum of 1% of the required parking spaces to be provided as disabled persons' car parking. 	<p>Basement parking provided. Sufficient car parking, motorcycle and bicycle parking is provided. Sufficient car parking to support the adaptable units is also proposed.</p> <p>Council's Traffic Engineer has assessed the proposal as being consistent with this Clause.</p>	<p>Yes</p>
<p><u>4.5 Site facilities and services</u></p> <p>Mail boxes; Communication structures, air conditioners and service vents.</p> <p>Waste storage and collection</p>	<p>Letter boxes are provided adjacent to the pedestrian entry.</p> <p>No rooftop ancillary structures or services shown on the plans.</p> <p>Provision has been made for waste storage rooms within the basement. On-street collection is proposed which is acceptable due to site width,</p> <p>The building is serviced by the major utilities. Additional services such as an</p>	<p>Yes</p>

electrical substation is required to service the development and shown on the plans.

5 Environmental management

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>5.2 Energy efficiency and conservation</u>	BASIX certificates submitted indicate the BASIX targets are satisfied by the residential units	Yes
<u>5.3 Water conservation</u>	BASIX certificates submitted indicate the BASIX targets are satisfied by the residential units	Yes
<u>5.4 Reflectivity</u>	No concerns are raised in regards to material reflectivity.	Yes
<u>5.5 Wind mitigation</u>	A wind impact statement was not required.	N/A
<u>5.6 Waste and recycling</u>	Waste management arrangements are satisfactory	Yes

6 Residential development standards

Refer to SEPP 65 and ADG assessment.

8 Works in the public domain

Planting of street trees have been recommended by Council's Landscape Department. Conditions of consent are recommended.

CHAPTER B1 – RESIDENTIAL DEVELOPMENT:**4.0 General Residential controls**

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>4.8 Building Character and Form</u>	Refer to Chapter D13 Assessment.	
<u>4.9 Fences</u>	Plans show minor front retaining walls only,	Yes
<u>4.12 Site Facilities</u>	An accessible and secure letterbox wall is provided to the front of the building near the street frontage. No rooftop structures proposed.	Yes
<u>4.13 Fire Servicing</u>	Submitted plans show provision for a fire hydrant booster located near the northern boundary adjacent to the driveway access to the site.	Yes
<u>4.14 Services</u>	The site is currently serviced and appropriate conditions will be imposed for adequate services to be provided to meet the needs of the development.	Yes
<u>4.15 Development near the Coastline</u>	The site is located within the coastal zone however is approximately 750m from the coastal foreshore. No concerns are raised.	Yes
<u>4.16 View Sharing</u>	Refer to Clause 3.10 of Chapter D13.	
<u>4.17 Retaining Walls</u>	Condition compliance with relevant Australian Standards and require engineering design and certification	Condition

6 Residential Flat Buildings

<i>Objectives/controls</i>	<i>Comment</i>	<i>Compliance</i>
<u>6.2 Minimum Site Width Requirements</u>	Minimum site width of 30.48m achieved.	Yes
<u>6.3 Front Setbacks</u>	Refer Chapter D13 (a minimum 4m front setback required which takes precedence over this front setback requirement).	Yes

