Waste Management Plan

Proposed Residential Development
7-9 Surf Parade, Broadbeach

April 2025
Revision A

Prepared for

Hirsch & Faigen Property Group
C/- Urbis Ltd.

RHODIUM ENVIRONMENTAL

Rhodium Industries Pty Ltd ACN 666 102 361
admin@rhodiumenviro.com.au
0493 701 451
PO Box 398 MIAMI QLD 4220
rhodiumenviro.com.au

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NOTE

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A RHODIUM ENVIRONMENTAL REPORT

Rhodium Industries Pty Ltd
ABN 75 666 102 361
PO Box 398, MIAMI QLD 4220
Telephone: +61 0493 701 451
Email: admin@rhodiumenviro.com.au
www.rhodiumenviro.com.au

DISCLAIMER

This Waste Management Plan has been prepared for Hirsch & Faigen Property Group by Rhodium Environmental, for a proposed residential development located at 7-9 Surf Parade, Broadbeach. Opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. The report also contains comments and information provided by others. Rhodium Environmental takes no responsibility for advice provided by any third party. This document has been prepared for the sole purpose of a Waste Management Plan and does not present final or detailed engineering designs for construction purposes.

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1.0 DEFINITIONS

Bin carting route – the proposed route to move bins between the storage point and the servicing point.

Bulk bins – bins fitted with lids and side pockets to allow them to be serviced by a front-lift truck.

Clinical or related waste – waste that has the potential to cause disease, including, for example: animal waste, discarded sharps, human tissue waste, or laboratory waste.

Commercial accommodation – for the purposes of this report means commercial development that includes a domestic or residential component, such as Retirement facility, Community care centre, Rooming accommodation, Short term accommodation or Resort complex.

Commercial premises – for the purpose of this report means any of the following types of premises: a Hotel, Short term accommodation, Tourist park, Food and drink outlet, an assembly building, institutional building, Child care centre, Educational establishment, premises where a sport or game is ordinarily played in public, an exhibition ground, show ground or racecourse; or an Office, Shop or other premises where business or work other than a manufacturing process is carried out.

Commercial waste – means waste, other than green waste, recyclable waste, and interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of commercial developments.

Common servicing point – a common area where more than two dwellings/tenancies stand their bins for servicing.

Common storage point – a common area where more than two dwellings/tenancies store their bins.

Constructed hardstand area – a hardstand area, for example a concrete pad which has been constructed for bin storage.

Digesters and dehydrators - machines specifically designed to reduce food waste volumes to allow for efficient disposal. Digesters typically process the material into sludge while dehydrators remove liquid from food waste generating a fertiliser as the end product. Disposal of end product can be used on either internal gardens or on external gardens/farms.

e-waste - Electronic waste includes discarded electrical or electronic devices. Used electronics which are destined for refurbishment, reuse, resale, salvage recycling through material recovery, or disposal are also considered e-waste.

Drive-on service – where the waste collection vehicle services bulk bins on site, bins are to be positioned for direct access/servicing without the need for manual handling by the waste vehicle driver or other person.

General waste – waste, other than domestic clean-up waste, green waste, recyclable waste, interceptor waste or waste discharged to a sewer, produced as a result of the ordinary use or occupation of domestic or commercial premises.

Glass crushers - machines that can reduce the volume of glass waste by up to 75%, saving valuable space.

Hazardous waste - solid waste that is or contains toxic material, for example light bulbs, fluorescence lights, batteries.

Internal servicing roadway – is a driveway, private roadway or other path intended for use by vehicles, in which the waste collection vehicle is required to use to service a bin.

Mixed-use development – for the purpose of this report, any building or development complex used, or intended to be used, for residential purposes in combination with other commercial uses (e.g. Offices, Food and drink outlets etc.).

Non-serviced area – an area within the boundaries of City of Gold Coast which is not serviced by Council's waste collection contractor.

Organic waste - is waste that comes from plants or animal that is biodegradable for example green waste and food waste.

Recycling chute - a duct in which recycling descends from one point to another.

Recyclable waste – for a local government's area, means clean and inoffensive waste that is declared by the local government to be recyclable waste for the area. In the City of Gold Coast the following wastes are deemed recyclable: all household plastics, bottles and containers; aluminium and steel cans and aerosols; bottles and jars made only of glass; clean cardboard, newspaper, loose paper, junk mail, magazines and cartons.

Related waste – means waste that constitutes, or is contaminated with, chemicals, cytotoxic drugs, human body parts, pharmaceutical products or radioactive substances.

Ro-Ro bin – roll-on roll-off bin.

Roll-on roll-off bin – large steel open top skip bins or enclosed bins. Bins are collected by a hook-lift truck.

Solid waste – any general or recyclable waste, be it commercial or domestic. Solid waste does not include waste discharges to sewer/water or the atmosphere.

Servicing point – the designated area allocated to the temporary storage of waste bins for the period of servicing only. The point may be within or external to a development.

Storage point – the area allocated to the permanent storage of waste bins. This is the normal location of the waste bins and excludes the period where the bin is serviced. A storage point may be a common storage point or an individual bin storage point.

Waste – includes any thing, other than a resource that is: left over, or an unwanted by-product from an industrial, commercial, domestic or other activity; or surplus to the industrial, commercial, domestic or other activity generating the waste.

Waste carting distance – the distance required for a person to transport their waste from the nearest point of exit of their dwelling/tenancy to a storage point (or in the case of a multi-level building, to the nearest waste disposal point).

Waste chute – a duct in which waste descends from one point/level to a collection bin.

Waste disposal point – the point where waste is disposed of into the chute, also known as waste hopper. It consists of a fixed frame and hood unit, covered with a hinged or pivoted door.

Waste storage room – the room at the base of the chute used for the storage of waste bins.

Wheelie bin – two wheeled mobile garbage bins, made from high density polyethylene (HDPE). Wheelie bins are collected by a side-lift truck.

2.0 INTRODUCTION

2.1 DEVELOPMENT BACKGROUND

The applicant, Hirsch & Faigen Property Group proposes to construct a residential development at 7-9 Surf Parade, Broadbeach. The development will be constructed across a 1,013m^2 parcel of land described as Lot 0 on BUP3459 and Lot 0 on BUP2545.

Rhodium Environmental was commissioned by Urbis Ltd. to prepare this Waste Management Plan (WMP) to be submitted to City of Gold Coast (Council) as a component of the Development Application for the site. This WMP ensures that the waste storage and collection activities for the operational phase of the development are in accordance with *SC6.15 City Plan Policy v.11 - Solid Waste Management* (City of Gold Coast, February 2024).

2.2 SITE DETAILS

The development site is located at 7-9 Surf Parade, Broadbeach (refer **Figure 1**). The site is bound by Surf Parade to the west with existing residential developments to the north, east and south of the site.

