WLPP No.	Item 4
DA No.	DA-2019/1356
Proposal	Residential - Eight storey residential flat building comprising 14 residential units over two levels of basement carparking.
Property	9-11 Park Street, Wollongong
Applicant	PRD Architects
Responsible Team	Development Assessment and Certification - City Centre Team (MJ)

ASSESSMENT REPORT AND RECOMMENDATION

Executive Summary

Reason for consideration by Local Planning Panel

The proposal has been referred to Local Planning Panel for determination pursuant to clause 2.19(1)(a) of the Environmental Planning and Assessment Act 1979. Under Schedule 2 of the Local Planning Panels Direction of 1 March 2018, the proposal classified as sensitive development in accordance with Part 4 (b) as it is development to which SEPP 65 Design Quality of Residential Flat Buildings applies and is 4 or more storeys in height. The proposal is also classified as a contentious development under Part 2 (b) as it is the subject of 10 or more unique submissions by way of objection.

Proposal

The proposal is for an eight (8) storey residential flat building comprising 14 residential units over two (2) levels of basement carparking.

Permissibility

The site is zoned R1 General Residential pursuant to Wollongong Local Environmental Plan 2009. The proposal is categorised as a residential flat building and is permissible in the zone with development consent.

Consultation

The proposal was notified in accordance with Council's Notification Policy and received 20 submissions from separate objectors over two (2) exhibition periods, which are discussed at section 1.3 of the assessment report.

Main Issues

The main issues include;

SEPP 65 - Apartment Design Guide:

- Impacts on solar access to neighbouring property to south (ADG Objective 3B-2).
- Lack of detail regarding potential substations and augmented service requirements (ADG Objective 3C-2 and WDCP 2009 Chapter B1 Cl 4.13).
- Building Separation encroachments on the southern and eastern boundaries on levels 5, 6 and 7 (ADG Objective 3F-1).
- The actual number of bedrooms for several units is not clear due to use of ancillary study rooms, which has further implications for required apartment mix, private open space, storage and living room dimensions (ADG Objective 4D-3).
- Several living rooms do not meet minimum dimensions (ADG Objective 4D-3).
- Privacy and glare impacts associated full width glass balustrades on north east and west elevations (ADG Objective 4E-2).

Wollongong Local Environmental Plan 2009:

- The proposal is unsatisfactory with regard to the objectives of the R1 General Residential Zone (WLEP 2009 Cl 2.3).
- The proposed floor space ratio of 1.527:1 exceeds the 1.5:1 which is permitted for the site. A written request seeking to justify the contravention of the FSR development standard has not been submitted by the applicant (WLEP 2009 Cl 4.4 & 4.6).
- The development fails to exhibit design excellence (WLEP 2009 Cl 7.18).

Wollongong Development Control Plan 2009:

- Creation of an isolated lot (WDCP 2009 Chapter B1 Cl 6.2).
- Setback encroachment and scale of feature entry awning into front setback (WDCP 2009 Chapter D13 Cl 2.2).
- Excessive width of vehicle footpath crossing (WDCP 2009 Chapter D13 Cl 3.6).
- Visual impact of basement podium on north western corner (WDCP 2009 Chapter D13 Cl 6.6 and ADG Objective 3J-4).

RECOMMENDATION

It is recommended that the application be refused for the reasons listed at Attachment 10.

1 APPLICATION OVERVIEW

1.1 DETAILED DESCRIPTION OF PROPOSAL

The proposal entails the construction of a residential flat building at 9-11 Park Street, Wollongong.

Specifically, the proposal requires the demolition of two (2) existing dwelling houses, removal of nine (9) trees, consolidation of two (2) lots and the erection of an eight (8) storey residential flat building development, comprising 14 residential apartments over two (2) levels of basement car parking.

The building comprises a single tower over a podium with double height entry. Materials generally include a mix of cladding, concrete and glass balustrades. The elevations are further articulated by aluminium (timber batten) screening over the first three (3) floors and roof, operable screens and feature entry awning.

The proposal includes ground floor communal open space which is integrated with the deep soil zone. Landscaping is provided around the perimeter of the development, internal communal "zen gardens" are provided throughout the building. Vehicular and pedestrian entry is provided via from the Park St frontage.

LAYOUT SUMMARY		
LEVEL	**UNITS**	**GFA**
8	Units 13 (3 bedroom (br)) & 14 (3 br), roof terrace POS	114m
7	Units 13 (3 br) & 14 (3 br), zen garden	242m²
4 - 6	Units 7, 8, 9, 10 (2 br + study) & Units 11, 12 (3 br), zen garden	261 x 3 = 783m
3	Units 5 (adaptable - 1 br + study) & 6 (3 br), zen garden	236m
2	Units 3 (adaptable - 1 br + study) & 4 (3 br)	231m
GF / 1	Units 1 (3 br) & 2 (3 br + study), communal open space, deep soil zone	303m
B 1	9 x car spaces (3 x visitor, 2 x accessible), 6 x bicycle spaces (2 x visitor), motorbike space, garbage storage (15 x bins), residential storage (x3)	NA
B 2	13 x car parking spaces,1 x bicycle, residential storage (x 4), services cupboard/storage	27.5m

1.1 BACKGROUND

The subject lots have historically been used for residential purposes.

- **Prelodgement Meeting**

A prelodgement meeting was held for this proposal on 6 August 2019 (ref. PL-2019/97).

Summary of issues raised at the prelodgement

i. Council objected to potential removal of street tree.

This matter has been resolved, tree is no longer proposed to be removed.

ii. Council raised concerns regarding the creation of an Isolated lot at 13 Park Street.

This matter has not been resolved, see Wollongong DCP 2009 section of this report.

iii. Council raised concerns over solar access & overshadowing of 13 Park Street.

This matter has not been resolved, see SEPP 65 and Wollongong DCP 2009 sections of this report.

iv. Council raised concerns over privacy & overlooking impacts on dwellings to the north.

This matter has been partially resolved, see SEPP 65 and Wollongong DCP 2009 sections of this report.

v. Council raised concerns over view loss affecting surrounding residential development.

This matter has been partially resolved, see SEPP 65 and Wollongong DCP 2009 sections of this report.

vi. *Council raised concerns calculation of gross floor area & floor space ratio, resulting in non-compliant FSR.*

This matter has not been resolved, see Wollongong LEP 2009 section of this report.

vii. *Council raised concerns over mis-calculation of car parking requirement.*

This matter has been partially resolved, see SEPP 65 and Wollongong DCP 2009 sections of this report.

viii. *Council raised concerns over non-compliance with ADG Setbacks & building separation requirements.*

This matter has been partially resolved, see SEPP 65 section of this report.

ix. *Council raised concerns over non-compliance* Deep soil zone.

This matter has been partially resolved, see Wollongong DCP 2009 section of this report.

x. General design issues.

Some general design issues remain with the proposal, generally relating to room sizes and the use of 'study' rooms in some units, see SEPP 65 section of this report.

- **Design Review Panel**

The proposal referred to the Design Review Panel (DRP) twice, the initial panel meeting occurred after the prelodgement meeting, the second occurred after lodgement. See consultation section below for summary of panel commentary and applicant's design response.

CUSTOMER SERVICE ACTIONS

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

1.2 SITE DESCRIPTION

The subject lot is located at 9-11 Park Street, Wollongong. The title references are Lot 1 DP 780693 and Lot 1 DP 1246328.

The site is the consolidation of two allotments with the northern allotment (No.9) having a greater depth than the southern allotment (No.11) as No. 9 Park Street extends further to the east. In all other regards the site is a regular shape with a consolidated width of 30.48m and a consolidated area of 1,268m^2. The site slopes to the north-western corner and drains to Park Street.

The site is zoned R1 General Residential and the immediate locality is characterised by a varied scale of residential development including dwelling houses, multi dwelling housing and residential flat buildings. Immediately adjoining the site includes:

- North: Single dwelling
- South: 4 unit Multi dwelling Housing (Strata subdivided)
- East: 7 storey residential flat building (Strata subdivided)
- West: Park Street road reserve

Property constraints

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

- Acid sulphate soils (class 5): Council's Environment Officer has recommended conditions in this regard, should the application be approved.

There are no restrictions on the title that would preclude the development.

1.3 SUBMISSIONS

The application was notified in accordance Community Participation Plan 2019. This included a notice in The Advertiser. The application was notified an again following amended plans being provided. Exhibition was also extended to include likely affected residents of Edward Street.

Figure 1: Notification Map

18 original submissions were received in the initial exhibition period and 13 during the second period. There were two (2) new objectors during the second period.

The issues raised in during both exhibition periods were similar and are summarised in a consolidated table below.

Table 1: Submissions

Concern	Comment
1. Excavation impact on adjoining building.	This matter may be resolved by condition of consent. Notwithstanding, refusal is recommended.
2. Insufficient parking has been provided.	Sufficient car parking has been provided in accordance with WDCP 2009 requirements. Car parking is not considered to be an issue.
3. Excessive Building height.	~27m building height is below maximum 32m permitted by WLEP 2009. Building height is not considered to be an issue.

Concern	Comment
4. Impact on Solar Access to 13 Park St. "Timber" Batten screen will intensify impacts. Plans of 13 Park St are incorrect.	The development does not meet the minimum solar access requirements provided by the ADG or WDCP 2009. See further discussion in ADG & WDCP 2009 sections of this report.
5. Front setback encroaches into setback established in street, affecting views.	The proposed 4m setback complies with that required under WDCP 2009. However, the level of encroachment of the feature awning into the front setback is not acceptable. See further discussion in WDCP 2009 section of this report.
6. Retain and protect street tree.	The tree is not proposed to be removed. Tree protection is addressed via a condition of consent. Notwithstanding, refusal is recommended.
7. Side and Rear Setback control variation.	The proposal entails several side and rear setback variations which are not supported. See further discussion in ADG section of this report.
8. General Visual impact.	The redevelopment of this site to the scale expected by permitted heights and floor space ratio is likely to have some visual impact. Noting the proposed variations to setbacks and basement podium height, the development will have negative visual impacts. Due to the impacts attributed to these variations, the development does not exhibit design excellence. Visual impact is further discussed at the ADG, WLEP 2009 and WDCP 2009 sections of this report.
9. Inappropriate design in context of older dwellings and existing streetscape.	Aesthetically, the proposed design is considered acceptable in the immediate context of the site, which contains a variety of residential ages and densities.
10. Creation of isolated lot – 13 Park St.	The proposal has not satisfactorily addressed the Minimum Site Width – Isolated Lot controls of the WDCP 2009. See further discussion in WDCP 2009 section of this report.

Concern	Comment
11. Privacy impacts.	The development does not adequately protect the privacy of surrounding residential development. See further discussion in ADG & WDCP 2009 sections of this report.
12. Impact of basement & retaining walls on north east boundary landscaping	This matter may be resolved by condition of consent. Notwithstanding, refusal is recommended.
13. Non-compliant with Floor Space Ratio requirements.	The development does not comply with the maximum FSR for the site. See further discussion in WLEP 2009 section of this report.
14. Does not exhibit Design Excellence.	Given the proposed variations to the ADG, WLEP 2009 and WDCP 2009 controls, and related impacts, the development does not exhibit design excellence. See further discussion in WLEP 2009 section of this report.
15. Trees number 5 (*Araucaria columnaris*) and 9 (*Howea forsteriana)* should be retained or replanted.	The removal of the trees does not specify treatment (replanting etc), this would be at the discretion of the owner. The removal of these trees has been supported by Council's Landscape division.
16. Safety of Entry design.	The proposal has been assessed against CPTED principles and is acceptable See further discussion in WDCP 2009 section of this report.
17. Health concerns due to asbestos removal, building materials and noise.	This matter may be resolved by condition of consent. Notwithstanding, refusal is recommended.
18. Blocking of sea breezes.	The redevelopment of this site and surrounding area to the scale expected by permitted heights and floor space ratio is likely to have some impact on sea breezes.
19. Shadow documents do not consider 15 Park St.	Shadow diagrams are only required to demonstrate impacts on adjoining lots. Notwithstanding, based on the shadow diagrams, minimal overshadowing of 15 Park Street would occur and the development would comply with ADG & WDCP 2009 solar access requirements.

Concern	Comment
20. Bin Collection occupying street.	Given the required number of bins, the development complies with WDCP 2009 controls for bin collection. See further discussion in WDCP 2009 section of this report.
21. Solar access Impacts on 14-16 Church St (east).	The development would not impact 14-16 Church St until approximately 2pm. Assessment of solar access under the ADG and WDCP 2009 require consideration of 2 & 3 hours access between 9am and 3pm only. The development complies in this respect.
22. Construction impacts (noise / dust), request notice.	This matter may be resolved by condition of consent. Notwithstanding, refusal is recommended.
23. Impact on views through site.	Varying levels of view impacts are anticipated based on location of the affected property. It is anticipated that given maximum heights and FSR for the surrounding area, and anticipated development types, further impacts to views will occur (and are to be expected) in this locality. See further discussion in WDCP 2009 section of this report.
24. Maximum height / depth not provided.	The plans have shown adequate RLs and dimensions to allow building height and depth to be determined.
25. Timber screening will add to view loss and overshadowing.	See comments above regarding view impacts and overshadowing. See further discussion in ADG & WDCP 2009 section of this report.
26. Dark colour will accentuate impacts.	The proposed colour palate is appropriately varied and is acceptable.
27. Concern over accuracy of documents exhibited, brief length of notification period and request for additional notification.	The application was notified in accordance with the Community Participation Plan 2019. Formatting issues were identified with the exhibited 'DCP Compliance Table' document. Document was subsequently amended and made available for viewing. Additional time was provided to make submissions following end of initial exhibition period.

It is noted there were further concerns raised regarding administrative matters not relevant to the consideration of the current version of the proposal, including; request for referral to Councillors, matters related to previous plan revisions and financial devaluation of objector's properties.

1.4 CONSULTATION

1.4.1 INTERNAL CONSULTATION

Geotechnical Engineer

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

Stormwater Engineer

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

Landscape Architect

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

Traffic Engineer

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

Environment Officer

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

1.4.2 EXTERNAL CONSULTATION

Endeavour Energy

Both the original and amended design were referred to Endeavour Energy.

Endeavour energy has reviewed the most recent version of the application and given a satisfactory referral subject to conditions of consent.

Regarding the requirements for a potential padmount substation, Endeavour Energy advised:

"Typically a development of 15 residential units (replacing 2 existing premises) would not require the provision of a padmount substation on the site. However with the significant medium density residential development in the area, Endeavour Energy's G/Net master facility model indicates that the nearby existing pole mounted substations are at or near maximum capacity. Accordingly the existing local network may not have sufficient spare capacity to facilitate the proposed development.

…

In due course the applicant for the proposed development will need to submit an application for connection of load via Endeavour Energy's Network Connections Branch to carry out the final load assessment and the method of supply will be determined."

Design Review Panel

1. DRP – 20 August 2019 (DE-2019/90)

Recommendation:

"While the proposal is at a preliminary stage only, it will benefit from a thorough review with special regard for the following:

- Impacts on southern property
- Outlook and privacy impacts from side facing windows and
- Balconies
- ADG building separation requirements
- Building expression, materials and streetscape character
- Landscape and large trees

To properly assess the proposal, all plans, sections and elevations MUST include adjoining properties, existing and likely future built form, trees and landscape features, public domain and all elements that contribute to context and streetscape qualities."

2. DRP – 22 January 2020

A summary of DRP commentary (full commentary – see attachment 6):

1. *The adjacent properties and public domain (incl. slope) MUST be included on the final DA plans, elevations and sections.*

The plans have been amended accordingly.

2. *Ground interface and expression of first two levels. Setting back and unifying the two lower levels, might allow a more generous engagement with streetscape, entry and front garden. Propose a material that is more consistent with the existing streetscape (masonry or render for example) and is less likely to be "value managed" down to an inferior product.*

Ground floor levels have not been setback and 4m front setback retained. The feature awning significantly encroaches into front setback.

The proposed materials have been modified but do not demonstrate consistency with existing streetscape (e.g. masonry or render).

The amended design has not addressed this issue.

3. *Northern basement levels and retaining walls along the northern elevation and interface with northern boundary. Adjacent levels are no higher than absolutely necessary, as well as to maximise the functionality of the communal open space.*

North western edge of podium still exceeds ADG and WDCP 2009 requirements, largely due to slope and basement RLs.

Communal open space (COS) functionality is not compromised by change in levels.

The amended design has not addressed this issue.

4. *Multiple concerns over roof top COS or POS, regarding functionally, shade and exclusive use.*

Rooftop design has been changed from single unit private open space (POS) to shared dwelling and POS areas for units 13 & 14. As adequate COS has been provided, this amendment partially resolves the issue of exclusivity.

5. *Southern building Setbacks and Separation above four storeys, bedrooms encroach into required setback need to comply.*

The amended proposal still includes setback encroachments at levels 5, 6 and 7, affecting the southern and eastern elevations and relationship with development to south.

This issue remains unresolved.

6. *Waste room should be setback into building envelope.*

The waste room has been incorporated into the basement, resolving this issue.

7. *Ground floor POS to align with site levels and are not affected by COS.*

Ground floor POS (Units 1 & 2) are acceptable with regard to layout and privacy.

8. *Levels. layout, circulation and landscaping of ground floor communal open space area is to be simplified*

Functionality of COS has been addressed and is acceptable.

9. *Excessive glazing and associated impacts to north and east. Introduce solid spandrels to elevations.*

Impact of glazing has been somewhat reduced by incorporation of operable louvers on northern elevation. However, large areas of clear glazing still remain on North, East and Western elevations, which have the potential for privacy and glare impacts. Solid spandrels have not been introduced.

This issue remains unresolved.

10. *Any variation to FSR controls is not supported.*

The amended proposal results in an FSR which exceeds the maximum allowed 1.5:1, which is not supported.

11. *Retention of Trees 10 & 11, as identified in Arborist report*

This matter may be addressed as condition of consent, should the application be approved. Notwithstanding, refusal is recommended.

12. *Appropriate selection of materials, variation to be consolidated and informed by windy seaside context*

The proposed materials have been modified and do incorporate masonry and render as recommended by the DRP.

13. *Clarify location of Basement Entry Gate*

Location of gate is clear on plans, allowing access to visitor parking, and is acceptable.

14. *Landscape materials, treatments and species, to complement street tree and provide front garden aspect, and consider solar access throughout COS.*

Use of native species in front setback complements street tree.

Planting is integrated throughout COS, whilst some shading is anticipated this is acceptable. Council's Landscape Architect has reviewed the landscape plan and found it satisfactory.

15. *Sensitively incorporate boosters, substation and other required services.*

The plans do not provide any information regarding the location of boosters, substation and other required services.

This issue remains outstanding.

16. *Regarding exhibition of design excellence, above matters need to be resolved.*

As several matters remain unresolved, based on the criteria established by SEPP 65 and WLEP 2009 as identified by the DRP, the design does not exhibit design excellence.

2 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

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

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

Council records do not indicate any historic use that would contribute to the contamination of the site and the land is not identified as being contaminated on Council mapping.

The Stage –I (Preliminary Site Investigation) report prepared by 'Geofirst Pty Ltd' dated 5 June 2020 and submitted with the application stated the was used as dwellings since in 1948 and there is no historical record stated site could be potentially contaminated and concluded the report stating that the site is suitable for proposed development in the event that approval is granted.

No concerns are raised in regard to contamination as relates to the intended use of the land and the requirements of clause 7.

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 1.4.2 above.

A statement has been prepared by a Registered Architect addressing the requirements of SEPP 65 and was submitted with the application at lodgement accordance with Clauses 50(1A) & 50(1AB) of the Environmental Planning and Environment Regulation 2000. A revised statement was not submitted with the amended plans.

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

Principle 1: Context and neighbourhood character

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.

An assessment against WDCP 2009 controls indicates the development will create an isolated lot (13 Park St). In addition, the proposal includes several side and rear setback encroachments, privacy impacts and is non-compliant with regard to solar access to the adjoining lot to the south.

The current proposal is not consistent with the desired future character of the area as identified through the development standards and controls applicable to the land.

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 development is well within the maximum allowable height however it does exceed the maximum FSR permitted for this site.

Whilst the approximate building envelope is largely consistent with that which is to be anticipated given the applicable development standards, the clear impacts of the development (overshadowing, visual impacts etc) can be linked with non-compliances with built form controls & standards, confirming the built form and scale is not acceptable.

Principle 3: Density

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

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

Whilst the increased density of dwellings is consistent with the anticipated increase in population for the Wollongong City Centre, the development results in a variation to FSR standards which is not supported.

The development has not anticipated location of additional service requirements (substation, hydrants etc) which may result in poor streetscape outcomes.

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 design meets all building depth and cross ventilation controls.

A Site Waste Management and Minimisation Plan has been provided which is acceptable.

It is noted the proposal does not impact on any heritage items or environmentally sensitive areas.

A BASIX Certificate provided indicating minimum sustainability requirements are met.

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 integrated landscaped areas that will improve the amenity of the occupants and soften the appearance of the development from adjoining properties and the public domain.

Deep soil zones are of inadequate size when assessed against WDCP 2009 controls, indicating landscape treatment could be further improved. It is noted that the ADG requirements are met (requiring lesser area and minimum dimensions). SEPP 65 does not specify deep soil zone requirements as a DCP control that is of no effect under Clause 6A of the SEPP.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being.

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

The development does not comply with solar access requirements for adjoining residential development. Overshadowing impacts, combined with the visual impact arising from non-compliant setbacks indicates an acceptable level of amenity of adjoining development is not retained.

Amenity for the majority of units with regard to solar access and layout is acceptable, however there are several instances of rooms, labelled as studies, which do not meet minimum dimension or storage requirements for bedrooms or living areas. There is concern these may be used as bedrooms by future occupants, whilst potentially not meeting amenity or storage requirements provided by the ADG.

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.

Principle 8: Housing diversity and social interaction

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

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

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

The proposal appears to provide a mix of unit sizes and layouts appropriate to the locality.

The provision of study rooms throughout the development confuse the ultimate mix of bedroom numbers and amenity of the affected rooms.

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. A mixture of materials and finishes is provided and the development is suitably articulated.

The DRP commentary called for a simplification of materials, which reflected the existing character of the locale, citing masonry and render. While their advice has been incorporated somewhat, there are large

architectural elements comprising zinc & aluminium cladding in addition to aluminium (timber grain) batten screening.

An assessment of the application against the Apartment Design Guide (*ADG*) is contained below.

Apartment Design Guide

Objectives of ADG which include matters of non-compliance are listed below, the full compliance table is listed at attachment 7.

Standards/controls	*Comment*	*Compliance*
Part 3 Siting the development		
3B Orientation Buildings must be oriented to maximise northern 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. *Objective 3B-1:* *Building types and layouts respond to the streetscape and site while optimising solar access within the development* Design Guidance - Buildings should define the street by facing it and providing direct access. *Objective 3B-2* *Overshadowing of neighbouring properties is minimised during mid- winter* Design Guidance - 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 - 70% of apartments – Living & POS - 2 hours direct sunlight between 9am – 3pm - Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring	Building is oriented to take advantage of northern orientation. Street frontage addresses Park Street. Direct Pedestrian Access is provided. OVERSHADOWING OF NEIGHBOURING PROPERTY TO SOUTH (13 Park St): 13 Park St contains a four (4) unit townhouse development. 70% of 4 = 2.8 (3 UNITS) 3 unit's POS & living areas required to receive 2 hours solar access between 9am – 3pm. Shadow diagrams have been submitted with the application which demonstrate the following: Solar Access: UNIT 1: Solar access 1pm – 3pm = ~2 hours UNIT 2: 9 – 10am (partial) = less than 1 hour UNIT 3: 9 – 10am = ~1 hour UNIT 4: 9am – 12pm = ~3 hours	Y N

Standards/controls	*Comment*	*Compliance*
properties is not reduced by more than 20% - If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy	Less than 50% of dwellings receive the minimum solar access. It was noted by the applicant that the affected townhouse development includes awnings which shade the living and POS areas. The occupants of the townhouses have claimed the awnings have been designed to allow winter solar access into the living and POS areas. If it is assumed the affected dwellings do not currently receive the minimum solar access, the development would still result in an excess of 20% reduction in solar access. The development also entails several building separation encroachments on the southern eastern elevation which exacerbates overshadowing impacts. Considering the context of the related non-compliances, variation to this guidance is not supported.	
3C Public domain interface Key components to consider when designing the interface include entries, private terraces or balconies, fences and walls, changes in level, services locations and planting. The design of these elements can influence the real or perceived safety and security of residents, opportunities for social interaction and the identity of the development when viewed from the public domain *Objective 3C-1:* *Transition between private and public domain is achieved without compromising safety and security* Design Guidance - 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.	Street entry is available to Unit 1 Clear definition has been provided between private and public domain. Surveillance public domain provided from unit balconies & windows.	Y

Standards/controls	*Comment*	*Compliance*
- Front fences and walls along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m. - Opportunities should be provided casual interaction between residents and the public domain eg seating at building entries, near letterboxes etc *Objective 3C-2:* *Amenity of the public domain is retained and enhanced* Design Guidance - 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.	Planting is utilised heavily throughout the development. The mailboxes are located adjacent the covered entry control point for easy access as residents enter the building. The garbage room is located within the basement (Level B1). Ground Floor walls are durable finished, predominately concrete with some screening elements above. The basement carpark is located to the South and minimal in appearance so as not to impact on negatively on the public domain. The entry to the carpark will be flanked by boundary planting and concrete balustrades to reduce the visual impact of the opening. No detail has been provided regarding substations hydrants etc	N
3F Visual privacy		
Objective 3F-1 *Adequate building separation distances are shared equitably between neighbouring sites, to achieve reasonable levels of external and internal visual amenity.* Design Criteria: 1. Minimum required separation distances from buildings to the side and rear boundaries are as follows:	Separation encroachments are proposed the southern and eastern boundaries on levels 5, 6 and 7, see below. Given the solar access and visual impacts of the development, and advice from DRP, variations to building separation guidance is not supported. **Up to 12M (LEVELS 1 – 4)** LEVEL 1/G Habitable: North: 6 – 12.5m	Y

Standards/controls	*Comment*	*Compliance*
<table><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr><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></table> <u>Design Guidance</u> - Apartment buildings should have an increased separation distance of 3m (in addition to the above requirements) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale. - Direct lines of sight should be avoided - No separation is required between blank walls <u>*Objective 3F-2:*</u> *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* <u>Design Guidance</u> - Communal open space, common areas and access paths should be separated from private open space and windows to apartments. Design solutions include: • Setbacks, • Solid or partly solid balustrades to balconies • Fencing or vegetation to separate spaces • Screening devices • Raising apartments/private open space above the public domain • Planter boxes incorporated into walls and balustrades to increase visual separation • Pergolas or shading devices to limit overlooking	South: 7.9m East/Rear: 6 – 12m <u>Non-Habitable</u>: North: 6 -9m South: 6.8 – 7.8m East/Rear: 6 – 18m <u>LEVEL 2</u> <u>Habitable:</u> North: 6 – 9m South: 8m East/Rear: 8 – 14m <u>Non-Habitable</u>: North: NA South: 6.8-8m East/Rear: NA <u>LEVEL 3</u> <u>Habitable:</u> North: 6 – 9m South: 7.9m East/Rear: 7.8 – 12m <u>Non-Habitable</u>: North: NA South: 6.9 – 7.9m East/Rear: NA <u>LEVEL 4</u> <u>Habitable:</u> North: 9m South: 7.9 – 9m East/Rear: 9 – 13.1m <u>Non-Habitable</u>:	Y Y Y

Standards/controls	*Comment*	*Compliance*
• Only on constrained sites where it's demonstrated that building layout opportunities are limited – fixed louvres or screen panels - Windows should be offset from the windows of adjoining buildings	North: 8.2m South: 6.9m East/Rear: NA **Between 12 and 24M (LEVELS 5-8)** **LEVELS 5 - 6** Habitable: North: 9m South: **7.9 (BED 2)** – 9m East/Rear: **7.5 (EAST BALCONY)** – 13.1m Non-Habitable: North – 8.2m South – 6.9m East/Rear: NA **LEVEL 7** Habitable: North: 9.1m South: 9m (no openings) East/Rear: **7.5 (EAST BALCONY)** - 15m Non-Habitable: North: 8.2m South: 9 - 9.2m East/Rear: NA **LEVEL 8** Habitable: North: 9.9m South: 9.3m (no openings) East/Rear: 9.8 – 15.8m Non-Habitable: North: 8.2m South: 9.3 – 10.5m	**N** **N** Y

Standards/controls	*Comment*	*Compliance*
	East/Rear: 9 – 13.3m **<u>Over 25M (LEVEL 8 - PARTIAL)</u>** It is noted part of the level 8 structure (wall, ceiling, batten screening) extends beyond 25m in height, these areas are setback as follows: North: 12.57m South: 9m East/Rear: 12m These areas comply with setback requirements for habitable and non-habitable areas. As this level is not a 9th storey and the subject areas over 25m in height comprise only part of the level, these setback requirements should not be extended to the full extent of level 8.	Y
<u>*Objective 3J-3*</u> *Car park design and access is safe and secure* <u>Design Guidance</u> - 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. <u>*Objective 3J-4*</u> *Visual and environmental impact of underground car parking are minimised* <u>Design Guidance</u> - Excavation should be minimised through efficient carpark layouts and ramp design. - Protrusion of carparks should not exceed 1.0m above ground level.	Supporting facilities adequately located. Lobby is defined. Roller Shutter doors proposed within the basement beyond visitor parking. All parking below street level in basement. Ventilation incorporated into the design. The basement podium protrudes ~1.5m on north western edge of building, largely due to slope of site. This is further discussed at the WDCP 2009 section of this report	Y **N**

Standards/controls	*Comment*	*Compliance*
- Natural ventilation should be provided to basement and sub-basement car parking areas. - Ventilation grills or screening devices should be integrated into the façade and landscape design. <u>*Objective 3J-5*</u> *Visual and environmental impacts of on-grade car parking are minimised* - On grade car parking should be avoided - Design guidelines provided where it's unavoidable <u>*Objective 3J-6*</u> *Visual and environmental impacts of ground enclosed car parking are minimised* - Exposed parking should not be located along primary street frontages - Positive street address and active street frontages should be provided at ground level.	Not applicable Not applicable	
<u>4D Apartment size and layout</u> Note: 1. Under Clause 30, apartment size cannot be used as a reason for refusal where the proposal meets the minimum standards 2. Also, under the amended SEPP 65 apartment size has become a non-discretionary development standard (in accordance with Cl. 79(C) of the EP&A Act. Therefore, a departure from this is likely to generate referral to LPP, despite not specifically being a "Local Environment Planning' development standard (Charter 3.3) <u>*Objective 4D-1*</u> *The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity* <u>Design Criteria:</u> 1. Minimum internal areas:	All units meet minimum internal areas	Y

Standards/controls	*Comment*	*Compliance*
Studio – 35m^2 1 bed – 50m^2 2 bed – 70m^2 3 bed – 90m^2 The minimum internal areas include only 1 bathroom. Additional bathrooms increase the minimum internal areas by 5m^2 each. 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	Habitable rooms exceed minimum glass area	Y
Design Guidance: - Where minimum areas are not met, need to demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas.		
Objective 4D-2 *Environmental performance of the apartment is maximised*		
Design Criteria: 1. Habitable room depths are limited to a maximum of 2.5 x ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window.	Levels 1 – 6: 2.5 x 2.8 = 7m max depth All habitable rooms comply Levels 7 & 8: 2.5 x 2.9 = 7.25m max depth All habitable rooms comply Open plan rooms have less than 8m depth from windows	Y
Design Guidance: - Greater than the minimum ceiling heights can allow proportionate increases in room depths. - Where possible, bathrooms and laundries should have an external openable window. - Main living spaces should be oriented towards the primary outlook.		
Objective 4D-3 *Apartment layouts are designed to accommodate a variety of household activities and needs*		
Design Criteria:		

Standards/controls	*Comment*	*Compliance*
1. Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$ (excl wardrobe space) 2. Bedrooms have minimum dimension of 3m (excl wardrobe) 3. Living rooms have minimum width of: - 3.6m for studio and 1 bed apartments and - 4m for 2+ beds. 4. The width of the crossover or cross through apartments are at least 4m internally to avoid deep narrow apartment layouts. <u>Design Guidance:</u> - Access to bedrooms, bathrooms and laundries is separated from living areas - Minimum 1.5m length for bedroom wardrobes - Main bedroom apartment: minimum 1.8m long x 0.6m deep x 2.1m high wardrobe - Apartment layouts allow for flexibility over time, including furniture removal, spaces for a range of activities and privacy levels within the apartments.	Majority bedroom & living room dimensions comply. Units 2, 3 and 5 contain rooms labelled 'study' which do not meet minimum dimension requirements for living or bedroom areas, the future use is unknown. Whether or not these rooms are proposed to be bedrooms has implications for unit mix, POS, storage and living room dimension requirements. Units 3 & 5 (1 br + study) contain a living rooms which do not satisfy minimum width (2.7m & 3m proposed). The amenity and use of these areas is compromised Units 13 & 14 contain living rooms which don't meet minimum widths, however as these are supplementary to primary living areas, this is acceptable. Crossover/through apartments exceed 4m width	N Y
<u>4Q Universal design</u> *<u>Objective 4Q-1</u>* *Universal design features are included in apartment design to promote flexible housing for all community members* <u>Design guidance</u>	An adaptable unit layout has been provided on Units 3 & 5 with equitable access provided.	Y

Standards/controls	*Comment*	*Compliance*
- A universally designed apartment provides design features such as wider circulation spaces, reinforced bathroom walls and easy to reach and operate fixtures  future, should it be required. The seven core design features elements in the silver level they are: 1 A safe continuous and step free path of travel from the street entrance and / or parking area to a dwelling entrance that is level. 2 At least one, level (step-free) entrance into the dwelling. 3 Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces. 4 A toilet on the ground (or entry) level that provides easy access. 5 A bathroom that contains a hobless (step-free) shower recess. 6 Reinforced walls around the toilet, shower and bath to support the safe installation of grabrails at a later date 7 A continuous handrail on one side of any stairway where there is a rise of more than 1 metre. -		
<u>*Objective 4Q-2*</u> *A variety of apartments with adaptable designs are provided* <u>Design guidance</u> - Adaptable housing should be provided in accordance with the relevant council policy	No certification from an access consultant has been provided, this is discussed further at the WDCP 2009 section of this report.	N
<u>*Objective 4Q-3*</u> *Apartment layouts are flexible and accommodate a range of lifestyle needs* <u>Design guidance</u> - Apartment design incorporates flexible design solutions	With exception of units which do not satisfy minimum living room dimensions (see discussion above), layouts are flexible to accommodate a range of lifestyle needs.	Y

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

The proposal is BASIX affected development to which this policy applies. In accordance with Schedule 1, Part 1, 2A of the Environmental Planning and Assessment Regulation 2000, a BASIX Certificate was submitted in support of the application at lodgement and to support revised plans, demonstrating that the proposed scheme achieves the BASIX targets.

2.1.4 STATE ENVIRONMENTAL PLANNING POLICY (COASTAL MANAGEMENT) 2018

Division 3 Coastal environment area

<u>13 Development on land within the coastal environment area</u>

The proposal is unlikely to cause an adverse impact on the following:

(a) the integrity and resilience of the biophysical, hydrological (surface and groundwater) and ecological environment,

(b) coastal environmental values and natural coastal processes,

(c) the water quality of the marine estate (within the meaning of the Marine Estate Management Act 2014), in particular, the cumulative impacts of the proposed development on any of the sensitive coastal lakes identified in Schedule 1,

(d) marine vegetation, native vegetation and fauna and their habitats, undeveloped headlands and rock platforms,

(e) existing public open space and safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,

(f) Aboriginal cultural heritage, practices and places,

(g) the use of the surf zone.

The proposal is satisfactory with regard to the following:

(a) the development is designed, sited and will be managed to avoid an adverse impact referred to in subclause (1), or

(b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(c) if that impact cannot be minimised—the development will be managed to mitigate that impact.

Division 4 Coastal use area

14 Development on land within the coastal use area

The proposal is unlikely to cause an adverse or undue impact on the following:

(i) existing, safe access to and along the foreshore, beach, headland or rock platform for members of the public, including persons with a disability,

(ii) overshadowing, wind funnelling and the loss of views from public places to foreshores,

(iii) the visual amenity and scenic qualities of the coast, including coastal headlands,

(iv) Aboriginal cultural heritage, practices and places,

(v) cultural and built environment heritage, and

The proposal is satisfactory with regard to the following:

(i) the development is designed, sited and will be managed to avoid an adverse impact referred to in paragraph (a), or

(ii) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or

(iii) if that impact cannot be minimised—the development will be managed to mitigate that impact, and

The proposal has taken into account the surrounding coastal and built environment, and the bulk, scale and size of the proposed development.

Division 5 General

15 Development in coastal zone generally—development not to increase risk of coastal hazards

The proposed development is not likely to cause increased risk of coastal hazards on the site or other land.

16 Development in coastal zone generally—coastal management programs to be considered

The applicable coastal management plan does not indicate the site is subject to any coastal hazards or further considerations.

2.1.5 WOLLONGONG LOCAL ENVIRONMENTAL PLAN 2009

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.

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.*

Whilst the development is of a type and general scale of that which is to be anticipated in this zone, the proposal results in unacceptable amenity impacts on surrounding development in addition to several related non-compliances with the ADG, WLEP 2009 and WDCP 2009 controls. The ability to affectively provide for the housing needs of the community is therefore compromised and the development cannot be considered satisfactory with regard to the objectives of the R1 Zone.

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

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

The proposal is categorised as a residential flat building as defined above and is permissible in the zone with development consent.

Clause 2.7 Demolition requires development consent

Development consent has been sought for the demolition of two (2) dwelling houses.

Part 4 Principal development standards

Clause 4.3 Height of buildings

The proposed maximum building height of approximately 27m does not exceed the maximum 32m permitted for the site.

Clause 4.4 Floor space ratio

The maximum allowable floor space ratio (FSR) for this site is 1.5:1 or 1,902m² of gross floor area (GFA).

The proposed GFA is 1936.5² which equates to 1.527:1.

Several elements contribute to this technical FSR non-compliance

- Two (2) car spaces surplus to Council requirements which add 27.5m² of GFA (included by applicant).
- Five (5) internal 'zen gardens' have been provided throughout the building which equate to approximately 28.5m² of GFA and do not appear to have been considered in the GFA calculation.

The FSR non-compliance may be addressed with minor amendments to the design. Notwithstanding, the current design does not comply and no variation to the FSR development standard would be supported. The DRP supported this view in their commentary.

A written request seeking to justify the contravention prepared in accordance with Clause 4.6 has not been submitted. It is noted, a request was not formally requested of the applicant, however clarification of correct calculation of GFA was noted in the prelodgement meeting minutes, DRP meeting minutes and additional information request.

Clause 4.6 Exceptions to development standards

A written request seeking to justify the contravention of the FSR development standard has not been submitted by the applicant. Therefore, the requirements of this clause have not been met.

Part 7 Local provisions – general

Clause 7.1 Public utility infrastructure

The subject site is serviced by utilities to service the proposal.

Endeavour energy could not confirm whether a pad mount substation would be required to facilitate required service.

Clause 7.5 Acid Sulfate Soils

The proposal is identified as being affected by class 5 acid sulfate soils. An acid sulfate soils management plan would be required as a condition of consent. Notwithstanding, refusal is recommended.

Clause 7.6 Earthworks

The proposal comprises significant earthworks. The earthworks are not expected to have a detrimental impact on environmental functions and processes, neighbouring uses or heritage items and features surrounding land.

Clause 7.14 Minimum site width

The site width of 30.48m exceeds the 24m width required for a residential flat building.

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

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

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

The DRP raised concerns with material choice and detailing.

The proposed mix of materials and articulation in built form are acceptable for the building type and location.

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

When experienced from the public domain the form and external appearance are of acceptable quality.

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

The subject site is located within the nominated distant panoramic view corridor identified in Figure 3.12 (Clause 3.10 of Chapter D13 of WDCP 2009), given the allowable building height and FSR for this area, the impacts on the available view corridor are not considered to be unreasonable.

The encroachment of the entry awning into the front setback will affect views through Park Street and should be reduced.

(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 areas shown 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 land is appropriately zoned for this development and site width, FSR and height controls anticipate a building of this scale. However, there remain design issues which inhibit it from achieving design excellence, namely its impacts upon the adjoining development to the south, potential impacts on the public due to unknown servicing requirements and the encroaching entry awning are also of concern.

These matters are in addition to several unresolved matters raised by the DRP, which include; ground interface and expression of first two levels, northern basement levels and retaining walls, southern setbacks, excessive glazing and sensitive incorporation of services.

For these reasons, the development does not exhibit design excellence.

Part 8 Local provisions—Wollongong city centre

Clause 8.1 Objectives for development in Wollongong city centre

The objectives of this Part and (in so far as it relates to the Wollongong city centre) clause 7.18 are as follows—

(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 is generally consistent with the objectives for development in the city centre with regard to promotion of residential opportunities, housing choice and housing affordability. However, changes to the design would be required for the building to exhibit design excellence.

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

NA

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

2.3.1 WOLLONGONG DEVELOPMENT CONTROL PLAN 2009

WDCP 2009 Chapters and Variations to development controls are discussed below.

See Attachment 8 – WDCP 2009 Chapters B1 and D13 Compliance Tables.

CHAPTER A1 – INTRODUCTION

8 Variations to development controls in the DCP

Chapter B1 Residential Development

4.13 Fire Brigade Servicing

Objective:

(a) To ensure that all dwellings can be serviced by fire fighting vehicles.

Development Controls:

1. All dwellings, particularly dual occupancy and dwellings on battle axe allotment must be located within 60m of a fire hydrant, or the required distance as required by Australian Standard AS2419.1. Provision must be made so that Fire and Rescue NSW vehicles can enter and leave the site in a forward direction where:

a) Fire and Rescue NSW cannot park their vehicles within the road reserve due to the distance of hydrants from dwellings and/or restricted vehicular access to hydrants; and

b) The site has an access driveway longer than 15m

COMMENT:

No detail of location of potential fire brigade booster requirements have been provided.

Considered siting of these services is critical to minimise adverse streetscape impacts.

Variation to this control is not supported.

4.14 Services

Objective:

(a) To encourage early consideration of servicing requirements, to ensure that all residential development can be appropriately serviced.

Development Controls:

1. Applicants shall contact service authorities early in the planning stage to determine their requirements regarding conduits, contributions, layout plans, substations and other relevant details.

2. Consideration shall be given to the siting of any proposed substation during the design stage, to minimise its visual impact on the streetscape. Any required substation must not be located in a prominent position at the front of the property.

COMMENT:

No detail of correspondence with service authorities or location of potential substation requirements have been provided.

Considered siting of these services is critical to minimise adverse streetscape impacts.

Variation to this control is not supported.

6.2 Minimum Site Width Requirement

Objectives:

(a) To allow for development of sites, which are of sufficient width to accommodate the required building envelope, car parking and landscaping requirements.

(b) To promote the efficient utilisation of land.

(c) To encourage amalgamation of allotments to provide for improved design outcomes including greater solar access and amenity.

Development Controls:

2. Within the R1 General Residential, R3 Medium Density Residential and R4 High Density Residential zones, development for the purpose of a residential flat building must not result in the creation of an "isolated lot". ". An "isolated lot" is a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise existing development other than a single dwelling house and redevelopment of such adjoining properties is unlikely. This includes cases where there is high separation of ownership of dwelling ownership in the adjoining developments. Amalgamation of allotments will be required in the circumstance where an isolated allotment would otherwise be created.

COMMENT:

South:

The neighbouring lot to south, 13 Park Street (Lot 1 DP 1014832 / SP 63234), is 15.24m wide and contains a strata subdivided townhouse development (multi dwelling housing). Adjoining 13 Park St to the south is 15 Park St which contains a recently constructed strata subdivided residential flat building (SP 97803).

As development of 15 Park St contains development other than a dwelling and redevelopment is unlikely, the proposal will result in 13 Park Street becoming an isolated lot.

North:

The neighbouring lot to the north, 7 Park St (Lot 1 DP 780638), is also 15.24m wide, and contains a dwelling. Adjoining 7 Park St to the north is 5 Park St (Lot 16 DP 604914), which contains a residential flat building (single owner). Both 7 and 5 Park St are under the same ownership.

As both lots are under the same ownership the likelihood of redevelopment is not unlikely.

3. Council will only allow development which would result in the creation of an "isolated lot", where it is demonstrated that:

(a) The "isolated lot" achieves a site width of 24 metres or more and is capable of accommodating the proposed residential flat building, taking into account other relevant development controls.

COMMENT:

13 Park St site width is 15.24 and is incapable of the proposed development or any conceptual residential flat building, without significantly contravening development standards and controls.

(b) The following planning principles as outlined in the NSW Land and Environment Court judgment in Melissa Grech v Auburn Council[2004] NSWLEC 40 ("Grech Case") *are met:*

(i) Where a property will be "isolated" by a proposed development and that property cannot satisfy the minimum lot width requirements then negotiations between the owners of the properties should commence at an early stage and prior to the lodgement of the Development Application.

(ii) Where no satisfactory result is achieved from the negotiations, the Development Application should include details of the negotiations between the owners of the properties. These details should include offers to the owner of the isolated lot. A reasonable offer for the purposes of determining the Development Application and addressing the planning implications of an "isolated lot", is to be based at least on one recent independent valuation report and may include other reasonable expenses likely to be incurred by the owner of the "isolated lot" in the sale of that property.

(iii) The level of negotiation and any offers made for the "isolated lot" are matters that will be given weight in the consideration of the Development Application. The amount of weight will depend on the level of negotiation, whether any offers are deemed reasonable or unreasonable, any relevant planning requirements and the "matters for consideration" under Section 79C of the Environmental Planning & Assessment Act 1979.

COMMENT:

There is no evidence of any negotiations between the proponent and owner/s of 13 Park Street.

The applicant has provided advice prepared by 'PDC Lawyers & Planners' LEF: 20/1226 dated 20 April 2020. A summary of the advice is as follows;

- The townhouse development located on 13 Park St may now constitute an RFB and be subject to the provisions of SEPP 65.
- 13 Park St has reached its development potential and is not approaching the end of its life cycle.
- 13 Park St development and is consistent with R1 Zone Objectives and WDCP 2009 Character Statement, which seeks to provide a variety of housing types and densities.
- Provides example of recent caselaw, considered after the "Grech Case", related to isolated allotments, in the context of other Council's isolated lot development controls.
- The opinion of the advice is that 13 Park St is not an isolated lot and the assessment proceed with purposive approach with regard to the caselaw or apply clause 6.2 in a flexible manner, without requiring compliance with the planning principle outlined in the "Grech Case".

<u>Classification of 13 Park St Development</u>

Regarding the classification of development of 13 Park St, the approved development satisfies the standard instrument definition of 'multi dwelling housing' (commonly known as townhouses), not 'residential flat building', as follows:

multi dwelling housing *means 3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building*

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

Each unit in the 13 Park St development has dedicated access at ground level, therefore satisfying the multi dwelling housing development definition.

As to whether SEPP 65 applies, subclause (1) (b) of clause 4 of the SEPP clarifies to what development the SEPP applies, being:

> *"(b) the building concerned is at least 3 or more storeys (not including levels below ground level (existing) or levels that are less than 1.2 metres above ground level (existing) that provide for car parking), and*
>
> *(c) the building concerned contains at least 4 or more dwellings."*

The approved plans for the subject development (DA-1991/116) confirm the design is four (4) x two (2) storey dwellings over a level of basement parking. Stamped plans indicating built form and layout are provided at attachment 9. It is also noted an awning was approved to be constructed at unit 1 under DA-2006/856, which is not shown on these stamped plans.

A review of the approved plans and relevant RLs suggests a relatively small part of the north western corner of basement level for parking protrudes 1.2m or more above the natural ground level, and besides the basement level this area is predominantly occupied by an external courtyard/terrace.

The area of the development which is occupied by the two (2) storey dwelling component does not appear to sit over the basement area of interest and fails to reach three (3) storeys, as defined by the SEPP. Therefore, the SEPP would not be applicable.

<u>Commentary on application of Clause 6.2</u>

From the perspective of this Council's controls, the adjoining land meets the definition of an "isolated lot", and thus central consideration needs to be given to the terms of cl 6.2 in determining whether the proposed development can still proceed.

Cl 6.2 dictates that negotiation is required with the owners of 13 Park St, the outcome of negotiations add weight to an argument as to whether the proposal can proceed.

In considering the flexibility in which Cl 6.2 may be applied, the objectives need to be considered, which read as follows:

> *(a) To allow for development of sites, which are of sufficient width to accommodate the required building envelope, car parking and landscaping requirements.*
>
> *(b) To promote the efficient utilisation of land.*
>
> *(c) To encourage amalgamation of allotments to provide for improved design outcomes including greater solar access and amenity.*

The development site width would seem to inherently achieve objectives (a) and (b).

Regarding (c) the objective of amalgamation is to provide for improved design outcomes including greater solar access and amenity. The development proposes several variations to setback/separation and solar access controls, resulting in a design outcome with clear amenity and overshadowing impacts. Thereby not achieving the objectives of the clause, therefore a variation would not be supported.

Furthermore, if the premise is accepted that 13 Park St has reached its full development potential and is not near end of life cycle, the significance of solar and amenity impacts is further exacerbated.

Objective (c) would need to be fully satisfied in order to consider a variation (or flexible approach) to the application of Cl 6.2.

Given that the opinion of the applicant's legal opinion is that the development will not create an isolated lot, there have been no negotiations with the owners of 13 Park Street to purchase the site in an effort to amalgamate the subject site and the adjoining property. This does not address the planning principle for isolated lots as outlined in the Grech case.

Chapter D13 – Wollongong City Centre

2.2 Building to street alignment and street setbacks

Objectives

a) To provide a hierarchy of street edges from commercial core with no street setbacks to residential locations with landscaped setbacks.

b) To establish the desired spatial proportions of the street and define the street edge.

c) To increase a clear transition between public and private space.

d) To locate active uses, such as shopfronts, closer to pedestrian activity areas.

e) To assist in achieving visual privacy to apartments from the street.

f) To create good quality entry spaces to lobbies, foyers or individual dwelling entrances.

g) To allow an outlook to, and surveillance of, the street.

h) To allow for street landscape character, where appropriate.

i) To maintain shared views to the ocean.

j) To maintain sun access to the public domain

Development Control

a) General Residential - 4m minimum setback.

d) Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible (see also Building Exteriors at 3.7)

COMMENT:

Front building line achieves minimum setback of 4m to the façade of the building.

Feature entry awning projects 2.2m into front setback up to three (3) storey height. A projection of this height and scale impedes solar access & views down Park Street. A relatively minor reduction or redesign to reduce the visual impact is required.

2.7 Deep soil zone

Objectives

a) To provide an area on sites that enables soft landscaping and deep soil planting, permitting the retention and/or planting of trees that will grow to a large or medium size.

b) To limit building bulk on a site and improve the amenity of developments, allowing for good daylight access, ventilation, and improved visual privacy.

c) To provide passive and active recreational opportunities.

Development Controls

b) The 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.

COMMENT:

1268m² x 0.15 = 190m² DSZ is required.

75m² or 5.9% with a minimum dimension of 6m is proposed.

If 6m dense planting was provided across the whole rear of the lot this would result in 210m² of DSZ. The area within this 6m not currently DSZ is occupied by turf, paving and integrated into COS.

Dense planting is provided throughout the site providing adequate in density of medium and large trees in addition to recreational opportunities though integration with COS.

It is noted the DSZ complies with ADG requirements and Council's Landscape Architect has reviewed the landscape plan and found it to be satisfactory.

This variation is acceptable.

3.6 Vehicular footpath crossings

Objectives

a) To make vehicle access to buildings more compatible with pedestrian movements and the public domain.

b) To ensure vehicle entry points are integrated into building design and contribute to high quality architecture.

Development Control

(a) Wherever practicable, vehicle access is to be a single lane crossing with a maximum width of 2.7 metres over the footpath, and perpendicular to the kerb alignment. In exceptional circumstances, a double lane crossing with a maximum width of 5.4 metres may be permitted for safety reasons.

COMMENT:

A 6m vehicle crossing is proposed, this is to be reduced to 5.4m to reduce visual dominance of driveway and improve compatibility with pedestrian movements through the road reserve.

6.2 Housing choice and mix

Objectives

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

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

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

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

Development Control

d) For residential apartment buildings and multi-unit housing, 10% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents. Dwellings must be designed in accordance with the Australian Adaptable Housing Standard (AS 4299-1995), which includes "pre-adaptation" design details to ensure visitability is achieved.

…

f) The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to comply with the Australian Adaptable Housing Standard (AS 4299-1995).

COMMENT:

No Access Report has been submitted. Certification is required from an accredited access consultant confirming adaptable dwellings are capable of being modified, when required by the occupant. Certification would need to be provided to satisfy this control.

6.6 Basement Carparks

Objective

a) Integrate the siting, scale and design of basement parking into the site and building design.

Development Control

b) The roof of any basement podium, measured to the top of any solid wall located on the podium, must not be greater than 1.2m above natural or finished ground level, when measured at any point on the outside walls of the building. On sloping sites, a change in level in the basement must be provided to achieve this maximum 1.2m height.

Generally variation to this 1.2m height will not be supported however Council recognises that there may be occasions where this standard cannot be achieved. Should such a circumstance arise, the additional portion of the basement podium above 1.2m height must be included in the total gross floor area calculation for the development.

COMMENT:

Podium appears to extend greater than 1.2m north west corner, potentially up to 1.7m. This is largely due to the slope of the site.

This variation may result in an area of up to 20 – 30m² of additional GFA, which would theoretically exacerbate an already non-compliant FSR. However it is noted the WLEP 2009 GFA definition takes precedence over this control. Whilst this WDCP 2009 variation may not technically add to the GFA of the development, the adverse impact of such a design element is reiterated throughout the development controls.

This variation is not supported.

CHAPTER A2 – ECOLOGICALLY SUSTAINABLE DEVELOPMENT

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

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

CHAPTER B1 – RESIDENTIAL DEVELOPMENT

See Attachment 8 – WDCP 2009 Chapter B1 Compliance Table. Non-compliances and Variations are discussed above at Chapter A1.

CHAPTER D1 – CHARACTER STATEMENTS

Wollongong City Centre

The character statement anticipates increased opportunities for higher density housing in Wollongong,

Whilst there are outstanding issues to resolve with this particular development, the proposal is of general type and scale which is generally consistent with the desired future character for the locality.

CHAPTER D13 – WOLLONGONG CITY CENTRE

See Attachment 8 – WDCP 2009 Chapter D13 Compliance Table. Non-compliances and Variations are discussed above at Chapter A1.

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

6 Traffic impact assessment and public transport studies

6.1 Car Parking and Traffic Impact Assessment Study

A traffic impact assessment was submitted with the proposal.

The recommendations of the study were incorrect and required additional information be requested. This matter has been addressed.

The traffic impact of the proposal has been reviewed by Council's Traffic Officer who has not raised any further concerns subject to conditions of consent.

7 Parking demand and servicing requirements

Resident

<70 (.75 space) = 0

70-110 (1 space) x 2 = 2

>110 (1.25 space) x 12 = 15

Total = 17 spaces

Visitor

0.2 x 14= **2.8 (3) spaces**

Total

19.8 (20) spaces

1 x motorcycle

6 x bicycle (4.5 resident 1 visitor)

Provided

19 x resident spaces (2 x accessible)

3 x Visitor Spaces

7 x Bicycle area provided (5 x res. & 2 x vis.)

1 x Motorcycle

Adequate vehicular parking, motor bike and bicycle parking proposed. No concerns were raised from Traffic Engineer.

Two (2) additional spaces have been provided which contribute to the overall GFA of the development.

Appropriate resident bicycle arrangements proposed.

8 Vehicular access

Driveway grades and sight distances comply.

9 Loading / unloading facilities and service vehicle manoeuvring

Council's Traffic Engineer has reviewed the proposal and found it satisfactory with regard to maneuvering.

Waste servicing will occur from the kerb.

10 Pedestrian access

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

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

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

CHAPTER E6: LANDSCAPING

Landscape concept plan prepared by 'Site Design + Studios' submitted with application and satisfies controls of Chapter E6.

Council's Landscape Architect has assessed the plan and found it satisfactory.

CHAPTER E7: WASTE MANAGEMENT

A Site Waste Minimisation and Management Plan has been provided in accordance with this chapter.

The proposal involves demolition of two (2) dwelling houses and a demolition plan has accordingly been provided.

Suitable waste storage and servicing arrangements have been provided as follows:

- Basement waste storage.
- Kerbside pickup acceptable based on not exceeding maximum occupation of frontage.

Council's Traffic Engineer has assessed the proposal and found it satisfactory.

CHAPTER E14 STORMWATER MANAGEMENT

A stormwater management plans prepared by 'ATB Consulting Engineers' was submitted with the application and is acceptable with regard to the controls of Chapter E14.

Council's Stormwater Engineer has assessed the plan and found it satisfactory.

CHAPTER E17 PRESERVATION AND MANAGEMENT OF TREES AND VEGETATION

Several trees are proposed to be removed. An Arboricultural report prepared by 'Allied Tree Consultancy' was submitted in support of the proposal.

It is noted the DRP requested additional tree retention, see section 1.4.2 for discussion.

Council's Landscape Architect assessed the proposal and found it satisfactory.

CHAPTER E19 EARTHWORKS (LAND RESHAPING WORKS)

Significant earthworks are required to enable the development.

Council's Geotechnical Engineer has assessed the proposal and found it satisfactory in this respect.