<u>6.4 Site and rear setbacks/building separation</u>	Refer Chapter D13	
<u>6.6 Visual Privacy</u>	Refer to ADG Assessment	
<u>6.7 Acoustic Privacy</u>	Refer to ADG Assessment	
<u>6.8 Car Parking Requirements</u>	Refer to Chapter E3.	
<u>6.9 Basement Car Parking</u>	Basement design is satisfactory with deep soil zone. The roof does not protrude more than 1.2m above natural ground level.	Yes
<u>6.10 Access Requirements</u>	The driveway access is appropriate and is setback 1.8m from the northern property boundary.	Yes
<u>6.11 Landscaping Requirements</u>	Required- 409.8sqm (30%) 503sqm (37%) of landscaping is proposed inclusive of deep soil planting.	Yes
<u>6.12 Deep Soil Zone</u>	Total of 182.85sqm proposed provided along the rear (eastern) boundary of the site.	Yes
<u>6.13 Communal open space</u>	Refer to ADG Assessment.	
<u>6.14 Private Open space</u>	Refer to ADG Assessment.	
<u>6.15 Adaptable Housing</u> 10% of all dwellings must be designed or capable of being designed to be capable of adaptable for disabled or elderly residents.	3 units (No. 501, 601 and 701) are identified as being adaptable. Complies with this Clause. 3 adaptable car parking spaces are proposed.	Yes
<u>6.16 Access for people with a disability</u>	A Statement of Compliance Access for people with a Disability prepared by Accessible Building Solutions accompanies the DA and confirms compliance with relevant legislative requirements.	Yes

<u>6.17 Apartment size and layout</u>	Refer to ADG Assessment and Chapter D13. 19x2 b/r and 2x 3b/r proposed Refer to Chapter D13, Clause 6.2.	Variation requested.
<u>6.18 Solar Access</u>	Refer to ADG Assessment.	
<u>6.19 Natural Ventilation</u>	Refer to ADG Assessment.	

CHAPTER A2- ECOLOGICALLY SENSITIVE DEVELOPMENT

This application was referred to Council's Environment Officer and conditions of approval in relation to Water Cycle/Stormwater Quality treatment. A BASIX Certificate and Nathers Assessment has been undertaken and the commitments are required to be undertaken prior to issue of Occupation Certificate for the building. This is included in the draft conditions.

CHAPTER E1: ACCESS FOR PEOPLE WITH A DISABILITY

The applicant has provided a Statement of Compliance Access for People with a Disability (Accessible Building Solutions. 18 June 2018) with the DA. The proposal has been considered against the requirements of this chapter and found to be acceptable. If approved it is recommended the application also be conditioned to comply with the BCA and relevant Australian Standards.

CHAPTER E2: CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

An assessment against the controls in this Chapter is provided below:

<i>Control/objective</i>	<i>Comment</i>	<i>Compliance</i>
• <u>3.1 Lighting</u>	No lighting shown however, it is expected to be provided around the entrance points of the building and within the basement car park. No light spill impacts are expected.	Yes
• <u>3.2 Natural surveillance and sightlines</u>	Opportunities for natural surveillance of the Keira street is available from the balconies and main living areas of the units fronting the Keira Street.	Yes
• <u>3.3 Signage</u>	No signage proposed	N/A
• <u>3.4 Building design</u>	The design is considered to adequately respond to CPTED principles. There are no places of obvious concealment or entrapment evident on the plans.	Yes

• <u>3.5 Landscaping</u>	Landscaping treatment will not result in any concealment opportunities in any unsecure places.	Yes
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CHAPTER E3: CAR PARKING, ACCESS, SERVICING/LOADING FACILITIES AND TRAFFIC MANAGEMENT

Car parking rates set out in the RTA's Guide to Traffic Generating Development have been utilised for this development. The required parking is based on the sub regional centre requirements of the RTA Guide to Traffic Generating Developments (GTTGD) in accordance with Part 3J of the Apartment Design Guide. The following parking/traffic arrangements are proposed:

22 residential car parking spaces (including 2 spaces capable of adaption for people with disabilities).

5 visitor car parking spaces. (including 1 spaces capable of adaption for people with disabilities).

2 motorcycle parking spaces.

13 secure residential bicycle spaces.

8 visitor bicycle spaces.

Waste will be collected from the street frontage of the site, with waste to be stored within a designated room within the basement. The servicing arrangements proposed have been considered by the Traffic Section and is acceptable.

Council's Traffic Engineer has considered the proposal and has provided a satisfactory referral subject to conditions.