The development is proposed to include a 32 storey, residential tower consisting of three levels of basement carparking, services and car parking at ground level and mezzanine level, car parking across levels 2 and 3, residential recreation at level 4, and 100 x 2 bedroom dwellings in the tower above.

2.3 PURPOSE AND SCOPE

This report represents a Waste Management Plan for the operational phase of the development which includes:

- Details on the anticipated type and quantity of waste (**Section 3.0**);
- Details of the waste storage point requirements and waste storage bins (**Section 4.0**); and
- Details of the waste collection point requirements and proposed waste collection arrangements (**Section 5.0**).

Council's Solid Waste Management Code (v.11) has been addressed and is included in **Attachment A**.

This report presents conceptual information on the above dot points, rather than involving detailed engineering designs. At the current phase of the proposal, the development of detailed engineering designs of the waste storage areas is not practical.

Figure 1: Site location map.

Proposed development site at 7-9 Surf Parade, Broadbeach.

3.0 WASTE AND RECYCLING GENERATION

3.1 TYPE OF WASTE

The development is proposed to include residential dwellings only and as such, the anticipated waste types include general waste and co-mingled recycling material only. Provisions will be made for each anticipated waste type.

3.2 WASTE VOLUMES

Calculations of the anticipated waste quantities from the development were performed using typical waste generation rates as provided by Council in *SC6.15 City Plan Policy v.11 - Solid Waste Management* (City of Gold Coast, February, 2024).

Table 1 below displays the anticipated volume of general waste and recycling material that is expected to be generated during the operational phase of the development.

Table 1: Anticipated general waste and recycling quantities from the development.

Waste Type	No. units	Waste Generation Rate (L/unit/week)	Estimated Waste Generation (L/week)	Estimated Waste Generation (m^3/week)	Estimated Waste Generation (m^3/day)
General waste	100 x 2 bedroom	100	10,000	10	1.43
Recycling		60	6,000	6	0.86

The development is expected to generate approximately 10m^3 per week of general waste and 6m^3 per week of recycling material.

4.0 WASTE AND RECYCLING STORAGE

Section 4 outlines the general design criteria of the waste storage and servicing areas as required by *SC6.15 City Plan Policy v.11 - Solid Waste Management* (City of Gold Coast, February 2024) along with a description of the proposed bins to be used. Should the proposed development be unable to meet any of the following requirements, alternative arrangements may be negotiated with Council at the appropriate time.

4.1 BIN STORAGE POINTS

The development is proposed to include a bulk bin storage room at ground level for the storage of all general waste and recycling material generated from the dwellings (refer to **Figure 2**). The bulk bin storage room will be provided at the bottom of a single waste chute system fitted with a diverter for separation of general waste and recycling material. Any waste generated from the communal areas of the site will be collected by site management staff and deposited into the appropriate bulk bins in the bulk bin storage room.

The bin storage room will be designed and constructed to meet Council's design requirements as listed below. The bin storage room will be:

1. Designed to allow the bins to be easily transported to a separate servicing point (no steps or lips on bin-carting route);
2. Waste-carting distance does not exceed 60 metres and is designed to ensure ease of use;
3. Located at least five (5) metres from any door, window or fresh air intake within the development or any adjoining site;
4. Screened to ensure bins are not visible from a public place or sensitive land use;
5. Provided with safe access to the disposal area;
6. Constructed hardstand area with a solid concrete base or acceptable equivalent;
7. Of sufficient size to accommodate the required number of bins;
8. Located in a well-ventilated area at ground level and not within thirty (30) metres of an opening to a food premises or food handling area.
9. Designed with adequate clearance surrounding bins and associated equipment within the bin room to ensure practical waste management at the site;
10. Provided with adequate storage for recyclable waste that all users can safely and easily access via provision of a waste disposal hopper on each floor capable of receiving both general waste and recycling material;
11. Roofed and designed to prevent entry to rainwater;
12. Graded to fall to a drainage point within the storage point that is connected to sewer in accordance with trade waste requirements;
13. Provided with a hosecock for cleaning bins and the bin room (i.e. the bin room will serve as the bulk bin wash area);
14. Insect and vermin proof;
15. Fire rated and ventilated in accordance with the National Construction Code — Building Code of Australia;
16. Doors will be wide enough to allow for the easy removal of the largest bin to be stored;
17. The walls, ceiling, floor and equipment of the waste storage room will be designed and constructed of impervious material with a smooth finish to allow for easy cleaning;

18. Provided with adequate artificial lighting;
19. Not located adjacent to or within any habitable portion of a building or place used in connection with food preparation (including food storage);
20. Designed to permit unobstructed access for removal of the bins to the service point and for positioning of the bins correctly in relation to the waste chute.

Note that it will be the responsibility of site management to wash bins and to maintain the cleanliness of the bins and bin storage areas.

4.2 WASTE CHUTES

As a best practice approach, general waste and recycling material will be delivered to the bin storage room at ground level via a single waste chute fitted with a waste diverter for separation of general waste and recycling material. Importantly, for health and safety purposes, the bin storage room will only be accessible to site management. The waste chute will be constructed to meet the requirements listed below. The waste chute will be:

1. Adequate in strength for its purpose, including additional reinforcing where necessary at joins, bends and hopper intersections.
2. Insect and vermin proof.
3. Constructed and installed to prevent the following during operation of the system:
   - transmission of vibration to the structure of the premises;
   - excessive odour – there must not be a noticeable odour beyond the waste disposal and storage points;
   - excessive noise to the occupants of the building.
4. Installed in a 'fire rated' duct and ventilated in compliance with building requirements of the National Construction Code – Building Code of Australia.
5. Comply with the waste chute manufacturer's technical specifications and/or operational limitations, including installation design features and ancillary equipment required to prevent blockages and noise disturbances, to achieve compliance with the section.
6. Fitted with a shutter at the base of the chute for closing off the chute manually during bin exchange and automatically in the case of fire.

4.3 WASTE DISPOSAL POINTS

A waste disposal point will be provided for residents on each level of the building for disposal of general waste and recycling material. The disposal points will be designed and constructed to meet the following requirements. The waste disposal points will be:

1. Located on each floor in a position that is:
   - freely ventilated in the open air (sheltered balconies), or in a dedicated room or compartment;
   - easily accessible by the occupants of each apartment;
   - separated from any habitable portion of a building or place used in connection with food preparation or storage.
2. Located to ensure the handle of the hopper is at least 1,200 millimetres above finished floor level.

3. Designed to ensure that the hopper door closes automatically after use.
4. Designed to permit free flow of waste into the chutes.
5. Constructed so that the diameter or largest dimension of the service opening (the diagonal of a rectangular opening) does not exceed three quarters (3/4) of the diameter of the chute with which the hopper is connected.
6. The floor adjacent to the hopper will be constructed of a durable impervious material with a smooth finished surface.

