

2017SSH028 – 49-57 GERRALE STREET, CRONULLA

DA17/0885

ASSESSMENT REPORT APPENDICES

Appendix	A	Draft Conditions of Consent
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DRAFT CONDITIONS OF CONSENT
Development Application No. 17/0885

1. Approved Plans and Documents

The development must be undertaken substantially in accordance with the details and specifications set out on the Plan / Drawings in the table below:

<i>Plan number</i>	<i>Reference</i>	<i>Prepared by</i>	<i>Date</i>
A098 Rev I	Basement 2	Architecture Urbaneia	Received by Council 30.10.17
A099 Rev I	Basement 1	Architecture Urbaneia	Received by Council 30.10.17
A100 Rev K	Ground Floor Plan	Architecture Urbaneia	Received by Council 30.01.18
A101 Rev K	Level 1	Architecture Urbaneia	Received by Council 30.01.18
A102 Rev K	Level 2	Architecture Urbaneia	Received by Council 30.01.18
A103 Rev D	Level 3	Architecture Urbaneia	Received by Council 30.01.18
A104 Rev C	Level 4	Architecture Urbaneia	Received by Council 30.01.18
A105 Rev D	Level 5	Architecture Urbaneia	Received by Council 30.01.18
A106 Rev J	Level 6	Architecture Urbaneia	Received by Council 30.01.18
A107 Rev C	Level 7	Architecture Urbaneia	Received by Council 30.01.18
A108 Rev K	Level 8 (Penthouse)	Architecture Urbaneia	Received by Council 30.01.18
A109 Rev L	Rooftop Level	Architecture Urbaneia	Received by Council 30.01.18
A150 Rev G	Gerrale Street East Elevation	Architecture Urbaneia	Received by Council 09.02.18
A151 Rev G	Surf Lane West Elevation	Architecture Urbaneia	Received by Council 09.02.18
A152 Rev G	North Elevation	Architecture Urbaneia	Received by Council 09.02.18
A153 Rev G	South Elevation	Architecture Urbaneia	Received by Council 09.02.18
A160 Rev G	Cross Section	Architecture Urbaneia	Received by Council 09.02.18
A161 Rev F	Long Section	Architecture Urbaneia	Received by Council 09.02.18
A401 Rev B	Material Finishes - 01	Architecture Urbaneia	Prepared 16/10/17
A402 Rev B	Material Finishes - 02	Architecture Urbaneia	Prepared 16/10/17
A601 Rev D	Adaptable housing -01	Architecture Urbaneia	Prepared 30/10/17
A602 Rev E	Adaptable housing -01	Architecture Urbaneia	Prepared 30/10/17
A603 Rev D	Livable Housing	Architecture Urbaneia	Prepared 16/10/17
ESCP01 Rev B	Erosion & Sediment Control Plan	ADCAR Consulting	Prepared 07.07.17

SW01 Rev C	Stormwater Services Coversheet, Legend, Notes & Details	ADCAR Consulting	Prepared 19.10.17
SW02 Rev C	Stormwater Services Basement 2	ADCAR Consulting	Prepared 19.10.17
SW03 Rev C	Stormwater Services Basement 1	ADCAR Consulting	Prepared 19.10.17
SW04 Rev C	Stormwater Services Ground Floor	ADCAR Consulting	Prepared 19.10.17
SW05 Rev C	Stormwater Services Level 1	ADCAR Consulting	Prepared 19.10.17
L-DA-C Issue C	Tree Management Plan	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Ground Floor + Public Domain	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Podium - Level 1	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Podium - Level 2 - 3	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Podium - Level 4	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Podium - Level 5 - 7	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Podium - Level 8	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Landscape Plan Podium - Roof Top	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	3D Views - Ground Level Courtyard	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Alternative Options of Mailbox Locations	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Material Palette Ground Level + Public Domain	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Planting Palette Ground Floor + Public Domain	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Planting Palette Podium	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Planting Palette Rooftop	Turf Design Studio	Prepared October 2017
L-DA-C Issue C	Design Statement Approach	Turf Design Studio	Prepared October 2017

and any details on the application form and on any supporting information received with the application except as amended by the following conditions.

Note: The following must be submitted to Sutherland Shire Council prior to the commencement of any building work.

- i) A Construction Certificate.
- ii) Notification of the appointment of a Principal Certifying Authority and a letter of acceptance from that Principal Certifying Authority.
- iii) Notification of the commencement of building works with a minimum of 2 days' notice of such commencement.

2. Design Changes Required

A. Before Construction

The following design changes must be implemented:

- i) The residential entry gates on both Surf Lane and Gerrale Street are to be an open form and style to provide security but allow for passive surveillance.
- ii) Unobstructed internal access must be provided from the Gerrale Street tenancies to the commercial garbage room and Surf Lane loading area. This will require the deletion of the wall shown on Ground Floor Plan A100 Rev K;
- iii) The northern wall adjacent the vehicle entry shall be Stonewall Cladding for the portion of the wall which extends forward of the entry roller door. Details of the garage roller door must also be submitted for the approval of the Director, Shire Planning.
- iv) A total provision of 558m³ of storage must be provided within the building. A minimum of 279m³ of storage shall be provided within the individual apartments allocated on the basis of 6m³ per 1 bedroom apartment, 8m³ per 2 bedroom apartment and 10m³ per 3 bedroom apartments. The required storage shall be contained within the existing GFA for the building.
- v) Privacy screens for the windows and balconies in the southern elevation shall be designed with vertical blades at maximum 50mm spacings.
- vi) The private terrace area for penthouse apartment No. 866 must have a minimum depth of 2.4m towards the northern end of the terrace adjacent the living area. This can be achieved with a reduced planter depth or moving the glass-line.
- vii) The first 10m of the proposed 'green wall' on the southern boundary of the site (Gerrale Street frontage) must not exceed 1.8m in height. This is to prevent visual dominance on the streetscape and for the neighbouring property to the south.
- viii) Glazing must be incorporated into the southern elevation of the southern-most tenancy in the Gerrale Street frontage to the east of the proposed residential entry gates. The purpose of the glazing is to provide passive surveillance.

Details must be submitted for the approval of the Director, Shire Planning prior to release of the Construction Certificate.

3. Crime Prevention through Design

A. During Construction

Security lighting and/or a security company shall be incorporated to protect the site during the construction phase.

B. Before Occupation

To minimise the opportunity for crime, and in accordance with Crime Prevention Through Environmental Design (CPTED) principles, the development shall incorporate the following mitigation measures:

- i. Access control shall be installed to the car parking area, residential forecourt areas and foyers to permit admission of authorised persons only (including employees of the commercial premises and residents). An intercom system shall be installed to enable controlled access for visitors.
- ii. Security lighting shall be installed to the entry and exit points on Surf Lane and Gerrale Street as well as within the landscaped forecourt area and communal open space areas. External Lighting must satisfy AS1158.3.1.
- iii. A CCTV system shall be installed with a focus on monitoring the parking and storage areas and access points to the buildings.
- v. Signage shall be installed to assist in way finding through the development.
- vi. All Graffiti must be removed as soon as is practical from the time of reporting.

4. Public Place Environmental, Damage & Performance Security Bond

A. Before Issuing of any Construction Certificate

Prior to the issue of a Construction Certificate or the commencement of any works on site, whichever occurs first, the person acting on this consent must provide security to Sutherland Shire Council against damage that may be caused to any Council property and/or the environment as a consequence of the implementation of this consent. The security may be provided by way of a deposit with Council or a bank guarantee. A non-refundable inspection/administration fee is included in the bond value.

It is the responsibility of the person acting on this consent to notify Sutherland Shire Council of any existing damage to public areas in the vicinity of the development site by the submission of a current dilapidation report supported by photographs. This information must be submitted to Council at least 2 days prior to the commencement of works.

In the event that the dilapidation report is not submitted 2 days prior to commencement and the public area sustains damage the person acting on this consent may be held liable.

Should any public property and/or the environment sustain damage as a result of the works associated with this consent, or if the works put Council's assets or the environment at risk, Council may carry out any works necessary to repair the damage and/or remove the risk. The costs incurred must be deducted from the bond.

The value of the bond is \$20,710.00

Note: Bond amount includes a non-refundable administration fee which must be paid separately if security is provided by way of a deposit with Council or a bank guarantee.

Use of Bank Guarantee - As bond releases may occur under different timeframes only one bond amount/bond purpose is permitted on a Bank Guarantee. Multiple bonds will require multiple bank guarantees to be lodged.

B. After Occupation

A request for release of the bond may be made to Sutherland Shire Council after all works relating to this consent have been completed. Such a request must be submitted to Council on the 'Bond Release Request Form' signed by the owner or any person entitled to act on the consent and must be accompanied by a current dilapidation report including photographs.

SECTION 94 CONTRIBUTIONS

The following monetary contributions have been levied in relation to the proposed development pursuant to Section 94 of the Environmental Planning and Assessment Act 1979.

5. S94 2016 Contribution Plan - Cronulla Centre Precinct

A. Before Construction

Pursuant to Section 94 of the Environmental Planning and Assessment Act 1979 and Sutherland Shire Council Section 94 Plan 2016, a total monetary contribution of \$700,000.00 must be paid to Sutherland Shire Council toward the cost of regional and local public domain works contained in the Works Programme of the Contributions Plan.

This contribution has been assessed and calculated in accordance with the Sutherland Shire 2016 S94 Contribution Plan on the basis of 67 proposed residential apartments with a concession for 32 existing residential apartments.

Infrastructure & Facilities	Contribution Required
Local open space and public domain works	\$342,785.48
Regional open space	\$357,214.52

The contribution will be indexed on 1 July in each year in accordance with the Consumer Price Index (All Groups Index) for Sydney.

The formula to index a contribution rate is:

$$\text{New Contribution Rate} = \text{Current Contribution Rate} \times \frac{\text{Current CPI}}{\text{Previous year's CPI}}$$

Payment must be made prior to the issue of the Construction Certificate.

6. Approvals Required under Roads Act or Local Government Act

A. Before Construction

No occupation or works are to be carried out on public land (including a road or footpath) or access provided over a public reserve adjacent to the development site without approval being obtained from Sutherland Shire Council and the necessary fee paid under the Roads Act 1993 and/or the Local Government Act 1993. These approvals must be to the satisfaction of Council for the required development works and may include but are not limited to the following:

- Detailed Frontage Works including construction of a driveway, footpath, etc.
- Road openings and restoration to provide services to the development.
- Work Zones and Hoardings.
- Skip Bins.
- Shoring / Anchoring.
- Standing of cranes, concrete pumps, etc.

Note: All Plans and Permits are required to be on site, at all times and may be requested by council officers at any time.

Note: Approval under the Roads Act or Local Government Act cannot be granted by a Principal Certifying Authority or by a Private Certifier. Failure to obtain approval may result in fines or prosecution.

7. Design and Construction of Works in Road Reserve (Council Design)

A. Design

Council has determined that the proposed development generates a need for the following works to be undertaken by the applicant in the road reserve. To this end a Detailed Frontage Works application under the Roads Act 1993 must be submitted to Sutherland Shire Council, prior to the release of the Construction Certificate. The form is available on Council's website. A fee applies for the relevant inspections, assessment, coordination, creation of design brief and the issue of permits providing consent to undertake frontage works. The design will be quoted separately by Council's Design Services unit.

This design will generally comply with the approved architectural design drawings and the current website version of Council's Public Domain Design Manual (PDDM) and Public Domain Technical Manual (PDTM) except where modified by/or addressing the following:

- i) Property alignment/ boundary levels - establish the property alignment/ boundary levels and crossing profiles.
- ii) Grades - regrade footpath verge to final design levels including topsoil, turf and all associated soft landscaping.
- iii) Vehicle Crossings - construct one vehicle crossing and associated layback within Surf Lane to facilitate turning movements for a "HRV".
- iv) Redundant Laybacks and Crossings - remove redundant laybacks and vehicle crossings and replace with kerb and gutter (including associated road reconstruction works).
- v) Stormwater Connection - construct new kerb inlet pit and associated lintel within Gerrale Street to facilitate private drainage connection for the proposed development. Remove all redundant stormwater connections from within the footpath verge and reinstate kerb and gutter as required.
- vi) Footpath - upgrade footpath pavement along full frontage of site on Surf Lane and Gerrale Street as required by the Public Domain Design Manual for the Cronulla Centre.
- vii) Cycleway - install new cycleway (as required).
- viii) Infrastructure Transitions - ensure there are adequate transitions between newly constructed and existing infrastructure as required.

- ix) Road Pavement - reconstruct road pavement as required.
- x) Kerb and Gutter - reconstruct and realign kerb and gutter including associated road reconstruction within the subject frontages of Surf Lane and Gerrale Street where required.
- xi) Street Signage - alter existing and/or install new street signage as required including all associated line marking.
- xii) Trees - remove three (3) existing *Cupaniopsis anacardioides* (Tuckeroo) street trees in Gerrale Street; and install new *Cupaniopsis anacardioides* (Tuckeroo) street trees in Gerrale Street.
- xiii) Furniture - Install street furniture as required by the Public Domain Design Manual for the Cronulla Centre.
- xiv) Undergrounding - provide replacement of existing local distribution power lines and other overhead utilities with subsurface utilities or with insulated aerial bundles cables (ABC) as required.
- xv) Street Lighting - install new street lighting in conjunction with the undergrounding of local distribution power lines and other utilities as required.
- xvi) Utility Services - adjust public services infrastructure as required.
- xvii) NBN - the Australian Government has issued a new policy on the provision of telecommunication infrastructure in new developments. The policy is effective from 1 March 2015. Developers are responsible for providing telecommunications infrastructure in their developments. To provide this infrastructure, developers need to contract a carrier to install and operate a telecommunications network.

NBN is the IPOLR (infrastructure provider of last resort) in developments of 100 lots or more within its fixed-line footprint and in new development where its fixed-line network is available, or the NBN rollout has been announced (www.nbnco.com.au/learn-about-the-nbn/rollout-map.html).

If you use NBN, you will need to provide six months' notice before your network needs to be available.

Evidence of the lodgement of this application must be provided to the PCA prior to the release of the Construction Certificate

B. Before Construction

Prior to the release of the Construction Certificate property alignment levels and crossing profiles must be obtained from Sutherland Shire Council.

C. Before Occupation

Prior to the occupation of the building or the issue of an Occupation/Subdivision Certificate the following certification must be provided to Sutherland Shire Council:

- i) The supervising engineer must certify that the road frontage works were constructed in accordance with the development consent and associated approval under the Roads Act 1993 including the approved drawings and specification; and
- ii) The supervising arborist, landscape designer or landscape architect must certify the street trees are the correct species and were installed in accordance with the development consent and associated approval under the Roads Act 1993.

8. Site Management Plan

A. Before Commencement of Works including Demolition

An Environmental Site Management Plan must accompany the application for a Construction Certificate. If demolition is to commence prior to the issue of a Construction Certificate the applicant must submit to Sutherland Shire Council a separate Demolition Site Management Plan. These plans must satisfy the Objectives and Controls of Sutherland Shire Development

Control Plan 2015 relating to environmental site management and must incorporate the following throughout demolition and construction:

- i) Safe access to and from the site during construction and demolition.
- ii) Safety and security of the site, road and footpath area including details of proposed fencing, hoarding and lighting.
- iii) Method of loading and unloading excavation machines, building materials.
- iv) How and where, construction materials, excavated and waste materials will be stored.
- v) Methods to prevent material being tracked off the site onto surrounding roadways.
- vi) Erosion and sediment control measures.

B. During Works

The site management measures set out in the above plan must remain in place and be maintained throughout the period of works and until the site has been stabilised and landscaped.

9. Pre-commencement Inspection

A. Before Works

A Pre-commencement Inspection/meeting is to be convened by the Applicant on-site a minimum 5 days prior to any demolition and/or construction activity and between the hours of 8.00 am and 4.30 pm Monday to Friday. The meeting must be attended by a representative of Council's Public Domain Assets Branch, the Principal Certifying Authority, the builder/site manager of the building/civil construction company and where necessary the supervising engineer. The attendance of the owner is required when it is intended to use more than one builder / principal contractor throughout the course of construction.

The purpose of the meeting is to:

- i) Ensure safe passage for pedestrians, Work and Hoarded Zones are maintained in accordance with Council requirements;
- ii) Check the installation and adequacy of all traffic management devices;
- iii) Confirm that the supervising engineer has a copy of Council's Specification for Civil Works Associated with Subdivisions and Developments.

Note: An inspection fee must be paid to Council prior to the lodgement of the Notice of Commencement. Please refer to Sutherland Shire Council's Adopted Schedule of Fees and Charges.

10. Supervising Engineer

A. Before Construction

The applicant must engage an Accredited Certifier in civil engineering works or a Chartered Civil Engineer to supervise construction of any:

- i) Road frontage works.
- ii) Construction / installation of stormwater drainage.
- iii) Rainwater harvesting & reuse.

B. During Construction

The engineer must supervise the works as listed above to ensure compliance with:

- i) All relevant conditions of development consent.
- ii) Any Consent issued under the Roads Act for this development.

C. Before Occupation

The supervising engineer must certify the works required in "A" above were undertaken and completed in accordance with the requirements of this Development Consent and to their satisfaction.

11. Internal Driveway, Parking and Manoeuvring

A. Design

The internal driveway profile, parking and manoeuvring areas must be designed in accordance with the approved architectural plans except where modified by the following:

- i) Align with Access and Alignment levels issued by Council's Public Domain Unit.
- ii) The ingress and egress crossing must be clearly identified by signage.
- iii) The proposed loading and delivery area must be clearly defined with suitable signposting and pavement markings.
- iv) The car park must be line marked to accommodate 140 vehicles.
- v) The internal driveway area must be paved or concreted and must be finished in materials other than plain or exposed aggregate concrete.
- vi) Provision of adequate sight distance for the safety of pedestrians using the footpath area.
- vii) Provide a maximum grade of 5% for the first 13.5 metres inside the property boundary.
- viii) Comply with AS2890.1(2004) in relation to the design of vehicular access, parking and general manoeuvring for the B85 vehicle.
- ix) The maximum longitudinal grade of the driveway must not exceed 25%.

B. Construction

Certification from an appropriately qualified engineer to the effect that the design requirements of "A" above have been met must accompany the Construction Certificate.

C. Occupation

Prior to the occupation of the development or the issue of any occupation certificate a suitably qualified engineer must certify that the works required in "A" above were undertaken and completed to their satisfaction and in accordance with the requirements of this Development Consent. This certification must be provided to the PCA and a copy also provided to Council.

D. On-going

The approved parking must be used exclusively for car parking as approved for the life of the development.

12. Basement Car Park Design & Construction

A. Design

The basement car park must be designed in accordance with the approved architectural drawings, subject to the following modifications:

- i) A minimum headroom of 2.2m measured from the parking floor to the underside of any beam, ventilation duct or service conduit, or to the underside of any door including a security door and fittings when those doors are in an open position in accordance with clause 5.3 of AS2890.1.
- ii) Parking bays must not be enclosed, caged or a door provided.
- iii) All parking bays must provide a minimum clear parking envelop in accordance with figure 5.2 of AS2890.1.
- iv) The security door fitted to the car parking area entrance must be independently mounted on rubber pads to prevent vibration noise transmission through the concrete walls and / or columns.

B. Prior to Construction

Certification from a Chartered Civil Engineer or a Registered Surveyor, to the effect that the car park layout and vehicle access-way design has been prepared in accordance with A above must accompany the application for the Construction Certificate.

C. Occupation

Prior to the occupation of the development or the issue of any Occupation Certificate a Chartered Civil Engineer or a Registered Surveyor must certify that the works required in "A" above have been completed to their satisfaction and in accordance with the requirements of this Development Consent. This certification must be provided to the PCA and a copy provided to Council.

D. On-going

The approved parking must be used exclusively for car parking as approved for the life of the development.

13. Drainage Design - Detailed Requirements

A. Design

The stormwater drainage system must be designed in accordance with the approved stormwater drainage design drawing, Australian Standard AS3500.3:2003 and the BASIX Certificate issued for this development. Except where modified by the following:

- i) A detailed drainage design supported by a drainage calculation.
- ii) The rate of discharge of stormwater from the site to a drainage system under Council's control must be controlled so that it does not exceed the pre-development rate of discharge.
- iii) The rainwater tank must have a minimum capacity of 20m³.
- iv) All levels reduced to Australian Height Datum.
- v) Harvested rainwater must be used for irrigation, toilet flushing and a cold water tap in the laundry for clothes washing.
- vi) The pipeline within the footpath verge must be a hot dipped galvanised steel hollow section with a minimum wall thickness of 4.0 millimetres or reinforced concrete.

B. Before Construction

- i) Certification from an Accredited Certifier in Civil Engineering or a Chartered Civil Engineer, to the effect that the drainage design is to their satisfaction and satisfies the design requirements in "A" above must accompany the application for a Construction Certificate.

C. Before Occupation

Prior to the issue of an Occupation Certificate:

- i) A Works-As-Executed drawing (WAED) of the stormwater drainage system must be prepared by a Registered Surveyor. This drawing must detail the alignment of pipelines, pits, the rainwater tanks and the detention facilities. An original or a colour copy must be submitted to Sutherland Shire Council.
- ii) The Supervising Engineer must certify the WAED of the stormwater drainage system that the stormwater drainage works, rainwater harvesting facility and rainwater reuse systems were constructed to their satisfaction and in accordance with the Development Consent. Prior to the occupation or use of the building the Applicant / Owner must submit to Council a copy of the aforementioned letter of certification.

D. Ongoing

- i) The operation of all devices or appliances installed within the development approved by this consent as required by conditions pertinent to rainwater harvesting and rainwater reuse must be maintained in good operating order at all times.
- ii) The stormwater detention / absorption facility must be:
 - ☐ Kept clean and free from silt, rubbish and debris.
 - Be maintained so that it functions in a safe and efficient manner.
 - Not be altered without prior consent in writing of the Council.

Note: Upon submission of the Works-As-Executed drawing for the stormwater drainage system a notation will be added to the section 149(5) certificate advising future owners that their property is burdened by a stormwater retention facility, installed to fully / partly off-set provision of a detention facility.

14. Stormwater Treatment

A. Before Construction

An appropriate stormwater treatment measure, selected from the Environment Protection Authority's document "Managing Urban Stormwater - Treatment Techniques, November 1997", must be provided as part of the permanent site stormwater (water quality) management system. Details must accompany the application for a Construction Certificate.

B. Before Occupation

The above work must be completed in accordance with 'A' above to the satisfaction of the supervising engineer before the issue of any Occupation Certificate.

C. Ongoing

The stormwater treatment measure must be maintained in accordance with the manufacturers' specification.

Note: Upon approval of the stormwater management designs a notation will be added to the 149 certificate in relation to any required detention facility or stormwater treatment device.

15. Damage to Adjoining Properties**A. Before Works**

To minimise vibration damage and loss of support to buildings / structures and properties in close proximity to the development site, compliance with the recommendations contained within the report prepared by JK Geotechnics dated 16 June 2017 must be achieved. The JK Geotechnics Report and recommendations must be provided to the person undertaking the excavation and the Principal Certifying Authority.

B. During Works

The constraints and recommendations of the Geotechnical Engineers Report must be implemented.

16. Public Utilities

This condition is imposed to facilitate the provision of services to the development and reduce conflicts between services and lot boundaries, buildings or associated facilities.

A. Before Construction

Suitable arrangements must be made with all relevant utility service providers to ensure the development is appropriately serviced by electricity, gas, telecommunications (including NBN) and the like, and any necessary underground conduits are provided. The Australian Government has issued a new policy on the provision of telecommunications infrastructure in new development. This policy is effective from 1 March 2015. Developers are responsible for providing telecommunications infrastructure in their developments. To provide this infrastructure, developers need to contract a carrier to install and operate a telecommunications network. NBN is the IPOLR (infrastructure provider of last resort). NBN require 6 months' notice in order to make the network available.

A copy of the agreements/contracts with the utility providers must form part of the supporting construction certificate documentation.

B. Before Occupation

Prior to issue of any Occupation Certificate, certification must be provided from each utility service provider/approved agent to the effect that each lot has been serviced to their satisfaction.

Prior to the issue of any Occupation Certificate, evidence satisfactory to the Certifying Authority that arrangements have been made for:

- i) The installation of fibre-ready facilities (conduits and pits) to all individual lots and/or premises/dwelling to enable fibre to be readily connected to any premises that is being or may be constructed on those lots. Certification from each carrier/provider must be provided to the PCA that they are satisfied that the fibre ready facilities are fit for purpose.
- ii) The provision of fixed-line telecommunications infrastructure (cables) in the fibre-ready facilities to all individual lots and/or premises/dwellings must be installed and certification from the carrier/provider must be provided to the PCA stating that the infrastructure has been provided and to their satisfaction.

- iii) Installation of gas and/or electricity must be constructed/installed by the utility service provider/approved agent to each allotment. Certification must be provided from each provider/agent stating that all allotments have been serviced to their satisfaction.
- iv) WAE drawings must be prepared by a registered surveyor detailing location and depth of conduits/pits and connection points/ties within allotments. A copy of the WAE drawings must form part of any Occupation/Subdivision certificate documentation.

Note: Should these requirements result in any significant change to the approved design an application must be made to modify the consent under s.96 of the Environmental Planning and Assessment Act.

17. Endorsement of Linen Plan of Subdivision for Consolidation

A. Before Construction

To facilitate the issue of the Plan of Subdivision for the consolidation of No's 49-51, 51R and 55-57 Gerrale Street into one lot, a film eight (8) paper copies of the Plan of Subdivision shall be submitted together with any necessary Instrument under the Conveyancing Act, where required for ultimate lodgement with the NSW Land Registry Services prior to issue of any Construction Certificate.

18. Landscaping Works

A. Design

The landscaping works must be designed in accordance with the approved Landscape Plan except where modified by the following and submitted to the Director of Shire Planning for approval prior to the issue of the Construction Certificate.

- i) The landscape plans must be amended in accordance with the approved architectural plans.
- ii) All existing trees on the site and in the road proposed to be removed must be shown on the plan.
- iii) For all landscaped areas including planter boxes and non-accessible planting, detailed planting plans and a plant schedule must be prepared. This should show plant species, spacings, numbers and pot sizes. Ensure a minimum density of 4 plants per square metre of understorey plantings to reduce weeds and ongoing maintenance.
- iv) Provide minimum soil depths in planter boxes as follows:
 - 1200mm for large trees.
 - 900mm for small trees and tall shrubs.
 - 600mm low shrubs.
 - 450mm grass and ground covers
- v) In Surf Lane relocate the 5 x *Livistona australis* (Cabbage Tree palms) shown on the Landscape Plan from the kerb to within the site. The tree trunk must be wholly inside the property boundary. Each palm tree must be provided with a tree cell, drainage, soil preparation, tree guard, watering, grating and/or mulching to match the Gerrale Street frontage as directed by Council.
- vi) Within the ground floor palm plantings include an additional 3 x *Cupaniopsis anarcardioides* (Tuckeroo) and 5x *Synoum glandulosum* (Bastard Rosewood) to help reduce wind tunnelling in the side passage.
- vii) Delete the following plant species from the 'Succulent Sky Garden' palette:

Dracaena marginata 'Tricolor' (Madagascar Dragon Plant)
Kalanchoe fedtschenkoi (Kalanchoe)
Kalanchoe 'Flapjacks' (Flapjacks)
Sansaviera trifasciata (Mother-in-Law Tongue)
Yucca 'Bright Edge' (Yucca)

Include the following local beach plant species in the 'Succulent Sky Garden' palette:

Carpobrotus glaucescens (Pigface)
Dianella congesta (Beach Flax Lily)
Rhagodia spinescens (Saltbush)
Scaveola aemula (Fairy Fan Flower)
Scaveola albida (White Fan Flower)

- iv) Each unit must be provided with a clothes line on a balcony. Ensure that clothes lines are not visible above the balustrade.
- v) All common planted areas, including the non-accessible planting areas, must be provided with a water-efficient irrigation system and taps at 20m centres, connected to a pump and the rainwater tank, to enable effective landscape maintenance.
- vi) Each unit with a planter box must be provided with one tap, connected to mains water.

The applicant must engage a suitably qualified Landscape Designer or Landscape Architect to oversee any design changes to the approved Landscape Plan and amendments required above. Details of these design changes must be included in the documentation submitted with the application for a Construction Certificate.

Notes:

A Landscape Designer is a person eligible for membership of the Australian Landscape Designers and Managers and a Landscape Architect is a person eligible for membership of the Australian Institute of Landscape Architects as a Registered Landscape Architect.

If demolition works to occur prior to the Construction Certificate being issued, tree protection measures must be installed prior to commencement of demolition.

B. Prior to Occupation/Occupation Certificate

The landscape works must be completed in accordance with the approved Landscape Plan and amendments required by 'A' above. A Final Landscape Inspection must be carried out and a certificate issued by Council's landscape officer prior to occupation or the issue of an Occupation Certificate (interim or final). This certificate is required to ensure that all tree protection measures, landscaping works, replacement tree planting and the deep soil percentage requirements have been carried out in accordance with 'A' above and other conditions within this consent, and that all new indigenous plants on the site and within the road reserve are the correct species.

To arrange a Final Landscape Inspection please phone 9710-0333 48 hours prior to the required inspection date. An inspection fee of \$230 is required to be paid, prior to the inspection. Additional inspections will be charged at a rate of \$103 each.

C. Ongoing

All landscaping works required by 'A' above must be maintained for 12 months following the final landscape inspection date. Trees required by this condition must be maintained and protected until they are covered by Council's Controls for Preservation of Trees and Bushland Vegetation (SSCDP 2015 Chapter 38).

Any plants found faulty, damaged, diseased or dead shall be replaced with the same species in the same sized container within one month with all costs borne by the owner.

Note: If difficulty is experienced sourcing suitable indigenous plants from other suppliers, plants grown from locally provenance seed may be available from:

Sutherland Shire Council Nursery
345 The Boulevard, Gympie
Ph: 02 9524 5672

19. Tree Removal on Private and Council Land

A. Design

The removal of the all trees within the site and in the road reserve is approved.

B. Tree Removal on Council Land

Council has preferred supplier agreements in place with arborists who are approved to carry out arbor works on Council land. Removal / pruning of trees must only be undertaken using Council's preferred supplier at the applicant's expense. The applicant is responsible for contract management and payment of the arborist prior to works being undertaken.

Select from Council's list of preferred suppliers listed on Council's website:

<http://www.sutherlandshire.nsw.gov.au/Residents/Trees/Trees-on-Council-or-Public-Land>.

Payment of the quoted amount provided must be made prior to any works commencing on site.

20. Tree Retention and Protection

A. Before Works

Prior to the commencement of any demolition, excavation or construction works on site, the following tree protection measures must be put in place and maintained during the course of construction to prevent damage to trees.

- i) Protective fencing constructed of 1.8m high chain wire mesh supported by robust posts must be installed at a distance of 12 times the diameter measured at 1.5m above ground level. Signage must be erected on the fence with the following words clearly displayed "TREE PROTECTION ZONE, DO NOT ENTER".
- ii) The tree protection zone within the protective fencing must be mulched with a maximum depth 75mm of suitable organic mulch (woodchips or composted leaf chip mulch) and kept regularly watered for the duration of the works subject to this consent.
- iii) No development or associated activity is permitted within the fenced tree protection zone for the duration of works subject to this consent. This includes vehicular or pedestrian access, sheds, washout areas, excavations, backfilling, installation of services (including stormwater), removal of top soil, stockpiling of soil or building materials.
- iv) Where site access/egress is required over the roots of trees identified for retention and protection, provide hardwood rumble boards over a 200mm thick layer of wood chip.

B. During Construction

- i) The tree protection measures detailed in 'A' above must be maintained during construction.
- ii) A supervising Arborist must be present during any approved hand excavation or under boring works within the Tree Protection Zone (TPZ) of any tree identified for retention and protection and have the authority to direct works to ensure the trees long term preservation;
- iii) A supervising Arborist must strictly supervise that there is no disturbance or severing of roots greater than 30mm diameter and to cleanly cut those roots between 10-30mm in diameter.
- iv) If the tree/s identified for retention in 'A' above are damaged or destabilised during construction then works must cease and Council's Tree Assessment Officer (ph. 9710-0333) must be contacted to assess the tree/s and recommend action to be taken.

21. Protection for a Potential Item of Aboriginal Heritage

A. During Construction

Development consent from Council does not imply consent to destroy an Aboriginal site or object issued under the National Parks and Wildlife Act.

Should any Aboriginal objects be unearthed/exposed during the project, works must temporarily cease within the immediate vicinity and the Office of Environment and Heritage be contacted to advise on the appropriate course of action.

Requirements of National Parks and Wildlife Act 1974

The National Parks and Wildlife Act is the primary legislation for the protection of Aboriginal cultural heritage in NSW. Under the National Parks and Wildlife Act 1974 it is an offence to desecrate or harm an Aboriginal object without having obtained an Aboriginal Heritage Impact Permit (AHIP) under section 90 or without having exercised due diligence in accordance with the Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (NSW Department of Environment, Climate Change & Water (DECCW)).

22. Garbage and Recycling Area

To ensure the proper storage of waste from the premises:

A. Design

The garbage and recycling storage areas within Basement Level 1 and the Ground Level must have smooth impervious floors that are graded to a floor waste. A tap and hose must be provided to facilitate regular cleaning of the bins and all waste water must be discharged to the sewer in accordance with the requirements of Sydney Water. Garbage bins must be designed to prevent the escape of any liquid leachate and must be fitted with a lid to prevent the entry of vermin.

B. Before Construction

Details of compliance with 'A' above must form part of the documentation accompanying the applications for a Construction Certificate.

C. Before Occupation

The works must be completed prior to the issue of any Occupation Certificate.

D. Ongoing

All waste and recycling bins must be stored wholly within the approved waste storage area. The bins must only be stored in the Ground Level collection area the evening prior to pick-up and returned to the Basement Level storage area as soon as possible after pick-up.