CHAPTER E6: LANDSCAPING

Council's Landscape officer has assessed the application and provided conditions should the application be approved. Conditions include permission to remove the existing Flame Tre street tree to accommodate the development. Compensatory street tree planting has been recommended along with other landscaping conditions found in the draft consent.

CHAPTER E7: WASTE MANAGEMENT

Site Waste Minimisation and Management Plan provided. Standard conditions to apply.

CHAPTER E9: HOARDINGS AND CRANES

Conditions are recommended in relation to the use of any hoardings or cranes for the construction of the building and found in the draft consent.

CHAPTER E12 GEOTECHNICAL ASSESSMENT

The requirements contained within this chapter have been considered and a referral from Council's Geotechnical Engineer has been received. Appropriate conditions are recommended and included in the draft conditions.

CHAPTER E14 STORMWATER MANAGEMENT

Council's Stormwater Officer has reviewed the proposal and recommended conditions of consent regarding stormwater management, which are included in the draft consent.

CHAPTER E21 DEMOLITION AND ASBESTOS MANAGEMENT

Council's standard conditions of consent are recommended in relation to demolition and asbestos management.

CHAPTER E22 SOIL EROSION AND SEDIMENT CONTROL

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

Attachment 7- DRAFT CONDITIONS FOR: DA-2017/1521

Approved Plans and Documents

- 1 The development shall be implemented substantially in accordance with the details and specifications set out on Project No. 1600, Sheets 05-AA, 10-AA to 16-AA and 20-AA to 27-AA dated 22 June 2018 prepared by Design Workshop Australia 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 Geotechnical

- i. Hard bedrock where encountered will be difficult to excavate. Alternative excavation methods should be considered to minimise noise and vibration.
- ii. A dilapidation report is required for all structures located within the zone of influence of the proposed earthworks as determined by the geotechnical consultant.
- iii. 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.
- iv. Retaining wall design is not to include anchors extending on to adjoining property without the written consent of the adjoining property owner.
- v. There is to be no unsupported excavations with all cuts to be immediately supported by retaining wall construction.
- vi. An earthworks plan is to be developed by the geotechnical consultant prior to start of earthworks.
- vii. The earthworks plan may require modification in light of any subsequent geotechnical reports commissioned to address unforeseen geotechnical conditions encountered during the bulk earthworks.
- viii. Due to the sensitivity of the site to changing geotechnical conditions, all work must be undertaken with Level 1 geotechnical supervision as defined in Australian Standard AS3798 Guidelines for Earthworks for Commercial and Residential Developments.

3 Water Cycle/Stormwater Quality Management

The water cycling management treatment nodes shall be constructed as per the water cycle management study to achieve the treatment goals for removal of pollutants and nutrients which shall be: Gross Pollutants (GP) – 90%, Total Suspended Solids (TSS) – 80%, Total Phosphorus (TP) – 55% and Total Nitrogen (TN) – 40%;

4 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.

5 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.

6 Mailboxes

The developer must install mailboxes along street frontage of the property boundary in accordance with Australia Post Guidelines. 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.

7 **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.

8 **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.

9 **Street Tree Removal**

The developer has permission to remove the existing street tree as indicated the Demolition Plan.

Tree removal costs are to be borne by developer. The removal of trees, including stumps, is to be carried out by suitably qualified tree contractor. This contractor must be appropriately insured to indemnify Council against any loss or damage incurred during the above works. They must also have appropriate WH&S policies and procedures (including traffic control) to ensure that works are carried out in a safe manner and in accordance in Council's own WH&S policies.

The developer must apply for (and be granted) permission under section 138 of the roads act to work within the road reserve. Tree removal must be carried out to the satisfaction of WCC Manager of Works.

Prior to the Issue of the Construction Certificate

10 **Detailed Drainage Design**

A detailed drainage design shall be submitted with the Construction Certificate documentation for the proposed development. This detailed drainage design shall be prepared by a suitably qualified civil engineer in accordance with Chapter E14 of Wollongong City Council's Development Control Plan 2009, conditions listed under this consent, and generally in accordance with the concept stormwater layout plans OCE12866/C01/DA/C, OCE12866/C02/DA/B dated 12 June 2018 and OCE12866/C03/DA/A by Optima Consulting Engineers dated 13 June 2018.