4.4 PROPOSED WASTE BINS

To ensure that the bin storage areas provided for the development are sufficiently sized, details of the type and quantity of waste and number of bins to be stored are provided in **Table 2** below.

Table 2: Details of waste and bins required for the proposed development.

Waste Type	Waste Quantity (m^3/week)	Proposed Bins	Servicing frequency*	Comments
General	10	2 x 1.5m^3 bulk bins	Four per week	Bins will be carted by site management to a bin servicing point. Bins will then be collected and serviced by the service provider on Surf Parade and returned to the bin servicing point within the property. Site management will return the empty bins to the bin storage room.
Recycling	6	2 x 1.5m^3 bulk bins	Twice per week	

*Once the development is operational, the servicing frequency will be reviewed to ensure that it is sufficient but not excessive for the development.

4.5 BIN DIMENSIONS

Table 3 below provides dimensions of the bins to be used on-site.

Table 3: Dimensions of proposed waste storage containers.

Bin Type	Volume	Length (mm)	Width (mm)	Height (mm)	Collection Vehicle Type
Steel bulk bin	1.5m^3	2,040	1,051	1,304	Front lift truck

5.0 SERVICING

5.1 BIN SERVICING POINT

All bulk bins will be carted by site management to the servicing point within the site and adjacent to the site entry driveway (refer to **Figure 2**). As bin will be carted up a ramp with a 1:16 grade from the bin storage room, an electric bin tug will be provided for ease of transport. Details on the typical bin tug to be used are included in **Attachment B**.

The contracted service provider will service the bins on Surf Parade and return the empty bins to the bin servicing point following collection. It will be the responsibility of site management to return the bins to the bin storage room following servicing.

The development will require four bulk bins in total (two for general waste and two for recycling material) and as such, the bin servicing point will be designed to cater for two bulk bins only as the general and recycling bins will be collected on alternate days by the service provider.

The bin servicing point will be designed and constructed to meet the requirements listed below. The bin servicing point will be:

1. Provided with sufficient access and clearance for the waste and recycling collection vehicles to service the bins, including adequate unobstructed overhead space for the swinging arm action of the waste collection vehicle.
2. Designed to ensure that bins can be serviced safely while minimising the impediment of traffic flow during servicing.
3. Clearly separated from car parking bays, loading bays, footpaths and pedestrian access, and any other similar areas.
4. Clear of speed control devices or similar provisions which inhibit direct access to the bins for servicing.
5. Bin-carting route will allow bins to be easily manoeuvred and is devoid of steps or steep rises.
6. Bin-carting route does not extend through habitable parts of the building, or a food premises, and only occurs through common property or publicly accessible locations.
7. Positioned on a level pad.
8. Over five metres from any door, window or fresh air intake within the development or any adjoining site.
9. Bins to be removed from and returned to the storage point by site management.
10. Constructed hardstand with a solid concrete base or acceptable equivalent.
11. Positioned on a level pad within the site, no further than 5 meters from the property boundary, level with the kerbside and adjacent to a driveway or other approved crossover on the public roadway.
12. Connected to the crossover by a paved path so that the bin can be manoeuvred for servicing without lifting the bin over raised surfaces (pram ramp).
13. Not situated within twenty (20) metres of an intersection (including opposite a T-intersection) or roundabout.

14. Designed with adequate clearance between each side of the bins and any barrier around the location.
15. Screened to minimise the view of bins from neighbouring properties or passing vehicles and pedestrian traffic external to the site.
16. Bin carting will be via hard stand pathways and internal roads.
17. Bins will be easily moved to the bin servicing point adjacent to the site entry point.
18. Not constructed on a section of the driveway that falls away (e.g. to the basement).
19. Bin carting route will not include pedestrian footpaths and will occur within the property boundary.
20. Positioned away from entrances to shops or residential premises.

5.2 COLLECTION VEHICLES

Table 4 details the dimensions of the waste collection vehicles that will service the development. Front lift service vehicles will empty the bulk bins on Surf Parade in a clear area with no overhead obstructions. Refer to **Attachment C** for front lift vehicle specifications.

Table 4: Service vehicle dimensions.

Vehicle type	Travelling Height	Width	Length	Servicing Height	Total Tonnage (maximum)	Min Turning Circle (wall to wall)	Min Turning Circle (kerb to kerb)
Front lift truck	4.3m	2.5m	10.2m	6.4m	27.5tn	13.2m	12.3m

Suitable clearance is available at the proposed servicing point ensuring safe access and unimpeded operation of the vehicles when servicing the bins (noting that suitable clearance = servicing height of 6.4m + 100mm).