CHAPTER E21 DEMOLITION AND HAZARDOUS BUILDING MATERIALS MANAGEMENT

Two (2) dwelling houses are proposed to be demolished as part of the proposal. If the application were to be approved, standard conditions of consent regarding demolition and asbestos management would apply. Notwithstanding, refusal is recommended.

CHAPTER E22 SOIL EROSION AND SEDIMENT CONTROL

A soil erosion and sediment control plan was submitted with the proposal.

2.3.2 WOLLONGONG CITY WIDE DEVELOPMENT CONTRIBUTIONS PLAN 2019

As refusal is recommended, no development levy is applicable.

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

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

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

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

Any potential demolition impacts would be managed via condition of consent. Notwithstanding, refusal is recommended.

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

Context and Setting: The proposed land use and overall building envelope is permitted at this site, however the clear linkages with local amenity impacts the proposed departures from ADG Design criteria & guidance, WLEP 2009 standards and WDCP 2009 controls indicate the development is not suitable for the context of the site.
Access, Transport and Traffic: No significant impacts with regard to access, transport and traffic are anticipated.
Public Domain: Excessively wide driveway and encroaching entry awning will have adverse impact on public domain experience.
Utilities: Further information is required with regard to potential augmenting of services, and resultant streetscape impacts.
Heritage: No heritage items will be impacted by the proposal.
Other land resources: The proposal is not envisaged to impact upon any valuable land resources.
Water: Further information is required with regard to potential augmenting of services, and resultant streetscape impacts.
Soils: There are no contamination concerns and any acid sulfate soils may be adequately managed.
Air and Microclimate: The proposal is not expected to have any negative impact on air or microclimate.
Flora and Fauna: Proposed vegetation removal has been supported by appropriate reporting, there are no issues in this regard.
Waste: Proposed waste management is acceptable.

Energy: Further information is required with regard to potential augmenting of services, and resultant streetscape impacts.
Noise and vibration: The development is not envisaged to have adverse noise or vibration impacts.
Natural hazards: There are no natural hazards affecting the site that would prevent the proposal.
Technological hazards: There are no technological hazards affecting the site that would prevent the proposal.
Safety, Security and Crime Prevention: This development does not result in any opportunities for criminal or antisocial behaviour.
Social Impact: The development does not result in any adverse social impacts
Economic Impact: The proposal is not expected to create any negative economic impact.
Site Design and Internal Design: The proposal entails several departures from ADG Design criteria & guidance, WLEP 2009 standards and WDCP 2009 controls, indicating that it will have unacceptable impacts with regard to site & internal design.
Construction: Should the development be approved, standard construction management conditions would be imposed. Notwithstanding, refusal is recommended.
Cumulative Impacts: Whilst some of the non-compliances with ADG Design criteria & guidance, WLEP 2009 standards and WDCP 2009 controls may be technical in nature, there are clear links between compliance and impacts on the surrounding residents and the public domain. The cumulative impacts result in clear amenity impacts that would set an undesirable precedent for similar development.

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

There are several outstanding concerns with the proposal indicating the site is not be suitable for the development in its current form.

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

See section 1.3 of this report.

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

With reference to the non-compliances discussed in this report, the application is not considered appropriate with consideration to the zoning and the character of the area and is therefore not considered to be in the public interest.

3 CONCLUSION

This application has been assessed as unsatisfactory having regard to the Heads of Consideration under Section S4.15(1) of the Environmental Planning and Assessment Act 1979, the provisions of Wollongong Local Environmental Plan 2009 and all relevant Council DCPs, Codes and Policies.

The proposal involves a departure to the floor space ratio, variations to setbacks under the Apartment Design Guide and Wollongong DCP 2009 which are not supported. These issues also contribute to adverse impacts on the adjoining properties, particularly 13 Park Street to the south. These impacts have been considered in context that the development creates an isolated lot at 13 Park Street. The creation of the isolated lot has not been adequately addressed having regard to the planning principle outlined in the NSW Land and Environment Court judgment in *Melissa Grech v Auburn Council[2004] NSWLEC 40.*

The submissions have been considered in the assessment of the application as discussed in part 1.3 of the report.

4 RECOMMENDATION

It is recommended that the development application be approved refused for the reason listed at Attachment 10.

5 ATTACHMENTS

1 Aerial photograph

2 WLEP 2009 zoning map

3 Plans

4 Shadow Diagrams

5 Legal Advice (PDC Lawyers & Planners)

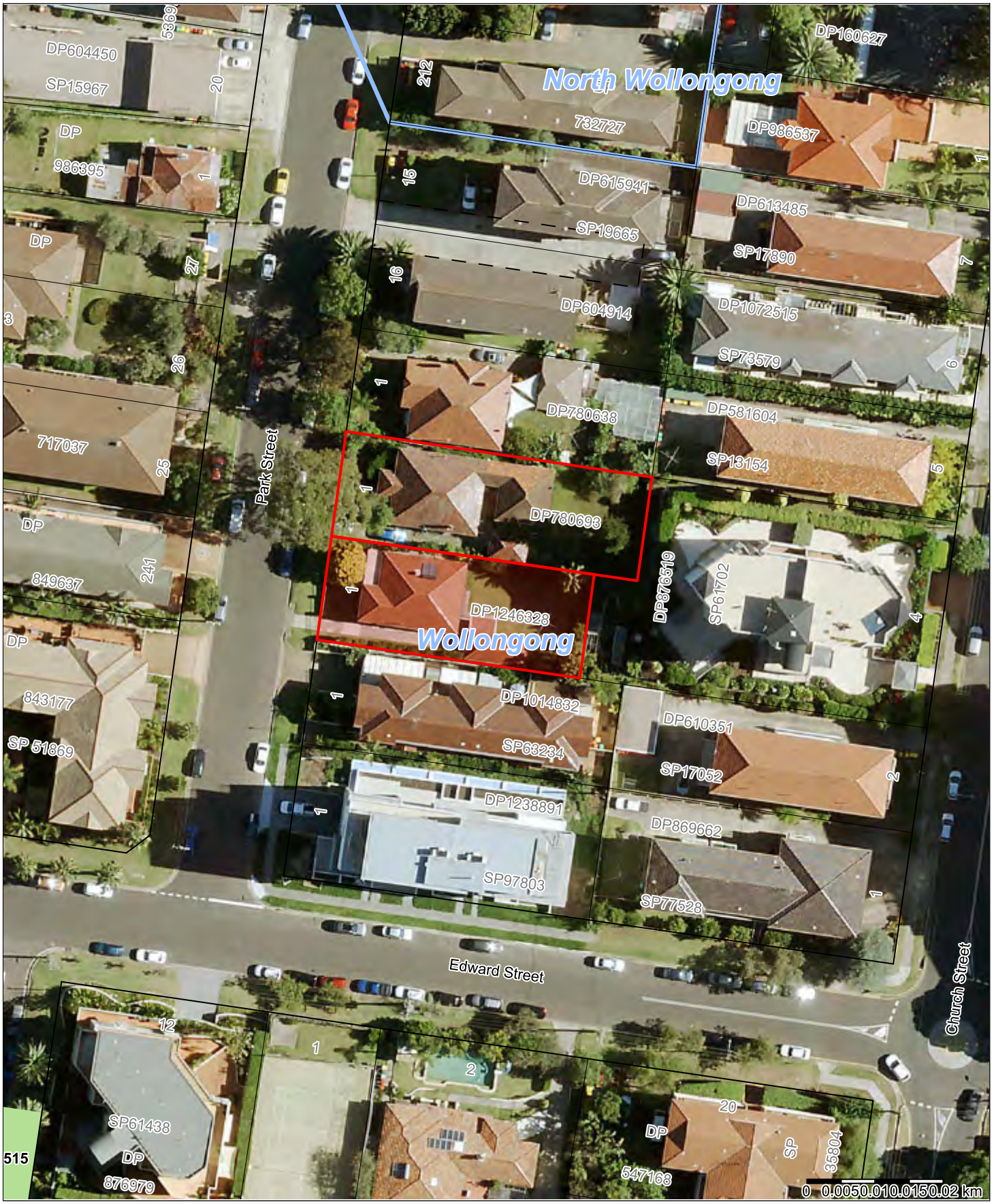
6 Design Review Panel minutes - 22 January 2020

7 Apartment Design Guide Assessment – Compliance Tables

8 Wollongong DCP 2009 Assessment – Compliance Tables

9 Stamped Plans – DA-1991/116 – 13 Park St

10 Draft Reasons for refusalw



wollongong
city of innovation

Aerial Photography 2018

N

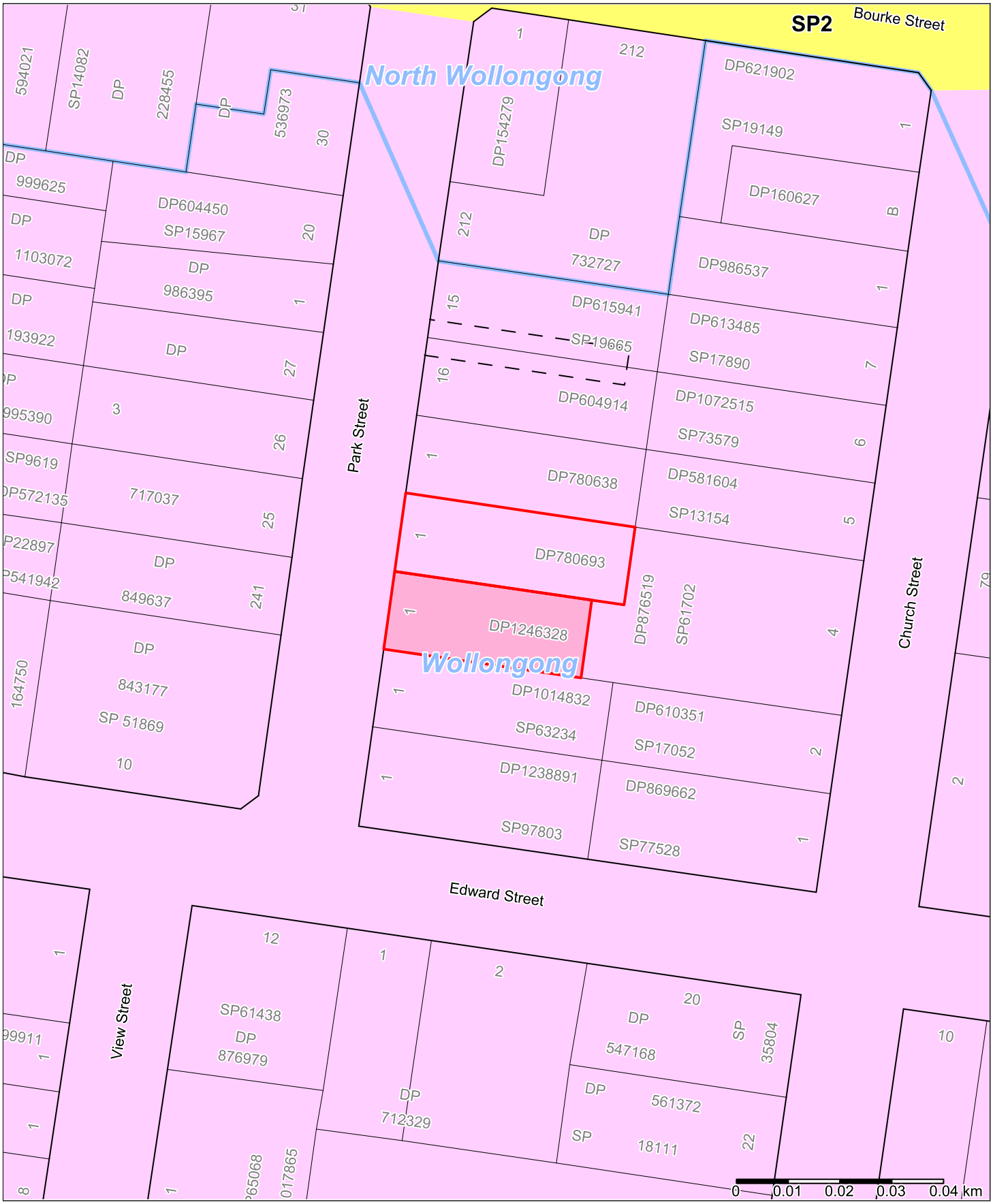
Original Sheet
Size A4

FOR INTERNAL USE ONLY

Printed: 25/08/2020

Printed By: Martin Jameson

This automated map was produced using TechnologyOne's IntraMaps.



Wollongong LEP 2009
Land Use Zone Map

wollongong
city of innovation

N

Original Sheet
Size A4

FOR INTERNAL USE ONLY

Printed: 19/08/2020

Printed By: Martin Jameson

This automated map was produced using TechnologyOne's IntraMaps.

9-11 PARK STREET
PROPOSED APARTMENT BUILDING

Drawing List					
Sheet Number	Current Revision	Sheet Name	Rev . By	Revsion Date	Approved
DA-00	E	TITLE SHEET	DC	07.07.2020	PR
DA-01	D	SURVEY DEMOLITION PLAN	DC	23.06.2020	PR
DA-02	D	SITE ANALYSIS	DC	23.06.2020	PR
DA-03	D	SITE PLAN	DC	23.06.2020	PR
DA-04	D	BASEMENT B2	DC	23.06.2020	PR
DA-05	D	BASEMENT B1	DC	23.06.2020	PR
DA-06	E	LEVEL 1 FLOOR PLAN	DC	07.07.2020	PR
DA-07	D	LEVEL 2 FLOOR PLAN	DC	23.06.2020	PR
DA-08	D	LEVEL 3 FLOOR PLAN	DC	23.06.2020	PR
DA-09	D	LEVEL 4-6 FLOOR PLAN	DC	23.06.2020	PR
DA-10	D	LEVEL 7 FLOOR PLAN	DC	23.06.2020	PR
DA-11	D	LEVEL 8 FLOOR PLAN	DC	23.06.2020	PR
DA-12	D	ELEVATIONS	DC	23.06.2020	PR
DA-13	D	ELEVATIONS	DC	23.06.2020	PR
DA-14	D	SECTION	DC	23.06.2020	PR
DA-16	D	STREET CONTEXT SECTION	DC	23.06.2020	PR
DA-17	D	3D PERSPECTIVES	DC	23.06.2020	PR
DA-18	D	3D PERSPECTIVES	DC	23.06.2020	PR
DA-19	E	SHADOW DIAGRAMS- WINTER SOLSTICE	DC	23.06.2020	PR
DA-20	F	SHADOW DIAGRAMS- WINTER SOLSTICE	DC	23.06.2020	PR
DA-21	F	SHADOW DIAGRAMS- SUMMER SOLSTICE	DC	23.06.2020	PR
DA-22	F	SHADOWS TO 13 PARK STREET	DC	23.06.2020	PR
DA-25	D	AERIAL 3D PERSPECTIVES	DC	23.06.2020	PR
DA-26	C	PERSPECTIVES	DC	23.06.2020	PR
DA-27	D	FSR. CALCULATION	DC	07.07.2020	PR

Thermal Comfort Specifications	
Glazing Doors/windows	Aluminium framed, single clear glazing
	A – awning windows + hinged glazed doors
	U-Value: 6.7 (equal to or lower than) SHGC: 0.57(±10%)
	B – sliding doors/windows + fixed glazing + louvres windows
	U-Value: 6.7 (equal to or lower than) SHGC: 0.70 (±10%)
	Aluminium framed, performance glazing to units 06, 07, 09 11, 13 and 15.
	U-Value: 4.50 (equal to or lower than) SHGC: 0.50 (±10%)
	Given values are AFRC, total window system values (glass and frame)
Roof	Concrete roof – no insulation required
	External colour
	Medium colour (0.475<SA<0.7)
Ceiling	Plasterboard ceiling R3.5 insulation (insulation only value) - excluding Garage
	Note: All ceiling penetrations have been modelled in accordance with NatHERS protocols, all downlights are assume non-ventilated LED down lights IC abutted and covered.
External wall	**External walls:**
	Brick veneer with a minimum R2.0 insulation (insulation only value)
	Lightweight cladding with a minimum R2.5 insulation (insulation only value) to unit 15 only
	Colour backed spandrel with a minimum R2.0 insulation (insulation only value)
	External colour
	Default colour modelled
Inter tenancy walls	Hebel power panels to walls between neighbours – no insulation required.
	Concrete to walls facing fire stairs and lift shafts – no insulation required
	Hebel power panels to walls facing hallways and lobbies– min. R1.2 required (insulation only value)
Walls with-in dwellings	Plasterboard on studs – no insulation required
Floors	Concrete between levels – no insulation required
	Suspended concrete with min R1.2 insulation to units above carpark or with open subfloor below
Floor coverings	Carpet to bedrooms and tiles elsewhere
BASIX Water Commitments	
Alternative Water	Rainwater tank with a minimum capacity of 5,000L, harvested from min. 100m² roof area and connected to at least one outdoor tap for irrigation of common landscaping.
Common Pool	Outdoor pool with a maximum volume of 31kL
BASIX Energy Commitments	
Hot Water System	Individual 6-stars gas instantaneous system to all units
Common Pool	Heating system: solar (gas boosted)
	Pump controlled by timer.
Alternative Energy	Photovoltaic system with a minimum output of 7kW

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC
E	SITE INFORMATION UPDATED	07.07.2020	DC

Site Information

9-11 Park Street, Wollongong
Lot 1, DP 780693 &
Lot 1, DP 1246328

Zone R1
Site Area- 1268m
1.5 FSR (Compliant)
32m height limit (Compliant)

Max GFA 1902m²

Floor Areas

L1: 303.9m²
L2: 229.9m²
L3: 229.9m²
L4-6: 763.5m² (254.5m² x3)
L7: 235.7m²
L8: 111m²
Total :1873.9m²

+2 Excess Car Parking Spaces (27.5m²)

Total :1901.4m²
(2 excess car parking spaces included)

UNIT FLOOR AREA:

UNIT 1 : 131.3m²
UNIT 2 : 143.5m²
UNIT 3 : 83.2m²(adaptable)
UNIT 4 : 131.3m²
UNIT 5 :83.2m²(adaptable)
UNIT 6 :131.3m²
UNIT 7 :120m²
UNIT 8 :120m²
UNIT 9 :120m²
UNIT 10 :120m²
UNIT 11 :120m²
UNIT 12 :120m²
UNIT 13 : 161.4m² (110m² + 51.4m²)
UNIT 14 : 159.5m² (110m² + 49.5m²)

Communal Open Space, Landscape Area & Deep Soil Zone - REFER TO LANDSCAPE PLAN

Refer to Traffic report & Landscape plan

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

Suite 3
75 Market Street
Wollongong NSW 2500
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E: office@prdarchitects.com
PRD ARCHITECTS

7/07/2020 1:17:26 PM

PROPOSED APARTMENT BUILDING
9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

MORETTI CONSTRUCTION18-60

TITLE SHEET

DA-00 -E

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC

SP73579

DP780638

DP780693
678m²
Available

DP1246328
590m²

SP61702

SP632234

WEATHERBOARD COTTAGE TO BE DEMOLISHED

CONCRETE DRIVEWAYS AND PATHS TO BE DEMOLISHED

SHED TO BE DEMOLISHED

TREES TO BE ROMOVED AS PER ARBOIST REPORT FROM ALLIED TREES

BRICK COTTAGE TO BE DEMOLISHED

CONCRETE DRIVEWAYS AND PATHS TO BE DEMOLISHED

SHED TO BE DEMOLISHED

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

SP17052

1:50 @ A1 1:100 @ A3

23/06/2020 10:27:32 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

SURVEY DEMOLITION PLAN

MORETTI CONSTRUCTION18-60

DA-01 -D

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NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC
E	DELETE PV SYSTEM REQUIREMENT	20.08.2020	DC

7 PARK STREET
BRINCK AND WEATHERBOARD RESIDENCE

1 DP780638

DP1246

SP61702

STREET

TPZ

SRZ

R 8800

R 2800

4m setback

6m setback

9m setback

EXIT PATH FROM BASEMENT

LEVEL 1 PLANTER

LEVEL 1 UNIT 1 POS

LEVEL 1 COMMUNAL OPEN SPACE

LEVEL 3 BALCONY

LEVEL 8 PLANTER

LEVEL 8 TERRACE

LEVEL 7 ROOF

PLANTER TO LANDSCAPE PLAN

LEVEL 8 PLANTER

LEVEL 8 AWNING

POTENTIAL PV SYSTEM LOCATION IF REQUIRED

LIFT OVERRUN

CONCRETE ROOF WITH INTERNAL SLOPES TO ENGINEERS FUTURE DETAIL

DEEP SOIL ZONE REFER TO LANDSCAPE PLAN

ENTRY PATH

LEVEL 8 ROOF

LEVEL 6 ROOF

LEVEL 3 SERVICE BALCONY

BASEMENT ENTRY RAMP

PLANTER TO LANDSCAPE PLAN

LEVEL 1 COMMUNAL OPEN SPACE

LANDSCAPE

SETOUT POINT

RL 28.000

SETBACK (Varies)

4125

6910

SETBACK

1500

6130

10225

9530

2832

2985

20M BUILDING SEPARATION BETWEEN HABITABLE AND NON HABITABLE UP TO 4 STOREYS COMPLIANT WITH ADG

98° 18'

7° Available

14.875" Available

6° 40' 05"

98° 18' 35"
6.2

7° 51' 10"
15.24

7° 51' 10"
0.36

Windows
Lvl 6 45.8
Lvl 5 43.0
Lvl 3 37.6
Lvl 2 34.9

Windows
Lvl 6 45.38
Lvl 5 42.67
Lvl 4 39.97
Lvl 3 37.26
Lvl 2 34.65

THE HORIZONS
14-16 CHURCH STREET
WOLLONGONG
6 STOREY APARTMENT BUILDING

13 PARK STREET, 2 STOREY BRICK APARTMENT DEVELOPMENT

632234

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

2 1 0 2 4 6 8

1:100 @ A1 1:200 @ A3

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

SITE PLAN

MORETTI CONSTRUCTION18-60

DA-03 -E

Suite 3
73 Market Street
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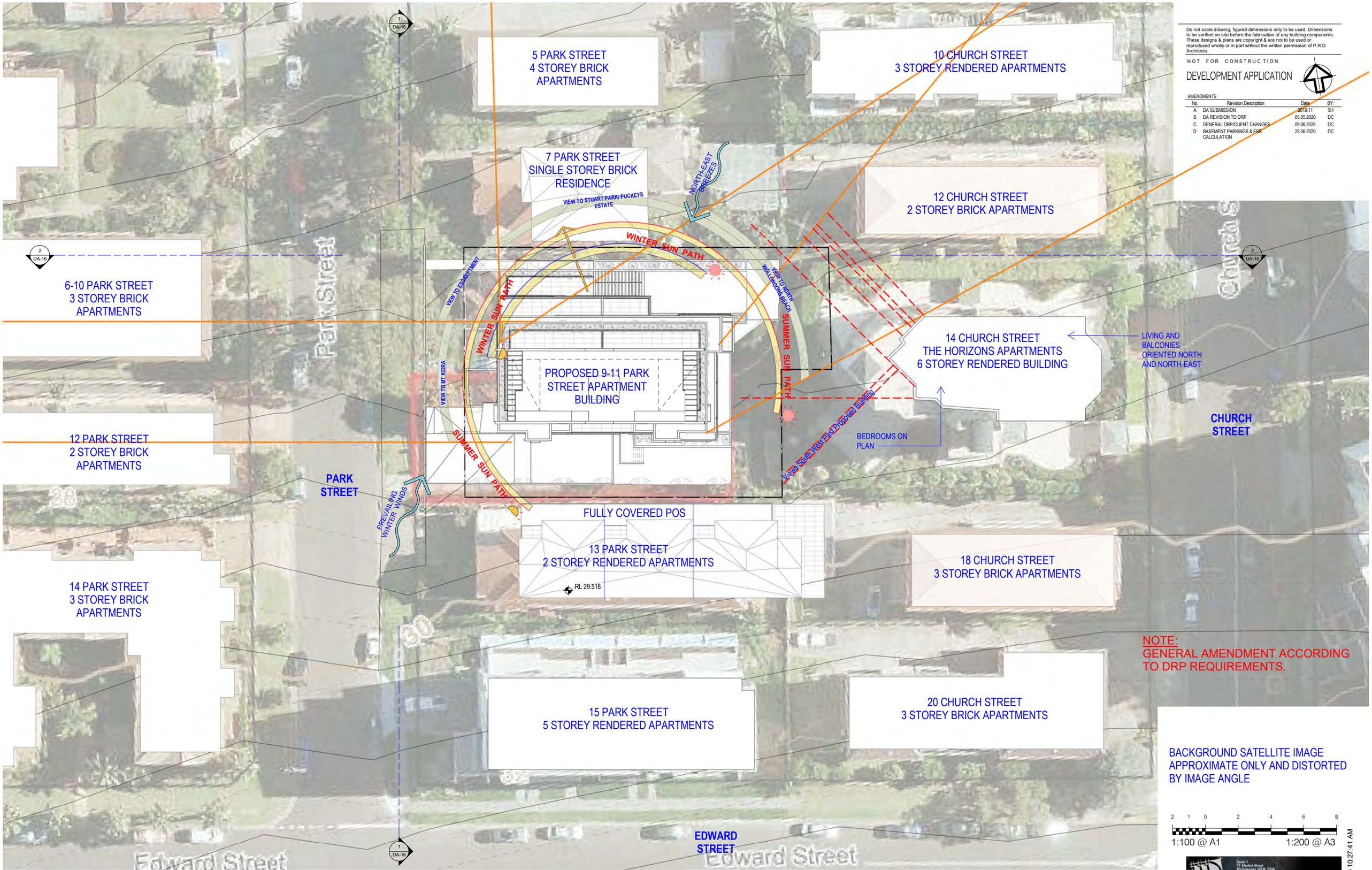
20/08/2020 2:19:29 PM



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DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

BACKGROUND SATELLITE IMAGE APPROXIMATE ONLY AND DISTORTED BY IMAGE ANGLE

2 1 0 2 4 6 8

1:100 @ A1 1:200 @ A3

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23/06/2020 10:27:41 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

SITE ANALYSIS

MORETTI CONSTRUCTION18-60

DA-02 -D

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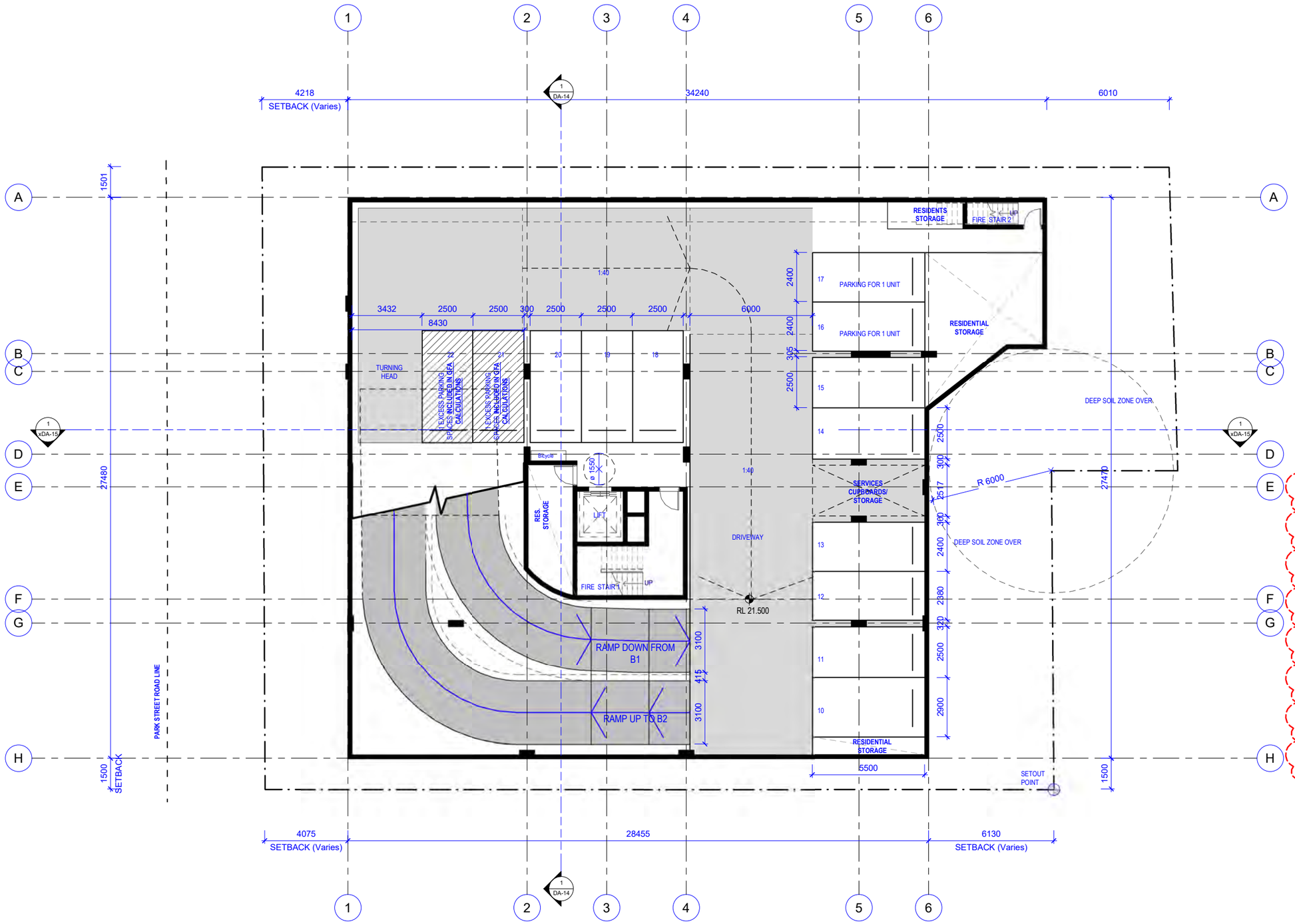
DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC



CAR PARK INFORMATION

Basement 1
Resident Car Spaces =9
(including 2 access parkings)
Resident Motorbike =1
Resident Bicyles =4
Visitors Bicyles =2

Basement 2
Resident Car Spaces =13 (including 2 excess parkings)
Resident Bicyles =1

Total parking spaces 22 (including 2 excess parkings)
Total Bicycles 7 (including 2 visitor bicycles)
Total Motorbike 1

Note:See Traffic Report

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

2 1 0 2 4 6 8
1:100 @ A1 1:200 @ A3

1 B2

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

BASEMENT B2

MORETTI CONSTRUCTION18-60

DA-04 -D

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DEVELOPMENT APPLICATION

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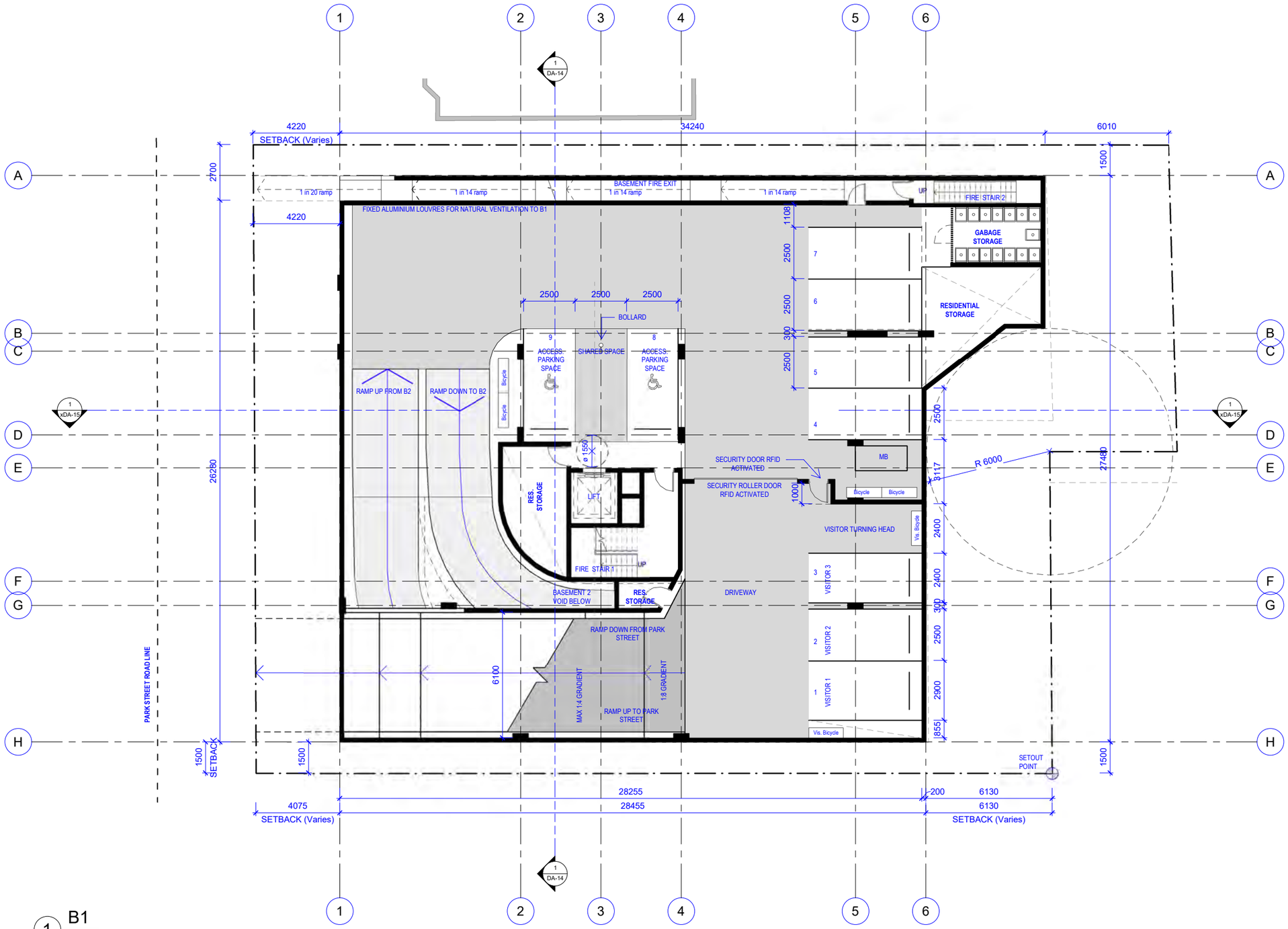
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC



CAR PARK INFORMATION

Basement 1

Resident Car Spaces =9
(including 2 access parkings)
Resident Motorbike =1
Resident Bicyles =4
Visitors Bicyles =2

Basement 2

Resident Car Spaces =13 (including 2 excess parkings)
Resident Bicyles =1

Total parking spaces 22 (including 2 excess parkings)
Total Bicycles 7 (including 2 visitor bicycles)
Total Motorbike 1

Note:See Traffic Report

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

1:100 @ A1 1:200 @ A3

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PROPOSED APARTMENT BUILDING

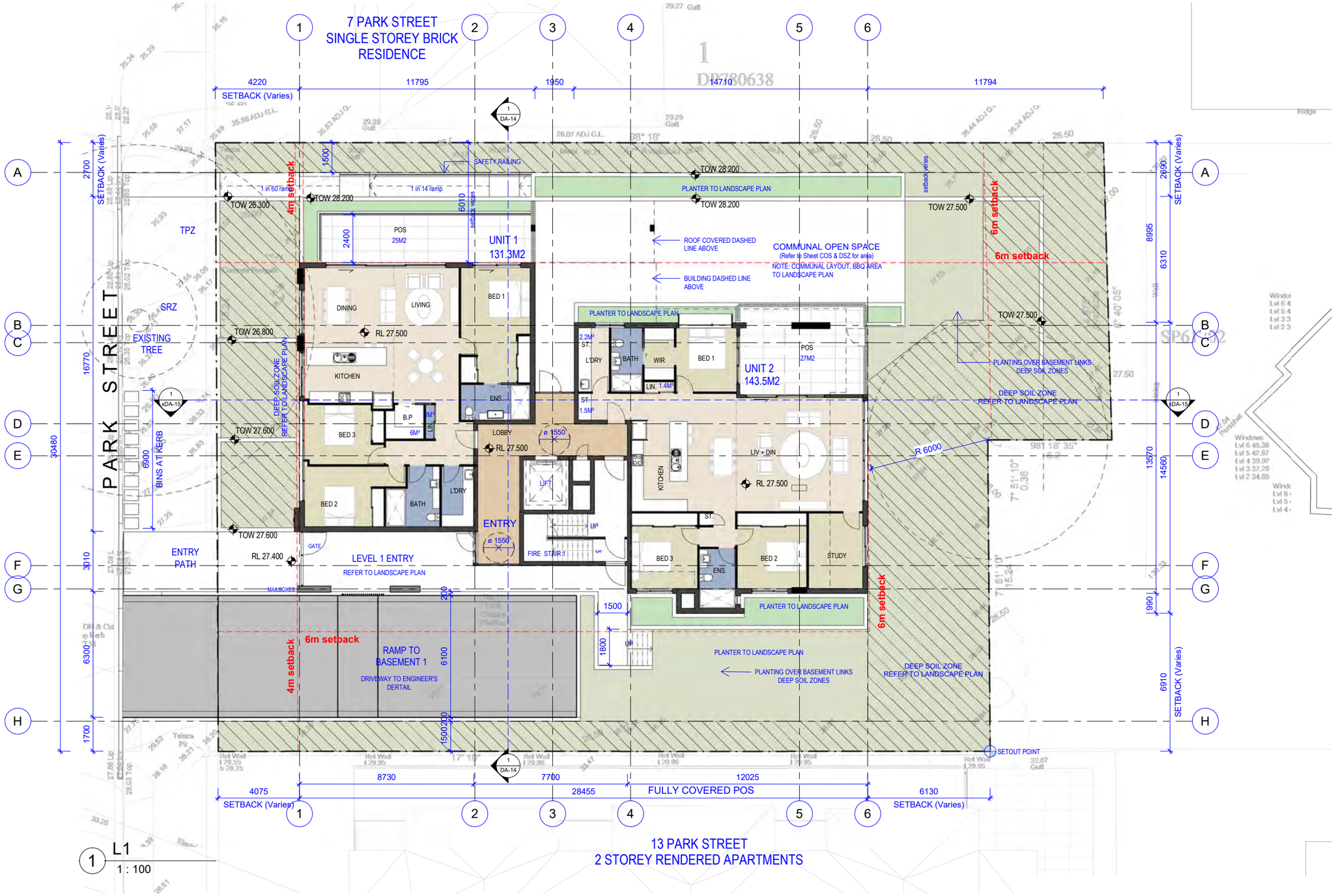
9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

BASEMENT B1

MORETTI CONSTRUCTION18-60

DA-05 -D

1 B1



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DEVELOPMENT APPLICATION

AMENDMENTS

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A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC
E	SITE INFORMATION UPDATED	07.07.2020	DC

Site Information

9-11 Park Street, Wollongong
Lot 1, DP 780693 &
Lot 1, DP 1246328

Zone R1
Site Area- 1268m
1.5 FSR (Compliant)
32m height limit (Compliant)

Max GFA 1902m²

Floor Areas

L1: 303.9m²
L2: 229.9m²
L3: 229.9m²
L4-6: 763.5m² (254.5m² x3)
L7: 235.7m²
L8: 111m²
Total :1873.9m²

+2 Excess Car Parking Spaces (27.5m²)

Total :1901.4m²
(2 excess car parking spaces included)

UNIT FLOOR AREA:

UNIT 1 : 131.3m²
UNIT 2 : 143.5m²
UNIT 3 : 83.2m²(adaptable)
UNIT 4 : 131.3m²
UNIT 5 :83.2m²(adaptable)
UNIT 6 :131.3m²
UNIT 7 :120m²
UNIT 8 :120m²
UNIT 9 :120m²
UNIT 10 :120m²
UNIT 11 : 120m²
UNIT 12 :120m²
UNIT 13 : 161.4m² (110m² + 51.4m²)
UNIT 14 : 159.5m² (110m² + 49.5m²)

Communal Open Space, Landscape Area & Deep Soil Zone - REFER TO LANDSCAPE PLAN

Refer to Traffic report & Landscape plan

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

2 1 0 2 4 6 8
1:100 @ A1 1:200 @ A3

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7/07/2020 1:18:11 PM

PROPOSED APARTMENT BUILDING
9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

LEVEL 1 FLOOR PLAN

MORETTI CONSTRUCTION18-60

DA-06 -E

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DEVELOPMENT APPLICATION

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C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
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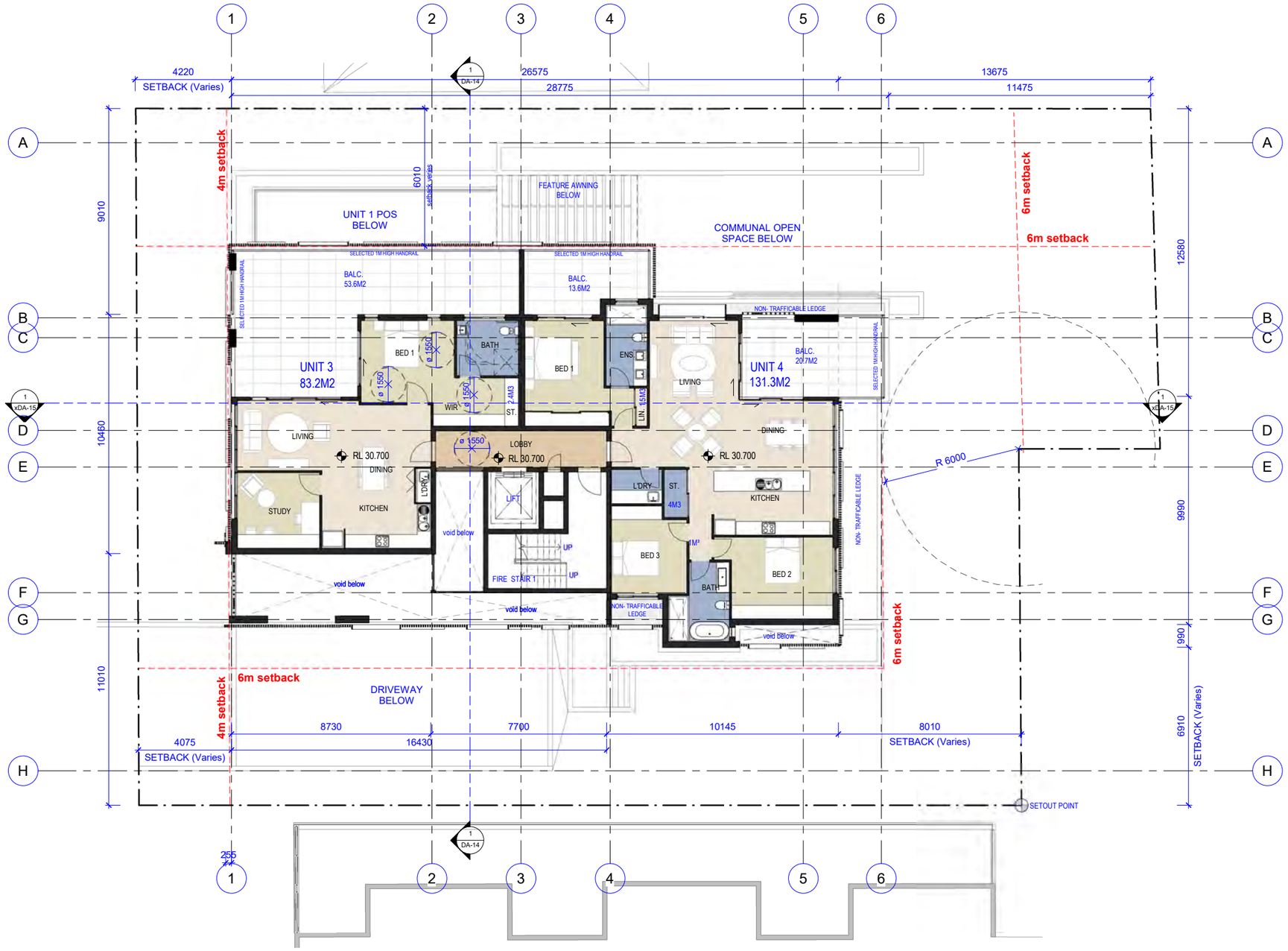

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

1 L2

1:100 @ A1 1:200 @ A3

23/06/2020 10:28:36 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

LEVEL 2 FLOOR PLAN

MORETTI CONSTRUCTION18-60

DA-07 -D

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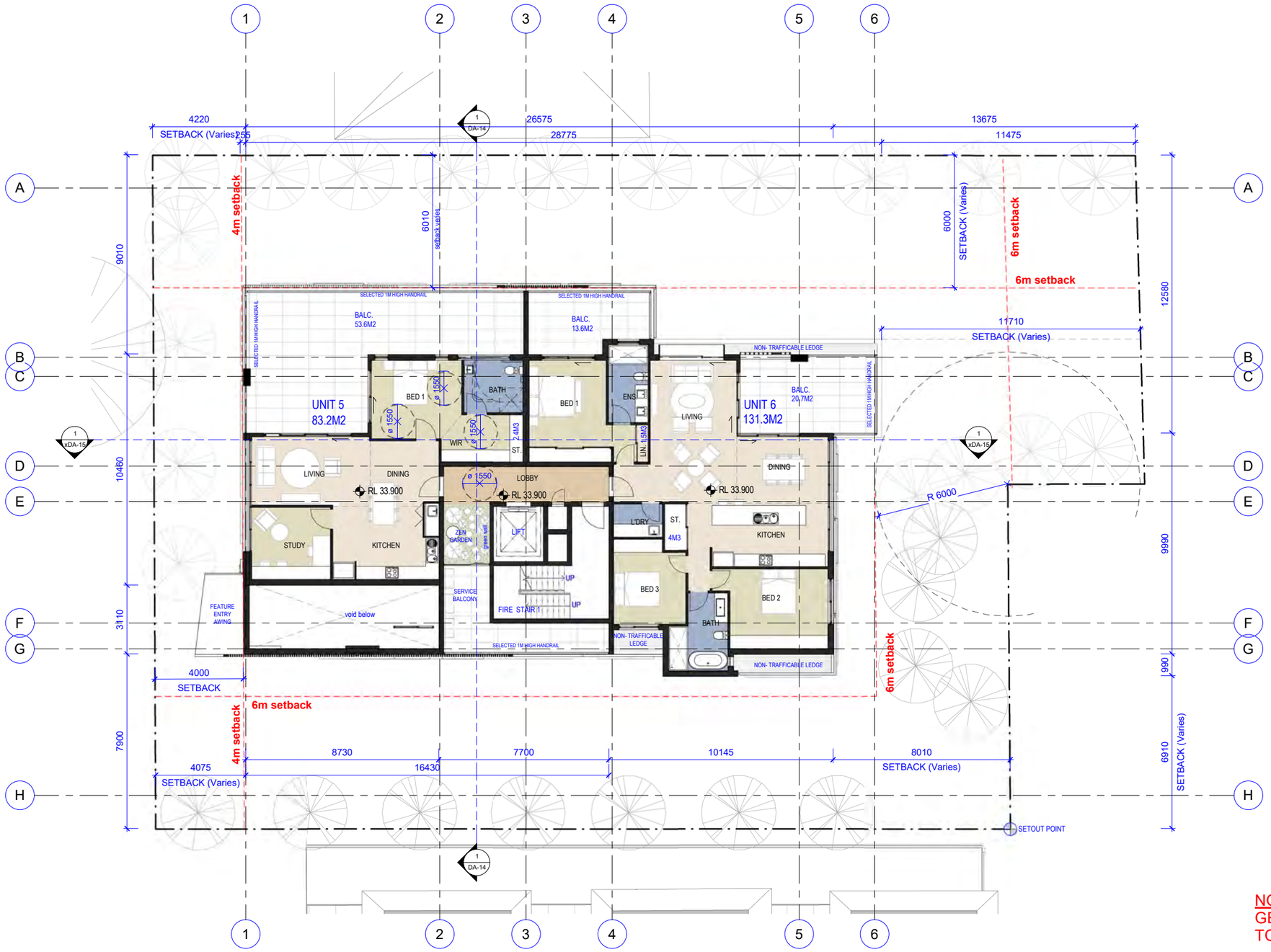
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC



NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

1 L3

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23/06/2020 10:28:59 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

LEVEL 3 FLOOR PLAN

MORETTI CONSTRUCTION18-60

DA-08 -D

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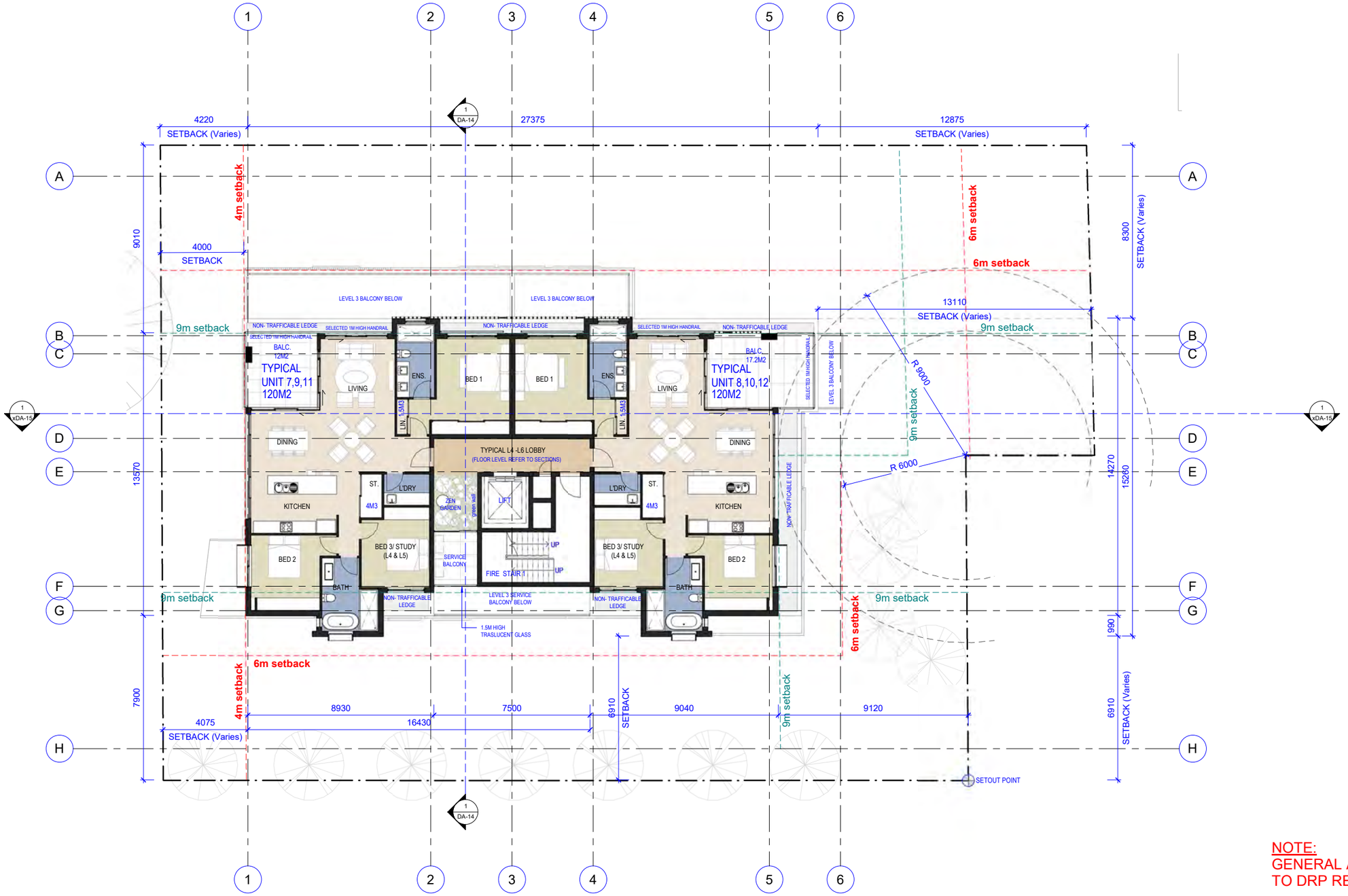
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC



1 L4 - L6 (TYPICAL)

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

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23/06/2020 10:29:16 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

LEVEL 4-6 FLOOR PLAN

MORETTI CONSTRUCTION18-60

DA-09 -D

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B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
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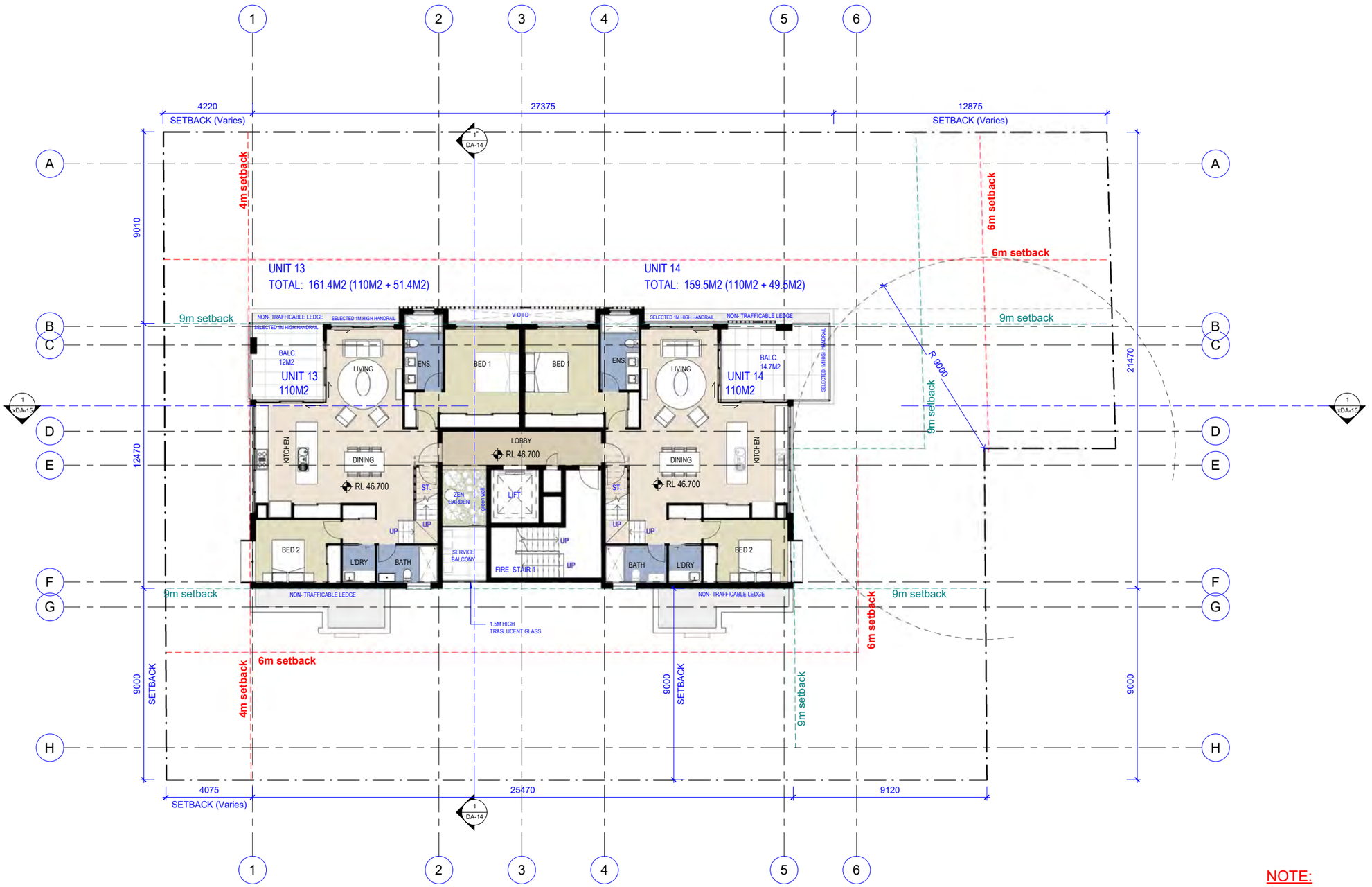

1 L7

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

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23/06/2020 10:29:25 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

LEVEL 7 FLOOR PLAN

MORETTI CONSTRUCTION18-60

DA-10 -D

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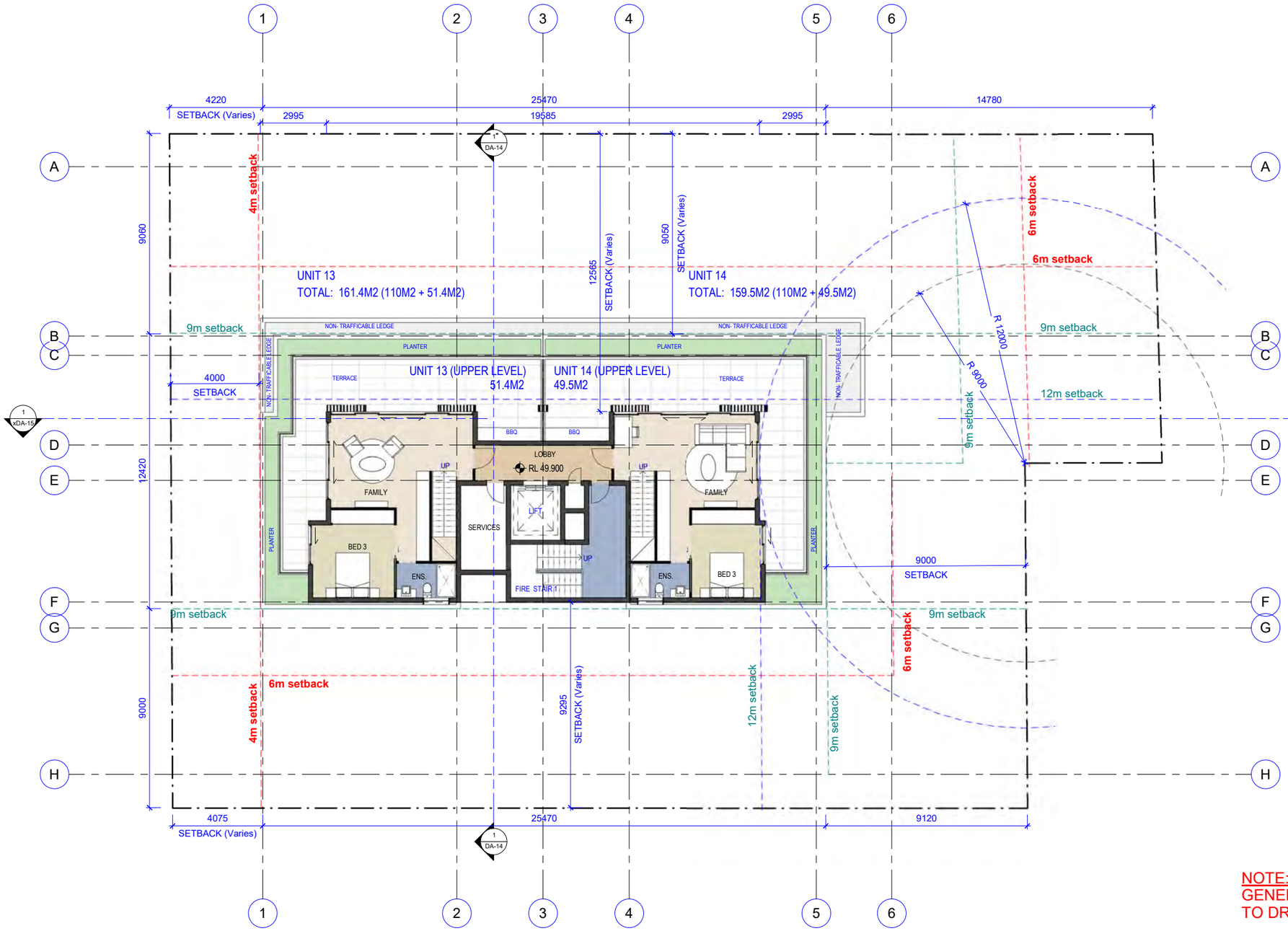
No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC



NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

1 L8
1 : 100

2 1 0 2 4 6 8
1:100 @ A1 1:200 @ A3

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

LEVEL 8 FLOOR PLAN

MORETTI CONSTRUCTION18-60

DA-11 -D

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DEVELOPMENT APPLICATION

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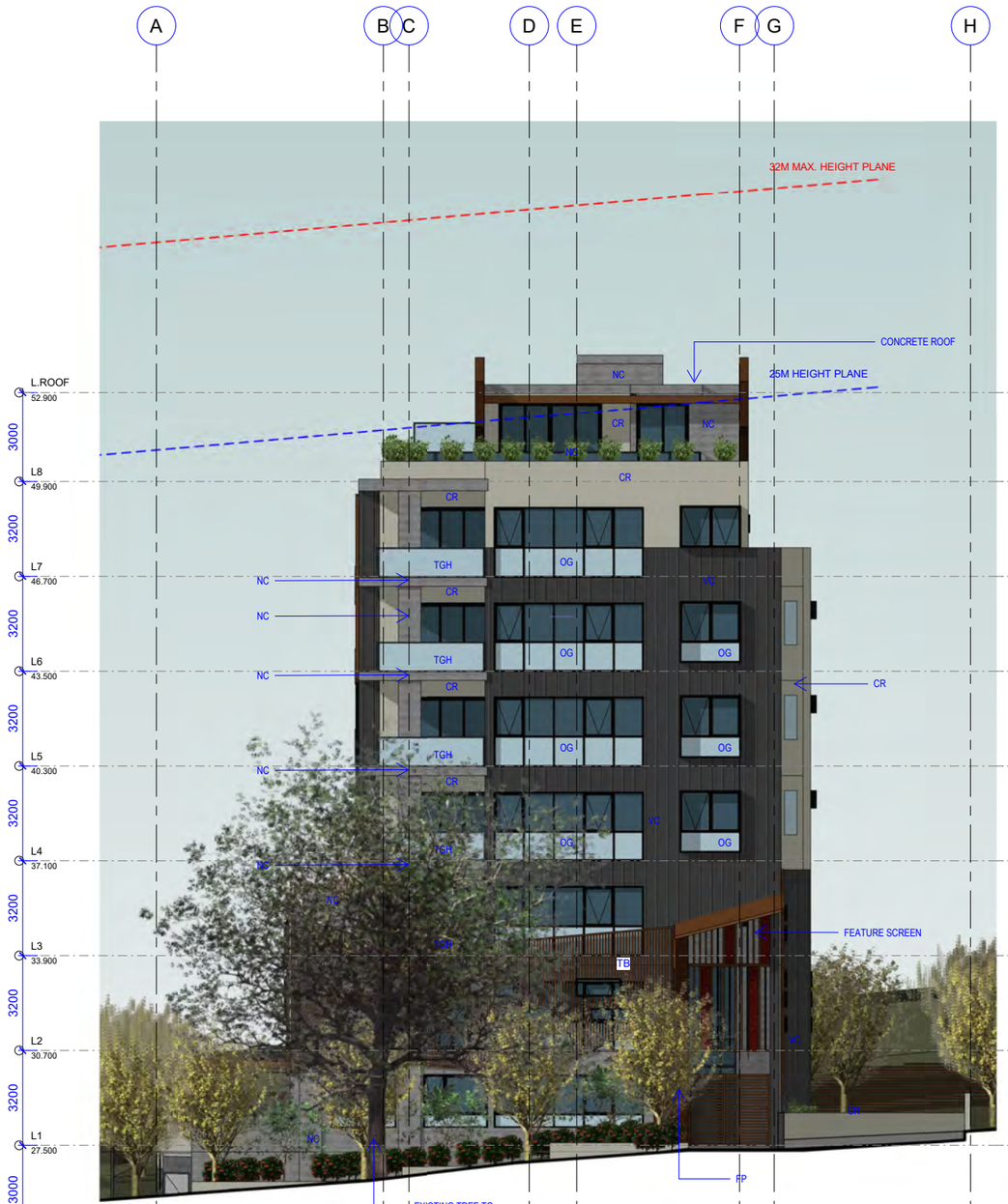
No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC



2 WEST ELEVATION

1 NORTH ELEVATION

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

ELEVATION KEY:
VC - VERTICAL ZINC STANDING SEAM CLADDING OR SIMILAR
TB - ALUMINIUM (TIMBER GRAIN) BATTEN SCREEN WITH CHARCOAL ALUMINIUM FRAME
NC - NATURAL CONCRETE RENDER FINISH
CB - COLORBOND 'SHALE GREY' CUSTOM ORB CLADDING
CR - RENDER FINISH- PANTED 'DUNE'
FP - FEATURE TIMBER PANELLING
TGH - TRANSLUCENT GLASS HANDRAIL WITH ALUMINIUM HANDRAIL
OG - OPAQUE GLASS (CLOUR TO MATCH GLASS)

2 1 0 2 4 6 8
1:100 @ A1 1:200 @ A3

NOTE: ALL MATERIALS SUBJECT TO SUBSTITUTON WITH SIMILAR FINISHES.
BATH/SHOWER WINDOW GLASS TO BE TRANSLUCENT.