23. External Lighting - (Amenity)

To ensure that any lighting on the site does not cause a nuisance to neighbours or motorists on nearby roads:

A. Design

All lighting must be designed in accordance with Australian Standard AS4282 - Control of the Obtrusive Effects of Outdoor Lighting.

B. Ongoing

All lighting must be operated and maintained in accordance with the Standard above.

24. Noise Control - Design of Plant and Equipment (Commercial Tenancies)

To minimise the impact of the commercial tenancies on the surrounding residential receivers and residents of sole occupancy units within the development, all sound producing plant, equipment, machinery, mechanical ventilation systems or refrigeration systems from the commercial tenancies:

A. Design

All plant and equipment must be acoustically attenuated so that the noise emitted

- before 8am or after 10pm on any Saturday, Sunday or public holiday, or
 - before 7am or after 10pm on any other day
- i) does not exceed an LAeq sound pressure level of 5dB above the ambient background noise level when measured
- a) at the most effected point on or within any residential property boundary or
 - b) at the external edge of any sole occupancy unit balcony within the premises itself at any time the units operate.

- ii) cannot be heard within a habitable room in any sole occupancy unit* or other residential premises (regardless of whether any door or window to that room is open).

* As defined in the Building Code of Australia

Note: Noise measurement must be carried out in accordance with Australian Standard 1055.1.

B. Before Construction

Acoustic attenuation required to comply with 'A' above, must be prepared by a qualified acoustic engineer. These details must accompany the application for a Construction Certificate.

C. Before Occupation

Certification must be provided by a qualified acoustic engineer that all work associated with the installation of the acoustic measures has been carried out in accordance with 'A' above.

D. Ongoing

All plant and equipment must be operated and maintained in accordance with 'A' above.

25. Building Ventilation

To ensure adequate ventilation for the building:

A. Design

The building mechanical and / or natural ventilation systems must be designed, in accordance with the provisions of:

- i) The Building Code of Australia;
- ii) AS 1668 Part 1 - 1998;
- iii) AS 1668 Part 2 - 1991;
- iv) The Public Health Act - 2010;
- v) The Public Health Regulation 2012;
- vi) AS 3666.1 - 2002;
- vii) AS 3666.2 - 2002; and
- viii) AS 3666.3 - 2000.

B. Before Construction

Details of compliance with the above must form part of the documentation accompanying the application for a Construction Certificate.

C. Before Occupation

- i) Certification must be provided by a qualified mechanical ventilation engineer that the installation of the ventilation system has been carried out in accordance with 'A' above.
- ii) Occupation of the premises must not occur until a registration application has been submitted to Council's Environment and Health Regulation Department for any cooling tower / warm water system.

D. Ongoing

The ventilation system must be operated and maintained in accordance with 'A' above.

26. Car-Park Ventilation - Alternate System

To ensure adequate ventilation for the car park:

A. Design

The basement car-park must comply with the ventilation requirements of Australian Standards AS1668.2 -1991. The car-park must be either mechanically ventilated by a system complying with AS1668.2 -1991 or alternatively, the natural ventilation system must be certified by a qualified mechanical ventilation engineer to the effect that the system is adequate. The certification shall confirm that the system will protect the health of occupants of the car park at any time it is used and satisfies the atmospheric contaminate exposure rates specified in the Worksafe Australia document: Workplace Exposure Standards for Airborne Contaminants.

B. Before Construction

Details of compliance with 'A' above must form part of the application for a Construction Certificate.

C. Before Occupation

Certification must be provided by a qualified mechanical ventilation engineer that the installation of the ventilation system has been carried out in accordance with 'A' above.

D. Ongoing

The ventilation system must be operated and maintained in accordance with 'A' above.

27. Demolition Work

To ensure that demolition of structures is carried out in an environmentally acceptable and safe manner:

A. Before Commencement

If works involve the removal of more than 10 square metres of asbestos material, a bonded asbestos licence is required. A friable asbestos licence is required to remove, repair or disturb any amount of friable asbestos. For further information contact SafeWork NSW.

B. During Works

- i) The demolition of the existing building must be carried out strictly in accordance with Australian Standard 2601 - The Demolition of Structures.
- ii) The applicant must ensure that the demolition contractor has a current public risk insurance coverage for a minimum of \$5 million. A copy of the Policy must be submitted to the Council prior to demolition.

To ensure that the removal and transportation of any asbestos material, regardless of the quantity, is carried out in an environmentally acceptable and safe manner, all work must comply with the following:

- a) Work Health and Safety Act 2011;
- b) Work Health and Safety Regulation 2011;
- c) Safe Work Australia Code of Practice - How to Manage and Control Asbestos in the Workplace;
- d) Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC:2002(2005)];
- e) SafeWork NSW 'Working with Asbestos - Guide 2008';
- f) Protection of the Environment Operations Act 1997; and
- g) Protection of the Environment Operations (Waste) Regulation 2005.

Asbestos waste in any form must be disposed of at a waste facility licensed by the NSW EPA to accept asbestos waste. Any asbestos waste load over 100kg (including asbestos contaminated soil) or 10m² or more of asbestos sheeting must be registered with the EPA on-line reporting tool WasteLocate. More information can be found at <https://wastelocate.epa.nsw.gov.au>.

28. Noise Control-Compliance with Acoustic Report

A. Design

To minimise the impact on surrounding residential receivers and residents of sole occupancy units within the development, the design and selection of mechanical services and equipment for the residential units must comply with the recommendations made in Section 4.2 of the submitted acoustic report, prepared by Vipac Engineers & Scientists, report number 20E-17-0127-TRP-458063-3, dated 7 July 2017.

Attenuation measures outlined in the report must be followed to ensure that the noise emitted

- before 8am or after 10pm on any Saturday, Sunday or public holiday, or
- before 7am or after 10pm on any other day

- i) does not exceed an LAeq sound pressure level of 5dB above the ambient background noise level when measured
 - a) at the most effected point on or within any residential property boundary or
 - b) at the external edge of any sole occupancy unit balcony within the premises itself at any time the units operate.
- ii) cannot be heard within a habitable room in any sole occupancy unit* or other residential premises (regardless of whether any door or window to that room is open).

* As defined in the Building Code of Australia

Note: Noise measurement must be carried out in accordance with Australian Standard 1055.1.

B. Before Construction

Acoustic attenuation required to comply with 'A' above, must be prepared by a qualified acoustic engineer. These details must accompany the application for a Construction Certificate.

C. Before Occupation

Certification must be provided by a qualified acoustic engineer that all work associated with the installation of the acoustic measures has been carried out in accordance with 'A' above.

D. Ongoing

All plant and equipment must be operated and maintained in accordance with 'A' above.

29. Compliance with Acoustic Report Sole-Occupancy Premises

A. Design

To minimise noise transmission between sole-occupancy premises and between common spaces into sole-occupancy premises, the building must be designed and constructed in accordance with the construction and material recommendations outlined in Sections 4.3 and 4.4 of the submitted acoustic report, prepared by Vipac Engineers & Scientists, report number 20E-17-0127-TRP-458063-3, dated 7 July 2017.

B. Before Occupation

Certification must be provided by a qualified acoustic engineer that all work associated with the installation of the acoustic measures has been carried out in accordance with 'A' above.

30. Collection/Delivery of Goods

A. Ongoing

To minimise the noise impact of the commercial tenancies of the development on the residential occupants of the same development and residential properties surrounding it, the delivery and collection of goods, including garbage and recycling waste from the premises must not take place between the hours of 8pm and 7am Monday to Saturday or before 9am Sunday and Public Holidays.

31. Dilapidation Report - Adjoining Properties

A. Before Works

To assist in the resolution of any future disputes about damage to properties adjoining the development site, prior to commencement of any work on site the Applicant or principal contractor must provide dilapidation reports on the adjacent buildings at No.s 43-45 Gerrale Steet, 59-65 Gerrale Street and 2 Surf Road, Cronulla, including any basements and ancillary structures. The reports must be provided to the Principal Certifying Authority and to the owners of the properties that are the subject of the report.

The reports must be prepared by a suitably qualified and experienced person, such as a structural engineer.

32. Swimming Pools (including Spas)

To minimise the impact of the swimming pool on the amenity of adjoining properties and to ensure safety.

A. Design

The design of the swimming pool and associated equipment must comply with the following requirements:

- i) The Swimming Pools Act & Regulations.
- ii) Australian Standard 1926 Swimming Pool Safety as prescribed under the Building Code of Australia.
- iii) The pump and associated equipment must be sound insulated and/or isolated so that the noise emitted does not exceed an LAeq (15min) of not more than 5 dB(A) above the background level in any octave band from 31.5Hz to 8KHz centre frequencies inclusive at the boundary of the site.

Note:

- The measurement of sound must be carried out in accordance with Australian Standard 1055.1.
- Landscaping and ancillary structures must not intrude into the child-resistant barrier Non-Climbable Zone.
- Only structures associated with the pool may be located within the pool area. Clothes lines, barbeque, sheds, entertainment structure, outside toilets or any other non pool-related structures are not permitted within the pool area.

B. Before Construction

Details of all child-resistant barriers (existing and proposed) to be utilised to comply with the requirements of the Swimming Pools Act and Regulations applicable at the time must be shown on the Construction Certificate plans.

C. During Works

The swimming pool excavation and/or swimming pool must be provided with a suitable barrier to prevent a risk of falling into the excavation or pool at all times throughout the construction phase.

D. Before Occupation

Before the issue of any Occupation Certificate;

- i) The child resistant barrier must be installed in accordance with A above.
- ii) The swimming pool is to be registered in the NSW Swimming Pool Register.

E. Ongoing

- i) The pump and associated equipment must be maintained and operated in accordance with the noise levels described above.
- ii) The child resistant barrier must be maintained in accordance with the Australian Standard as described above.

33. Design Requirements for Adaptable Housing

A. Design

A report prepared by a suitably qualified Adaptable Housing Specialist must be submitted with the Construction Certificate, demonstrating that the development complies with the requirements of AS4299 - Adaptable Housing. The report must contain a completed checklist (Appendix A - AS4299) demonstrating compliance with the requirements of a Class C Adaptable House.

B. Before Occupation

A suitably qualified Adaptable Housing Specialist must certify prior to the issue of any Occupation Certificate that the development has been constructed in accordance with the requirements of AS4299 - Adaptable Housing for a Class C Adaptable House. A copy of this certification must accompany the Occupation Certificate.

34. Verification of Design for Construction - SEPP 65

A. Design

Design verification must be provided by a registered Architect pursuant to SEPP 65 stating that the design intent approved by the Development Consent has been maintained in the building / architectural plans submitted with the Construction Certificate. This must accompany the application for a Construction Certificate.

B. Before Occupation

Prior to the issue of the final Occupation Certificate design verification must be provided in accordance with SEPP 65.

35. External Walls and Cladding Flammability

A. Design

The external walls of the building, including attachments, must comply with the relevant requirements of the *National Construction Code (NCC)*. This includes the products and systems proposed for use or used in the construction of external walls including finishes and claddings such as synthetic or aluminium composite panels

B. Before Construction

Details of compliance with "A" above must form part of the application for a Construction Certificate.

C. Before Occupation

Certification, including an appropriate level of detail to demonstrate compliance with the NCC as built, must be provided by an appropriately accredited professional that external finishes of the building complies with "A" above.

36. Certification Requirement of Levels

A. During Construction

At the following stages of construction:

- i) Prior to the pouring of each floor or roof slab;
- ii) Upon completion of the roof;
- iii) Prior to the pouring / installation of the swimming pool shell.

A registered surveyor must provide the Principal Certifying Authority with Certification that the stage of structure complies with the development consent in respect of levels.

B. Before Occupation

The certification referred to above must form part of the application for an Occupation Certificate.

37. Sydney Water Requirements & Section 73 Compliance Certificate

A. Before Any Works

Prior to the commencement of any works on site, including demolition or excavation, the plans approved as part of the Construction Certificate must also be approved by Sydney Water. This allows Sydney Water to determine if sewer, water or stormwater mains or easements will be affected by any part of your development. Customers will receive an approval receipt which must be included in the Construction Certificate documentation.

Please refer to the web site www.sydneywater.com.au.

B. Before Occupation / Subdivision Certificate

Prior to the issue of an Occupation Certificate or a Subdivision Certificate a Compliance Certificate under Section 73 of the Sydney Water Act, 1994, must be submitted to Council by the Principal Certifying Authority. Sydney Water may require the construction of works and/or the payment of developer charges. This assessment will determine the availability of water and sewer services, which may require extension, adjustment or connection to the mains.

Sydney Water Advice on Compliance Certificates:

Sydney Water will assess the development and if required will issue a Notice of Requirements letter detailing all requirements that must be met. Applications can be made either directly to Sydney Water or through a Sydney Water accredited Water Servicing Coordinator. Please make early contact with the Coordinator, since building of water / sewer extensions can be time-consuming and may impact on other services as well as building, driveway or landscaping design.

Go to www.sydneywater.com.au/section73 or call 1300 082 746 to learn more about applying through an authorised WSC or Sydney Water.

38. Dial Before You Dig

A. Before Construction

Underground assets may exist in the area that is subject to your application. In the interests of health and safety and in order to protect damage to third party assets please contact Dial Before You Dig at www.1100.com.au or telephone on 1100 before excavating or erecting structures (this is the law in NSW).

It is the individual's responsibility to anticipate and request the nominal location of plant or assets on the relevant property via contacting the Dial before you dig service in advance of any construction or planning activities.

39. Noise Control and Permitted Hours for Building and Demolition Work

A. During Works

To minimise the noise impact on the surrounding environment:

- i) The LAeq sound pressure level measured over a period of 15 minutes when the construction or demolition site is in operation, must not exceed the ambient background level (LA90 15min) by more than 10dB(A) when measured at the nearest affected premises.
- ii) All building and demolition work must be carried out only between the hours of 7.00am and 6.00pm Monday to Friday inclusive, 8.00am and 3.00pm Saturdays. No work must be carried out on Sundays and Public Holidays.

On 12 occasions only for the purpose of pouring large floor or roof slabs, work may be carried out on the site from 7.00am to 8.00pm Monday to Friday, excluding Public Holidays which fall on a week day.

In order to activate the extended hours of operation both Council and affected neighbours must be notified a minimum of 48 hours prior to commencement. Affected neighbours include those in the immediate vicinity, adjacent or adjoining the development site. Notification must be by way of written advice including:

- Date/s the extended hours will be utilised.
- The purpose of the extended hours - pouring large slab.
- Address of the development works / site.
- Contact name and number of appropriate site officer (supervisor or manager) for enquiries.

Notification to Council must include a copy of the letter and a map or list identifying those affected neighbours who have been notified.

40. Toilet Facilities

A. During Works

Toilet facilities must be available or provided at the work site at a ratio of one toilet plus one additional toilet for every 20 persons employed at the site before works begin and must be maintained until the works are completed.

Each toilet must:

- i) be a standard flushing toilet connected to a public sewer, or
- ii) have an on-site effluent disposal system approved under the Local Government Act 1993, or
- iii) be a temporary chemical closet approved under the Local Government Act 1993.

41. Car parking Areas

A. Ongoing

To ensure that the car parking area satisfies the demands of the development:

- i) All commercial car parking must be made available on an unrestricted basis and free of charge at all times for employees' and visitors' vehicles
- ii) Any residential car parking nominated as visitor parking must be continually available as common property in any future subdivision.

B. Ongoing

The car parking provided must only be used in conjunction with the dwellings and / or tenancies contained within the development and not for any other purpose.

42. Car Parking Allocation

A. In any future Subdivision

Visitor parking facilities and/or car wash bays must be designated as common property on any future strata plan.

Parking must be allocated on the following basis:

- Residential dwellings: 115 spaces with a minimum of 1 space per residential unit
- Retail/commercial: 25 spaces to be allocated on the basis of 1 space per 30m² GFA
- Loading/servicing: 1 "HRV" sized bay to be used for both commercial and residential use.

43. Loading and Unloading

To preserve the amenity and ensure the safety of the public:

A. Ongoing

All loading and unloading of vehicles must be carried out within the site and not from the public roadway. All service/delivery vehicles must leave the site in a forward direction.

44. Ground Level Residential Forecourt Area

A. Prior to Occupation Certificate & On-going

Signage must be clearly displayed at the rear of the non-residential tenancies to state that the ground floor landscaped area and forecourt area within the entry gates between Surf Lane and Gerrale Street is for the use of the residents of the development only. No use of this area is permitted by patrons of the non-residential tenancies. This restriction shall be included on any future strata by-laws.

45. Consent for Non-Residential Tenancies

A. Occupation

Consent must be obtained prior to the first use of any of the non-residential tenancies.

END OF CONDITIONS



Lauren Franks - 9710 0617
File Ref: PAD17/0020

16 May 2017

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C/-Architecture Urbaneia P/L
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CROWS NEST NSW 2065

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Office Hours
8.30am to 4.30pm
Monday to Friday

Dear Sir/Madam

Pre-Application Discussion No. PAD17/0020

Proposal: Mixed use development comprising 2 levels of basement parking with 35 non-residential and 113 residential parking spaces, commercial space on the ground floor with 7 levels of 61 apartments. The concept proposed to create a public pedestrian link between Surf Lane and Gerrale Street.

Property: 49-57 Gerrale Street, Cronulla

Council is committed to achieving quality built outcomes for the benefit of residents and the broader community. The Pre-Application (PAD) process is intended to assist in this goal and I appreciate you taking the time to attend.

The PAD held on 29 March 2017 regarding the above development proposal was attended by Carine Elias (Team Leader), Lauren Franks and Teille Whiteman (Development Assessment Officers), David Jarvis (Architect) and Stevie Medcalf (Landscape Architect) who attended the meeting on behalf of Council and Mo Chehelnabi (Applicant), Lyndall Wynne and Laura Featherstone (Planning Consultants), Ted Manny (Owner) and Chris Rose (Consultant) on behalf of the applicant.

The purpose of this letter is to provide a summary of the issues discussed at the meeting and provide information that will assist you complete a development application (DA). Council cannot provide you with certainty on the determination of the proposal until a DA has been lodged and assessed.

Your DA will need to be supported by a Statement of Environmental Effects addressing all relevant Environmental Planning Instruments, and the detailed planning controls contained in Council's Draft Development Control Plan.

The Site and Proposal:

The site has 2 street frontages, located on the western side of Gerrale Street, opposite South Cronulla Park and situated on the eastern side of Surf Lane. The property has a

41.57m eastern (front) boundary, 59.05m northern side boundary, 60.455m southern side boundary and 54.735m western (rear) boundary. The site has an area of 2,918m². The land moderately slopes 2.65m from the north-western corner to the front south-eastern corner. Two date palms exist within the centre of the site.

The proposal is to construct a 9 storey mixed use development, consisting of 61 residential units (12 x 1 bedroom units, 25 x 2 bedroom units, 20 x 3 bedroom units and 4 x 4 bedroom units), ground floor commercial spaces and 2 levels of basement parking for 152 car spaces (35 commercial spaces and 113 residential spaces).

The property is within Zone B3 Commercial Core under the provisions of Sutherland Shire Local Environmental Plan 2015 (SSLEP). The proposed mixed residential flat building and commercial development is a permissible form of development within this zone.

SSLEP2015 indicates that the site is mapped as being Class 5 Acid Sulphate Soils. This specific characteristic of the site will need to be taken into consideration when preparing your DA.

Comments on the Proposal:

The following comments are provided in respect to the concept plans presented for consideration at the meeting with reference to the Apartment Design Guide (ADG) and Council's Draft Sutherland Shire Development Control Plan 2015 (DSSDCP) for the B3 Commercial Core - Cronulla. These comments should be read in conjunction with the comments from Councils Architectural Review and Advisory Panel (ARAP) which will be issued to you for application shortly.

Built Form

Clause 4.4 of Sutherland Shire Local Environmental Plan 2015 (SSLEP) stipulates that a maximum FSR of 3:1 applies to the site. Preliminary calculations indicate that the proposal has an FSR of 3.096:1, however, this calculation does not include parking spaces in excess of DSSDCP. The proposed design should demonstrate that the FSR complies with the maximum permissible FSR of 3:1.

The extent of floor space in this circumstance is not supported because the development's bulk and scale becomes incompatible with the context of the locality and various impacts occur to adjoining properties. Subsequently, the development is not considered to achieve the objectives of Clause 4.4 of the SSLEP.

Please note that the FSR calculations have incorrectly excluded areas of the development which are in fact considered GFA. These areas include:

- Ground floor lobby area and internal walkway.
- Internal dwelling stairs within each penthouse apartment at both Level 8 and the rooftop.
- Ground floor bathroom.
- Ground floor bin storage rooms.
- Any car spaces provided in excess of what is required by the DSSDCP.

Clause 4.3 of SSLEP stipulates that a maximum building height of 30m applies to the site. It is recognised that architectural roof features can be excluded from this height

limit pursuant to Clause 5.6 of SSLEP provided that, among other things, they comprise a decorative element on the uppermost portion of a building and will cause minimal overshadowing. The two bronzed metal structures wrapping around the building by extending from the ground level to the roofline above the penthouse rooftop stairs do not currently adhere to this description. Also, portions of the metal structure extend above the roofline at the building's sides which creates increased visual bulk and exacerbates the building's mass. The lift overrun and stairs which exceed the maximum 30m building height limit may be supported in their current form as they are centrally located depending on the ultimate design.

Council's DSSDCP (B3 Commercial Core – Cronulla) outlines a desired building form for this site comprising a building with a wide base and narrow tower which is reflected in the setback controls. In addition, the optimum arrangement of bulk is detailed with a 30m (9-10 storey) height limit applied to the site's northern lot (No. 49-51 Gerrale St) and 16m height limit (4-5 storeys) to the site's southern lot (No. 55-57 Gerrale St). These controls aim to distribute the gross floor area across the site in a manner that offers continuity in building form at the street level and reduces adverse impacts to the southern neighbouring property. The proposed building is a 9 storey tower with a uniformed footprint. There remains potential to re-model the proposed building form to minimise impact upon the southern neighbour by increasing the extent of building base and refining the form of the tower.

Urban Design

The DSSDCP allows a nil setback to side boundaries at the ground floor, creating a street of continuous shop frontages. The adjoining site to the north follows the pattern created by this control by providing a two storey high blank wall with a nil set back (in anticipation of a similar building form to adjoin it) on the subject site's northern boundary. The adjoining site to the south is by contrast a predominantly residential building which has minimal setback from its northern boundary, creating potential privacy issues with the current proposed building. An appropriate response to this context would be to adjoin the site to the north at street level, providing a continuous retail presentation to the street and if so desired, provide a setback / open space to the south where the proposal adjoins the more sensitive residential interface.

Council's DSSDCP does not identify this site as requiring provision of a pedestrian thoroughfare. However, Council is not opposed in principle to provision of an additional pedestrian thoroughfare if executed well and demonstrated to have a better outcome compared with following Council's DSSDCP which requires a nil side setback at the ground level. The concept plans have not demonstrated this and only shifts a significant amount of bulk to the upper levels.

The ADG states that a 9m setback is required for the first 8 storeys. From the 9th storey, this is to be increased to 12m. The proposal does not adhere to this control as the 9th storey (i.e. Level 8) is set back only 9m. Any new development would be expected to comply and provide a suitable urban outcome.

The building's curved street façade is likely to give rise to privacy issues between balconies of proposed front units. This issue has been dealt with through provision of screens to a large portion of the façade, which in turn restricts views from units. It is

suggested that a more holistic approach is taken with the expression of the building form that enhances amenity rather than restricting it.

The plans show each basement level with fire stairs located in the south-west corner of the site. However, the ground floor plan shows the driveway in this location. It is understood the plans are preliminary at this stage and this requires further resolution.

Sustainability

The proposal incorporates narrow gaps (approximately 2m wide by 12 deep) between units. These gaps do not provide cross ventilation in accordance with ADG requirements and, the minimum 60% requirement for units to be cross ventilated is not achieved.

The layout appears to satisfactorily demonstrate that 70% of the proposed units will receive 2 hours sunlight in accordance with the ADG. However, it is questionable that no more than 15% of units (i.e. 9 units) will be without sunlight. In addition, as the development does not conform to DSSDCP with regard to distribution of building bulk and storeys across each of the 2 lots comprising the site, there will be a significant impact to the level of solar access gained to the adjoining development to the south (No. 59-65 Gerrale Street). Multiple units within this development have a single northern orientation. It is acknowledged that this adjoining property is situated to the south of the site which presents a challenge in ensuring adequate solar access is achieved; however deviation from the DSSDCP should not result in a poorer outcome as currently occurs.

Amenity

Identifying the pedestrian thoroughfare as communal open space to satisfy ADG requirements is not supported at this point in time as this area does not fulfil the intent of the ADG. In order for an area to be classified as communal open space, these areas are to provide amenities such as all-weather covering, BBQs, seating and toilets to make the space usable and sociable. Whilst the ADG specifies an area equivalent to 25% of the site to be allocated as communal open space, there is merit for a reduction due to its proximity to recreational facilities including parks and beaches. However, given the size of the development, consideration for provision of some communal open space should be given and demonstrated.

A total of 6 livable and 12 adaptable units are to be provided within the development pursuant to Cl. 14 of Ch. 18 of DSSDCP. These units and their car spaces are to be identified on plans. One requirement of this clause is that livable units have a 3.2m wide car space. Post-adaptation plans need to be shown, and should involve minimal changes to walls and plumbing for affordability. With an ageing population, this form of housing is necessary to ensure occupants can remain in their home as they age without the need to modify their home in the future.

Whilst each unit has a size capable of compliance with the ADG, 2 x 1 bedroom units are 53m². At this size, these units can only accommodate 1 bathroom. A 2nd bathroom will require the unit to be increased in size to 55m².

It is understood that the design of individual dwellings is quite preliminary at this point with various layout options being considered. Many layouts show laundries accessible by walking past a toilet. When a toilet is in operation, access to the laundry will be

prevented. Furthermore, within many units, the dining and lounge rooms need to be re-worked as many are odd in shape, quite small and would prove difficult to furnish.

Residential storage is required at a rate of 6m³ for 1 bedroom, 8m³ for 2 bedroom and 10m³ for 3 or more bedroom units, in accordance with the ADG and DSSDCP. These areas are to be identified (along with their cubic metre volume) on plans submitted with the DA. A maximum 50% of storage can be provided within the basement with their allocation to each unit demonstrated.

A maximum of 8 units off a circulation core on a single level is to be provided as per the ADG to allow comfortable movement and access to each unit. Levels 1 to 4 do not comply with this requirement and if this is to be supported, adequate justification is to be provided in a Statement of Environmental Effects submitted with a DA.

Safety

Any future DA must address Crime Prevention Through Environmental Design (CPTED) principles. A **CPTED Assessment Report** should be submitted with the DA. Whilst the plans are preliminary in form, the identification of the entry to residential units could be improved.

Drainage and Waste Management

A **Drainage Plan** prepared by a suitably qualified engineer including OSD calculations is required with pit connection to Council's infrastructure in Gerrale Street.

A **Waste Management Plan** demonstrating compliance with DSSDCP must be provided.

Parking, Vehicular Access and Loading Zone

The car park for the retail component must comply with AS 2890.1 User Class 3. The residential component must comply with AS2890.1 User Class 1A. No bicycle or motorbike parking is provided on the site and is required at a rate of:

- Bicycle parking: 1 space per 10 car spaces
- Motorbike parking: 1 space per 25 car spaces

Based on the current proposal, in excess of the required commercial parking spaces (rate of 1 space per 30m² GFA) is provided. The rate equates to 26 spaces however, 35 are provided. Based on the current proposal, the additional 9 car spaces will be included as GFA. 113 residential parking spaces are provided, compliant with the DSSDCP (minimum of 1 space per dwelling and a maximum of 2 spaces per dwelling). There is an opportunity to re-allocate the additional 9 retail car spaces as residential spaces to avoid any car space from being included in the calculation of GFA.

Vehicular access off Surf Lane is supported. However, the location of the driveway hard up against the southern boundary results in a pedestrian / vehicle conflict at the basement entry / exit. The driveway will need to be offset to comply with requirements of AS2890.1 and allow clear vision to pedestrians in Surf Lane. The driveway / basement ramp must be a minimum width of 6m to allow for suitable 2 way movement.

A loading zone currently exists along the site's Surf Lane frontage. Concerns exist with regard to the proposed on-site private loading zone facilities and its impact on the existing kerbside loading zone and adjoining businesses. In addition, as Surf Lane is identified as being a semi-active frontage in the DSSDCP, the proposed loading zone will not satisfy the objectives of the DSSDCP as the loading zone will reduce commercial floor space fronting the lane.

Landscape Design

The Draft Cronulla Town Centre Public Domain Master Plan is still undergoing modifications and not publicly available. However, the character of Surf Lane is detailed in C.2.3.5 - Lanes of the Public Domain Design Manual. Also, the proposal should consider Cl. 2 of Ch. 18 of DSSDCP, which notes that as part of the Cronulla Centre Strategy:

“Surf Lane can also become an attractive street in its own right if new development provides attractive, active elements towards the lane. Redevelopment of properties should deliver large trees, landscaping and footpaths to Surf Lane to help improve the environment for pedestrians and the amenity of existing and future residents.”

Utilities and Infrastructure

You are advised to make enquiry early with the various infrastructure and utility providers to ensure relevant considerations for the provision of services have been taken into account early in the building design. Urban infrastructure and utilities are reaching, or have reached maximum capacity in some localities. Electricity substations are required on occasion to ensure sufficient power to buildings and NSW Fire have required substantial water tanks in some instances to meet flow requirements for sprinkler systems.

Infrastructure to support these requirements in the front boundary set back at the expense of landscaping or parking requirements is not likely to be acceptable. So you are encouraged to make enquiries and plan in advance.

Conclusion:

Council supports quality, well considered development and the comments provided are intended to help you work toward this outcome. As presented, the mixed residential flat building and commercial development is of a built form which is inconsistent with the SSLEP, DSSDCP and ADG and is unlikely to be supported at this point in time. A sympathetic building form is required to ease the impacts on the adjoining property to the south and amendments to the ground floor is required to provide a design which is in line with the ambitions of the DSSDCP. In addition, comments provided by Council's Architectural Review and Advisory Panel (ARAP) will form part of the assessment of any future development application and need to be taken into consideration when amending the proposal. These comments will be issued shortly.

It is important to note that the information provided in this letter is based on the planning instruments applicable at the time of writing. You should make yourself aware of any subsequent changes to legislation or local planning controls before lodging your development application.

Council strongly recommends that you distribute this letter to all professionals within your design team including architects, landscape architects and engineers.

For detailed information about how to prepare and lodge a development application, please refer to the "Development" section of Council's website (www.sutherlandshire.nsw.gov.au). A "DA Guide" is available and an online tool called "Development Enquirer", which searches the applicable planning instruments for the planning controls relevant to your site and development.

To make sure lodgement of your application is quick and easy, make an appointment with Council's Development Enquiry Officers on 9710 0520 when you are ready to lodge. Requests for appointments can also be made via Council's website.

Please contact Council if you believe any of the above information to be incorrect or if you need clarification of the advice provided. Your initial point of contact should be Lauren Franks (9710 0617) as this is Council's development assessment officer who will most likely be responsible for the assessment of your DA.