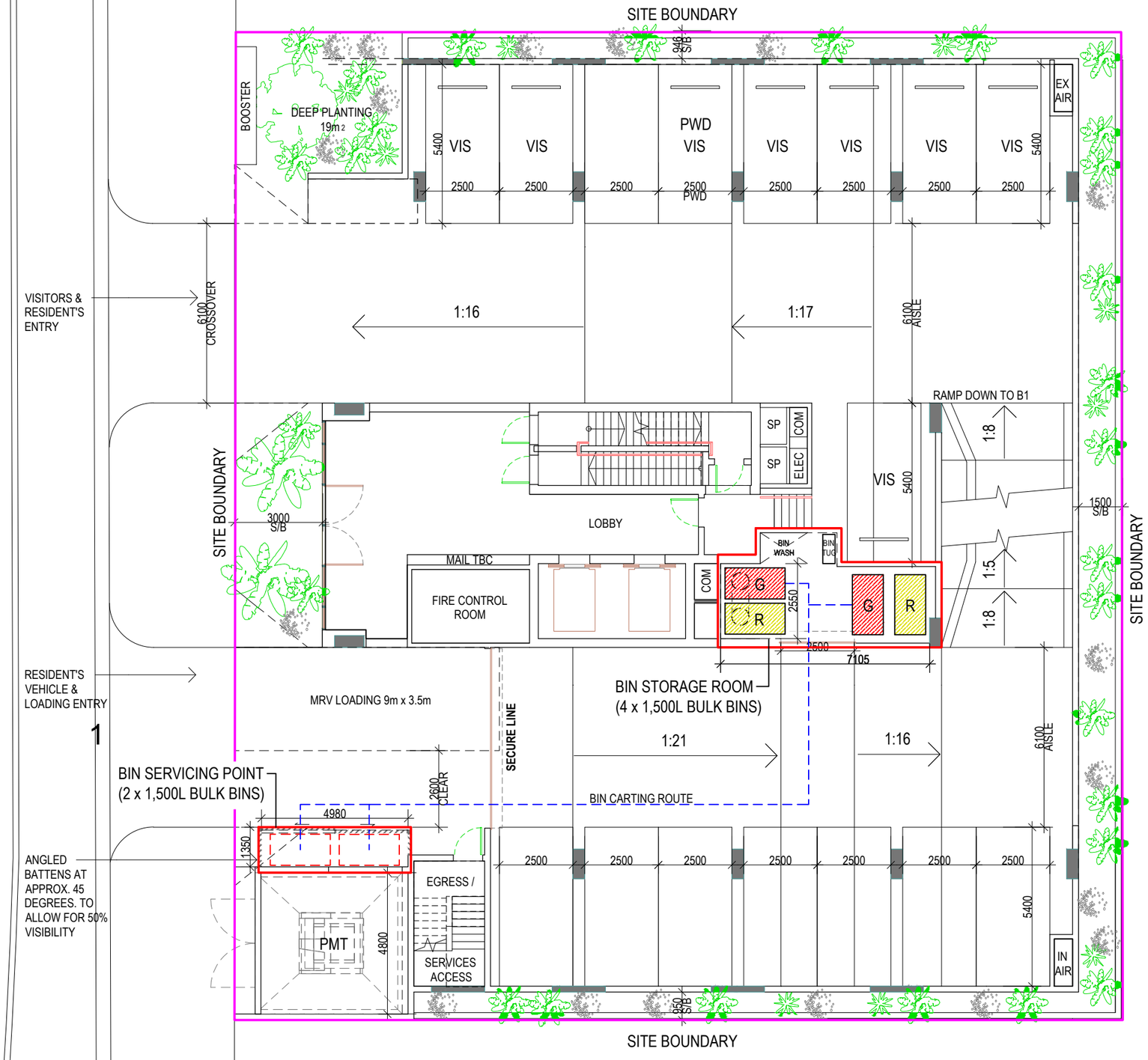
6.0 CONCLUSION

This Waste Management Plan has been prepared to provide conceptual details for an efficient and compliant waste management system in the operational phase of the proposed residential development at 7-9 Surf Parade, Broadbeach. Further detail on the engineering specifics regarding waste area design and drainage will be completed by others.

The following details provide a summary of the proposed development and the related waste management requirements:

- The proposed development is for a 32 storey, residential high-rise tower and supporting facilities across a 1,013m^2 parcel of land at 7-9 Surf Parade, Broadbeach;
- The development will consist of three levels of basement carparking, services and car parking at ground level and mezzanine level, car parking across levels 2 and 3, residential recreation at level 4, and 100 x 2 bedroom dwellings in the tower above;
- Waste from the development is expected to consist of general waste and recycling material only;
- The development is expected to generate approximately 10m^3 per week of general waste and 6m^3 per week of recycling material;
- A bin storage room will be provided at ground level for bulk bin storage;
- Residents will have access to a waste hopper on each level for disposal of general and recycling waste via a single waste chute fitted with a diverter for waste and recycling segregation;
- The waste chute will direct all waste and recycling material to bulk bins in the bulk bin storage room;
- Any waste generated from the communal areas of the site will be collected by site management and disposed of in the provided bulk bins at ground level;
- The bin storage areas will be designed and constructed generally in accordance with Council's Solid Waste Management Policy requirements;
- Bin wash facilities will be provided in the bulk bin storage room, and it will be the responsibility of site management staff to maintain the amenity of the bins and bin storage areas;
- Site management staff will cart bins from the bin storage room to the bin servicing point using an electric bin tug ahead of collection by Council's service provider;
- A bin servicing point will be provided within the development for the temporary storage of bulk bins prior to servicing;
- General waste bins will require servicing four times per week, while recycling bins will require servicing twice per week;
- Bulk bin servicing will be conducted by a front-lift service vehicle on Surf Parade;
- Sufficient access and clearance will be provided at the nominated servicing point for servicing the bulk bins.

SURF PARADE



NOTES
Adapted from original prepared by Rothelowman.

RHODIUM ENVIRONMENTAL

DESIGNED	RH	CLIENT	HIRSCH & FAIGEN PROPERTY GROUP
APPROVED	RH	JOB NO.	RH2501-45
		DATE	APRIL 2025
		SHEET SIZE	A3
		AHD	NA

PROJECT
WASTE MANAGEMENT PLAN
7-9 SURF PARADE, BROADBEACH

TITLE
GROUND LAYOUT AND
BIN STORAGE AREAS

SCALE	REVISION	FIGURE
NTS	A	FIGURE 2

ATTACHMENT A

9.4.12 Solid Waste Management Code (v.11), City of Gold Coast, February 2024.

Performance Outcomes	Acceptable Outcomes	Confirmed	Comments
Waste and recycling storage and bin wash-down facilities			
PO1 **Development provides waste and recycling storage facilities that are appropriate and adequate for the type and volume of waste generated.**	**AO1.1** Development includes waste storage points of sufficient size to accommodate the required number of waste and recyclable bins consistent with **SC6.15 City Plan policy – Solid waste management**.	Y	The development includes waste storage points of sufficient size to accommodate the required number of waste and recyclable bins generally consistent with **SC6.15 City Plan policy – Solid waste management**.
	AO1.2 Waste and recycling storage points are located, designed and sized consistent with **SC6.15 City Plan policy – Solid waste management**.	Y	The development includes waste and recycling storage points that are located, designed and sized generally consistent with **SC6.15 City Plan policy – Solid waste management**.
	AO1.3 Development with a dwelling above the third storey include appropriate waste removal systems which incorporate: (a) waste chutes; (b) hoppers; and (c) separate waste storage rooms. **Note: Waste removal system design is to be consistent with SC6.15 City Plan policy – Solid waste management.**	Y	The development includes dwellings above the third storey and therefore includes appropriate waste removal systems which incorporate: (a) waste chute; (b) hoppers; and (c) separate waste storage rooms. The waste removal system design is consistent with **SC6.15 City Plan policy – Solid waste management**.
	AO1.4 Developments that include a commercial kitchen or generate clinical or related waste incorporate additional waste facilities consistent with **SC6.15 City Plan policy – Solid waste management**.	na	The development does not include a commercial kitchen or generate clinical or related waste.
PO2 **Development provides a bin wash-down facility that maintains appropriate environmental health and amenity standards.**	**AO2** Development includes appropriately sized and located bin wash-down facilities consistent with **SC6.15 City Plan policy –Solid waste management**.	Y	The development includes appropriately sized and located bin wash-down facilities consistent with **SC6.15 City Plan policy – Solid waste management**.
Amenity			
PO3 **Waste and recycling storage and servicing points are appropriately located and designed for convenient and safe access by all users and to minimise the potential for nuisance to occupants of the development or adjoining properties.**	**AO3.1** Direct unobstructed paths exist between waste and recycling storage and servicing points and road frontages.	Y	Direct unobstructed paths exist between waste and recycling storage and servicing points and road frontages.
	AO3.2 Waste and recycle storage points are screened by solid fencing or vegetation to ensure they are not visible from a public place or sensitive land use.	Y	Waste and recycling storage points are enclosed rooms ensuring that bins are not visible from a public place or sensitive land use.