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

ELEVATIONS

MORETTI CONSTRUCTION18-60

DA-12 -D

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NOTE:
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DEVELOPMENT APPLICATION

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No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
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D	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC

1 EAST ELEVATION

2 SOUTH ELEVATION

ELEVATION KEY:
VC - VERTICAL ZINC STANDING SEAM CLADDING OR SIMILAR
TB - ALUMINIUM (TIMBER GRAIN) BATTEN SCREEN WITH CHARCOAL ALUMINIUM FRAME
NC - NATURAL CONCRETE RENDER FINISH
CB - COLORBOND 'SHALE GREY' CUSTOM ORB CLADDING
CR - RENDER FINISH- PANTED 'DUNE'
FP - FEATURE TIMBER PANELLING
TGH - TRANSLUCENT GLASS HANDRAIL WITH ALUMINIUM HANDRAIL
OG - OPAQUE GLASS (CLOUR TO MATCH GLASS)

2 1 0 2 4 6 8

1:100 @ A1 1:200 @ A3

NOTE: ALL MATERIALS SUBJECT TO SUBSTITUTON WITH SIMILAR FINISHES.
BATH/SHOWER WINDOW GLASS TO BE TRANSLUCENT.

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23/06/2020 10:31:24 AM

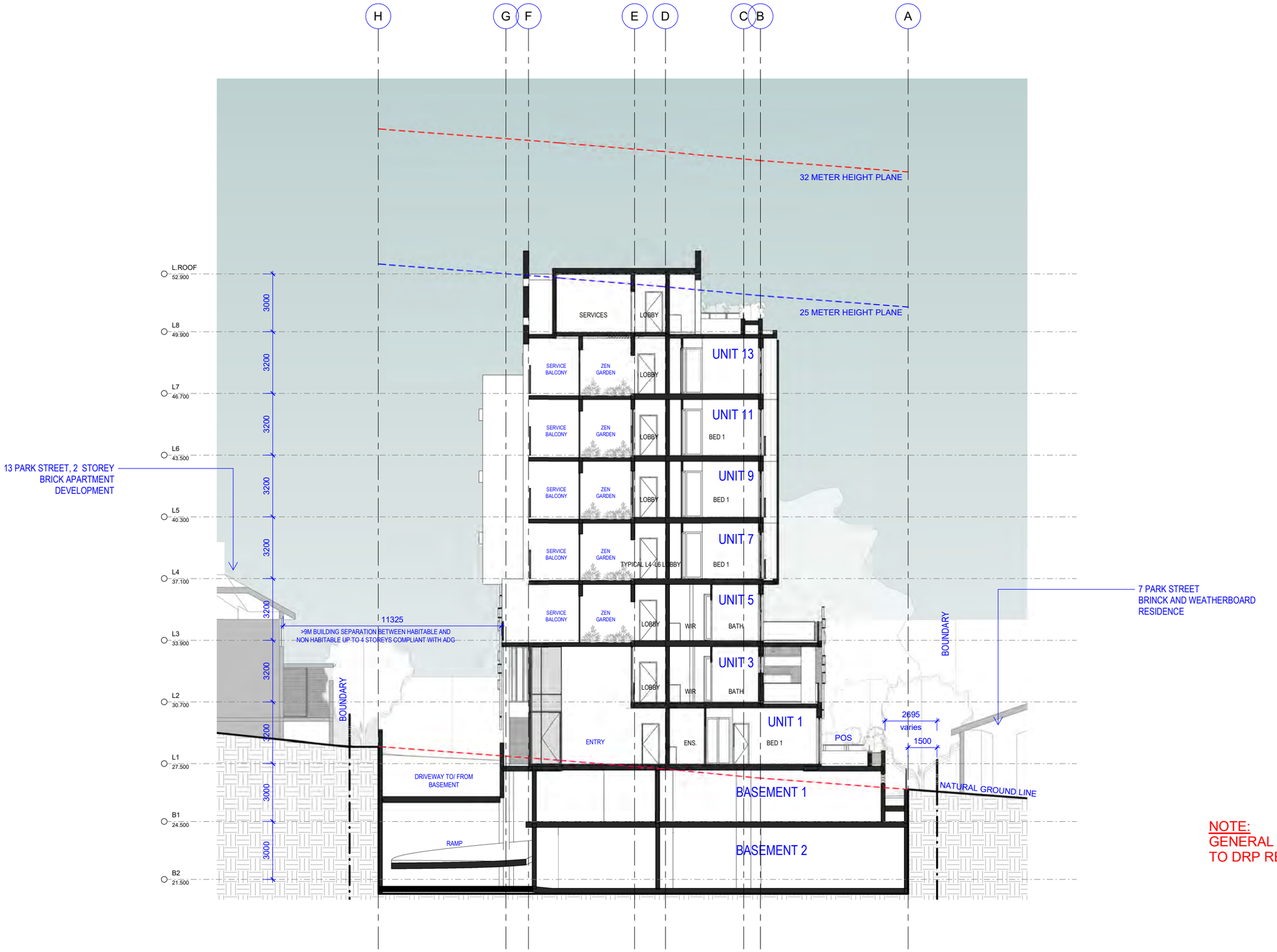
PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

MORETTI CONSTRUCTION18-60

ELEVATIONS

DA-13 -D



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DEVELOPMENT APPLICATION

AMENDMENTS

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NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

2 1 0 2 4 6 8

1:100 @ A1 1:200 @ A3

23/06/2020 10:31:30 AM

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PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

SECTION

MORETTI CONSTRUCTION18-60

DA-14 -D

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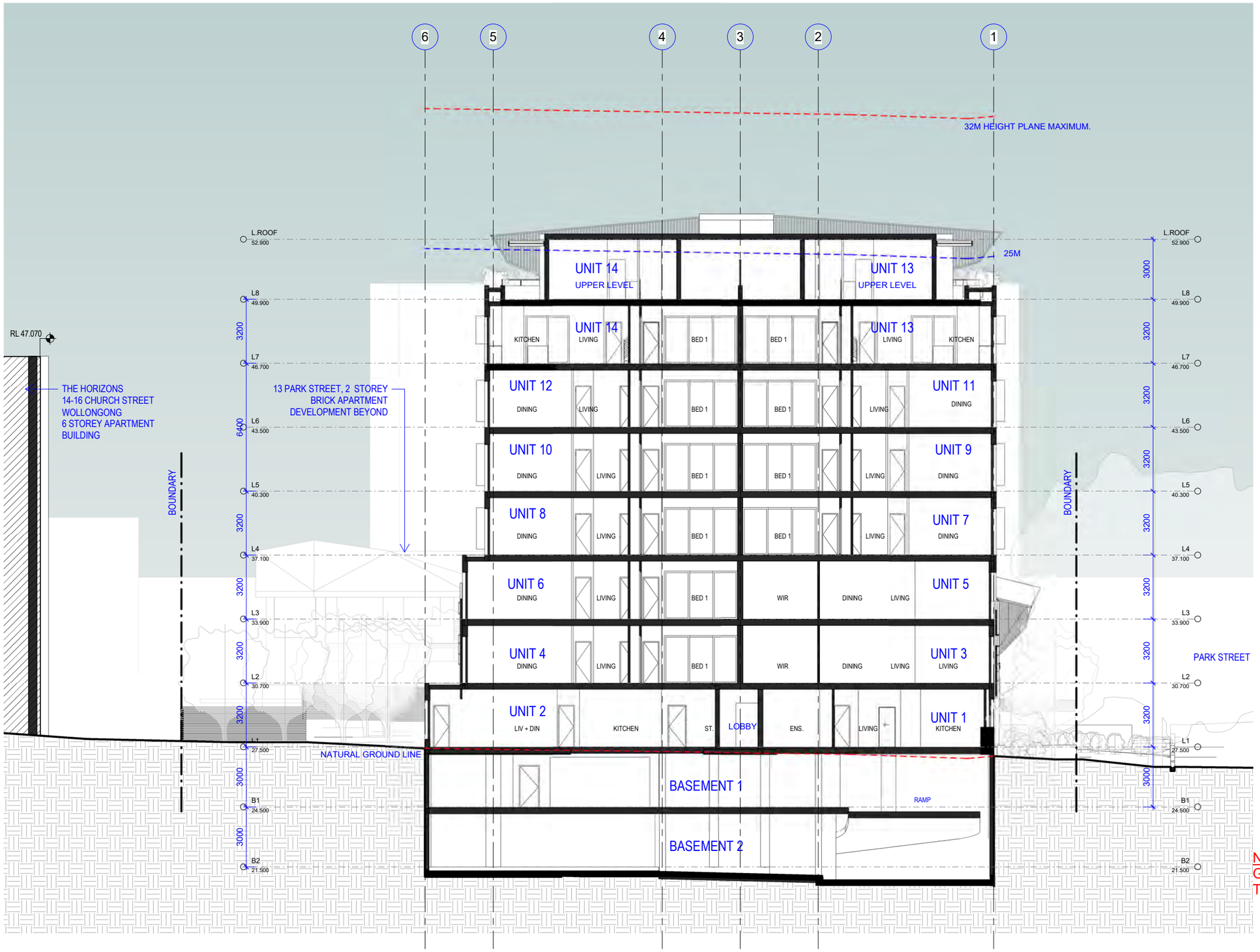
DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	ADDITIONAL INFORMATION UPDATED	30.07.2020	DC



NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

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3/08/2020 4:22:05 PM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

SECTION

MORETTI CONSTRUCTION18-60

DA-15 -C

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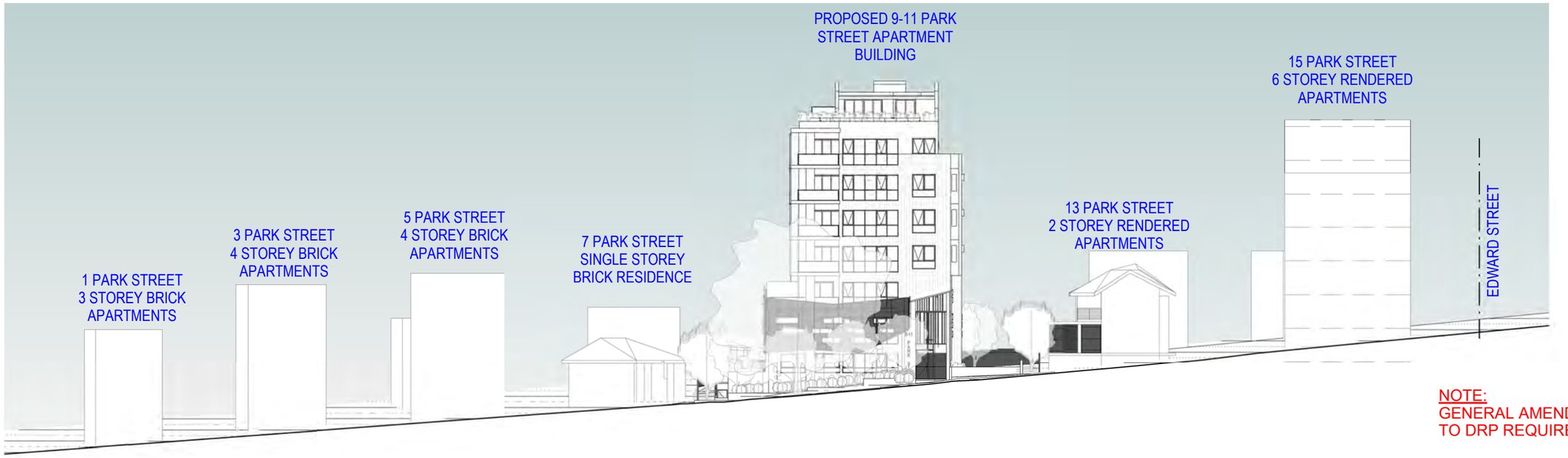
2 BLOCK CROSS SECTION



1 PARK STREET SECTION

NOTE:
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DEVELOPMENT APPLICATION

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4 0 4 8 12 16

1:200 @ A1 1:400 @ A3

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PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

STREET CONTEXT SECTION

MORETTI CONSTRUCTION18-60

DA-16 -D

VIEW FROM INFRONT OF 7 PARK STREET

VIEW FROM ENTRY POINT

NOTE:
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PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

3D PERSPECTIVES

MORETTI CONSTRUCTION18-60

DA-17 -D

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VIEW FROM NORTH EAST

VIEW FROM SOUTH EAST

NOTE:
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DEVELOPMENT APPLICATION

AMENDMENTS

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PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

3D PERSPECTIVES

MORETTI CONSTRUCTION18-60

DA-18 -D

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NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

MORETTI CONSTRUCTION18-60

PERSPECTIVES

DA-26 -C

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23/06/2020 10:36:52 AM

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	GENERAL	22.01.2020	SH
B	DA REVISION TO DRP	05.05.2020	DC
C	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC

1 AERIAL PERSPECTIVE 01
- SOUTH WEST ASPECT

2 AERIAL PERSPECTIVE 02
- SOUTH EAST ASPECT

3 AERIAL PERSPECTIVE 03
- NORTH EAST ASPECT

4 AERIAL PERSPECTIVE 04
- NORTH WEST ASPECT

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

AERIAL 3D PERSPECTIVES

MORETTI CONSTRUCTION18-60

DA-25 -C

Suite 3
73 Market Street
Wollongong NSW 2500
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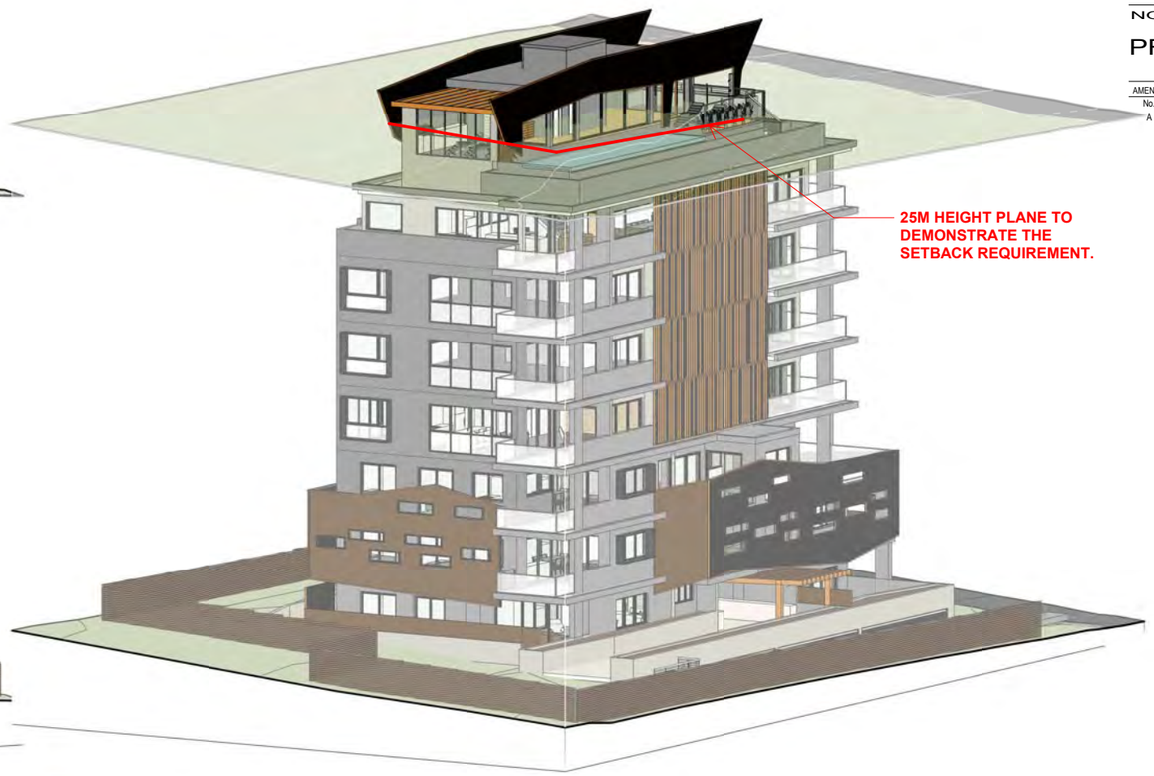
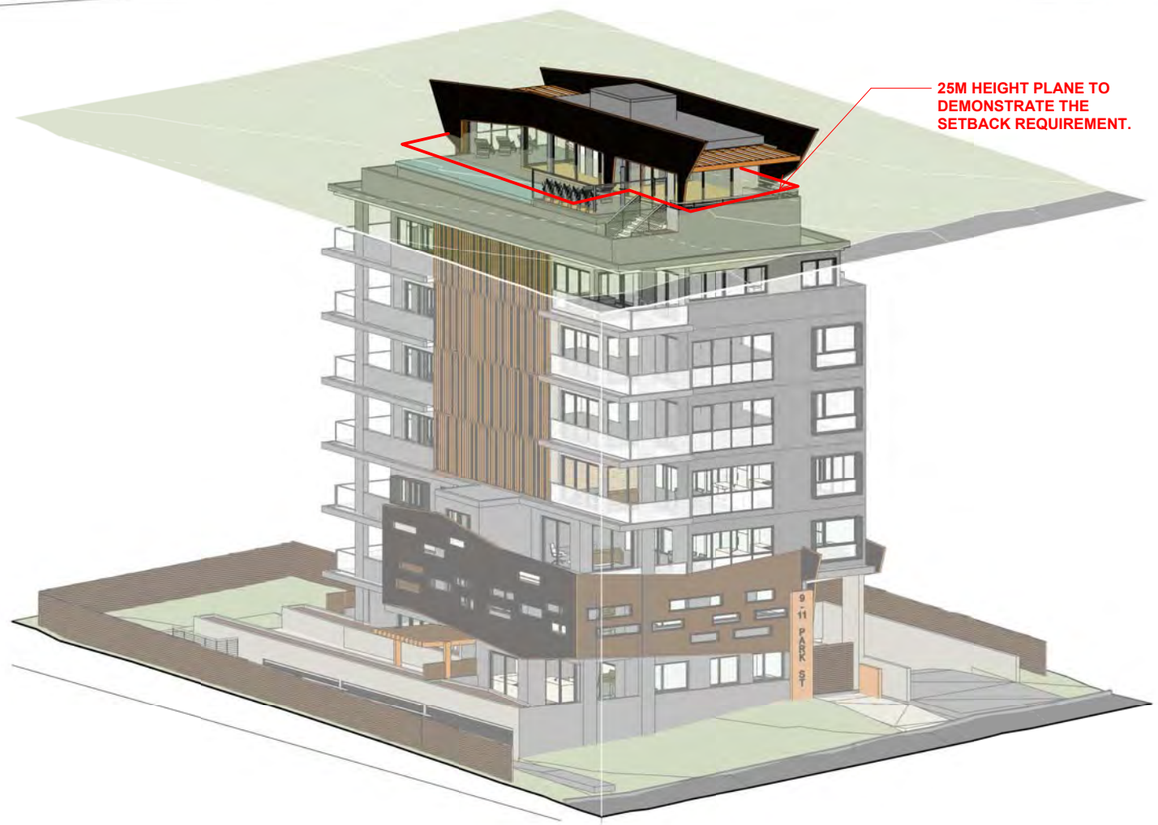
E: office@prdarchitects.com
PRD ARCHITECTS

10/06/2020 3:46:12 PM





NOTE: 32M HEIGHT PLANE
ALLOWANCE TO THIS ZONE

NOT FOR CONSTRUCTION

PRELIMINARY

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA REVISION TO DRP	05.05.2020	DC

Project:

PROPOSED APARTMENT BUILDING
Project Address

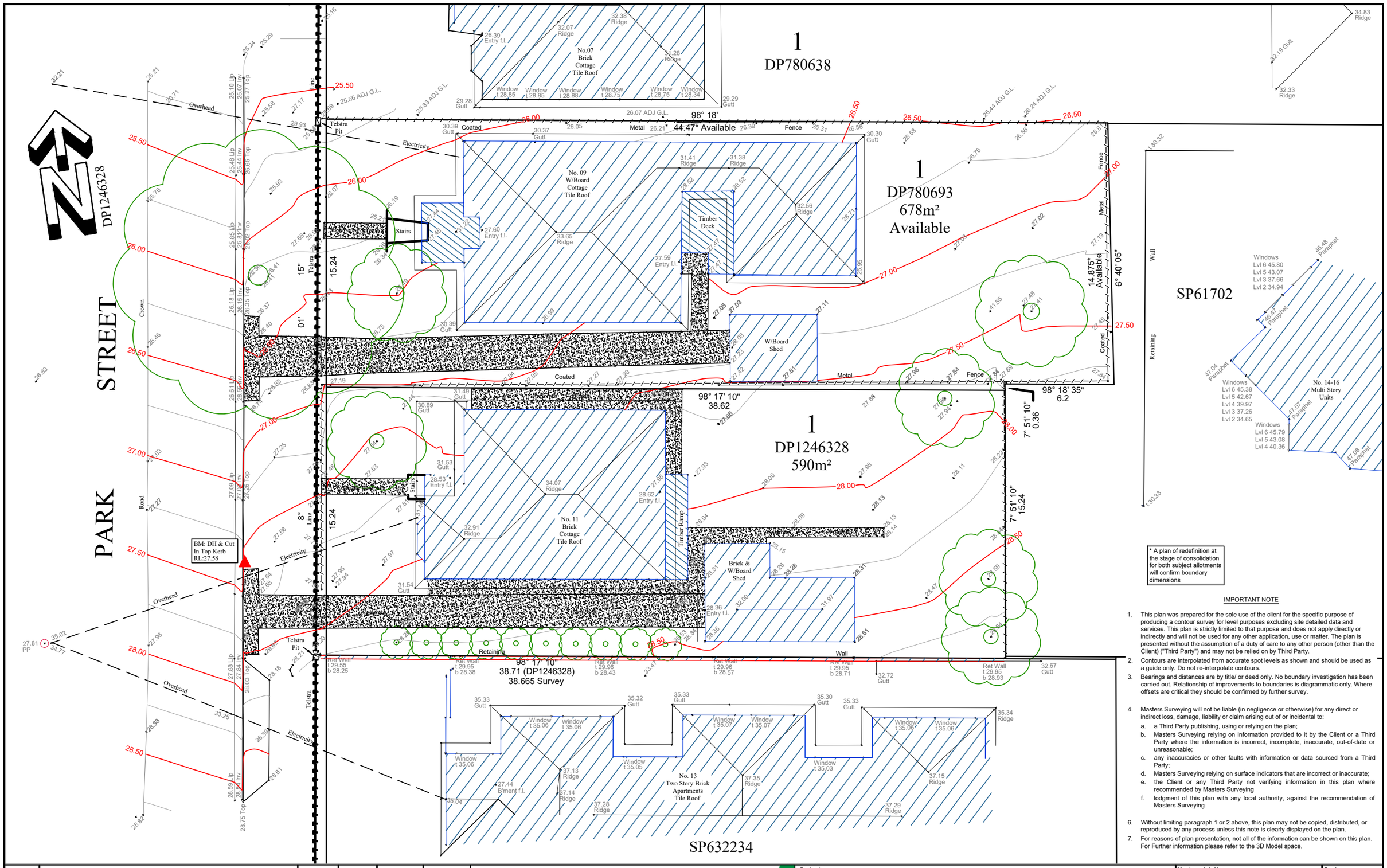
Client:
MORETTI CONSTRUCTION

Suite 3
75 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
E: office@prdarchitects.com
PRD ARCHITECTS

Title:
25M HEIGHT PLANE

Date: xx.xx.xx	Job No:	Dwg:	Rev:
Scale:	18-60	DA-29	

6/05/2020 4:36:32 PM



* A plan of redefinition at the stage of consolidation for both subject allotments will confirm boundary dimensions

IMPORTANT NOTE

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   d. Masters Surveying relying on surface indicators that are incorrect or inaccurate;
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Rev.	Reason for Issue or Amendment	Date	Drawn	Checked	Surveyed
0	ORIGINAL ISSUE	31/01/2019	ZS	NB	NB

MASTERS SURVEYING
116 Corrimal Street, Wollongong NSW 2500 P 02 4228 9911 masterssurveying.com.au
Wollongong CADASTRAL CONSTRUCTION ENGINEERING

Project: 9-11 PARK STREET WOLLONGONG - LOT 1 DP780693 & LOT 1 DP1246328	Masters Job No: W18210		Scale: 1:200 at A3
Title: DETAILED SITE SURVEY	Level Datum: A.H.D.	Origin: PM16930	Co-ord System: N/A
Client: MORETTI CONSTRUCTIONS	Masters Drawing No: W18214	Revision: 0	Sheet: 2 OF 2

GENERAL

G1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF CURRENT SAA CODES AND THE BYLAWS, ORDINANCE OR OTHER REQUIREMENTS OF THE RELEVANT BUILDING AUTHORITIES.

G2. DO NOT OBTAIN DIMENSIONS BY SCALING THESE DRAWINGS. ONLY PRINCIPAL STRUCTURAL DIMENSIONS ARE SHOWN. ALL DIMENSIONS ARE IN MILLIMETERS.

G3 READ THESE DRAWINGS IN CONJUNCTION WITH THE ALL OTHER CONTRACT DOCUMENTS AND THE REQUIREMENTS OF THE RELEVANT BUILDING AUTHORITIES.

G4. BEFORE PROCEEDING WITH WORK CLARIFY ANY DISCREPANCIES, VERIFY ALL SETTING OUT DIMENSIONS. CONSTRUCTION FROM THESE DRAWINGS AND ASSOCIATED CONSULTANTS' DRAWINGS

G5. SHALL NOT COMMENCE UNTIL APPROVED BY THE LOCAL AUTHORITIES.

G6.DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION. DO NOT EXCEED THE DESIGN LIVE LOADS SHOWN OR CAUSE ANY ELEMENT TO BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE BUILDER TO KEEP THE WORKS AND EXCAVATIONS STABLE AT ALL TIMES.

G7. THE BUILDER SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS.

G8. ALL SITE RE-GRADING AREAS SHALL BE FINALLY GRADED TO THE SATISFACTION OF THE ENGINEER.

G9 SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.

G10. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.

G11. THE METHOD OF CONSTRUCTION AND THE MAINTENANCE OF SAFETY DURING CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER. IF ANY STRUCTURAL ELEMENT PRESENTS DIFFICULTY IN RESPECT OF CONSTRUCTIBILITY OR SAFETY, THE MATTER SHALL BE REFERRED TO THE STRUCTURAL ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

G12. IF THERE IS A DISCREPANCY IN MEMBER SIZES FOR ANY COMPONENT, ASSUME FOR PRICING PURPOSES ONLY THAT THE LARGER OR MORE EXPENSIVE SIZE IS CORRECT. REFER TO STRUCTURAL/CIVIL ENGINEER FOR DECISION BEFORE DETAILING OR CONSTRUCTION

SITE PREPARATION

SP1. STRIP OFF ALL VEGETATION, RUBBISH AND TOPSOIL SP1 CONTAINING ORGANIC OR ROOT MATTER FROM THE AREA OF THE CONSTRUCTION.

SP2 PROVIDE SUITABLE SURFACE AND/OR SUBSOIL DRAINAGE IN CONJUNCTION WITH, OR SUBSEQUENT TO BULK EARTHWORKS AS REQUIRED ON SITE, TO MINIMIZE INGRESS OF MOISTURE ADJACENT TO, OR BENEATH THE BUILDING.

SP3 FILL SHALL CONSIST OF MATERIAL COMPACTED TO 98% MAX. STD DRY DENSITY UNLESS NOTED OTHERWISE IN LAYERS BY REPEATED ROLLING WITH PROPRIETARY COMPACTION PLANT. ALL FILLING IS TO BE LAID IN 150mm MAXIMUM LAYERS.

SP4. THESE DRAWINGS TO BE READ IN CONJUNCTION WITH THE SOIL GEOTECHNICAL REPORT BY THE GEOTECHNICAL ENGINEER IS TO APPROVE THE MATERIAL USED FOR FILLING AND IS TO SUPERVISE PLACING OF COMPACTED FILL. FILLING IS TO BE FREE OF RUBBISH, PLASTIC CLAY OR LARGE PIECES OF ROCK/BOULDER WHICH WOULD INHIBIT COMPACTION.

SP5. FOR ON-GROUND CONCRETE SLABS - BLIND WITH SAND UNDER VAPOUR-PROOF MEMBRANE BARRIER. VAPOUR BARRIER SHALL BE POLYETHYLENE SHEETING OF MIN. 0.2mm THICKNESS . LAPPING SHALL BE NOT LESS THAN 200mm AT JOINTS . PENETRATIONS BY PIPES SHALL BE TAPED.

SP6. BACKFILLING AND COMPACTION OF FILL SHALL BE CARRIED OUT SIMULTANEOUSLY ON EACH SIDE OF WALLS.

SP7. ALL FINISHED SURFACE LEVELS OF EARTHWORKS ARE TO GRADE AWAY FROM THE BUILDING & DIVERT RUNOFF INTO THE STORMWATER DRAINAGE SYSTEM IN ACCORDANCE WITH THE RELEVANT CONTRACT DRAWINGS.

SP8. ALL PAD FOOTING EXCAVATIONS ARE TO BE BACKFILLED UP TO FINISHED SURFACE LEVEL.

ENVIRONMENT

THE BUILDERS ATTENTION IS CALLED TO OBSERVE ANY COUNCIL, E1 EPA, OTHER AUTHORITY'S OR CONTRACT CONDITIONS IN COMPLYING WITH MANAGEMENT OF EXCAVATION, SOIL MOVEMENT, SEDIMENT CONTROL AND DUST SUPPRESSION.

STORMWATER DRAINAGE GENERAL:

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT AND ENGINEER FOR DECISION BEFORE PROCEEDING WITH THE WORK.
2. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THESE DRAWINGS. REFER TO ARCHITECT'S FINAL DRAWINGS.
3. THE BUILDER SHALL BE RESPONSIBLE FOR LOCATING ALL EXISTING AND NEW SERVICES, AND SHALL BE RESPONSIBLE FOR DAMAGE TO SAME.
4. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SAA CODES, AND THE BY-LAWS AND ORDINANCES OF THE FOLLOWING:- SHELLHARBOUR CITY COUNCIL EPA and WORK COVER AS 3500 PARTS 2 & 3
5. PREPARE PROGRESSIVELY AND FURNISH TO THE ENGINEER WORK AS EXECUTED DRAWINGS OF THE SAME SIZE AND QUALITY AS THIS DRAWING BUT ACCORDANCE WITH DA CONDITIONS & CC REQUIREMENTS
6. GIVE SUFFICIENT NOTICE SO THAT INSPECTION MAY BE CARRIED OUT AT THE FOLLOWING STAGES: WORK READY FOR SPECIFIED TESTING WORK READY TO BE COVERED OR CONCEALED
7. OBTAIN APPROVAL BEFORE INTERRUPTING AN EXISTING SERVICE. KEEP THE NUMBER OF INTERRUPTIONS TO A MINIMUM
8. LAY PIPES TO THE LEVELS SHOWN ON THE DRAWINGS AND IN ANY CASE NOT LESS THAN THE FOLLOWING: 100∅ @ 1.0% , 150∅ @ 1.0%, 225∅ @ 0.5%, 300∅ @ 0.5%
9. ENDS OF PIPES AND STUB CONNECTIONS TO BE SEALED WITH AN APPROVED SEALED DISC.
10. MILD STEEL STAR PICKET 1200mm LONG WITH 300mm PAINTED GREEN EXTENDED ABOVE GROUND LEVEL TO BE PLACED AT EACH INTERLOTMNET DRAINAGE CONNECTION POINT.
11. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.

PAVEMENT GENERAL

1. ALL WORK TO BE IN ACCORDANCE WITH THE DEVELOPMENT CONSTRUCTION SPECIFICATION OF THE SHELLHARBOUR CITY COUNCIL.
2. MAKE SMOOTH CONNECTION TO ALL EXISTING ENGINEERING WORK.
3. ALL EXISTING SERVICES TO BE LOCATED AND LEVELED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF WORK.
4. ALL SERVICES AFFECTED BY NEW WORK, TO BE ADJUSTED TO SUIT IN N4. THE FIELD, TO THE SATISFACTION OF THE RELEVANT SERVICE AUTHORITY.
5. WHILE WORKING ON COUNCIL ROADS OR ROAD RESERVES, CONTRACTOR TO PROVIDE A TRAFFIC CONTROL PLAN WHICH COMPLIES WITH A.S. 1742.3-1996. A COPY OF THE PLAN SHOWING LAYOUT OF PROPOSED TRAFFIC CONTROL FOR THE COMMENCEMENT OF WORK AND CERTIFIED BY A SUITABLY QUALIFIED PERSON, IS TO BE SUBMITTED TO COUNCIL PRIOR TO THE COMMENCEMENT OF ANY WORK. FURTHER PLANS ARE TO BE SUBMITTED IF WORK SITE ALTERS.
6. ANY ROAD RESTORATION REQUIRED SHALL BE IN 300mm LAYERS OF DGS 40 FROM THE BOTTOM OF TRENCH OR TOP OF SAND OVERLAY OVER ANY PIPES, COMPACTED TO A MINIMUM OF 100% STANDARD COMPACTION, WITH THE FINAL LAYER OF 100mm DGB 20 COMPACTED TO A MINIMUM OF 100% STANDARD COMPACTION AND FINISHED LEVEL WITH EXISTING ROAD SURFACE.
7. ALL DISTURBED SURFACES ARE TO BE REINSTATED TO AS NEARLY AS POSSIBLE TO THE PRE CONSTRUCTION CONDITION.

STORMWATER DRAINAGE CERTIFICATION:

1. PROVIDE CERTIFICATION THAT THE WHOLE INSTALLATION MEETS THE STANDARDS REFERRED TO IN THESE SPECIFICATIONS AND THE REQUIREMENTS OF AUTHORITIES AS WELL AS THE SUPPLY UTILITY.
2. ON COMPLETION OF DRAINAGE WORKS THE CONTRACTOR TO SUPPLY TO THE ENGINEER WORK AS EXECUTED DRAWINGS CERTIFIED BY A REGISTERED SURVEYOR.

STORMWATER DRAINAGE NOTES:

1. CONTRACTOR IS TO VERIFY THE LEVEL AND LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION
2. THE CONTRACTOR IS TO VERIFY ANY CONFLICT OF SERVICES IN THE ROAD RESERVE OR SUBJECT PROPERTY AND THE ENGINEER IS TO BE NOTIFIED AT THE EARLIEST POSSIBLE CONVENIENCE.
3. THE CONTRACTOR IS TO VERIFY INVERT LEVELS AT POINT OF CONNECTION TO EXISTING STORMWATER SYSTEM AND REPORT ANY CONFLICT OF LEVELS.
4. ALL BUILDINGS HAVE BEEN RAISED SO THERE IS AT LEAST 150mm STEP UP INTO THE BUILDING TO ALLOW SUFFICIENT FREEBOARD FOR OVERLAND FLOWS IN THE CASE OF PIPE BLOCKAGE.
5. DOWNPIPE & PIT LOCATIONS & LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS, AFTER ENGINEERS APPROVAL.
6. DOWNPIPES SHOWN ARE INDICATIVE ONLY. ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
7. DRAINAGE PIPES TO BE CONCRETE ENCASED WHERE LOCATED UNDER DRIVEWAY OR BUILDING.
8. ALL PIPES TO BE FULLY HOUSED INTO PIT WALLS AND JOINED/SEAL IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
9. GRADE ALL PAVED AND GRASSED AREAS AWAY FROM BUILDING.
10. TOP OF GRATE TO BE POSITIONED TO CATCH ALL UPSTREAM SURFACE FLOWS AS INDICATED BY PLANS.
11. ALL PIPES WITHIN THE PROPERTY TO BE MIN. OF 150 DIA. PVC @ 1% MIN. GRADE, UNO.
12. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULHEADS AT ALL JOINTS
13. ALL PITS WITH THE PROPERTY AREA TO BE FITTED WITH WELDOK OR APPROVED EQUIVALENT GRATES TO AS 3996:
    - LIGHT DUTY FOR LANDSCAPED AREAS
    - HEAVY DUTY WHERE SUBJECTED TO VEHICULAR CROSSING
14. ANY PIPES BENEATH RELEVANT LOCAL AUTHORITY ROAD TO BE RUBBER RING JOINTED RCP, uno.
15. ALL PITS IN ROADWAYS ARE TO BE FITTED WITH HEAVY DUTY GRATES WITH LOCKING BOLTS AND CONTINUOUS HINGE.
16. ALL COURTYARD & LANDSCAPE PITS TO BE 400 SQUARE UNO
17. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
18. PROVIDE STEP IRONS TO STORMWATER PITS GREATER THAN 1200 IN DEPTH.
19. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS TO BE MIN. 25MPa
20. PROVIDE CONCRETE BENCHING ACROSS PIT TO SUIT INLET & OUTLET PIPES AS DETAILED.
21. 100∅ SUBSOIL DRAINAGE PIPE 3.0M LONG WRAPPED IN FABRIC SOCK TO BE PLACED ADJACENT TO INLET PIPES ON BOTH SIDES AND 100 MM MIN. ABOVE PIT FLOOR
22. SUB-SOIL DRAINAGE SHALL BE PROVIDED TO ALL RETAINING WALLS & EMBANKMENTS, WITH THE LINES FEEDING INTO THE STORMWATER DRAINAGE SYSTEM, UNO.
23. SELECTED GRANULAR BACKFILL IS TO BE PLACED AGAINST THE FULL HEIGHT OF THE PIT VERTICAL FACES AND FOR A HORIZONTAL DISTANCE EQUAL TO ONE-THIRD THE HEIGHT OF THE STRUCTURE.
24. MORTAR BASES TO BE SHAPED TO GIVE MIN. 20mm FALL ACROSS PITS
25. MORTAR BASES TO BE DISHED TO SUIT ADJOINING PIPE SIZES TO GIVE SELF CLEANSING PITS.
26. WHERE PIT DEPTH EXCEEDS STANDARD DEPTH, CONCRETE SHALL BE USED AS PIT BASE, AND ALSO TO GAIN REQUIRED INLET/OUTLET LEVELS.
27. THE INLET PIPE OBVERT IS TO BE HIGHER THAN THE OUTLET PIPE OBVERT.
28. ALL SWALES SHALL HAVE A TURFED INVERT EXTENDING 0.5m UP THE SIDE SLOPES.
29. HAND EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS
30. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS
31. ALL FENCES MUST BE RAISED 150mm FROM FINISHED GROUND LEVELS SO THAT OVERLAND FLOWS FROM UPSTREAM PROPERTIES ARE NOT RESTRICTED OR BLOCKED.

SURVEY DRAWINGS

SD1. BOUNDARIES IF SHOWN MAY NOT YET HAVE BEEN DEFINED OR MARKED. ALL BEARING AND DISTANCES ARE SUBJECT TO FINAL SURVEY. ONLY VISIBLE SERVICES HAVE BEEN LOCATED. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION, RELEVANT AUTHORITIES SHOULD BE CONTACTED FOR DETAILED LOCATION OF ALL SERVICES AND POSSIBLE LOCATION OF FURTHER UNDERGROUND SERVICES.
ALL WORK IS TO BE SET OUT BY A COMPETENT SURVEYOR APPROVED BY COUNCIL.

EARTHWORKS

1. ALL EARTHWORKS ARE TO BE PERFORMED TO LEVEL 1 CLASSIFICATION IN ACCORDANCE WITH AS 3798 - "GUIDELINES ON EARTHWORKS FOR COMMERCIAL, RESIDENTIAL DEVELOPMENTS".
2. ALL WORKS TO BE CONDUCTED TO THE REQUIREMENTS OF THE SHELLHARBOUR CITY COUNCIL SUBDIVISION POLICY.
3. EXCAVATIONS GREATER THAT 1.5m IN DEPTH SHALL BE BENCHED AT 1.5m INTERVALS IN HEIGHT & PROTECTED BY SAFETY FENCE ABOVE.
4. NO SITE RE-GARDING WORKS ARE TO BE UNDERTAKEN UNTIL EROSION & SEDIMENT CONTROL DEVICES HAVE BEEN ERECTED OR CONSTRUCTED TO THE SATISFACTION OF THE SUPERINTENDENT.
5. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION
6. OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH, SLABS ETC, AND STRIP TOP SOIL.AVERAGE 200mm THICK. REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
7. STRIP AVERAGE 500mm EXISTING UNCONTROLLED FILL IN BUILDING AREAS. STRIP AVERAGE 1000mm UNCONTROLLED FILL UNDER ROADS & SLABS ON GRADE.
8. CUT & FILL OVER THE SITE TO LEVELS REQUIRED. BENCH AS NECESSARY.
9. ALL DISTURBED AREAS INCLUDING BATTERS TABLE DRAINS AND FOOTPATH AREAS ARE TO BE TOP SOILED FERTILIZED AND SEEDED TO THE SATISFACTION OF COUNCIL'S SUBDIVISION AND DEVELOPMENT ENGINEER.
10.
11. STOCKPILE EXCAVATION MATERIAL FOR RE-USE. GEOTECHNICAL ENGINEER TO APPROVE.
12. PRIOR TO ANY FILLING IN AREAS OF CUT OR EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE WITH A ROLLER OF MIN. WEIGHT OF 5 TONES WITH A MIN. OF 10 PASSES
13. EXCAVATE & REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING & REPLACE WITH APPROVED FILL COMPACTED IN LAYERS.THE WHOLE OF THE EXPOSED SUB-GRADE & FILL SHALL BE COMPACTED TO 98% STANDARD MAX. DRY DENSITY AT OPTIMUM MOISTURE CONTENT ±2%.
14. FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL & PRIOR TO COMMENCING OPERATIONS.
15. WHERE HARD ROCK IS EXPOSED IN SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
16. FILL IN 200mm MAX. (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASE COURSE USING THE EXCAVATION MATERIAL & COMPACTED TO REQUIRED STANDARD (AS 1289 5.1.1). MAX. DRY DENSITY AT OPTIMUM MOISTURE CONTENT ±2% SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS. IMPORT NECESSARY CLEAN GRANULAR FILL TO GEOTECH ENGINEER APPROVAL
17. USE EXCAVATION MATERIAL IN LOWER LEVELS & UNDER BUILDINGS. USE IMPORTED MATERIAL IN UPPER LEVELS & UNDER ROAD & CAR PARK AREAS.
18. FOR COMPACTION REQUIREMENTS REFER TO ATTACHED DRAWINGS.
19. ALL TESTING WORKS SHALL BE UNDERTAKEN & CERTIFIED BY A NATA REGISTERED LABORATORY. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE SUPERINTENDENT.
20. BATTERS TO BE AS SHOWN OR MAX 1 VERT: 4 HORIZ ALL CONDUITS & MAINS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
21. ALL BATTERS & FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM & SEEDED UNLESS OTHERWISE SPECIFIED.
22. REFER TO GEOTECHNICAL ENGINEERS REPORT TO ASSESS ALL CUTTING & FILLING ONSITE.

SERVICES CONFLICT: IT IS THE CONTRACTORS RESPONSIBILITY TO CHECK FOR ANY CONFLICT OF SERVICES IN THE FOOTPATH & VERIFY LEVELS OF THE EXISTING STORM WATER CONNECTION BEFORE ANY COMMENCEMENT OF WORK

ATB CONSULTING ENGINEERS TAKES NO RESPONSIBILITY OR LIABILITY FOR ANY DAMAGES OR LOSSES INCURRED TO ANY PERSONS OR PROPERTY (INCLUDING THE DEVELOPMENT SITE) AS A RESULT OF MISINTERPRETATION OF THE RESULTS AND UNFORESEEN CIRCUMSTANCES SUCH AS POOR CONSTRUCTION, LACK OF MAINTENANCE AFTER CONSTRUCTION, ALTERATIONS TO GROUND LEVELS UPSTREAM, DOWNSTREAM OR ADJACENT TO THE DEVELOPMENT.

SYMBOLS & NOTATIONS

100∅ uPVC @ 1.0% MIN.	PIPE SIZE, TYPE AND GRADE
20.71	EXISTING LEVELS
x 22.80	PROPOSED LEVELS
	STORMWATER PIT
	CONCRETE COVERED PIT
KIP 1	KERB INLET PIT 1
	1200 SQ. GRATED PUMP OUT PIT WITH TWIN PUMPS
● DP	DOWN PIPE
RWT	RAINWATER TANK
	STORMWATER PIPE
AGG	AGG. PIPE
	SPOON/SWALE DRAIN
	GRATED DRAIN
	DIRECTION OF FLOW
O/F	DIRECTION OF OVERLAND FLOW
	PROPOSED RETAINING WALLS
	100∅ PVC SPREADER PIPE, 600 LG
BO ∅	BALCONY OUTLET
PO ∅	PLANTER OUTLET
OF	OVERFLOW SLOTS
	PIPE SUSPENDED BELOW SLAB
H1	CONTINUED OH H1
DP 100	DIRECTION OF FLOW SERVICE SIZE

LEGEND

AHD	AUSTRALIAN HIGH DATUM
AG	AGG PIPE
ARI	AVERAGE RECURRENCE INTERVAL
BG	BOX GUTTER
BP	BASEMENT PIT.
BWT	BOTTOM WATER LEVEL
CL	COVER LEVEL
CO	CLEAN OUT INSPECTION OPENNING
DP	DOWNPIPE.
EDP	EXISTING DOWN PIPE
EG	EAVES GUTTER
EP	EXISTING PIT.
FFL	FINISHED FLOOR LEVEL
GI	GALVANISED IRON GRATE.
GP	GROUND PIT.
HDG	HEAVY DUTY CAST IRON GRATE.
IL	INVERT LEVEL
IO	INSPECTION OPENING
JP	JUNCTION PIT.
K	KERB.
KIP	KERB INLET PIT.
LDG	LIGHT DUTY CAST IRON GRATE.
MDG	MEDIUM DUTY CAST IRON GRATE.
NTS	NOT TO SCALE
O/F	OVER FLOW
OSD	ONSITE DETENTION
PE	EASEMENT PIT.
PD	PARKING DRAIN
PSD	PERMISSIBLE SITE DISCHARGE
RCP	REINFORCED CONCRETE PIPE
RHS	RECTANGULAR HOLLOW SECTION
RL	REDUCED LEVEL
RRJ	RUBBER RING JOINTED
RWT	RAINWATER TANK
RWO	RIANWATER OUTLET
RWH	RAIN WATER HEAD
SFL	SLAB FINISHED LEVEL
SP	SPREADER.
SS	STAINLESS STEEL
SU	BOX GUTTER SUMP
SWP	STORMWATER PIT
TOK	TOP OF KERB
TW	TOP OF WALL
TWL	TOP WATER LEVEL
U/S	UNDER SIDE OF SLAB
VG	VALLY GUTTER
UNO	UNLESS NOTED OTHERWISE

ISSUE	AMENDMENT	DATE
1	ISSUE FOR COORDINATION	22/10/19
A	ISSUE FOR DA APPLICATION	07/11/19

PLANS 0 1000 2000 3000 4000 5000

DO NOT SCALE IF IN DOUBT ASK A1

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS

ATB CONSULTING ENGINEERS CIVIL & STRUCTURAL
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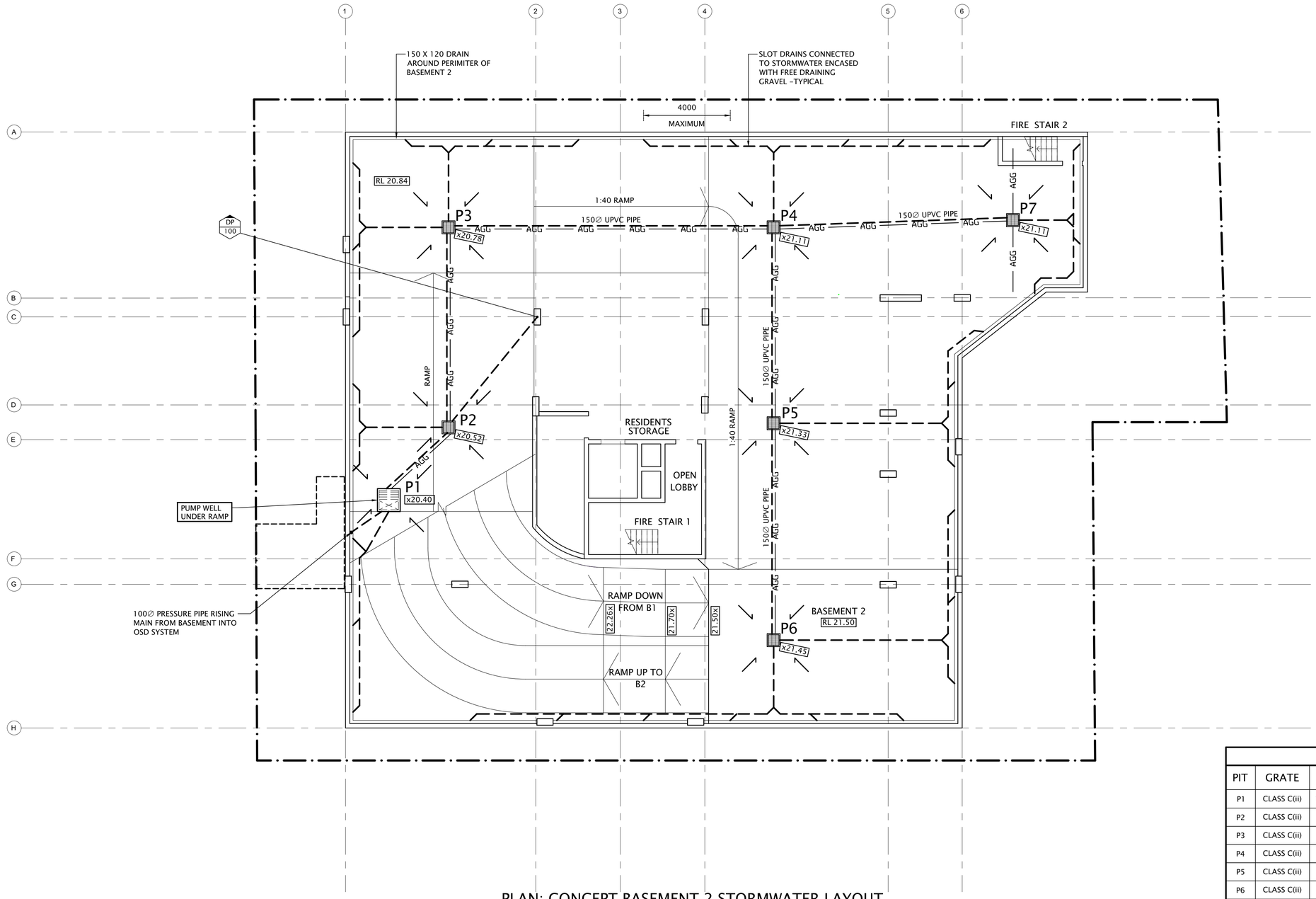
Email: info@atbconsulting.com.au
ACEA The Association of Consulting Engineers Australia

Title	STORMWATER NOTES AND LEGENDS
Project	PROPOSED APARTMENT DWELLING
At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

SCALES	AS SHOWN
DRAWN	D.K.
DESIGNED	G.U.
CHECKED	G.U.
DATE PLOTTED	13/05/19
DATUM	A.H.D.
DATE CHK'D	__/05/19
PROJECT No	19044
DWG	SW1
REVISION	A



NOTE: MINIMUM GRADIENT
THE MINIMUM GRADIENT SHALL BE 1 IN 200 (0.5%), FOR BASEMENT TO ALL STW PITS.