Yours faithfully

Mark Adamson
Manager – Projects and Development Assessment

APPENDIX D

Apartment Design Guide (ADG) Key Controls		
Guidelines	Proposed	Compliance
Part 2F: Building separation		
<i>Minimum distances between buildings:</i> <i>Five to eight storeys (up to 25m):</i> 18m between habitable rooms/balconies 12m between habitable rooms and non-habitable rooms 9m between non-habitable rooms <i>Nine storeys and above (over 25m)</i> 24m between habitable rooms/balconies 18m between habitable rooms and non-habitable rooms 12m between non-habitable rooms	<u>North</u> 9m habitable room to boundary <u>South</u> 11.1m between habitable rooms <u>North</u> 12.15m habitable room to boundary <u>South</u> 12m habitable to boundary	No – see Report No – see Report No – see Report No – see Report No – see Report
Part 3D: Communal Open Space		
<i>Objective 3D-1</i> <i>Communal open space has a minimum area equal to 25% of the site.</i> 25% of site = 730.1m	Communal open space located on Level 1 (podium) = 340m² (12%) Additional 'wellness room' provided at ground level (50m²) Additional 308m² of landscaping (incl. 200m² of deep-soil) provided along southern side boundary at ground level. Total COS provision = 698m²	No – see Report
<i>Development must achieve a minimum of 50% direct sunlight to the principle usable part of communal open space for a minimum of 2 hours between 9am and 3pm on 21 June (mid-winter)</i>	Level 1 open space is north facing and receives all day solar access.	Yes
Part 4A: Solar Access		

Objective 4A-1 <i>Living rooms and private open spaces of at least 70% or apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid-winter. Requires 46.9 units out of 67.</i>	52/67 (77%)	Yes
<i>Maximum of 15% of apartments in a building receive no direct sunlight between 9am and 3pm at mid-winter.</i>	9/67 (15%)	Yes
Part 4B: Natural Ventilation		
Objective 4B-3 <i>At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Requires 40.2 units out of 67.</i>	45/67 (67%)	Yes
<i>Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line.</i>	Proposal complies	Yes
Part 4C: Ceiling Heights		
Objective 4C-1 <i>Measured from finished floor to finished ceiling level, minimum heights are;</i> <i>Habitable rooms = 2.7m</i> <i>Non-habitable rooms = 2.4m</i>	Habitable room min. 2.7m (residential unit floor to ceiling) Non-habitable 2.4 – 2.5m	Yes Yes
Part 4D: Apartment Size		
Objective 4D-1 <i>Minimum internal areas of;</i> <i>1 bedroom = 50m²</i> <i>2 bedroom = 70m²</i> <i>3 bedroom = 90m²</i> <i>*Additional bathrooms increase the minimum internal area by 5m²</i>	1 Bedroom + 1 Bathroom: 52m ² - 63m ² 2 Bedroom + 2 Bathroom: 79m ² - 106m ² 3 Bedroom + 3 Bathroom: 118m ² - 197m ²	Yes Yes Yes
<i>Figure 4D.3 – Depth of a single aspect apartment relative to the ceiling height directly influences the quality of natural ventilation and daylight access. The maximum depth of open plan layouts that combine living, dining and kitchen space is 8m.</i>	Single aspect >8m for units 439, 546, 547, 654, 655, 763	No – conditioned to comply
Part 4E: Private Open Space		
Objective 4E-1		

<i>All apartments are required to have a primary balcony as follows;</i> • 1 bedroom = 8m² (depth of 2m) • 2 bedroom = 10m² (depth of 2m) • 3 bedroom 12m² (depth of 2.4m)	1 Bedroom: 8m ² - 33m ² (depth 2m)	Yes
	2 Bedroom: (depth 2m) 12m ² - 34m ²	Yes
	3 Bedroom: (depth 2 - 2.4m) 16m ² - 59m ²	Yes / No see Report
<i>For apartments at ground level or on a podium or similar structure, private open space is provided instead of a balcony. Must have a minimum area of 15m² and depth of 3m</i>	Vary from 15m ² – 59m ²	Yes
Part 4G: Residential Storage		
<i>Objective 4G-1</i> <i>In addition to storage in kitchens, bathrooms and bedrooms the following storage is provided</i> • 1 bedroom = 6m³ • 2 bedroom = 8m³ • 3 bedroom = 10m³ <i>At least 50% of the required storage is to be located within the apartment.</i>	Adequate storage proposed in units but not a great proportion in basement levels. Conditions recommended to ensure sufficient storage provision.	Yes

APPENDIX E

Sutherland Shire Local Environmental Plan 2015			
CLAUSE	REQUIRED	PROPOSAL	COMPLIANCE (% variation)
Cl.4.3 Height of Building	Maximum 30m	31.56m	No – 1.56m (5.2%) – see Report
Cl.4.4 Floor Space Ratio	Maximum 3:1 (8,760.9m ²)	2.98:1 (8,704m ²)	Yes
Sutherland Shire Development Control Plan 2015			
Chapter 19 – B3 Commercial Core Cronulla			
CLAUSE	REQUIRED	PROPOSAL	COMPLIANCE
Cl.4.2 – Streetscape and Built Form			
Cl.5 Development must be designed and sited so that it addresses the street and must have a clearly identifiable entry.		Proposal adequately addresses primary (Gerrale Street) and secondary (Surf Lane) frontages and has clearly identifiable entries.	Yes
Cl.8 The building form must be articulated to avoid large expanses of unbroken wall, and to visually reduce bulk.		Building form provides adequate articulation and represents a good urban design outcome.	Yes
Cl.9 Where development has two or more road frontages, vehicular access shall be from the lowest order road. Vehicular access is to be from a rear lane where such is provided.		Vehicular entrance via Surf Lane (lesser order road).	Yes
Cl.11 Where a basement car park extends above the natural ground level, it is to be designed to ensure that podiums and vehicular entries do not dominate the overall design of the building or streetscape. Basements and podiums are to be integrated into the architectural design of the building. Driveway walls adjacent to the entrance of a basement car park are to be treated so that the		Proposal includes 2 level basement for car parking. Basement is fully underground and integrated with design of building above. No detail has been provided with respect to the proposed roller door or side wall of the vehicle entry point and conditions have therefore been included in Appendix 'A' in this regard.	Yes / No

appearance is consistent with the external finish of the building.		
CI.8.2 – Street Setbacks		
CI.1 The first two storeys of new development must have a nil setback to the street.	Ground floor • 4m to Gerrale Street • 6.2m to Surf Lane First floor • 4m to Gerrale Street • 2.3m to Surf Lane	No – see Report
CI.2 In accordance with the Cronulla Centre Upper Level Setbacks Map, new development must provide the following setbacks: • First and second floor = 4m • Upper floors = 6m	Level 1: • Min. 4m Levels 2-8: • Min. 7.3m to building wall. • 5m minor point encroachment at balcony. Second floor provided with larger setbacks than required. Minor spot variation to front balcony of upper floors	Yes
CI.9.2 – Side and Rear Setbacks		
CI.1 A nil setback to side and rear boundaries is permitted. However, where new development adjoins or is across the road from a residential zone, open space or school where it is likely to remain as a standalone building, side and rear setbacks will be assessed on merit, having regard to the impacts on residential amenity of both the neighbouring buildings and the future residents of the proposed building, and the design quality of the building.	Western rear boundary (Surf Lane): • Min. 6m at Ground Level • Min. 2.3m to Level 1 balcony • Min. 4m to upper level balconies Northern side boundary adjoins single storey commercial building with nil setback to common boundary: • Nil at Ground and Level 1 • Min. 9m at upper levels Southern side boundary adjoins part	Yes – see discussion below

	3-part 7-storey mixed use building with min. 300mm setback to common boundary: • 3.4m at Level 1 balcony • Min. 9m at upper levels	
CI.2 Where an active or semi-active street frontage is required on the Active Street Front Map, nil boundary setbacks are required for all ground floor uses to allow for the provision of continuous awnings over public footpaths.	Semi-active street frontage on Surf Lane (western rear boundary) is proposed. A setback of 6.2m to building wall is proposed. Awning with 4m setback provided along extent of building façade. Gerrale Street frontage is active with continuous awning for full length of site frontage.	Yes
CI.10.2 – Landscape		
CI.2 Where planting is proposed on podiums, roof tops or within planter boxes, the space to be planted must be designed and constructed to contain a minimum of 600mm of soil depth.	Planter areas appear to comply and conditions are recommended to ensure this.	Yes
CI.3 Where a ground floor setback is required, the setback shall provide indigenous trees capable of complementing the scale of the development.	Significant planting on southern side of entry walkway area has been conditioned for indigenous species.	Yes
CI.6 Appropriate paving must be provided to driveways, walkways, entries, fire egress points, garbage bin enclosures, letter boxes, clothes lines and under pergolas.	Landscape treatment for hard surfaces is appropriate and has been conditioned accordingly.	Yes
CI.11.2 – Active Frontages		
CI.1 Active frontages at footpath level are to be provided in accordance with the Cronulla Centre Active Street Front Map.	Semi-active street frontage at Surf Lane frontage and active frontage on Gerrale Street with non-residential tenancies at ground level for both frontages.	Yes
CI.2		

Active frontages must be assured by orienting openings to the public domain.	Ground floor commercial tenancies front Surf Lane and Gerrale Street. Pedestrian access via pathway from Gerrale Street to Surf Lane for future residents of the building.	Yes
CI.3 Active frontages must be at footpath level along the full length of the building frontage.	Provided.	Yes
CI.5 Vehicle entrances and service areas are not to be located in active street frontages.	Vehicular access via Surf Lane. Proposed vehicular access is via lower order road and is supported by Council's engineers	Yes
CI.6 Continuous awnings must be provided along shop fronts and active street frontages.	Continuous awning provided along length of building on Surf Lane and Gerrale Street.	Yes
CI.12.2 – Building and Site Layout		
CI.1 Incorporate passive solar building design, including the optimisation of sunlight access, the minimisation of heat loss and energy consumption to avoid the need for additional artificial heating and cooling.	A high proportion of units will receive solar access.	Yes
CI.3 Loading areas shall be located so as to avoid on-street loading and be freely available for use at all times.	Vehicle loading and unloading bay located within basement car parking and is supported by Council's engineers subject to suitable conditions of consent.	Yes
CI.4 Non-residential and residential land uses in the same development shall be sited and designed to not adversely affect the residential amenity of building occupants.	Design change to proposed outdoor seating area. Conditions imposed	Yes / No – see Report
CI.13.2 – Shop top Housing & Residential Flat Buildings		
CI.1 Residential flat buildings and shop top housing should achieve the design quality	Propose residential development complies with ADG as per the Table	Yes

principles of <i>SEPP 65</i> and the <i>Apartment Design Guide</i> .	above.	
CI.3 The side and rear setbacks must result in a development that: - Provides adequate resident amenity- including privacy, solar access, and ventilation. - Responds to the local context and streetscape, providing adequate separation from existing and future adjoining development. - Does not prevent a neighbouring site from achieving its full development potential and optimal orientation. - Has architectural merit.	Merit based approach to side and rear setbacks to maximise building separation from existing residential to the south and ensure future development potential is retained for the site to the north.	Yes
CI.6 Living rooms and private open space for at least 70% of residential units in a development should receive a minimum of 2 hours direct sunlight between 9 am and 3pm in mid-winter.	52/67 (77%)	Yes
CI.8 Dwelling entries shall be distinguished from commercial premises/retail entries.	Separate residential and commercial use entries provided and clearly distinguishable.	Yes
CI.9 Each dwelling must be provided with a primary balcony/patio with direct access from the living area, with sizes as follows; 1 bedroom = 8m² (depth of 2m) 2 bedroom = 10m² (depth of 2m) 3 bedroom = 12m² (depth of 2.4m)	1 Bedroom: 8m² - 33m² (depth 2m) 2 Bedroom: 12m² - 34m² (depth 2m) 3 Bedroom: 16m² - 59m² (depth 2 – 2.4m)	Yes Yes Yes / No – see Report
CI.14 Secure space must be provided for each dwelling in accordance with the following; 1 bedroom = 6m³	1 Bedroom: 6m³ 2 Bedroom: 8m³ – 9m³ 3 Bedroom: 10m³ – 17m³	Yes

2 bedroom = 8m³ 3 bedroom = 10m³ At least 50% of the required storage is to be located within the dwelling and accessible from circulation or living spaces.	Over half of required storage provided in dwellings but not a great proportion in basement levels. Conditions recommended to ensure sufficient storage provision.	Yes
CI.15 Communal open space should have a minimum area equal to 25% of the site for development with a floor space ratio of 2:1 or greater. 25% of site area = 730.1m²	340m² (12% of site area) of communal open space provided on Level 1. Additional 50m² internal communal space provided at Ground Level. Total COS provision = 390m². Additional 308m² of landscaping (incl. 200m² of deep-soil) provided along southern side boundary. Increases amenity to adjoining properties and ground floor commercial tenancies.	No – see Report
CI.16 Communal open space should have a minimum dimension of 3m. This space should incorporate shelter, furniture and facilities suitable for outdoors.	Min. dimension of 3m provided. Communal open space includes adequate shelter, furniture, and outdoor facilities.	Yes
CI.14.2 – Adaptable Housing		
CI.1 All new development must provide dwellings designed in accordance with the <i>Australian Adaptable Housing Standard</i> at the following rates: - Development containing 3-5 dwellings = none - Development of 6+ dwellings = 20% adaptable. 67 units = min. 13 adaptable units	14 adaptable units provided	Yes
CI.14.3 – Livable Housing		

CI.1 All new development must provide livable dwellings at the following rates: - Development containing 3-5 dwellings = 1 dwelling - Development of 6+ dwellings = 10% of dwellings. <i>67 units = min. 7 livable dwellings</i>	7 livable units provided	Yes
CI.17.2 – Parking		
CI.1 Car parking shall be provided in accordance with the following: Residential flat building/shop top housing: - Minimum 1 space per unit - Maximum 2 spaces per unit - No visitor parking. <i>67 units = min. 67 spaces, max. 134 spaces.</i> Commercial premises: 1 space per 30m² GFA. <i>703m² total GFA = min. 23 spaces.</i> <i>Total car parking spaces min = 90 / max = 157 spaces</i>	115 residential parking spaces 25 commercial parking spaces	Yes
CI.3 Motorcycle parking shall be provided at a rate of 1 motorcycle space per 25 car spaces. <i>90 car spaces = min. 4 motorcycle spaces</i>	14 motorcycle parking spaces	Yes
CI.4 Bicycle parking space must be provided at a rate of 1 space per 10 car parking spaces for the first 200 car spaces. <i>90 car spaces = min. 9 bicycle spaces</i>	20 bicycle parking spaces	Yes

Design Review Forum

Proposal: Demolition of existing structures, construction of a mixed use development containing ground floor commercial units and 63 residential units with 4 rooftop swimming pools

Property: 55-57 Gerrale Street CRONULLA NSW 2230
51R Gerrale Street CRONULLA NSW 2230
49-51 Gerrale Street CRONULLA NSW 2230

Applicant: Iridium Developments Pty Ltd

File Number: DA17/0885

The following is the report of the Design Review Forum Meeting held on Thursday, 31 August 2017 at the Administration Centre, Sutherland Shire Council, Eton Street, Sutherland. The report documents the Panel's consideration of the proposed development described above.

4. "DA17/0885 - Mixed use development comprising of 2 levels of basement parking with 35 non-residential and 113 residential; ground level non-residential use with 7 levels of luxury residential above totalling 63 apartments (10x1 bedroom; 31x2 bedroom; 22x3 bedroom). The concept proposes to create a public link between Surf Lane and Gerrale Street to enhance pedestrian links and connectivity between the immediate areas. Ground level Surf Lane and Gerrale Street activations and public domain improvements at 49-57 Gerrale Street Cronulla

Council's Carolyn Howell and Barbara Buchanan outlined the proposal for the Panel, including providing details of Council's relevant codes and policies

Mo ChehelNabi (architect); Lyndall Wynne & Laura Featherstone (planners) addressed the Panel regarding the aims of the proposal and the constraints of the site.

Description of the Site and Proposal

Pre DA or DA: Development Application
File No:- DA17/0885
Proposal:- Mixed use development comprising of 2 levels of basement parking with 35 non-residential and 113 residential; ground level non-residential use with 7 levels of luxury residential above totalling 63 apartments (10x1 bedroom; 31x2 bedroom; 22x3 bedroom). The concept proposes to create a public link between Surf Lane and Gerrale Street to enhance pedestrian links and connectivity between the immediate areas. Ground level Surf Lane and Gerrale Street activations and public domain improvements
Project Address:- 49-57 Gerrale Street Cronulla
Zoning:- B3 Commercial Core
Applicant:- Mo ChehelNabi(Architecture Urbaneia P/L)
Meeting Date:- 31 August 2017
PAD:- Yes (PAD17/0020)
ARAP Pre-DA:- Yes (ARAP17/0005)
Responsible Officer/Team Leader:- Lauren Franks/ Carolyn Howell

Consent Authority: Sydney South Planning Panel

Key Controls

Sutherland Shire Local Environmental Plan 2015 (SSLEP 2015).

Sutherland Shire Council Draft Development Control Plan 2015 (SSDDCP 2015)

Apartment Design Guide (ADG)

Applicant's Submission

PRINCIPLE 1 – CONTEXT AND NEIGHBOURHOOD CHARACTER

From Pre-DA ARAP report:

“The site sits within one of the most iconic precincts in the Shire, Cronulla Town Centre and environs. The Cronulla centre is located adjacent to the Cronulla railway station on a narrow strip of land extending from the head of Gunnamatta Bay in the west to Cronulla Beach in the east.

It encompasses an area of high density mixed use development, which is framed by the railway and several significant open spaces - Gunnamatta Park to the south-west, Cronulla Park and Beach to the east and includes Munro Park, laid out in the 1930s, to the south. Some of the distinctive character in the precinct arises from the centre's remaining examples of original art deco buildings; including the Cronulla railway station, the former Commonwealth Bank building and the Post Office. This architectural heritage is acknowledged and protected by State and local heritage listings.

South of the site is one of Cronulla's most important pedestrian connections, Beach Park Avenue, linking Cronulla Rail Station with the Beach, along Munro Park and through Cronulla Park.

Surf Lane, which crosses Beach Park Lane south of the site, will become increasingly important as part of Cronulla's vibrant Public Domain when the renovations to the art deco Commonwealth Bank are complete at the northern end. Given its close physical and visual proximity to this active corner, along with the fact it occupies 50% of the block's elevation to Surf Lane, the site is particularly well placed to continue to animate the southern end of Surf Lane to Beach Park Avenue.

In August 2014, this precinct was subject to a design ideas competition, which has resulted in significant activation of streets and lanes in just two and a half years. The southern part of the precinct, however, has been slower to respond to the vitality of the public domain. In the most recently completed Cronulla Town Centre Master Plan, the further growth of an active interface with pedestrian activity is also encouraged.”

PRINCIPLE 2 – SCALE AND BUILT FORM

The DCP describes a building envelope for the site that is a maximum of 30 metres on the northern part of the site, stepping down to maximum 16 metres on the southern part of the site, over a podium, with a maximum height of 10 metres, that extends to the side boundaries. The DCP also provides guidance on street setbacks to both street frontages, with different setbacks for the podium and upper levels. The

stepped built form intended by the DCP, demonstrated by a successful built outcome at 9 Gerrale Street, provides active streetscapes on both street frontages with ample retail space within a continuous podium, landscaped terraces at upper levels, and increased opportunities for solar access to sites to the south. The last ARAP meeting notes state :

“ While this may not be the only way to interpret the DCP block planning for the site – and it could be argued for example that the podium could be higher at both street interfaces - the proponent has still not modified the design to significantly respond to the PAD comments and the intent of the DCP to the panel’s satisfaction.”

This advice appears not have been accepted by the applicant, whose outward expression and general arrangement of the massing remains similar to first proposed. As a result, the proposed built form departs significantly from the DCP setbacks and envelope controls. While the proposal respects the ground floor setbacks to both streets and the upper levels on Surf Lane, the upper level setback to Gerrale St., the DCP stepped envelope and the maximum LEP height limit do not comply.

The proponent states that the building separation controls in the ADG have been complied with for the side setbacks. However, little justification for the departure from the DCP envelope has been provided beyond maximization of beach and ocean views – again, an issue that was pointed out at the last DRP meeting. The shadow analysis provided comparing shadows cast by the proposal and the full DCP building envelope is not a true indication of the relative impact of the proposal. This is because the DCP envelope is only an abstract prism into which a complying and amenable building can be inserted, so it is liable to have a substantial courtyard to facilitate, light, air and compliant setbacks to its adjacent property. Hence, the Panel believes that the centrally located built form proposed shows little regard for impacts on the southern neighbour (in terms of direct shadows, overlooking or overbearing) although that is precisely what has driven the DCP controls. Nor does the proposal respect the required setback to Gerale Street, which is intended to set back higher massing 6m to create a consistency of future built form right along the street. While the proponent said that the DCP setback to Gerrale St was ignored because other buildings on Gerrale St do not comply, this ignores the fact that these buildings were built under different controls and that the DCP is an attempt to provide a coherent and more unified presentation. The Panel therefore believe that the proposal should comply with the DCP street setback.

The form relies on ‘slots’ for ventilation and light to the middle of the plan, which adds unnecessary bulk to the building, forcing the building to break setback controls at the side and the street in order to fit the expected FSR. Although this strategy was strongly criticised at Pre-DA ARAP - with particular attention given to unnecessarily increased bulk and restricted internal amenity - the ‘slots’ remain. Apart from unnecessarily increasing building bulk, the slots continue to impact on the units themselves. For example there are potential acoustic and visual privacy conflicts between large balconies (of units 105 and 106 and all units above for six levels) and main bedrooms (in units 103 and 104 and all units above for six levels) that are very difficult to resolve; in other words, severe privacy issues are liable to impact 28 apartments (or 44%) of the 63 units proposed. As acoustic issues can lead to serious and costly ramifications (such

as occurred at the Horizon in Darlinghurst, Harry Seidler, Architect) – and acoustic issues cannot be solved with screening - the ADG is very clear about building separation distances between habitable spaces (including balconies). Clearly, the separation distances proposed between these spaces do not comply with the ADG. Although the following advice was provided at the last ARAP meeting, it was clearly not taken:

“ The panel recommend revising the built form entirely, both in the base and tower forms, to better address the requirements of the DCP. While the removal of slots should greatly decrease building bulk, a revised layout should improve yield, outlook and compliance with the ADG’s cross ventilation requirements. Similarly, an articulated tower form, that works with the potential of the wedge-shaped site, over an active street edge podium, would reduce impacts on the southern side, increase landscape potential on the podium, improve and increase street activation to both the street and the lane, with the unit entry being centralised and clearly legible from the street.”

The organisation of the ground floor is an improvement on the version presented to the Pre-DA ARAP, with good retail spaces fronting the two streets, and a discreet arrangement of the ‘back-of-house’ spaces dealing with services and vehicle access. Although the compact size of the urban block between Surf Road and Beach Park Avenue may not demand a through-site link through the subject site, the arrangement of the residential entry off the through-site link is much improved. While it is relatively close to a cross street, consideration should be given to relocating the security gates to adjacent to the entry lobby so that the through site link can remain open at all hours.

The proponent argues that, as the site is close to the beach and park and other amenities, there is little need to provide spaces for communal gathering. The same argument could be used regarding the proposed roof swimming pools, which exceed the height limit increase the proposal’s apparent bulk and scale. Common open space is well below the requirements of the ADG, limited to a small space on the podium facing Surf Lane. Although there may be no need to provide common open space to the full requirements of the ADG, what has been provided is clearly inadequate both in quantity and quality. It would be better to provide some additional space for common activities on the western end of the roof.

PRINCIPLE 3 – DENSITY

While the density proposed appears to comply with the LEP, the floor space is still poorly arranged, requiring setback and height controls to be broken in order to accommodate the maximum FSR.

PRINCIPLE 4 – SUSTAINABILITY

The proposal complies with ADG requirement of maximum 70% of units receiving 2 hours mid winter solar access; however, if the DCP envelope of northern neighbour were to be added to the solar modelling, the number of units receiving adequate sunshine would be greatly reduced. The proposal appears not to comply with ADG requirement of maximum 15% of units with no direct sunshine between 9am -3 pm winter. The southern units may need to be extended to the south-west to gain additional solar access.

While the proposal appears to comply with the ADG's cross ventilation requirements, the potential acoustic privacy issues due to the slots (referred to in Scale and Built Form above) are liable to restrict the opening of bedroom one windows in as many as 14 units, thereby impacting on the proposal's capacity to comply with the ADG's natural ventilation compliance.

RWT is located above the roof of Basement Level 1. No other sustainability issues were discussed at the meeting.

PRINCIPLE 5 – LANDSCAPE

The landscape plan has attempted to ameliorate the bulk of the building by integrating various planting elements into the built form with varying success.

Public Domain: the southern open space with shade tolerant plants and water features could be a pleasant contribution to the public domain if it were maintained as a public thoroughway. This would allow for the shops to be open in the evenings thus animating Surf Lane and Gerrale Street and increasing the general permeability of Cronulla Town Centre. The simple street trees and paving allows for spill-over from shops.

Podium Level 1: The extensive area of non-accessible planted area to the north acts against Principle 8 – Social Interaction. As this area is currently receiving north sun, it is a missed opportunity not to provide a similar area of communal open space to the east. The planted podium to the south adds to the subtropical atmosphere of the through space. The design of the podium Levels 2-7 is adequate; The podium Level 8's privacy edge planters are OK. The roof top terrace is under-designed in terms of wind and shade.

Appropriate species have been suggested for the various areas, except for the roof top amenity, due to shade and wind-screening. The existing Canary Island Palms should be transplanted, possibly into the beach park opposite.

PRINCIPLE 6 – AMENITY

The ground floor and servicing of the building is greatly improved. Considerably more commercial space will now activate both streets, the unworkable mall last proposed is removed and driveway location is much more neatly integrated.

The proposed slots brings light deep into the floor plan, but creates unnecessary bulk - which impacts on the amenity of the building to the south - and creates potential visual and privacy impacts between a large number of units (see Scale and Built Form above).

If built form is poorly configured, visual privacy can be controlled with screening; that being said, excessive screening can impede outlook and solar access and create the perception of conflict. Acoustic

privacy is much harder to deal with; as rooms rely on open windows for cross ventilation, the close proximity of neighbours is liable to create severe acoustic privacy issues, in this case between a large number of main bedrooms, kitchens and nearby balconies (see Scale and Built Form above). This issue is exacerbated by the focus of the whole units on their balconies, which suggests they will be heavily used; conversely, it is clear that restricting their use would not be tenable to future residents. It is of concern that this serious issue has not been addressed in such a high profile development, especially as the Panel have reported it before.

Most units are very large and comfortable, with adequate sized rooms; however, due to the depth of the plan some of the circulation is long and appears very wasteful. The “Media Room” in Unit 605-606 is a habitable room without natural light and ventilation. Bedroom to Unit 109-409 is too narrow.

The adaptable units proposed have been poorly conceived. Not only does the amount of work required to adapt them challenge their feasibility (including the reconstruction of whole rooms), the amenity of each adapted unit is severely impacted. Hence, unit 101 (and above) – perhaps the most expensive units apart from the penthouses - requires the total demolition of a main bedroom and ensuite and the adapted layout requires access to the living room through the kitchen.

See comments above regarding the inadequate provision of communal open space proposed.

PRINCIPLE 7 – SAFETY

The through-site link needs more consideration including degree of public access, location of gates, mail boxes, activation etc.. If the through-site links were to be incorporated into the public domain, secure entries to the complex would be required around the common room, including letter-boxes.

PRINCIPLE 8 – HOUSING DIVERSITY AND SOCIAL INTERACTION

There is little space for interaction – these are large units for private enjoyment. A better common open space could be provided on a roof terrace at the western end of the roof.

PRINCIPLE 9 – AESTHETICS

The building form envisaged in the DCP suggests a two-three storey base and a stepped tower form with more slender proportions above. This would activate the street, provide views, light and air to a great many apartments, introduce landscaped terracing within the form and create generous setbacks to its south especially. While the Panel pointed out nearby buildings where this principle has been incorporated, it also clearly stated there are other ways to interpret this form. Clearly, these principles have been lost in the current proposal.

The proposed podium is expressed as a single storey with a large awning. As such, there is no attempt to develop a lower level grain to enrich the texture of the street, with massing scaled and designed to mediate with a much larger form above (creating a dialogue, one would hope, with the horizontal banding

of spandrels above). Nor is a successful proportional relationship achieved between the podium and the bulk of the building above it, as such, the podium appears under scaled and awkward.

Above the podium, the building presents to the street as extremely wide bands of balconies stacked on top of each other – assembled only for taking in the view – with little consideration given to scale, proportion, modulation and contextual fit. As such, the building has little quality in terms of building language and risks overwhelming the context with an overly horizontal and repetitive expression - especially as it lacks a substantial base, is over the height limit and not substantially setback as required, above podium level. Hence, as proposed the building will be distinguished by its location and size, but not by any architectural distinction.

RECOMMENDATIONS

For built form and amenity reasons, the Panel does not support the proposal in its current form. As advised at the last Panel meeting, the proposed slots create unnecessary bulk, which impacts heavily on the southern neighbours and on the streetscape, where the building's excessive width is exacerbated by relentless horizontal balconies from level one and above. The slots also create severe acoustic privacy issues between habitable spaces for a great number of dwellings, create non-compliance with the ADG's building separation controls and necessitate a great amount of screening to achieve a minimum level of visual privacy.

Natural and cross ventilation should not be compromised by visual or privacy issues with adjoining units. Mid winter solar compliance must be demonstrated with a complying envelope located on the northern site. A maximum of 15% of the units proposed should receive no sun at mid Winter. Non compliance with height and front setback is not supported.

As advised at the last panel meeting, a revised built form should be designed to more closely address the objectives of the DCP and its prescribed envelope. The new built form should sit within the height controls, incorporate a compliant Gerrale St setback and include a larger and more amenable common open space, preferably at roof level."

Brendan Randles
ARAP Chairman

20 September 2017

Wynne Planning



49-57 GERRALE STREET CRONULLA

Revised Clause 4.6 Variation - Height

February 2018

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Clause 4.6 Variation – Building Height

Summary

The proposal is for the demolition of existing structures and construction of a 9 and 10 storey mixed use development. The subject site is identified as having a maximum building height of 30m under SSLEP 2015. The original proposal had a maximum building height of 33.06m and presented an 11.33% numerical variation to Clause 4.3 of SSLEP 2015. The amended proposal has a reduced maximum building height of 31.56m and presents a 5.2% numerical variation to Clause 4.3 of SSLEP 2015. The amended proposal continues to satisfy the requirements of clause 4.6 and accordingly Council's agreement is sought to the proposed variation to the development standard (Clause 4.3).

Key arguments presented include:

- The proposal meets the first of the Wehbe principles, being that it achieves the objectives of the standard to be varied;
- The proposal presents a reasonable variation to the numerical requirement of the standard;
- The proposal does not result in unreasonable adverse environmental impact;
- The numerically non compliant portion of the development will be minimally visible from the public domain and waterways;
- The non compliant areas are accessible by a limited number of people only;
- The proposal achieves the objectives for maximum building height in Clause 4.3 of the LEP;
- The proposal achieves the objectives of the B3 zone.

Introduction

The proposal is for the demolition of existing structures and construction of a 9 and 10 storey mixed use development, containing commercial premises at the ground floor level with apartments above and 2 levels of basement parking at 49-57 Gerrale Street, Cronulla.

Under Clause 4.3(2) of SSLEP 2015:

“(2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.”

The subject site is identified on the Height of Buildings Map as having a maximum building height of 30m. The proposed development originally had a maximum building height of 33.06m, presenting a numerical non compliance with the development standard. This presented a 11.33% numerical variation to the development standard.

Following the submission of DA17/0885, the proposal has been amended. The amendments to the proposal resulted in a reduced maximum building height of 31.56m and 5.2% numerical variation to the development standard.

Clause 4.6 of the LEP – Exceptions to development standards provides opportunity for Council to vary the controls where it can be shown that strict compliance with a numerical standard is unreasonable or unnecessary in the circumstances of the case, where there are sufficient environmental planning ground and where the variation would be in the public interest.

It is considered that the amended proposal continues to satisfy the Clause 4.6 criteria in the LEP and therefore should be supported. Accordingly, this document is a formal request for a variation to the maximum building height development standard.

Discussion

Clause 4.6 of the LEP provides:

- **Clause 4.6 (2)** *“Development consent may, subject to this clause, be granted for development even though the development would contravene a development standard imposed by this or any other environmental planning instrument. However, this clause does not apply to a development standard that is expressly excluded from the operation of this clause”.*

Comment: Clause 4.3 is not expressly excluded from the operation of Clause 4.6.

- **Clause 4.6 (3)** *“Development consent must not be granted for development that contravenes a development standard unless the consent authority has considered a written request from the applicant that seeks to justify the contravention of the development standard by demonstrating:*

“(a) that compliance with the development standard is unreasonable or unnecessary in the circumstances of the case”

Comment: The case of Preston CJ in *Wehbe v Pittwater Council* [2007]

NSWLEC 827 (Wehbe) sets out five ways of demonstrating that compliance with a development standard is unreasonable or unnecessary. Cases such as *Four2Five Pty Ltd v Ashfield Council* [2015] NSWLEC 90 and *Randwick Council v Micaul Holdings Pty Ltd* [2016] NSWLEC 7 have confirmed that adopting the 'Wehbe' principles when assessing a clause 4.6 submission in respect of clause 4.6(3)(a) is an appropriate approach. It is necessary that the proposal meets one or more of the Wehbe principles (although the Wehbe principles are not the only basis upon which 'unnecessary or unreasonable' may be demonstrated). For the purpose of this submission, only the first of the Wehbe principles is relevant. Set out below is an extract from the judgement in Wehbe together with a response in relation to the subject application:

1. **Compliance with objectives of the standard:** *"The most commonly invoked way is to establish that compliance with the development standard is unreasonable or unnecessary because the objectives of the development standard are achieved notwithstanding non-compliance with the standard. The rationale is that development standards are not ends in themselves but means of achieving ends.The ends are environmental or planning objectives. Compliance with a development standard is fixed as the usual means by which the relevant environmental or planning objective is able to be achieved. However, if the proposed development proffers an alternative means of achieving the objective, strict compliance with the standard would be unnecessary (it is achieved anyway) and unreasonable (no purpose would be served)."*

Response: Despite the technical non compliance with the with the maximum building height control, the proposal achieves the objectives for maximum building height in clause 4.3 as outlined in the assessment table later in this document.

"(b) that there are sufficient environmental planning grounds to justify contravening the development standard."

Comment:

- **The amended proposal presents a reasonable variation to the numerical requirement of the standard:** The site is subject to a maximum building height of 30m, however the amended proposal has a maximum building height of 31.56m. This presents a 5.2% numerical variation to the development standard, which is considered reasonable as a result of discussion throughout this Clause 4.6 variation. It is also noted that the amended proposal has significantly reduced the height and extent of variation to the development standard. The original proposal had a maximum building height of 33.06m and presented an 11.33% variation to the standard, while as discussed above the amended proposal has a maximum building height of 31.56m and presents a 5.2% variation to the standard.

Additionally, it is noted that a number of Clause 4.6 variations of similar or greater percentage in relation to maximum building height have been recently approved. The following table summarises these Clause 4.6 variations (information obtained as publicly available via DA tracker):

DA No.	Address	Development	% Variation	Structures Exceeding Height
DA16/1724	10-12 Clyde Avenue, Cronulla	Mixed use – including 46 residential units	5.0%	Lift access and overrun, stair access, rooftop amenities
DA16/1239	17 Mitchell Avenue, Jannali	RFB – 64 units	6%	Living areas, lift core, plant louvers
DA16/1035	29 The Grand Parade, Sutherland	RFB – 100 units	13%	Roof forms, lift overrun, plant enclosure, roof terrace balustrade
DA16/0602	300 Taren Point Road, Caringbah	RFB – 38 units	18%	Lift overrun, roof terrace walls, pergola
DA15/1401	25 Flide Street, Caringbah	Mixed use, including residential	9.50%	Significant portion of upper floor, large portion of rooftop, stair access to roof
DA15/1345	34 Railway Crescent, Jannali	Mixed use – including 89 residential units	15%	Cl4.6 not available in DA tracker
DA15/1037	13 University Road, Miranda	RFB – 132 units	11.2%	Almost entire Level 8 and significant portion of Level 7

As can be inferred from the table above, a number of clause 4.6 variations of similar or greater extent, resulting from similar or larger portions of structures have been recently approved and therefore considered acceptable.