Waste servicing			
PO4 **Waste and recycling servicing points are appropriately located and designed to facilitate safe, unobstructed and efficient servicing of waste containers.**	**AO4** Waste and recycling servicing points are located, designed and sufficiently sized consistent with **SC6.15 City Plan policy –Solid waste management**. **Note: Regulation of the access, stopping and manoeuvring of refuse collection vehicles are subject to meeting, Part 9.4.13 Transport code and associated City Plan guidelines.**	Y	The waste and recycling servicing point is located, designed and sufficiently sized generally consistent with **SC6.15 City Plan policy – Solid waste management.**
Non-serviced areas			
PO5 **Developments in non-serviced areas have appropriate solid waste management measures to adequately service the development.** **Note: For Commercial developments a Waste management plan, prepared in accordance with SC6.15 City Plan policy – Solid waste management, is Council's preferred method of addressing the above outcome.**	**AO5** No acceptable outcome provided.	na	The development is located in a serviced area.

ATTACHMENT B

Master Mover SM200+ bin tug technical specifications.

MasterMover®

SM200+

Battery powered electric tug

SM200+

kg
2,000

Overview

Easily move heavy wheeled loads with the SmartMover range. Delivering effortless pushing, pulling and steering, the SmartMover improves safety, removes manual handling and drives operational efficiency.

With robust yet simple coupling systems, the SmartMover range ensures loads are secure and gives operators complete control – even on slopes. Safety-focused, SmartMover electric tugs feature anti-crush functionality, emergency stop, variable speed settings and intuitive controls to keep operators, loads and equipment safe.

Benefit from versatility with various coupling options available, including a hydraulic clamp that delivers total load security.

Key Features

Safety

- Audible horn, flashing beacon, performance monitoring and emergency stop
- Intuitive parking brake stops loads, even on slopes
- Multiple speed settings for maximum control

Power

- Interchangeable, maintenance-free batteries for 24/7 operation
- Power display for real-time data
- Smart charging system to maximum battery longevity

Performance

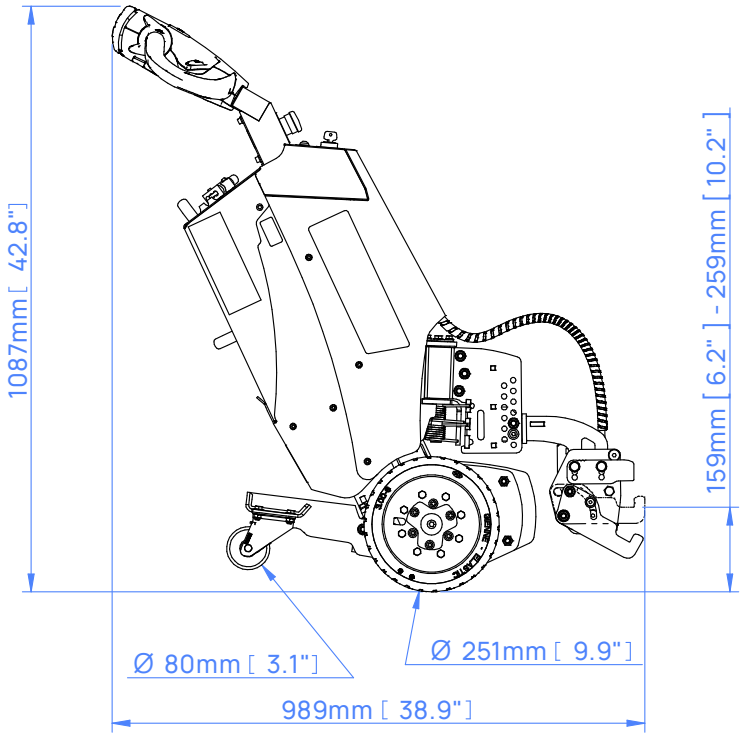
- Two high-powered motors for consistent performance
- 180° steering angle provides precise handling
- Powerful performance both indoors, outdoors and on slopes

Connection

- Secure and easy-to-use coupling options, including hydraulics
- Variable coupling options for maximum flexibility
- Custom couplings available

MasterMover

Dimensions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Ø 80mm [3.1"]
Ø 251mm [9.9"]
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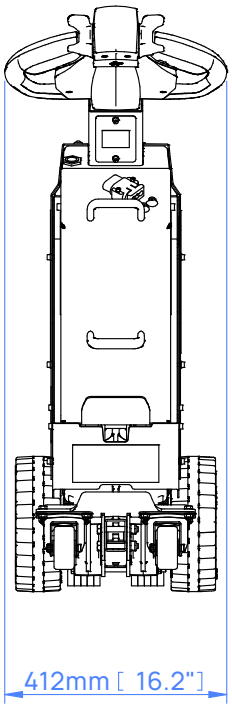
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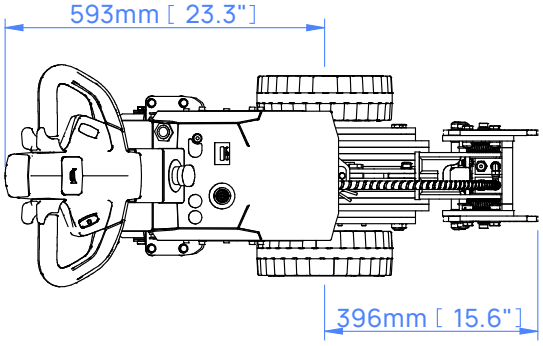
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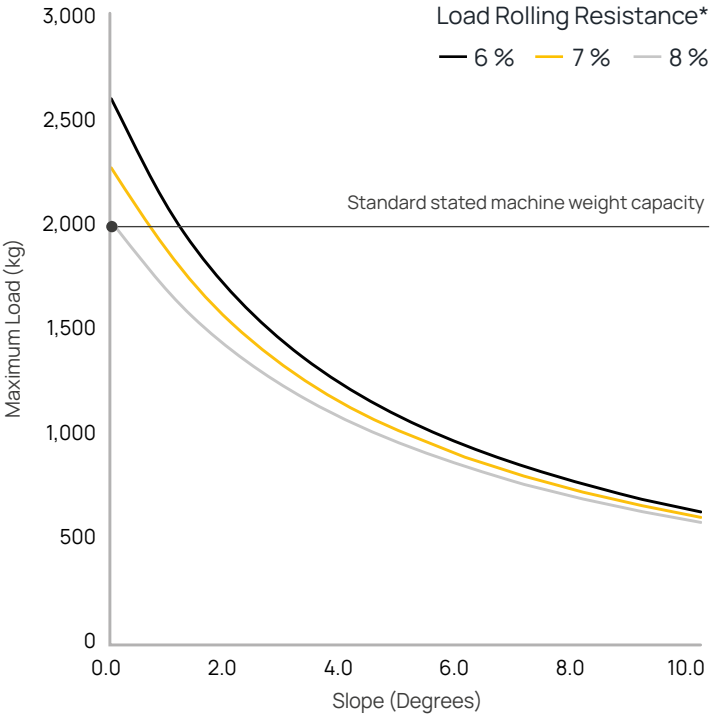
396mm [15.6"]

Slope Performance

The force required to move a load is based on load weight, slope angle and floor condition. Movement on a slope increases the force required to safely start, stop and move the load.