PIT SCHEDULE

PIT	GRATE	SIZE	RL	IL	COMMENT
P1	CLASS C(ii)	1200x1200	20.40	-	PUMP WELL
P2	CLASS C(ii)	600 x 600	20.52	19.92	SURFACE PIT
P3	CLASS C(ii)	600 x 600	20.78	20.18	SURFACE PIT
P4	CLASS C(ii)	600 x 600	21.11	20.41	SURFACE PIT
P5	CLASS C(ii)	600 x 600	21.33	20.73	SURFACE PIT
P6	CLASS C(ii)	600 x 600	21.45	20.85	SURFACE PIT
P7	CLASS C(ii)	600 x 600	21.11	20.51	SURFACE PIT

CLASS OF GRATE AS3996.2006

A - 10kN PEDESTRIAN
B - 80kN LIGHT VEHICLES
C(i) - 150kN LIGHT TRUCK
C(ii) - 150kN SLOW TRUCK
D - 210kN HIGHWAY VEHICLES

PLAN: CONCEPT BASEMENT 2 STORMWATER LAYOUT

(SCALE 1:100 @ A1, 1:200 @ A3)

1.ALL PIPES SHOWN 100∅ SEWER GRADE WITH 1% FALL UNLESS OTHERWISE SPECIFIED.
2. EXACT LOCATION OF DOWNPIPES TO BE CONFIRMED BY ARCHITECT PRIOR TO DETAILED LOCATION.
3. GRADE ALL PERVIOUS AREAS AWAY FROM BUILDINGS.
4. PROVIDE OVERFLOW PATHS THRU LANDSCAPING BEDS AS REQUIRED OR AS DIRECTED BY ENGINEER ON SITE.
5. GEOFABRIC MATERIAL TO BE FITTED TO ALL OUTLET PIPES FOR ALL PITS. THIS IS REQUIRED TO STOP SEDIMENT FROM EXITING THE PROPERTY.
6.DOWNPIPES CONNECTED TO THE RAINWATER TANKS SHOULD BE VIA A CHARGED SYSTEM ∅100mm SEWER GRADE AND CLEANOUT RISER AT OPPOSITE SIDE OF RAINWATER TANK(S)

CONCEPT DESIGN
NOT TO BE USED FOR CONSTRUCTION PURPOSES

ISSUE	AMENDMENT	DATE
1	ISSUE FOR COORDINATION	22/10/19
A	ISSUE FOR DA APPLICATION	07/11/19
B	MINOR AMENDMENTS	24/06/20

PLANS 0 1000 2000 3000 4000 5000

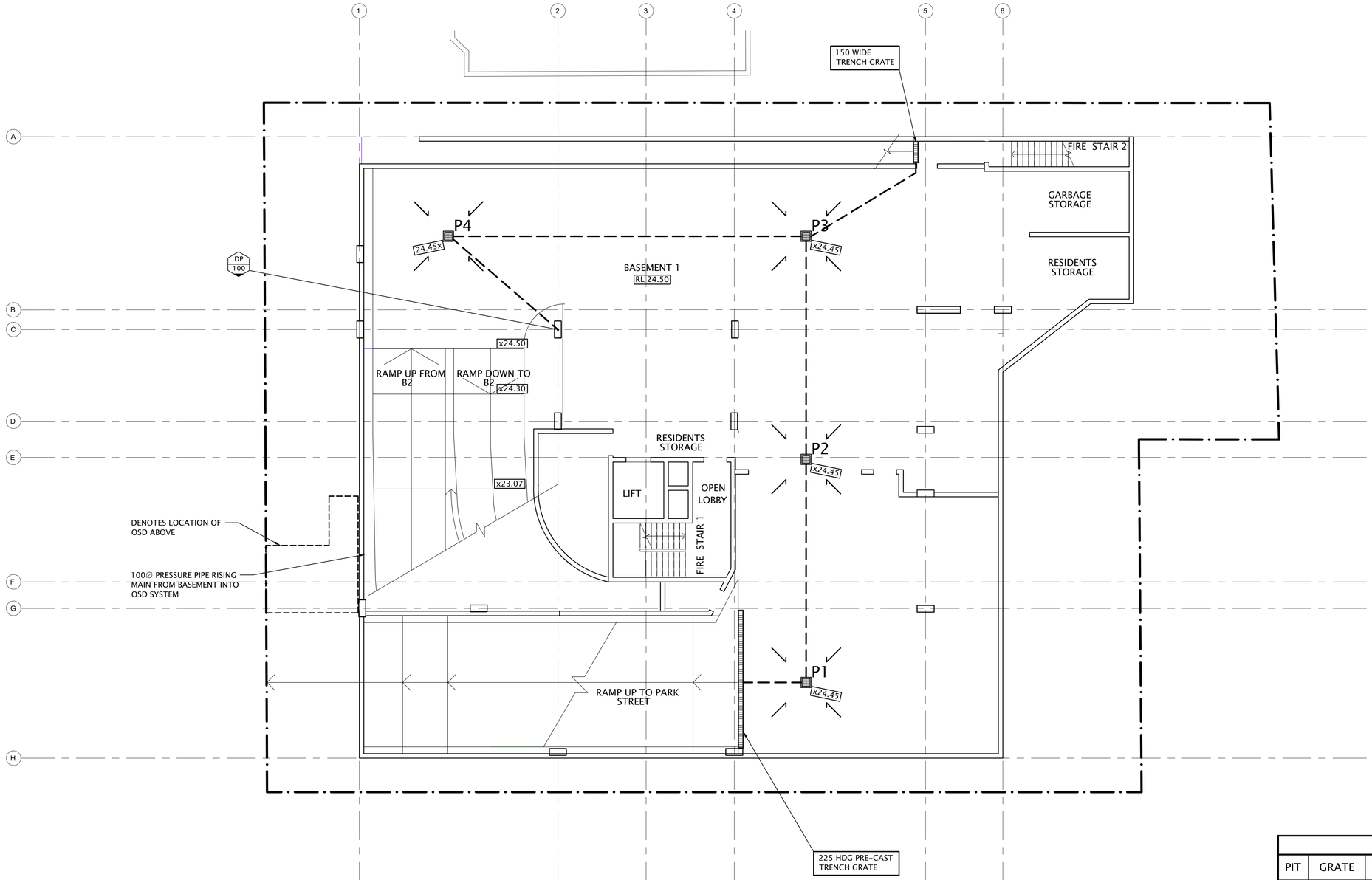
DO NOT SCALE IF IN DOUBT ASK A1

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS

ATB CONSULTING ENGINEERS CIVIL & STRUCTURAL
11 VICTORIA STREET WOLLONGONG NSW 2500
TELEPHONE: 02 42 266 646
Email: info@atbconsulting.com.au
ACEA The Association of Consulting Engineers Australia

Title	PLAN: CONCEPT BASEMENT 2 STORMWATER LAYOUT
Project	PROPOSED APARTMENT DWELLING
At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

SCALES	AS SHOWN	DATE PLOTTED	13/05/19
DRAWN	D.K.		
DESIGNED	G.U.	DATUM	A.H.D.
CHECKED	G.U.	DATE CHK'D	__/05/19
PROJECT No	19044	DWG	SW2
REVISION	B		



PLAN: CONCEPT BASEMENT 1 STORMWATER LAYOUT

(SCALE 1:100 @ A1, 1:200 @ A3)

NOTE: MINIMUM GRADIENT
THE MINIMUM GRADIENT SHALL BE 1 IN 200 (0.5%), FOR BASEMENT TO ALL STW PITS.

PIT SCHEDULE

PIT	GRATE	SIZE	RL	IL	COMMENT
P1	CLASS C(ii)	450 x 450	24.45	-	SURFACE PIT
P2	CLASS C(ii)	450 x 450	24.45	-	SURFACE PIT
P3	CLASS C(ii)	450 x 450	24.45	-	SURFACE PIT
P4	CLASS C(ii)	450 x 450	24.45	-	SURFACE PIT

CLASS OF GRATE AS3996.2006

A - 10kN PEDESTRIAN
B - 80kN LIGHT VEHICLES
C(i) - 150kN LIGHT TRUCK
C(ii) - 150kN SLOW TRUCK
D - 210kN HIGHWAY VEHICLES

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At	9-11 PARK STREET WOLLONGONG, NSW
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SCALES AS SHOWN		DATE PLOTTED 13/05/19
DRAWN D.K.		DATUM A.H.D.
DESIGNED G.U.		
CHECKED G.U.	DATE CHK'D __/05/19	
	PROJECT No 19044 / DWG SW3	REVISION C

2 x 150x100 GALVANISED RHS, CONNECTED TO STREET AS PER WOLLONGONG CITY COUNCIL
Q5 = 40.30L/S
IL = 25.10 TBC PRIOR CC STAGE.

RAINWATER TANK TO COLLECT ROOF AREA AS PER BASIX REQUIREMENTS WITH 100∅ PVC OVERFLOW PIPE, TYPICAL

SHAPE GROUND TO DIRECT OVERLAND FLOWS

PARK STREET

100∅ PRESSURE PIPE RISING MAIN FROM BASEMENT INTO OSD SYSTEM

UNDERGROUND OSD TANK
0.80m D x 6.7m² AREA
VOLUME = 5.36m³
SSR 5 YRS = 3.10m³
SSR 100 YRS = 5.19m³
TWL = 27.075m AHD
INVERT = 26.30m AHD

VEHICULAR CROSSINGS TO WOLLONGONG CITY COUNCIL DETAILS AND SPECIFICATIONS, TYPICAL.

NEIGHBORING RETAINING WALL FINISHING ABOVE NATURAL GROUND LEVEL BLOCKING ANY POSSIBLE OVERLAND FLOWS

RAINWATER TANK TO COLLECT ROOF AREA AS PER BASIX REQUIREMENTS WITH 100∅ PVC OVERFLOW PIPE, TYPICAL

TREE TO BE REMOVED SHOWN DASHED

P1 | O/F | PO | BO | DP | RWT | UP | TPZ | SRZ | TRUNK | EXISTING TREE | TOW 26.300 | TOW 26.800 | TOW 27.500 | 1 in 60 ramp | 1 in 14 ramp | P.O.S RL 27.45 | COMMUNAL OUTDOOR SPACE RL 27.45 | UNIT 1 RL 27.50 | UNIT 2 RL 27.50 | LOBBY RL 27.50 | LIFT | ENTRY | ENTRY PATH | FIRE STAIR | RAMP TO BASEMENT 1 | PLANTER TO LANDSCAPE PLAN | DEEP SOIL ZONE | DEEP SOIL ZONE REFER TO LANDSCAPE PLAN | 225∅ UPVC | DP1246328 | 98° 18' 44.47° Available | 14.875° Available | 98° 18' 35" 6.2 | 7° 51' 10" 0.36 | 7° 51' 10" 15.24 | 6° 40' 05" | x27.40 | x27.45 | x27.80 | x27.50 | x27.25 | Overhead | Telstra | Electricity | Telstra Pit | Line | Road | Crown | Fence | Metal | Wall | Coated | Retaining | 25.50 | 26.00 | 26.50 | 27.00 | 27.50 | 28.00 | 28.50

TREE
TREE NUMBER
TREE PROTECTION ZONE
STRUCTURAL ROOT ZONE

TREE PROTECTION ZONE LEGEND

REFER TO ARBORICULTURAL IMPACT ASSESSMENT REPORT BY ALLIED TREE CONSULTANCY REFERENCE NO. D3913 DATED OCTOBER 2019

PLAN: CONCEPT LEVEL 1 STORMWATER LAYOUT

(SCALE 1:100 @ A1, 1:200 @ A3)

PIT SCHEDULE

PIT	GRATE	SIZE	RL	IL	COMMENT
P1	CLASS A	900 x 900	25.80	25.27	SURFACE PIT

CLASS OF GRATE AS3996.2006

A	– 10kN PEDESTRIAN
B	– 80kN LIGHT VEHICLES
C(i)	– 150kN LIGHT TRUCK
C(ii)	– 150kN SLOW TRUCK
D	– 210kN HIGHWAY VEHICLES

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Title	PLAN: CONCEPT LEVEL 1 STORMWATER LAYOUT
Project	PROPOSED APARTMENT DWELLING
At	9–11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

SCALES	AS SHOWN	DATE PLOTTED	13/05/19
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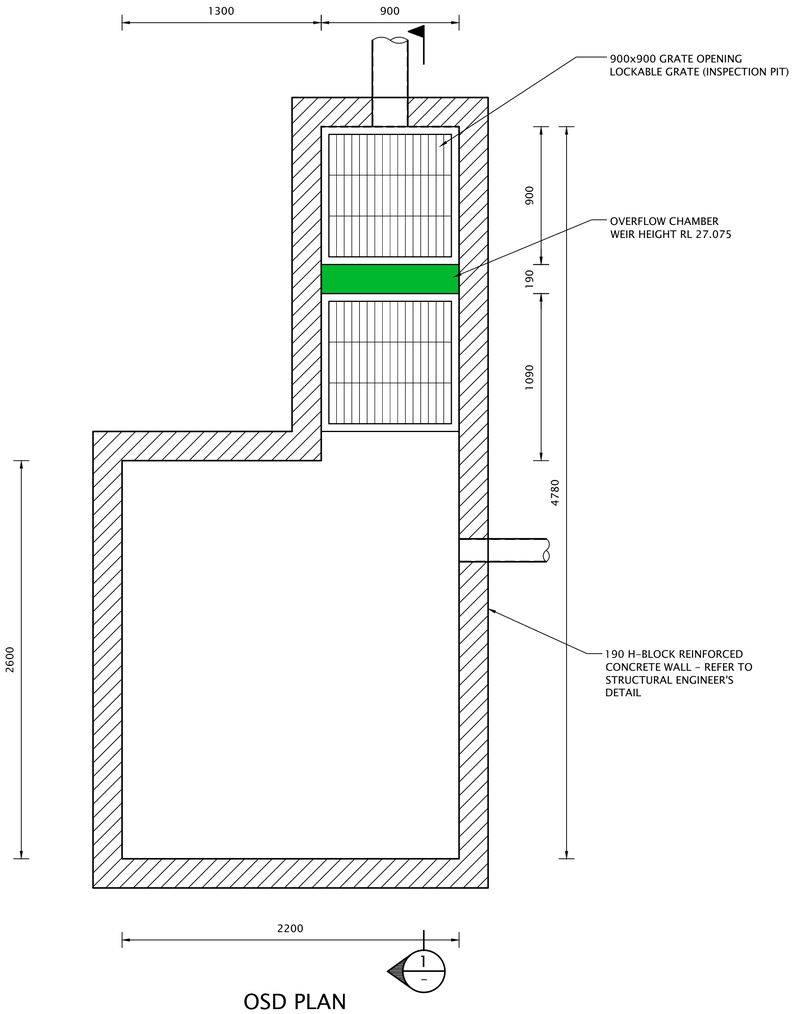
DESIGNED	G.U.	DATUM	A.H.D.
CHECKED	G.U.	DATE CHK'D	__/05/19
PROJECT No	19044	DWG	SW4
REVISION	C		



OSD PLAN
(SCALE 1:20)

OSD Calculator

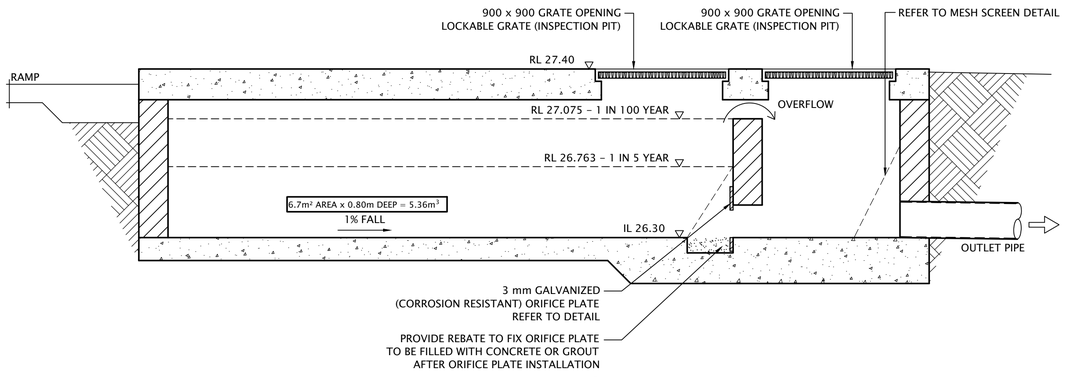
Job Description: 9-11 PARK STREET WOLLONGONG

Tributary Area (m^2)	% IMP Existing Conditions	% IMP Developed Conditions	$I_{1hr,50yr}$ (mm/hr) read from fig =>
1266	43.0	70.0	94.5
	Natural	Existing	Post Development
F1 - 5yr	1.00	1.14	1.19
F1 - 100yr	1.00	1.12	1.18
F2	1.11		
F3		0.11	0.16
F4		0.60	0.60
PSD 5yr (l/s/ha)	280	318	334
PSD 100yr (l/s/ha)	490	547	576
SSR 5yr (m^3/ha)		37	62
SSR 100yr (m^3/ha)		66	106

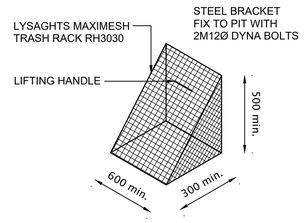
OSD Requirements	
Flow 5yr (l/s)	40.3
Flow 100yr (l/s)	69.3
Volume 5yr (m^3)	3.10
Volume 100yr (m^3)	5.19

Orifice Discharge Calculations

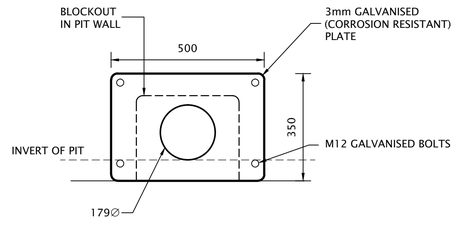
Engineer:	GU		
Job Address:	9-11 Park Street	**Job No.:**	19044
	WOLLONGONG		
Equation:	$Q = CA(2gh)^{0.5}$		
	Discharge, Q_5	0.0403	m^3/s
	Coefficient of Discharge, C	0.61	
	Acceleration to gravity, g	9.81	m^2/s
	Depth of Water, h5	0.35	m
	Orifice area, A	**0.02521**	m^2
Orifice Size:	Diameter of Orifice	**179**	mm



SECTION 1/-
(SCALE 1:20)



MESH SCREEN DETAIL
NOT TO SCALE
GALVANISED LYSAGHT RH3030MAXI
MESH SCREEN IN GALVANISED STEEL
FRAME WITH LIFTING HANDLES



OSD ORIFICE PLATE DETAIL
(NOT TO SCALE)

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At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

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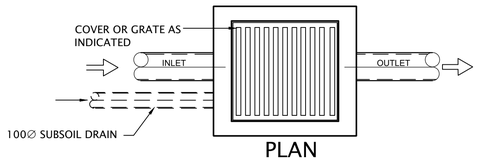
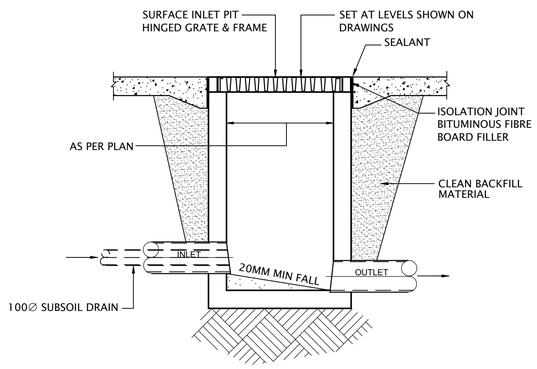
DRAWN	D.K.	DATUM	A.H.D.
DESIGNED	G.U.		
CHECKED	G.U.	DATE CHK'D	__/05/19

PROJECT No	DWG	REVISION
19044	SW5	A

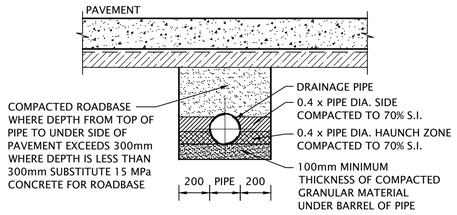


PLAN
(NOT TO SCALE)
PIPE SIZES AND LEVELS AS SHOWN ON DRAWINGS

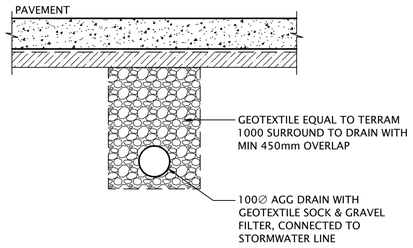


SECTION THROUGH
SURFACE STORMWATER PIT (TYPICAL)
(NOT TO SCALE)

1. ALL PITS TO BE CONSTRUCTED WITH 25MPa CONCRETE AND REINFORCED WITH SL72 MESH CENTRALLY PLACED. MINIMUM COVER TO REINFORCEMENT AT PIPE PENETRATIONS TO BE 50mm.
2. GRATE & FRAME TO BE CLASS 'D' HOT DIP GALVANIZED MILD STEEL - WELDLOK GG50D OR SIMILAR EQUIVALENT.
3. ALL FRAMES TO BE EMBEDDED INTO SURROUNDING CONCRETE AND FINISHED FLUSH WITH THE FINISH FLOOR LEVELS.
4. STEP IRONS TO BE USED WHERE DEPTH TO INVERT IS GREATER THEN 1.2m.
5. ALL EXPOSED EDGES TO BE ROUNDED TO 10mm RADIUS.
6. N12 'L' BARS (MIN. 400x400mm) TO BE PLACED AT 400 CENTRES ON ALL CORNERS (i.e WALLS AND BASE).

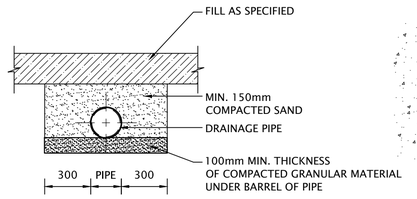


SECTION THROUGH STORMWATER
DRAIN UNDER PAVEMENT
(NOT TO SCALE)



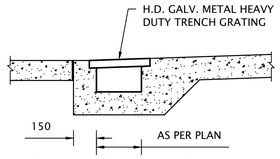
AGG DRAIN DETAIL
(NOT TO SCALE)

REFER TO STRUCTURAL DRAWINGS FOR DETAILS BEHIND RETAINING WALLS.

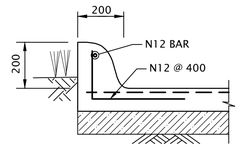


SECTION THROUGH STORMWATER
DRAIN UNDER GROUND
(NOT TO SCALE)

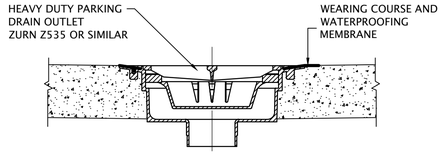
DETAIL
(NOT TO SCALE)
100mm BALCONY OUTLET DETAIL



TRENCH GRATE DETAIL
(TYPICAL)
(NOT TO SCALE)

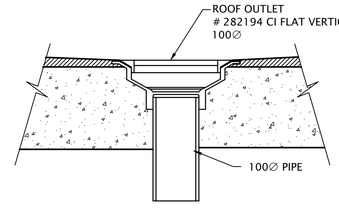


200 HIGH UPTURNED KERB DETAIL
(NOT TO SCALE)

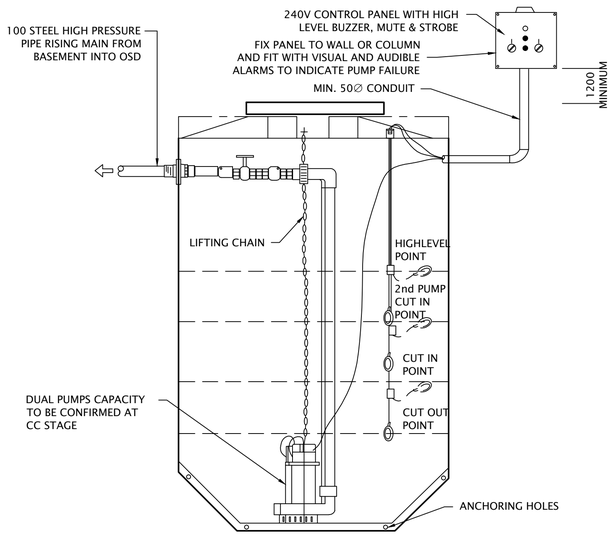


450∅ PARKING DRAIN OUTLET DETAIL
(NOT TO SCALE)

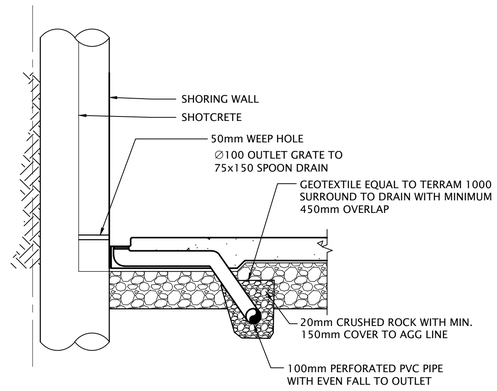
ALL STORMWATER DRAINS ARE TO BE VERIFIED BEFORE COMMENCEMENT AND ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURES SPECIFICATIONS AND RECOMMENDATIONS



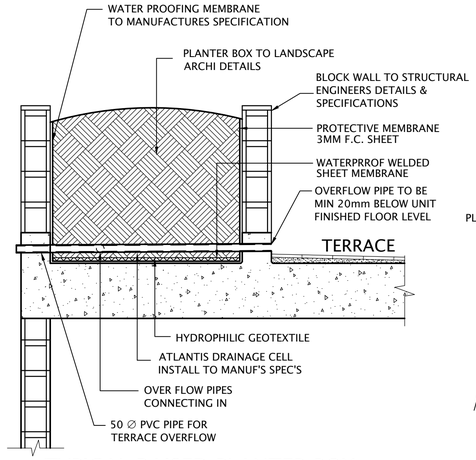
SECTION THROUGH BALCONY OUTLET



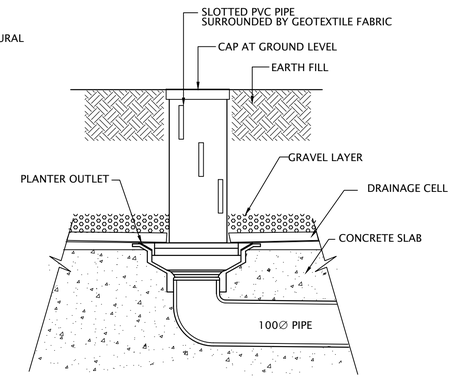
SECTION THROUGH PUMP WELL
(NOT TO SCALE)



AGG. DRAIN
(SCALE 1:20)



TYPICAL RAISED PLANTER BOX
SCALE 1:10



100∅ PLANTER OUTLET
(NOT TO SCALE)

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Title	STORMWATER DETAILS
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Client	MORETTI CONSTRUCTION

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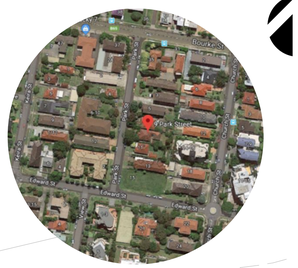
CHECKED	G.U.	DATE CHK'D __/05/19	
PROJECT No	DWG	REVISION	
19044	SW6	A	

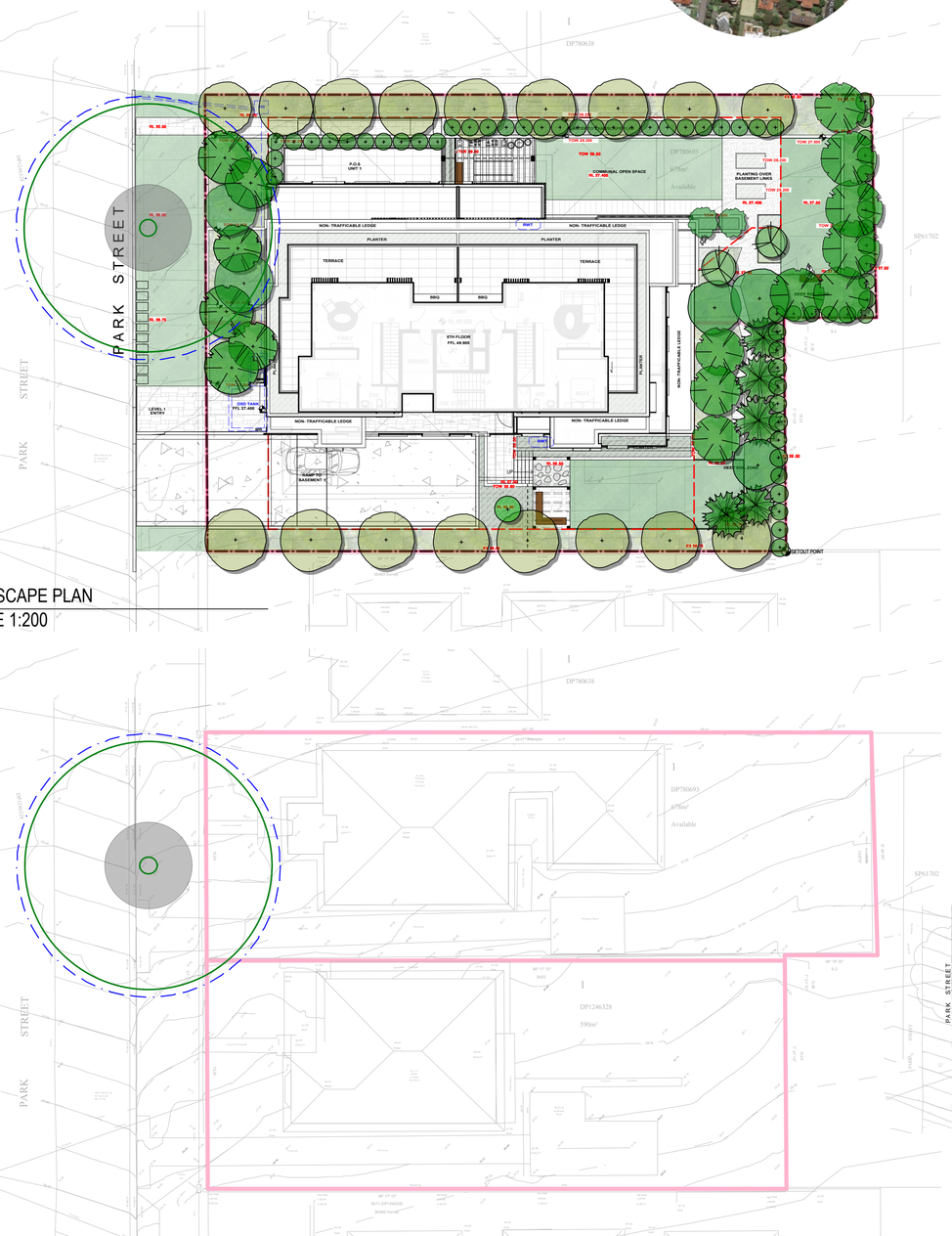
LANDSCAPE DA

9-11 PARK STREET, WOLLONGONG

Drawing List

Sheet No.	Sheet Name	Sheet Size	Rev. No.	Rev. Date	Project No.
L-01	SITE PLAN & LANDSCAPE DETAILS	A1	C	7/7/20	
L-02	GROUND FLOOR LANDSCAPE PLAN	A1	C	7/7/20	
L-03	ROOFTOP LANDSCAPE PLAN	A1	C	7/7/20	





LANDSCAPE PLAN
SCALE 1:200

EXISTING TREE PLAN
SCALE 1:200

0 10 M

EXISTING TREE LEGEND

- EXISTING TREES TO BE RETAINED
- TREES TO BE REMOVED
- TPZ - OF TREES RETAINED
- SRZ - OF TREES RETAINED

LEGEND

- DRIVEWAY
- TURF AREAS
- PODIUM GARDENS
- DEEP SOIL GARDENS
- PROPOSED BUILDING
- PAVED TYPE 1 SELECTED ETA / DRAINAGE UNDERNEATH
- PAVED TYPE 2 SELECT STONE ENGLAB
- PAVED TYPE 3 COBBLE ON CONCRETE OR SIMILAR
- DECKED AREAS

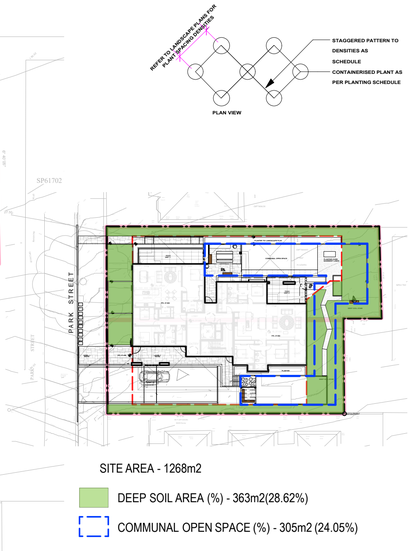
LANDSCAPE MAINTENANCE NOTES

MONTH	MOWING (CONVENTIONAL BLOWING)	FERTILISING (GRANULE)	CHECK IRRIGATION	HAND WEED / TOUCH-UP	PRUNING	WEED SPRAYING	WATERING/ IRRIGATION	PLANT REPLACEMENT IF REQUIRED	
DEC	W	M	M	W	F	M	D		W
JAN	W	M	M	W	F	M	D		W
FEB	W	M	M	W	F	M	D		W
MAR	F	M	M	F	M	M	D		W
APR	F	N/A	M	F	M	M	D		W
MAY	F	N/A	M	M	M	M	D		W
JUNE	M	N/A	M	M	N/A	N/A	2ND D		W
JULY	M	N/A	M	M	N/A	N/A	2ND D		W
AUG	M	N/A	M	M	N/A	N/A	2ND D		W
SEP	M	M	M	M	N/A	N/A	2ND D		W
OCT	F	F	M	F	M	M	D		W
NOV	F	F	M	F	M	M	D		W

PLANTING ESTABLISHMENT PERIOD - 12 MONTHS
LANDSCAPE MATERIAL ESTABLISHMENT - 12 MONTHS
WEED DISPOSAL IN MEDIUM, IF PORTRAIT, IN MEDITING, END DMP.

EXEMPT TREE REMOVAL

Any declared noxious plant. The applicant is to ensure that all noxious plants are properly identified and controlled/removed.
iv) Any tree species exempted by the Sutherland Shire Local Environmental Plan 2015.



SITE AREA - 1268m2

DEEP SOIL AREA (%) - 363m2(28.62%)

COMMUNAL OPEN SPACE (%) - 305m2 (24.05%)

LANDSCAPE CALCULATION PLAN
SCALE 1:500

LANDSCAPE WORK SPECIFICATION

PRELIMINARIES

1.01 GENERAL

The following general conditions should be considered prior to the commencement of landscape works:

The landscape plans should be read in conjunction with the architectural plans,hydraulic plans, service plans and survey prepared for the proposed development.

All services including existing drainage should be accurately located prior to the commencement of landscape installation. Any proposed tree planting which falls close to services will be relocated on site under the instruction of the landscape architect.

Installation of conduit for required irrigation, electrical and other services shall be completed prior to the commencement of hardscape works and hardstand pours.

All outdoor lighting specified by architect or client to be installed by qualified electrician.

Anomalies that occur in theses plans should be brought to our immediate attention.

Where an Australian Standard applies for any landscape material testing or installation technique, that standard shall be followed.

1.02 PROTECTION OF ADJACENT FINISHES

The Contractor shall take all precautions to prevent damage to all or any adjacent finishes by providing adequate protection to these areas / surfaces prior to the commencement of the Works

1.03 PROTECTION OF EXISTING TREES

Existing trees identified to be retained shall be done so in accordance with NATSPEC Guide 2 "A Guide to Assessing Tree Quality". Where general works are occurring around such trees, or pruning is required, a qualified Arborist shall be engaged to oversee such works and manage tree health.

Existing trees designated on the drawing for retention shall be protected at all times during the construction period. Any soil within the drip-line of existing trees shall be excavated and removed by hand only. No stockpiling shall occur within the root zone of existing trees to be retained.

Any roots larger in diameter than 50mm shall only be severed under instruction by a qualified arborist. Roots smaller than 50mm diameter shall be cut cleanly with a saw.

Temporary fencing shall be installed around the base of all trees to be retained prior to the commencement of landscape works. Where possible this fencing will be located around the drip line of these trees, or a minimum of 3m from the trunk. The fencing shall be maintained for the full construction period.

1.04 EROSION & POLLUTION CONTROL

The Contractor shall take all proper precautions to prevent the erosion of soil from the subject site. The contractor shall install erosion & sediment control barriers and as required by council, and maintain these barriers throughout the construction period. Note that the sediment control measures adopted should reflect the soil type and erosion characteristics of the site.

Erosion & pollution control measures shall incorporate the following:

- Construction of a sediment trap at the vehicle access point to the subject site.
- Sediment fencing using a geotextile filter fabric in the location indicated on the erosion control plan or as instructed on site by the landscape architect.
- Earth banks to prevent scour of stockpiles
- Sandbag kerb sediment traps
- Straw bale & geotextile sediment filter.
- Exposed banks shall be pegged with an approved Jute matting in preparation for mass planting

Refer to "Sitewise Reference Kit" as prepared by DLWC & WSROC (1997) for construction techniques

SOIL WORKS

2.01 MATERIALS

Specified Soil Conditioner (Generally to improve site soil)

The specified soil conditioner for site top-soil improvement shall be an organic mix, equal to "Botany Humus", as supplied by ANL. Note that for sites where soil testing indicates toxins or extremes in pH, or soils that are extremely poor, allow to excavate and supply 300mm of imported soil mix.

New gardens & proposed Planting

New garden and planting areas shall consist of a 50/50 mix of clean site soil (refer d) below) and imported "Organic Garden Mix" as supplied by ANL or approved equal. All mixes are to comply with AS 4419 Soils for landscaping & garden use, & AS 4454 Composts, Soil conditioners & mulches.

Specified Soil Mix - Turf

The specified soil mix for all turf areas shall be a min 75mm layer of imported soil mix consisting of 80% washed river sand (reasonably coarse), and 20% composted organic matter equivalent to mushroom compost or soil conditioner, or other approved lawn top dress.

Site Topsoil

Site topsoil is to be clean and free of unwanted matter such as gravel, cXXlay lumps, grass, weeds, tree roots, sticks, rubbish and plastics, and any deleterious materials and materials toxic to plants. The topsoil must have a pH of between 5.5 and 7. Use 100% imported soil mix when site when site topsoil runs out.

2.02 INSTALLATION

a) Establishing Subgrade Levels

Subgrade levels are defined as the finished base levels prior to the placement of the specified material (i.e. soil conditioner). The following subgrade levels shall apply:

Mass Planting Beds - 300mm below existing levels with specified imported soil mix.

Turf areas - 100mm below finished surface level.

Note that all subgrades shall consist of a relatively free draining natural material, consisting of site topsoil placed previously by the Civil Contractor. No builders waste material shall be acceptable.

b) Subgrade Cultivation

Cultivate all subgrades to a minimum depth of 100mm in all planting beds and all turf areas, ensuring a thorough breakup of the subgrade into a reasonably coarse tilth. Grade subgrades to provide falls to surface and subsurface drains, prior to the placement of the final specified soil mix.

c) Drainage Works

Install surface and subsurface drainage where required and as detailed on the drawing. Drain subsurface drains to outlets provided, with a minimum fall of 1:100 to outlets and / or service pits.

d) Placement and Preparation of Specified Soil Conditioner & Mixes.

Trees in turf & beds - Holes shall be twice as wide as root ball and minimum 100mm deeper - backfill hole with 50/50 mix of clean site soil and imported "Organic Garden Mix" as supplied by ANL or approved equal.

Mass Planting Beds - Install specified soil conditioner to a compacted depth of 100mm

Place the specified soil conditioner to the required compacted depth and use a rotary hoe to thoroughly mix the conditioner into the top 300mm of garden bed soil. Ensure thorough mixing and the preparation of a reasonably fine tilth and good growing medium in preparation for planting.

Turf Areas - Install specified soil mix to a minimum compacted depth of 75mm.

Place the specified soil mix to the required compacted depth and grade to required finished soil levels, in preparation for planting and turfing.

PLANTING

3.01 MATERIALS

a) Quality and Size of Plant Material

All trees supplied above a 25L container size must be grown and planted in accordance with *Clarke, R 1996 Purchasing Landscape Trees: A guide to assessing tree quality. Natspec Guide No. 2.* Certification that trees have been grown to Natspec guidelines is to be provided upon request of Council's Tree Management Officer.

Above - Ground Assessment

The following plant quality assessment criteria should be followed:

Plant true to type, Good vigour and health, free from pest & disease, free from injury, self-supporting, good stem taper, has been pruned correctly, is apically dominant, has even crown symmetry, free from included bark & stem junctions, even trunk position in pot, good stem structure

Below - Ground Assessment

Good root division & direction, rootball occupancy, rootball depth, height of crown, non-suckering For further explanation and description of these assessment criteria, refer to Ross Clark's book.

All Plant material shall be to the type and size specified. No substitutions of plant material shall be permitted without written prior approval by the Landscape Architect. No plant shall be accepted which does not conform to the standards listed above.

b) Stakes and Ties

Provide min. 2 No. Stakes and ties to all plants identified as in the plant schedule. Stakes shall be sound, unpainted, straight hardwood, free of knots and pointed at one end. They shall be 2200mm x 50mm x 50mm Hardwood, or approved alternative. Ties shall be 50mm wide hessian webbing material.

c) Fertilisers

Fertilisers shall be approved slow release fertilisers suitable for the proposed planting types. Note that for native plants, specifically Proteaceae family plants including Grevillea species, low phosphorus fertilizers shall be used.

d) Mulch

Mulch shall be an approved equal to "Forest Blend" as supplied by ANL. Mulch shall be completely free from any soil, weeds, rubbish or other debris.

e) Turf

Turf shall be "Sir Walter" Buffalo or equivalent (unless stated otherwise), free from any weeds and other grasses, and be in a healthy growing condition.

3.02 INSTALLATION

a) Setting Out

All planting set out shall be in strict accordance with the drawings, or as directed. Note that proposed tree planting located near services should be adjusted at this stage. Notify Landscape Architect for inspection for approval prior to planting.

b) Planting

All plant material shall be planted as soon after delivery as possible. Planting holes for trees shall be excavated as detailed and specified. Plant containers shall be removed and discarded, and the outer roots gently teased from the soil mass. Immediately set plant in hole and backfill with specified soil mix, incorporating the approved quantity of fertiliser for each plant type. Ensure that plants are set plumb vertically and root balls set to the consolidated finished grades detailed on the drawings. Compact the backfilled soil and saturate by hand watering to expel any remaining air pockets immediately after planting.

c) Staking and Tying

Staking and tying shall be in strict accordance with the drawings and shall occur immediately following plant placement and soil backfilling. All plants identified as "Trees" on the planting schedule shall be staked with a min. 3 stakes.

d) Mulching

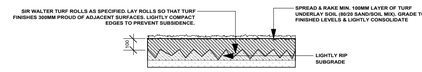
Mulch should be spread so that a compacted thickness of 75mm is achieved after settlement in all planting beds and around each individual plant. Apply immediately following planting and watering in, ensuring that a 50mm radius is maintained around the trunk of each plant . There shall be no mixing of soil and mulch material.

e) Turfing

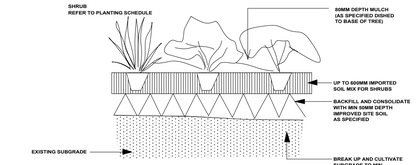
Moisten soil prior to the turf being laid. Turf shall be neatly butt jointed and true to grade to finish flush with adjacent surfaces. Incorporate a lawn fertilizer and thoroughly water in. Keep turf moist until roots have taken and sods/rolls cannot be lifted. Keep all traffic off turf until this has occurred. Allow for top dressing of all turf areas. All turf shall be rolled immediately following installation.

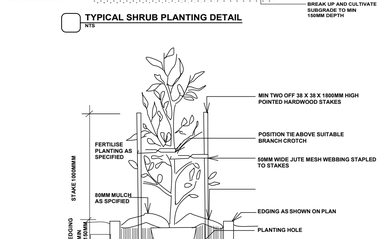
f) Steel Garden Edging

The Contractor shall install stone edging as shown on the drawings, to all mass planting beds adjoining turf or gravel mulched areas, and where required. The resultant edge shall be true to line and flush with adjacent surfaces.



TURF DETAIL
NTS





TYPICAL SHRUB PLANTING DETAIL
NTS

TYPICAL TREE PLANTING DETAIL
NTS

HARDSCAPE WORKS

4.01 GENERAL

The Contractor shall undertake the installation of all hardscape works as detailed on the drawing, or where not detailed, by manufacturers specification.

Paving - refer to typical details provided, and applicable Australian Standards. *Permeable paving may be used as a suitable means of satisfying Council permeable surface requirements, while providing a useable, hardwearing, practical surface.* In most instances, the client shall nominate the appropriate paving material to be used.

Australian Standards shall be adhered to in relation to all concrete, masonry & metal work. Some details are typical and may vary on site. All hardscape works shall be setout as per the drawings, and inspected and approved by the Landscape Architect prior to installation. All workmanship shall be of the highest standard. Any queries or problems that arise from hardscape variations should be bought to the attention of the Landscape Architect.

Your attention is directed to any obligations or responsibilities under the Dividing Fences Act, 1991 in respect of adjoining property owners which may arise from this application. Any enquiries in this regard may be made to the Crown Lands Division on (02) 8836 5332

IRRIGATION WORKS

5.01 GENERAL (PERFORMANCE SPECIFICATION)

An automated drip-irrigation system is to be installed to all gardens, planters and lawn areas in accordance with the approved Irrigation Design.

This system shall be designed and installed by a qualified and licensed irrigation specialist, to the highest industry standards and to maximise the efficient usage of water.

The Installer is required to obtain all approvals necessary for the completion of works in accordance with the Laws of Australia, Laws of the State of NSW, Council By-Laws and Ordinances.

Drawings:

- The Landscape Contractor nominated Licensed Irrigation Specialist shall provide irrigation drawings for approval upon engagement.

Design Requirements:

- The irrigation system shall be installed prior to all planting works. It shall incorporate a commercially available irrigation system, with sub-surface dripper lines to irrigate all gardens, planters and lawn areas.
- It shall incorporate a suitable back flow prevention device for the scale of works, an in-line filter, check valves, and suitable high and low density poly hose fittings and PVC piping to achieve flow rates suitable for specified planting.
- The irrigation application rate shall not exceed the infiltration rate of the soil or creates run-off.
- The landscape contractor shall check the existing pressure available from the ring mains and size irrigation piping to suit. Supply shall be from local hose cock where available.
- All piping and fittings shall be buried 50mm below the finished soil levels in garden and lawn areas, and secured in position at 500mm centres with galv wire pins.
- Size of pipes shall be selected to ensure the working pressure at the end of the line does not decrease by more than 5%.

Services Co-ordination:

- Co-ordination required by Landscape Contractor or Project Manager to provide required conduit, pipe work and penetration through slabs and planter walls for water and power provisions.
- The Landscape Contractor shall be engaged with the Irrigation Specialist to co-ordinate with the Project Manager to identify the preferred service and conduit locations.
- Project Manager and Landscape Contractor to establish area suitable for irrigation control system with required area, power provision and water supply.

Testing & Defects:

Upon completion of installation, the system shall be tested, including:

- Main Line Pressure Test: The main line is pressurised to test for leaks. All valves are shut and the pressure is taken over a determined length of time.
- Dripper Pressure Test: Measurement at flushing valves are taken and the pressure gauged to make sure it conforms to the manufacturer recommendations. The inlet pressure is then tested under the same conditions to check it does not exceed 300Kpa.
- All components are to be satisfactorily functional and operational prior to approval. Should any defect develop, or the capacity or efficiency of the system decline during the agreed maintenance system, then these faults shall be immediately rectified.

Warranty :

- A full 12 month warranty shall be included to cover labour and all parts.

Further Documentation:

- On request, a detailed irrigation performance specification report can be issued.

12 MONTH MAINTENANCE

6.01 GENERAL

The consolidation and maintenance period shall be 12 months beginning from the approved completion of the specified construction work (Practical Completion). A qualified landscape maintenance contractor shall undertake the required landscape maintenance works. Consolidation and maintenance shall mean the care and maintenance of Contracted works by specialised landscaping or horticultural practices, ensuring that all plants are in optimum growing conditions and appearance at all times, as well as rectifying any defects that become apparent in the contracted works.

This shall include, but not be limited to, the following items where and as required: Watering all planting and lawn areas / irrigation maintenance.

Clearing litter and other debris from landscaped areas.

Removing weeds, pruning and general plant maintenance.

Replacement of damaged, stolen or unhealthy plants. Make good areas of soil subsidence or erosion.

Topping up of mulched areas.

Spray / treatment for linsect and disease control.

Fertilizing with approved fertilizers at correct rates.

Mowing lawns & trimming edges each 14 days in summer or 18 days in winter Adjusting ties to Stakes

Maintenance of all paving, retaining and hardscape elements.

On the completion of the maintenance period, the landscape works shall be inspected and at the satisfaction of the superintendent or landscape architect, the responsibility will be signed over to the client.xx

Plant List

ID	Botanical Name	Common Name	Scheduled Size	Mature Height	Mature Spread
Trees					
cit-x sin'-1	Citrus × sinensis	Orange tree	45L	5 - 10m	3.5 - 6m
CAna	Cupaniopsis anacardioides	Tuckeroo	45L	10 - 15m	3.5 - 6m
dra-dra	Dracaena draco	Red edged dragon tree	45L	3 - 5m	1.2 - 2.0m
Lag-bi'ls'	Lagerstroemia 'Indian Summer' biloxi	Crepe Myrtle	45L	4m	3m
LAust	Livistona australis	Cabbage-tree Palm	45L	10m	3m
ML	Melaleuca linearifolia	Flax-leaved Paperbark	45L	5 - 10m	6 - 10m
TLaur-lus	Tristaniopsis laurina 'luscious'	Kanooka, Water Gum	45L	5 - 10m	3.5 - 6m
Shrubs					
Acm-smi	Acmena smithii 'Minor'	Lillypilly	200mm	2-3m	2m
Bux-bal	Buxus balls	Littleleaf Boxwood, English Boxwood	200mm	0.7m	0.7m
Leu x sup-1	Leptospermum 'Fore shore'		150mm	0.5m	0.5m
Leu-bro'SN'	Leucophyta browni nana 'Silver Nugget'	Silver Cushion Bush	200mm	0.3 m	0.3 m
Mel-nes-ln	Melaleuca nesophila 'Little Nessie'	Little Nessie	200mm	0.9 - 1.5m	0.9 - 1.2m
MFiji	Metrosideros collina 'Fiji Fire'	Fiji fire	300mm	2-4m	1-2m
Phi-xan	Philodendron 'Xanadu'	Winterborn Philodendron	200mm	0.9 - 1.5m	0.9 - 1.2m
Pit-tob-mm	Pittosporum tobira 'Miss Muffet'		200mm	0.6-1.2m	1.2 - 2.0m
Rap-ind-op	Raphiolepis indica 'oriental pearl'	Indian Hawthorn	300mm	0.45 - 0.6m	1.2 - 2.0m
Str-reg-jun	Streltizia juncea	Narrow-leafed Bird of Paradise	200mm	0.9 - 1.5m	0.9 - 1.2m
wes-gb	Westringia 'Grey Box'	Grey Box' Westringia	200mm	0.9m	0.6m
Ground Covers					
Alp-nut	Alpinia nutans	False Cardemon	150mm	0.9 - 1.5m	1-2.5m
Car-gla	Carpobrotus glaucescens	Coastal Moonflower, Pigface, Iceplant	150mm	0.0 - 0.3m	1.2 - 2.0m
cas'ci'	Casuarina "Cousin It'	Casuarina "Cousin It'	150mm	0.0 - 0.3m	1.2 - 2.0m
Cra bl 'jp'-1	Crassula 'Blue Bird'	mini jade	150mm	0.0 - 0.3m	0.3 - 0.6m
Cra-mc	Crasula "Max Cook'		150mm	0.0 - 0.3m	0.3 - 0.6m
dic-sf	Dichondra 'Silver Falls'	Silver falls kidney weed	150mm	1.2m	0.5m
Ro-offPro	Rosmarinus officinalis 'Prostratus'	Trailing rosemary,Creeping Rosemary	200mm	0.5 m	1.2 - 2.0m
San-tri-1	Sansevieriatrifasciata 'Silver Queen'	mother in low tongue	150mm	0.45 - 0.6m	0.0 - 0.3m
zam-fu	Zamia furfuracea	Cardboard Plant	150mm	0.5m	0.6 m
Zoy-ten	Zoysia tenuifolia	Petting Grass	150mm	0.0 - 0.3m	0.3 - 0.6m
Grasses					
Dia-cae	Dianella caerulea	Blue Flax-lilly	150mm	0.4m	0.6m
Dor-exc	Doryanthes excelsa	Gymea Lily	300mm	1-2m	2-4m
Fes-gla	Festuca glauca	Blue Fescue	150mm	0.0 - 0.3m	0.0 - 0.3m
imp-cyl	Imperata cylindrica	Blady Grass	150mm	0.3 - 0.45m	0.0 - 0.3m
lom-ta	Lomandra 'Tanika'	Fine-leaved mat rush	150mm	0.5m	0.6m
lom 'SB'	Lomandra filiformis 'SAVANNA BLUE'	Dwarf matt Rush	150mm	0.5m	0.5m
Pen-alo-naf	---	Purple Fountain Grass	150mm	0.6 - 0.75m	0.3 - 0.6m
poa-laTEs'	Poa labillardieri 'Eskdale'	tussock grass	150mm	0.8m	0.5m
Climbers					
Aquatic Plants					
Perennials					
Ferns					

PLAN NOTES

This plan should be read in conjunction with the architectural and hydraulics plans. Work specific to these plans should be prepared in accordance to these plans, including specification and details prior to the installation of landscaping, and should not be altered or compromised during landscape construction.

Retaining wall details to engineers design.

Elements such as drainage swales may be incorporated in garden bed areas (using non-floatable mulch) without compromising the capacity or form.

The Design & location of new letter boxes shall be in accordance with Australia Post's "Requirements for Delivery of Mail to Residential Premises" published Feb '97. All noxious weeds listed in Councils weed lists & located on the site shall be continually removed & suppressed. Reinstate all boundary fencing in poor condition with Council approved 1.8m fencing to rear of building line, rake to 1m forward of BL. Pollution, sediment & erosion control devices as specified shall be in place, and maintained for the duration of the construction period. Proposed excavation near existing established trees to be supervised by arborist.

This plan has been prepared for DA approval only, not for construction.

Planting proposed using commercially available plant species selected from local planting lists and the BASIX local plant list
D.A approved landscape plan's are required to be constructed as approved to obtain occupancy certificate.

ISSUE	DATE	COMMENT
C	7/7/20	FOR DA

AMENDMENTS

GENERAL NOTES

All work to be carried out in accordance with the Building Code of Australia, all Local and State Government Ordinances, relevant Australian Standards, Local Authorities Regulations and all other relevant Authorities concerned.
All structural work and site drainage to be subject to Engineer's details or certification where required by Council. This shall include r.c. slabs and footings, r.c. and steel beams & columns, wind bracing to AS 1170
and AS4055, anchor rods or bolts, tie downs, fixings etc., driveway slabs and drainage to Council's satisfaction. All timbers to be in accordance with SAA Timber Structure Code AS1720 and SAA Timber Framing Code AS 1684. All work to be carried out in a professional and workman- shiplike manner according to the plans and specification.
NOTE
Do not scale off the drawings unless otherwise stated and use figured dimensions in preference.
All dimensions are to be checked and verified on site before the commencement of any work, all dimensions and levels are subject to final survey and set-out
No responsibility will be accepted by Sitedesign for any variations in design, builder's method of construction or materials used, deviation from specification without permission or accepted work practices resulting in inferior construction. Locate and protect all services prior to construction.

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www.sdstudios.com.au

Project PROPOSED APARTMENT BUILDING
Address 9-11 PARK STREET, WOLLONGONG
Drawing Title SITE PLAN & LANDSCAPE DETAILS Scale 1:200@A1
Client MORETTI CONSTRUCTION Drawing No.