- **The proposal does not result in unreasonable adverse environmental impact:** The proposed development has been designed with regard to site opportunities and constraints, as well as applicable controls under the ADG, LEP and DCP. As discussed below and throughout the Statement of Environmental Effects and supplementary planning report, the proposal has been designed to minimise impacts in terms of view sharing, privacy, shadow and visual intrusion. As discussed below and throughout the Statement of Environmental Effects and supplementary planning report, this has been ensured through measures such as setbacks and building separation, orientation and internal layout, location of windows and doors, built form screening elements (e.g. blade walls, solid balustrades, screens), reduction in built form and screen landscaping.
- **The numerically non compliant portion of the development will be minimally visible from the public domain and waterways:** The numerically non compliant portion of the development is limited to rooftop private open spaces and a portion of the plant room only. Refer to section extracts below:



The section extracts above demonstrate the central location of the non compliant forms and their notable setbacks from boundaries, particularly side boundaries. The section extracts above also demonstrate the maximum building height of the originally proposed built form in red, as well as the proposal as amended and reduced. Accordingly, the non compliant forms are considered unlikely to present unreasonable opportunity for overlooking. It is also noted that the central location of these forms will ensure that they are minimally visible from public open space, including Cronulla Mall, Cronulla Park and South Cronulla Beach (aided by the existing topography of the land to the east). This will also minimise the visibility of these forms from adjacent and nearby property.

- **The non compliant private open spaces are accessible by a limited number of people only:** The non compliant portion of the development, as discussed above, primarily includes a portion of rooftop private open spaces. These private open spaces will be accessible by the residents of the corresponding units and their visitors only. Accordingly, this significantly limits the number of people which have access to this space and therefore the intensity of use. It

is also noted that rooftop space is often used for communal open space, which is accessible by a larger number of people and has the potential to be more intensively used. The proposed rooftop space is not communal. The rooftop plant room is not anticipated to be accessed often, and only for maintenance purposes.

- **The proposal achieves the objectives for maximum building height in clause 4.3 of the LEP: Refer discussion below.**

Clause 4.3 Objective	Assessment Comment
<i>“(a) to ensure that the scale of buildings:</i> <i>(i) is compatible with adjoining development, and”</i>	The subject site is located within the changing context of the Cronulla Centre, transitioning to a higher density built form under the controls of SSLEP 2015. The proposal is an appropriate response to the context of the subject site which adjoins development within the same zone and subject to the same maximum building height controls under the LEP (B3 Commercial Core). Adjoining development to the north is currently single storey in nature, however is capable of being developed in a similar manner to the proposed development. The proposal is therefore considered to be compatible with adjoining development to the north in terms of scale. Adjoining development to the south is currently up to seven storeys and mixed use (primarily residential) in nature. The existing scale of the adjoining development to the south is considered compatible with the proposed development. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>(ii) is consistent with the desired scale and character of the street and locality in which the buildings are located or the desired future scale and character, and”</i>	As noted above, the subject site is located in the changing context of the Cronulla Centre, transitioning to a higher density. The scale of the proposed development is considered to be consistent with the desired future scale and character of the streets and locality in which the proposed development is located. The proposed development has been designed in response to applicable FSR, setbacks and ADG building separation requirements which together have determined the scale and form of the development. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.

<i>(iii) complements any natural landscape setting of the buildings,”</i>	The subject site is located to the east of the Cronulla Centre, and opposite Cronulla Park and South Cronulla Beach. The proposed development is well articulated with horizontal, vertical and curved forms. It is complemented by deep soil landscaping and vegetation in planters throughout the development, which will serve to soften the built form and contribute to the natural and coastal setting of the locality and streetscapes. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>“(b) to allow reasonable daylight access to all buildings and the public domain,”</i>	The proposal has been designed and solar studies completed (refer to solar studies submitted under separate cover) so as to ensure that it allows reasonable daylight access to buildings and the public domain. In particular, it is noted that the proposal provides compliant solar access (under the ADG) to apartments on site, and will not result in unreasonable shadow to Cronulla Mall to the west or Cronulla Park to the east. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>“(c) to minimise the impacts of new buildings on adjoining or nearby properties from loss of views, loss of privacy, overshadowing or visual intrusion,”</i>	The proposal has been designed above the street wall in response to building separation requirements under the ADG. This has resulted in significant setbacks, particularly at the upper level from side boundaries and will allow for the provision of view corridors through the site to the beach and ocean situated to the east. It is therefore considered that the proposal has appropriately minimised its impacts to existing and potential future adjoining and nearby development in terms of view sharing. The proposed development has been designed so as to ensure a reasonable level of visual and acoustic privacy to occupants of the subject site and sites adjacent and nearby. It is noted that the subject site is negatively impacted by existing development to the south, which includes residential development that presents a nil setback to the shared boundary. The nil setback of existing development to the south includes a nil setback to habitable rooms. Accordingly, existing development to the south does not provide its share of building separation (though it is noted that the site to the south may have been developed prior to the ADG).

	Nevertheless, the proposed development has responded to site opportunities and constraints and appropriately considered building layout and orientation, building separation, location of windows and doors, built form screening elements and landscaped screening elements so as to minimise its impacts in terms of visual and acoustic privacy. As discussed above, the proposal is not considered to result in unreasonable adverse overshadowing impacts. The proposal has been designed in response to setback and building separation controls, and does not result in unreasonable adverse privacy impacts. Accordingly, the proposed development is considered to appropriately minimise visual intrusion. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"(d) to ensure that the visual impact of buildings is minimised when viewed from adjoining properties, the street, waterways and public reserves,"</i>	As discussed, the proposal has been designed in response to setback and building separation requirements. The proposal, as also discussed above, has been well articulated and complemented by landscaping so as to soften the built form and respond to the location of the site within the Cronulla Centre and having natural characteristics. This has ensured that the visual impact of the proposal is minimised when viewed from adjoining properties, the streetscapes, waterways and public reserves. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"(e) to ensure, where possible, that the height of non-residential buildings in residential zones is compatible with the scale of residential buildings in those zones,"</i>	NA – subject site not located within a residential zone.
<i>"(f) to achieve transitions in building scale from higher intensity employment and retail centres to surrounding residential areas."</i>	NA – subject site not in immediate proximity to residential zoned land.

- The proposal achieves the objectives of the B3 zone: Refer to discussion below.

Clause 4.3 Objective	Assessment Comment
<i>"To provide a wide range of retail, business, office, entertainment, community and other suitable land uses"</i>	The proposal provides for commercial spaces at ground floor level which will allow for a number of potential uses into

<i>that serve the needs of the local and wider community."</i>	the future which serve the needs of the local and wider community. The proposal also provides apartments of varying sizes and configurations (1, 2 and 3 bedrooms) which will provide for an increased and improved housing stock within the community. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"To encourage appropriate employment opportunities in accessible locations."</i>	The proposal includes commercial spaces which will provide new employment opportunities in an area which is easily accessible via public transport. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"To maximise public transport patronage and encourage walking and cycling."</i>	The close proximity of the site to Cronulla train station, bus stops and the mall, and the provision of bicycle parking encourages the maximisation of public transport patronage and walking and cycling. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"To strengthen the viability of existing commercial centres through increased economic activity, employment and resident population."</i>	The proposal includes residential apartments which will increase the resident population, and commercial spaces which will serve to strengthen the viability of the Cronulla Centre through increased economic activity and employment. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"To create an attractive, vibrant and safe public domain with a high standard of urban design and public amenity."</i>	The proposal has been designed to present an attractive, active, vibrant and safe public domain providing a high standard of urban design and public amenity. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"To enhance commercial centres by encouraging incidental public domain areas that have a community focus and facilitate interaction, outdoor eating or landscaping."</i>	The proposal presents incidental public domain areas to the street frontages which will facilitate interaction and could potentially provide for outdoor eating if desired in the future.

	The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.
<i>"To provide for pedestrian-friendly and safe shopping designed to cater for the needs of all ages and abilities."</i>	The development includes commercial spaces addressing each frontage for pedestrian friendly and safe shopping opportunities which can cater for the needs of all ages and abilities. The proposed development will achieve this objective to at least an equal degree than a proposal that complied with the standard would.

- Clause 4.6 (4)** *"Development consent must not be granted for development that contravenes a development standard unless: (a) the consent authority is satisfied that: (i) the applicant's written request has adequately addressed the matters required to be demonstrated by subclause (3), and (ii) the proposed development will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone in which the development is proposed to be carried out, and (b) the concurrence of the Secretary has been obtained."*

Comment: This Clause 4.6 variation has adequately addressed the matters set out in Clause 4.6(3). This submission demonstrates numerical compliance with Clause 4.3 of SSLEP 2015 is unreasonable or unnecessary in the circumstances of the case because the proposal achieves both the objectives of the maximum building height clause and the objectives of the B3 zone. This submission also demonstrates that there are sufficient environmental planning grounds to justify contravening the development standard. Additionally, the proposal is considered to be in the public interest in that it achieves the objectives of Clause 4.3 and Zone B3 Commercial Core under SSLEP 2015.

It is notable that this submission demonstrates that both the objectives of the maximum building height and the zone objectives are achieved. Achieving these objectives is a higher level of satisfaction than that required in Clause 4.6(4)(ii), which only requires that the proposed development "will be in the public interest because it is consistent with the objectives of the particular standard and the objectives for development within the zone..." In *Moskovich v Waverley Council* [2016] NSWLEC 1015, Commissioner Tuor makes the distinction between the different requirements between clauses 4.6(3) and 4.6(4) and notes the higher standard as being able to demonstrate the objectives of the standard and zone are "achieved".

- Clause 4.6 (5)** *"In deciding whether to grant concurrence, the Secretary must consider: (a) whether contravention of the development standard raises any matter of significance for State or regional environmental planning, and (b) the public benefit of maintaining the development standard, and (c) any other matters required to be taken into consideration by the Secretary before granting concurrence."*

Comment: There is considered to be no public benefit in refusing the application (for the reasons stated above) so as to ensure that full compliance with the maximum building height control is achieved, as discussed above. The variation to the development standard does not raise any matters of state or regional significance.

Accordingly Council's agreement is sought to the proposed variation in maximum building height provision.

Rev	Description	Date
B	ISSUE TO CONSULTANTS	26/05/17
C	ISSUE TO CILENTS	13/06/17
D	ISSUE TO CONSULTANTS	15/06/17
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	DA SUBMISSION	13/07/17
H	ISSUE FOR DISCUSSION	5/10/17
I	Amended DA Submission	16/10/17

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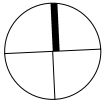
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CRONULLA**

File

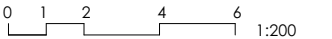
BASEMENT 2

Scale @ A3 **1 : 200**
Date **16/10/17**
Drawn by **YH**
Checked by **MC**



Sheet Number Revision

A098 **I**



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Rev	Description	Date
D	ISSUE TO CONSULTANTS	15/06/17
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	ISSUE TO CONSULTANTS	26/06/17
H	DA SUBMISSION	13/07/17
I	ISSUE FOR DISCUSSION	5/10/17
J	Amended DA Submission	16/10/17
K	Amendments	20/12/17

Room Legend

- COMMON ROOM
- LOBBY
- SERVICE
- SHOP

AU ARCHITECTURE URBANEA

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Client

IRIDIUM DEVELOPMENTS PTY LTD

Project

1701

49-57 GERRALE STREET, CRONULLA

File

GROUND FLOOR PLAN

Scale @ A3 1 : 200

Date 20/12/17

Drawn by YH

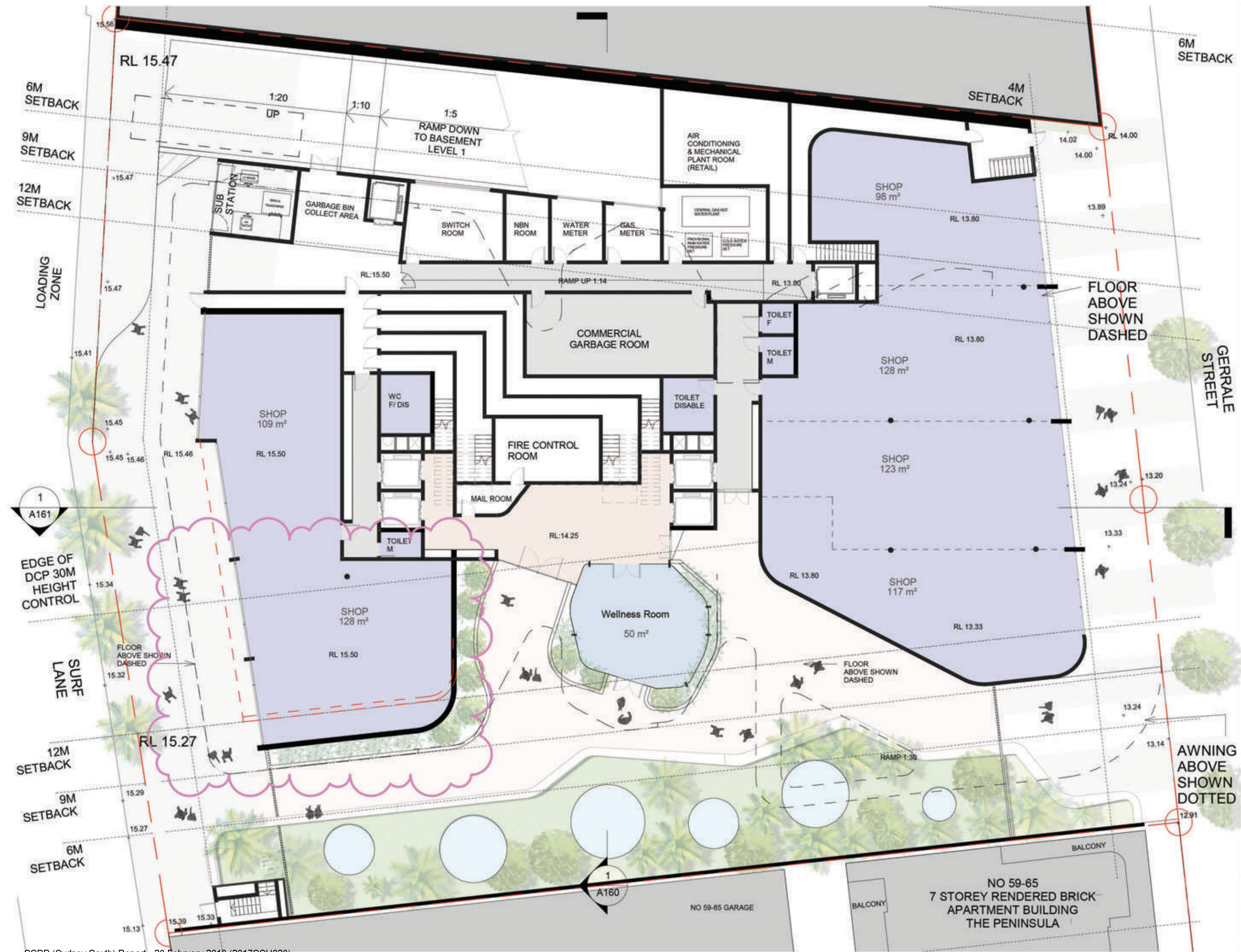
Checked by MC

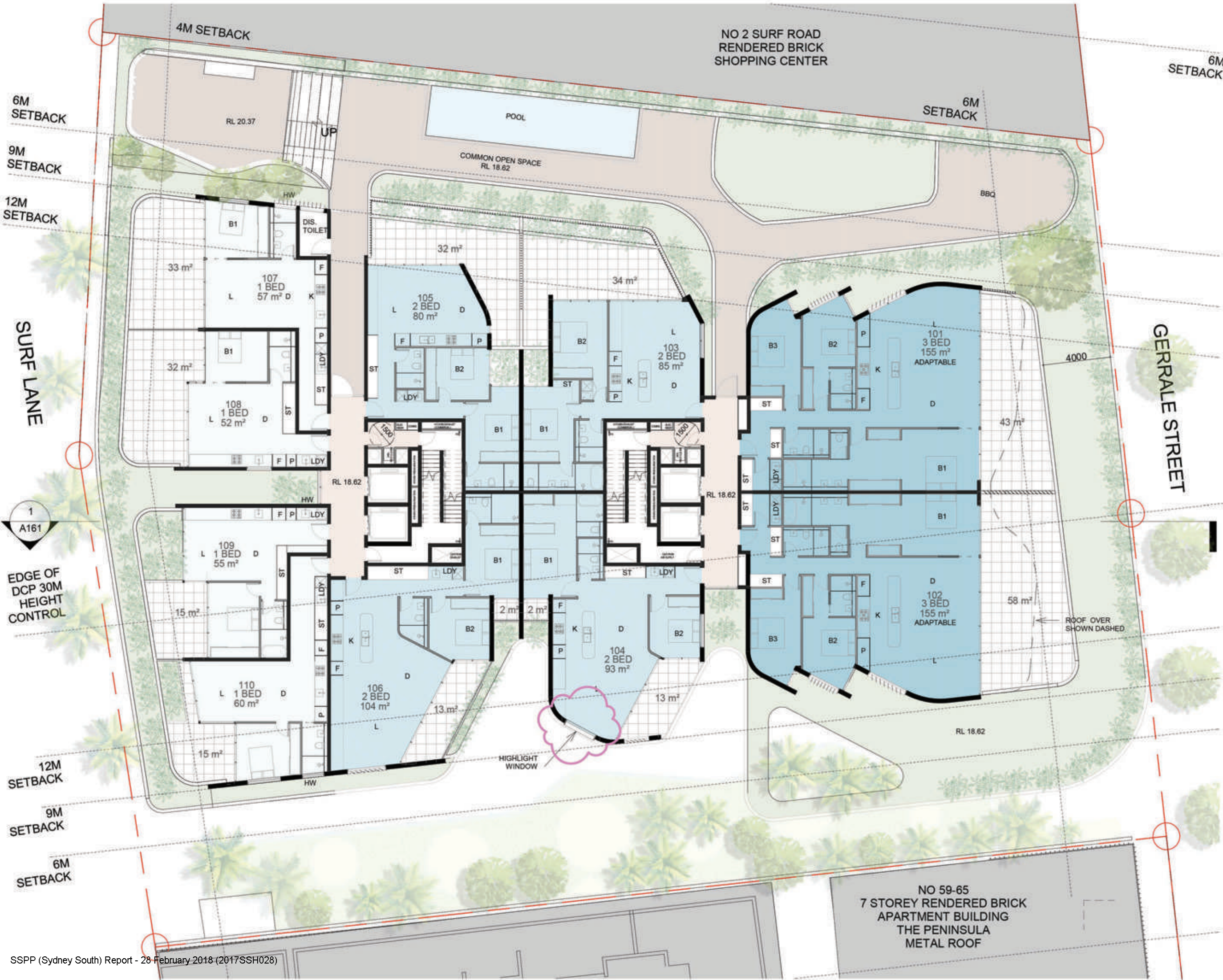
Sheet Number Revision

A100 K

0 1 2 4 6 1:200

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Rev	Description	Date
D	ISSUE TO CONSULTANTS	15/06/17
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	ISSUE TO CONSULTANTS	26/06/17
H	DA SUBMISSION	13/07/17
I	ISSUE FOR DISCUSSION	5/10/17
J	Amended DA Submission	16/10/17
K	Amendments	20/12/17

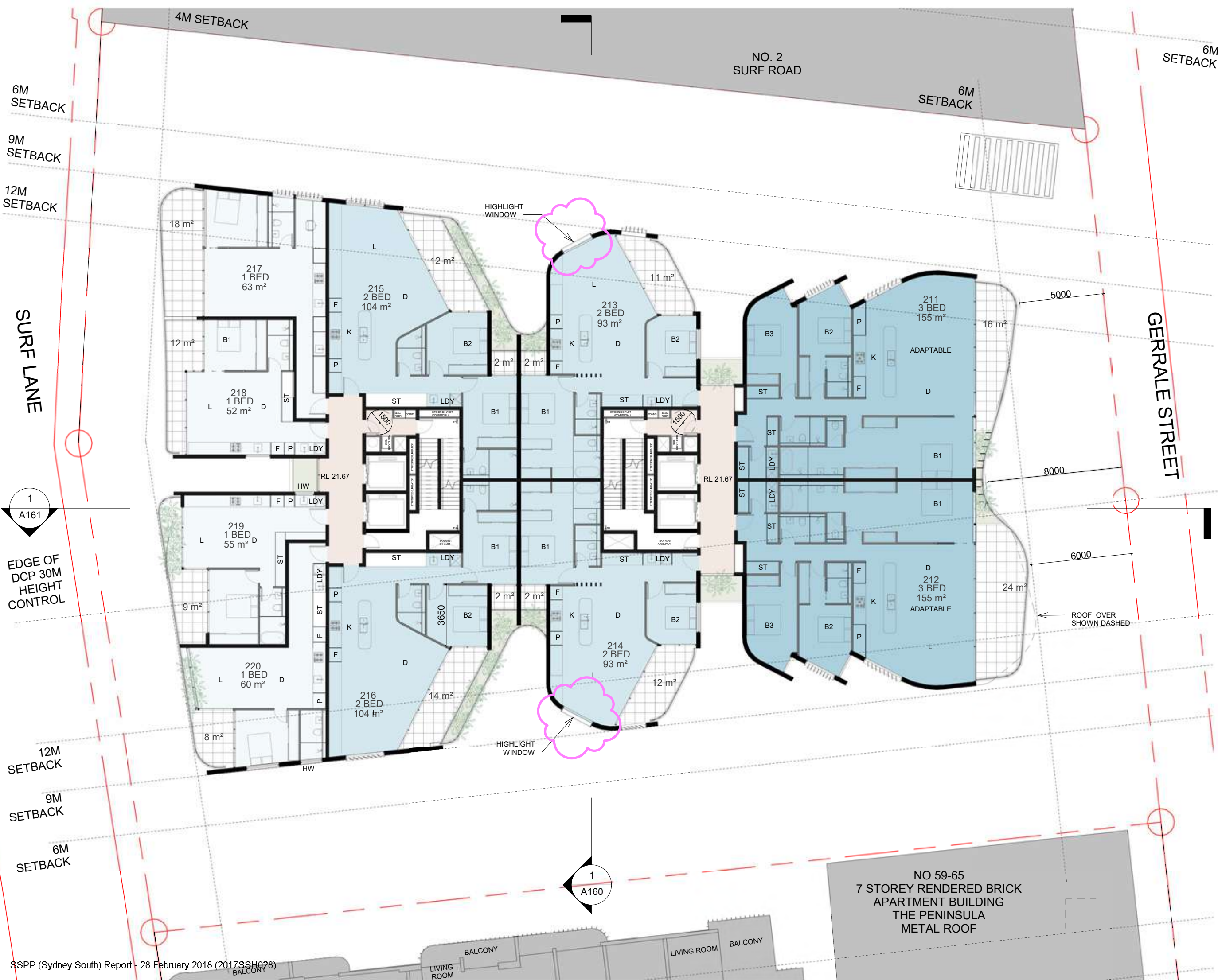
Room Legend

- 1 BED
- 2 BED
- 3 BED
- BALCONY
- LOBBY
- HW HIGHLIGHT WINDOW

AU ARCHITECTURE URBANEA
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IRIDIUM DEVELOPMENTS PTY LTD
Project
1701
49-57 GERRALE STREET, CRONULLA

File
LEVEL 1
Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**
Sheet Number **A101** Revision **K**
0 1 2 4 6 1:200
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Rev	Description	Date
D	ISSUE TO CONSULTANTS	15/06/17
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	ISSUE TO CONSULTANTS	26/06/17
H	DA SUBMISSION	13/07/17
I	ISSUE FOR DISCUSSION	5/10/17
J	Amended DA Submission	16/10/17
K	Amendments	20/12/17

Room Legend

- 1 BED
- 2 BED
- 3 BED
- BALCONY
- LOBBY

HW HIGHLIGHT WINDOW

AU ARCHITECTURE URBANEA
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Client
IRIDIUM DEVELOPMENTS PTY LTD
Project
1701
49-57 GERRALE STREET, CRONULLA

File
LEVEL 2
Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**
Sheet Number **A102** Revision **K**
0 1 2 4 6 1:200



Rev	Description	Date
A	ISSUE TO CONSULTANTS	05/07/17
B	DA SUBMISSION	13/07/17
C	Amended DA Submission	16/10/17
D	Amendments	20/12/17

Room Legend

- 1 BED
- 2 BED
- 3 BED
- BALCONY
- LOBBY
- HW HIGHLIGHT WINDOW

AU ARCHITECTURE URBANEA
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Client
IRIDIUM DEVELOPMENTS PTY LTD

Project
**1701
49-57 GERRALE STREET,
CRONULLA**

File
LEVEL 3

Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**

Sheet Number **A103** Revision **D**
0 1 2 4 6 1:200

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Rev	Description	Date
A	DA SUBMISSION	13/07/17
B	Amended DA Submission	16/10/17
C	Amendments	20/12/17

Room Legend

- 1 BED
- 2 BED
- 3 BED
- BALCONY
- LOBBY
- HW HIGHLIGHT WINDOW

AU ARCHITECTURE
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Client

**IRIDIUM
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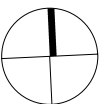
Project

**1701
49-57 GERRALE STREET,
CRONULLA**

File

LEVEL 4

Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**

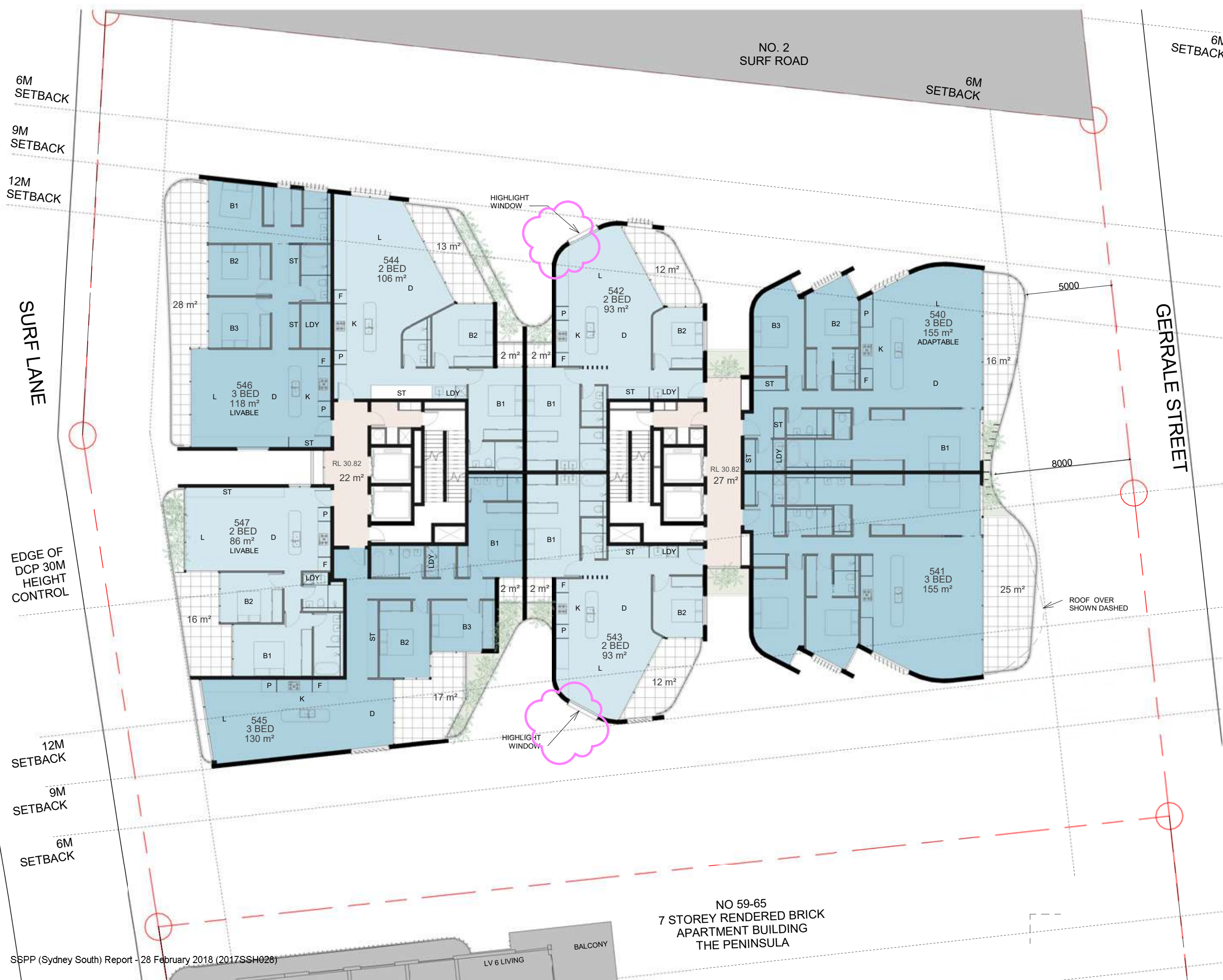


Sheet Number Revision

A104 C

0 1 2 4 6 1:200

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Rev	Description	Date
A	DA SUBMISSION	13/07/17
B	ISSUE FOR DISCUSSION	5/10/17
C	Amended DA Submission	16/10/17
D	Amendments	20/12/17

Room Legend

- 2 BED
- 3 BED
- BALCONY
- LOBBY

HW HIGHLIGHT WINDOW

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IRIDIUM DEVELOPMENTS PTY LTD

Project
**1701
49-57 GERRALE STREET,
CRONULLA**

File
LEVEL 5

Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**

Sheet Number **A105** Revision **D**

0 1 2 4 6 1:200

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Rev	Description	Date
C	ISSUE TO CILENTS	13/06/17
D	ISSUE TO CONSULTANTS	15/06/17
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	ISSUE TO CONSULTANTS	26/06/17
H	DA SUBMISSION	13/07/17
I	Amended DA Submission	16/10/17
J	Amendments	20/12/17

Room Legend

- 2 BED
- 3 BED
- BALCONY
- LOBBY

HW HIGHLIGHT WINDOW

AU ARCHITECTURE URBANEA
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Client

IRIDIUM DEVELOPMENTS PTY LTD

Project
1701
49-57 GERRALE STREET, CRONULLA

File
LEVEL 6

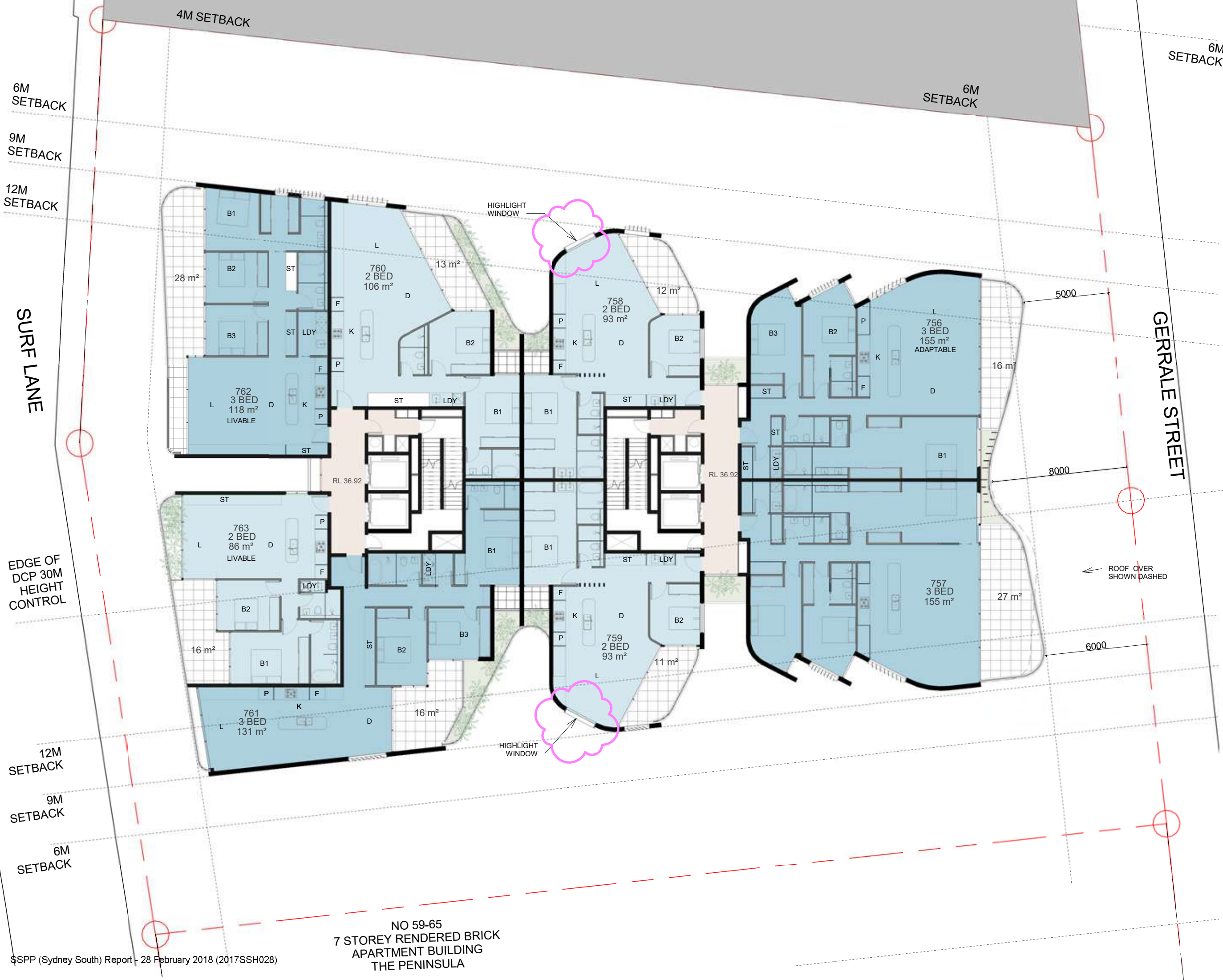
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Date **20/12/17**
Drawn by **YH**
Checked by **MC**

Sheet Number **A106** Revision **J**



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manufatures recommendations and instructions.