If your application involves moving a load up or down a slope, speak to our team who will be happy to advise on which machine will meet your requirements.

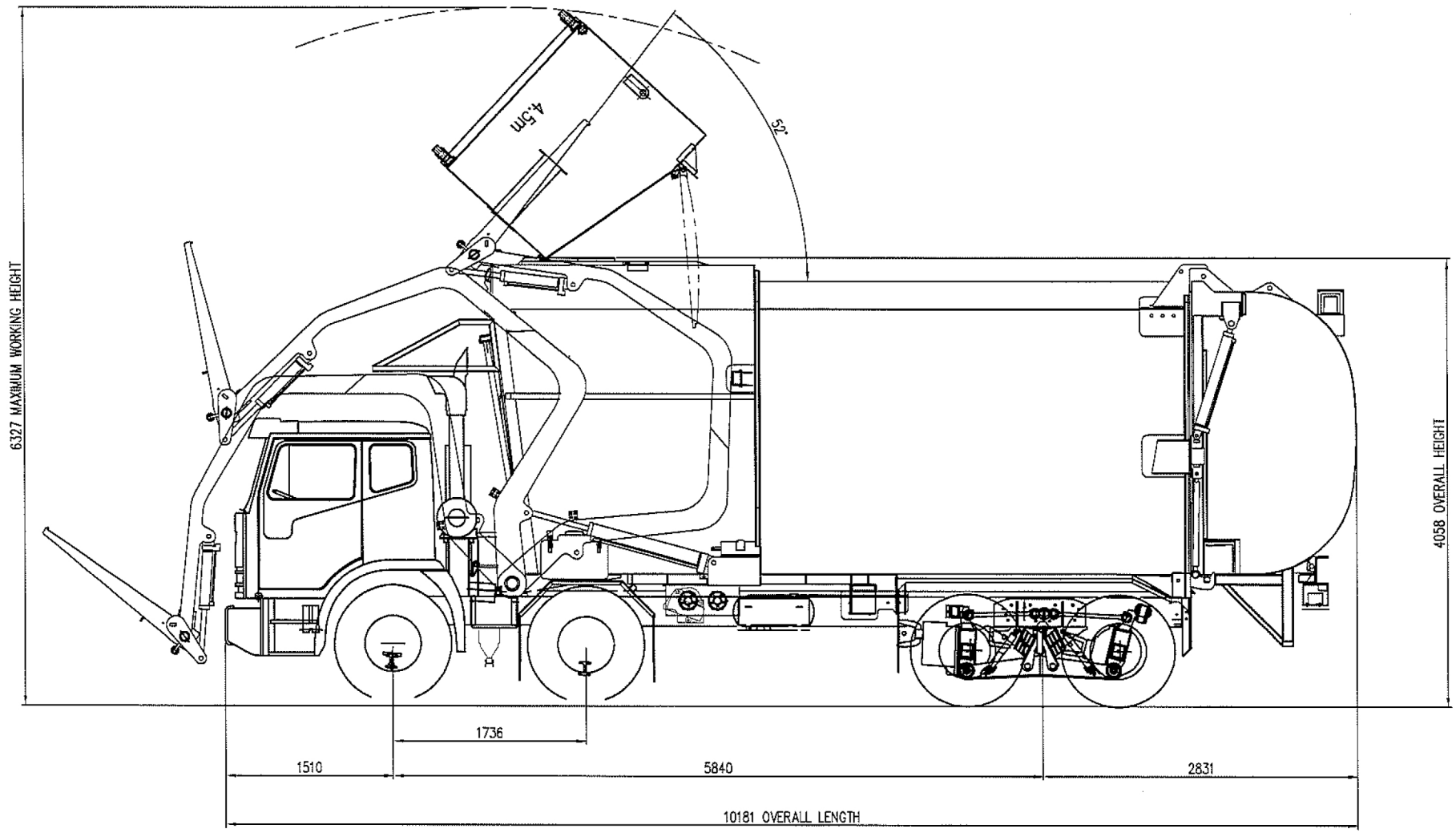


* Variables that affect rolling resistance include the quality of floor/terrain and the type/condition/quality of castor wheels.