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0 10 M

EXISTING TREE LEGEND

- EXISTING TREES TO BE RETAINED
- TREES TO BE REMOVED
- TPZ - OF TREES RETAINED
- SRZ - OF TREES RETAINED

LEGEND

- DRIVEWAY
- TURF AREAS
- PODIUM GARDENS
- DEEP SOIL GARDENS
- PROPOSED BUILDING
- PAVED TYPE 1 (MALESTO STONE OR SIMILAR)
- PAVED TYPE 2 (MULESTO STONE OR SIMILAR)
- PAVED TYPE 3 COBBLE ON CONCRETE OR SIMILAR
- DECKED AREAS

TIERED GARDEN BEDS WITH SPILING PLANTS AND TREE PLANTING

HEDGE SCREENING

STEEL EDGE GARDEN BEDS

ARBOR WITH CLIMBING PLANTS

COMUNAL BBQ WITH SINK AND TABLE

HEDGE SCREENING

TREE SCREENING

SCREEN TREE PLANTING

NATURAL TURF AREA

RAISED VEGETABLE GARDEN BEDS WITH FRUIT TREES

DECK WALKWAY

DECOMPOSED GRANITE PATH WITH CORTEN STEEL RISERS TO TAKE IN LEVELS

OPEN TIMBER ARBOR WITH SEATING UNDER

NATIVE SCREEN TREE PLANTING CANOPY PLANTING

NATURAL TURF AREA IN DEEP SOIL AND WITH SOIL DEPTH ABOVE DRIVEWAY ROOF

LINEAR LINE OF SCREENING TREES

PLANTS TO SPILL OVER WALL TO DRIVE ENTRY

FEATURE TREE ABOVE DRIVEWAY ENTRY TO SOFTEN ASPECT

6 Melaleuca linearifolia

35 35-Poa labillardieri 'Eskdale'

Cupaniopsis anacardioides 2

34 34-Westringia 'Grey Box'

25 25-Lomandra filiformis 'SAVANNA BLUE'

20 20-Festuca glauca

Pittosporum tobira 'Miss Muffet' 4

Casuarina "Cousin It" 7

Strelitzia juncea 5

Pittosporum tobira 'Miss Muffet' 5

Sansevieriatrifasciata 'Silver Queen' 11

Zoysia tenuifolia 20

Alpinia nutans 5

Casuarina "Cousin It" 28

Strelitzia juncea 5

Pittosporum tobira 'Miss Muffet' 7

9 Crassula 'Blue Bird'

10 Zamia furfuracea

3 Pittosporum tobira 'Miss Muffet'

1 Dracaena draco

Citrus × sinensis 2

31 Acmena smithii 'Minor'

9 Tristaniopsis laurina 'luscious'

31 Acmena smithii 'Minor'

34 Pennisetum alopecuroides 'Nafray'

36 Lomandra 'Tanika'

12 Pennisetum alopecuroides 'Nafray'

4 Melaleuca linearifolia

2 Lagerstroemia 'Indian Summer' biloxi

8 6-Dianella caerulea

11 11-Casuarina "Cousin It"

16 16-Leucophyta brownii nana 'Silver Nugget'

3 3-Doryanthes excelsa

26 26-Festuca glauca

21 21-Westringia 'Grey Box'

3 Cupaniopsis anacardioides

5 Melaleuca linearifolia

5 Livistona australis

47 47-Poa labillardieri 'Eskdale'

25 Pennisetum alopecuroides 'Nafray'

8 Tristaniopsis laurina 'luscious'

20 Lomandra 'Tanika'

SETOUT POINT

P.O.S UNIT 1

P.O.S UNIT 2

COMMUNAL OPEN SPACE RL 27.450

PLANTING OVER BASEMENT LINKS

DEEP SOIL ZONE

RAMP TO BASEMENT 1

LEVEL 1 ENTRY

OSD TANK FFL 27.400

PLANTER TO LANDSCAPE PLAN

DP780693 678m² Available

SP61702

PARK STREET

STREET

LANDSCAPE PLAN GROUND FLOOR

SCALE 1:100

ISSUE	DATE	COMMENT
C	7/7/20	FOR DA

AMENDMENTS

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Address	9-11 PARK STREET, WOLLONGONG
Drawing Title	GROUND FLOOR LANDSCAPE PLAN
Scale	1:100@A1
Client	MORETTI CONSTRUCTION
Drawing No.	

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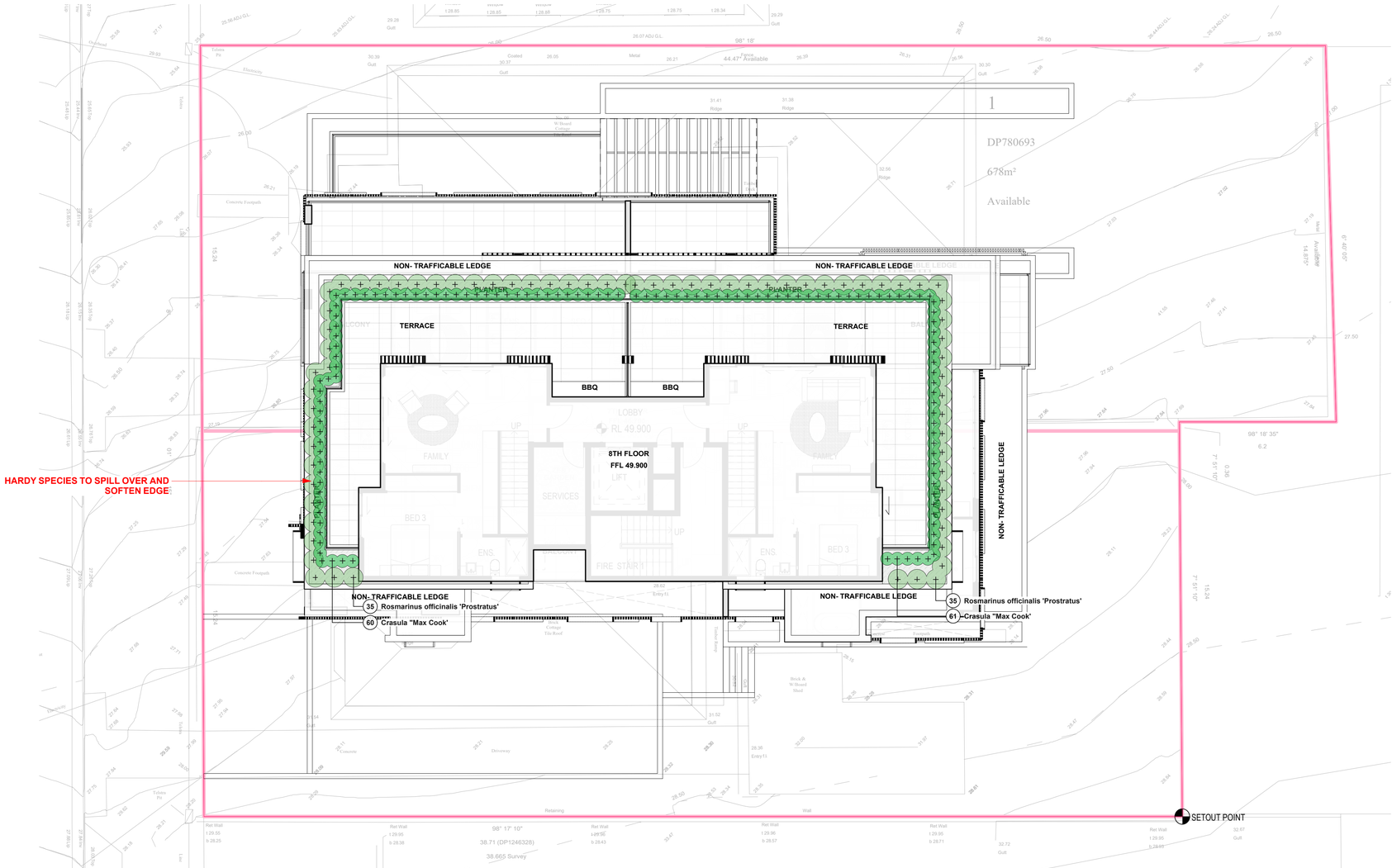
L-02 C

LEGEND

- DRIVEWAY
- TURF AREAS
- PODIUM GARDENS
- DEEP SOIL GARDENS
- PROPOSED BUILDING
- PAVED TYPE 1 PAVERS STYLE & COLOUR UNKNOWN
- PAVED TYPE 2 SELECTED STONE, SCALLA
- PAVED TYPE 3 COBBLE ON CONCRETE OR SIMILAR
- DECKED AREAS



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C 7/7/20 FOR DA
ISSUE DATE COMMENT

AMENDMENTS

GENERAL NOTES

All work to be carried out in accordance with the Building Code of Australia, all Local and State Government Ordinances, relevant Australian Standards, Local Authorities Regulations and all other relevant Authorities concerned.
All structural work and site drainage to be subject to Engineer's details or certification where required by Council. This shall include r.c. slabs and footings, r.c. and steel beams & columns, wind bracing to AS 1170
and AS4055, anchor rods or bolts, tie downs, fixings etc., driveway slabs and drainage to Council's satisfaction. All timbers to be in accordance with SAA Timber Structure Code AS1720 and SAA Timber Framing Code AS 1684. All work to be carried out in a professional and workman- shiplike manner according to the plans and specification.
NOTE
Do not scale off the drawings unless otherwise stated and use figured dimensions in preference.
All dimensions are to be checked and verified on site before the commencement of any work, all dimensions and levels are subject to final survey and set-out
No responsibility will be accepted by Sitedesign for any variations in design, builder's method of construction or materials used, deviation from specification without permission or accepted work practices resulting in inferior construction. Locate and protect all services prior to construction.

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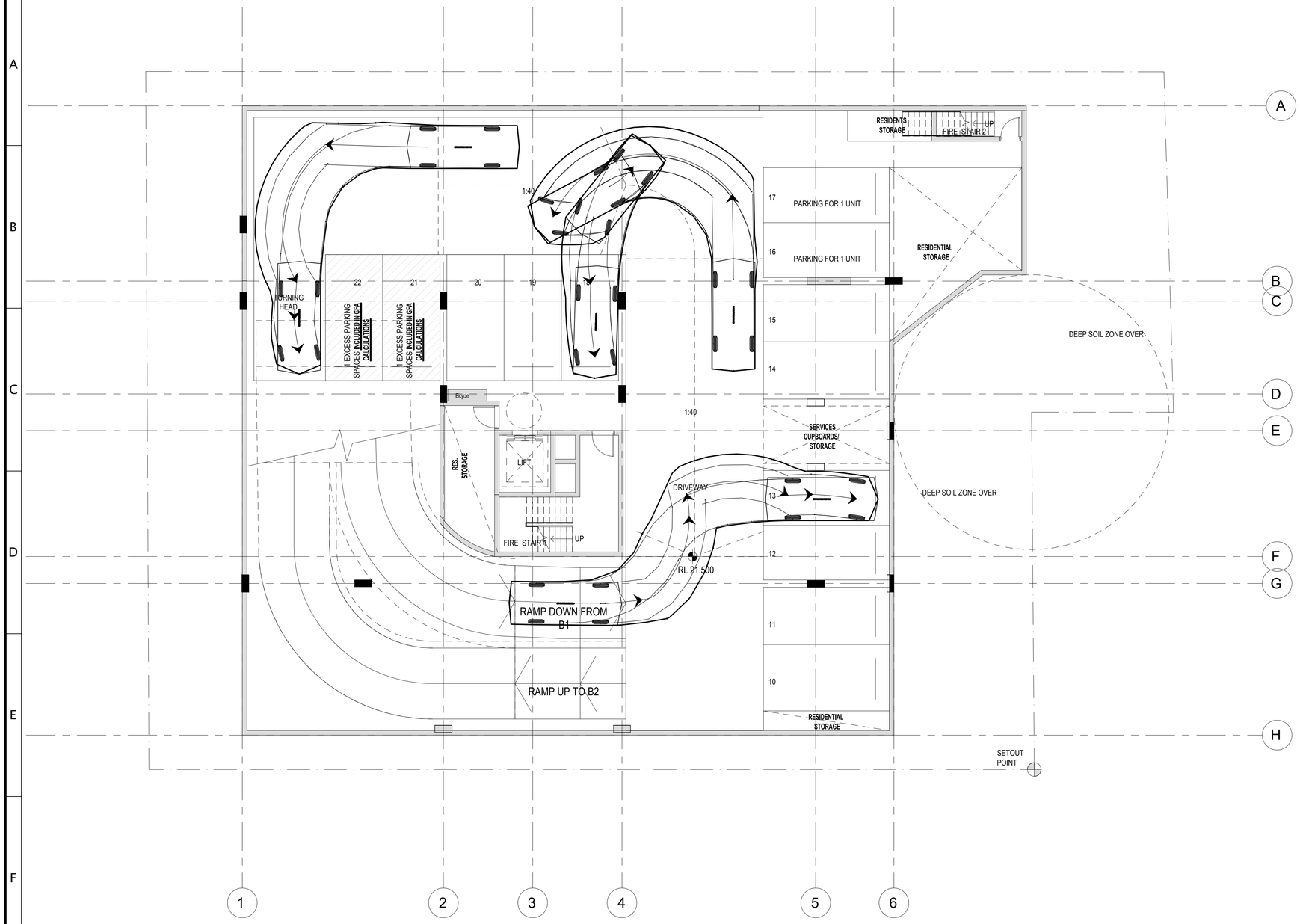
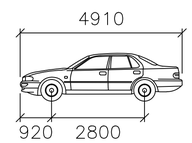
www.sdstudios.com.au

Project PROPOSED APARTMENT BUILDING
Address 9-11 PARK STREET, WOLLONGONG
Drawing Title ROOFTOP LANDSCAPE PLAN Scale 1:100@A1
Client MORETTI CONSTRUCTION Drawing No.

Page
L-03 C



BASEMENT 2 B85 ENTERING PARKING SPACES



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ISSUE	AMENDMENT	DATE
A	ISSUE FOR DA APPLICATION	07/11/19
B	MINOR AMENDMENTS	08/05/20
C	MINOR AMENDMENTS	24/06/20

PLANS 0 1000 2000 3000 4000 5000

DO NOT SCALE IF IN DOUBT ASK A1

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS

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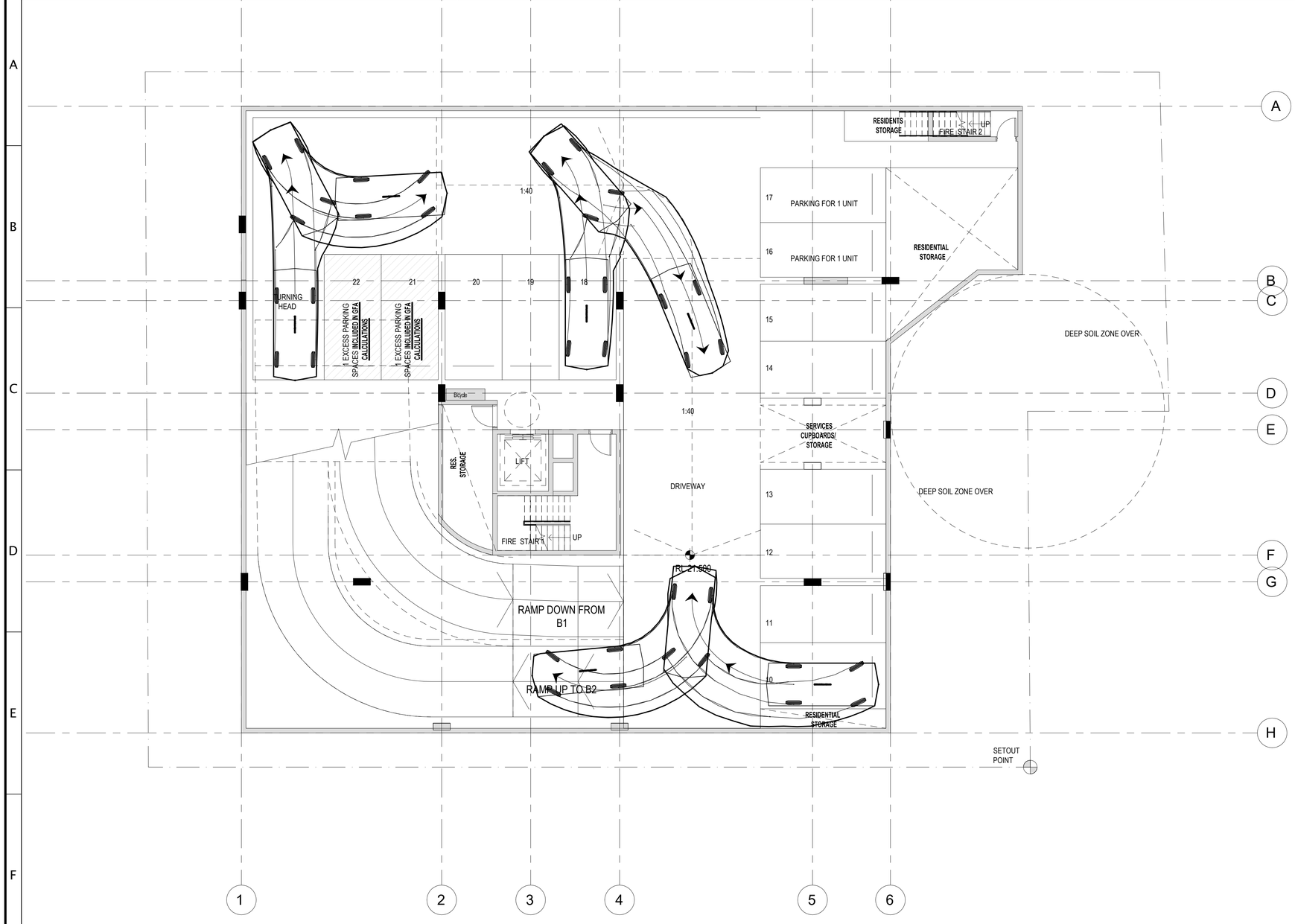
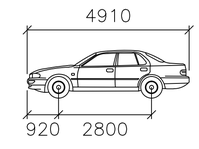
WOLLONGONG NSW 2500
TELEPHONE: 02 42 266 646
Email: info@atbconsulting.com.au
ACEA The Association of Consulting Engineers Australia

Title	TRAFFIC ASSESSMENT
Project	PROPOSED APARTMENT DWELLING
At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

SCALES AS SHOWN			DATE PLOTTED 13/05/19
DRAWN D.K.			
DESIGNED G.U.			DATUM A.H.D.
CHECKED G.U.	DATE CHK'D __/05/19		
	PROJECT No 19044	DWG T1	REVISION C



BASEMENT 2 B85 EXITING PARKING SPACES



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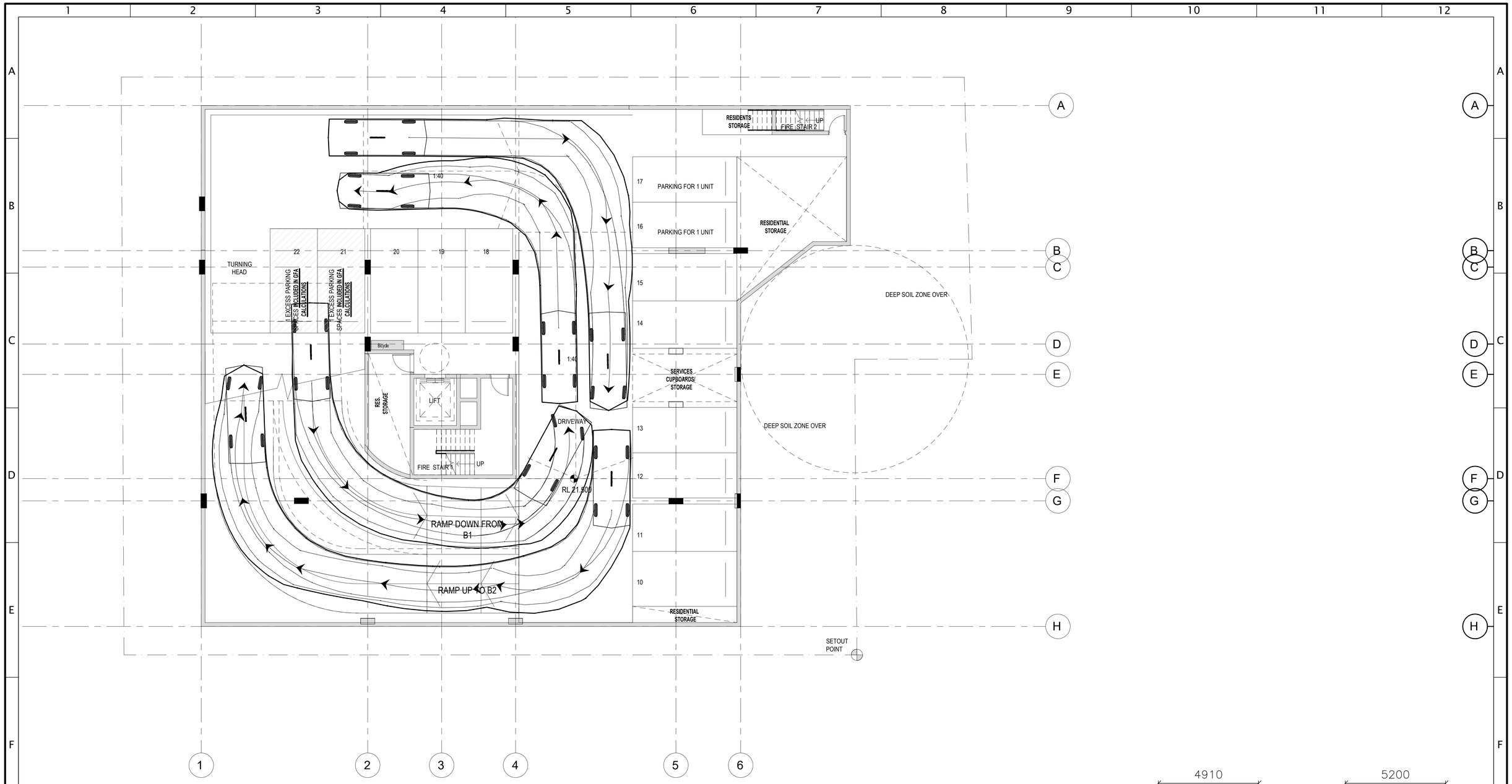
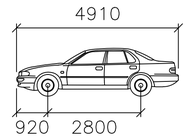
CHECKED G.U.	DATE CHK'D __/05/19	
	PROJECT No 19044 / DWG T2	REVISION C



BASEMENT 2 B99 PASSING B85
BASEMENT 2 B99 PASSING B99 ON SPIRAL RAMP



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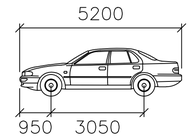

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ISSUE	AMENDMENT	DATE
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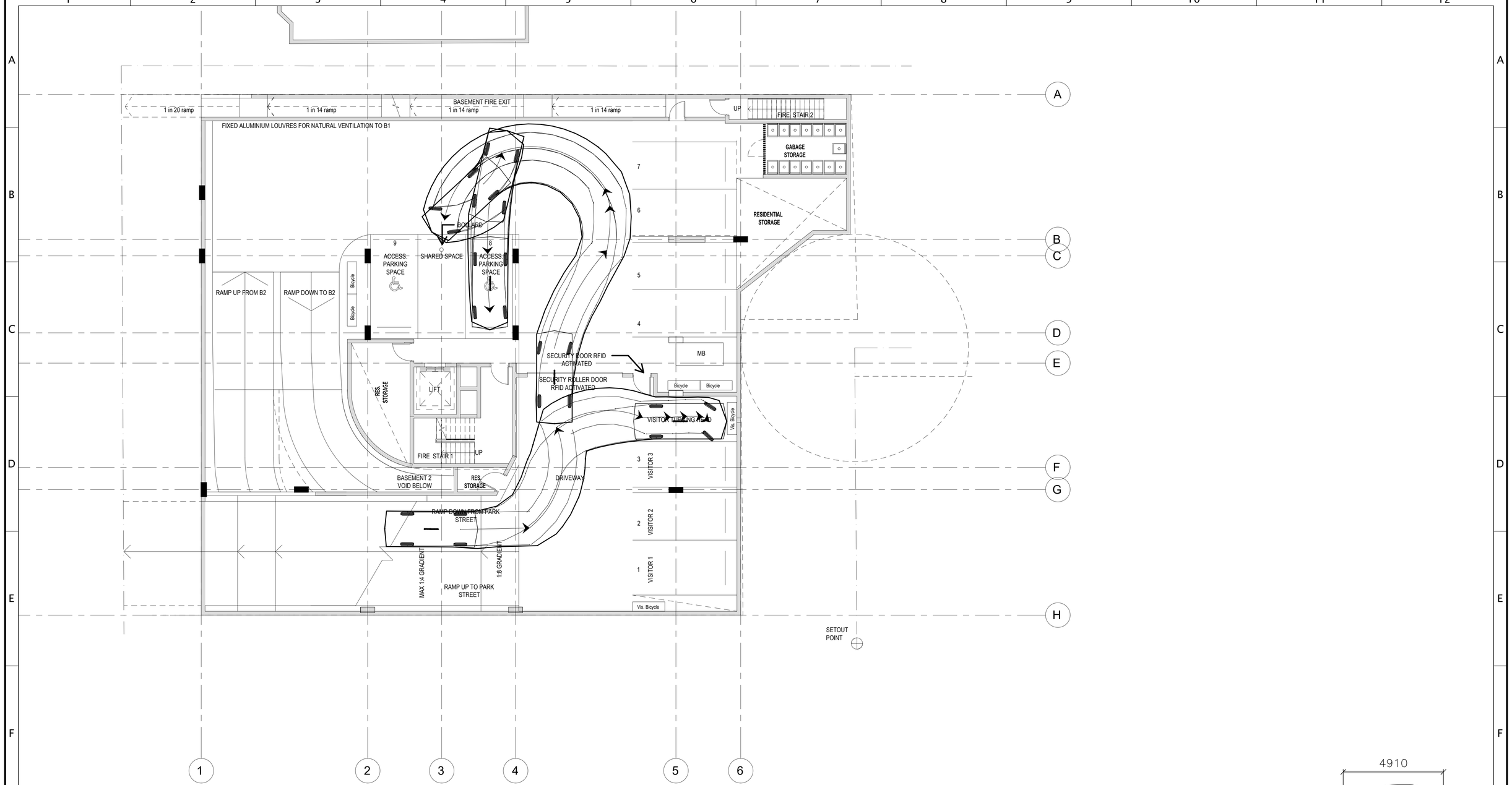
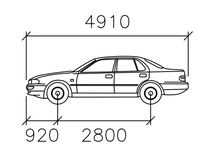
	PROJECT No 19044	DWG T3	REVISION C



BASEMENT 1 B85 ENTERING / EXITING PARKING SPACES



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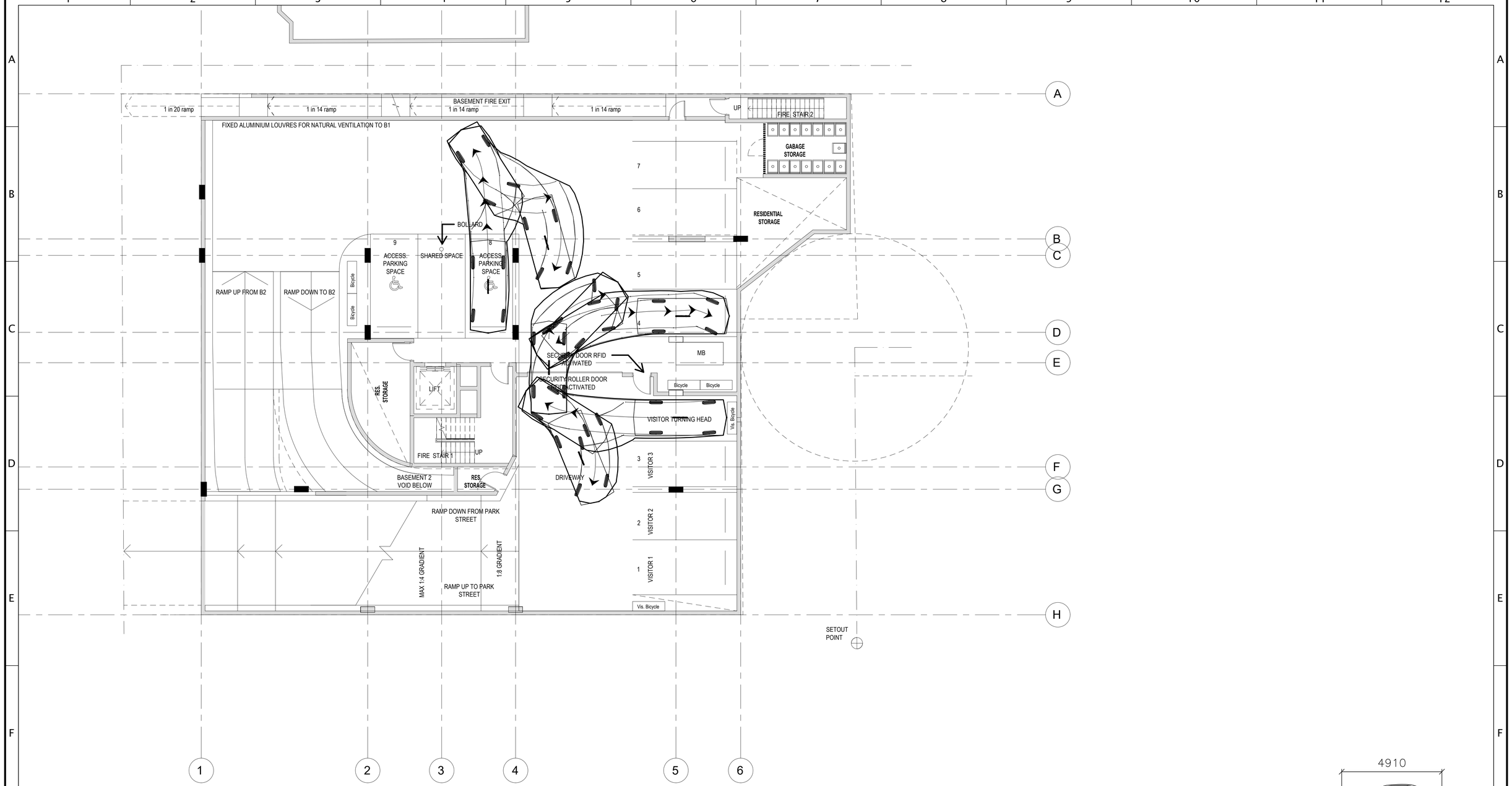
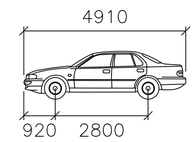


BASEMENT 1 B85 EXITING PARKING SPACES



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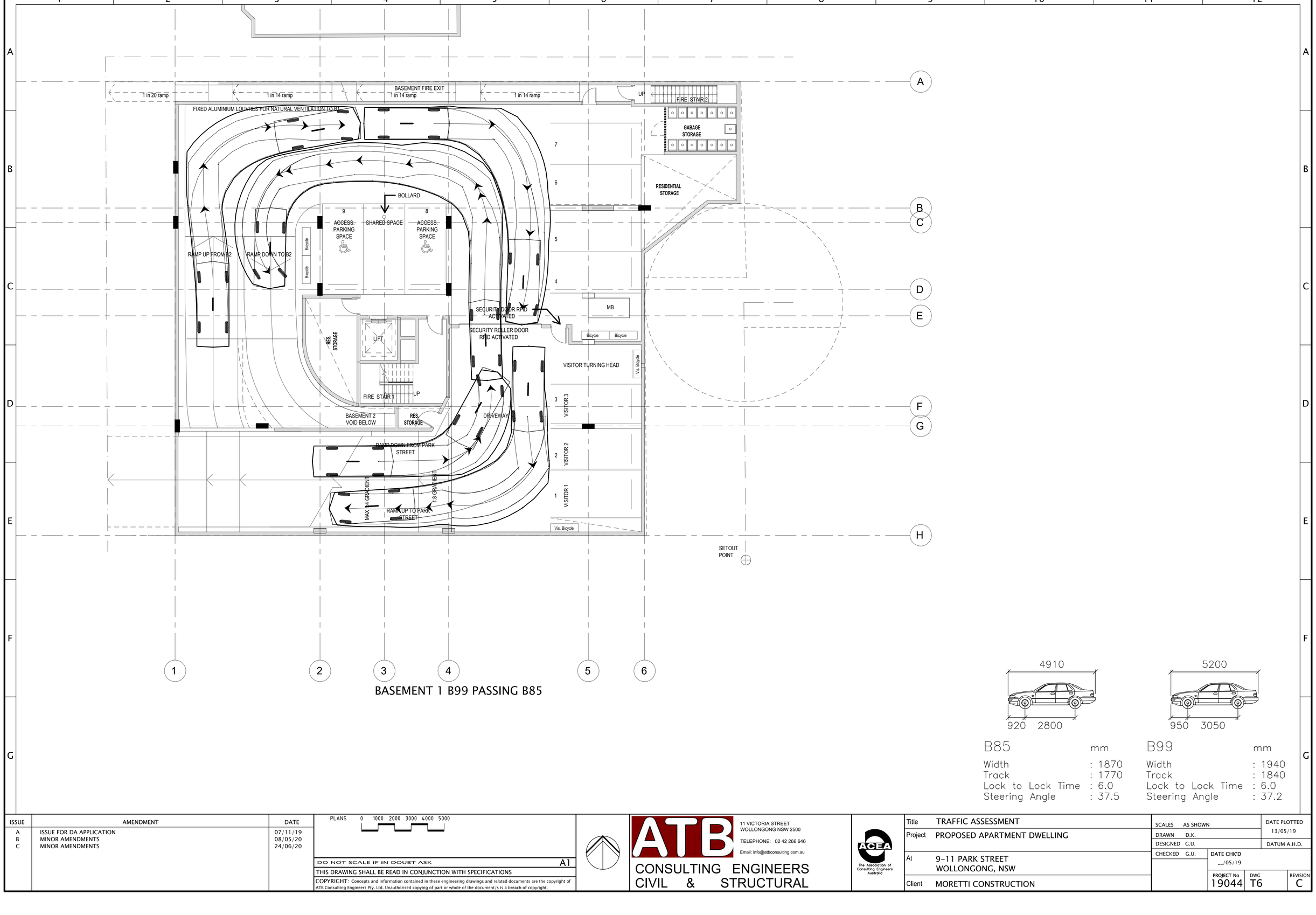
	PROJECT No 19044	DWG T5	REVISION C



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PROJECT No 19044	DWG T6	REVISION C	

SOIL EROSION & DUST MANAGEMENT CONTROLS

1. ALL EROSION AND SEDIMENTATION CONTROL MEASURES, INCLUDING RE-VEGETATION AND STORAGE OF SOIL AND TOPSOIL, SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE NSW LANDCOM PUBLICATION TITLED MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION VOL. 14th ED. MARCH 2004(BLUE BOOK) OR THE LATEST VERSION OF THIS PUBLICATION

2. THE HEAD CONTRACTOR IS TO INFORM ALL SITE STAFF AND SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION AND SEDIMENT CONTROL PLAN.

3. THE CONTRACTOR SHALL NOT DEVIATE FROM THE APPROVED PROGRAM WITHOUT THE SUPERINTENDENT'S APPROVAL FOR TEMPORARY ACCESS/CONSTRUCTION FROM BARRETTA LANE.

4. PRIOR TO BREAKING EXISTING GROUND THE CONTRACTOR SHALL HAVE IN PLACE DRAINAGE AND FILTER CONTROLS FOR RETENTION OF SEDIMENT. A FILTER FABRIC FENCE AND HAY BALE BARRIERS ARE TO BE USED WHERE ANY LOW POINTS ALLOW SURFACE WATER TO ESCAPE BEFORE CONSTRUCTION OF FINISHED LEVELS.

5. WASHING DOWN OF WHEELS AND MUDDIED BODY SURFACES OF ALL VEHICLES AND PLANT LEAVING THE SITE TO PREVENT THE CARRIAGE OF SEDIMENT ONTO STREETS IS REQUIRED DURING INCLEMENT WEATHER.

6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO ADJACENT ROADS AND STREETS. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE ENTRANCE WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEARANCE OF ANY MEASURES USED TO TRAP SEDIMENT.

7. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO ROADS MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.

8. DIVERT RUNOFF AWAY FROM ACCESS POINT. SEDIMENT FENCES AND BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND CHECKED WHEN RAIN PERIODS ARE IMMINENT AND AT CLOSE WEEK'S WORK.

9. MACHINERY MOVEMENT AND TRUCKS SUPPLYING MATERIALS SHALL BE CONFINED TO THE CONTRACTORS ACCESS ROUTE.

10. ALL CONTROLS SHALL REMAIN IN PLACE UNTIL ROAD BASE FOR NEW PAVEMENT FORMATION IS LAID.

11. DESIGNATED PLANT AND MACHINERY ACCESS WAYS TO BE DEFINED ONSITE BY THE INSTALLATION OF PARAWEBBING FENCING TO MINIMISE UNNECESSARY SITE DISTURBANCE.

12. THE CONTRACTOR SHALL HAVE STANDBY LABOR AND ARRANGEMENT FOR DEALING WITH DUST SUPPRESSION FLOCCULATION / DE-WATERRING SEDIMENT BASINS AND OTHER URGENT REMEDIAL MAINTENANCE TO EROSION CONTROL MEASURES DURING WEEKENDS AND EXTENDED CLOSED PERIODS.

13. SHOULD ADVERSE WIND CONDITIONS ARISE. MACHINERY / PLANT MOVEMENTS SHALL BE RESTRICTED TO THE MINIMUM.

14. PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.

15. CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE BALLAST ENTRY DRIVEWAY AREA AND NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.

16. TOILET FACILITIES MUST BE EITHER A FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED AND SERVICED ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.

17. DURING TRENCH EXCAVATION ALL SPOIL SHALL BE MOUNTED ON THE UPHILL SIDE OF TRENCHES AND PLACEMENT IS TO COMPLY WITH THE SUPERINTENDENTS REQUIREMENTS.

18. DIVERSION BANKS SHOULD BE CONSTRUCTED BY MOUNDING STRIPPED TOPSOIL (MIN. HEIGHT 600mm) WHERE DIRECTED. MATERIAL TO BE RE-SPREAD ON FOOT WAYS AFTER FINAL TRIMMING.

19. TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH 'RTA' TRAFFIC CONTROL AT WORK SITES - CURRENT EDITION AND AS 1742 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

20. PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH AS 1742 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

SEQUENCE OF OPERATIONS

1. PROVIDE SHAKE DOWN PAD AT ENTRY OF SITE.
2. CONSTRUCT CLEAN WATER CUT OFF DRAIN & RE-VEGETATE
3. PLACE BARRIER FENCING AS SHOWN TO RESTRICT VEHICULAR ACCESS.
4. CONSTRUCT SEDIMENT FENCING & DIRTY WATER CHANNEL
5. PROVIDE STRAW BALE DAM (REPLACE AT COMPLETION OF EACH DAYS WORK)
6. CONSTRUCT ROADS, DRAINAGE & DETENTION BASIN (MODIFY SEDIMENT CONTROL DRAINS TO SUIT CONSTRUCTION.
7. PITS & PIPES TO BE PROTECTED WITH FILTER BARRIERS
8. AT COMPLETION OF ALL WORKS RE-VEGETATE BATTERS WITHIN 14 DAYS
9. AFTER 80% RE-VEGETATION COVER IS REACHED REMOVE CONTROL MEASURES CAN BE REMOVED.

STABILISATION

UNDERTAKE PROGRESSIVE STABILISATION OF DISTURBED GROUND SURFACES AS THEY ARE COMPLETED RATHER THAN AT THE END OF THE WORKS PROGRAM.

ENSURE THAT DISTURBED LANDS FOR EACH STAGE ARE STABILISED APPROPRIATELY BEFORE COMMENCING WORK ON THE FOLLOWING STAGE.

BATTERIES SHOULD BE STABILISED TO BRING C- FACTORS DOWN TO 0.1 WITHIN 10 WORKING DAYS OF FINAL FORMATION.

STABILISATION OF BATTERIES CAN BE ACHIEVED BY PLACING TOPSOIL OVER THEM WITH LOCALLY-SOURCED NATIVE MULCH PLACED OVER THE SOIL, OR ALTERNATIVELY, THEY CAN BE HYDRO-MULCHED (OR EQUIVALENT).

APPROPRIATE SEEDBED PREPARATION SHOULD BE CARRIED OUT WHEN STABILISING LANDS.

AS SURFACES ARE STABILSED AND PERMANENT DRAINAGE MEASURES ARE INSTALLED, TEMPORARY WATER MANAGEMENT STRUCTURES CAN BE REMOVED (EG. DIVERSION DRAINS).

MONITORING AND MAINTENANCE

THE SITE MANAGER IS TO DELINEATE AN APPROPRIATE LOCATION FOR THE ONSITE OFFICE OR COMPOUND/S

SAFE STORAGE AREAS FOR WASTES, FUELS AND OTHER HAZARDOUS MATERIALS ARE TO BE DELINEATED AT THE DISCRETION OF THE SITE MANAGER.

STORAGE LOCATIONS FOR EROSION CONTROL MATERIALS (EG. JUTE MATTING) ARE TO BE DELINEATED AT THE DISCRETION OF THE SITE MANAGER.
ANY WASTE MATERIALS (SUCH AS ROCKS
AND DEBRIS) ARE TO BE REMOVED FROM ANY PUBLIC TRAFFICKED ROAD SURFACE AS SOON AS POSSIBLE.

ANY SEDIMENT ACCUMULATED IN TRAPPING DEVICES IS TO BE REMOVED AND DEPOSITED IN A SECURE LOCATION WHERE THERE IS A LOW RISK THAT IT WILL BE RE-ENTRAINED IN RUNOFF.

WASTE RECEPTACLES ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE MUST BE IN A MANNER APPROVED BY THE SITE SUPERINTENDENT.

NOTES:

1. THE ROADWAY, FOOT PATH OR COUNCIL RESERVE SHALL NOT BE USED TO STORE BUILDING MATERIAL WITHOUT THE PRIOR APPROVAL OF COUNCIL.

2. ALL EXCAVATIONS AND BACKFILLING MUST BE EXECUTED SAFELY IN ACCORDANCE WITH APPROPRIATE PROFESSIONAL STANDARDS.

3. ALL EXCAVATIONS MUST BE PROPERLY GUARDED AND PROTECTED TO PREVENT THEM FROM BEING DANGEROUS TO LIFE OR PROPERTY.

4.THE BUILDER SHALL CARRY OUT WORK AT ALL TIMES IN A MANNER WHICH WILL NOT CAUSE A NUISANCE, BY THE GENERATION OF UNREASONABLE NOISE, DUST OR OTHER ACTIVITY, TO RESIDENTS OF ADJACENT PROPERTIES.

5. THE BUILDER SHALL CONTROL THE EMISSION OF DUST FROM THE SITE AND IN THIS REGARD WATERING EQUIPMENT SHALL BE KEPT ON THE SITE AND USED FOR THIS PURPOSE. THE DEVELOPER MUST ENSURE THAT THE CONTRACTOR IS ABLE TO CONTROL EMISSION OF DUST FROM THE SITE ON WEEKENDS WHEN WINDY CONDITIONS PREVAIL.

6. THE BUILDER SHALL ENSURE THAT NO VIBRATOR ROLLERS ARE USED DURING THE CONSTRUCTION WITHOUT PRIOR WRITTEN APPROVAL OF THE PRINCIPAL CERTIFYING AUTHORITY.

MATERIAL WASTE MANAGEMENT:

ALL WASTE TO BE SORTED ON SITE AND TAKEN TO APPLICABLE RECYCLING FACILITY ONCE REMOVED FROM SITE
ALL EXCAVATED MATERIAL TO BE REMOVED FROM SITE.
ALL CONSTRUCTION MATERIAL TO BE REMOVED FROM SITE.
SEDIMENTATION BARRIER TO BE ERECTED TO PREVENT RUN-OFF INTO ADJOINING NEIGHBORS PROPERTY.
SANDBAGS TO BE USED TO PREVENT RUN-OFF INTO STORMWATER SYSTEM

RE-VEGETATION NOTE:

SITE SHALL BE RE-VEGETATED AS SOON AS POSSIBLE TO PREVENT SOIL EROSION. EXCAVATED TOP SOIL SHOULD BE REUSED. RE-VEGETATE ALL TRENCHES UPON COMPLETION OF BACKFILLING

AIR POLLUTION NOTE:

STOCKPILES OF SAND AND SOIL SHALL BE LOCATED IN A SHELTERED POSITION WHERE POSSIBLE AND COVERED OR WATERED TO PREVENT MATERIAL FROM BEING BLOWN OFF THE SITE

DRAINAGE PIPE CONNECTION:

TEMPORARY OR PERMANENT DOWN PIPES SHALL BE INSTALLED PRIOR TO FRAME INSPECTION.

ALL DRAINAGE PIPE INLETS TO BE CAPPED UNTIL:
- DOWN PIPES CONNECTED
- PITS CONSTRUCTED AND PROTECTED WITH SILT BARRIER.

SILT BARRIER FENCE NOTES

1.CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION.

2. CUT A 150mm DEEP TRENCH ALONG UP SLOPE LINE IN THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.

3. 1.5M LONG, 40mm SQUARE HARDWOOD STAR PICKETS SHALL BE DRIVEN INTO GROUND AT 2.5M INTERVALS MAX. THE STAR PICKET SHOULD BE FITTED WITH SAFETY CAPS.

4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UP SLOPE SIDE OF THE POST ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.

5. JOIN SECTION OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.

6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

HAY BALE NOTES

1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF THE SLOPE.

2. PLACE BALES LENGTH WISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE LOOSE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.

3. ENSURE THAT THE MAXIMUM HEIGHT OF FILTER IS ONE BALE.

4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH 2 1.2 METER STAR PICKETS OR STAKES. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.

5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 - 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.

6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED- THEY COULD REQUIRE REPLACEMENT EACH TWO OR FOUR MONTHS

DUST SUPPRESSION

DUST SUPPRESSION SHOULD BE CARRIED OUT WHENEVER NECESSARY TO MINIMISE SEDIMENT BECOMING AIR BOURNE TO WIND EROSION.

EXCAVATIONS

WATER ACCUMULATING IN ANY SORT OF EXCAVATION WITHIN THE SITE EFFECTIVELY BECOME A SEDIMENT BASIN.

WATER FROM EXCAVATIONS MUST NOT BE DISCHARGED FROM THE SITE UNLESS IT CONTAINS LESS THAN 50MG/L OF SUSPENDED SOLIDS. FLOCCULATION SHOULD BE USED TO ACHIEVE THIS WHERE NECESSARY.

HOWEVER, IF THE WATER IS GOING TO BE USED WITHIN THE CONSTRUCTION SITE FOR DUST-SUPPRESSION PURPOSES AND WILL DRAIN BACK INTO THE SEDIMENT CAPTURE SYSTEM IT WILL NOT REQUIRE FLOCCULATION.

SELF AUDITING PROGRAM

A SELF-AUDITING PROGRAM MUST BE INITIATED FOR THE SITE. THE SITE MANAGER IS TO INSPECT THE SITE AT LEAST WEEKLY AND MAINTAIN A LOG OF INSPECTIONS, PAYING PARTICULAR ATTENTION TO:

REMOVAL OF SPILLED SOILS OR OTHER MATERIALS FROM NEAR RIPARIAN AREAS (I.E. THE DRAINAGE RESERVE/CREEK)

ENSURING BARRIER FENCING IS MAINTAINED AND EXCLUSION ZONES ARE BEING OBSERVED BY ALL WORKERS AND CONTRACTORS.

CONSTRUCTING ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED WATER CONTROL IS ACHIEVED I.E. PREPARE PROGRESSIVE SWMP'S (PREFERABLY IN CONSULTATION WITH SEEC).

MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES IN A FUNCTIONING CONDITION FOR THE DURATION OF THE WORKS.

REMOVAL OF TRAPPED SEDIMENT AND DISPOSAL TO SAFE AREAS.

AREAS OF LOCALISED SOIL EROSION ARE TO BE IDENTIFIED AND APPROPRIATE PREVENTATIVE MEASURES IMPLEMENTED. THESE WILL INCLUDE:

A. PLANTING ADDITIONAL STABILISLING VEGETATION OR WIND BRAKES.
B. STABILSING SOILS WITH MULCHES OR ALTERNATIVE SOIL BINDERS.
C. TAKING STEPS TO MINIMISE ANY CONCENTRATED STROMWATER FLOWS.

STOCKPILING

STOCKPILE LOCATIONS ARE SHOWN ON THE 11000136-SWMP02. THE SITE MANAGER IS TO DESIGNATE SAFE STOCKPILE SITES IN THESE LOCATIONS. THE LOCATIONS OF THE STOCKPILES CAN BE MOVED AT THE DISCRETION OF THE SITE MANAGER TO AN ALTERNATIVE LOCATION WITH THE WORKS (I.E. NOT THE NO-GO ZONES). HOWEVER, THEY SHOULD INCORPORATE CLEARLY DEFINED ACCESS CONTROLS AND COMPLY WITH THE REGULATIONS OUTLINED BELOW.

ALL STOCKPILES MUST BE CONSTRUCTED AND MAINTAINED AND THE FOLLOWING REGULATIONS:

- ALL STOCKPILES MUST HAVE SEDIMENT FENCING INSTALLED AROUND THEIR BASES.

- MULCHED VEGETATION, TOPSOIL AND SUBSOIL (IF APPLICABLE) ARE TO BE STOCKPILED SEPARATELY.- STOCKPILES ARE TO BE TRIMMED, DEEP RIPPED TO 300MM, IMMEDIATELY SOWN WITH PERMANENT PASTURE SPECIES AND FERTILIZED.

- STOCKPILES ARE TO BE STABILIZED TO ACHIEVE A C-FACTOR OF 0.1 WITHIN 10 DAYS OF FORMATION.

- STABILIZATION MEASURES ON STOCKPILES MUST BE EMPLOYED AS PER THE REQUIREMENTS SET OUT IN TABLE 1 AND TABLE 2.

- STOCKPILES SHOULD BE CONSTRUCTED TO NO MORE THAN 2METRES IN HEIGHT.

- THE WORKING FACE OF THE STOCKPILE SHOULD BE BATTERED DOWN AT A MAXIMUM SLOPE OF 3:1.

SLOPE LENGTHS

ENSURE SLOPE LENGTH ON DISTRIBUTED SURFACES IS LESS THAN 80M DURING RAIN.

DIVERSION BUNDS/DRAINS, LOW FLOW EARTH BANKS OR SANDBAGS/EQUIVALENT SHOULD BE INSTALLED PRIOR TO ANY RAINFALL EVENT TO ACHIEVE THIS.

ISSUE	AMENDMENT	DATE
A	ISSUE FOR DA APPLICATION	07/11/19

PLANS 0 1000 2000 3000 4000 5000

DO NOT SCALE IF IN DOUBT ASK A1

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS

ATB CONSULTING ENGINEERS CIVIL & STRUCTURAL
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WOLLONGONG NSW 2500
TELEPHONE: 02 42 266 646
Email: info@atbconsulting.com.au
ACEA The Association of Consulting Engineers Australia

Title	SOIL EROSION & SEDIMENTATION NOTES
Project	PROPOSED APARTMENT DWELLING
At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

SCALES AS SHOWN		DATE PLOTTED 13/05/19
DRAWN D.K.		
DESIGNED G.U.		DATUM A.H.D.
CHECKED G.U.	DATE CHK'D __/05/19	
	PROJECT No 19044 / DWG C1 / REVISION A	

DP1246328

EXISTING BUILDING TO BE DEMOLISHED SHOWN DASHED

PROPOSED DEVELOPMENT

BULK EXCAVATION RL 20.80

GEOTEXTILE FENCE TO ACT AS SEDIMENT BARRIER. BAGS AS REQUIRED

PUMP AT LIFT LOCATION & LAY FLAT HOSE TO PUMP OUT SETTLED WATER. MUDDED WATER TO CLEAR BEFORE PUMPED OUT TO KERB & GUTTER THROUGH FILTER. (2 LOCATIONS)

PROVIDE SWALE FROM CORNER OF EXCAVATION TO PIT -TYPICAL

AREA TO BE UNDISTURBED

TEMPORARY CONSTRUCTION STAIRS

CONSTRUCTION SHAKER

ENTRY

EXIT

TEMPORARY ACCESS RAMP

MSA

WSC

WR

T

SS

PROVIDE TEMPORARY RAMP AS REQUIRED. EXACT LOCATION TO BE CONFIRMED PRIOR ANY WORK ON SITE

SHORING WALL TO STRUCTURAL ENGINEER'S DETAIL

POSITION OF STOCKPILES:

TOPSOIL STOCKPILE AREA. PROVIDE SEDIMENT FENCE BARRIER ON DOWNSTREAM SIDE AND DIVERSION BANK ON UPSTREAM SIDE. TOPSOIL STOCKPILES SHALL BE LOCATED AWAY FROM DRAINAGE LINES AND AREA WHERE WATER MAY CONCENTRATE.

ENSURE SECRITY FENCING IS IN PLACE PRIOR TO COMMENCING EXCAVATION. FENCE TO BE ON BOUNDARY LINE

GEOFABRIC MATERIAL TO BE FITTED TO ALL OUTLET PIPES FOR ALL PITS. THIS IS REQUIRED TO STOP SEDIMENT FROM EXISTING THE PROPERTY.

MESH WIRE TEMPORARY CONSTRUCTION FENCE ALONG THE SITE BOUNDARY WHERE ONE HAS NOT ALREADY BEEN PROVIDED

SITE MANAGEMENT LEGEND

SIDE BOUNDARY	INDICATIVE STOCKPILE AREA
SEDIMENT CONTROL FENCE	WASTE STORAGE CONTAINER
MESH WIRE TEMPORARY CONSTRUCTION FENCE ALONG THE SITE BOUNDARY	WASTE / RECYCLE BINS
SAND BAGS PLACED IN INVERT OF GUTTER	MATERIALS STORAGE AREA
SURFACE CATCH DRAIN	TEMPORARY TOILET FACILITY
STAKED STRAW BALES	MAINTAIN EXISTING NATURAL GROUND SLOPE
WASH OUT AREA	

SOIL EROSION & SEDIMENTATION CONTROL PLAN

SCALE 1:100 A1, 1:200 A3

NOTES
1. GEOFABRIC MATERIAL TO BE FITTED TO ALL OUTLET PIPES FOR ALL PITS. THIS IS REQUIRED TO STOP SEDIMENT FROM EXISTING THE PROPERTY.
2. ALL EXCAVATED MATERIAL TO BE REMOVED FROM SITE.
3. ALL CONSTRUCTION MATERIAL TO BE REMOVED FROM SITE
4. NO CONSTRUCTION MACHINERY TO REMAIN OVERNIGHT ONSITE
5. SEDIMENTATION BARRIER TO BE ERECTED TO PREVENT RUN-OFF INTO ADJOINING NEIGHBORS PROPERTY. SANDBAGS TO BE USED TO PREVENT RUN-OFF INTO STORMWATER SYSTEM
5. ALL WASTE TO BE SORTED ON SITE AND TAKEN TO APPLICABLE RECYCLING FACILITY ONCE REMOVED FROM SITE

WASH-OUT AREA

BUILDER TO ESTABLISH WHEEL WASH AREA (40mm GRAVEL) TO ENSURE TRUCKS DO NOT TRACK MUD ONTO PUBLIC ROAD. A NOTICE IS TO BE PLACED INSTRUCTING TRUCK DRIVERS OF THEIR OBLIGATION TO ENSURE WASH-DOWN OF ALL EQUIPMENT TO PREVENT MUD, SOIL etc TRACKING ONTO PUBLIC ROADS. THE TRUCK WHEEL WASH FACILITY CAN BE ABANDONED ONCE SITE IS COVERED WITH ROAD BASE. ALL RUN-OFF FROM THE WASTE AREA SHALL BE INTERCEPTED BY A SEDIMENT FENCE OR STRAW HAY BALES.