Rev	Description	Date
A	DA SUBMISSION	13/07/17
B	Amended DA Submission	16/10/17
C	Amendments	20/12/17



Room Legend

- 2 BED
- 3 BED
- BALCONY
- LOBBY
- HW HIGHLIGHT WINDOW

AU ARCHITECTURE
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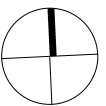
Project

**1701
49-57 GERRALE STREET,
CRONULLA**

File

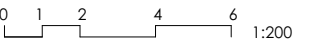
LEVEL 7

Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**



Sheet Number Revision

A107 C



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Rev	Description	Date
D	ISSUE TO CONSULTANTS	15/06/17
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	ISSUE TO CONSULTANTS	26/06/17
H	DA SUBMISSION	13/07/17
I	ISSUE FOR DISCUSSION	5/10/17
J	Amended DA Submission	16/10/17
K	Amendments	20/12/17

Room Legend

- PENTHOUSE
- BALCONY
- LOBBY

ARCHITECTURE
URBANEIA

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Client

IRIDIUM
DEVELOPMENTS PTY LTD

Project

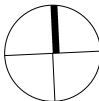
1701
49-57 GERRALE STREET,
CRONULLA

File

LEVEL 8 (PENTHOUSE)

Scale @ A3

Date
20/12/17
Drawn by
YH
Checked by
MC



Sheet Number

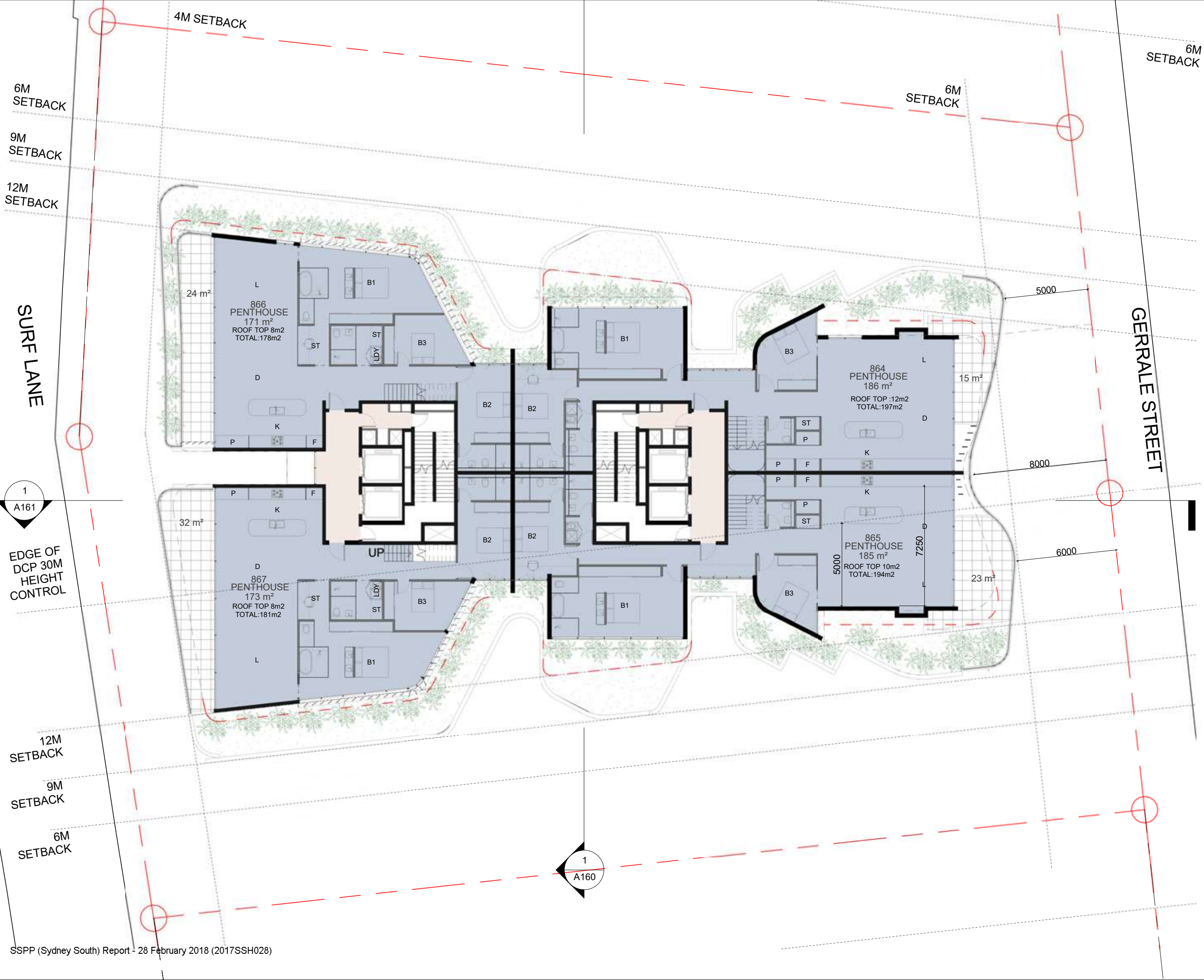
Revision

A108

K

0 1 2 4 6 1:200

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Rev	Description	Date
E	ISSUE TO CONSULTANTS	19/06/17
F	ISSUE TO CONSULTANTS	22/06/17
G	ISSUE TO CONSULTANTS	26/06/17
H	ISSUE TO CONSULTANTS	05/07/17
I	DA SUBMISSION	13/07/17
J	ISSUE FOR DISCUSSION	5/10/17
K	Amended DA Submission	16/10/17
L	Amendments	20/12/17

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Client

IRIDIUM DEVELOPMENTS PTY LTD

Project

1701
49-57 GERRALE STREET, CRONULLA

File

ROOFTOP LEVEL

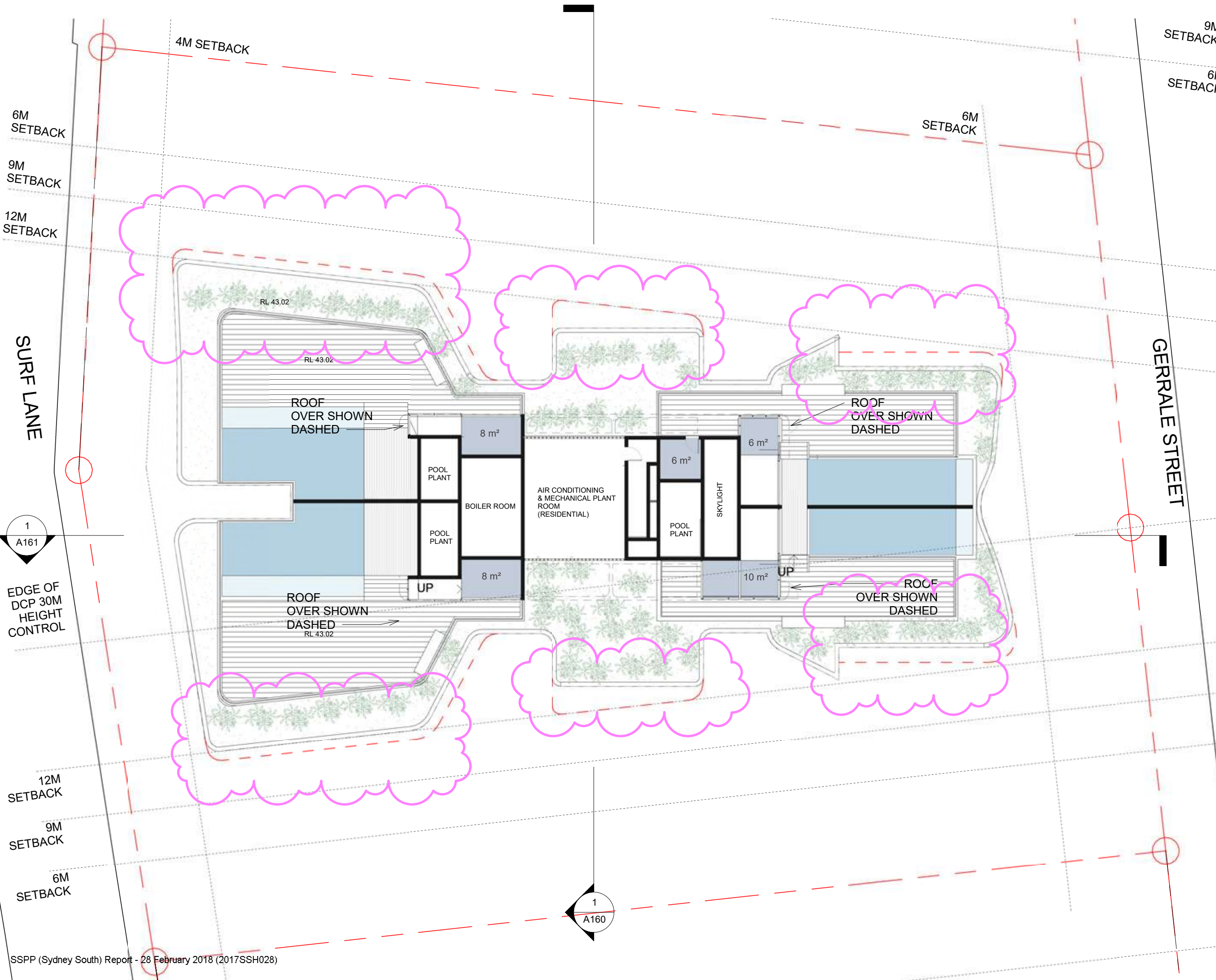
Scale @ A3 **1 : 200**
Date **20/12/17**
Drawn by **YH**
Checked by **MC**

Sheet Number Revision

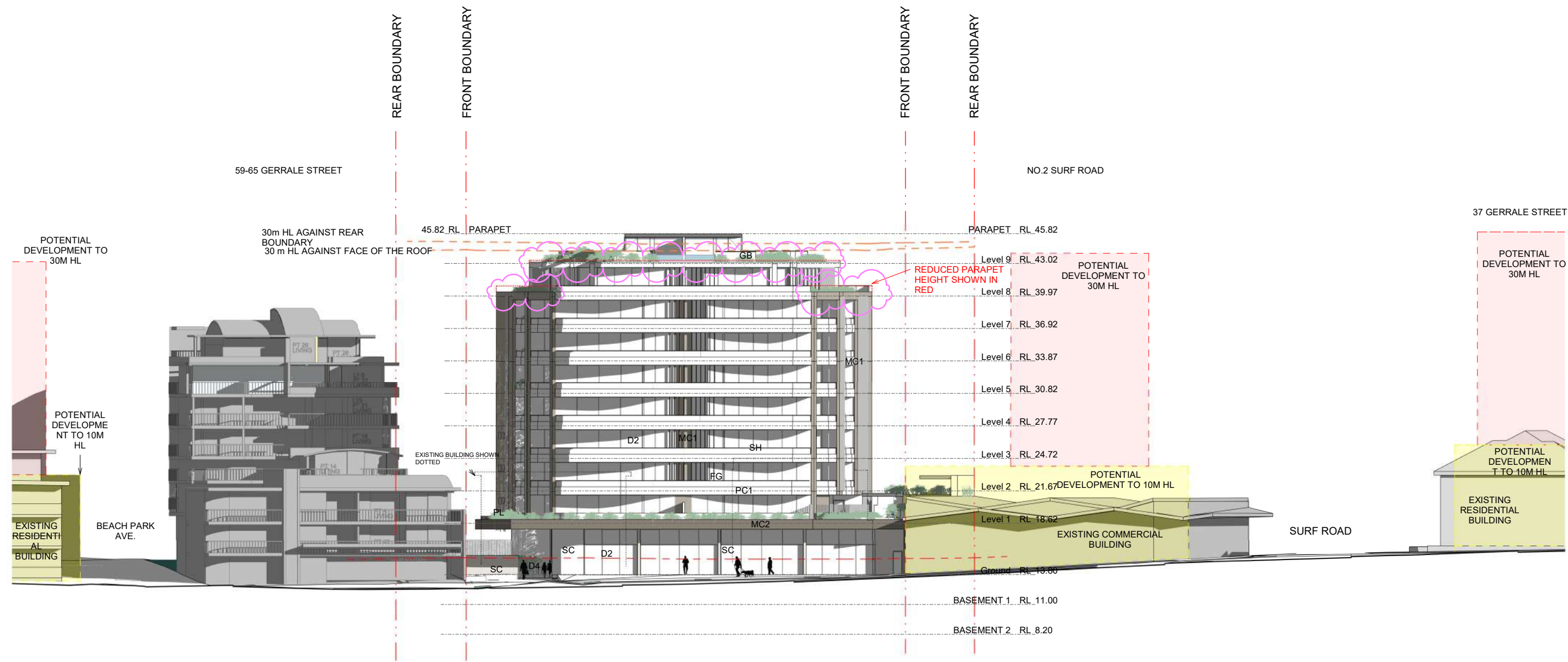
A109 **L**

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Rev	Description	Date
A	ISSUE TO CILENTS	19/05/17
B	ISSUE TO CONSULTANTS	26/05/17
C	ISSUE TO CONSULTANTS	26/06/17
D	DA SUBMISSION	13/07/17
E	AMENDED DA SUBMISSION	16/10/17
F	AMENDMENTS	20/12/17
G	DELETE NOTES & PREVIOUS DOTTED ROOF LINE	09/02/18



① MAIN Elevation East
1:200 @ A1
1:400 @ A3

FINISHES LEGEND



SSPP (Sydney South) Report - 28 February 2018 (2017SSH028)

1. ALUMINUM FRAMED COLOR _ LIGHT WARM GREY
2. PRE-CAST CONCRETE _ WHITE RENDER
3. PRE-CAST CONCRETE
4. METAL CLADDING _ COLOUR 1
5. METAL CLADDING _ COLOUR 2
6. STONE WALL CLADDING

MC
MC2
SC
PC
SH
GB
PL
FG
W1

METAL CLADDING _ COLOUR 1
METAL CLADDING _ COLOUR 2
STONE WALL CLADDING
PRE-CAST CONCRETE _ COLOUR 1
PRE-CAST CONCRETE _ COLOUR 2
STAINLESS STEEL HANDRAIL
FRAMELESS GLASS BALUSTRADE
PLANTING
FROST GLASS
FIXED GLAZING

W2
W3
D1
D2
D3
D4
D5
S1

AWNING WINDOW
SLIDING WINDOW
ALUMINUM FRAMED GLASS DOOR-SINGLE PUSH
ALUMINUM FRAMED GLASS SLIDING DOOR
GARAGE DOOR
STAINLESS STEEL SECURITY GATES
DOUBLE GLASS DOOR
OPERABLE VERTICAL METAL SUN SCREEN

COLOR LEGEND

- Existing Building
- 10 m Height limit
- 16 m Height limit
- 30 m Height limit

AU ARCHITECTURE
URBANEIA

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Client

**IRIDIUM
DEVELOPMENTS PTY LTD**

Project

1701

**49-57 GERRALE STREET,
CRONULLA**

File

GERRALE ST EAST ELEVATION

Scale @ A1

Date

Drawn by

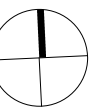
Checked by

As indicated

09/02/2018

YH

MC



Sheet Number

Revision

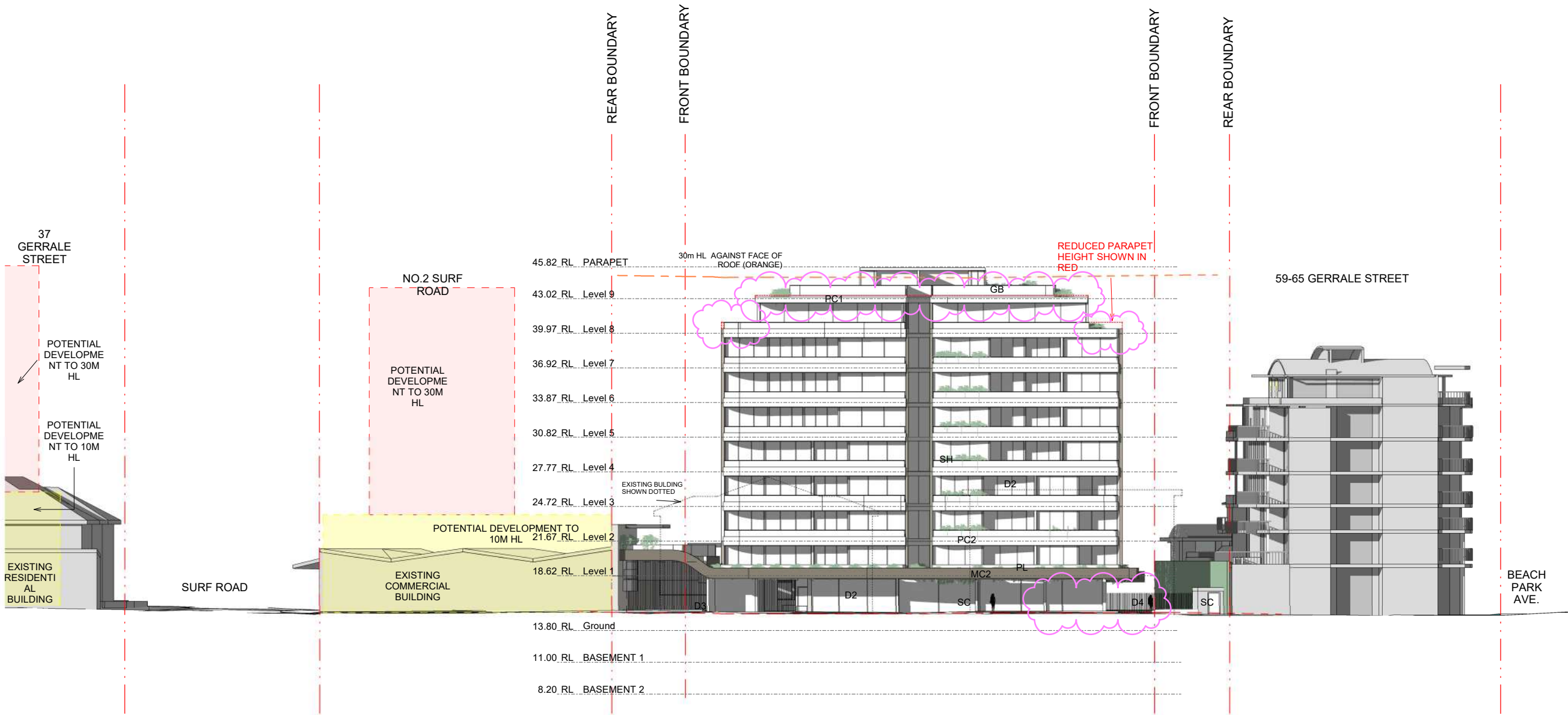
A150

G

0 1 2 4 8 12 1:200

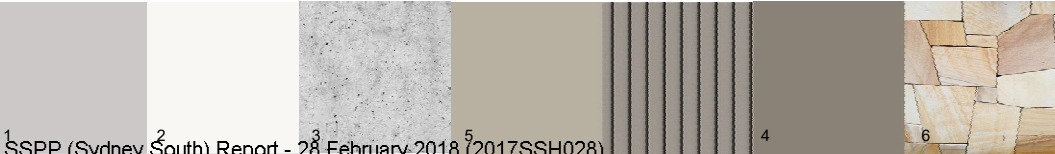
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Rev	Description	Date
A	ISSUE TO CILENTS	19/05/17
B	ISSUE TO CONSULTANTS	26/05/17
C	ISSUE TO CONSULTANTS	26/06/17
D	DA SUBMISSION	13/07/17
E	AMENDED DA SUBMISSION	16/10/17
F	AMENDMENTS	20/12/17
G	DELETE NOTES & PREVIOUS DOTTED ROOF LINE	09/02/18



① MAIN Elevation West
1:200 @ A1
1:400 @ A3

FINISHES LEGEND



1. ALUMINUM FRAMED COLOR _ LIGHT WARM GREY
2. PRE-CAST CONCRETE _ WHITE RENDER
3. PRE-CAST CONCRETE
4. METAL CLADDING _ COLOUR 1
5. METAL CLADDING _ COLOUR 2
6. STONE WALL CLADDING

MC
MC2
SC
PC
PC
SH
GB
PL
FG
W1

METAL CLADDING _ COLOUR 1
METAL CLADDING _ COLOUR 2
STONE WALL CLADDING
PRE-CAST CONCRETE _ COLOUR 1
PRE-CAST CONCRETE _ COLOUR 2
STAINLESS STEEL HANDRAIL
FRAMELESS GLASS BALUSTRADE
PLANTING
FROST GLASS
FIXED GLAZING

W2
W3
D1
D2
D3
D4
D5
S1

AWNING WINDOW
SLIDING WINDOW
ALUMINUM FRAMED GLASS DOOR-SINGLE PUSH
ALUMINUM FRAMED GLASS SLIDING DOOR
GARAGE DOOR
STAINLESS STEEL SECURITY GATES
DOUBLE GLASS DOOR
OPERABLE VERTICAL METAL SUN SCREEN

COLOR LEGEND

- Existing Building
- 10 m Height limit
- 16 m Height limit
- 30 m Height limit

AU ARCHITECTURE
URBANEIA

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Client

**IRIDIUM
DEVELOPMENTS PTY LTD**

Project

1701

**49-57 GERRALE STREET,
CRONULLA**

File

SURF LN WEST ELEVATION

Scale @ A1

Date

Drawn by

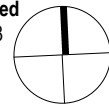
Checked by

As indicated

09/02/2018

YH

MC



Sheet Number

Revision

A151

G

0 1 2 4 8 12 1:200

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Rev	Description	Date
A	ISSUE TO CILENTS	19/05/17
B	ISSUE TO CONSULTANTS	26/05/17
C	ISSUE TO CONSULTANTS	26/06/17
D	DA SUBMISSION	13/07/17
E	AMENDED DA SUBMISSION	16/10/17
F	AMENDMENTS	20/12/17
G	DELETE NOTES & PREVIOUS DOTTED ROOF LINE	09/02/18



① MAIN Elevation North

1:400 @ A3

FINISHES LEGEND



SSPP (Sydney South) Report - 28 February 2018 (2017SSH028)

- ALUMINUM FRAMED COLOR _ LIGHT WARM GREY
- PRE-CAST CONCRETE _ WHITE RENDER
- PRE-CAST CONCRETE
- METAL CLADDING _ COLOUR 1
- METAL CLADDING _ COLOUR 2
- STONE WALL CLADDING

MC
MC2
SC
PC
PC
SH
GB
PL
FG
W1

METAL CLADDING _ COLOUR 1
METAL CLADDING _ COLOUR 2
STONE WALL CLADDING
PRE-CAST CONCRETE _ COLOUR 1
PRE-CAST CONCRETE _ COLOUR 2
STAINLESS STEEL HANDRAIL
FRAMELESS GLASS BALUSTRADE
PLANTING
FROST GLASS
FIXED GLAZING

W2
W3
D1
D2
D3
D4
D5
S1

AWNING WINDOW
SLIDING WINDOW
ALUMINUM FRAMED GLASS DOOR-SINGLE PUSH
ALUMINUM FRAMED GLASS SLIDING DOOR
GARAGE DOOR
STAINLESS STEEL SECURITY GATES
DOUBLE GLASS DOOR
OPERABLE VERTICAL METAL SUN SCREEN

AU ARCHITECTURE
URBANEIA

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Client

**IRIDIUM
DEVELOPMENTS PTY LTD**

Project

1701

**49-57 GERRALE STREET,
CRONULLA**

File

NORTH ELEVATION

Scale @ A1

Date

Drawn by

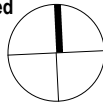
Checked by

As indicated

09/02/2018

YH

MC



Sheet Number

Revision

A152

G

0 1 2 4 8 12 1:200

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Rev	Description	Date
A	ISSUE TO CILENTS	19/05/17
B	ISSUE TO CONSULTANTS	26/05/17
C	ISSUE TO CONSULTANTS	26/06/17
D	DA SUBMISSION	13/07/17
E	AMENDED DA SUBMISSION	16/10/17
F	AMENDMENTS	20/12/17
G	DELETE NOTES & PREVIOUS DOTTED ROOF LINE	09/02/18



① MAIN Elevation South

1:200 @ A1

1:400 @ A3

FINISHES LEGEND



SSPP (Sydney South) Report - 28 February 2018 (2017SSH028)

1. ALUMINUM FRAMED COLOR_ LIGHT WARM GREY
2. PRE-CAST CONCRETE _ WHITE RENDER
3. PRE-CAST CONCRETE
4. METAL CLADDING _ COLOUR 1
5. METAL CLADDING _ COLOUR 2
6. STONE WALL CLADDING

MC
MC2
SC
PC
PC
SH
GB
PL
FG
W1

METAL CLADDING_ COLOUR 1
METAL CLADDING_ COLOUR 2
STONE WALL CLADDING
PRE-CAST CONCRETE_ COLOUR 1
PRE-CAST CONCRETE_ COLOUR 2
STAINLESS STEEL HANDRAIL
FRAMELESS GLASS BALUSTRADE
PLANTING
FROST GLASS
FIXED GLAZING

W2
W3
D1
D2
D3
D4
D5
S1

AWNING WINDOW
SLIDING WINDOW
ALUMINUM FRAMED GLASS DOOR-SINGLE PUSH
ALUMINUM FRAMED GLASS SLIDING DOOR
GARAGE DOOR
STAINLESS STEEL SECURITY GATES
DOUBLE GLASS DOOR
OPERABLE VERTICAL METAL SUN SCREEN

AU ARCHITECTURE
URBANEIA

M. Chehelnabi REGD. ARCH.7057
ABN 50169207818

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Client

**IRIDIUM
DEVELOPMENTS PTY LTD**

Project

1701
**49-57 GERRALE STREET,
CRONULLA**

File

SOUTH ELEVATION

Scale @ A1

Date

Drawn by

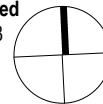
Checked by

As indicated

09/02/2018

YH

MC



Sheet Number

Revision

A153

G

0 1 2 4 8 12 1:200

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in accordance with the Australian Standards, the Building Code of Australia and manufacturers recommendations and instructions.

Rev	Description	Date
A	ISSUE TO CILENTS	19/05/17
B	ISSUE TO CONSULTANTS	26/05/17
C	DA SUBMISSION	13/07/17
D	ISSUE FOR DISCUSSION	5/10/17
E	AMENDED DA SUBMISSION	16/10/17
F	DELETE NOTES & PREVIOUS DOTTED ROOF LINE & PARTY WALL SHOWN	09/02/18



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Client

**IRIDIUM
DEVELOPMENTS PTY LTD**

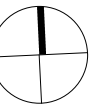
Project

**1701
49-57 GERRALE STREET,
CRONULLA**

File

LONG SECTION

Scale @ A1 **1 : 200**
Date 09/02/2018
Drawn by YH
Checked by MC



Sheet Number Revision

A161 F

0 1 2 4 8 12 1:200

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PARAPET RL 45.82

Level 9 RL 43.02

Level 8 RL 39.97

Level 7 RL 36.92

Level 6 RL 33.87

Level 5 RL 30.82

Level 4 RL 27.77

Level 3 RL 24.72

Level 2 RL 21.67

Level 1 RL 18.62

Ground RL 13.80

Architectural elevation drawing of a building facade, showing levels and materials. The drawing includes the following labels and level markers:

- Level 9** RL 43.02
- Level 8** RL 39.97
- Level 7** RL 36.92
- Level 6** RL 33.87
- Level 5** RL 30.82
- Level 4** RL 27.77
- Level 3** RL 24.72
- Level 2** RL 21.67
- Level 1** RL 18.62
- Ground** RL 13.80

Material and feature labels include:

- SC (Stone Cladding)
- GB (Glass Balustrade)
- PC1 (Polished Concrete)
- W2 (Window)
- W1 (Window)
- PC2 (Polished Concrete)
- FG (Flooring)
- SH (Shower)
- MC1 (Mechanical Room)
- MC2 (Mechanical Room)
- PL (Plaster)
- D4 (Door)

Rev	Description
A	DA SUBMISSION
B	Amended DA Submission

Date 13/07/17
16/10/17
79 of 101

Page 79 of 101

AU | ARCHITECTURE
URBANEIA

**IRIDIUM
DEVELOPMENTS PTY LTD**

1701
49-57 GERRALE STREET,
CRONULLA

MATERIAL FINISHES

Scale @ A3
1 : 100
Date 16/10/17
by YHD
Checked MC

A402

Wiley-Blackwell

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PARAPET RL 45.82

Level 9 RL 43.02

Level 8 RL 39.97

Level 7 RL 36.92

Level 6 RL 33.87

Level 5 RL 30.82

Level 4 RL 27.77

Level 3 RL 24.72

Level 2 RL 21.67

Level 1 RL 18.62

Ground RL 13.80



Rev	Description
A	DA SUBMISSION
B	Amended DA Submission

Date	
13/07/17	
16/10/17	

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AU | ARCHITECTURE
URBANEIA

**IRIDIUM
DEVELOPMENTS PTY LTD**

1701
49-57 GERRALE STREET,
CRONULLA

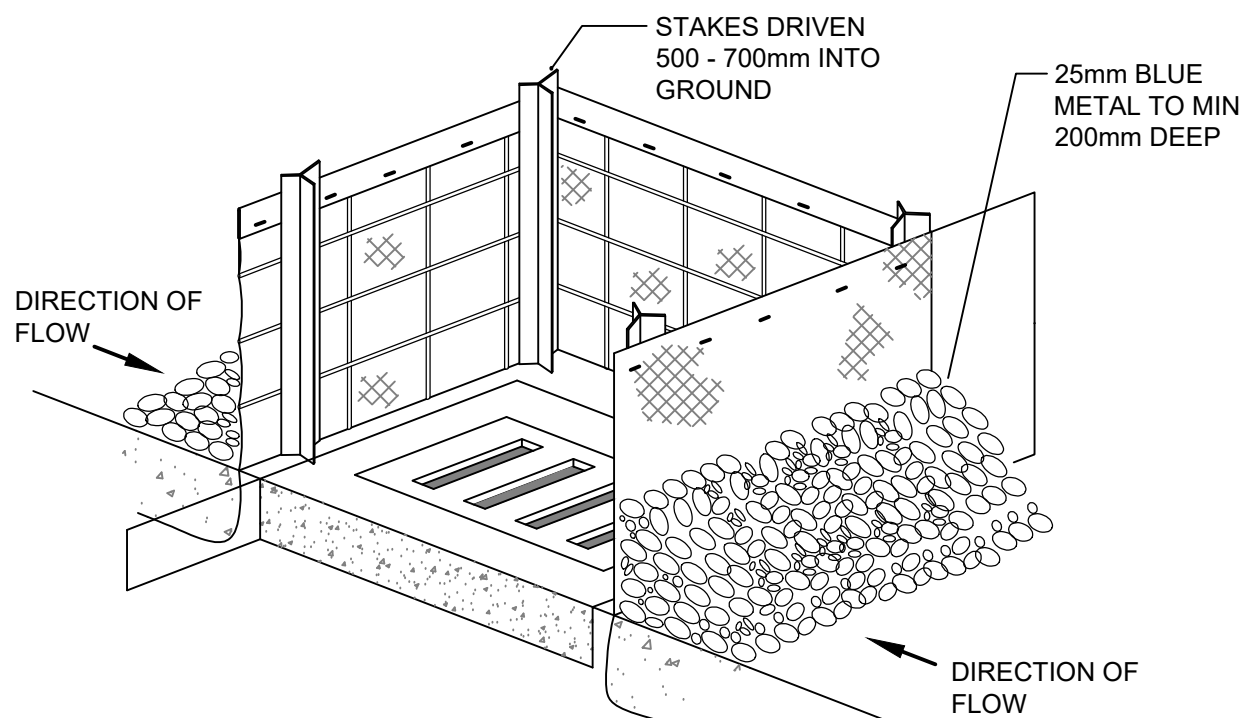
MATERIAL FINISHES

checked by
Date
Scale @ A3
1:100
16/10/17



A402

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DETAIL: STORM INLET SEDIMENT TRAP

STORM INLET SEDIMENT TRAP

DESCRIPTION
THESE ARE TEMPORARY DE-SILTING STRUCTURES.

USAGE

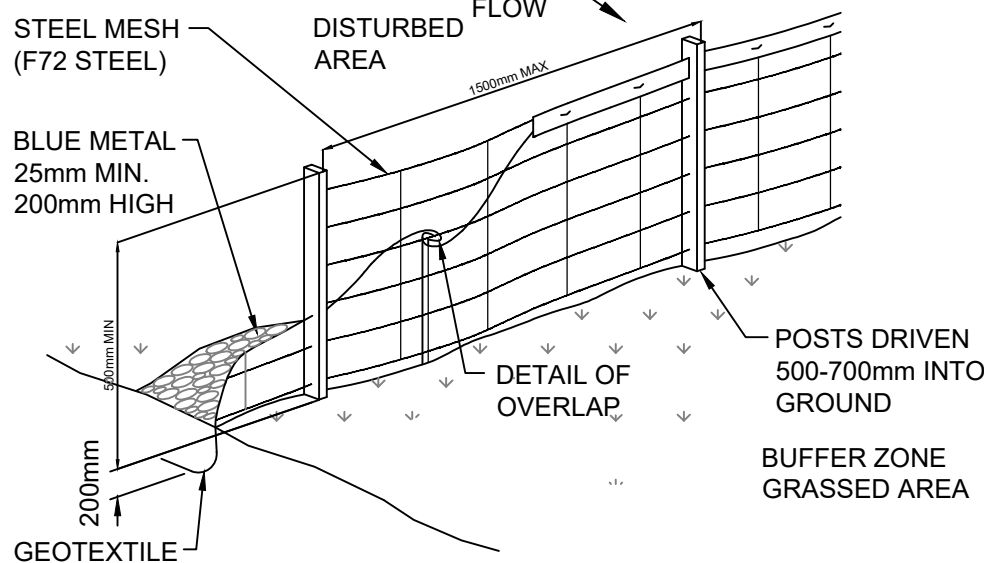
SUCH SEDIMENT TRAPS ARE USED AT STORMWATER INLETS AND OUTLETS, CULVERT ENTRIES AND POINTS WHERE RUN-OFF FROM DISTURBED CATCHMENTS SUCH AS CONSTRUCTION SITES IS DISCHARGED.