In Application: SmartMover

ATTACHMENT C

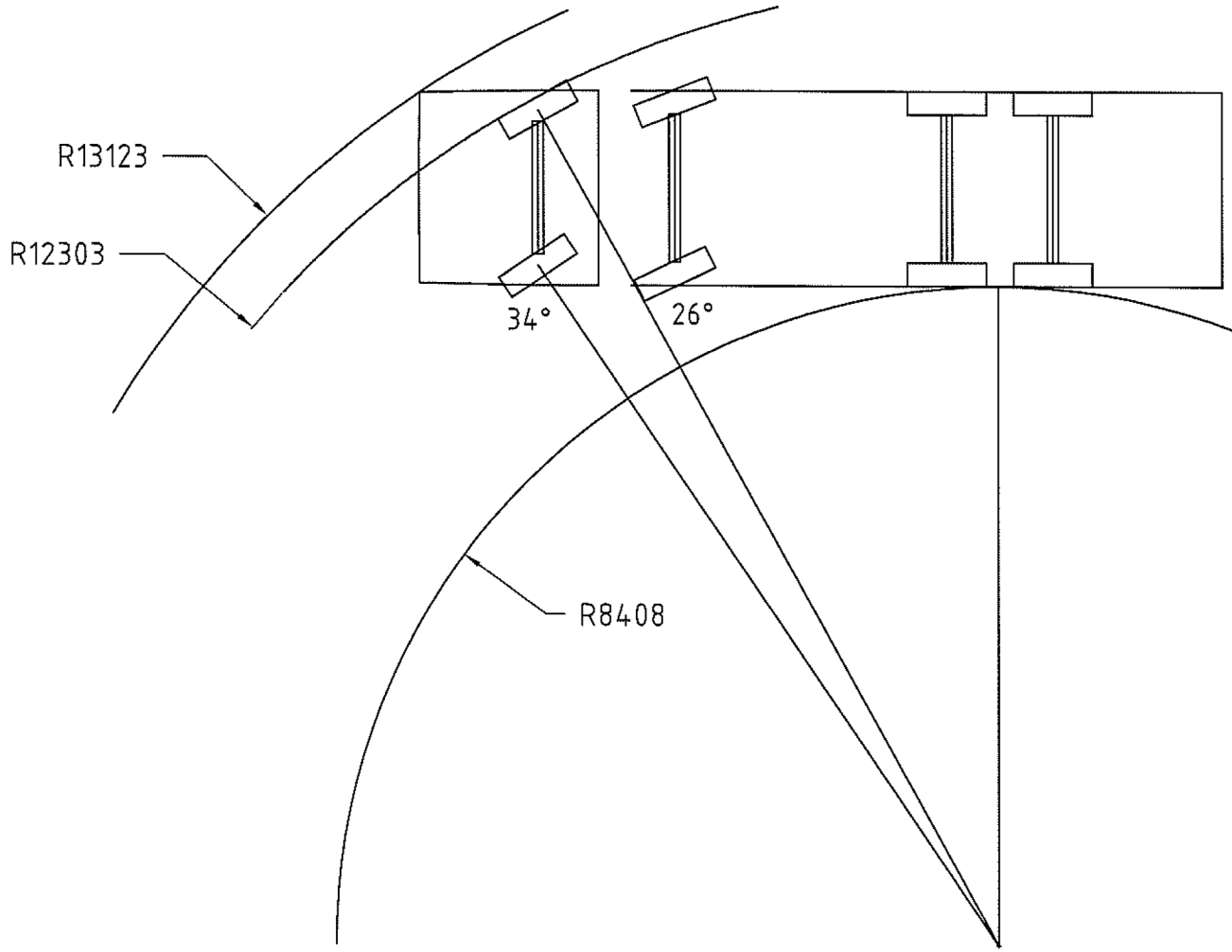
City of Gold Coast front lift refuse vehicle specifications.



"REFERANCE DIMENSIONS"

- TRAVEL HEIGHT = 4.3m
- MAXIMUM WEIGHT. =27.5t
- MAXIMUM WORKING HEIGHT = 6.35m
- MAXIMUM WIDTH. = 2.49m

8x4 Overhead Loader
Overall Dimensions



"TURNING RADIUS"

- Kerb to Kerb=12.3 meters
- Wall to Wall=13.2 meters
- Inside Radius =8.4 meters

8x4 Overhead Loader
Turning diagram

ITEM	DRAWING or PART No.	ITEM DESCRIPTION	PRODUCT	MATERIAL DESCRIPTION	LENGTH	MATERIAL	QTY	REMARKS

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

8.2.14 Regional infrastructure overlay code

8.2.14.1 Application

This code applies to assessing material change of use, reconfiguring a lot or operational work for development subject to the Regional infrastructure overlay and the State controlled roads, rail corridor and transport noise corridors overlay where indicated within **Part 5.10 Categories of development and assessment – Overlays**.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3** in **Part 5**.

Note: For the purpose of this code, the term 'noise' encompasses road traffic noise, road construction noise and road maintenance noise.

8.2.14.2 Purpose

(1) The purpose of the Regional infrastructure overlay code is to:

- (a) ensure that development is compatible with, and does not adversely affect the viability, integrity, operation and maintenance of existing and planned regional infrastructure, including:
  - (i) high voltage electricity transmission lines and substations;
  - (ii) water supply pipelines and infrastructure;
  - (iii) state-controlled roads; and
  - (iv) railways.
- (b) regulate development of properties adjacent to all state-controlled roads or near rail operations to ensure that potential conflicts between sensitive land uses are mitigated.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) Existing and planned regional infrastructure facilities, networks and corridors are protected from incompatible development.

(b) Development adjacent to existing and planned regional infrastructure facilities, networks and corridors:

(i) is appropriately located, designed, constructed and operated to avoid compromising the integrity, operational efficiency and maintenance of regional infrastructure;

(ii) protect the amenity, health and safety of people and property.

(c) Sensitive land uses (excluding Office, Relocatable home park, Short-term accommodation and Tourist park) proposed to be located adjacent to a state-controlled road or located within 100m of the Gold Coast rail corridor are appropriately attenuated.

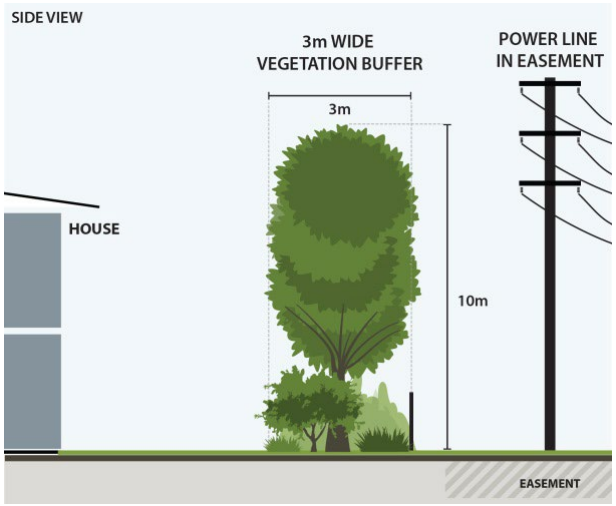
(d) The number of people exposed to potential adverse impacts emanating from regional infrastructure is minimised.

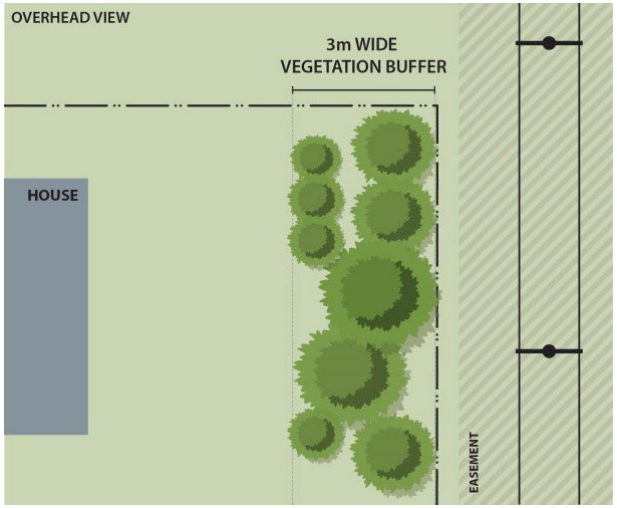
8.2.14.3 Specific benchmarks for assessment