WASTE SCHEDULE

DESTINATION

TYPE OF WASTE GENERATED	ESTIMATED VOLUME m³	ON-SITE METHOD OF ONSITE REUSE	OFF-SITE SPECIFY CONTRACTOR AND RECYCLING OUTLET TO BE USED	SPECIFY CONTRACTOR AND LAND FILL SITE	CONTACT DETAILS
EXCAVATION MATERIAL	5790m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
TIMBER	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
CONCRETE	1.2m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
BRICK/PAVERS	1.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
METAL	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
GLASS	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
PLASTERBOARD	1.0m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
PACKAGING	1.0m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
GARDEN ORGANICS	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
CONTAINERS	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
PAPER/ CARDBOARD	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193
RESIDUAL WASTE	0.5m³	TO BE STOCKPILED SEPARATELY	DUNMORE DEPOT	BUILDER	DUNMORE RECYCLING & WASTE DISPOSAL DEPOT, BUCKLEYS LANE DUNMORE NSW 2529 PH: 42 375193

ISSUE	AMENDMENT	DATE
A	ISSUE FOR DA APPLICATION	07/11/19
B	MINOR AMENDMENTS	08/05/20
C	MINOR AMENDMENTS	24/06/20

PLANS 0 1000 2000 3000 4000 5000

DO NOT SCALE IF IN DOUBT ASK A1

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS

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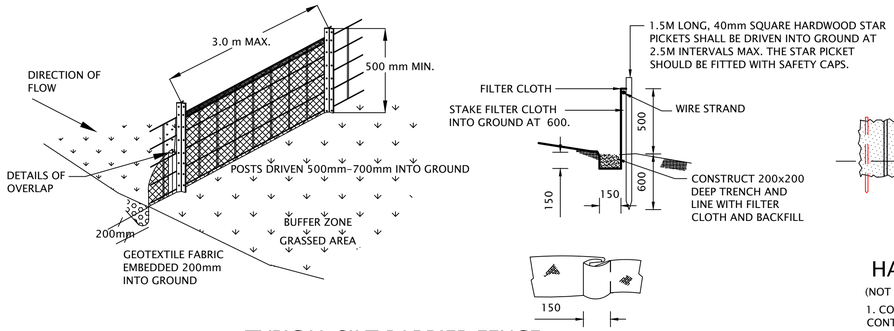
ACEA The Association of Consulting Engineers Australia

Title	SOIL EROSION AND SEDIMENTATION PLAN
Project	PROPOSED APARTMENT DWELLING
At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

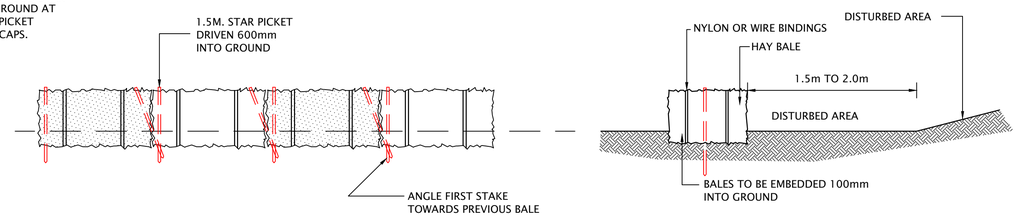
SCALES	AS SHOWN	DATE PLOTTED	13/05/19
DRAWN	D.K.		
DESIGNED	G.U.	DATUM	A.H.D.
CHECKED	G.U.	DATE CHK'D	__/05/19

PROJECT No	DWG	REVISION
19044	C2	C



TYPICAL SILT BARRIER FENCE.

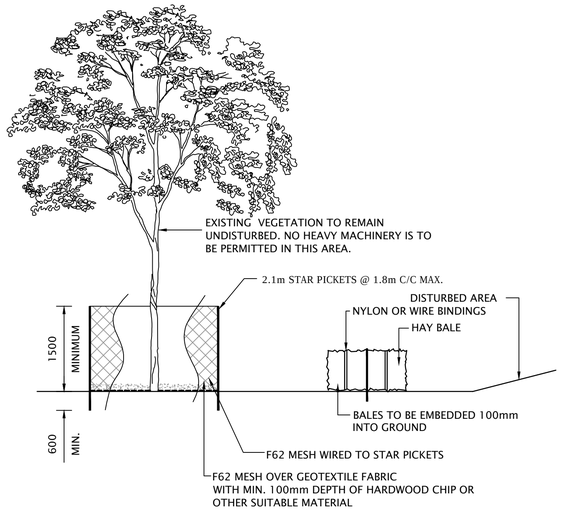
(NOT TO SCALE)



HAY BALE ELEVATION

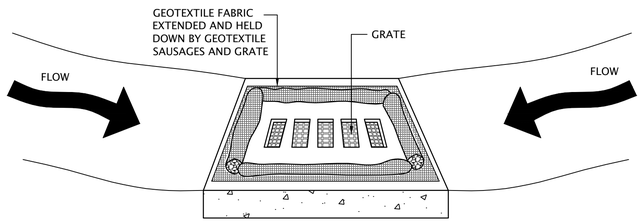
(NOT TO SCALE)

1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF THE SLOPE.
2. PLACE BALES LENGTH WISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE LOOSE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. ENSURE THAT THE MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH 2 1.2 METER STAR PICKETS OR STAKES. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 - 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.
6. ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED- THEY COULD REQUIRE REPLACEMENT EACH TWO OR FOUR MONTHS



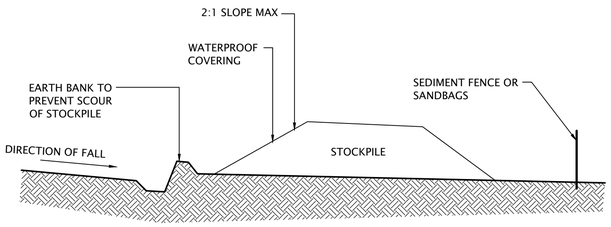
TREE PROTECTION DETAIL

(NOT TO SCALE)



STORMWATER INLET SEDIMENT CONTROL

(NOT TO SCALE)

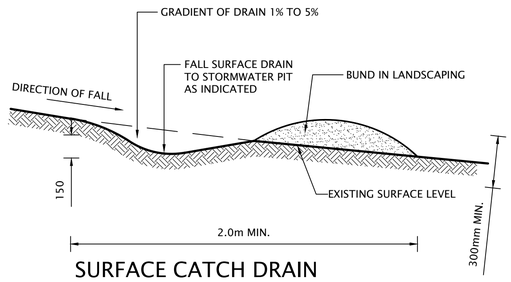


BUILDING MATERIAL STOCKPILE DETAILS

(NOT TO SCALE)

CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METERS FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW ROADS AND HAZARD AREAS
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METERS IN HEIGHT.
4. WHERE ARE TO BE PLACED FOR MORE THAN 10 DAYS, STABILIZE THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
5. CONSTRUCT EARTH BANKS ON THE UP SLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES 1 TO 2M DOWN SLOPE.



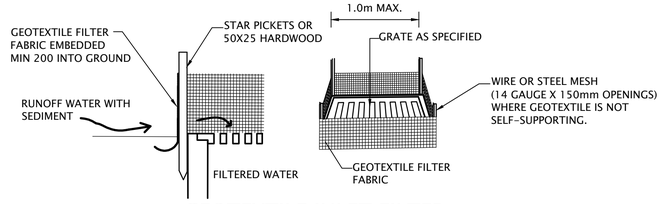
SURFACE CATCH DRAIN

NOTE TO SCALE

ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UP SLOPE LENGTH IS 80m

CONSTRUCTION NOTES

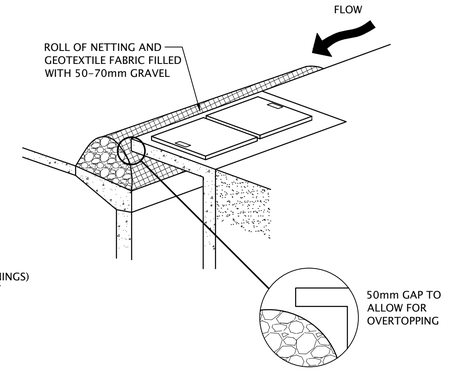
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT
2. AVOID REMOVING SHRUBS AND TREES IF POSSIBLE-WORK AROUND THEM
3. ENSURE THE STRUCTURE IS FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS NOT v SHAPED
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE
6. COMPLETE PERMANENT OR TEMPORARY STABILIZATION WITHIN 10 DAYS OF CONSTRUCTIONS



GEOTEXTILE INLET FILTER

(NOT TO SCALE)

1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW PROCEDURE FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC. REDUCE THE PICKET SPACING TO 1.0m CENTRES.
3. IN WATERWAY, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWINGS.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATER TO BYPASS IT.



SEDIMENT PROTECTION ON EXISTING STREET PIT-TYPICAL

(NOT TO SCALE)

1. ALL SEDIMENT DAMS AND TRAPS SHALL BE CLEANED WHEN THE STRUCTURES ARE A MAXIMUM OF 60 % FULL OF SOIL & DEBRIS
2. FILTER SHALL BE CONSTRUCTED BY REMOVING & WRAPPING GRATE IN FILTER FABRIC (PROPEX OR APPROVED EQUIVALENT) WITH MINIMUM 75mm FREE FABRIC OUTSIDE ALL EDGES OF GRATE WHEN IT IS REINSTALLED

ISSUE	AMENDMENT	DATE
A	ISSUE FOR DA APPLICATION	07/11/19

PLANS 0 1000 2000 3000 4000 5000

DO NOT SCALE IF IN DOUBT ASK A1

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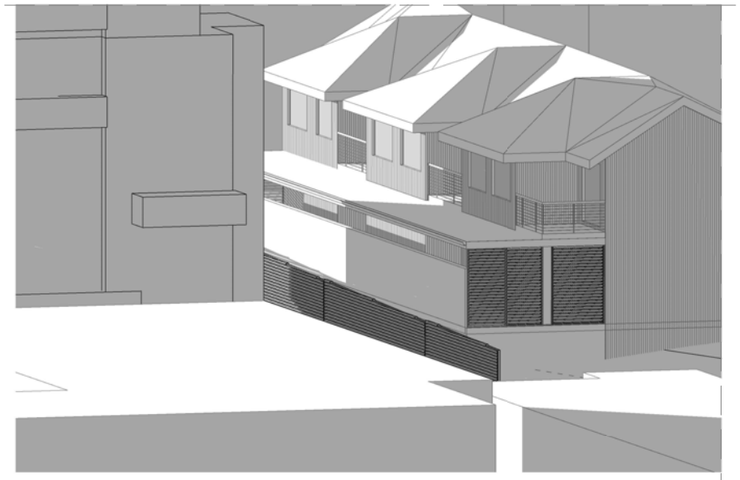
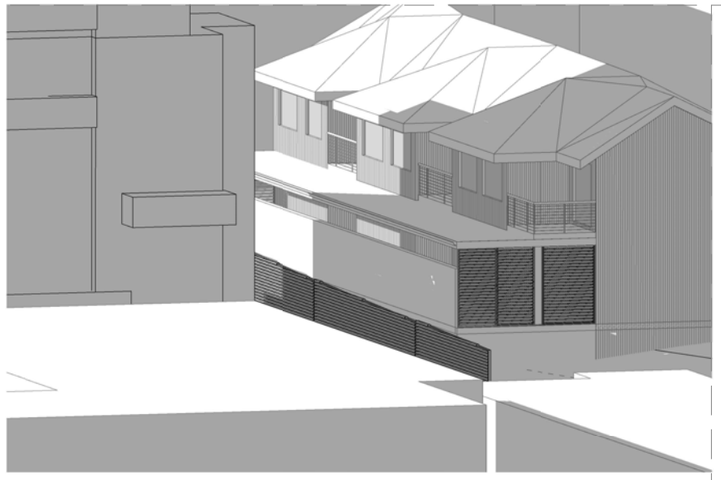
ACEA The Association of Consulting Engineers Australia

Title	SOIL EROSION & SEDIMENTATION DETAILS
Project	PROPOSED APARTMENT DWELLING
At	9-11 PARK STREET WOLLONGONG, NSW
Client	MORETTI CONSTRUCTION

SCALES AS SHOWN		DATE PLOTTED 13/05/19
DRAWN D.K.		
DESIGNED G.U.		DATUM A.H.D.
CHECKED G.U.	DATE CHK'D __/05/19	
PROJECT No 19044	DWG C3	REVISION A



2 8am- Compliant 3D Massing



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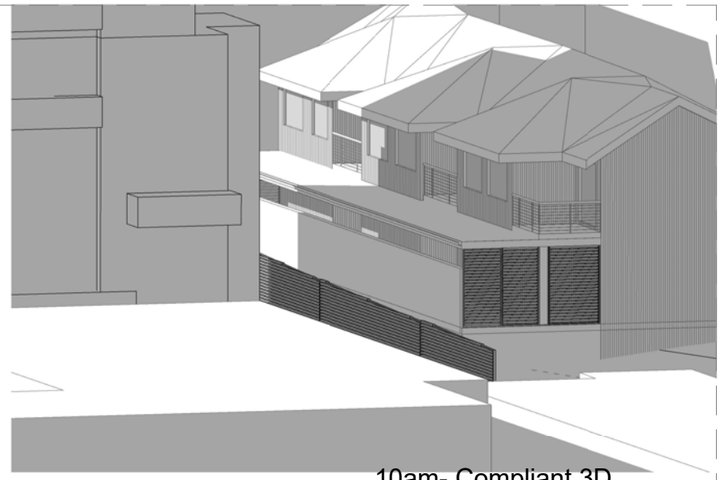

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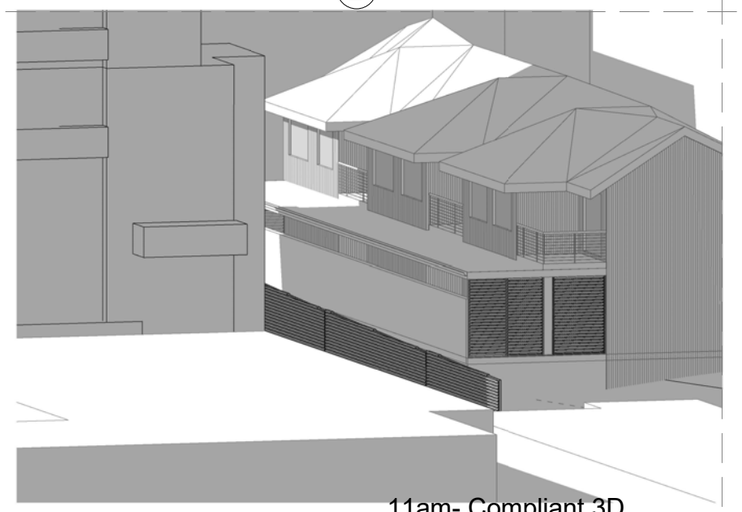

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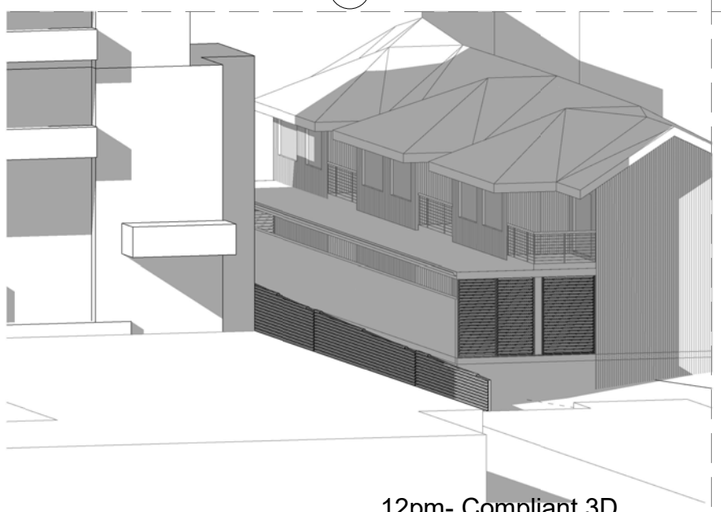

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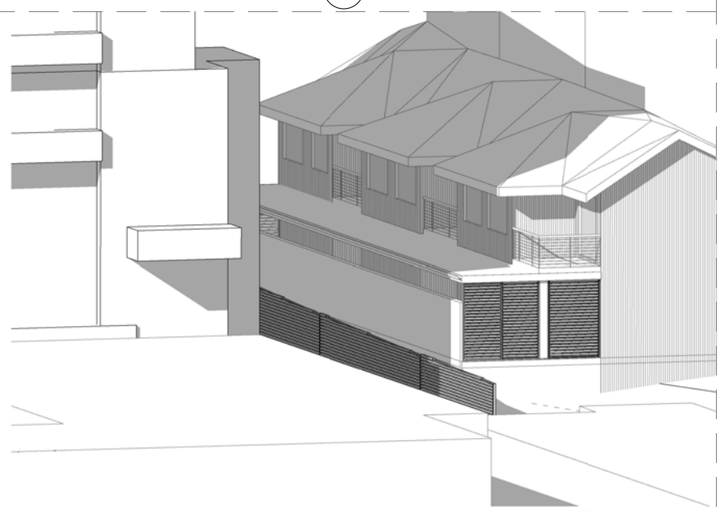

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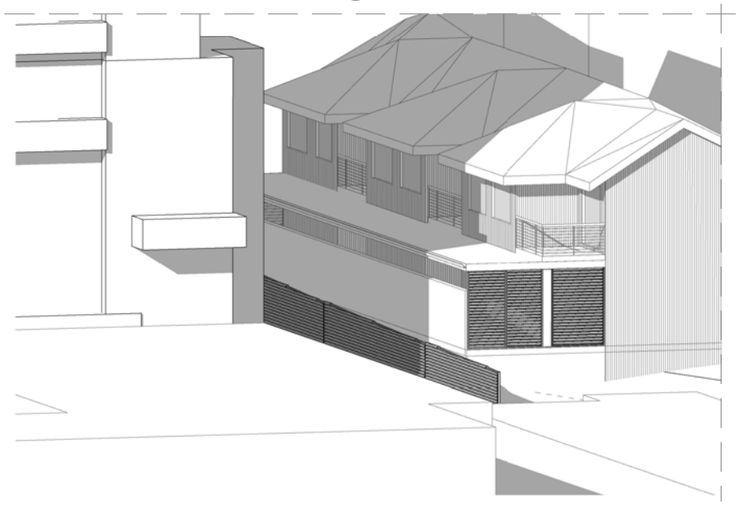

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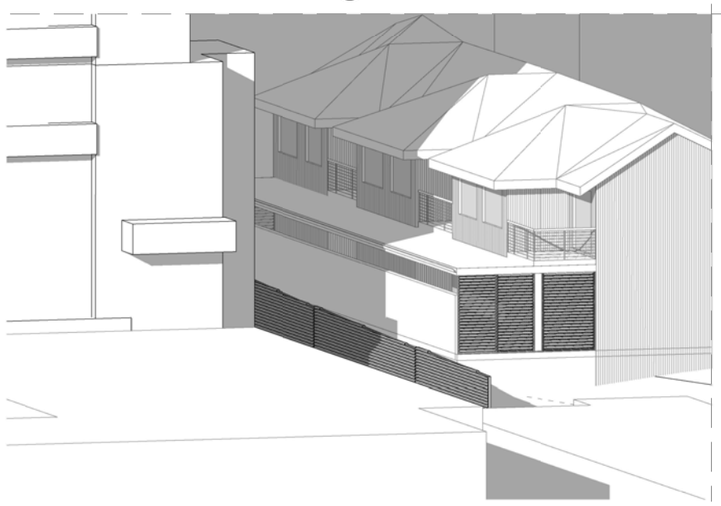

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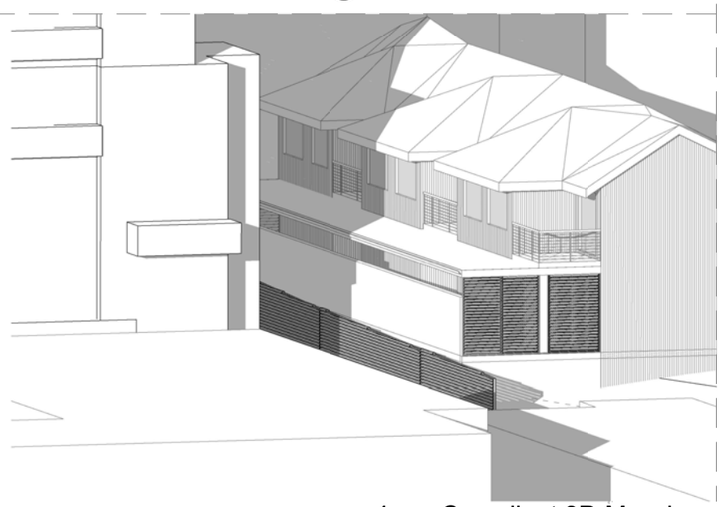


9 4pm- Compliant 3D Massing

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	AMENDMENT TO TEXT COLOUR ON SHADOW DIAGRAMS	21.01.2020	SH

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

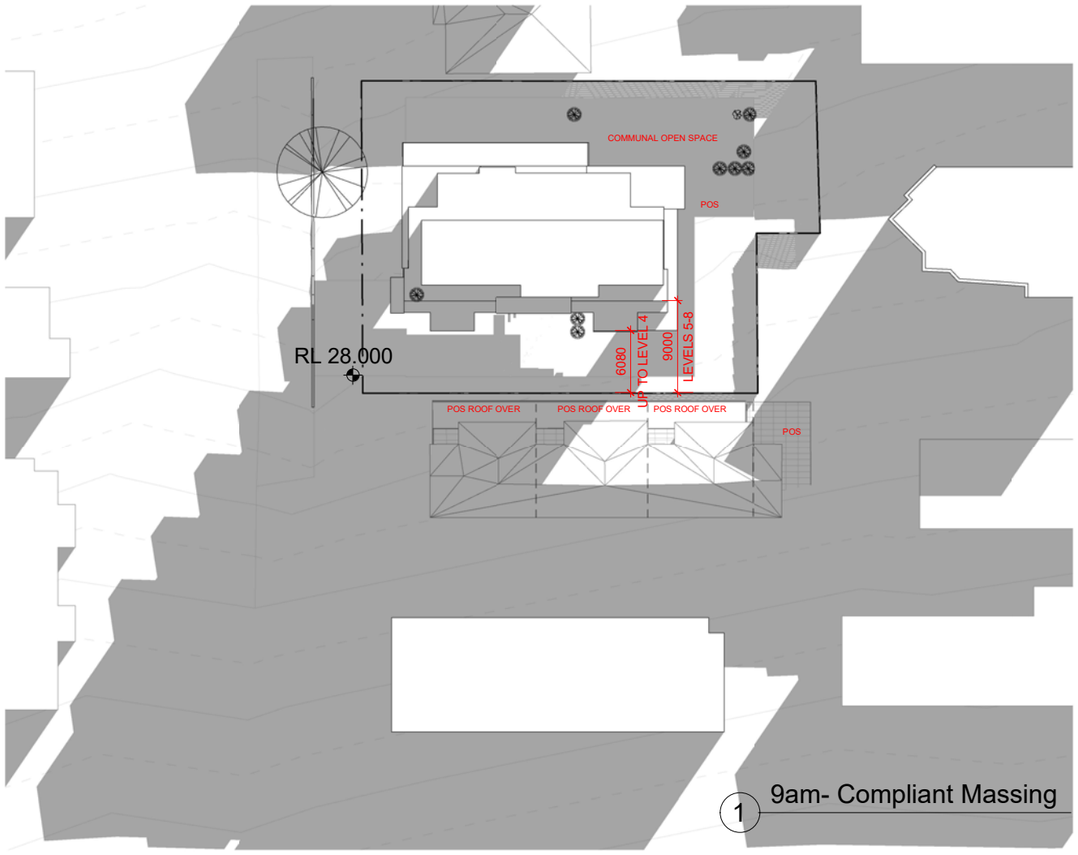
MORETTI CONSTRUCTION18-60

3D SHADOWS- COMPLIANT MASSING

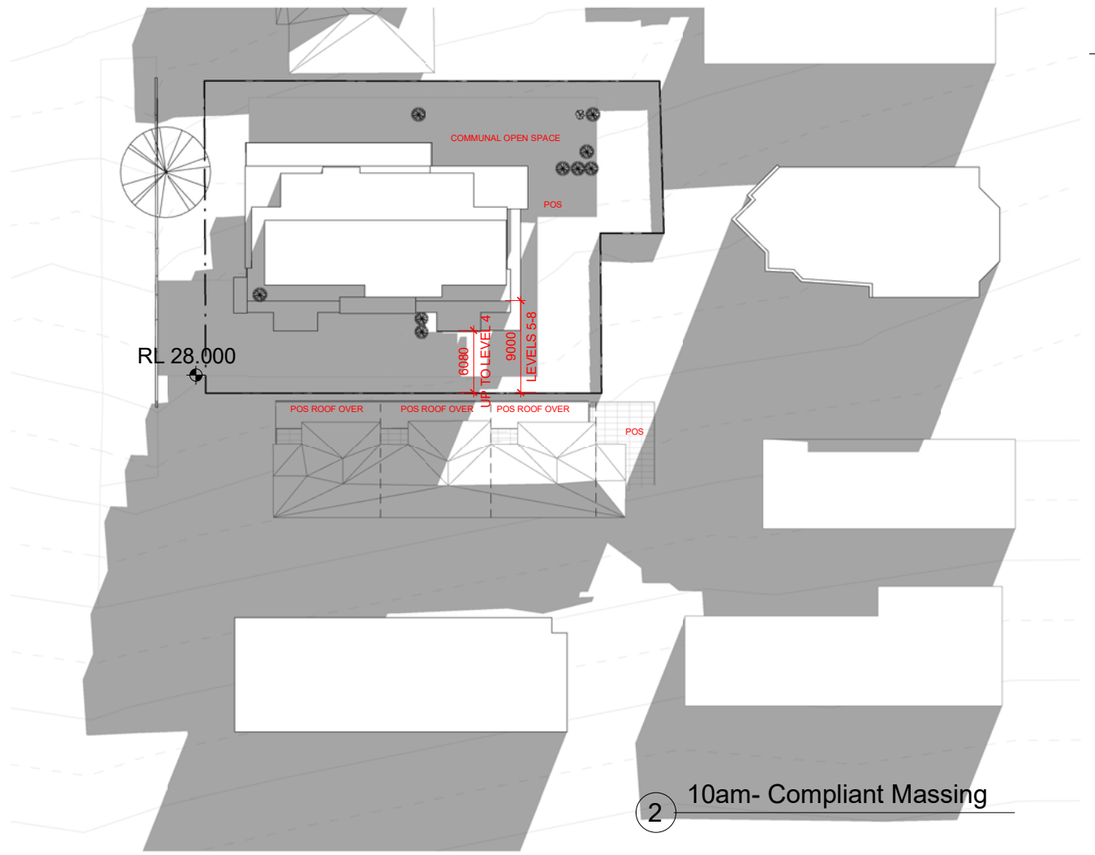
DA-25 -B

Suite 3
73 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
E: office@prdarchitects.com
PRD ARCHITECTS

21/01/2020 1:21:49 PM



1 9am- Compliant Massing



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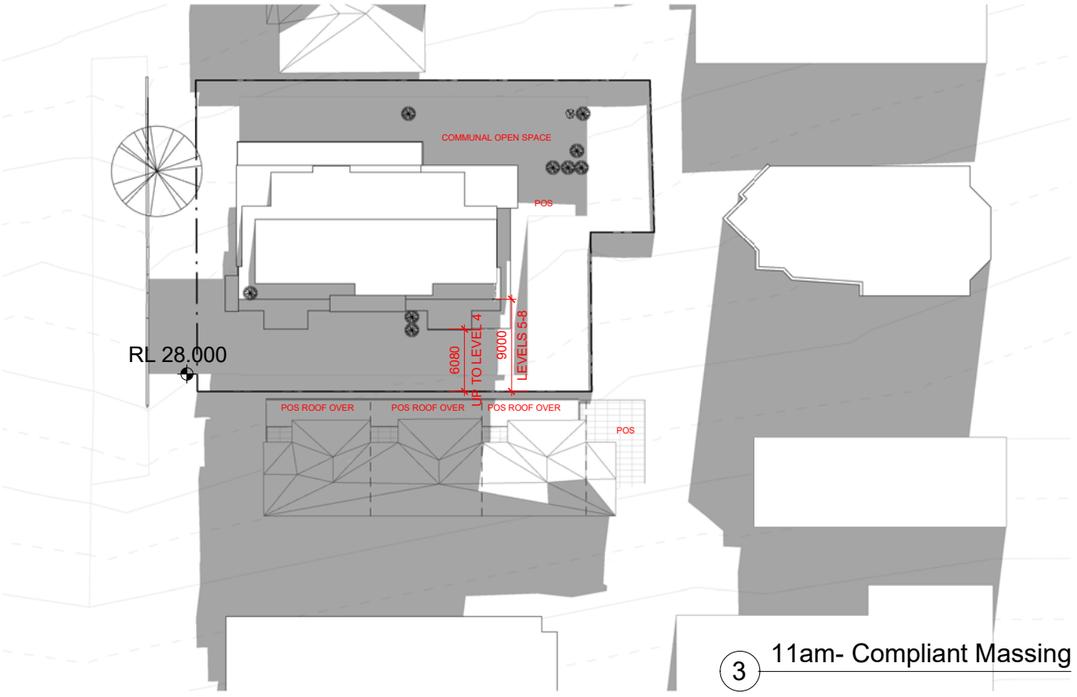

3 11am- Compliant Massing

4 12pm- Compliant Massing

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

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MORETTI CONSTRUCTION18-60

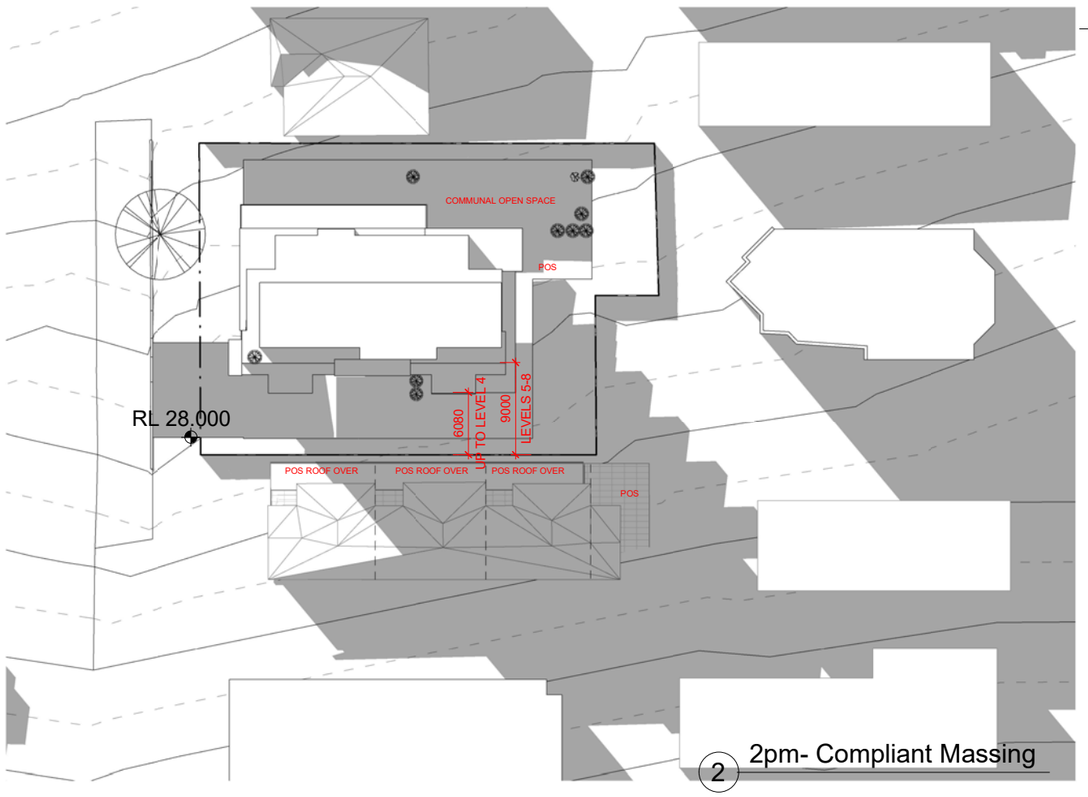
SHADOW DIAGRAMS- COMPLIANT MASSING

DA-20 -B

Suite 3
73 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
E: office@prdarchitects.com
PRD ARCHITECTS

21/01/2020 1:18:48 PM

1 1pm- Compliant Massing



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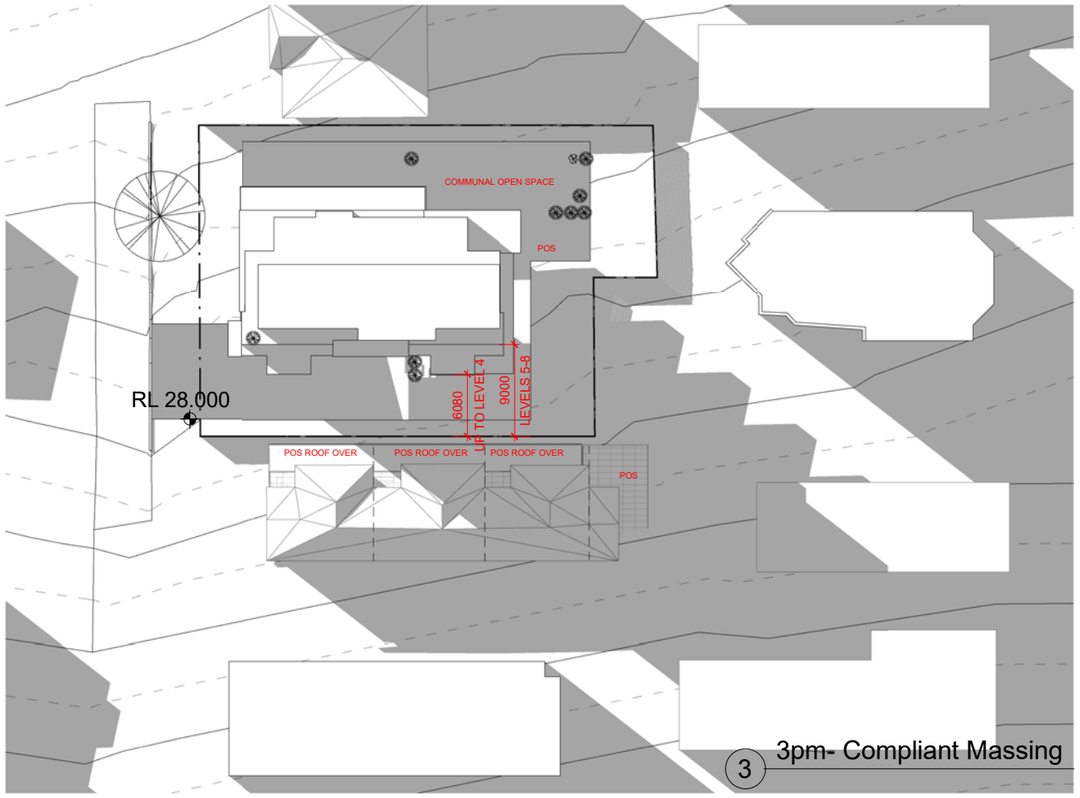


3 3pm- Compliant Massing

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	AMENDMENT TO TEXT COLOUR ON SHADOW DIAGRAMS	21.01.2020	SH

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

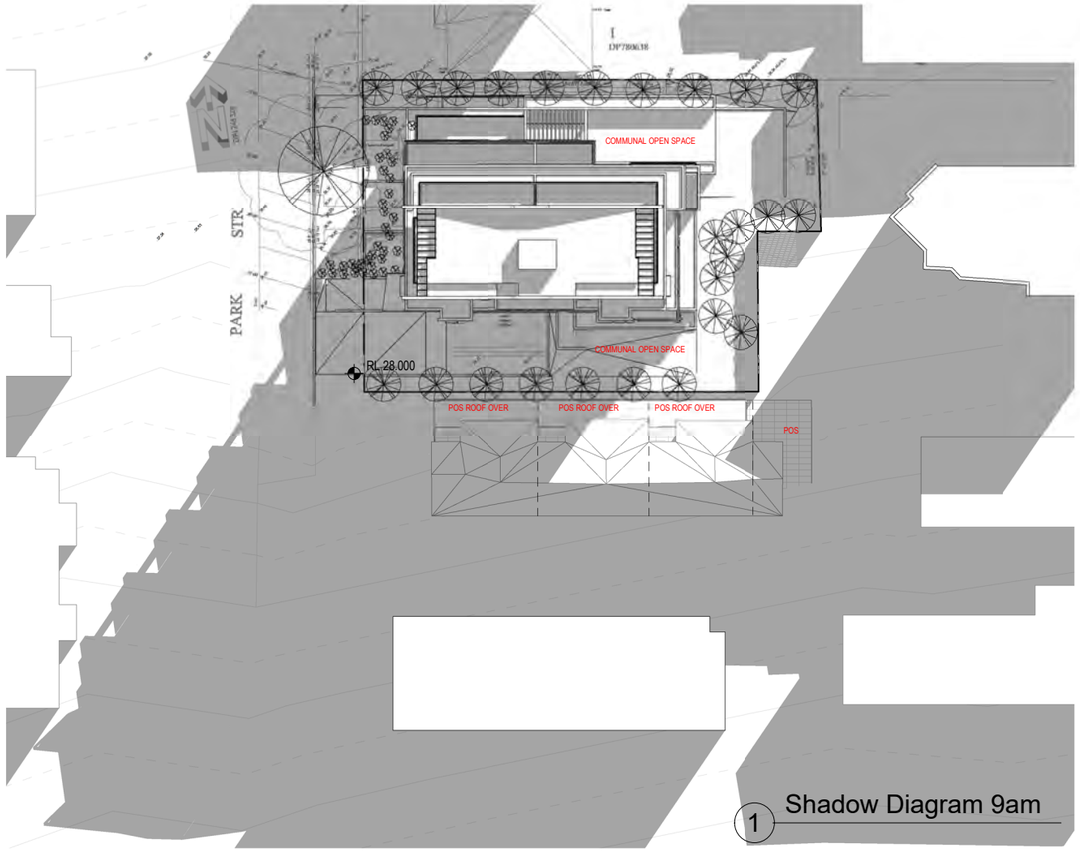
MORETTI CONSTRUCTION18-60

SHADOW DIAGRAMS- COMPLIANT MASSING

DA-22 -B

Suite 3
73 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
E: office@prdarchitects.com
PRD ARCHITECTS

21/01/2020 1:19:52 PM



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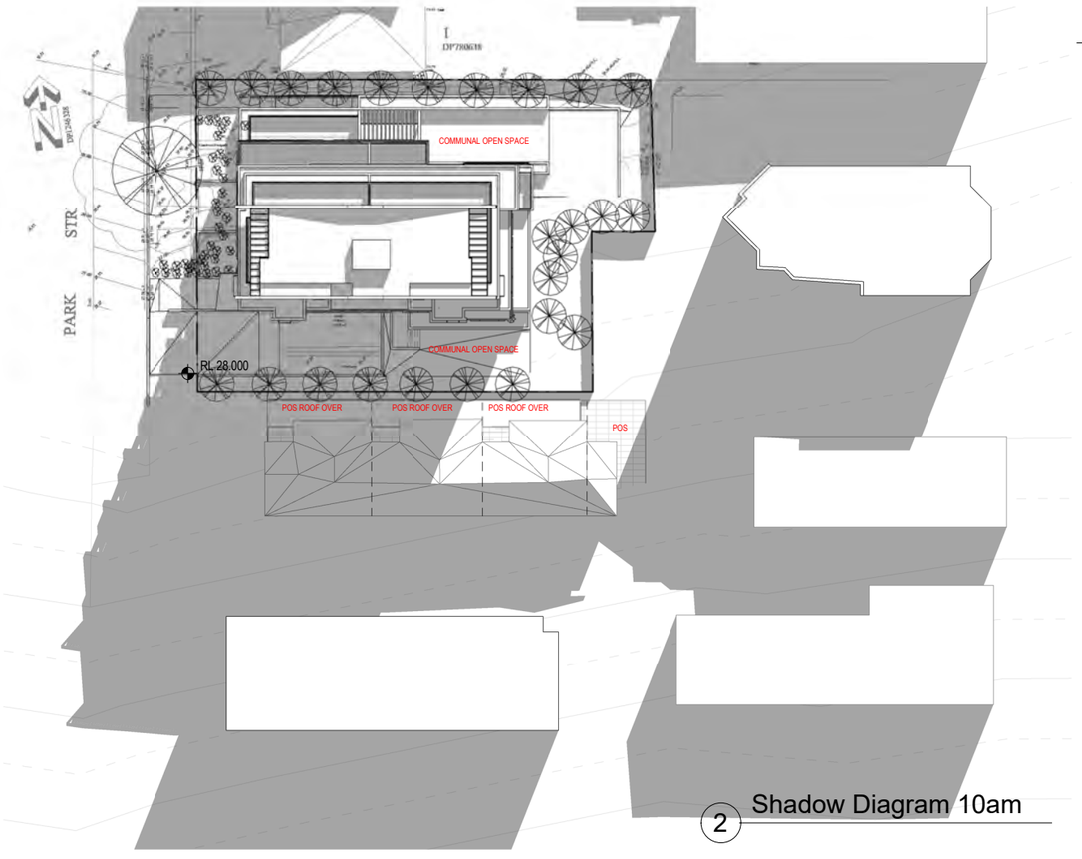

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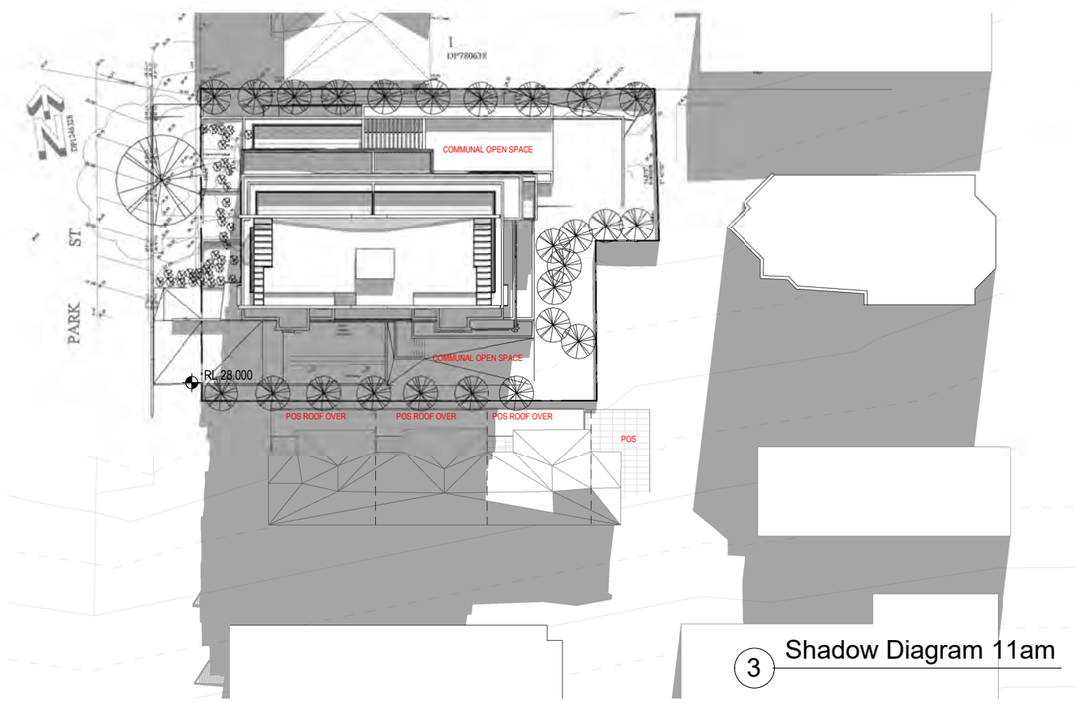

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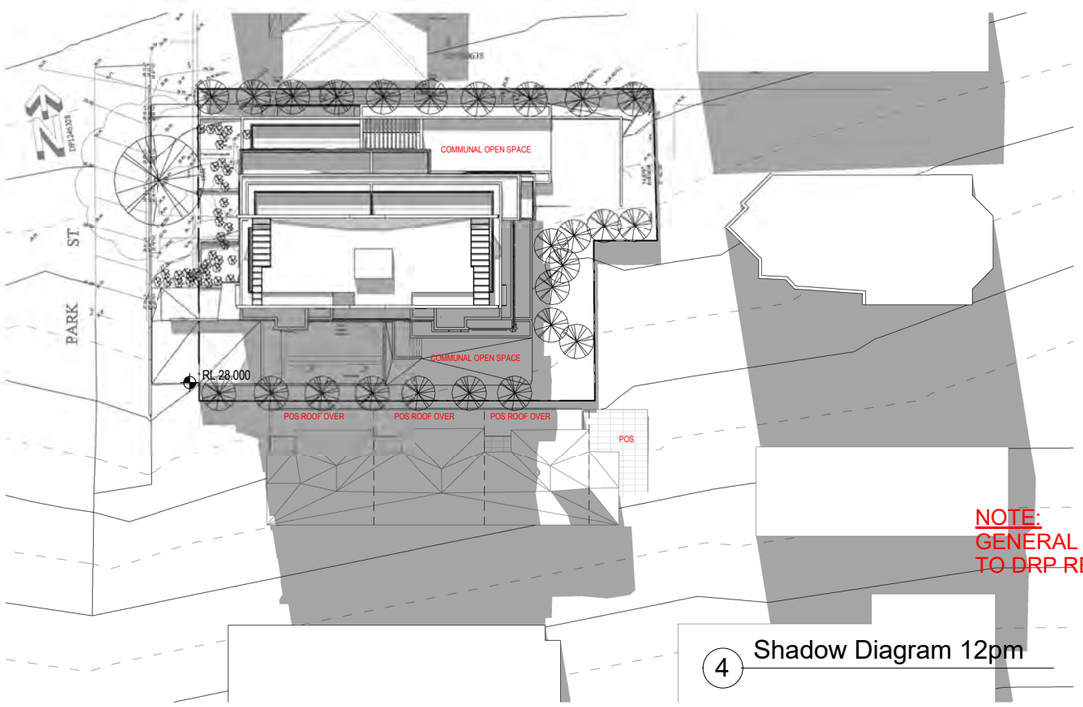


4 Shadow Diagram 12pm

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	AMENDMENT TO TEXT COLOUR ON SHADOW DIAGRAMS	21.01.2020	SH
C	DA REVISION TO DRP	05.05.2020	DC
D	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
E	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

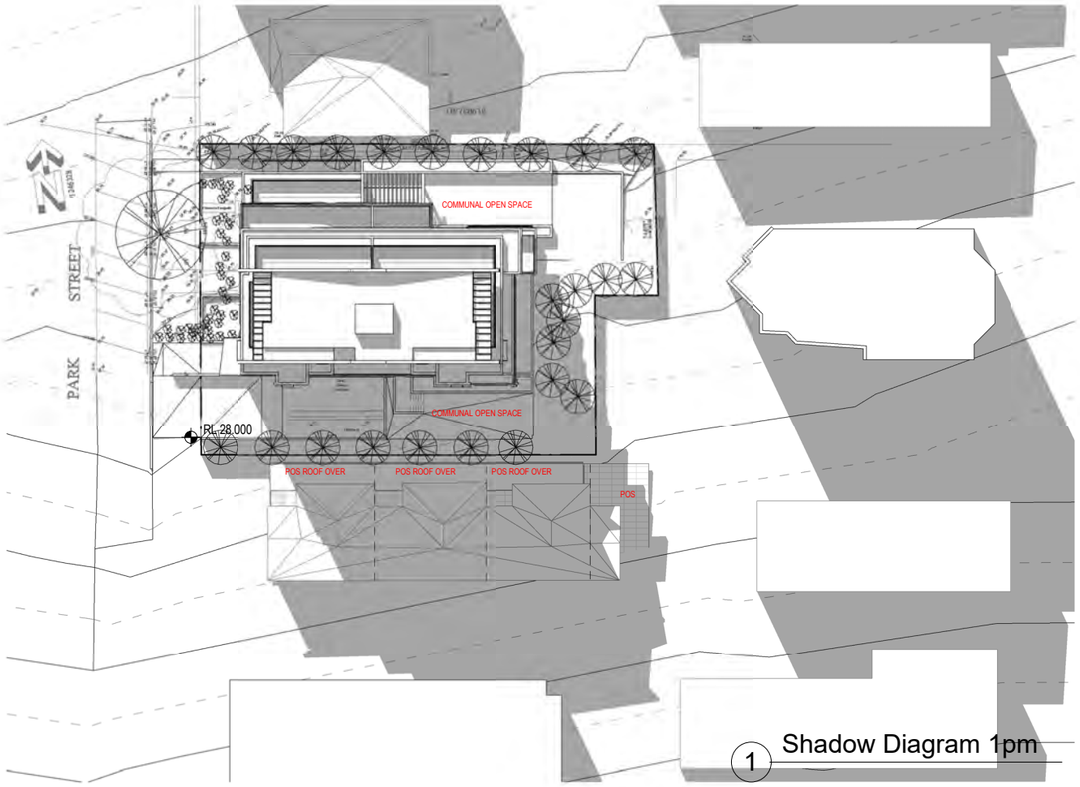
MORETTI CONSTRUCTION18-60

SHADOW DIAGRAMS- WINTER SOLSTICE

DA-19 -E

Suite 3
75 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
E: office@prdarchitects.com
PRD ARCHITECTS

23/06/2020 10:32:19 AM



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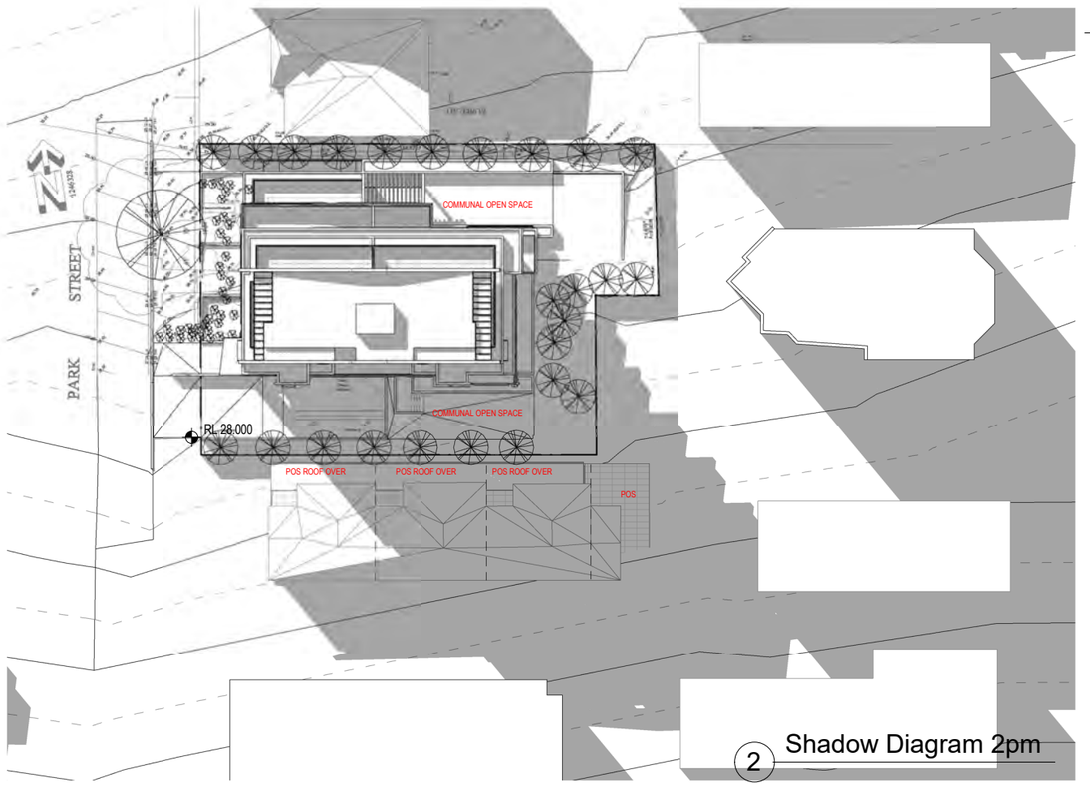

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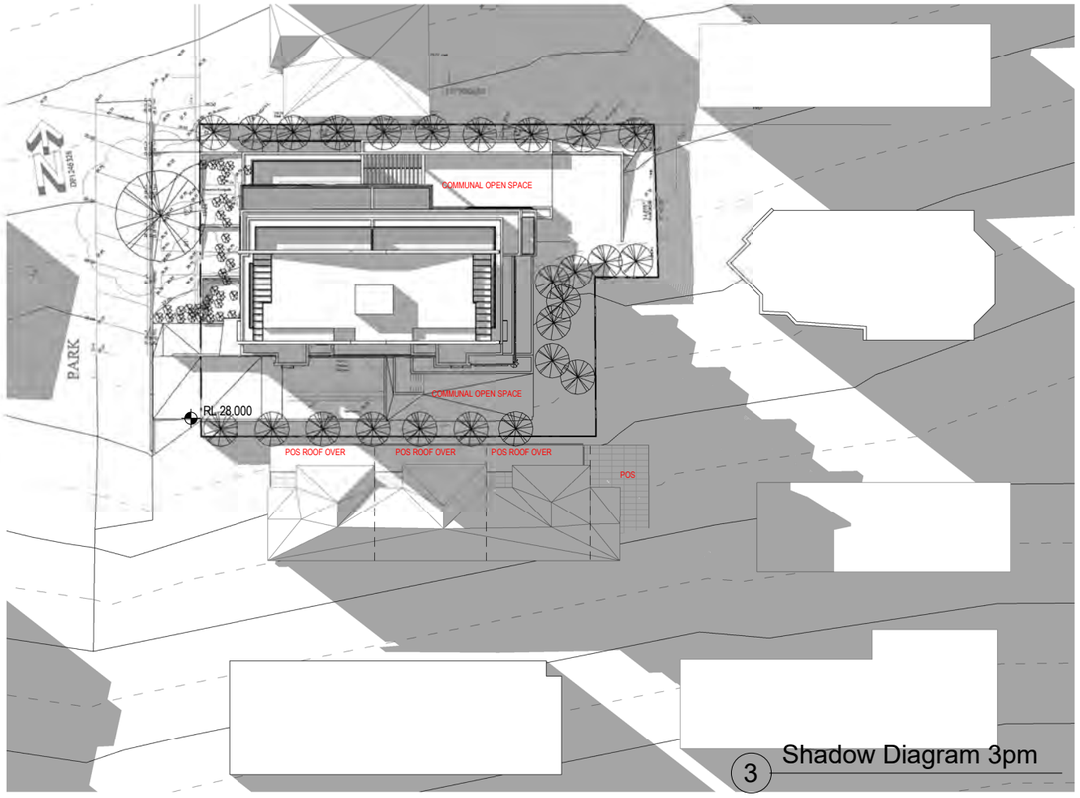

3 Shadow Diagram 3pm

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	AMENDMENT TO TEXT COLOUR ON SHADOW DIAGRAMS	21.01.2020	SH
C	GENERAL	22.01.2020	SH
D	DA REVISION TO DRP	05.05.2020	DC
E	GENERAL DRP/CLIENT CHANGES	09.06.2020	DC
F	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

2 1 0 2 4 6 8

1:100 @ A1 1:200 @ A3

Suite 3
73 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
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PRD ARCHITECTS

23/06/2020 10:32:48 AM

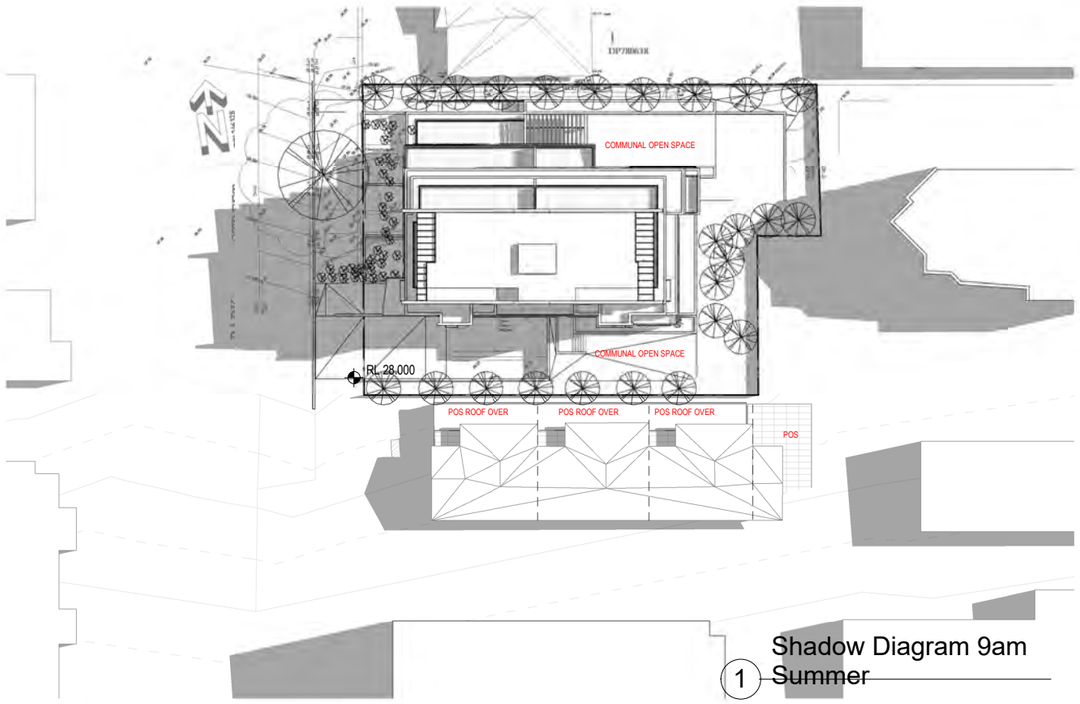
PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