GENERAL REQUIREMENTS

SEDIMENT TRAPS ARE BUILT FROM STRAW BALES, WASHED GRAVEL, GABIONS OR SANDBAGS (OR SARLON TYPE MATERIALS) FILLED WITH BLUE METAL. THE CHOICE OF MATERIAL OR TYPE OF STRUCTURE DEPENDS ON THE SIZE OF THE DRAINAGE AREA AND THE PHYSICAL STRUCTURE SURROUNDING THE SEDIMENT TRAP. CONSTRUCTION MATERIALS TO BE CONFIRMED BY COUNCIL.

MAINTENANCE

SEDIMENT TRAPS SHOULD BE REGULARLY MAINTAINED AND RESTORED TO THEIR ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO HALF OF THE DESIGNED CAPACITY. THE OUTLET SHOULD BE CONSTRUCTED AND MAINTAINED TO ENSURE EROSION DOES NOT OCCUR. MAINTENANCE PROGRAM SHALL BE AS REQUESTED BY COUNCIL.



DETAIL - SILT FENCES

SILT FENCES

DESCRIPTION
SILT FENCES ARE TEMPORARY BARRIERS MADE FROM A COMBINATION OF FILTER CLOTH AND BLUE METAL.

USAGE

SILT FENCES FILTER RUN-OFF LEAVING THE SITE TRAPPING THE SEDIMENT AND ALLOWING CLEAN FILTERED WATER TO PASS. SILT FENCES ARE TO BE PLACED ON THE CONTOUR OR SLIGHTLY CONVEX TO THE CONTOUR. IF ON THE CONTOUR, EACH END OF THE FENCE SHOULD BE TURNED UP TO CREATE A 'STILLING POND' UP SLOPE OF THE FENCE. WHERE POSSIBLE, A SILT FENCE SYSTEM SHOULD BE NO LONGER THAN ABOUT 20 METRES. THEY SHOULD NOT INTERCEPT LARGE CONCENTRATED OR CHANNELISED FLOWS.

INSTALLATION

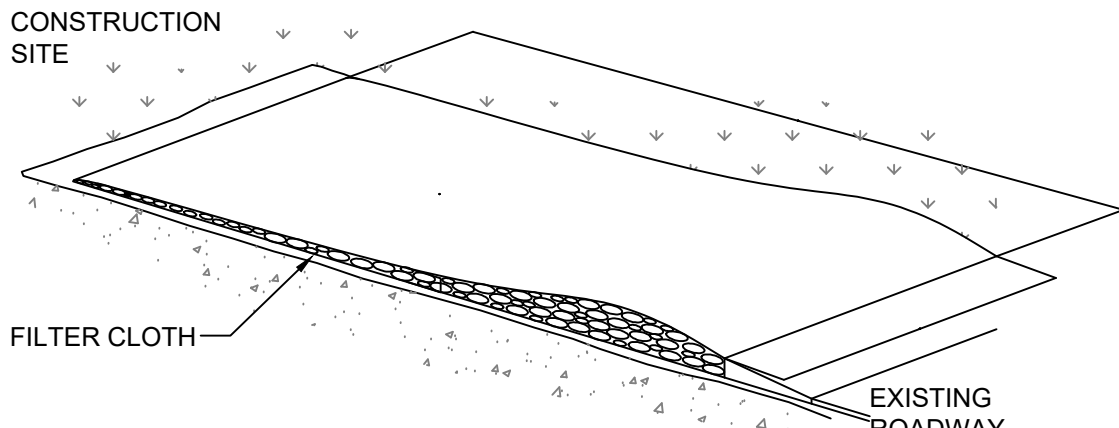
THE AREA BELOW A SILT FENCE MUST BE UNDISTURBED ON STABILISED GROUND.

MAINTENANCE

SILT FENCES REQUIRE REGULAR MAINTENANCE. TRAPPED SEDIMENTS SHOULD BE REMOVED, PICKETS STRAIGHTENED, FILTER CLOTH RESECURED AND TIGHTENED AND BLUE METAL REPLACED WHEN HEAVILY CONTAMINATED WITH SILT.

NOTE

FILTER FABRIC SHALL BE EQUIVALENT TO 'GEOLAB' AND BE CAPABLE OF INTERCEPTING SILT PARTICLES DOWN TO 2 MICRON IN SIZE.



DETAIL - SHAKE DOWN AREA/ACCESS STABILISATION

SHAKE DOWN AREAS/ACCESS STABILISATION

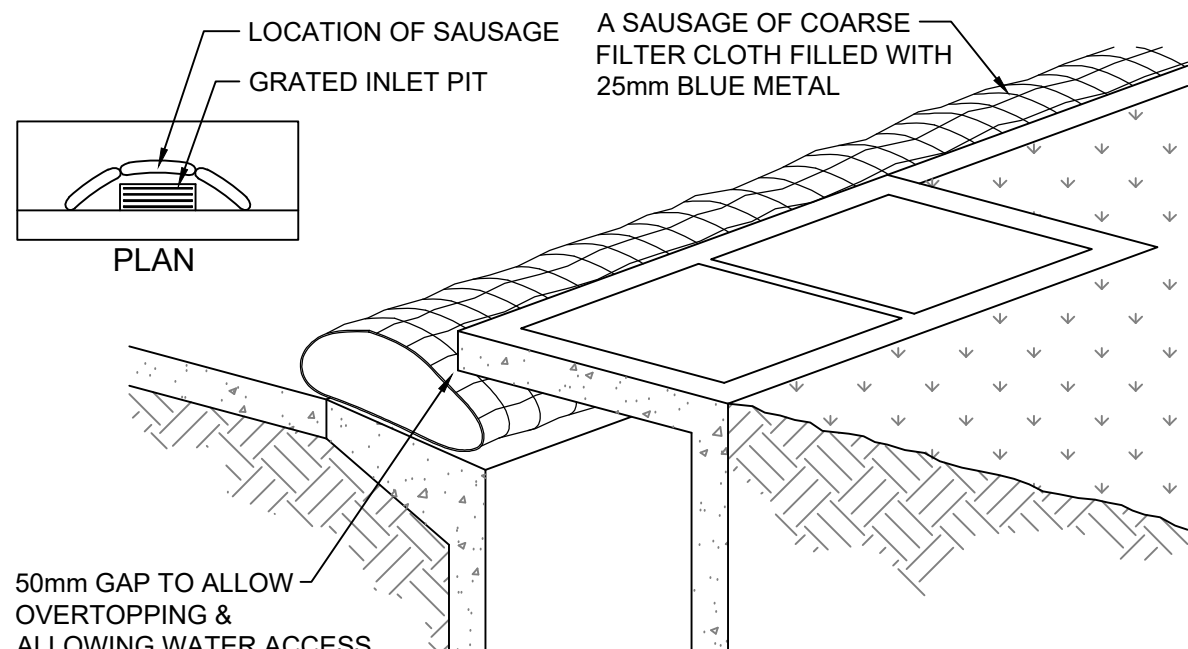
DESCRIPTION
STABILISED ACCESS SHALL BE A BED OF AGGREGATE ON FILTER CLOTH. GRADE THE ENTRANCE SO THAT IT IS AT LEAST 15 METRES LONG WITH A MINIMUM WIDTH OF 3 METRES FOR A ONE WAY ENTRANCE AND 6 METRES FOR A TWO WAY ENTRANCE. PLACE FILTER CLOTH OVER THE ENTIRE AREA AND COVER IT WITH 150mm MINIMUM THICKNESS OF 50mm AGGREGATE RIVER GRAVEL OR A RECYCLED OR RECLAIMED CONCRETE EQUIVALENT.

USAGE

SUCH STRUCTURES SHALL BE USED AT ALL POINTS WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE THE SITE AND EXISTING ROADWAYS.

TREATMENT/MAINTENANCE

SURFACE WATER FLOWING TO THE ENTRANCE MUST BE PIPED UNDER THE ENTRANCE, OR A BERM CONSTRUCTED TO DIRECT SURFACE FLOW AWAY FROM THE ROAD. ALL DEPOSITS ARE TO BE REGULARLY CLEARED FROM SITE ACCESS. THE DRAWBAR, TAILGATE ETC OF ANY VEHICLE INVOLVED IN THE TRANSPORT OF GRAVEL ETC TO A CONSTRUCTION SITE MUST BE MANUALLY CLEANED OF MATERIAL BEFORE THE VEHICLE LEAVES THE SITE. SHOULD THE MATERIAL BE DEPOSITED ON THE ROADWAY ETC, SUCH MATERIAL SHALL BE SWEEPED AND REMOVED FROM THE ROADWAY.



DETAIL - BLUE METAL GROUYNE (SAUSAGE)

BLUE METAL GROUYNE (SAUSAGE)

DESCRIPTION

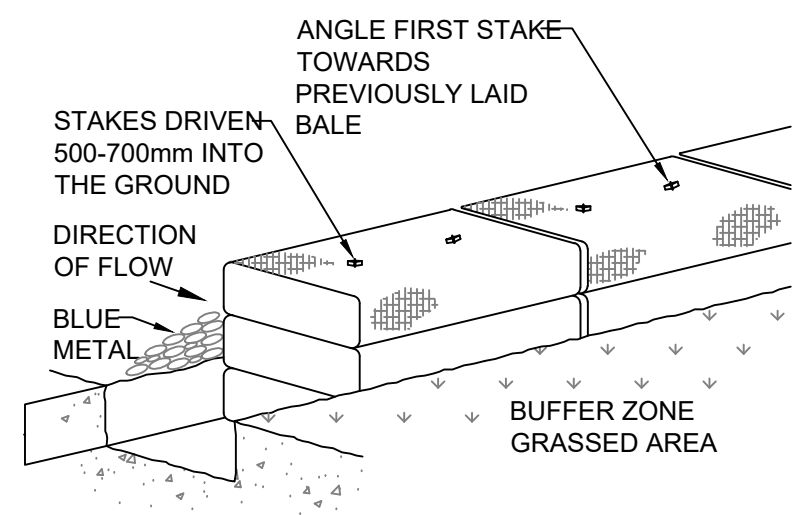
THE GROUYNE COMPRISES A SAUSAGE OF SHADE CLOTH OR OTHER PREVIOUS FABRIC, SOME 200mm DIAMETER, FILLED WITH 25mm BLUE METAL AND CLOSED BOTH ENDS.

INSTALLATION

THE SAUSAGE IS LAID ON THE GROUND ON THE CONTOUR SIMILAR TO A SILT FENCE. GENERALLY THE SAUSAGE SHOULD BE LAID TWO HIGH TO OBTAIN ENOUGH FILTER AREA.

LOCATION

THE GROYNES SHOULD BE LOCATED ACROSS THE ENTRY DRIVEWAY TO THE SITE AND AROUND THE NEAREST DOWNSTREAM KERB ENTRY PITS.



DETAIL - STRAW BALE BARRIERS

STRAW BALE BARRIERS

DESCRIPTION

A TEMPORARY BARRIER OF STRAW BALES PLACED AROUND THE PERIMETER OF A DISTURBED AREA.

USAGE

STRAW BALE BARRIERS ARE USED TO DESILT CONTAMINATED WATER

INSTALLATION

STRAW BALES ARE ONLY EFFECTIVE ON SITES OF LESS THAN HALF A HECTARE. THE BALES SHOULD BE PLACED LENGTHWISE IN 100mm DEEP TRENCHES WITH THEIR BINDING ROPE HORIZONTAL TO THE GROUND.

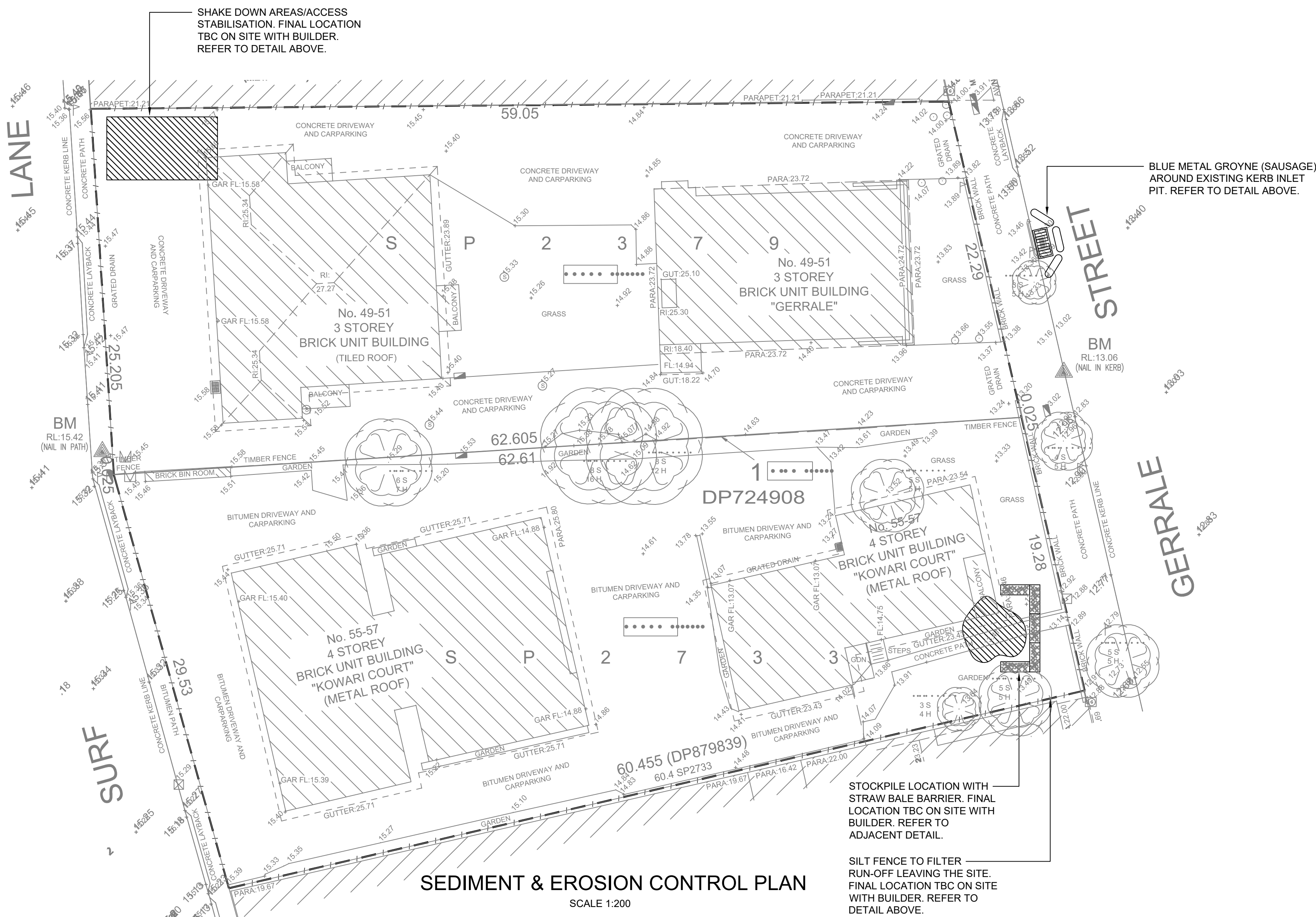
THE BALES SHOULD BE CONNECTED AND ANCHORED TO THE GROUND BY DRIVING TWO STAR PICKETS OR POSTS THROUGH EACH BALE. THE FIRST TO FORCE THE BALES TOGETHER.

MAINTENANCE

AFTER RAINFALL STRAW BALE BARRIERS SHOULD BE INSPECTED AND SEDIMENT REMOVED. DAMAGED BALES SHOULD BE REPAIRED OR REPLACED BALES HAVE A LIFE EXPECTANCY OF THREE TO SIX MONTHS.

NOTE

THE LOCATION OF STRAW BALES ON THE ABOVE SITE PLAN IS DIAGRAMMATIC ONLY. THE REQUIREMENT FOR THE USAGE OF STRAW BALES IS TO BE AS A SUPPLEMENTARY MEASURE TO ASSIST THE SILT FENCES. FINAL LOCATIONS AND EXTENT OF STRAW BALES TO BE DETERMINED BY THE COUNCIL.



SEDIMENT & EROSION CONTROL PLAN

SCALE 1:200

EROSION & SEDIMENT CONTROL NOTES

MINIMUM REQUIREMENTS

GENERAL

PROVIDE ON SITE CONTROLS THROUGHOUT THE ENTIRE WORKS TO ENSURE MINIMUM EROSION AND SEDIMENT LOSS.

ENSURE LEAST DISTURBANCE TO SITE.

AS EACH AREA IS COMPLETED, THAT AREA IS TO BE IMMEDIATELY PROGRESSIVELY SEEDED AND FERTILISED. SILT FENCES, STRAW BALES OR OTHER CONTROLS NEED TO BE PROVIDED UNTIL THE SITE IS STABLE. SHOULD THIS APPROACH NOT BE PRACTICAL, THE PROGRESSIVE REVEGETATION OF INDIVIDUAL AREAS WILL BE REQUIRED.

WHERE THERE IS GRADE ON OTHER AREAS OF THE SITE THAT MAY LEAD TO EROSION, FURTHER APPROPRIATE TREATMENT IS TO BE LOCATED TO CONTROL EROSION i.e. STRAW BALES

THE PROVISION AND MAINTENANCE OF (SEDIMENT) SILT FENCES WILL BE NECESSARY DURING THE CONSTRUCTION PHASE. WHEN INSTRUCTED BY THE COUNCIL PROGRESSIVELY REMOVE INDIVIDUAL SECTIONS OF SILT FENCES FOR CLEANING. CLEANING OF FENCES TO BE CARRIED OUT DURING PERIODS OF DRY WEATHER.

FILL AREAS

RUN-OFF AND SEDIMENT LOSS FROM THE AREAS OF FILL MUST BE CONTROLLED DURING AND AFTER CONSTRUCTION. BEFORE REVEGETATION TAKES PLACE USING SILT FENCES AND OR STRAW BALES AS INSTRUCTED BY THE PROJECT MANAGER/COUNCIL TO DIRECT WATER FROM THE DISTURBED AREA. OTHER MEASURES SHALL BE CARRIED OUT AS DIRECTED BY THE COUNCIL AND/OR AS SHOWN ON THE PLANS.

STOCK PILES

THE STOCK PILE LOCATION SHOWN ON THE PLAN IS PRELIMINARY. SHOULD THE BUILDER WISH TO RELOCATE THE STOCKPILE, HE SHALL OBTAIN APPROVAL FROM COUNCIL PRIOR TO COMMENCEMENT OF WORKS. THE BUILDER SHALL PRODUCE DRAWINGS INDICATING THE LOCATION OF STOCK PILES.

STOCK PILE SITES SHALL BE LOCATED AWAY FROM EXISTING OR PROPOSED DRAINAGE LINES OR AREAS LIKELY TO BE DISTURBED DURING CONSTRUCTION. STOCK PILE SITES SHALL NOT BE LOCATED WITHIN THE DRIP ZONE OF TREES.

STOCK PILE SITES MUST BE PROTECTED FROM EROSION AND SEDIMENT LOSS BY THE INSTALLATION OF SILT FENCES/STRAW BALES OR OTHER CONTROLS APPROVED BY COUNCIL.

WIND EROSION
TO MINIMISE WIND EROSION DURING CONSTRUCTION, THE GROUND SURFACE SHOULD BE KEPT DAMP (NOT WET). THE SURFACE SHOULD BE LEFT IN A ROUGH CLODDY CONDITION TO INCREASE ROUGHNESS AND SLOW SURFACE WIND SPEED.

LOCATION

LOCATION OF SEDIMENT CONTROL METHODS i.e. SILT FENCES ARE SHOWN DIAGRAMMATICALLY ONLY ON DRAWING. FINAL LOCATION, EXTENT AND TYPE OF SEDIMENT CONTROL METHODS SHALL BE TO THE SATISFACTION OF COUNCIL.

THE CONTRACTOR, UNDER SECTION 16 OF THE CLEAN WATERS ACT, IS LIABLE FOR THE DEPOSITION OF ANY CONTAMINANTS DEPOSITED ON ROADWAYS AFTER LEAVING THE CONSTRUCTION SITE.

B	07.07.2017	ISSUED FOR DA
A	06.07.2017	ISSUED FOR DA
REV	DATE	DESCRIPTION

DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION

IRIDIUM DEVELOPMENTS PTY LTD

ARCHITECTURE URBANEIA

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Hydraulic & Fire Consultants
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PROPOSED RESIDENTIAL DEVELOPMENT 49-57 GERRALE STREET CRONULLA NSW

EROSION & SEDIMENT CONTROL PLAN

DRAWN	ENGINEER	CHECKED	SCALE
TJ	PC	PC	1:200@B1
PROJECT No.	DRAWING No.	REVISION	
P2017-102	ESCP01	B	

STORMWATER SERVICES

47-57 GERRALE STREET, CRONULLA

The contractor is responsible for checking all dimensions and site conditions prior to commencing any work. Do not scale drawings, refer to figured dimensions only. Any discrepancies shall immediately be referred to ADCAR Consulting Pty Ltd for clarification.

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LINETYPES

- PROPOSED STORMWATER DRAINAGE
- EXISTING STORMWATER DRAINAGE
- PROPOSED SUB-SOIL DRAINAGE
- EXISTING SUB-SOIL DRAINAGE

SYMBOLS

- DOWNPIPE
- CLEAR OUT POINT
- RAIN WATER OUTLET
- PLANTER OUTLET
- OVERFLOW
- OVERLAND FLOW PATH
- PROPOSED TRENCH DRAIN
- PROPOSED STW PIT WITH GRATE
- PROPOSED STW PIT WITH COVER
- EXISTING KERB INLET PIT

DRAWING SCHEDULE

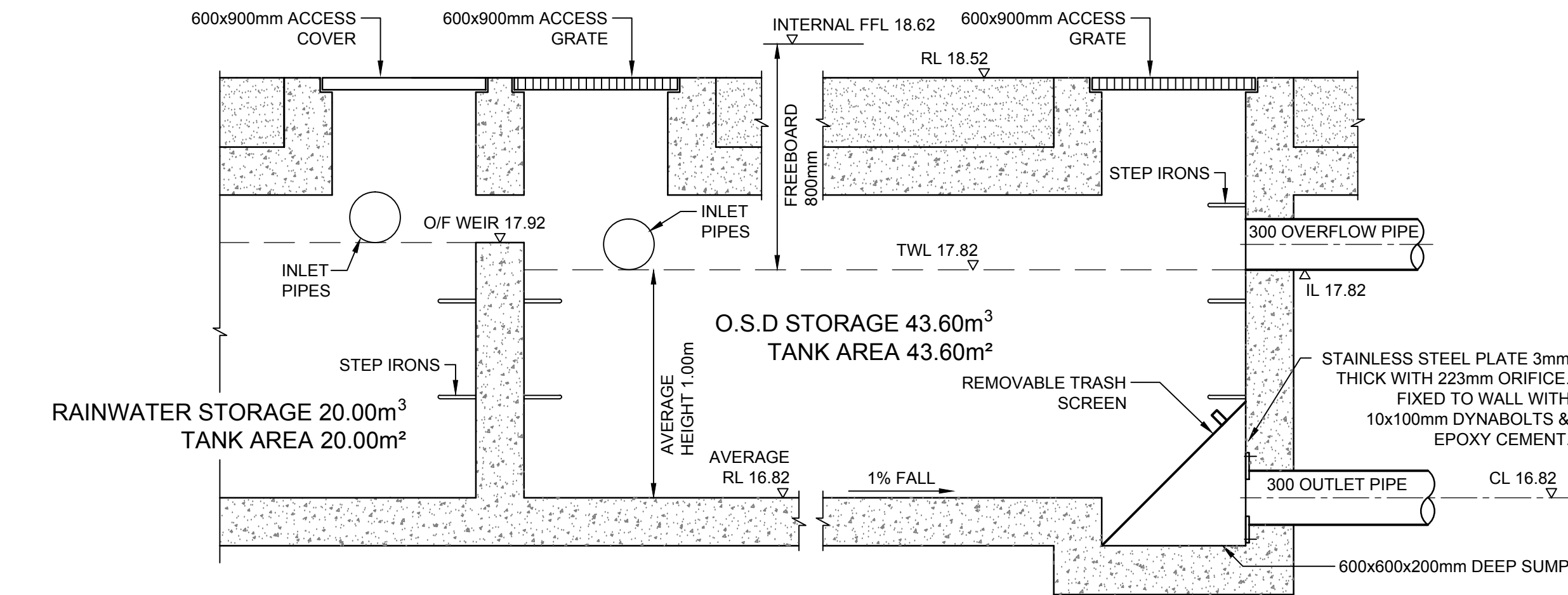
DWG No	DESCRIPTION
H01	COVER SHEET & DETAILS
H02	STORMWATER DRAINAGE BASEMENT 2
H03	STORMWATER DRAINAGE BASEMENT 1
H04	STORMWATER DRAINAGE GROUND FLOOR
H05	STORMWATER DRAINAGE LEVEL 1

OSD CALCULATION SUMMARY

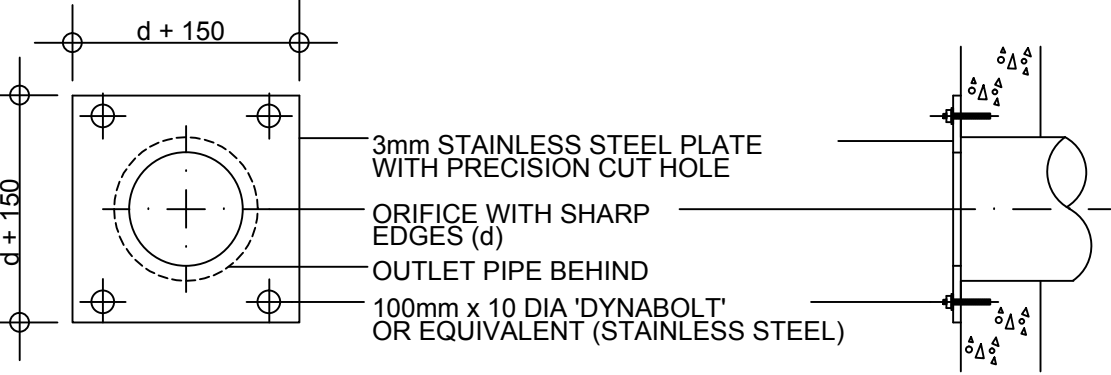
SITE AREA:	2920m ²
EXISTING SITE IMPERVIOUS AREA:	2520m ²
PROPOSED SITE IMPERVIOUS AREA:	2716m ²
REQUIRED OSD STORAGE (1:100YR):	43.6m ³
PERMITTED SITE DISCHARGE (1:100YR):	103.8 L/sec

STORMWATER NOTES

- CONFIRM LOCATION, SIZE, CONDITION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORK.
- ALL WORK TO BE IN ACCORDANCE WITH LOCAL AUTHORITIES REQUIREMENTS, BCA AND RELEVANT AUSTRALIAN STANDARDS (IN PARTICULARLY AS 3500)
- ALL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND OTHER CONSULTANTS DOCUMENTS. ALL DISCREPANCIES SHALL BE REFERRED TO THE PROJECT MANAGER BEFORE PROCEEDING WITH THE WORK.
- LOCATION OF ALL DOWNPIPES, PITS AND PIPEWORK IS DIGRAMMATIC ONLY. FINAL LOCATION TO BE CO-ORDINATED DURING CONSTRUCTION CERTIFICATE DOCUMENTATION.
- ALL MATERIALS USED IN THE WORK SHALL BE NEW AND OF THE BEST QUALITY AND TYPE AVAILABLE TO CONFORM WITH THE RELEVANT AUSTRALIAN STANDARDS AND BEAR THE REQUIRED STANDARDS MARK AND WATERMARK.
- MAKE ALL APPLICATIONS TO LOCAL COUNCIL. PAY ALL FEES AND OBTAIN ALL NECESSARY PERMITS AND APPROVALS AS REQUIRED BY THE AUTHORITIES.
- PIPEWORK UP TO 225mm DIAMETER SHALL BE UPVC DRAINAGE WASTE GRADE WITH SOLVENT WELDED JOINTS.
- PIPEWORK SHALL BE LAID AT 1:100 MINIMUM GRADE UNLESS NOTED OTHERWISE. PIPEWORK MAY BE LAID AT STEEPER GRADES AS REQUIRED TO MEET COVER REQUIREMENTS OR AS NOMINATED BY PIPEWORK INVERT LEVELS.
- SUBSOIL PIPEWORK SHALL BE INSTALLED AS REQUIRED, INCLUDING BEHIND ALL RETAINING STRUCTURES, PLANTERS AND WHERE GROUND WATER IS ENCOUNTERED. SHALL BE 90mm SLOTTED UPVC PIPE WRAPPED IN CLOTH SOCK AND SURROUNDED WITH 150mm THICKNESS OF 20mm DIAMETER BLUE METAL AND SURROUNDED IN GEOTEXTILE FABRIC.
- ALL EXTERNAL LEVELS TO FALL AWAY FROM BUILDING. BUILDER TO ENSURE THRESHOLD REQUIREMENTS. OVERLAND FLOW PATHS TO BE MAINTAINED AROUND BUILDING TO PREVENT WATER INGRESS.
- ALL LANDSCAPED AREAS LOCATED ABOVE CONCRETE SLABS TO BE EQUIPPED WITH DEDICATED OUTLET, WATERPROOFING MEMBRANE, DRAINAGE CELL AND GEOTEXTILE FABRIC.
- SUBSOIL, UPLIFT PRESSURE, VERTICAL WALL DRAINAGE AND PIT CONSTRUCTION DETAILS TO BE CONFIRMED / CO-ORDINATED WITH STRUCTURAL AND GEOTECHNICAL ENGINEERS DURING CONSTRUCTION STAGE OF THE PROPOSED DEVELOPMENT.
- ALL BALCONIES TO BE PROVIDED WITH SAFETY OVERFLOWS (FINAL LOCATION OF OVERFLOWS TO BE CONFIRMED BY ARCHITECT).