11 **On-Site Detention - Design Criteria**

The on-site stormwater detention (OSD) facility must incorporate a minimum 600 mm square lockable grate for access and maintenance purposes, provision for step irons where required, provision for safety, debris control screen and a suitably graded invert to prevent ponding (i.e. no sump). Also, details of the orifice plate including diameter of orifice and method of fixing shall be provided. These requirements shall be reflected on the Construction Certificate plans.

12 **On-Site Detention – Identification**

The construction certificate plans are to detail a corrosion resistant identification plaque for location on or close to the on-site stormwater detention (OSD) facility. The plaque shall include the following information and shall be installed prior to the issue of the occupation certificate:

- The structure is an OSD facility, being part of the stormwater drainage network, and is not to be tampered with.
- Identification number – DA-2017/1521.
- Any specialist maintenance requirements.

- 13 **On-Site Detention – Orifice and Weir Calculations**
Orifice and weir calculations for the on-site detention facility shall be provided on the Construction Certificate plans and supporting documentation prior to the release of the Construction Certificate.
- 14 **Sizing of Drainage**
All roof gutters, downpipes, and pipelines draining roof areas and other impervious surfaces with no deliberate overflow path to the on-site stormwater detention (OSD) facility, shall be designed to cater for a 1 in 100 year ARI storm event in accordance with AS 3500.3 – Plumbing and Drainage (Stormwater Drainage). Details of gutter/downpipe/pipeline sizes and locations shall be reflected on the Construction Certificate plans
- 15 **Flows from Adjoining Properties**
Flows from adjoining properties shall be accepted, contained and directed to the proposed stormwater surface inlet pits on site. Finished ground/surface levels along the boundary shall be no higher than the existing upslope adjacent ground/surface levels. Surface water interceptor drains/swales shall be provided across the slopes uphill of the building sites, to divert stormwater run-off to watercourse gullies and or stormwater swales to discharge points downhill from any permanent structure. This requirement shall be reflected on the Construction Certificate plans and supporting documentation.
- 16 **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.
- 17 **Stormwater Pipelines in Road Reserve**
Minor system discharges from the proposed development shall be piped to the street kerb via a maximum of two 100mm diameter sewer grade UPVC pipes, or two 150mm x 100mm galvanised steel pipes, with the 150mm dimension being parallel with the road surface. Where the required orifice diameter exceeds 100mm, details shall be provided of a smooth transition between the orifice plate and the stormwater outlet pipeline(s) within the road reserve, such that flows through the orifice are not obstructed and the orifice capacity is not reduced. These requirements shall be reflected on the Construction Certificate plans.
- 18 **Stormwater Quality Improvement Devices - Water Sensitive Urban Design (WSUD)**
Prepare water sensitive urban design concept report in line with Council's DCP 2009 Chapter E15 and the stormwater quality shall be achieved as per Table 2 for Gross Pollutants, Total Suspended Solids, Total Nitrogen and Total Phosphorus.
- 19 **Structural Engineering Details**
The submission of structural engineering details by a suitably qualified and experienced structural engineer (with appropriate insurance coverage) to the Principal Certifying Authority, prior to the release of the Construction Certificate addressing the following matters:
- a Footings;
 - b reinforced concrete slabs;
 - c retaining walls;
 - d structural steelwork;
 - e wall bracing and tie-down requirements;
 - f the structural engineer, in producing a design is to complement the Geotechnical Engineer's Stability Report to make a clear statement that "any structure designed and erected in accordance with the plans and specifications will achieve the performance requirements described in Clause 1.3 of 2870 (1996) and any other relevant codes and standards."
- 20 **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.