MORETTI CONSTRUCTION18-60

SHADOW DIAGRAMS- WINTER SOLSTICE

DA-20 -F



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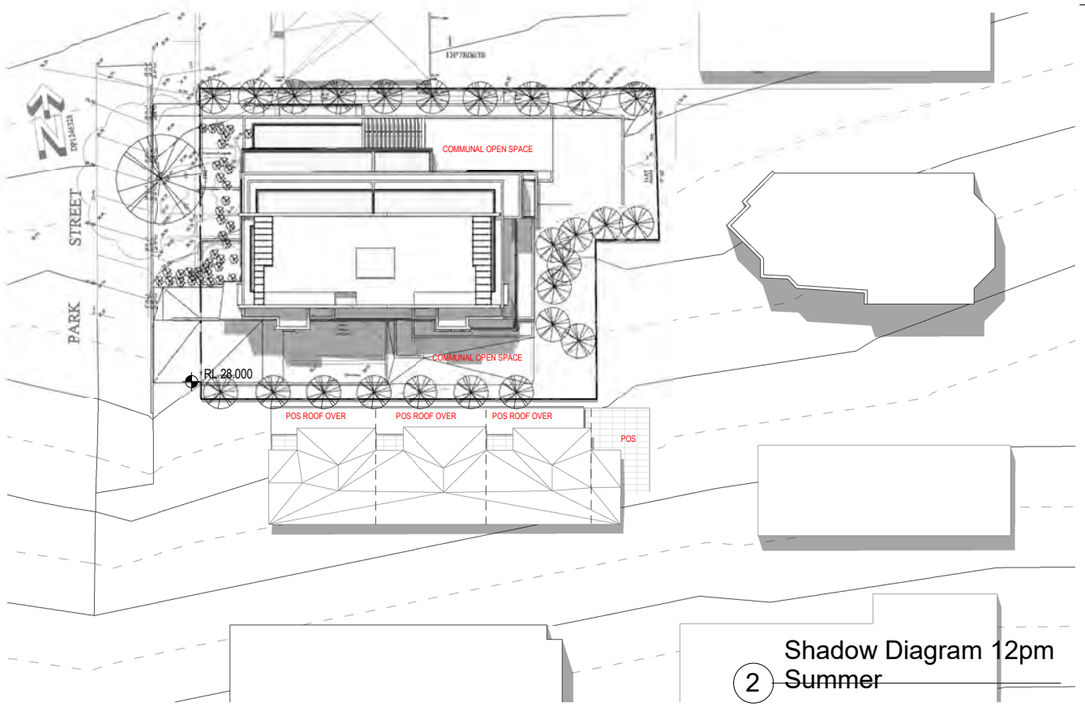

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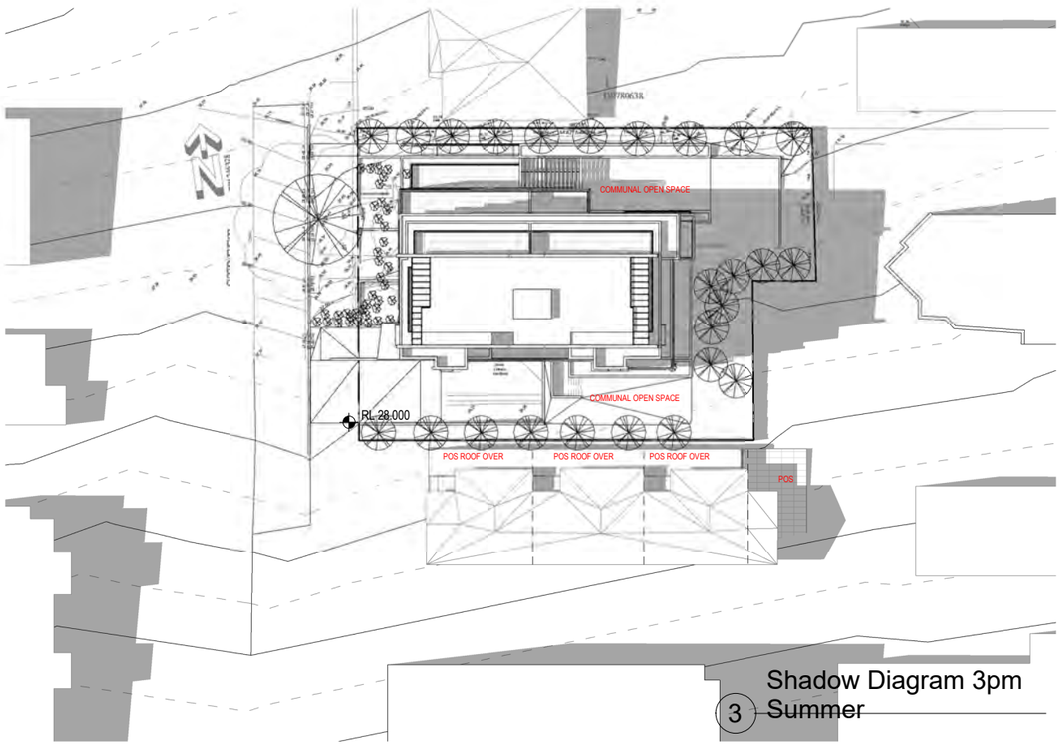

3 Shadow Diagram 3pm Summer

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	AMENDMENT TO TEXT COLOUR ON SHADOW DIAGRAMS	21.01.2020	SH
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F	BASEMENT PARKINGS & FSR CALCULATION	23.06.2020	DC

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

MORETTI CONSTRUCTION18-60

SHADOW DIAGRAMS- SUMMER SOLSTICE

DA-21 -F

Suite 3
77 Market Street
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P: 4228 3699 F:4229 1145
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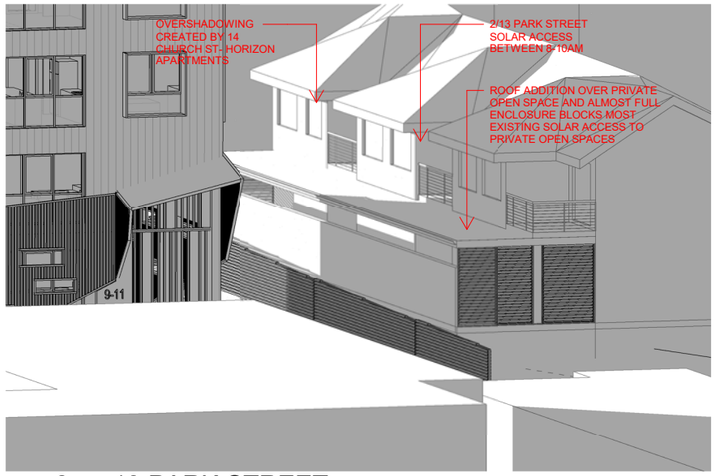
PRD ARCHITECTS

23/06/2020 10:33:04 AM



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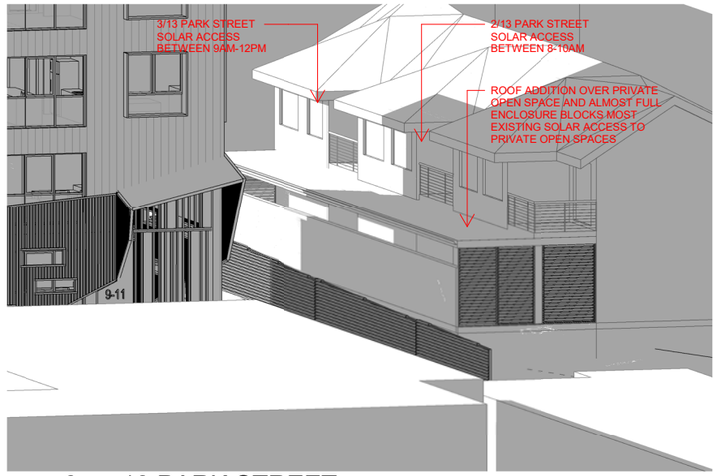

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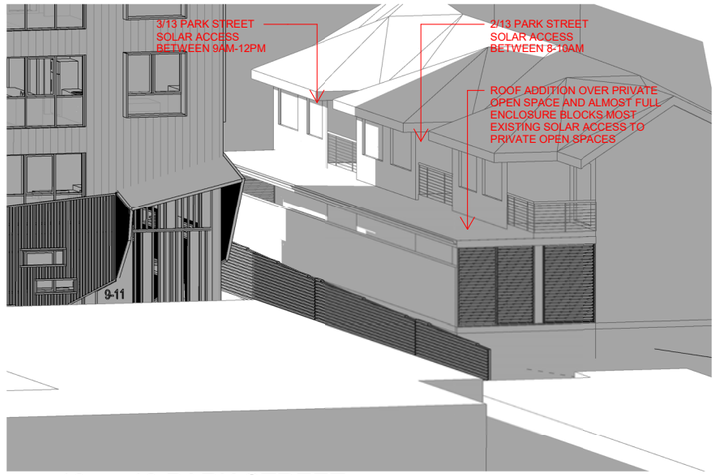

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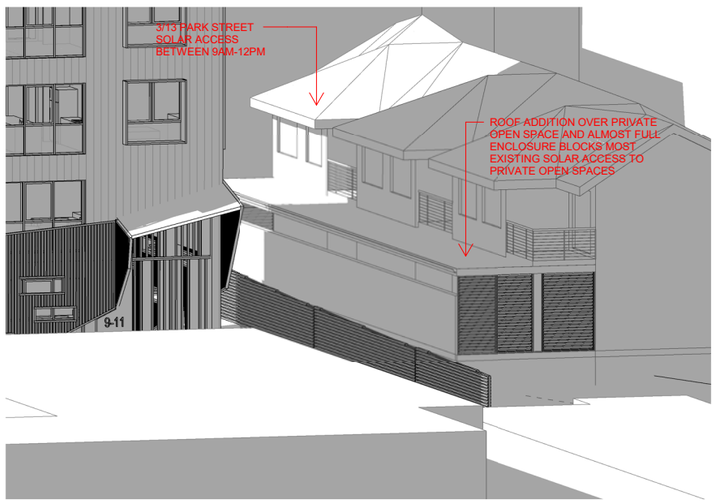

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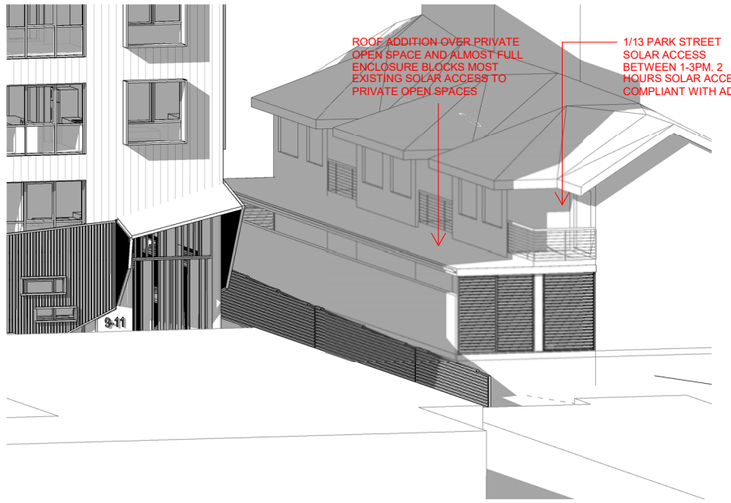

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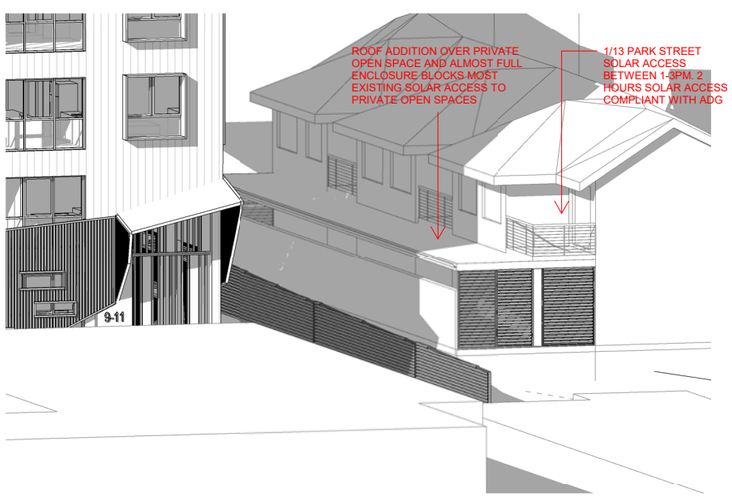

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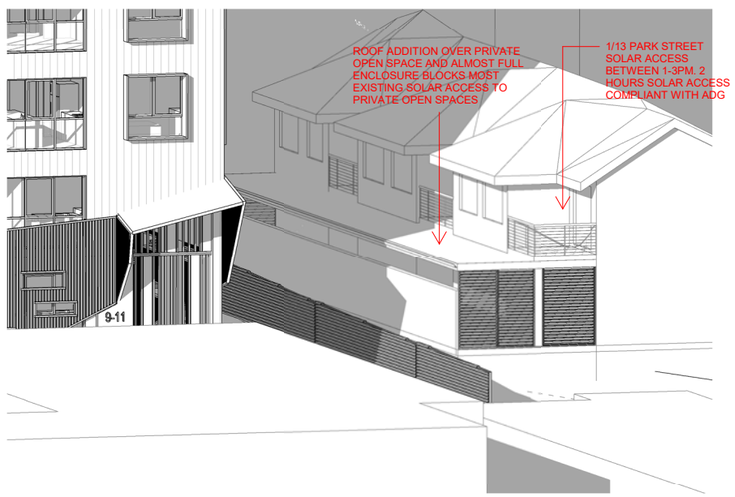

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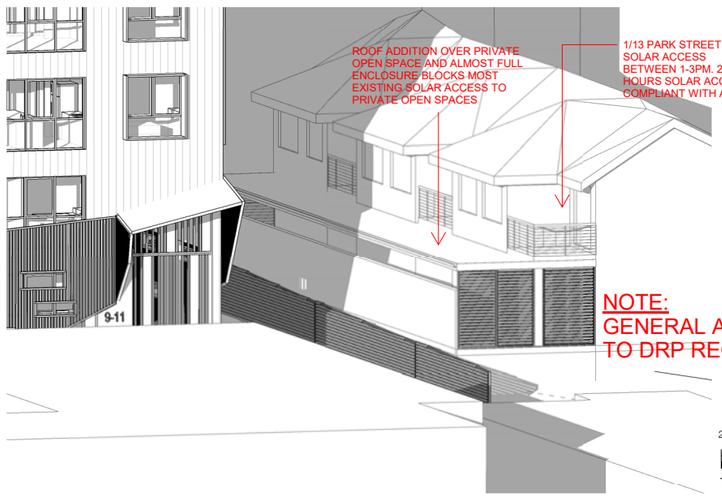

9 4pm 13 PARK STREET

NOTE:
GENERAL AMENDMENT ACCORDING TO DRP REQUIREMENTS.

NOT FOR CONSTRUCTION

DEVELOPMENT APPLICATION

AMENDMENTS

No.	Revision Description	Date	BY:
A	DA SUBMISSION	2019.11	SH
B	AMENDMENT TO TEXT COLOUR ON SHADOW DIAGRAMS	21.01.2020	SH
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2 1 0 2 4 6 8

1:100 @ A1 1:200 @ A3

Suite 3
73 Market Street
Wollongong NSW 2500
P: 4228 3699 F:4229 1145
E: office@prdarchitects.com
PRD ARCHITECTS

23/06/2020 10:34:21 AM

PROPOSED APARTMENT BUILDING

9-11 PARK STREET WOLLONGONG. LOT 1, DP 780693 & LOT 1, DP 1246328

SHADOWS TO 13 PARK STREET

MORETTI CONSTRUCTION18-60

DA-22 -F

Attachment 5

20 April 2020

Our Ref: LEF:20/1226

PRD Architects
2/73 Market Street
WOLLONGONG NSW 2500

By email only: scott.millican@prdarchitects.com

RE: PRD ARCHITECTS | ADVICE REGARDING ISOLATED ALLOTMENT| LOT 1 DP 780693 & LOT 1 DP 1246328 |

1. Background and Instructions

1.1 PRD Architects is the proponent of a development application submitted to Wollongong Council (”Council”) for the development of 9-11 Park Street Wollongong, legally known as Lot 1 DP 780693 and Lot 1 DP 1246328 (“Site”).

1.2 It is proposed to construct a residential flat building (‘RFB’) consisting of 15 apartments over 2 levels of basement car parking on the Site (“Proposal”). The Proposal also includes the consolidation of the two allotments which, together, form the Site.

1.3 The Site is zoned R1 General Residential under the Wollongong Development Control Plan (‘WDCP’).

1.4 At the pre-lodgment meeting on 6 August 2019, Council raised concern that the proposal would create an isolated lot to the south, being No. 13 Park Street, Wollongong, legally known as Lot 1 DP 1014832 (“No 13”). Specifically, Council requested that the circumstances in which an isolated lot is permitted by the WDCP be addressed in the development application.

1.5 The issue was addressed in the Statement of Environmental Effects (‘SEE’) prepared by SET Consultants dated 15 November 2019 which accompanied the development application. In summary, it was submitted that isolation of No. 13 Park Street would not occur. An extract of the Statement is provided below:

"… it is considered the No. 13 Park Street has reached its full development potential within the expectation of the R1 General Residential zone and the process of the planning principle is not required to be undertaken. The proposed development therefore does not create an isolated lot".

1.6 Council have indicated that they remain of the view that No. 13 will become an isolated site should the development be approved.

1.7 You have sought our advice as to whether No. 13 would properly be characterised as an isolated lot for the purposes of assessment of this development application.

2. Summary of opinion

2.1 It is our opinion that No. 13 will not become an isolated lot having regard to the matters below:

(a) the current development of No 13;

(b) the objectives of the relevant zone and character statement for the North Wollongong area;

(c) case law relating to what will constitute an isolated allotment; and

(d) the Wollongong Development Control Plan.

3. Current Development of No 13

3.1 No. 13 the has been developed by way of a two-storey building over basement parking ('existing development'). It is approximately 700m2 in area with a 15 metre frontage.

3.2 The building comprises four residencies approved as townhouses in 1991 which were subsequentially strata subdivided in 1997. As a result of the strata subdivision, the strata lots in No 13 are held in four separate ownerships.

3.3 The development on the lot is properly characterised as medium density development and, as outlined in the SEE, it may constitute a RFB that would now be subject to the provision of SEPP 65.

3.4 The following figure is an aerial view of North Wollongong with No. 13 located approximately in the centre of the image and identified with a green marker.

Figure 1 – North Wollongong aerial photograph obtained from Nearmaps on 18 April 2020

3.5 Figure 1 demonstrates that both the size of No 13 and the existing development on No 13 accords with much of the surrounding development.

3.6 Having regard to the surrounding development, it is **not** an example of a small allotment or of an underdeveloped property.

3.7 The current development is not approaching the end of its lifecycle and compared to many of the surrounding properties, has been the subject of relatively recent development.

4. Zone objectives and character statement

4.1 The objectives of the R1 General Residential Zone are as follows [emphasis added]:

- *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.*

4.2 The existing development at No 13 is entirely consistent with these objectives. It provides for the diverse housing needs of the community and makes a positive contribution to housing variety in the area.

4.3 Chapter D1 of the WDCP provides character statements which identify the existing character and desired future character for each particular suburb within the city. The North Wollongong Character Statement provides [emphasis added]:

> *North Wollongong is situated directly to the north of Wollongong City Centre and is a medium to high density residential suburb. It comprises predominantly of residential apartment buildings as well as a mix of other low to medium density residential development, including detached dwelling-houses, townhouses and walk up flats.*
>
> *North Wollongong will remain a medium to high density residential area and is likely to experience the replacement of some older housing stock with the erection of new multi-dwelling housing and residential flat buildings given the suburb's proximity to Wollongong City Centre, North Wollongong Beach and Wollongong Harbour / Belmore Basin.*

4.4 It is clear from this statement that Council envision a mix of both medium and high-density development in the North Wollongong area.

4.5 If Council intended for North Wollongong (and more specifically, Park Street) to be high-density development only, this would have been reflected in the character statement and zoning of the area. Park Street and surrounds are zoned R1 rather than a zone which would only allow for higher density development.

5. Case law related to isolated allotments

5.1 *Karavellas v Sutherland Shire Council* [2004] NSW LEC 251 ("Karavellas Case") is a seminal case in relation to the amalgamation of sites and isolation of sites through redevelopment.

5.2 In the Karavellas Case, the Court restated that *Melissa Grech v Auburn Council* [2004] NSWLEC 40 ("Grech Case") is the appropriate starting point for the general questions in relation to site isolation.

5.3 In the Grech Case it was found that, although the adjoining property could technically be suitable for other permissible forms of development, the form of development most likely to occupy the adjoining development was a residential flat development and the site that was found to be isolated would not be suitable for a residential flat development.

5.4 Contrasting the circumstances of the Grech Case against the present development squarely demonstrates the reasons why No 13 is not an isolated allotment. These reasons include:

(a) in the Grech Case the adjoining allotment was a single dwelling house in an area where the predominant form of accommodation was residential flat buildings. This can be contrasted to the present case where:

i. No 13 is substantially greater than a single dwelling house. It has multiple ownership and could be classified as a residential flat building in its own right;

ii. there is a mix of surrounding development in the area and the development of No 13 is already consistent with the general form of development in the area; and

(b) the Grech Case related to a property in a Residential (Residential Flat Buildings) Zone. This zone had within its zone objectives the objective of permitting residential flat buildings. This can be contrasted with the objectives of the relevant R1 General Residential zone the subject of No 13 which include the provision of a *variety of housing types and densities* [emphasis added].

5.5 In *Hamdan Co Group Pty Ltd v Canterbury-Bankstown Council* [2018] NSWLEC 1255 ('Hamdan') the Court adopted a wide approach when considering the respective prohibitive clause in the Bankstown DCP which states:

> *Isolation of sites occurs where a property that adjoins a development site would be narrower or smaller than required to be developed under Canterbury LEP. Consequently the isolated site would be incapable of accommodating the form of redevelopment envisaged by the planning controls.*

The Court interpreted the objective of the clause as follows:

> *[39] The objectives of the provision are to ensure sites are not sterilised by adjoining development so as to be incapable of being reasonably developed under the applicable controls.*

5.6 Adopting the approach of *Hamdan,* we conclude that the objective of isolated lot provisions is to prevent land being sterilized in the sense that, due its isolation, it is no longer capable of accommodating development that is consistent with the planning controls in the area.

5.7 Lot 13 is not isolated in this sense, given that its existing development is consistent with both the planning controls and the general form of development in the area.

5.8 Further in *Hamdan,* the Court considered an area in which the zone objectives encouraged a variety of dwelling types and an alleged isolated allotment that would not accommodate a residential flat building and made the following assessment:

> *"…….the zone objectives encourage a variety of dwelling types which translate to a likely diversity in future built form outcome. Therefore, development which does not reflect an RFB outcome, with the associated design controls, should not be considered to be incompatible simply because it isn't an RFB."*

5.9 This demonstrates that it is improper in the present case to determine that No 13 is an isolated allotment, merely on the basis that it doesn't comply with the controls for an RFB.

5.10 In *680-682 Kingsway Caringbah Pty Ltd v Sutherland Shire Council* [2017] NSWLEC 99, Acting Justice Molesworth reiterated the relevant considerations for determining lot isolation:

> *[117]…the factor of "isolation" can be considered from two perspectives: first, can the potentially isolated blocks be acceptably developed, as a single site, in a manner which accords with the relevant planning controls? Secondly, can the alleged isolation of the adjoining blocks be overcome in the future by way of amalgamation with other adjoining land?*

5.11 As No 13 has already been 'acceptably developed, as a single site, in a manner which accords with the relevant planning controls' it follows that No 13 will not be isolated by the proposal. It is therefore not necessary to consider the second perspective.

6. Wollongong Development Control Plan

6.1 Clause 6.2 of Chapter B1 of the WDCP prohibits development that would result in the creation of an "isolated lot" on land zoned R1 General Residential Zone. An isolated lot is defined as follows:

> *An "isolated lot" is a lot which is bounded on both sides by properties (or a property and a second street frontage) which comprise, existing development other than a single dwelling house and redevelopment of such adjoining properties is unlikely.*

6.2 This definition of isolated lot is extremely wide, particularly when compared to equivalent definitions contained in other DCP's. For example, Clause 2.19 of the Lake Macquarie DCP 2014 provides:

> *An isolated lot means an allotment that is bounded on all sides (excluding any road frontage) by existing (or approved) medium to high-density residential or commercial development that will preclude the development of the allotment beyond a dwelling house or dual occupancy dwelling or a two storey commercial building [emphasis added].*

6.3 The WDCP definition specifies that neighbouring development need only be 'development other than a single dwelling house' as opposed to medium or high-density development. Conceivably, this would include dual occupancies and other low-density development.

6.4 Further, the definition does not allow for consideration of the characteristics of the isolated lot. No concession is made where an isolated lot is already highly developed, or developed by a kind which is not dissimilar to that proposed on neighbouring allotments. It follows that a strict interpretation of the clause leads to an anomalous outcome whereby an 'isolated lot' may be a lot that is already highly developed, or already established with development which is similar to that proposed.

6.5 Finally, the WDCP does not comment on the impact that the neighbouring development would have on a subject lot in order to effectively 'isolate it'. Rather an exception is granted for lots with a site width of 24 metres or more. Twenty-four metres is the minimum site width required for residential apartment buildings. Mandating a width to accommodate residential flat buildings does

not give reasonable regard to the R1 zone objectives or the current form and desired character of the area.

6.6 A strict technical approach to clause 6.2 of the WDCP would be unwarranted and inconsistent with the purposive approach routinely adopted by the Court as outlined above.

6.7 For these reasons it is appropriate to either:

(a) construe the relevant provisions of WDCP with a purposive approach having regard to the case law defining the characteristics that will render a lot isolated; or

(b) follow the requirements of section 4.15(3A)(b) of the *Environmental Planning and Assessment Act 1979* and apply clause 6.2 of the WDCP in the flexible manner required by the Act.

6.8 Both of these approaches will result in the sensible outcome that recognises that the proposed development will not result in the sterilisation of No 13 having regard to its existing development, the zone objectives and the character of the area.

7. Conclusion

7.1 As thoroughly examined above, it is our strong view that the proposal will not result in No. 13 becoming an 'isolated lot' as the existing development of the property is:

(a) appropriate for the area and in keeping with surrounding land uses;

(b) compliant with the zone objectives; and

(c) relatively recent, having regard to the ages of surrounding development in the North Wollongong area.

7.2 In these circumstances it is appropriate for Council to proceed with the assessment of the development application without requiring compliance with the planning principle outline in the Grech Case.

7.3 Should you have any questions or wish to discuss further, please do not hesitate to contact the writer.

Yours sincerely

Lorri Field
Director and Lawyer
Accredited Specialist Commercial Litigation

Office: (02) 4288 0150
Email: lorri@pdclawyers.com.au

Attachment 6

Wollongong Design Review Panel
Meeting minutes and recommendations

Date	22 January 2020
Meeting location	Wollongong City Council Administration Offices
Panel members	Brendan Randles
	Carlo Di Giulio
	Sue Hobley
Apologies	Pier Panozzo – City Centre & Major Development Manager Rachel Harrison - SET Consultants
Council staff	Mark Riordan – Manager City Planning Martin Jameson – Development Project Officer
Guests/ representatives of the applicant	Scott Millican – PRD Architect Diego Quinones – PRD Architects
Declarations of Interest	Nil
Item number	1
DA number	DA-2019/1356
Determination pathway	Wollongong Local Planning Panel
Reasons for consideration by DRP	Clause 28 SEPP 65, Clause 7.18 WLEP 2009
Property address	9-11 Park Street, Wollongong NSW 2500
Proposal	Eight storey residential flat building comprising 15 residential units over two levels of basement carparking.
Applicant or applicant's representative address to the design review panel	
Background	The site previously seen by the Panel on 30 August 2019 under DE-2019/90. The Panel inspected the site at that time. Notes from the previous Panel Report are shown below in italics,
Design quality principals SEPP 65	
Context and Neighbourhood Character	*The subject site is located on the east side of a sloping north south street in an evolving context in North Wollongong, While Park Street is lined with a mixture of single storey detached houses and three storey walk up units, a seven/eight storey building on the corner of Edward Street provides an indication of the scale currently proposed on the subject site. Located close to North Beach and adjacent parklands, with outstanding views to the Escarpment, the context is ideally located for high quality residential development.* *To the north of the subject site is a single storey cottage, while to the south are relatively recently built townhouses. The townhouses raise a number of issues for the proposal. Due to the massing and scale proposed, the townhouses are liable to be heavily impacted, exacerbated by the slope - which falls to the north. Although the townhouse site is strata titled, the potential for increased development at a similar height currently proposed, could indicate that it is "isolated" by the current proposal.* *The context is not well described in the drawing package. No site or context analysis has been provided; nor was any "opportunities and constraints" analysis undertaken or any other documents provided to explain how the proposal has responded to its contextual challenges. This is not acceptable for a proposal at this scale.* *To properly assess the proposal, all plans, sections and elevations MUST include adjoining properties, existing and likely future built form, trees and landscape features, public domain and all elements that contribute to context and streetscape qualities.* Contextual elevations have now been provided, which are very

	helpful. Aside from that however, the site analysis provides basic information only; slope, for example – which to a large part drives the proposal - is not indicated on the site analysis at all. Plans, elevations and sections do not extend beyond the boundaries of the site – which is again noted as unacceptable. The adjacent properties and public domain MUST be included on the final DA plans, elevations and sections.
Built Form and Scale	*The built form proposal comprises two to three units/ floor within an eight storey rectangular form, considerably lower than the site's height limit. The basement layout provides ample setbacks for deep soil and large trees at the front and rear of the site.* *With a four metre street setback and rear and side setbacks exceeding six metres, the proposal would appear to meet the setback requirements of the DCP. However, the proposal does not meet the building separation requirements of the ADG, which require a nine metre setback from all internal and external habitable space. To improve amenity, minimise impacts on streetscape and adjacent properties (especially to the south) and achieve compliance, the Panel recommends the following modifications :* - *increase the southern setback above four storeys to nine metres (minimum)* The southern setback generally has been increased; however two master bedrooms protrude into the setback, which increases apparent bulk and visual impacts on the adjacent property. As this property is the recipient of the proposal's major impacts, it is recommended that both these bedrooms are realigned to comply with the ADG's building separation requirements. - *to address the weak ground interface (the building appears to be driven into the ground), provide a double level expression with double height entry and continuous two storey expression* This comment identified the uncomfortable outcome caused by the significant slope impacting on the entry and base of building. It was suggested that setting back and unifying the two lower levels, might allow a more generous engagement with streetscape, entry and front garden. This recommendation has been misinterpreted by the applicant. Now presented is a two storey timber like skin applied directly to the face of otherwise standard balconies and façade elements. Some odd outcomes include the doubling up of the entry awning, odd voids at levels two and walls that appear to serve no purpose except to "appear like" a two storey base. The response to this recommendation needs to be fully resolved to better integrate with the built form. It may be better to propose a material that is more consistent with the existing streetscape (masonry or render for example) and is less likely to be "value managed" down to an inferior product. - *to improve neighbouring amenity along the northern boundary, relate the finished levels better to the existing levels on the adjoining site so as to minimize the need for high retaining walls* More clarity is required along the northern elevation to ensure that proposed retaining walls and planting are completely resolved. Basement depth should be maximized to ensure that adjacent levels are no higher than absolutely necessary, as well as to maximise the functionality of the communal open space. That is,

	COS throughout multiple small and narrow terraces is not ideal and would not be useful to residents. See Landscape below. - *remove the discrete waste enclosure and relocate waste room into the building envelope* The waste room still protrudes from the building envelope. It should be set back into the built form as previously recommended and the increased area of open space used to create a better resolved garden – see Landscape below. - *increased to improve street activation and surveillance, rotate Unit 1 living room to face the street* Unit 1 living room has been rotated as required. The front garden still requires clarification of species and retaining wall to ensure that the streetscape achieves an excellent visual and physical amenity - *provide clear spatial continuity between upper and lower private living spaces and private pool deck* This has been achieved – but only by removing the communal open space (COS) from roof level. The Panel prefer that COS is retained at this level and that spatial and functional separation is achieved – as discussed at meeting. See Landscape below. - *provide stronger circulation The following links between the different communal open spaces and deep soil plantings of the rear landscapes to the north, east and south at ground level* As discussed, the ground level open spaces need to be completely reviewed in order to align with existing and proposed levels, as well as to maximise use by the proposal's residents; achieve higher amenity generally; allow for coherent circulation; and ensure that adjacent units and open spaces are amenable and do not suffer adverse privacy impacts by COS. See Landscape below. - *create a discrete, accessible and amenable communal roof terrace, unimpeded by adjacent private spaces* See notes above and below in Landscape. Other Built Form issues include : - Despite complying with ADG separation requirements, excessive glazing will adversely impact on adjoining properties (especially to the north and east) and unnecessarily increase heat loads. It is recommended that glazing is substantially reduced and solid spandrels introduced along the western elevation. - minor movements in and out on all facades are liable to weaken the expression and create unnecessary junction details - due to changes in layout from one level to the next, wet rooms appear over living and sleeping spaces – this is a poor design outcome and risks severe issues in the future.
Density	*Acceptable; however, the Panel does not support any breach of density requirements for the site* As advised by Council officers, the density has significantly increased since the late DRP meeting, mainly due to excessive car spaces and additional private circulation. It is now approximately 100sqm over the allowable GFA. As stated above, no breach of the density requirements for the site will be supported.

Sustainability	*With a small footprint and openness to north sun, the proposal provides high levels of solar access and natural ventilation. With ample basement setbacks, the proposal also provides high potential for substantial boundary planting and large trees to the front and rear of the site.* *Although sustainability was not discussed at the meeting, a raft of well integrated sustainability measures should be developed during the next design stage including water sensitive design, solar panels, plantings for biodiversity and so on.* Solar panels and water collection re use for public open areas is proposed, which is highly commended.
Landscape	The amended proposal includes a Landscape Plan but the recommended changes to the architectural scheme will require changes to the landscape design. In relation to the issues previously raised and identified in the latest scheme, the amended Landscape Plan will need to better address the following: - *The Panel strongly supports the retention of the large street tree to the front of the property and would oppose any design that required its removal.* This is proposed. - *The proposal should work with the sloping topography and minimise the need for extensive retaining walls of visually intrusive heights.* The latest scheme is an improvement but more work needs to be done, particularly in relation to level changes in the COS that affect accessibility, reduce functionality and unnecessarily complicate the relationships between various spaces (both interior and exterior). Once the lowering of the basement levels is resolved, the landscape architect should work with the architect to ensure the landscape levels support simple and easy access and circulation within the landscape and between the interior and exterior of the building. The proposal to provide steps in the northern side setback is considered a poor approach to the slope of a heavily planted garden bed. If possible, the retaining wall along this elevation should be wholly or partially deleted. The steps in the southern setback limit accessibility and spatial amenity. - *The front garden should be planted to soften the built form, maximise environmental benefits (eg provide shade from summer western sun), provide excellent streetscape amenity, and support an attractive and clear entry experience to the building's users.* Additional work is required once the basement levels are resolved. Whilst it is accepted that it may be desirable to use plantings to conceal above-ground points in the carpark, it is considered that a much lighter approach to the streetscape is required to achieve a more open, 'front garden' character to the landscape. The scheme should consider the significant role of the existing tree in the nature strip and develop a planting plan and species list that complements/incorporates the tree into a coherent outcome. If permissible, the letterboxes should be located under cover in the front entry area. - *The threshold entry to the building should be more*

generous and take advantage of the amenity benefits of the "Zen Garden", noting that the relocation of the garbage enclosure will greatly improve the latter.

The garbage enclosure remains a significant feature of this space, severely reducing its amenity. Once the enclosure is relocated and the driveway lowered, the space should be developed in consultation with the landscape architect to create a functional, accessible and delightful communal space that provides high amenity to the entry lobby. This space should be linked to the deep soil zone (COS) along the eastern boundary and the COS in the northern setback.

- *Plantings within the northern and southern boundary setbacks, as proposed, are promoted by the Panel on the basis that they should provide screening and amenity between adjoining properties and reduce the unsightliness of features such as driveway access without adversely impacting on neighbouring solar access or outlook. As noted previously, the interface between the site and the property to the north needs to be reconsidered in terms of walling and screening of level changes, and it is anticipated that the boundary plantings will play a role in this without being the sole solution.*

The planting plan must better address the solar access issues along the northern boundary. A dense line of large trees along the boundary will affect the viability of vegetable gardens and lawn, and the amenity of the area during cooler periods. Access through these plantings for landscape maintenance will be problematic. A more sensitive approach to screening and horticultural management is recommended.

- *The proposed communal open space (COS) at ground level will be acceptable provided that it is designed to support socialising and recreational activities (including communal gardening where appropriate) by the building's future residents.*

The design of the COS needs further development to address levels, circulation, functionality of spaces, plantings and amenity. The Panel does not support the proposal to extend private open space of unit 2 into the deep soil zone. The use of decomposed granite is not recommended.

- *The role of the "Deep Soil Zone" and its relationship to the COS needs to be clarified. It has the potential to support the functionality of the COS. It also links the COS to the Zen Garden and space that will be created by the relocation of the garbage enclosure and this should be incorporated into the design without compromising the safety and security of the residents.*
- *Steps to deal with level changes should be kept to a minimum.*

This needs to be addressed. It should be dedicated as COS but designed and planted to support its role as a particular space in the whole landscape and as the link between the northern and southern COS. The Arborist's Report recommends retention of tree 10 (and possibly tree11); this has not been addressed.

- *The Panel does not support the dedication of the roof to the penthouse unit but accepts that it may be feasible to provide both a discrete COS and private terrace for the upper unit. Achieving this will require that roof level open*

	are better resolved in terms both of clear separation of the private space from the COS and of level changes. The relationships between functional spaces for each need to be further considered in relation to environmental amenity, access and circulation, and privacy. This has not been achieved and remains an issue. The landscape architect should consult with the architect to ensure a COS is provided on the rooftop and that it offers particular function(s) that are not available elsewhere. It should have (as a minimum) kitchen and toilet facilities. Shade and shelter should be provided through careful design. - *The Panel strongly promotes the predominant use of locally indigenous plant species to support biodiversity and other environmental benefits.* This needs to be better addressed. Aside from selecting local species, the plantings should be more diverse. Vegetable/food gardens and lawns are acceptable, provided it is clear that they will serve the expected demographic of the residents. The Landscape Plan will need to address the impacts on amenity from locations of sub-station, fire hydrants, etc.
Amenity	*The following amenity issues need to be addressed :* - *overshadowing and privacy impacts on the southern property need to be minimised through increased setbacks, screening, modelling of built form and potential reduction in the number and/or size of north facing balconies.* As noted above, there is still excessive glazing and balconies facing north and east. - provide *a double height entry* While a double height entry has been introduced, the modeling and materiality of this volume is highly unresolved - *relocate waste room within the building envelope* As noted above, the waste room still needs to be pushed back into the building envelope - rotate Unit 1 living *room to face the street* This has been achieved. - *provide defined entry spaces to Unit 1* The Panel acknowledges that without a front fence, direct entry to Unit 1 will not be achievable. - remove south facing balconies While south facing balconies have been removed, protruding bedrooms fail to meet the ADG's separation requirements and will create adverse visual impacts on the adjacent property to the south. These rooms should be pushed back into building envelope. - *modify east facing balconies to contain privacy impacts* East facing glazed balconies include obscure glazing. With excessive east facing glazing generally, the resultant façade composition will struggle with two much glass. Further, this amount of glazing is liable to be adversely impacts on adjacent properties. Therefore the Panel recommends that glazing is substantially reduced and solid balcony spandrels are investigated. - *resolve penthouse level as noted above in Built Form and Landscaping*

	Unresolved. See notes above in Scale and Built Form and Landscape. - *Consideration of proposed RLs, particularly along the northern edge of the top of the basement so as to minimise the extent to which it extends above ground level, thereby improving the relationship with the adjoining northern property and the street.* As discussed at the meeting, this still requires resolution. See notes above in Scale and Built Form and Landscape.
Safety	*It is not clear where gates are located either to the entry or vehicular ramp.* An entry gate has been shown on plan but not on perspective views. It is still not clear where the basement gate is located or how it operates. It is noted that the fire stairs are accessed via 2 doors and that a better option is feasible.
Housing Diversity and Social Interaction	*Acceptable* No change.
Aesthetics	*While the proposal is at a preliminary stage only, it will benefit from the following :* - *provide a two storey expression to ground and first levels with a distinctive finish – such as stone facing* Unresolved as yet – see notes above in Scale and Built Form. - *provide a double height entry* Provided but unresolved. See notes above in Scale and Built Form. - *provide a consistent expression above level 1, perhaps incorporating rendered solid street facing spandrels with generous landscaped planter boxes* Discussed but not implemented. See notes above in Scale and Scale and Built Form. - *extend the spandrel expression with horizontal fenestration* Discussed but not implemented. See notes above in Scale and Scale and Built Form. - *complement built form with large existing and new trees* See Landscape above - *sensitively incorporate boosters, substation and other required services* Not shown as yet. - *incorporate a high quality landscape that contributes to the environmental amenity of the development within the locality and within the site* Still to be provided. See notes above in Landscape. It was discussed at the DRP meeting that too many materials are currently proposed, leading to compositional and detail issues. It is recommended that the materials proposed are greatly reduced in quantity and more informed by the windy, seaside context.

Design Excellence WLEP2009	
Whether a high standard of architectural design, materials and detailing appropriate to the building type and location will be achieved	Still to be resolved.
Whether the form and external appearance of the proposed development will improve the quality and amenity of the public domain,	Yes – provided that material, composition and landscape are resolved.
Whether the proposed development detrimentally impacts on view corridors,	No
Whether the proposed development detrimentally overshadows an area shown distinctively coloured and numbered on the Sun Plane Protection Map,	No
How the development addresses the following:	
the suitability of the land for development,	Yes
existing and proposed uses and use mix	Yes
heritage issues and streetscape constraints,	Streetscape would benefit from a more refined palette of materials, less glazing and simpler expression generally. The landscape treatment needs to relate better to the existing street tree and the neighbourhood.
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,	Yes – provided that side bedrooms are set back within building envelope.
bulk, massing and modulation of buildings	Still to be resolved.
street frontage heights	Base of building still to be resolved.
environmental impacts such as sustainable design, overshadowing, wind and reflectivity	Solar panels and water collection and reuse for public areas is commendable.
the achievement of the principles of ecologically sustainable development	Yes
pedestrian, cycle, vehicular and service access,	Excessive car spaces currently proposed

circulation and requirements	
impact on, and any proposed improvements to, the public domain	Base of building, height of ground level above street, retaining walls and perimeter landscaping still to be resolved.
Recommendations	Integrate above recommendations into a revised proposal and proceed to Council.

Attachment 7 - APARTMENT DESIGN GUIDE – COMPLIANCE TABLES

Standards/controls	*Comment*	*Compliance*
Part 1 – Identifying the context		
1A Apartment building types Generic apartment building types can be used to: - 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.	The proposal is a Residential flat development, most aptly described as "Narrow Infill apartments" The development consists of 14 units above 2 levels of basement car parking.	Y
1B Local character and context 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.	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.	Y
1C Precincts and individual sites		
Individual sites: 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: - 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.	The application proposes the amalgamation of two (2) lots with a single frontage to Park Street. There is no guidance on regarding the creation of isolated lots at this section, this is further discussed at the WDCP 2009 section of this report.	Y
Part 2 – Developing the controls		
These guidelines include tools to support the strategic planning process when preparing planning controls, and aren't	Strategic Planning controls have been established and incorporated into the DCP and LEP.	Y

Standards/controls	*Comment*	*Compliance*
relevant to the development assessment of individual proposals.		
Part 3 Siting the development		
(a) <u>3A Site analysis</u> Site analysis uses the following key elements to demonstrate that design decisions have been based on opportunities and constraints of the site conditions and their relationship to the surrounding context: - Site location plan - Aerial photograph - Local context plan - Site context and survey plan - Streetscape elevations and sections - Analysis A written statement explaining how the design of the proposed development has responded to the site analysis must accompany the development application.	Relevant site analysis plans have been provided with the DA.	Y
<u>3B Orientation</u> Buildings must be oriented to maximise northern 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. <u>*Objective 3B-1:*</u> *Building types and layouts respond to the streetscape and site while optimising solar access within the development* <u>Design Guidance</u> - Buildings should define the street by facing it and providing direct access. <u>*Objective 3B-2*</u> *Overshadowing of neighbouring properties is minimised during mid- winter* <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	Building is oriented to take advantage of northern orientation. Street frontage addresses Park Street. Direct Pedestrian Access is provided. OVERSHADOWING OF NEIGHBOURING PROPERTY TO SOUTH (13 Park St): 13 Park St contains a four (4) unit townhouse development. <u>70% of 4 = 2.8 (3 UNITS)</u> 3 units POS & living areas required to receive 2 hours solar access between 9am – 3pm.	Y N

Standards/controls	*Comment*	*Compliance*
- A minimum of 4 hours of solar access should be retained to solar collectors on neighbouring buildings - 70% of apartments – Living & POS - 2 hours direct sunlight between 9am – 3pm - Where an adjoining property does not currently receive the required hours of solar access, the proposed building ensures solar access to neighbouring properties is not reduced by more than 20% - If the proposal will significantly reduce the solar access of neighbours, building separation should be increased beyond minimums contained in section 3F Visual privacy	Shadow diagrams have been submitted with the application which demonstrate the following: <u>Solar Access:</u> UNIT 1: Solar access 1pm – 3pm = ~2 hours UNIT 2: 9 – 10am (partial) = less than 1 hour UNIT 3: 9 – 10am = ~1 hour UNIT 4: 9am – 12pm = ~3 hours Less than 50% of dwellings receive the minimum solar access. It was noted by the applicant that the affected townhouse development includes awnings which shade the living and POS areas. If it is assumed the affected dwellings do not currently receive the minimum solar access, the development would still result in an excess of 20% reduction in solar access. The occupants of the townhouses have claimed the awnings have been designed to allow winter solar access into the living and POS areas. The development also entails several building separation encroachments on the southern elevation which exacerbates overshadowing impacts. For any variation to this guidance to be considered building separation controls would need to be complied with in full.	
<u>3C Public domain interface</u> Key components to consider when designing the interface include entries, private terraces or balconies, fences and walls, changes in level, services locations and planting. The design of these elements can influence the real or perceived safety and security of residents, opportunities for social interaction and the identity of the development when viewed from the public domain <u>*Objective 3C-1:*</u> *Transition between private and public domain is achieved without compromising safety and security* <u>Design Guidance</u> - Terraces, balconies and courtyards should have direct street entry, where appropriate	Street entry is available to Unit 1 Clear definition has been provided between private and public domain. Surveillance public domain provided from unit balconies & windows.	Y

Standards/controls	*Comment*	*Compliance*
- 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 frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m. - Opportunities should be provided casual interaction between residents and the public domain eg seating at building entries, near letterboxes etc *Objective 3C-2:* *Amenity of the public domain is retained and enhanced* Design Guidance - 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.	Planting is utilised heavily throughout the development. The mailboxes are located adjacent the covered entry control point for easy access as residents enter the building. The garbage room is located within the basement (Level B1). Ground Floor walls are durable finished, predominately concrete with some screening elements above. The basement carpark is located to the South and minimal in appearance so as not to impact on negatively on the public domain. The entry to the carpark will be flanked by boundary planting and concrete balustrades to reduce the visual impact of the opening. No detail has been provided regarding substations hydrants etc	N
3D Communal and public open space		
Objective 3D-1 *An adequate area of communal open space is provided to enhance residential amenity and to provide opportunities for landscaping* Design Criteria 1.Communal open space has a minimum area 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 Design Guidance	25% of 1268 = 317m² COS required 217m² (open space) + ~120 (integrated with DSZ) = 337m² or 27%	Y

Standards/controls	*Comment*	*Compliance*
- Communal open space should be consolidated into a well designed, usable area. - Minimum dimension of 3m - Should be co-located with deep soil areas - Direct & equitable access required - Where not possible at ground floor it should be located at podium or roof level. - Where developments are unable to achieve the design criteria, such as on small lots, sites within business zones, or in a dense urban area, they should: • provide communal spaces elsewhere such as a landscaped roof top terrace or a common room • provide larger balconies or increased private open space for apartments • demonstrate good proximity to public open space and facilities and/or provide contributions to public open space	Part of the COS is integrated with Deep Soil Zone. Adequate solar access provided with appropriate facilities incl. BBQ, seating and walkways.	Y Y
<u>*Objective3D-2*</u> *Communal open space is designed to allow for a range of activities, respond to site conditions and be attractive and inviting* <u>Design guidance</u> - Facilities to be provided in communal open spaces for a range of age groups, and may incorporate seating, barbeque areas, play equipment, swimming pools	Adequate surveillance is provided throughout COS areas.	Y
<u>*Objective 3D-3*</u> *Communal open space is designed to maximise safety* <u>Design guidance</u> - Communal open space should be visible from habitable rooms and POS areas and should be well lit.		
<u>*Objective 3D-4*</u> *Public open space, where provided, is responsive to the existing pattern and uses of the neighbourhood*		

<table>
<tr><th>Standards/controls</th><th>Comment</th><th>Compliance</th></tr>
<tr><td>

3E Deep soil zones

Objective 3E-1

3E-1 Deep soil zones provide areas on the site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality.

Design Criteria:

1. Deep soil zones are to meet the following minimum requirements:

<table>
<tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr>
<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>
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Design guidance:

- Deep soil zones should be located to retain existing significant trees.

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7% of 1268 = 88.76m² of DSZ is required.

175m² of DSZ provided with minimum dimension of 3m = 13.8%

It is noted that the DSZ does not comply with WDCP 2009 controls, see WDCP 2009 section of this report.

Arborist report and Council's Landscape Architect indicate no significant trees within DSZ are to be retained.

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Y

NA

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3F Visual privacy

</td><td></td><td></td></tr>
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Objective 3F-1

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

Design Criteria:

1. Minimum required separation distances from buildings to the side and rear boundaries are as follows:

</td><td>

Separation encroachments are proposed the southern and eastern boundaries on levels 5, 6 and 7, see below.

Given the solar access and visual impacts of the development, and advice from DRP, variations to building separation guidance is not supported.

<12M (LEVELS 1 – 4)

LEVEL 1/G

Habitable:

North: 6 – 12.5m

</td><td>Y</td></tr>
</table>

Standards/controls	Comment	Compliance
<table><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr><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></table> <u>Design Guidance</u> - Apartment buildings should have an increased separation distance of 3m (in addition to the above requirements) when adjacent to a different zone that permits lower density residential development to provide for a transition in scale. - Direct lines of sight should be avoided - No separation is required between blank walls <u>*Objective 3F-2:*</u> *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* <u>Design Guidance</u> - Communal open space, common areas and access paths should be separated from private open space and windows to apartments. Design solutions include: • Setbacks, • Solid or partly solid balustrades to balconies • Fencing or vegetation to separate spaces • Screening devices • Raising apartments/private open space above the public domain • Planter boxes incorporated into walls and balustrades to increase visual separation • Pergolas or shading devices to limit overlooking • Only on constrained sites where it's demonstrated that building layout opportunities are limited – fixed louvres or screen panels	South: 7.9m East/Rear: 6 – 12m <u>Non-Habitable</u>: North: 6 -9m South: 6.8 – 7.8m East/Rear: 6 – 18m <u>LEVEL 2</u> <u>Habitable:</u> North: 6 – 9m South: 8m East/Rear: 8 – 14m <u>Non-Habitable</u>: North: NA South: 6.8-8m East/Rear: NA <u>LEVEL 3</u> <u>Habitable:</u> North: 6 – 9m South: 7.9m East/Rear: 7.8 – 12m <u>Non-Habitable</u>: North: NA South: 6.9 – 7.9m East/Rear: NA <u>LEVEL 4</u> <u>Habitable:</u> North: 9m South: 7.9 – 9m East/Rear: 9 – 13.1m <u>Non-Habitable</u>: North: 8.2m South: 6.9m East/Rear: NA **<u>12-24M (LEVELS 5-8)</u>**	Y Y Y

Standards/controls	*Comment*	*Compliance*
- Windows should be offset from the windows of adjoining buildings	**LEVELS 5 - 6** Habitable: North: 9m South: **7.9 (BED 2)** – 9m East/Rear: **7.5 (EAST BALCONY)** – 13.1m Non-Habitable: North – 8.2m South – 6.9m East/Rear: NA **LEVEL 7** Habitable: North: 9.1m South: 9m (no openings) East/Rear: **7.5 (EAST BALCONY)** - 15m Non-Habitable: North: 8.2m South: 9 - 9.2m East/Rear: NA **LEVEL 8** Habitable: North: 9.9m South: 9.3m (no openings) East/Rear: 9.8 – 15.8m Non-Habitable: North: 8.2m South: 9.3 – 10.5m East/Rear: 9 – 13.3m **24M> (LEVEL 8)** It Is noted part of the level 8 structure (wall, ceiling, batten screening) extend beyond 24m. However, these areas do form part of level 8 and the additional setback requirements are not applicable as they do not form part of a 9th storey, either practically or visually.	**N** **N** Y
3G Pedestrian access and entries *Objective 3G-1*	Single main entry is proposed and clearly identifiable.	Y

Standards/controls	*Comment*	*Compliance*
Building entries and pedestrian access connects to and addresses the public domain Design Guidance - 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. *Objective 3G-2* *Access, entries and pathways are accessible and easy to identify* Design Guidance - 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. *Objective 3G-3* *Large sites provide pedestrian links for access to streets and connection to destinations*	A second fire exit to the basement levels is provided on northern boundary. Additional entry to ground floor units was not required by the DRP, instead favouring landscape treatment to the front setback.	
3H Vehicle access *Objective 3H-1* *Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes* Design Guidance - Car park entries should be located behind the building line - Access point locations should avoid headlight glare to habitable rooms - Garbage collection, loading and service areas should be screened - Vehicle and pedestrian access should be clearly separated to improve safety. - Where possible, vehicle access points should not dominate the streetscape and be limited to the minimum width possible.	Car park entry is provided behind the building line. Garbage storage located in the basement. Whilst the vehicular entry does not dominate the streetscape, it is noted the driveway width exceeds WDCP 2009 requirements. This is further discussed at the WDCP 2009 section of this report.	Y
3J Bicycle and car parking Note:	The site is not located within 400m of B3 or B4 Zone. Chapter E3 of WDCP 2009 requires: - 20 car spaces	Y

Standards/controls	*Comment*	*Compliance*
1. Under Clause 30, car parking cannot be used as a reason for refusal where the proposal meets the minimum standards 2. Also, under the amended SEPP 65 car-parking has become a non-discretionary development standard (in accordance with Cl. 79(C) of the EP&A Act. Therefore, a departure from this is likely to generate referral to LPP, despite not specifically being a "Local Environment Planning' development standard (Charter 3.3) *Objective 3J-1* *Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas* Design Criteria 1. On land zoned B3 or B4 and located within 400m of land zoned B3 and B4, the minimum car parking requirement for residents and visitors is set out in the Guide for Traffic Generating Development, or Council's car parking requirement, whichever is less. The carparking needs for a development must be provided off street. *Objective 3J-2* *Parking and facilities are provided for other modes of transport* Design Guidance - Conveniently located and sufficient numbers of parking spaces should be provided for motorbikes and scooters - Secure undercover bicycle parking should be provided that is easily accessible from both the public domain and common areas.	- 6 bicycle spaces - 1 x motorcycle space **Provided** 19 x resident spaces (2 x accessible) 3 x Visitor Spaces 7 x Bicycle area provided (5 x res. & 2 x vis.) 1 x Motorcycle See Chapter E3 of WDCP 2009 for further discussion. Adequate motorbike and bicycle parking has been provided.	Y
Objective 3J-3 *Car park design and access is safe and secure* Design Guidance - Supporting facilities within car parks (garbage rooms, storage areas, car wash bays) can be accessed without crossing parking spaces	Supporting facilities adequately located. Lobby is defined. Roller Shutter doors proposed within the basement beyond visitor parking. All parking below street level in basement. Ventilation incorporated into the design.	Y

Standards/controls	*Comment*	*Compliance*
- 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. <u>*Objective 3J-4*</u> *Visual and environmental impact of underground car parking are minimised* <u>Design Guidance</u> - Excavation should be minimised through efficient carpark layouts and ramp design. - Protrusion of carparks should not exceed 1.0m above ground level. - Natural ventilation should be provided to basement and sub-basement car parking areas. - Ventilation grills or screening devices should be integrated into the façade and landscape design. <u>*Objective 3J-5*</u> *Visual and environmental impacts of on-grade car parking are minimised* - On grade car parking should be avoided - Design guidelines provided where it's unavoidable <u>*Objective 3J-6*</u> *Visual and environmental impacts of ground enclosed car parking are minimised* - Exposed parking should not be located along primary street frontages - Positive street address and active street frontages should be provided at ground level.	The basement podium protrudes ~1.5m on north western edge of building, largely due to slope of site. This is further discussed at the WDCP section of this report Not applicable Not applicable	**N**
Part 4 – Designing the building - Amenity		
<u>4A Solar and daylight access</u> <u>*Objective 4A-1*</u> *To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space* <u>Design Criteria</u>		Y

Standards/controls	*Comment*	*Compliance*
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. 2. A maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid winter <u>Design Guidance</u> - The design maximises north aspect and the number of single aspect south facing apartments is minimised - To optimise the direct sunlight to habitable rooms and balconies, the following design features are used: Dual aspect, Shallow apartment layouts Bay windows - To maximise the benefit to residents, a minimum of $1m^2$ of direct sunlight measured at 1m above floor level, is achieved for at least 15 minutes. <u>*Objective 4A-2*</u> *Daylight access is maximised where sunlight is limited* <u>Design Guidance</u> - Courtyards, skylights and high level windows (sill heights of 1500m or greater) are used only as secondary light sources in habitable rooms <u>*Objective 4A-3*</u> *Design incorporates shading and glare control, particularly for warmer months* <u>Design Guidance</u> Design features can include: - Balconies - Shading devices or planting - Operable shading - High performance glass that minimises external glare	100% of units comply with minimum solar & daylight access requirements. NA – not required The proposed units are not expected to endure glare impacts.	NA Y
<u>4B natural ventilation</u> <u>*Objective 4B-1*</u>	All habitable rooms are naturally ventilated. There are no single aspect units.	Y

Standards/controls	*Comment*	*Compliance*
All habitable rooms are naturally ventilated. Design Guidance - 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. *Objective 4B-2* *The layout and design of single aspect apartments maximises natural ventilation* Design Guidance - Single aspect apartments should use design solutions to maximise natural ventilation. *Objective 4B-3* *The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents* Design Criteria: 1. 60% of apartments are naturally cross ventilated in the first nine storeys 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.	100% of units are cross ventilated. Maximum depth 14-15m	
4C Ceiling heights *Objective 4C-1* *Ceiling height achieves sufficient natural ventilation and daylight access* Design Criteria 1. Minimum 2.7m for habitable rooms and 2.4m for non-habitable rooms *Objective 4C-2* *Ceiling height increases the sense of space in apartments and provides for well-proportioned rooms* *Objective 4C-3* *Ceiling height contribute to the flexibility of building use over the life of the building* Design Guidance	Minimum ceiling height of 2.7m proposed to habitable (all) rooms. Ceiling heights in lower level units are adequate to cater for conversion, noting land use limitations of R1 Zone.	Y

Standards/controls	*Comment*	*Compliance*
- Ceiling heights of lower level apartments in centres should be greater than the minimum required by the design criteria allowing flexibility and conversion to non-residential uses.		
4D Apartment size and layout Note: 1. Under Clause 30, apartment size cannot be used as a reason for refusal where the proposal meets the minimum standards 2. Also, under the amended SEPP 65 apartment size has become a non-discretionary development standard (in accordance with Cl. 79(C) of the EP&A Act. Therefore, a departure from this is likely to generate referral to LPP, despite not specifically being a "Local Environment Planning' development standard (Charter 3.3) *Objective 4D-1* *The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity* Design Criteria: 1. Minimum internal areas: Studio – 35m^2 1 bed – 50m^2 2 bed – 70m^2 3 bed – 90m^2 The minimum internal areas include only 1 bathroom. Additional bathrooms increase the minimum internal areas by 5m^2 each. 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 Design Guidance: - Where minimum areas are not met, need to demonstrate the usability and functionality of the space with realistically scaled furniture layouts and circulation areas. *Objective 4D-2*	All units meet minimum internal areas Habitable rooms exceed minimum glass area Levels 1 – 6: 2.5 x 2.8 = 7m max depth	Y Y

Standards/controls	*Comment*	*Compliance*
Environmental performance of the apartment is maximised <u>Design Criteria:</u> 1. Habitable room depths are limited to a maximum of 2.5 x ceiling height 2. In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window. <u>Design Guidance:</u> - Greater than the minimum ceiling heights can allow proportionate increases in room depths. - Where possible, bathrooms and laundries should have an external openable window. - Main living spaces should be oriented towards the primary outlook.	All habitable rooms comply Levels 7 & 8: 2.5 x 2.9 = 7.25m max depth All habitable rooms comply Open plan rooms have less than 8m depth from windows	Y
<u>*Objective 4D-3*</u> *Apartment layouts are designed to accommodate a variety of household activities and needs* <u>Design Criteria:</u> 1. Master bedrooms have a minimum area of $10m^2$ and other bedrooms $9m^2$ (excl wardrobe space) 2. Bedrooms have minimum dimension of 3m (excl wardrobe) 3. Living rooms have minimum width of: - 3.6m for studio and 1 bed apartments and - 4m for 2+ beds. 4. The width of the crossover or cross through apartments are at least 4m internally to avoid deep narrow apartment layouts.	Majority bedroom & living room dimensions comply. Units 2, 3 and 5 contain rooms labelled 'study' which do not meet minimum dimension requirements for living or bedroom areas, the future use is unknown. Whether or not these rooms are proposed to be bedrooms has implications for unit mix, POS, storage and living room dimension requirements. Units 3 & 5 (1 br + study) contain a living rooms which do not satisfy minimum width (2.7 & 3m proposed). The amenity and use of these areas is compromised Units 13 & 14 contain living rooms which don't meet minimum widths, however as these are supplementary to primary living areas, this is acceptable. Crossover/through apartments exceed 4m width	N
<u>Design Guidance:</u> - Access to bedrooms, bathrooms and laundries is separated from living areas - Minimum 1.5m length for bedroom wardrobes - Main bedroom apartment: minimum 1.8m long x 0.6m deep x 2.1m high wardrobe - Apartment layouts allow for flexibility over time, including furniture removal,		Y

<table>
<tr><th>Standards/controls</th><th>Comment</th><th>Compliance</th></tr>
<tr><td>spaces for a range of activities and privacy levels within the apartments.</td><td></td><td></td></tr>
<tr><td><u>4E Private open space and balconies</u>
<u>Objective 4E-1</u>
Apartments provide appropriately sized private open space and balconies to enhance residential amenity
1. Minimum balcony depths are:
<table><tr><th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr><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></table>The minimum balcony depth to be counted as contributing to the balcony area is 1m.
2. Ground level apartment POS must have minimum rea of 15m² and min. depth of 3m
<u>Objective 4E-2</u>
Primary private open space and balconies are appropriately located to enhance liveability for residents
<u>Design Guidance</u>
- 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 optimise daylight access into adjacent rooms.
<u>Objective 4E-3</u>
Primary private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building
<u>Design Guidance</u>
- 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</td><td><u>1 Bedroom Apartments</u>
<u>Unit 3</u>: 53m² balcony (min. dimension 2.5m)
<u>Unit 5</u>: 53m² balcony (min. 2.6m)
<u>2 Bedroom Apartments</u>
<u>Unit 7/9:</u> 12m² balcony (min. 3.1m)
<u>Unit 8/10:</u> 17.2m² balcony (min. 3.5m)
<u>3 Bedroom Apartments</u>
<u>Unit 1</u>: 25m² courtyard (min. 2.4m)
<u>Unit 2</u>: 27m² courtyard (min.4.3m)
<u>Unit 4</u>: 21 + 13.6m² balconies (min 2m)
<u>Unit 6</u>: 21 + 13.6m² balconies (min 2m)
<u>Unit 11</u>: 12m² balcony (min. 3.1m)
<u>Unit 12</u>: 17.2m² balcony (min. 3.5m)
<u>Unit 13</u>: 12m² balcony (min. 3.3min) + 51m² terrace (min. 1.2m)
<u>Unit 14</u>: 17m² balcony (min. 3.3min) + 49m² terrace (min. 1.6m)

Private open space and balconies are located adjacent to living rooms and extend the living space.