DETAIL 1: OSD / RAINWATER TANK
SCALE NTS

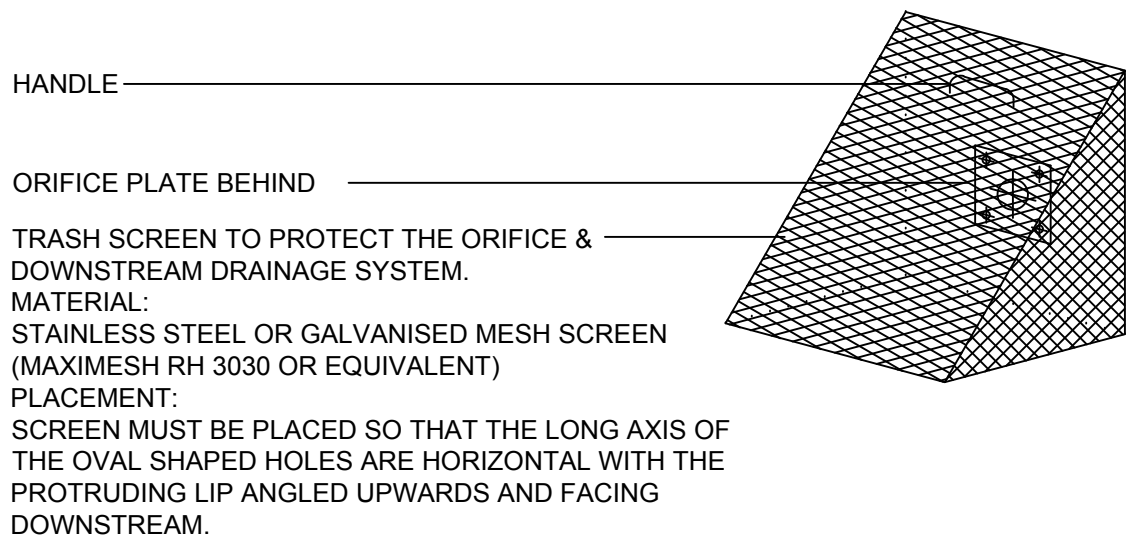


CALCULATION OF ORIFICE SIZE

PSD = PERMISSABLE SITE DISCHARGE IN [m³/s]
A = CROSSSECTIONAL AREA OF ORIFICE PLATE IN [m²]
C = DISCHARGE CO-EFFICIENT (0.6 FOR ORIFICE PLATE)
G = ACCELERATION DUE TO GRAVITY = 9.81 [m/s]
H = MAX. HEIGHT / HEAD OF WATER ABOVE THE CENTRE LINE OF THE ORIFICE PLATE IN [m]
D = ORIFICE DIAMETER IN [mm]

$$A = \frac{PSD}{C \times \sqrt{2 \times G \times H}} = \frac{0.1038}{0.6 \times \sqrt{2 \times 9.81 \times 1}} = 0.0039 \text{ m}^2$$
$$D = \sqrt{\frac{A \times 4}{\pi}} = \sqrt{\frac{0.0039 \times 4}{\pi}} \times 1000 \text{ mm/m} = 223 \text{ mm}$$

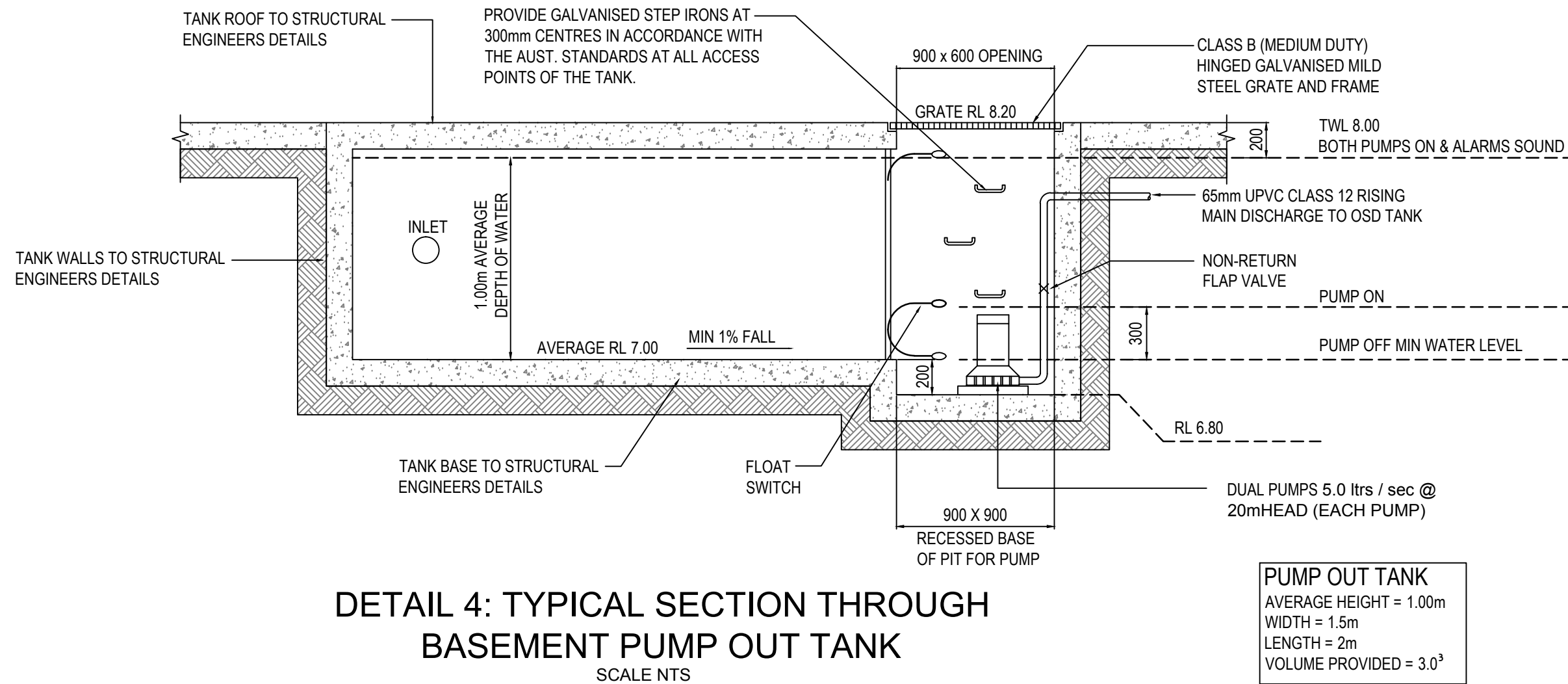
DETAIL 2: ORIFICE PLATE
SCALE NTS



DETAIL 3: REMOVABLE TRASH SCREEN
SCALE NTS

STANDARD PUMP OUT DESIGN NOTES
THE PUMP SYSTEM SHALL BE OPERATED IN THE FOLLOWING MANNER:-
1. THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY TO ALLOW BOTH PUMPS TO HAVE AN EQUAL OPERATION LOAD AND PUMP LIFE
2. A FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS AT THE MINIMUM WATER LEVEL. THE SAME FLOAT SHALL BE SET TO TURN ONE OF THE PUMPS ON UPON WATER LEVEL IN THE TANK RISING TO APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL. THE PUMP SHALL OPERATE UNTIL THE TANK IS DRAINED TO THE MINIMUM WATER LEVEL.
3. A SECOND FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHALL START THE OTHER PUMP THAT IS NOT OPERATING AND ACTIVATE THE ALARM.
4. AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT AND A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.
5. A CONFINED SPACE DANGER SIGN SHALL BE PROVIDED AT ALL ACCESS POINTS TO THE PUMP OUT STORAGE TANK.

PUMP-OUT TANK MAINTENANCE SCHEDULE
MAINTENANCE CONTRACT
NOTE: A 24 HOUR X 12 MONTHLY EMERGENCY AND MAINTENANCE CONTRACT SHALL BE OBTAINED FROM A COMPANY CAPABLE OF EXECUTING THE WORK AND SHALL BE KEPT IN FORCE BY THE PROPERTY OWNER(S) FOR THE LIFE OF THE BUILDING.
THE MAINTENANCE CONTRACT SHALL BE CARRIED OUT EVERY THREE (3) MONTHS AND SHALL INCLUDE THE FOLLOWING ACTIVITIES:
1. CLEAN OUT ALL PITS OF SILT AND DEBRIS.
2. CHECK AND CLEAN OUT, IF NECESSARY, ALL PIPELINES.
3. CHECK:
3.1. PUMPS FOR WEAR
3.2. PUMP OIL SEALS
3.3. PUMP STRAINER AND CLEAN
4. CARRY OUT ROUTINE MAINTENANCE TO PUMPS AS RECOMMENDED BY THE MANUFACTURER.
5. CHECK OPERATIONAL SEQUENCE OF LEVEL SWITCHES, PUMPS AND CONTROL PANEL.
6. THE EMERGENCY CONTRACT SHALL PROVIDE FOR A 24 HOUR X 7 DAY PER WEEK SERVICE.
THE CONTRACTOR SHALL PROVIDE A NAME PLATE STATING NAME, WORKING HOURS, TELEPHONE NUMBER AND OUT OF HOURS NUMBER AND SUCH NAME PLATE SHALL BE FIXED TO THE FRONT OF THE CONTROL PANEL.



DETAIL 4: TYPICAL SECTION THROUGH
BASEMENT PUMP OUT TANK
SCALE NTS

REV	DATE	DESCRIPTION
C	19.10.2017	ISSUED FOR DA
B	07.07.2017	ISSUED FOR DA
A	06.07.2017	ISSUED FOR DA

DEVELOPMENT APPLICATION NOT FOR CONSTRUCTION

CLIENT
**IRIDIUM DEVELOPMENTS
PTY LTD**

ARCHITECT
**AU | ARCHITECTURE
URBANEIA**
1/53 HUME STREET CROWS NEST NSW 2065
ABN 50169207818 M. CHEHEINABI REGD. ARCH. NO. 7057
T: 02 80948420 M: 0404 110 316 & 0403 900 235

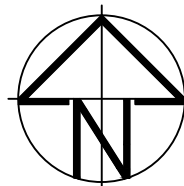
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Hydraulic & Fire Consultants
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PROPOSED RESIDENTIAL DEVELOPMENT 49-57 GERRALE STREET CRONULLA NSW

DRAWING TITLE

STORMWATER SERVICES COVER SHEET, LEGEND, NOTES & DETAILS

DRAWN	ENGINEER	CHECKED	SCALE
TJ	PC	PC	AS SHOWN
PROJECT No.	DRAWING No.	REVISION	
P2017-102	SW01	C	



LANDSCAPING DRAINAGE

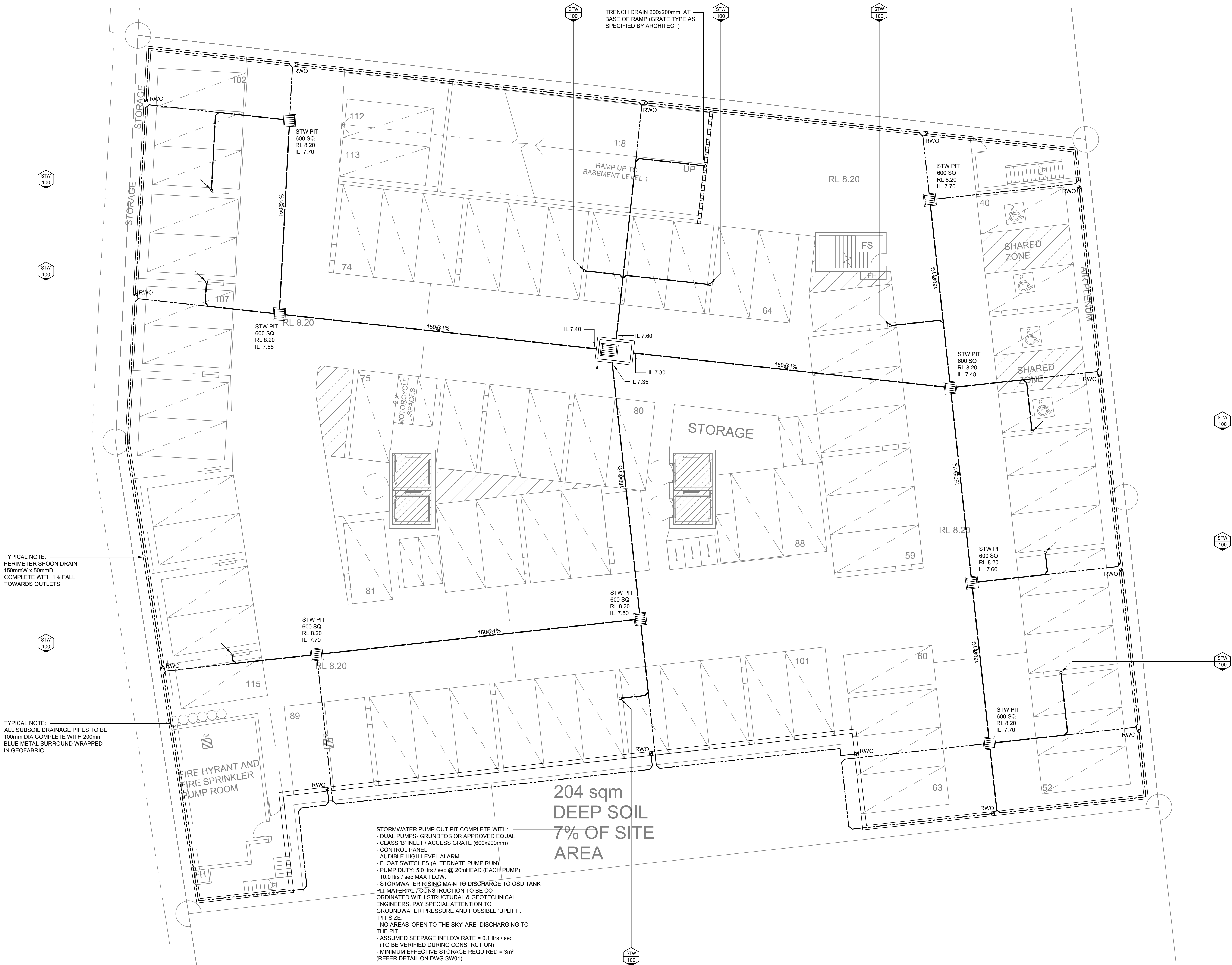
- ALL LANDSCAPED AREAS LOCATED ABOVE CONCRETE SLABS TO BE EQUIPPED WITH WATERPROOFING MEMBRANE, DRAINAGE CELL AND GEOFABRIC

STORMWATER DA DRAWING ONLY

- NOT FOR CONSTRUCTION
- FINAL LOCATION OF ALL DOWNPIPES, PITS, RAINWATER OUTLETS AND SUBSOIL PIPES TO BE CONFIRMED

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C	19.10.2017	ISSUED FOR DA
B	07.07.2017	ISSUED FOR DA
A	06.07.2017	ISSUED FOR DA
REV	DATE	DESCRIPTION

STATUS
**DEVELOPMENT APPLICATION
NOT FOR CONSTRUCTION**

CLIENT
**IRIDIUM DEVELOPMENTS
PTY LTD**

ARCHITECT
**AU | ARCHITECTURE
URBANEIA**
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PROJECT
**PROPOSED RESIDENTIAL
DEVELOPMENT
49-57 GERRALE STREET
CRONULLA NSW**

DRAWING TITLE
**STORMWATER SERVICES
BASEMENT 2**

DRAWN	ENGINEER	CHECKED	SCALE
TJ	PC	PC	1:100@B1
PROJECT NO.	DRAWING NO.	REVISION	
P2017-102	SW02	C	

LANDSCAPING DRAINAGE

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PROJECT
PROPOSED RESIDENTIAL DEVELOPMENT
49-57 GERRALE STREET
CRONULLA NSW

DRAWING TITLE
STORMWATER SERVICES BASEMENT 1

DRAWN	ENGINEER	CHECKED	SCALE
TJ	PC	PC	1:100@B1
PROJECT NO.	DRAWING NO.	REVISION	
P2017-102	SW03	C	

LANDSCAPING DRAINAGE

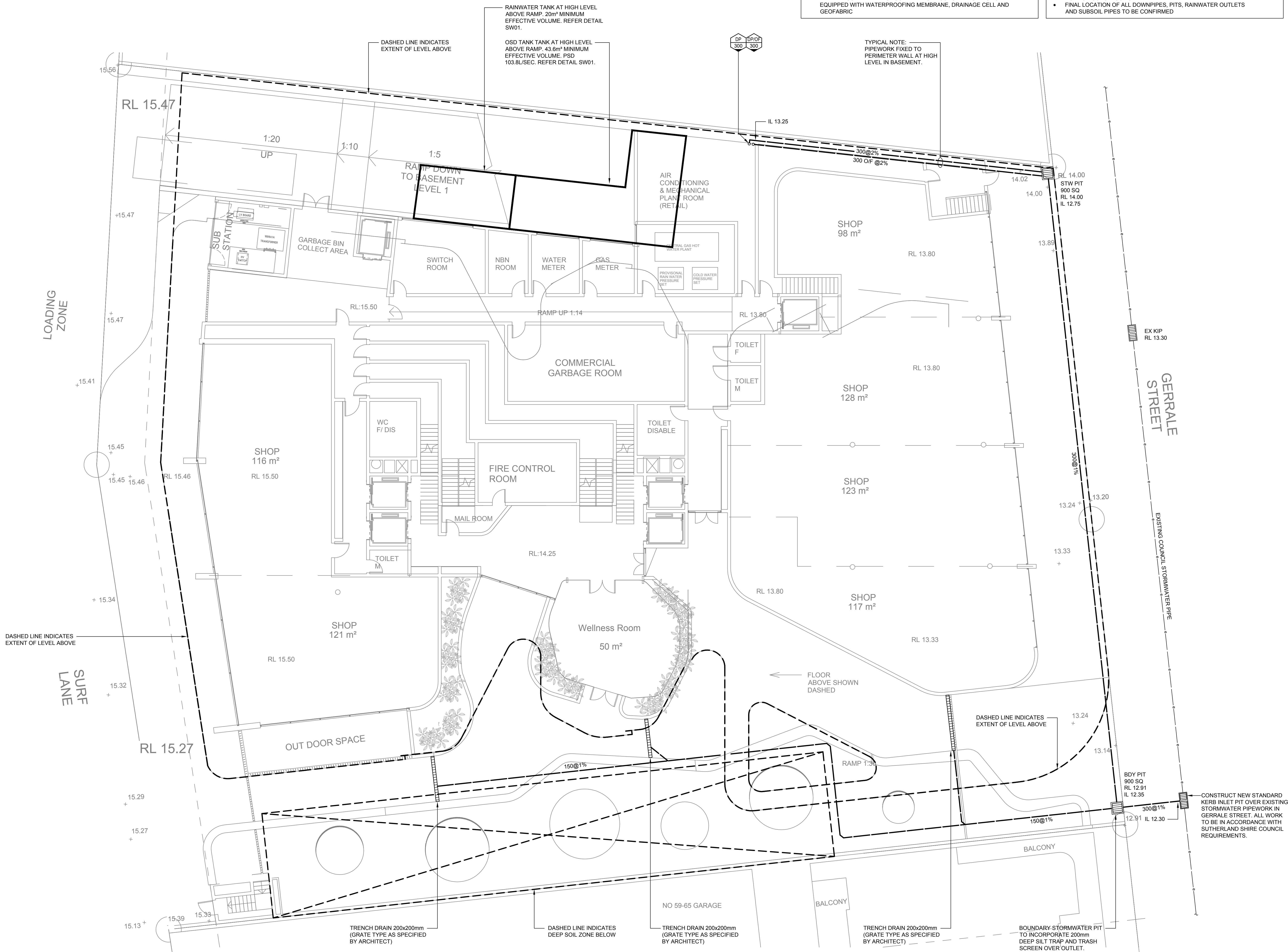
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PROJECT
PROPOSED RESIDENTIAL
DEVELOPMENT
49-57 GERRALE STREET
CRONULLA NSW

DRAWING TITLE
STORMWATER SERVICES
GROUND FLOOR

DRAWN	ENGINEER	CHECKED	SCALE
TJ	PC	PC	1:100@B1
PROJECT NO.	DRAWING NO.	REVISION	
P2017-102	SW04	C	

LANDSCAPING DRAINAGE

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SURF LANE

GERRALE STREET



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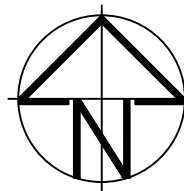
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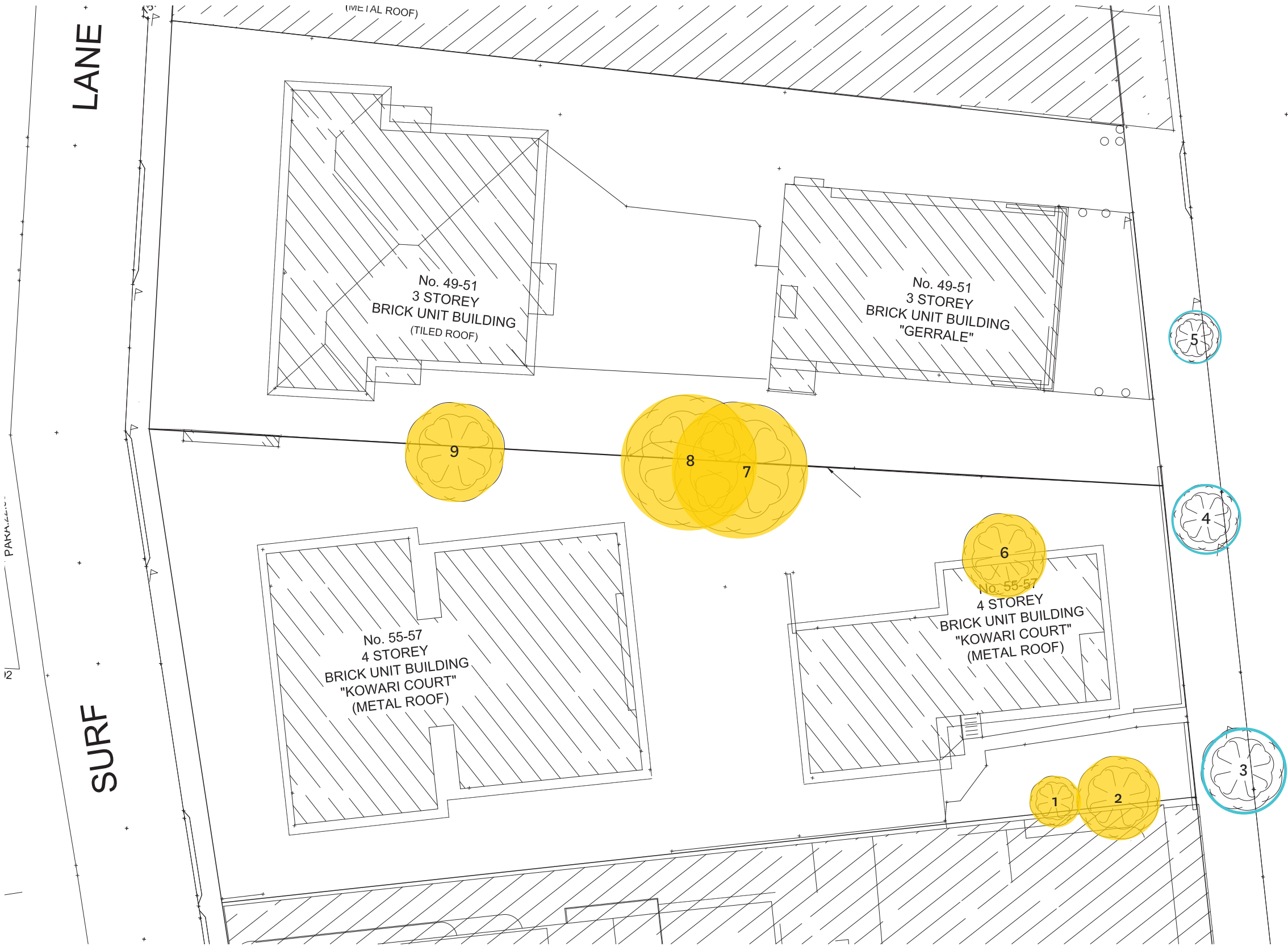
PROJECT
**PROPOSED RESIDENTIAL
DEVELOPMENT
49-57 GERRALE STREET
CRONULLA NSW**

DRAWING TITLE
**STORMWATER SERVICES
LEVEL 1**

DRAWN	ENGINEER	CHECKED	SCALE
TJ	PC	PC	1:100@B1
PROJECT NO.	DRAWING NO.	REVISION	
P2017-102	SW05	C	



TREE MANAGEMENT PLAN



EXISTING TREE SPECIES

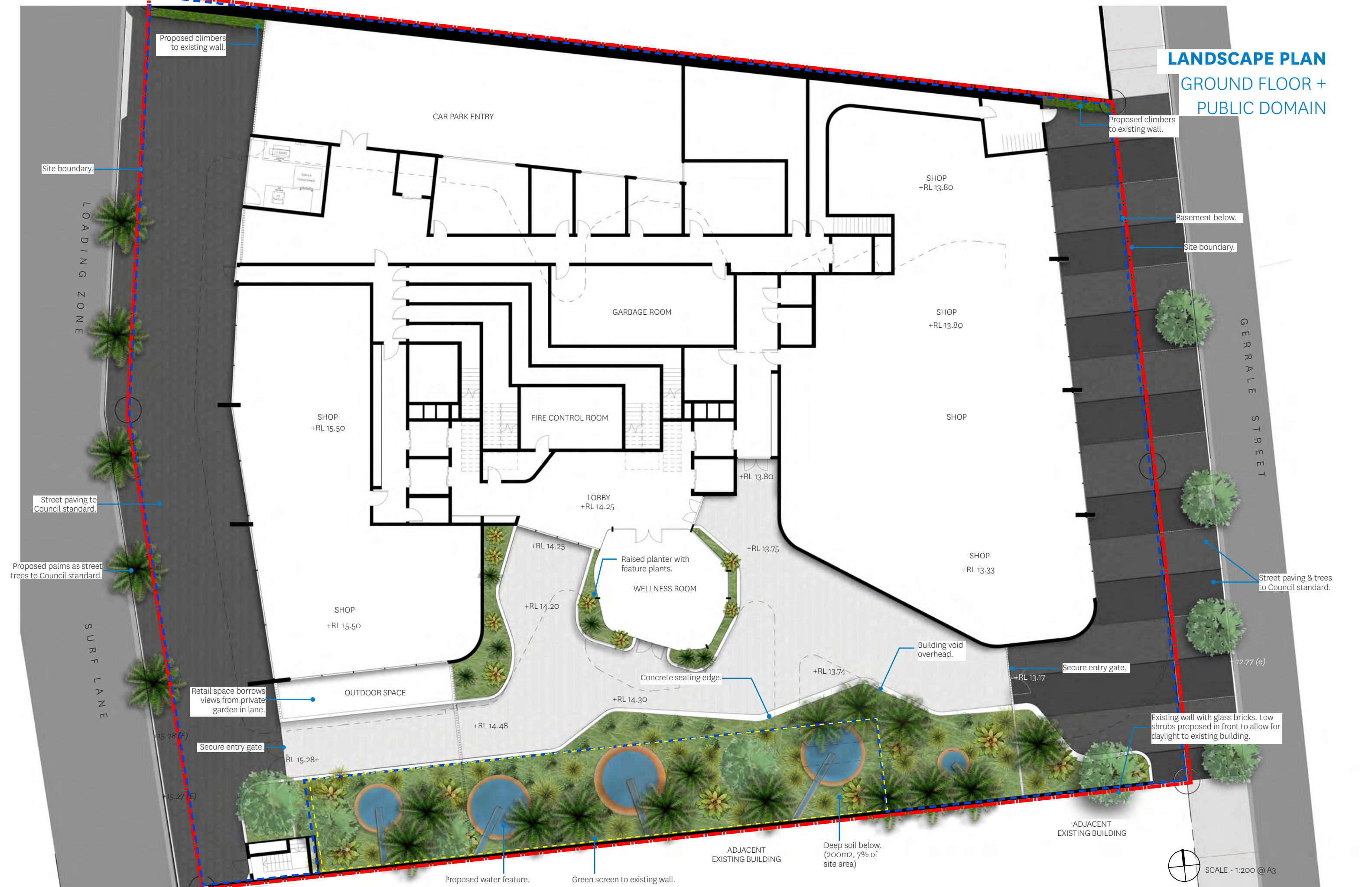
	Botanical Name	Height (m)	Canopy Size (m)	Significance (Low/ Moderate High)
1	Murraya paniculata	2	2	L
2	Callistemon sp.	4	3	L
3	Cupaniopsis anacardioides	5	3	L
4	Cupaniopsis anacardioides	5	3	L
5	Cupaniopsis anacardioides	5	3	L
6	Plumeria rubra	4	4	L
7	Phoenix canariensis	14	6	M
8	Phoenix canariensis	14	6	M
9	Callistemon sp.	7	5	L

LEGEND

- X Trees to be removed
- X Trees to be retained

Refer Arborist Report by Naturally Trees, July 2017, for further information on tree management and protection measures required for existing trees retained.

LANDSCAPE PLAN GROUND FLOOR + PUBLIC DOMAIN



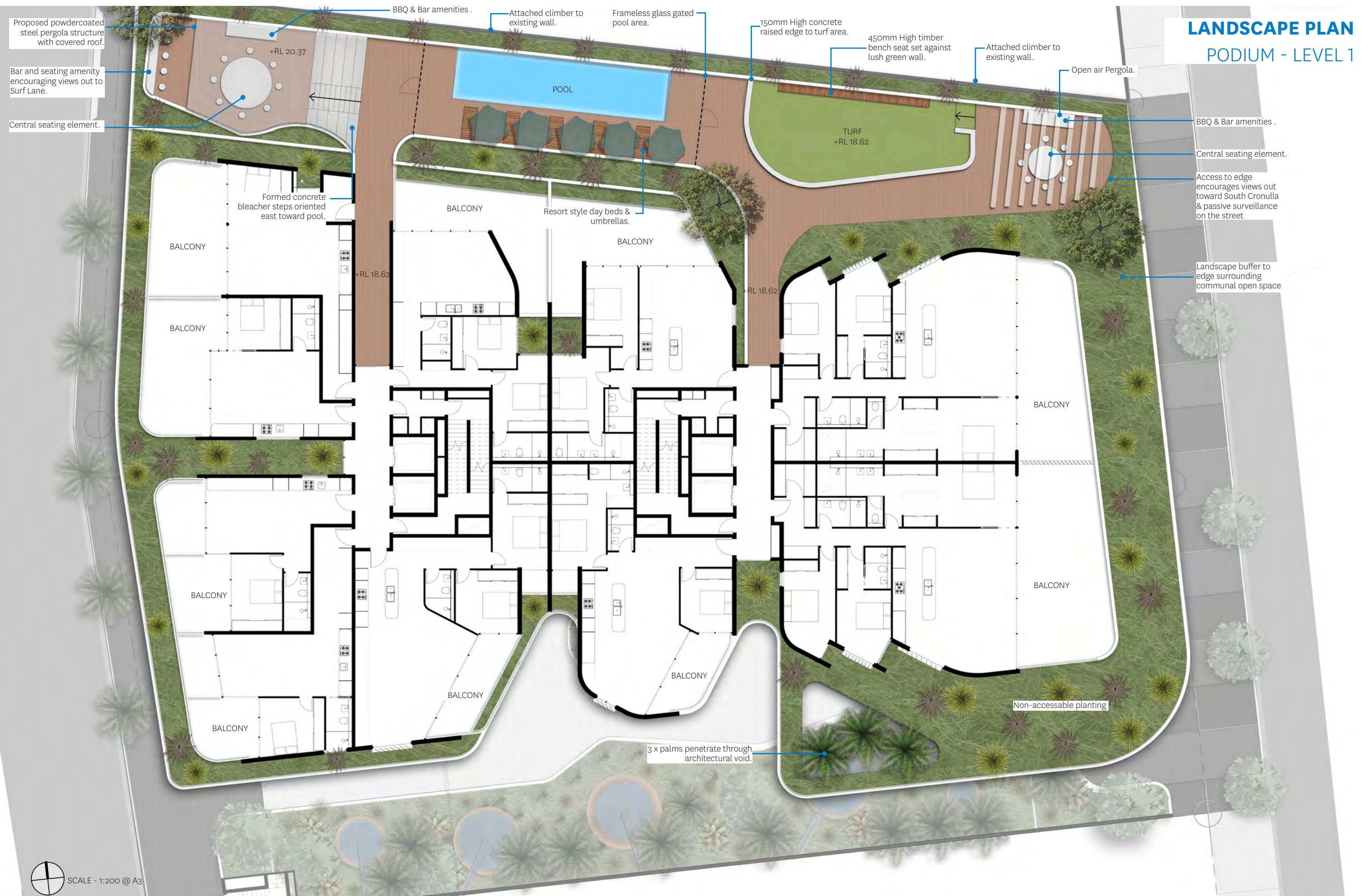
49-57 GERRALE STREET CRONULLA PROJECT NUMBER: 1710