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 **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.

23 **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.

24 **Obscure Glazing for all Bathroom and WC Windows**

The bathroom and WC windows for each dwelling in the development shall be frosted or opaque glass. This requirement shall be reflected on the Construction Certificate plans.

25 **Car Parking and Access**

The development shall make provision for a total of 27 car parking spaces (including 2 spaces capable of adaption for people with disabilities), 2 motorcycle parking spaces, 12 secure (Class B) residential bicycle spaces and 8 (Class C) visitor bicycle spaces. This requirement shall be reflected on the Construction Certificate plans. Any change in the above parking numbers shown on the approved DA plans shall be dealt with via a section 96 modification to the development. The approved parking spaces shall be maintained to the satisfaction of Council, at all times.

26 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.

27 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.

28 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.

29 **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.

- 30 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.

31 **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.

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

33 **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.

- 34 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.

- 35 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.

- 36 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.

37 **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. Enquiries regarding property addressing may be made by calling 4227 8660.

38 **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 within 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.

39 **Street Trees City Centre**

The developer must address the street frontage by installing street tree planting. The number and species for this development is two *Brachychiton acerifolius*, 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.

40 **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.

41 **Section 94 Contributions**

A total monetary contribution of \$50,000.00 shall be paid to Wollongong City Council for the purposes of section 94 Contribution Plan Fees. The total contribution shall be paid prior to the release of the construction certificate.

The individual contribution amounts are outlined below. These amounts will be indexed on 1 July in each year in accordance with indexing methods outlined in the relevant contribution plan, with amended rates being available from Council.

The contribution plans may be inspected or a copy purchased at the Strategic Planning Department's Inquiry Counter – Level 3, Council's Administration Building, 41 Burelli Street, Wollongong during normal business hours.

Prior to the Commencement of Works

42 **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.

43 **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.

44 **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.

45 **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.

46 **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.

47 **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 SafeWork NSW.

No demolition materials shall be burnt or buried on-site. The person responsible for the demolition works shall ensure that all vehicles leaving the site carrying demolition materials have their loads covered and do not track soil or waste materials onto the road. Any unforeseen hazardous and/or intractable wastes shall be disposed of to the satisfaction of the Principal 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.

48 **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.

49 **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.

50 **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.

51 **Support for Neighbouring Buildings**

This consent requires the preservation and protection of neighbouring buildings from any damage and if necessary, requires the underpinning and support of any neighbouring building 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 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 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.

52 **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.

During Demolition, Excavation or Construction

53 **Acid Sulphate Soils Management**

Prior to disposal of excavated soils, the soils must be treated as per the Acid Sulfate soils report recommended prepared by Aargus Consulting report.

54 **Supervision of Engineering Works**

All engineering works associated with the development are to be carried out under the supervision of a practicing engineer and/or registered surveyor.

55 **Piping of Stormwater to Existing Stormwater Drainage System**

Stormwater for the land must be piped to Council's existing stormwater drainage system.

56 **No Adverse Run-off Impacts on Adjoining Properties**

The design of the development shall ensure there are no adverse effects to adjoining properties as a result of flood or stormwater run-off. Attention must be paid to ensure adequate protection for buildings against the ingress of surface run-off.

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

57 **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.

58 **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.

59 **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> >).

60 **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 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.

61 **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.

62 **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.”

63 **Provision of Taps/Irrigation System**

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

64 **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

Prior to the Issue of the Occupation Certificate

65 **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.

66 **Restriction on Use – On-site Detention System**

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

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

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

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

67 **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.

68 **Positive Covenant – On-Site Detention Maintenance Schedule**

A positive covenant shall be created under the Conveyancing Act 1919, requiring the property owner(s) to undertake maintenance in accordance with the Construction Certificate approved On-Site Stormwater Detention System and Maintenance Schedule (application number to be referenced).

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

69 **On-Site Detention – Structural Certification**

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

70 **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.