POS optimises daylight access into rooms, utilising northern sunlight where possible.

Balustrades are predominantly full width transparent glass, with some opaque glass provided on eastern & western elevations.
Extent of glazing on north, east and western elevations (balconies) will result in privacy and glare impacts on dwellings on surrounding sites.</td><td>Y

Y

Y

N</td></tr>
</table>

Standards/controls	*Comment*	*Compliance*
- Operable screens etc are used to control sunlight and wind, and provide increased privacy for occupancy while allowing for storage and external clothes drying. *Objective 4E-4* *Private open space and balcony design maximises safety* Design Guidance - Changes in ground levels or landscaping are minimised.	Operable shutters provided along parts of northern elevation, will reduce privacy impacts somewhat to the north, however issues remain on the western and eastern elevations.	
4F Common circulation and spaces *Objective 4F-1* *Common circulation spaces achieve good amenity and properly service the number of apartments.* Design Criteria 1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40. Design Guidance - Long corridors greater than 12m in length should be articulated through the use of windows or seating. - Primary living rooms or bedroom windows should not open directly onto common circulation spaces, whether open or enclosed. Visual and acoustic privacy from common circulation spaces should be controlled. *Objective 4F-2* *Common circulation spaces promote safety and provide for social interaction between residents* Design Guidance: - Incidental spaces can be used to provide seating opportunities for residents, and promotes opportunities for social interaction.	Maximum of two (2) units are proposed off a circulation core. Corridor length is acceptable. There are no openings onto common circulation space from the units. Zen gardens are provided off circulation spaces on levels 3 – 7 which may function as incidental spaces.	Y
4G Storage *Objective 4G-1* *Adequate, well designed storage is provided in each apartment*	Basement Storage: 53m² (B2) + 40.5m² (B1) x 2.6 = 243m³ / 14 = 17.4m³ per unit. **1 Bedroom Apartments** Unit 3: 2.4m³ (located in bedroom)	Y

Standards/controls	*Comment*	*Compliance*
1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided At least 50% of the required storage is to be located within the apartment <u>*Objective 4G-2*</u> *Additional storage is conveniently located, accessible and nominated for individual apartments* <u>Design Guidance:</u> - Storage not located within apartments should be allocated to specific apartments.	<u>Unit 5:</u> 2.4m³ (located in bedroom) These units contain rooms labelled 'study' which may function as ancillary storage. In addition to basement storage afforded to each unit, this provision of storage is acceptable. **<u>3 Bedroom Apartments</u>** <u>Unit 1</u>: 6m³ <u>Unit 2</u>: 5.1m³ <u>Unit 4</u>: 4m³ <u>Unit 6</u>: 4m³ <u>Unit 7/9/11</u>: 4m³ <u>Unit 8/10/12</u>: 4m³ <u>Unit 13</u>: ~3m³ <u>Unit 14</u>: ~3m³ *Storage provided both within apartments and basement 50/50.*	

Dwelling type	Storage size volume
Studio apartments	4m³
1 bedroom apartments	6m³
2 bedroom apartments	8m³
3+ bedroom apartments	10m³

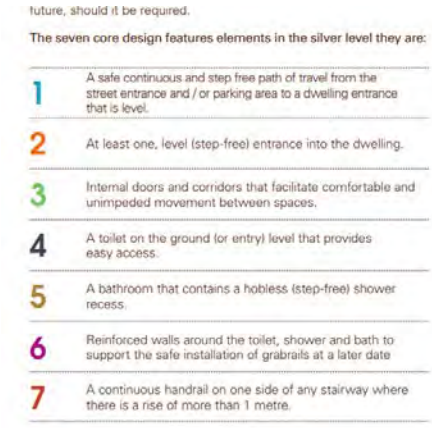
<u>4H Acoustic privacy</u> <u>*Objective 4H-1*</u> *Noise transfer is minimised through the siting of buildings and building layout* <u>Design Guidance</u> - Adequate building separation is required (see section 2F above). - Noisy areas within buildings should be located next to or above each other and 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. <u>*Objective 4H-2*</u> *Noise impacts are mitigated within apartments through layout and acoustic treatments* <u>Design Guidance</u> - In addition to mindful siting and orientation of the building, acoustic	Adequate building separation is proposed. There are no major external noise sources. Noise sources are generally located away from bedrooms. Bedrooms in units 1 and 2 are in close proximity to GF COS and circulation spaces. Landscape screening is proposed, this in addition to appropriate window glazing should be sufficient to retain adequate amenity.	Y

Standards/controls	*Comment*	*Compliance*
seals and double or triple glazing are effective methods to further reduce noise transmission.		
4J Noise and pollution *Objective 4J-1* *In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings* Design Guidance - Minimise impacts through design solutions such as physical separation from the noise or pollution source, *Objective 4J-2* *Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission* Design guidance: - Design solutions include limiting openings to noise sources & providing seals to prevent noise transfer.	The site is not affected by a noisy or hostile environment.	Y
Part 4 – Designing the building - Configuration		
4K Apartment mix *Objective 4K-1* *A range of apartment types and sizes is provided to cater for different household types now and into the future* Design guidance - A variety of apartment types is provided - The apartment mix is appropriate, taking into consideration the 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 *Objective 4K-2* *The apartment mix is distributed to suitable locations within the building* Design guidance	A mix of 1, 2 and 3 bedroom apartments is proposed. It is noted several units contain 'study' rooms which do not meet minimum dimension requirement for bedroom. On balance a suitable mix is proposed. Units 3 and 5 are designed to be adaptable, see WDCP 2009 for further discussion. Large apartments are located on the ground floor.	Y

Standards/controls	*Comment*	*Compliance*
- 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		
4L Ground floor apartments *Objective 4L-1* *Street frontage activity is maximised where ground floor apartments are located* Design guidance - Direct street access should be provided to ground floor apartments - Activity is achieved through front gardens, terraces and the facade of the building. - Ground floor apartment layouts support small office home office (SOHO) use to provide future opportunities for conversion into commercial or retail areas. In these cases provide higher floor to ceiling heights and ground floor amenities for easy conversion *Objective 4L-2* *Design of ground floor apartments delivers amenity and safety for residents* Design guidance - The design of courtyards should balance the need for privacy of ground floor apartments with surveillance of public spaces. Design solutions include: • elevation of private gardens and terraces above the street level by 1-1.5m (see figure 4L.4) • landscaping and private courtyards • window sill heights that minimise sight lines into apartments • integrating balustrades, safety bars or screens with the exterior design - Solar access should be maximised through: • high ceilings and tall windows • trees and shrubs that allow solar access in winter and shade in summer	Direct street access is not available to ground floor unit 1. Difficult to achieve due to landscaping and level change. This was accepted by the DRP. Design of private open space, common open space and surveillance is satisfactory. Good solar access to these spaces is provided. There are no major level changes within the landscaping plan.	Y
4M Facades		Y

Standards/controls	*Comment*	*Compliance*
<u>*Objective 4M-1*</u> *Building facades provide visual interest along the street while respecting the character of the local area* <u>Design guidance</u> - 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. <u>*Objective 4M-2*</u> *Building functions are expressed by the facade* <u>Design guidance</u> - Building entries should be clearly defined	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 Double height entry has been proposed and is clearly defined.	
<u>4N Roof design</u> <u>*Objective 4N-1*</u> *Roof treatments are integrated into the building design and positively respond to other street* <u>Design guidance</u> - Roof design should use materials and a pitched form complementary to the building and adjacent buildings. <u>*Objective 4N-2*</u> *Opportunities to use roof space for residential accommodation and open space are maximised* <u>Design guidance</u> - Habitable roof space should be provided with good levels of amenity.	A concrete roof over upstairs (Units 13 & 14) and POS areas which include landscaping. Architectural batten screening to be applied, which is repeated on lower levels. POS is provided on roof space which integrates planting areas.	Y

Standards/controls	*Comment*	*Compliance*
- Open space is provided on roof tops subject to acceptable visual and acoustic privacy, comfort levels, safety and security considerations *Objective 4N-3* *Roof design incorporates sustainability features* Design guidance - Roof design maximises solar access to apartments during winter and provides shade during summer		
4O Landscape design *Objective 4O-1* *Landscape design is viable and sustainable* Design guidance - Landscape design should be environmentally sustainable and can enhance environmental performance - Ongoing maintenance plans should be prepared *Objective 4O-2* *Landscape design contributes to the streetscape and amenity* Design guidance - Landscape design responds to the existing site conditions including: • changes of levels • views • significant landscape features	Landscape design is satisfactory and no concerns have been raised from Council's landscape division. The amended landscape plans has addressed those matters raised by the DRP.	Y
4P Planting on Structures *Objective 4P-1* *Appropriate soil profiles are provided* Design guidance - Structures are reinforced for additional saturated soil weight - Minimum soil standards for plant sizes should be provided in accordance with Table 5 *Objective 4P-2* *Plant growth is optimised with appropriate selection and maintenance*	The planting to the level podium is detailed by SD Studios on their landscape plan. Species have been selected to appropriately respond to the site conditions and available soil depths. Structural landscape design is satisfactory and no concerns have been raised from Council's Landscape Architect.	Y

Standards/controls	*Comment*	*Compliance*
Design guidance - Plants are suited to site conditions *Objective 4P-3* *Planting on structures contributes to the quality and amenity of communal and public open spaces* Design guidance - Building design incorporates opportunities for planting on structures. Design solutions may include: • green walls with specialised lighting for indoor green walls • wall design that incorporates planting • green roofs, particularly where roofs are visible from the public domain • planter boxes		
4Q Universal design *Objective 4Q-1* *Universal design features are included in apartment design to promote flexible housing for all community members* Design guidance - A universally designed apartment provides design features such as wider circulation spaces, reinforced bathroom walls and easy to reach and operate fixtures  future, should it be required. The seven core design features elements in the silver level they are: 1 A safe continuous and step free path of travel from the street entrance and / or parking area to a dwelling entrance that is level. 2 At least one, level (step-free) entrance into the dwelling. 3 Internal doors and corridors that facilitate comfortable and unimpeded movement between spaces. 4 A toilet on the ground (or entry) level that provides easy access. 5 A bathroom that contains a hobless (step-free) shower recess. 6 Reinforced walls around the toilet, shower and bath to support the safe installation of grabrails at a later date 7 A continuous handrail on one side of any stairway where there is a rise of more than 1 metre. - *Objective 4Q-2* *A variety of apartments with adaptable designs are provided* Design guidance	An adaptable unit layout has been provided on Units 3 & 5 with equitable access provided. No certification from an access consultant has been provided, this is discussed further at the WDCP 2009 section of this report.	Y N

Standards/controls	*Comment*	*Compliance*
- Adaptable housing should be provided in accordance with the relevant council policy *Objective 4Q-3* *Apartment layouts are flexible and accommodate a range of lifestyle needs* Design guidance - Apartment design incorporates flexible design solutions		
4R Adaptive reuse	NA	
4S Mixed use	NA	
4T Awnings and signage *Objective 4T-1* *Awnings are well located and complement and integrate with the building design* Design guidance - Awnings should be located along streets with high pedestrian activity and active frontages *Objective 4T-2* *Signage responds to the context and desired streetscape character* Design guidance - Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development	An awning is provided to the primary entry point of the building which is architecturally integrated into several design elements of the building. It is noted the projection of the awning into the front setback is significant. Design and impacts are discussed further at the WDCP 2009 section of this report. Signage - NA	Y
Part 4 – Designing the building - Configuration		
4U Energy efficiency *Objective 4U-1* *Development incorporates passive environmental design* Design guidance - Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access) *Objective 4U-2* *Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer* Design Guidance	Adequate natural light can be provided to habitable rooms. Plant rooms are located within the basement. Natural ventilation can be achieved. A BASIX Certificate has been submitted with the application in accordance with NSW requirements.	Y

Standards/controls	*Comment*	*Compliance*
- Provision of consolidated heating and cooling infrastructure should be located in a centralised location *Objective 4U-3* *Adequate natural ventilation minimises the need for mechanical ventilation*		
4V Water management and conservation *Objective 4V-1* *Potable water use is minimised* *Objective 4V-2* *Urban stormwater is treated on site before being discharged to receiving waters* Design guidance - Water sensitive urban design systems are designed by a suitably qualified professional *Objective 4V-3* *Flood management systems are integrated into site design* Design guidance - Detention tanks should be located under paved areas, driveways or in basement car parks	Landscape and Stormwater plan are compatible with each other. Council's Stormwater Engineer has advised that the stormwater layout is satisfactory. A BASIX Certificate has been submitted with the application in accordance with NSW requirements.	Y
4W Waste management *Objective 4W-1* *Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents* Design guidance - Common waste and recycling areas should be screened from view and well ventilated *Objective 4W-2* *Domestic waste is minimised by providing safe and convenient source separation and recycling* Design guidance - Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core - For mixed use developments, residential waste and recycling storage	The applicant proposes a water storage room within the basement. Waste collection from the street is to occur and is satisfactory. Council's Traffic Engineer has reviewed the proposal and found it satisfactory in this respect.	Y

Standards/controls	*Comment*	*Compliance*
areas and access should be separate and secure from other uses - Alternative waste disposal, such as composting, can be incorporated into the design of communal open space areas		
4X Building maintenance *Objective 4X-1* *Building design detail provides protection from weathering* Design guidance - Design solutions such as roof overhangs to protect walls and hoods over windows and doors to protect openings can be used. *Objective 4X-2* *Systems and access enable ease of maintenance* Design guidance - Window design enables cleaning from the inside of the Building *Objective 4X-3* *Material selection reduces ongoing maintenance costs easily cleaned surfaces that are graffiti resistant*	Durable and cleanable materials are proposed. Window placement and design does not introduce maintenance concerns. Window cleaning from the interior of the building is largely attainable.	Y

Attachment 8 - WOLLONGONG DEVELOPMENT CONTROL PLAN 2009 – COMPLIANCE TABLES

CHAPTER B1 – RESIDENTIAL DEVELOPMENT

4.0 General Residential controls

Controls/objectives	*Comment*	*Compliance*
4.8 Building Character and Form		
	Refer to Chapter D13 / ADG	Y
4.9 Fences		
	Existing fence may be replaced without consent.	Y
4.12 Site Facilities		
	Letter boxes proposed within the front setback which will be incorporated into the entry ramp/pedestrian pathway design. Service balconies provided to house Air Conditioners.	Y
4.13 Fire Brigade Servicing		
	See Variation - Chapter A1 Section	N
4.14 Services		
	See Variation - Chapter A1 Section	N
4.15 Development near the coastline		
	The site is located within the coastal zone however is approximately 550m from the coastal foreshore. No concerns are raised.	Y
4.16 View sharing		
• Visual impact assessment • Appropriate siting of the building on the land so as to provide a strip of land, unencumbered with structures, down one side of the dwelling. This strip of land must be a minimum width of 3m or 25% of the lot width whichever is the greater.	10m / 30.48 = 32% width of site unencumbered. The applicant addressed view impacts in the Statement of Environmental Effects, concluding the proposed development will not have a detrimental effect on any significant primary view corridors. A formal view analysis was not undertaken. Assessment of View impacts The Land and Environment Court has set a Planning Principle to assess view sharing based on the court case *Tenacity Consulting v Warringah Council [2004] NSWLEC 140*. This planning principle has adopted a four-step assessment which will be used to evaluate view loss arising from the proposed development. The site occupies two (2) lots which comprise half of the Park St and Church St block. The proposal will lead to some loss of views from surrounding properties. The	Y

surrounding properties are of mixed height and land use.

Submissions have been received from occupants of surrounding dwelling contained with varying development types. The views that will be affected relate to northern coastal views and the focus of view impacts will be in relation to this property.

The 4 step *Tenacity Consulting v Warringah Council [2004] NSWLEC 140* planning principle assessment is outlined as follows:

Step 1 – Assessment of views to be affected

Views of the escarpment from dwellings (mostly apartment buildings) located to east of the development site will be partially compromised.

Views of the coastline from dwellings (mostly apartment buildings) located to south and west of the development site will be partially compromised

The extent is of the affectation in each case is dictated by exact location and RL of the affected party.

Step 2 – What part of the property are the views obtained?

The views affected are obtained from balconies, living areas and POS of surrounding properties.

Step 3 – Assess the extent of the impact

The proposed development will obstruct existing north eastern coastal views and western escarpment views from surrounding and distant properties.

The view impact for adjoining sites will be significant, especially those located to the north and south, due to the orientation of the design.

Whilst the significant impact is noted, the view corridors throughout the surrounding area is largely compromised by existing development.

Step 4 – Assess the reasonableness of the proposal that is causing the impact

The development will result in a loss of coastal and escarpment views.

The proposed development is compliant with regard to the 32m building height limit for the site however the proposal is not

	compliant with the maximum 1.5:1 floor space ratio for the site. In order to reduce the view loss, the development would need a substantial reduction in height and increased setbacks on all boundaries. The development as proposed is of a scale generally permitted under the WLEP 2009 with regard to zoning, FSR and building height. Whilst the proposal exceeds the permitted FSR, the impacts on views does not necessarily correlate with the issue non-compliant FSR. Whilst there are several outstanding matters to resolve with regard to compliance with ADG guidance, WLEP 2009 standards and WDCP 2009 controls, provided these matters are resolved, view impacts are acceptable.	
4.17. Retaining walls	Condition compliance with relevant Australian Standards and require engineering design and certification	Y

6 Residential flat buildings

Controls/objectives	Comment	Compliance
6.1 General		
6.2 Minimum Site Width Requirement		
(a) To allow for development of sites, which are of sufficient width to accommodate the required building envelope, car parking and landscaping requirements. *(b) To promote the efficient utilisation of land.* ***(c) To encourage amalgamation of allotments to provide for improved design outcomes including greater solar access and amenity.***	See Variation - Chapter A1 Section	N
6.3 Front Setbacks	Refer to Chapter D13	
6.4 Side and Rear Setbacks / Building Separation	Refer to ADG Assessment	
6.5 Built Form	Refer to ADG Assessment	

6.6 Visual privacy	Refer to ADG Assessment	
6.7 Acoustic privacy	Refer to ADG Assessment	
6.8 Car Parking Requirements	Refer to Chapter D13 / Chapter E3	
6.9 Basement Car Parking	Refer to Chapter D13 / Chapter E3	
6.10 Access Requirements	Refer to Chapter D13 / Chapter E3	
6.11 Landscaping Requirements	Refer to Chapter D13 / Chapter E6	
6.12 Deep Soil Zone	Refer to Chapter D13 / Chapter E6	
6.13 Communal Open Space	Refer to ADG Assessment	
6.14 Private Open Space	Refer to ADG Assessment	
6.15 Adaptable Housing	Refer to Chapter D13	
6.16 Access for People with a Disability	Refer to Chapter D13 / E1	
6.17 Apartment Size and Layout Mix for Larger Residential Flat Building Developments	Refer to Chapter D13 & ADG Assessment	
6.18 Solar Access	Refer to ADG Assessment	
6.19 Natural Ventilation	Refer to ADG Assessment	

CHAPTER B2 - SUBDIVISION

Lot consolidation proposed, limited controls are applicable.

CHAPTER D13 – WOLLONGONG CITY CENTRE

2 Building form

Objectives/controls	*Comment*	*Compliance*
2.2 Building to street alignment and street setbacks 4m Required	4.075 - 4.22m Minor (~500mm) compliant balcony projections	Y

Objectives/controls	*Comment*	*Compliance*
Minor projections into front building lines and setbacks for sun shading devices, entry awnings and cornices are permissible	Regarding awning: See Variation - Chapter A1 Section	N
2.3 Street frontage heights in commercial core		
	NA	
2.4 Building depth and bulk		
900m² / 18 depth	Floorplate <900m²	
	Max depth 15m (building oriented East/West width as per site configuration)	
2.5 Side and rear building setbacks and building separation		
	Refer to ADG Assessment	
2.6 Mixed used buildings		
	NA	
2.7 Deep soil zone		
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.	See Variation - Chapter A1 Section	N
2.8 Landscape design		
	See ADG & Chapter E6.	
	Landscape referral acceptable	
2.9 Green roofs, green walls and planting on structures		
	Roof planting and Zen garden component.	
	Landscape referral acceptable	
2.10 Sun access planes		
	NA	
2.11 Development on classified roads		
	NA	

3 Pedestrian amenity

Objectives/controls	*Comment*	*Compliance*
3.1 General		
3.2 Permeability		
	NA	
3.3 Active street frontages		
Residential developments are to provide a clear street address and direct pedestrian access off the primary street front, and allow for residents to overlook all surrounding streets.	Clear street address and pedestrian access provided.	

3.4 Safety and security		
	Surveillance and adequate site lines provided throughout site and over street frontage. Lighting of basement common areas provided. See further assessment under Chapter E2	
3.5 Awnings		
	NA	
3.6 Vehicular footpath crossings		
One vehicle access point only (including the access for service vehicles and parking for non-residential uses within mixed use developments) will be generally permitted.	Single crossing proposed. Regarding crossing width: See Variation - Chapter A1 Section	Y N
3.7 Pedestrian overpasses, underpasses and encroachments		
	NA	
3.8 Building exteriors		
	Refer to Assessment under ADG	
3.9 Advertising and signage		
	NA	
3.10 Views and view corridors		
	Controls relates largely to public domain views. Park St not identified as 'Framed View' for preservation. Public E/W Views to escarpment from Flagstaff Hill will not be noticeably affected. See Chapter B1 for assessment of view impacts on private dwellings.	Y

4 Access, parking and servicing

Objectives/controls	*Comment*	*Compliance*
4.1 General		
4.2 Pedestrian access and mobility		
	Pedestrian access is available from the street frontage with one common entry point. Car parking for the adaptable units is provided within the basement car parking levels, with access throughout the building available via the lifts.	Y

	The finish of pedestrian pathways and the like can be dealt with by consent conditions.	
4.3 Vehicular driveways and manoeuvring areas		
Setback a minimum of 1.5m from the relevant side property boundary	Driveway located and designed appropriately. Vehicles can turn on site and leave in a forward direction. Car spaces, driveway grades comply with relevant standards. Council's Traffic Engineer found the design satisfactory.	Y
4.4 On-site parking		
	Basement parking provided. Sufficient car parking, motorcycle and bicycle parking is provided. Sufficient car parking to support the adaptable units is also proposed. Council's Traffic Engineer has found the proposal satisfactory.	Y
4.5 Site facilities and services		
Development must ensure that adequate provision has been made for all essential services including water, sewerage, electricity and telecommunications and stormwater drainage to the satisfaction of all relevant authorities.	The building is serviced by the major utilities and the proposal is not expected to result in any need to augment these services. Letter boxes proposed within the front setback which will be incorporated into the entry ramp/pedestrian pathway design. No rooftop ancillary structures or services shown on the plans. Provision has been made for waste storage rooms within the basement. On-street collection is proposed which is acceptable due to site width and number of units/bins. Consideration of boosters, substations etc have been considered under 4.13 & 4.14 of Chapter B1	Y

5 Environmental management

Objectives/controls	*Comment*	*Compliance*
5.2 Energy efficiency and conservation		
	The proposal is not expected to result in significant energy consumption and there are no particular opportunities to require energy saving measures under this DA other than to require water saving devices, such as flow regulators, 3 stars rated shower heads, dual flush toilets and tap aerators.	Y

	BASIX certificates submitted indicate the BASIX targets are satisfied by the residential units.	
5.3 Water conservation		
	The proposal is not expected to result in significant water consumption and there are no particular opportunities to require water saving measures under this DA other than to require new water fixtures (shower heads, taps, toilets, urinals etc.) to be 3 stars or better rated.	Y
	BASIX certificates submitted indicate the BASIX targets are satisfied by the residential units	
5.4 Reflectivity		
	Refer to ADG Assessment	
5.5 Wind mitigation		
	NA	
5.6 Waste and recycling		
	Garbage bins to be stored in basement.	Y
	Garbage is to be collected from street.	
	Required = 1120L waste, 1120L recycling and a communal green waste bin.	
	Based on 240L bins a total of 9.5 bins are required. The design provides for 15 bin spaces within the basement bin storage area.	

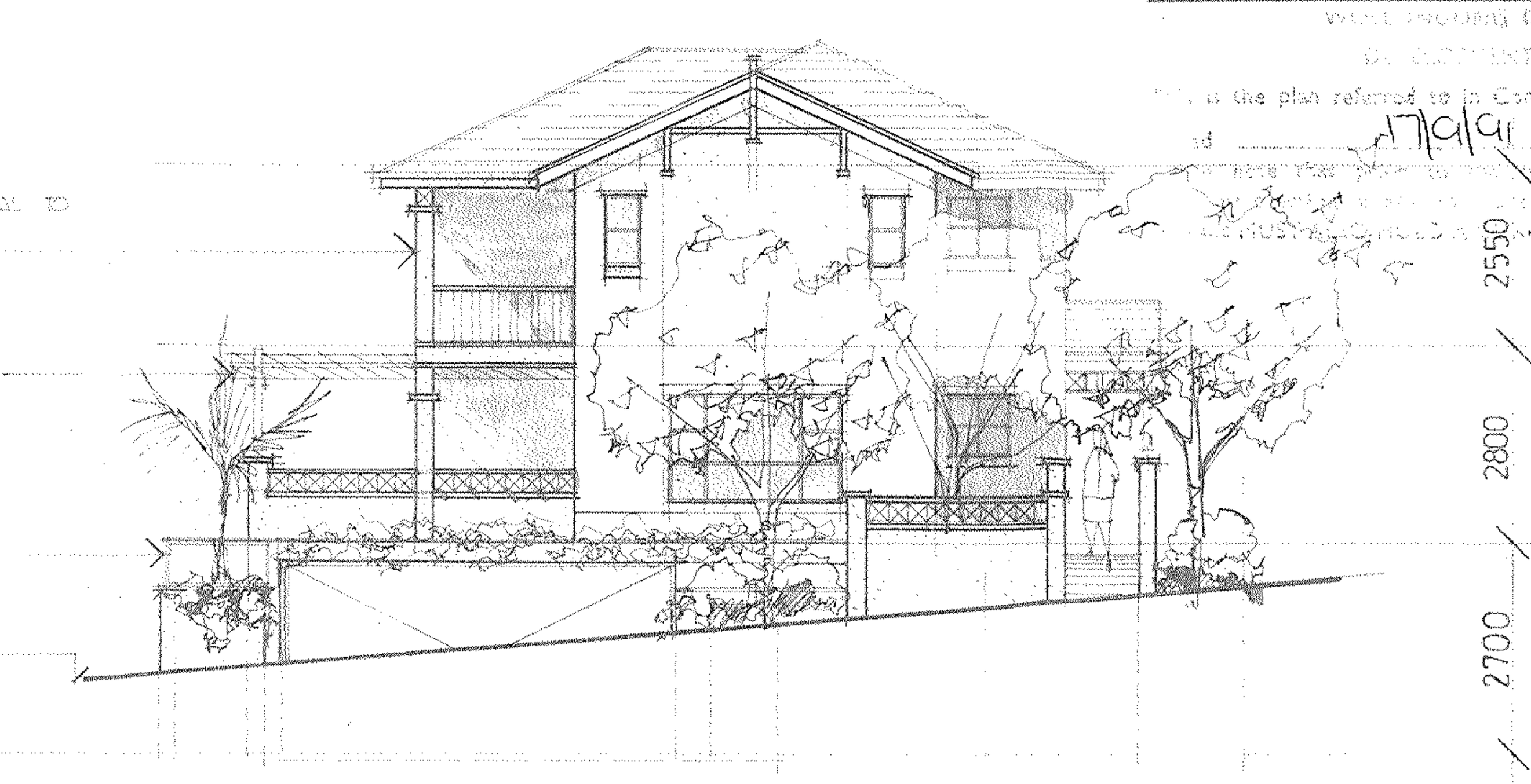
6 Residential development standards

Objectives/controls	*Comment*	*Compliance*
6.1 SEPP 65		
	Refer to SEPP 65 / ADG Assessment	
6.2 Housing choice and mix		
10% of all dwellings (or at least one dwelling) must be designed to be capable of adaptation for disabled or elderly residents.	Apartment choice/mix includes:	Y
	2 x 1 bedroom	
	4 x 2 bedroom	N
	8 x 3 bedroom	
	It is noted several include study rooms, which may potentially substitute as bedrooms that do not satisfy ADG requirements – Refer to ADG assessment.	
The development application must be accompanied by certification from an accredited Access Consultant confirming that the adaptable dwellings are capable of being modified, when required by the occupant, to	See Variation - Chapter A1 Section	

Objectives/controls	*Comment*	*Compliance*
comply with the Australian Adaptable Housing Standard (AS 4299-1995).		
6.3 Dwelling houses		
	NA	
6.4 Multi dwelling housing		
	NA	
6.5 Dual occupancy		
	NA	
6.6 Basement Carparks		
The scale and siting of the basement car park must not impact upon the ability of the development to satisfy minimum landscaping and deep soil zone requirements.	Landscaping and Deep Soil interaction is compliant	Y
	See Variation - Chapter A1 Section	N
The roof of any basement podium, measured to the top of any solid wall located on the podium, must not be greater than 1.2m above natural or finished ground level.		
6.7 Communal open space		
The minimum size of this open space is to be calculated at 5m2 per dwelling (min. dimension on 5m)	70m² required	Y
	217m² (open space) + ~120 integrated DSZ / = 337 proposed	
	Refer to ADG assessment.	
6.8 Private open space		
	Refer to SEPP 65 / ADG Assessment	
6.9 Overshadowing		
	Refer to SEPP 65 / ADG Assessment	
6.10 Solar access		
	Refer to SEPP 65 / ADG Assessment	
6.11 Natural ventilation		
	Refer to SEPP 65 / ADG Assessment	
6.12 Visual privacy		
	Refer to SEPP 65 / ADG Assessment	
6.13 Acoustic Privacy		
	Appropriate rooms are co-located together. Apartments above and below provide similar room uses is similar locations.	Y
	Wall construction adequate to address acoustic privacy.	
6.14 Storage		
	Refer to SEPP 65 / ADG Assessment	

CONSENT
... is the plan referred to in Consent DA 91/116
17/9/91
... BUILDING PERMIT.

NORTHERN ELEVATION

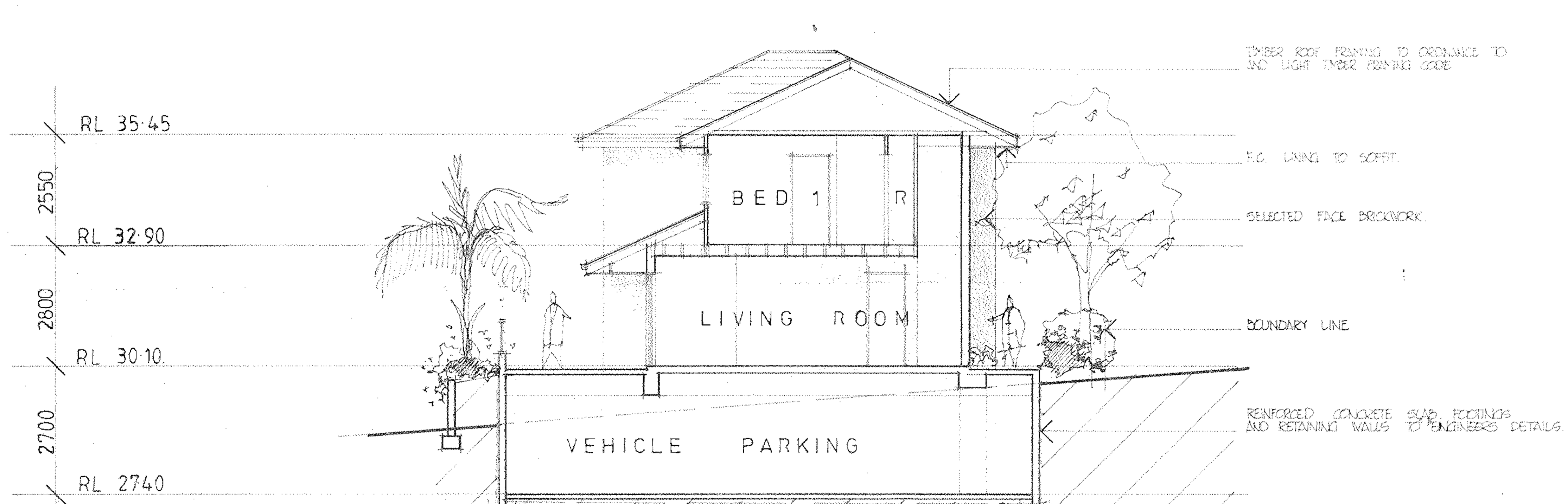


WESTERN ELEVATION

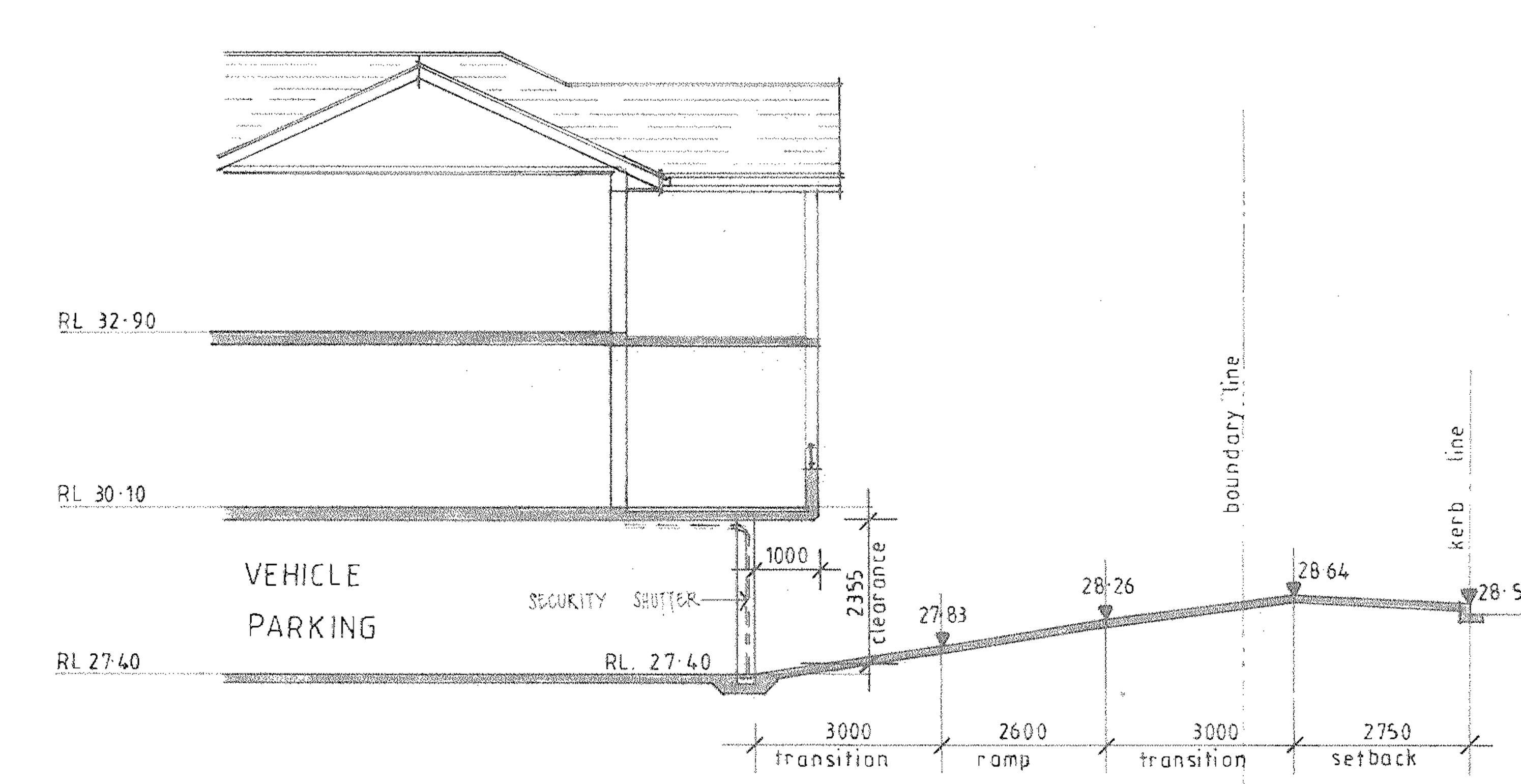
GARBAGE AND LETTERBOX ENCLOSURE

SOUTHERN ELEVATION

EASTERN ELEVATION



SECTION



SECTION THRU ℄ LINE OF RAMP

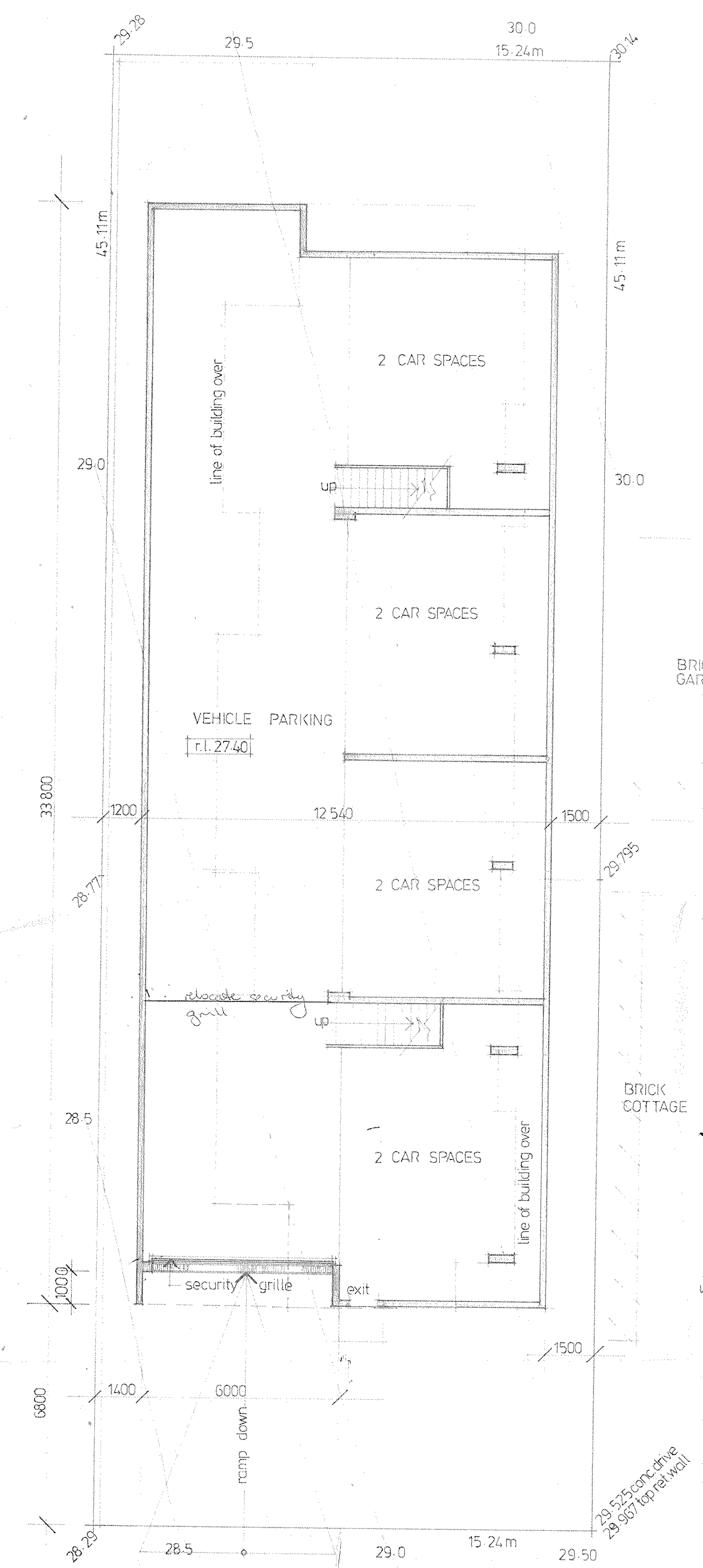
client
mr. losurdo

proposed 2 x 2 bed &
2 x 3 bed townhouses

13 park st. wollongong

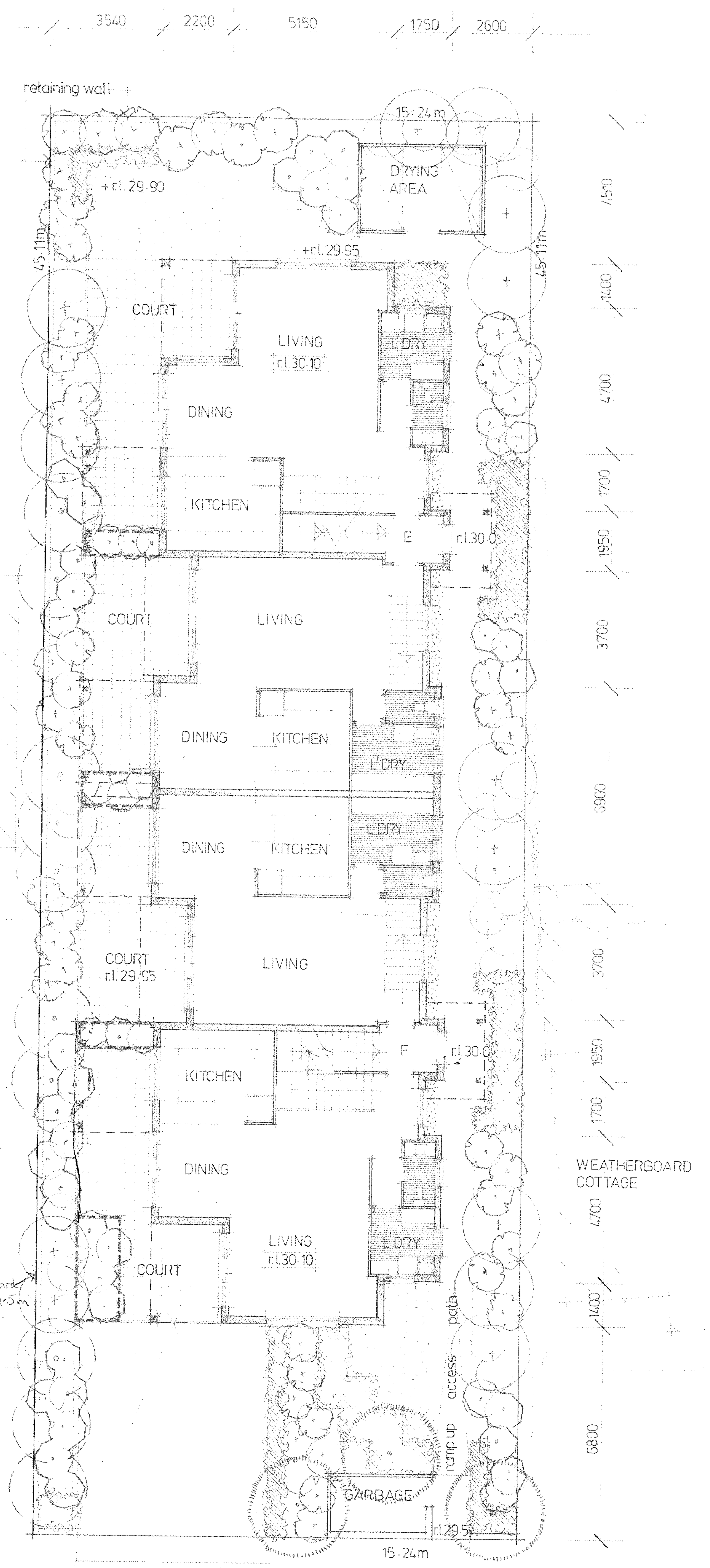
p.r. design co
architecture ~ interiors ~ landscape
graovac house,
2nd floor 73 church street
wollongong 2500
telephone 042 283699
fax no. 042 291145

date dwn	scale	dwg no
june '91	1:100	02
dwn: pr/sam	chkd:	job: 91034

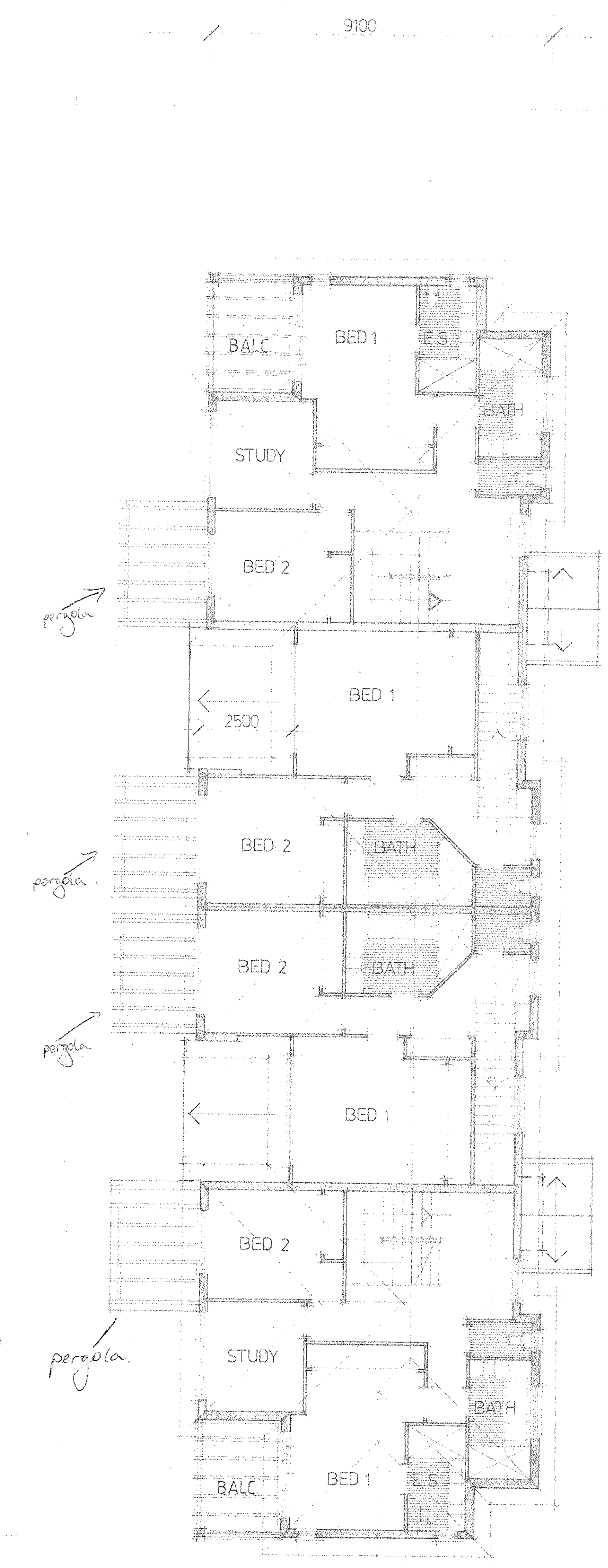


park street

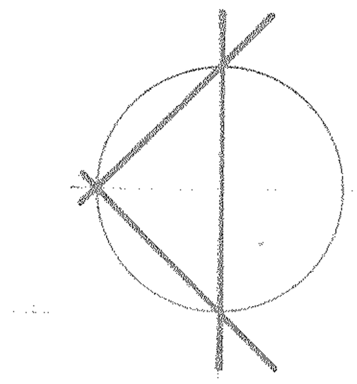
BASEMENT FLOOR PLAN



SITE, GROUND FLOOR PLAN



FIRST FLOOR PLAN



Amendments

Rev.	Date	By	Chkd

WOLLONGONG CITY COUNCIL
DEVELOPMENT CONSENT
... is the plan referred to in Consent 2911/116
17/9/91
... MUST ALSO HOLD A COUNCIL BUILDING PERMIT.

legend:

- CULTIVATED KIKUYU TURF
- NEPEAN RIVER GRAVEL
- TERRACOTTA TILES
- EXPOSED AGGREGATE CONC. PAVING
- TIMBER SCREEN – 1800mm HIGH
- RAISED PLANTER BOX TO 750mm HEIGHT
- DRYING AREA – HILLS PARALINE
- +20.0 EXISTING SPOT LEVEL
- +20.0 PROPOSED SPOT LEVEL
- RETAINING WALL

indicative planting list:

FEATURE PLANT	–Agapanthus praecox –Miscanthus sinensis –Hemerocallis
SMALL SHRUB	–Choisya ternata –Pimelia ferruginea –Gardenia florida
MEDIUM SHRUB	–Plumbago auriculata –Nandina domestica –Eriostemon myoporoides
LARGE SHRUB	–Murraya paniculata –Hibiscus rosa sinensis –Coprosma repens
FEATURE TREE	–Schefflera actinophylla
PALM PLANTING	–Howea forsterana
SMALL TREE	–Hymenosporum flavum –Pittosporum rhombifolium –Tristaniopsis laurina
ENTRY TREE	–Robinia frisia –Lagerstroemia indica –Fraxinus 'Raywood'

client

mr. losurdo

proposed 2 x 2 bed & 2 x 3 bed townhouses

13 park st. wollongong

p.r. design co

architecture ~ interiors ~ landscape

graovac house,
2nd floor 73 church street
wollongong 2500
telephone 042 283299
fax no. 042 291145

date dwn	scale	dwg no
june '91	1:100	01
dwn: pr/sam / chkd:	job: 91034	

SITE CALCULATIONS

SITE AREA		687.47 m²
MAX F.S.R.	1.25:1	859.35 m²
REDUCTION FOR WIDTH		644.50 m permissable – 25%
ACTUAL F.S.R.		531.815 m²
PARKING REQUIRED		7.8
ACTUAL		8 SPACES

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Attachment 10 – Draft Reasons for Refusal

The draft reasons for the refusal of the proposed development are:

1 Pursuant to the provisions of Section 4.15 (1)(a)(ii) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with the State Environmental Planning Policy No 65 with respect to the following objectives of the Apartment Design Guide; Objective 3B Solar Access, Objective 3C Location of Services, Objective 3F Building Separation, Objective 4B Room Layout & Dimensions and Objective 4E Privacy Impacts.

2 Pursuant to the provisions of Section 4.15 (1)(a)(i) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with Wollongong Local Environmental Plan 2009 with respect to Clause 2.2 and the zone objectives of the R1 General Residential Zone.

3 Pursuant to the provisions of Section 4.15 (1)(a)(i) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with Wollongong Local Environmental Plan 2009 with respect to Clause 4.4 and the variation to maximum floor space ratio.

4 Pursuant to the provisions of Section 4.15 (1)(a)(i) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with Wollongong Local Environmental Plan 2009 with respect to Clause 4.6 as no statement seeking to justify a variation to development standards has been submitted.

5 Pursuant to the provisions of Section 4.15 (1)(a)(i) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with Wollongong Local Environmental Plan 2009 as the development fails to exhibit design excellence under Clause 7.18.

6 Pursuant to the provisions of Section 4.15(1)(a)(iii) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with the provisions of Wollongong City Council's Development Control Plan 2009 with respect to Clause 6.2 of Chapter B1 as the development will result in the creation of an isolated lot.

7 Pursuant to the provisions of Section 4.15(1)(a)(iii) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is inconsistent with the provisions of Wollongong City Council's Development Control Plan 2009 with respect to Clause 2.2, 3.6, 6.2 and 6.6 of Chapter D13 Wollongong City Centre.

8 Pursuant to the provisions of Section 4.15 (1)(b) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development is excessive in floor space ratio and would adversely impact upon the amenity of the locality.

9 Pursuant to the provisions of Section 4.15 (1)(c) of the Environmental Planning and Assessment Act 1979, it is considered that the proposed development site is not suitable for the proposed development due to the resultant solar access and amenity impacts.

10 Pursuant to the provisions of Section 4.15 (1)(e) of the Environmental Planning and Assessment Act 1979 it is considered that in the circumstances of the case, approval of the development would set an undesirable precedent for similar inappropriate development and is therefore not in the public interest.