TURF DESIGN STUDIO

ISSUE: C L-DA-C

LANDSCAPE PLAN

PODIUM - LEVEL 1

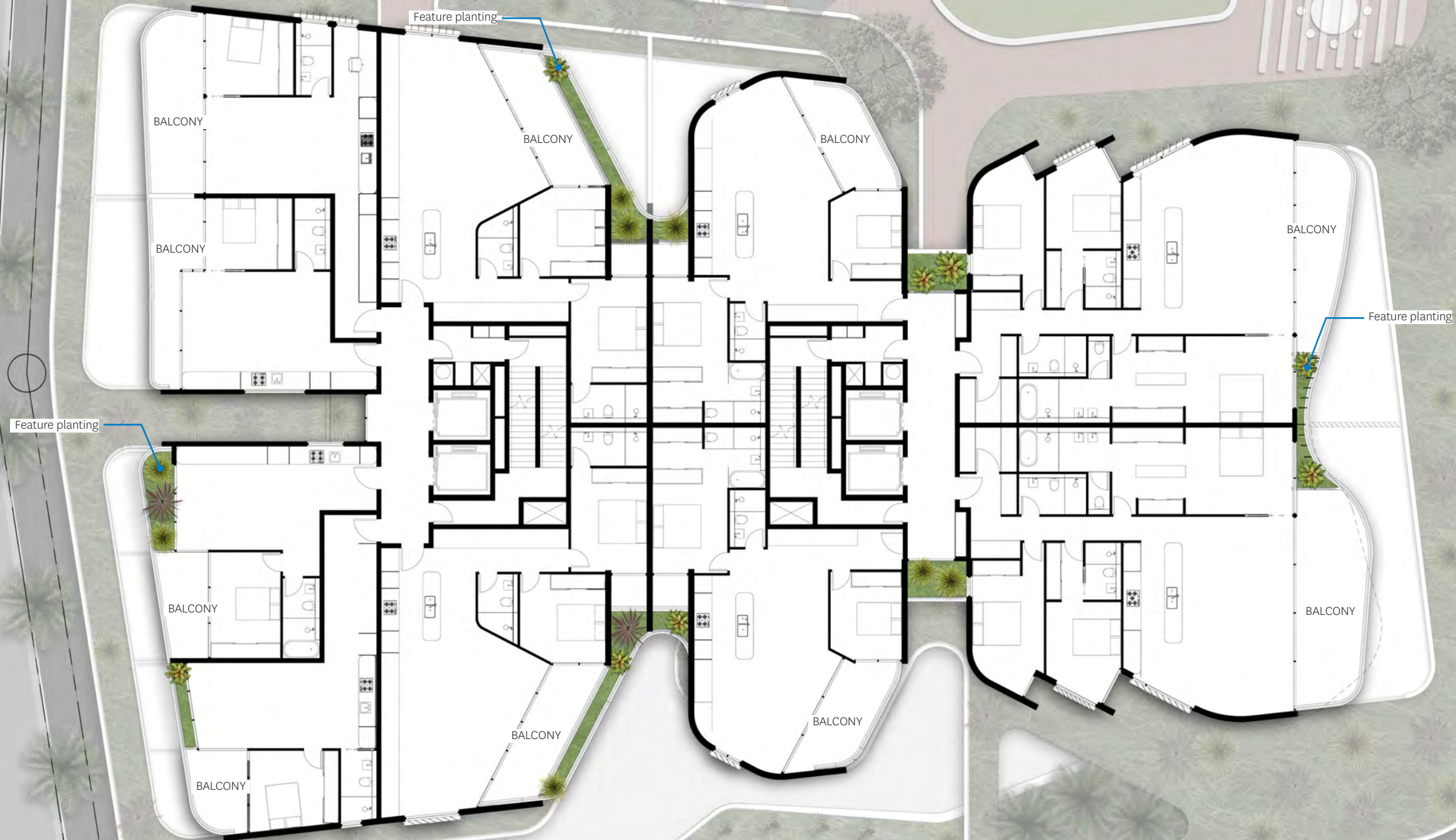


49-57 GERRALE STREET CRONULLA PROJECT NUMBER: 1710

Turf Design Studio

ISSUE: C L-DA-C

LANDSCAPE PLAN PODIUM - LEVEL 2-3

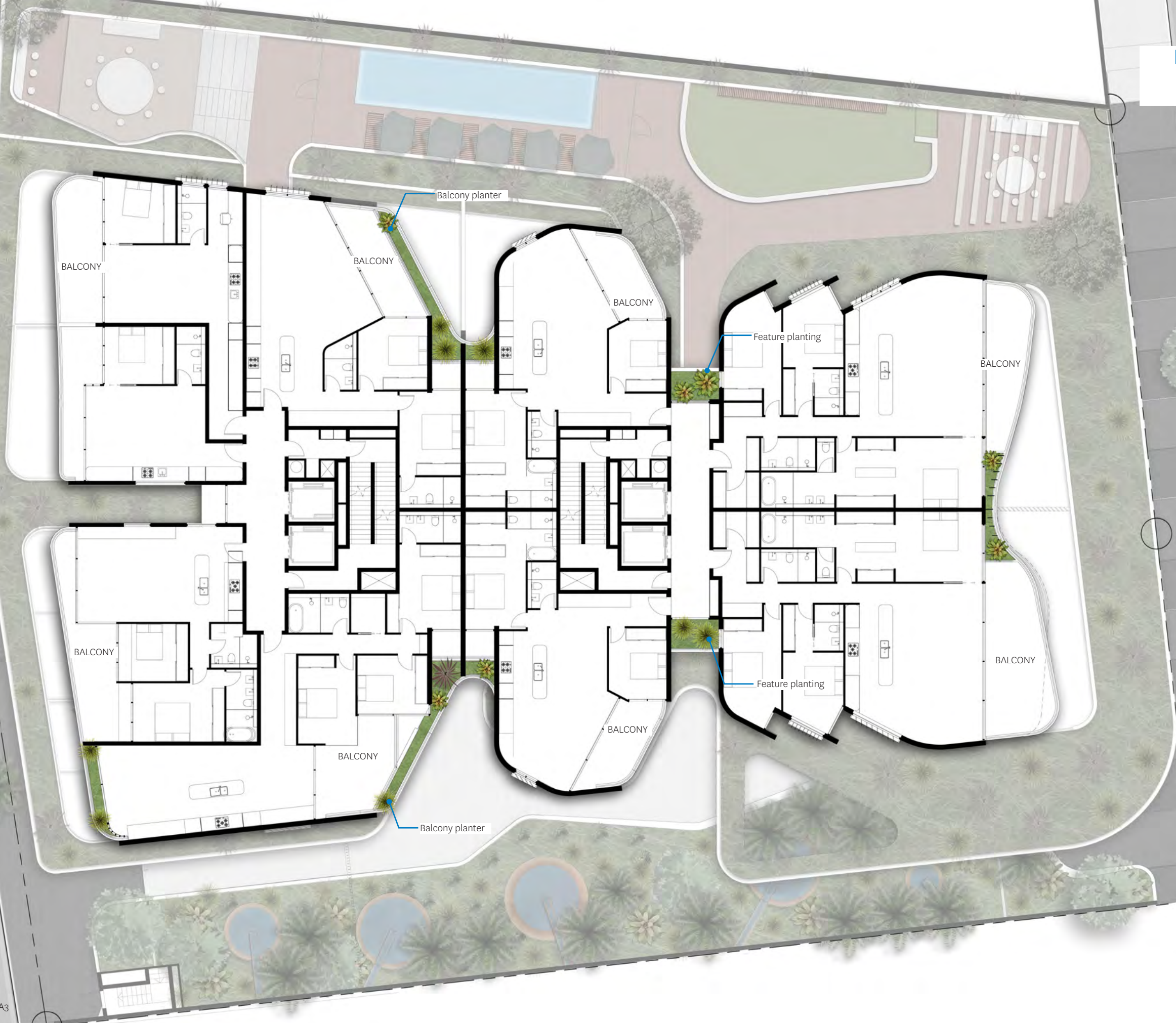


SCALE - 1:200 @ A3

49-57 GERRALE STREET CRONULLA PROJECT NUMBER: 1710
TURF DESIGN STUDIO

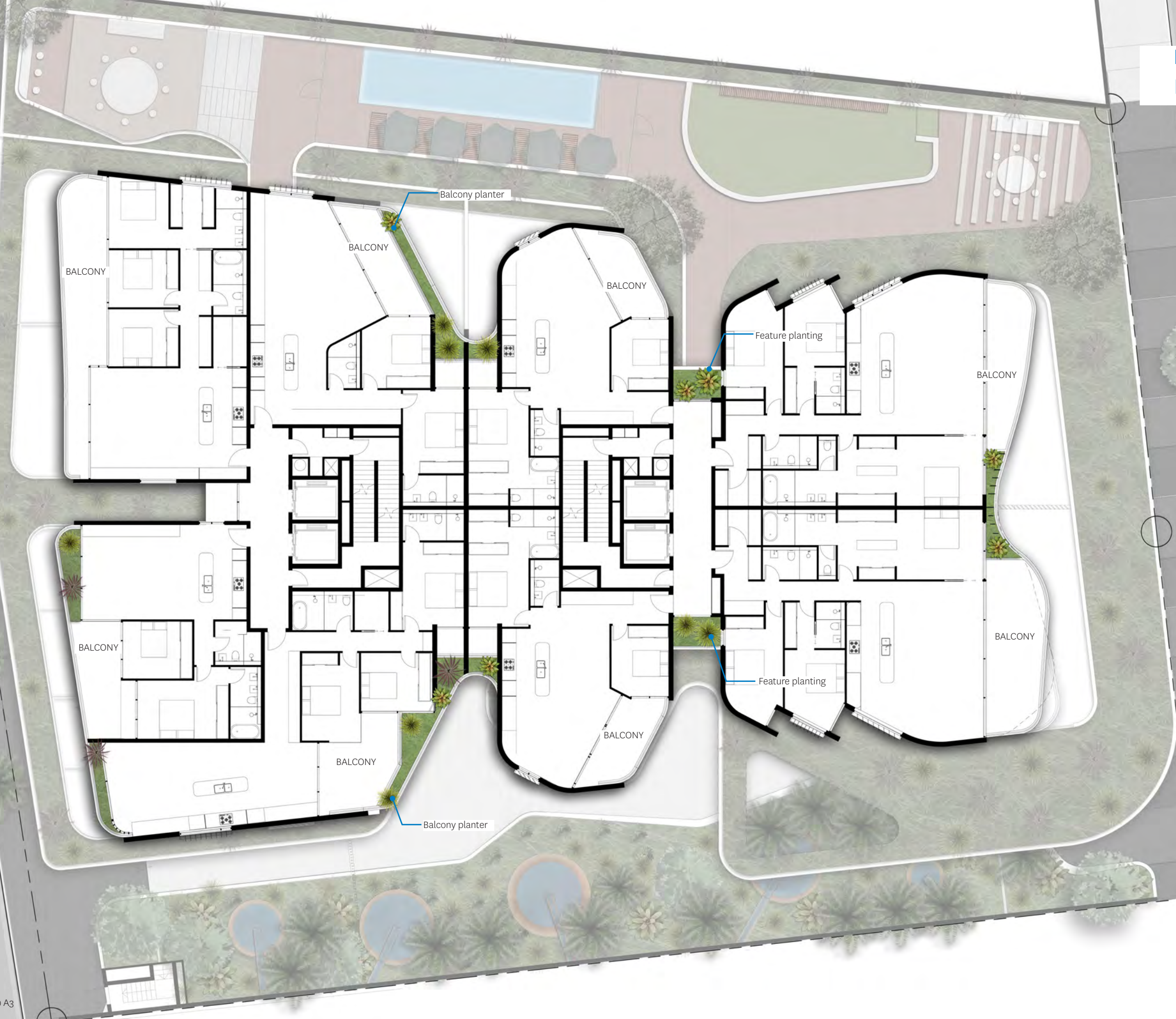
ISSUE: C L-DA-C

LANDSCAPE PLAN
PODIUM - LEVEL 4



SCALE - 1:200 @ A3

LANDSCAPE PLAN PODIUM - LEVEL 5-7



SCALE - 1:200 @ A3

49-57 GERRALE STREET CRONULLA PROJECT NUMBER: 1710

TURF DESIGN STUDIO

ISSUE: C L-DA-C

LANDSCAPE PLAN PODIUM - LEVEL 8

Balcony planter

Non-accessible planting

Non-accessible planting. Maintenance anchor to be provided.

BALCONY

PENTHOUSE

BALCONY

PENTHOUSE

BALCONY

PENTHOUSE

UP

PENTHOUSE

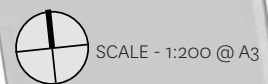
BALCONY

Non-accessible planting

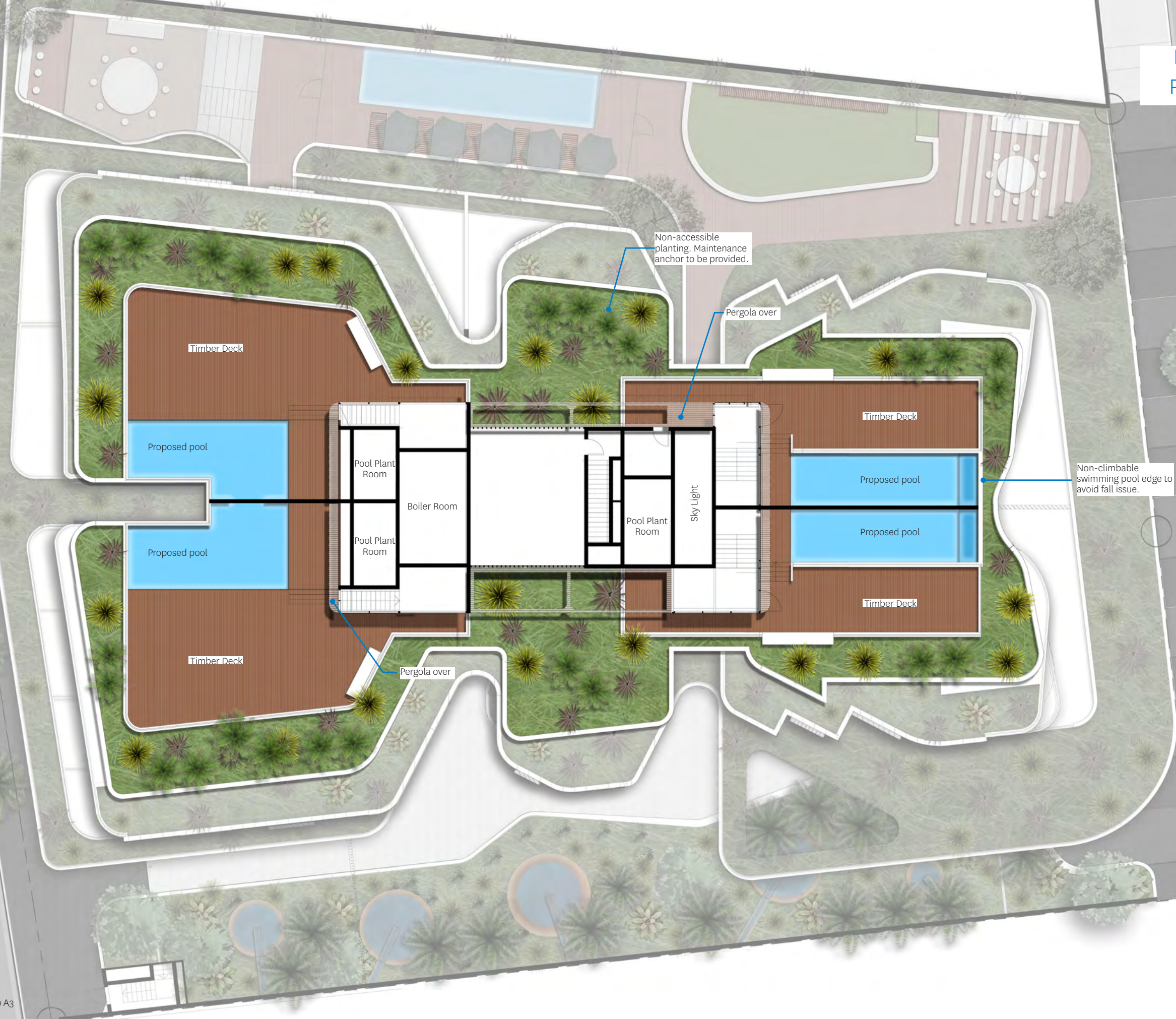
Feature planting

Non-accessible planting. Maintenance anchor to be provided.

Balcony planter



LANDSCAPE PLAN
PODIUM - ROOF TOP



SCALE - 1:200 @ A3

3D VIEWS

GROUND LEVEL COURTYARD

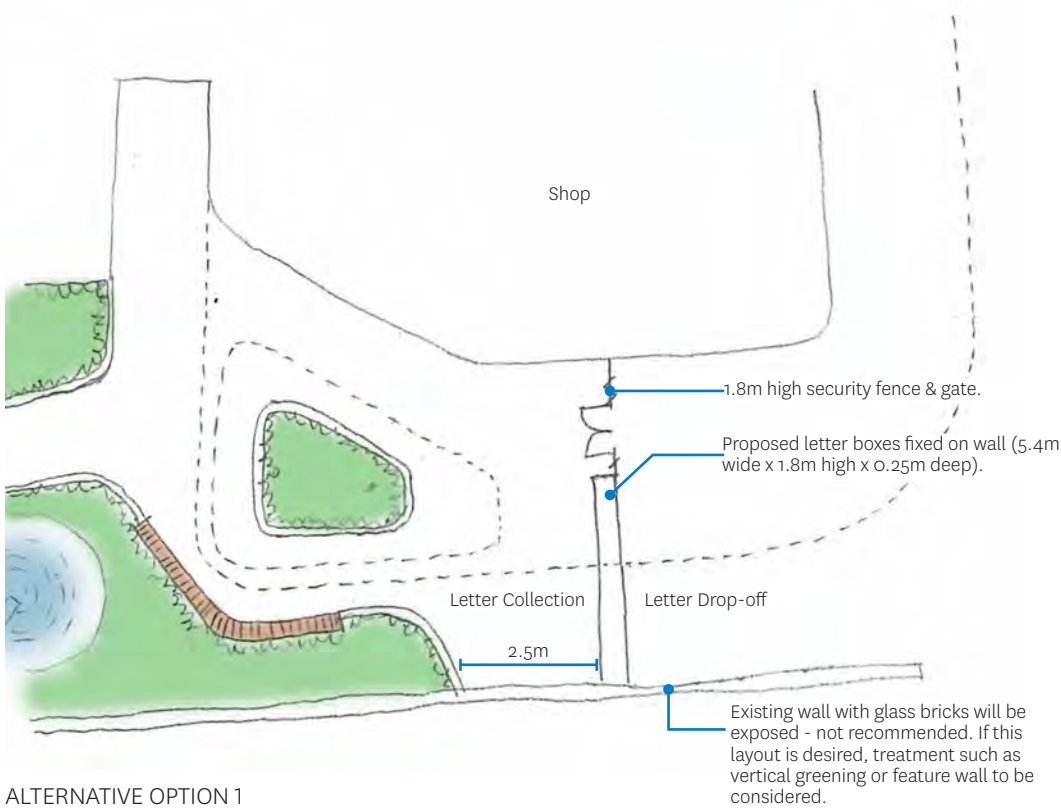


PROPOSED WATER FEATURE

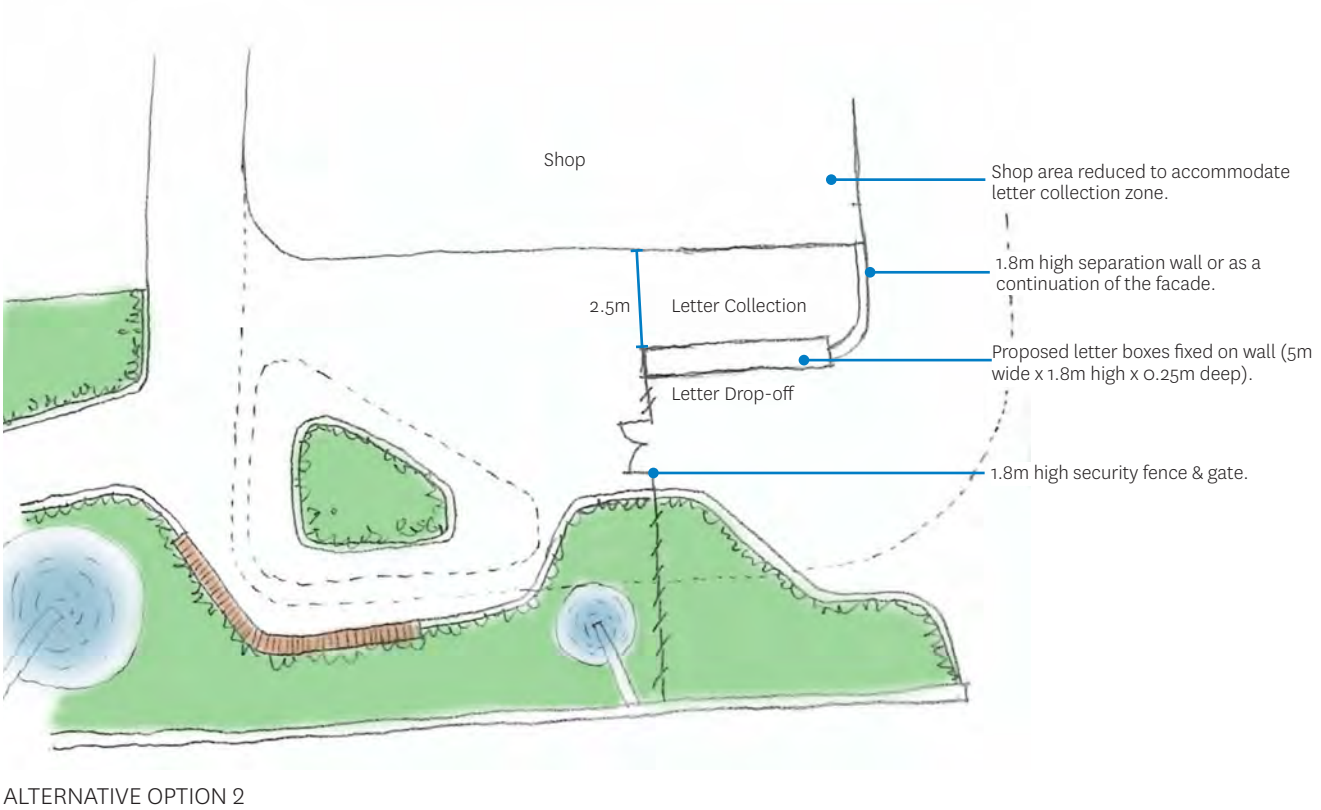


ALTERNATIVE OPTIONS OF MAIL BOX LOCATIONS

Note:
All options provide adequate space for at least 65 letter boxes.



ALTERNATIVE OPTION 1

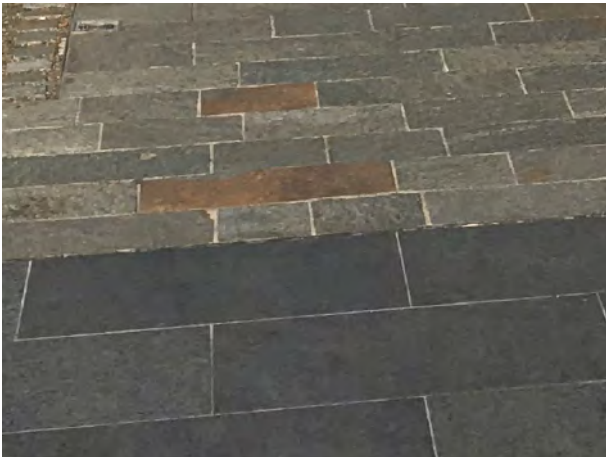


ALTERNATIVE OPTION 2

STREET PAVING TO COUNCIL STANDARD



BLACK GRANITE TO SURF LANE



BLACK GRANITE WITH PORPHYRY
PAVER BANDING TO GERRALE ST



PORPHYRY STONE SETTS WITHIN AGGREGATE TREE PIT

PRIVATE ENTRY COURTYARD



LIGHT COLOUR STONE UNIT PAVING TO PRIVATE ENTRY COURTYARD



CONCRETE PLANTER EDGE AS SEATING

STREET TREE PLANTING



Livistona australis



Cupaniopsis anacardioides

COURTYARD TREE PLANTING



Chamaedorea atrovirens



Howea forsteriana

UNDERSTOREY PLANTING



Alocasia macrorrhizos



Alpinia zerumbet 'Variegata'



Aspidistra elatior



Bambusa textilis var. 'Gracilis'



Chamaedorea seifrizii



Philodendron 'Xanadu'



Rhapis excelsa



Schefflera arboricola 'Variegata'



Scindapsus aureus



Syngonium podophyllum



Alcantarea imperialis 'Rubra'



Cordyline 'Rubra'



Asplenium astralasicum

PLANTING DESCRIPTION

The communal courtyard will comprise a mix of native and exotic plants presenting a lush green tropical rainforest character. Large leaves, palms and variegated foliage in the understorey will provide visual interest.

	BOTANIC NAME	COMMON NAME	MATURE HEIGHT	BENEFICIAL QUALITIES
Trees				
Cn	Cupaniopsis anacardioides	Tuckeroo	10m	Extend Gerrale St street tree feature
La	Livistona australis	Cabbage Palm	25m	Extend Surf Lane street tree feature
Ca	Chamaedorea atrovirens	Cascade Palm	2m	Dark green feather like leaf
Hf	Howea forsteriana	Kentia Palm	5m	Arching fronds with elegant long trunk
Understorey				
Ai	Alcantarea imperialis 'Rubra'	Imperial Bromeliad	1.5m	Large ornamental with red leaves
Am	Alocasia macrorrhizos	Giant Taro, Elephant Ear	4m	Large ornamental elephant ear like leaves
Az	Alpinia zerumbet 'Variegata'	Variegated Shell Ginger	1.2m	Upright evergreen with funnel formed flowers
Ae	Aspidistra elatior	Cast Iron Plant	0.5m	Dark glossy leaves with lobed cream flowers
Aa	Asplenium astralasicum	Bird Nest Fern	0.8m	Shrubby plant with rosette of yellow-green leaves
Bt	Bambusa textilis var. 'Gracilis'	Slender Weaver Bamboo	3m (Pruned)	Ornamental upright bamboo with large leaves ideal for screening.
Cr	Cordyline 'Rubra'	Palm Lily	4m	Feature plants with red leaves.
Cs	Chamaedorea seifrizii	Bamboo Palm	2m	Deep green stalk and thin to thick feathery leaves
Px	Philodendron 'Xanadu'	Xanadu	0.9m	Evergreen with lobed leaves
Re	Rhapis excelsa	Lady Palm	1.5m	Large thick green leaves
Sv	Schefflera arboricola 'Variegata'	Variegated Dwarf Umbrella Plant	1m	Yellow and green splaying leaf structure
Sa	Scindapsus aureus	Devil's Ivy	2m	Glossy alternate heart shaped leaves
Sy	Syngonium podophyllum	Aarrow Head Ivy	0.6m	Aarrow shaped green leaves with silvery white or cream variegation

TREE PLANTING



Citrus spp.



Cupaniopsis
anacardioides



Hymenosporum flavum



Olive (Olea europaea)

UNDERSTOREY PLANTING



Alcantarea imperialis 'Rubra'



Asplenium astralasicum



Carpobrotus glaucescens



Cordyline 'Rubra'



Cordyline 'Glaucua'



Hibbertia scandens



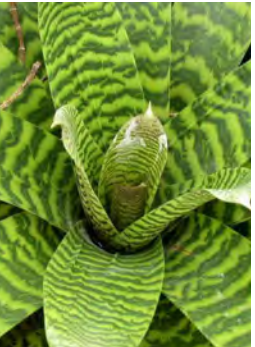
Myoporum parvifolium



Philodendron 'Xanadu'



Scaevola aemula
'Purple Fanfare'



Vriesea hieroglyphica

PLANTING DESCRIPTION

Communal podium and private balconies with good access for maintenance will be comprised of the following species, which will combine to provide cascading vegetation to the building.

	BOTANIC NAME	COMMON NAME	MATURE HEIGHT	BENEFICIAL QUALITIES
Trees				
Ci	Citrus spp.	Lemon Tree	5m	Small ornamental with fruits.
Ca	Cupaniopsis anacardioides	Tuckroo	10m	Medium tree provides shading.
Hf	Hymenosporum flavum	Native Frangipani	8m	Small flowering tree with fragrant.
Oe	Olea europaea	Olive	8m	Small ornamental with fruits.
Understorey				
Ai	Alcantarea imperialis 'Rubra'	Imperial Bromeliad	1.5m	Large ornamental with red leaves
Aa	Asplenium astralasicum	Bird Nest Fern	0.8m	Shrubby plant with rosette of yellow-green leaves
Cg	Carpobrotus glaucescens	Pigface	0.1m	Succulent costal cascading groundcover with pink flowers.
Cr	Cordyline 'Rubra'	Palm Lily	4m	Feature plants with red leaves.
Cl	Cordyline 'Glaucua'	Ti Plant	2m	Evergreen plants with low maintenance
Hs	Hibbertia scandens	Golden guinea vine	2-5m	Climber with yellow flower
Mp	Myoporum parvifolium	Creeping Boobialla	0.1m	Prostrate & spreading shrub with white flower
Px	Philodendron 'Xanadu'	Xanadu	0.9m	Evergreen with lobed leaves
Sa	Scaevola aemula 'Purple Fanfare'	Fan Flower	0.05m	Groundcover with showy purple flower
Vh	Vriesea hieroglyphica	King of the Bromeliads	0.9m	Green leaves with irregular dark cross banding and recurved tips.

SUCCULENT SKY GARDEN

Larger planting areas on the rooftop levels will require anchors for periodical maintenance access. Species selection for these areas will be a robust mix of succulent species that will require minimal ongoing maintenance, whilst delivering a diverse, colourful and highly textured landscape aesthetic.

The diversity of colours and tones creates a unique garden landscape within the site. Adoption of green, yellow, red, orange, and bronzed foliage and flowers provides a wealth of visual interest throughout the year. Appropriate maintenance path access will be provided through the pebble mulch.

The key considerations of the planting concept include:

- Robustness to exposed, often windy conditions;
- Shade tolerance;
- Suitability to shallow soil profiles;
- Low maintenance.

This has led to a selection of hardy shrubs and succulent plant varieties.



Botanical Name	Common Name	Pot Size / Installation size
Aeonium ‘Zwartkop’	Aeonium Black Rose	140mm
Aloe ‘Eager Beaver’	Eager Beaver	300mm
Aspidistra elatior	Cast Iron Plant	140mm
Clivia miniata	Clivia	140mm
Crassula ovata	Jade Plant	140mm
Dracaena marginata ‘Tricolor’	Madagascar Dragon Plant	300mm
Echeveria ‘Black Prince’	Black Prince Echveria	140mm
Echeveria elegans	Mexican Gem	140mm
Kalanchoe fedtschenkoi	Kalanchoe	140mm
Kalanchoe ‘Flapjacks’	Flapjacks	200mm
Ophiopogon japonicus ‘Dwarf’	Dwarf Mondo Grass	140mm
Sansaviera trifasciata	Mother-In-Law-Tongue	200mm
Sedum ‘Gold Mound’	Gold Mound Sedum	140mm
Senecio mandraliscae	Blue Chalksticks	140mm
Yucca ‘Bright Edge’	Bright Edge Yucca	300mm



Aeonium ‘Zwartkop’



Aloe ‘Eager Beaver’



Aspidistra elatior



Clivia miniata



Crassula ovata



Dracaena marginata ‘Tricolor’



Echeveria ‘Black Prince’



Echeveria elegans



Senecio mandraliscae



Kalanchoe fedtschenkoi



Kalanchoe ‘Flapjacks’



Ophiopogon japonicus ‘Dwarf’



Sansaviera trifasciata



Sedum ‘Gold Mound’



Yucca ‘Bright Edge’

APPROACH

Our design approach begins with connecting and activating the site. The planned revival of Gerrale Street and Surf Lane, with quality materials and detailing of urban elements, will set a new benchmark for Cronulla CBD. Our design provides continuity in the public domain, applying Council’s standards for paving materials and tree species.

The public domain will consist of generously proportioned pathways, supported by landscape wherever appropriate to contribute to the urban ecology. Outdoor dining space is also integrated with streetscape along Gerrale St and Surf Lane to support activation of the public domain; encouraging people to engage on their journey along the street.

The landscape design responds to key desire lines & creates a clear hierarchy of spaces, abstracting the architectural language to inform the spatial arrangement and geometry of the public domain’s private entry and podium landscapes. The apartment entry lane is a key landscape space of the development. Walked through by all residents on a daily basis, and serving as a high amenity outlook landscape for the adjacent retail, and apartments above. The space will also offer acoustic and visual interest to the street and laneway experience.

The communal space on Level 1 podium provides a place for residents to socialise. The design accommodates more than one group simultaneously, and includes bench seating that overlooks Surf Lane - further increasing passive surveillance and contributing to the vision for an activated laneway. A wether protected pergola enables use by the residents in all weather conditions. Bleacher steps face east towards the pool offering elevated views over the communal space. The Gerrale street podium edge includes a second BBQ and dining tables space with an open Pergola for filtered views from above and dappled shade below. An open lawn connects to this space, providing active play opportunity and open views toward the pool to optimize surveillance / supervision. The swimming pool offers a resort style facility for the residents and forms the third distinct space on the communal podium level. Pool fencing is located to ensure compliance with current regulations.

The proposed trellis frame structure will deliver life & greenery to the existing blank facades of adjacent residential buildings that interface with the site, screening unsightly elevations and helping mitigate the perceived bulk and scale of the building.

Vegetation is proposed to utilise the deep soil area proposed, augment indigenous biodiversity, moderate environmental conditions, complement vertical building scale and forms, enhance privacy, provide a presence of lush greenery on the rooftops, and offer a rich communal landscape setting.

URBAN ELEMENTS

Elements such as paving, furniture, screening, fencing and lighting will be developed further during detailed design. Refer plans and page 15 for proposed materials & finishes.

PLANTING DESIGN

The planting design has been developed in order to provide a lush and rich visual aesthetic. Complimentary foliage, colour and textures have been selected to ensure visual harmony. The species palettes consist of species that perform well

on structure in Cronulla, with developments such as ‘Drift’ & ‘Breeze’ on Gerrale St examples of good outcomes.

A range of species including local native and exotic will be used to promote biodiversity and robustness within the planting scheme. Low-growing plant species will be located where appropriate to ensure clear desirable views and safe site lines.

Consideration has been given to the incorporation of low water demand and low maintenance plant species in all areas to reduce mains consumption and fertiliser contamination of drainage water.

The habit and form of canopy trees will provide a dappled filigree of light and shade providing environmental amelioration year round.

AMENITY

Solar access and natural ventilation have been maximised by selecting a variety of tree species to suit varying requirements throughout the site. Light-canopied trees have been nominated in close proximity to building facades.

Visual privacy needs have been addressed in the planting design. The desire for an outlook to public areas is balanced with the need for privacy internally and externally, during day and night.

The outdoor communal courtyard will provide an external meeting place for large & small groups; formal & informal.

ACCESSIBILITY

Universal access to AS1428 has been incorporated into communal spaces, connecting walkways and building entries without compromising design quality.

Gently graded pathways will provide accessibility for all age groups and degrees of mobility; ensuring that residents can access site amenities comfortably. Entry to the apartment via the south lane will be highly legible from the street.

DRAINAGE

The detailed design will specify drainage cell to all soft landscape zones on structure. Design of the landscapes considers minimum freeboard requirements. The sunken garden space will be appropriately drained.

IRRIGATION

Irrigation will be included as a design & construction item within the tender package. Irrigation will be provided to all soft landscape areas.

GROWING MEDIA

The planting will comprise a complementary mix of indigenous and exotic species. Soil requirements will therefore vary according to varying soil chemistries enjoyed by individual species. For indigenous vegetation, soil profiles will be provided which have modest nutrient levels particularly phosphorus. Suggested material would equal Australian Native Landscapes ‘Low P’ mixture. In areas where exotic species are to be planted an industry standard organic soil mixture will be provided. Consideration will be given to the planting arrangement to ensure species sensitive to nutrient will be grouped together.

DEEP SOIL

The landscape design includes a deep soil zone of 200m2 on the southern boundary, which equals to 7% of the site area, in accordance with ADG minimum requirement, with minimum 6m width.

LIGHTING

Lighting of external spaces will be provided to ensure access points are well lit, improving visibility and the sense of safety. More importantly, the private lane entry will be well-lit to provide safe passage to apartment entry. The proposed street lighting will be consistent with Gerrale St and Surf Lane to provide continuity and strengthen the urban link through Cronulla CBD.

PLANT ESTABLISHMENT & MAINTENANCE

All planting on upper levels of the building has been designed with consideration to ongoing maintenance. Planter widths on balconies are no more than 1m. Anchors will be provided where safety widths exceed 1m.

A landscape maintenance contractor will be engaged to maintain all plant material in a state of health and vigour after practical completion. Contractor must provide the Superintendent with a proposed maintenance works program for approval. The landscape contractor must keep a logbook of all maintenance works undertaken and include ‘works to date’ information with all progress payment invoices. Works will include, but not be limited to:

- monitoring the irrigation system on a weekly basis to ensure plants are not under or over irrigated,
- replacing dead plant material to establish a complete cover of planting without obvious voids at final completion.
- replenishment of mulch as required to provide cover to the soil surface minimising weed encroachment.
- suppression of weed growth.
- low phosphorus nutrient will be provided to indigenous plant groupings, and a broad spectrum fertiliser applied to exotic plant groupings to satisfy differing chemical requirements and,
- selective pruning / crown lifting / canopy shaping of trees to remove potential future structural defects, establish branching above head height, etc.

SAFETY

Entry to apartment is to be highly visible from the street. The design of landscape minimises potential for hiding or obstructed views in the pubic domain and communal spaces. Lighting will ensure safe environment at night.

Planter on upper levels can be generally be maintained from apartment balconies(less than 1m wide). Anchors will be provided for larger planters where necessary.