PART B – ASSESSABLE DEVELOPMENT BENCHMARKS

Table 8.2.14-2: Regional infrastructure overlay code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Setbacks **Where directly abutting the existing Energex Ferry Road 110kV high voltage electricity corridor, Southport between Bundall Substation (Lot 1, 2 and 3 on RP89651) and Southport Substation (Lot 1 on RP801646 and Lot 893 on SP191060)**			
PO1 Development does not compromise the integrity, functionality, access to or efficient delivery of the electricity corridor.	**AO1** Front boundary setbacks are as follows: (a) Medium density residential zone – 4m (where the building height is no greater than 9m), otherwise 6m. (b) Mixed use, Neighbourhood centre and Centre zones – 2m (where the building height is no greater than 9.5m), otherwise 6m.	**AO1 NOT APPLICABLE**	
Major electricity infrastructure			
PO2 Sensitive land uses are appropriately located to ensure	**AO2** Buildings and outdoor use areas associated with a sensitive land use are setback from the closest boundary	**AO2 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
the amenity, health and safety of people and property are protected, and to avoid compromising the integrity, operational efficiency and maintenance of regional infrastructure.	of an easement for, or an area otherwise affected by, a high voltage electricity line corridor, in accordance with the following: (a) 20m for transmission lines up to 132kV; (b) 30m for transmission lines between 133kV and 275kV; and (c) 40m for transmission lines exceeding 275kV.		
PO3 There is sufficient space within the site to establish landscaping which substantively assists in screening and softening obtrusive high voltage electricity lines and substations.	**AO3** A minimum 3m wide densely planted landscaped buffer is provided along the boundary adjoining high voltage electricity lines and/or substations, including provision for advanced trees and shrubs that will grow to a minimum height of 10m. 	**AO3 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
			
PO4 High voltage electricity lines on private land are included in an easement.	**AO4** Existing infrastructure easements are maintained and where none currently exist, new easements are created which are sufficient for the electricity provider's requirements.	**AO4 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Water supply infrastructure			
PO5 Development within a water supply pipeline buffer: (a) is located, designed and constructed to protect the integrity of the water supply pipeline; and (b) maintains adequate access for any required maintenance or upgrading work to the water supply pipeline.	**AO5** Buildings and structures are located outside of the water supply pipeline buffer area, as identified on a **Regional infrastructure overlay map**.	**AO5 COMPLIES** The site is located outside of the water supply pipeline buffer area.	
PO6 Development is located and designed to maintain required access to water supply infrastructure.	**AO6** Development does not restrict access to water supply infrastructure of any type or size, having regard to: (a) buildings or structures; (b) gates and fences; (c) storage of equipment or materials; and (d) landscaping, earthworks, stormwater or other infrastructure.	**AO6 COMPLIES** The proposed development will not restrict access to any water supply infrastructure of any type or size.	
Protection from road traffic and rail noise			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO7 Development mitigates noise intrusion to provide acceptable levels of amenity for occupants of the development.	**AO7** All sensitive land uses (excluding Office, Relocatable home park, Short-term accommodation and Tourist park) comply with the Design level – road and rail noise criteria identified in **Table 8.2.14-3: Design level – road and rail noise criteria** through the implementation of 1 or more of the following noise attenuation measures: (a) the use of earth mounds and noise barrier fences, between the noise source and the sensitive land use; and/or (b) the use of appropriate buffer distances between the noise source and the sensitive land use.	**AO7 COMPLIES** Refer to Acoustic Report prepared by Acoustic Works	
PO8 Noise barriers are designed to mitigate impacts on visual amenity.	**AO8** Noise barriers are set back from the property boundary and adequately screened with dense landscaping.	**AO8 COMPLIES** Refer to Acoustic Report prepared by Acoustic Works	
Lot design (for subdivision only)			
PO9 Reconfiguration of lots does not compromise or adversely impact upon the efficiency and integrity of major electricity and water supply infrastructure networks.	**AO9** Urban residential lots and buildings and structures are not located within an easement for, or an area otherwise affected by, a high voltage electricity transmission line or water supply pipeline as identified on the **Regional infrastructure overlay map**.	**AO9 NOT APPLICABLE**	
PO10 Reconfiguring of lots ensures that access requirements of major electricity and water supply infrastructure are maintained.	**AO10** Major electricity or water supply infrastructure traversing or within private land are protected by an easement in favour of the service provider for access and maintenance.	**AO10 NOT APPLICABLE**	

Table 8.2.14-3: Design level – road and rail noise criteria

Measurement location	Design level road noise criteria
1m in front of the most exposed part of a proposed sensitive land use	**For road noise** (a) 60 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are greater than 40 dB (A) L^{90} (8 hour) between 10pm and 6am. (L^{10} (18 hour) is the arithmetic average of 18 hourly L^{10} levels measured in dB (A) between the hours of 6am and midnight). (b) 57 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are less than or equal to 40 dB (A) L^{90} (8 hour) between 10pm and 6am. (c) Where the above criteria cannot be met, internal maximum design criterion levels specified in *Table 1 AS/NZS 2107:2016 Acoustics–Recommended design sound levels and reverberation times for building interiors* apply, particularly for buildings greater than 1 storey high. **For rail noise** (a) 65 dB (A), assessed as the 24-hour average equivalent continuous A-weighted sound pressure level; (b) 87 dB (A), assessed as a single event maximum sound pressure level.
Balconies and formal external open space	**For road noise** (a) 60 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are greater than 45 dB (A) L^{90} (18 hour). (b) 57 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are less than or equal to 45 dB (A) L^{90} (18 hour).
Classrooms and meeting rooms	**For road noise** (a) 48 dB (A) L^{10} (1 hour) or less, as measured or calculated (in the centre of the room) as an indoor level between the hours of 8am and 4pm.
Inside bedrooms, living areas and noise-sensitive areas of non-residential uses (e.g. classrooms)	**For rail noise** Average Lmax (10pm to 6am) not greater than 50 dB (A).
External formal living area	**For rail noise** LAeq (1hr) (6am to 10pm) not greater than 55 dB (A).

Notes: Road noise criteria

(1) For the measurements above, all external levels stated are free field, and the expectation is that an additional 2.5 dB (A) increase is applied for the façade correction when the building is constructed. This will achieve a level equal to, or less than, 63 dB (A) and 60 dB (A), respectively, 1m from the most exposed façade of a building.

(2) The calculation and prediction of road noise levels is to be in accordance with the *Road Traffic Noise Management Code of Practice 2008*, published by the Queensland Department of Main Roads, and measurement is to be in accordance with *AS 2702–1984: Acoustics – Methods for the measurement of road traffic noise*. Alternative road traffic noise prediction models may be used where they can be justified as being appropriate to the circumstances of the particular situation and location and have been validated for Australian conditions.

(3) An assessment of road traffic noise is to be based on an ultimate ten-year traffic plan for the road, from the completion of construction of the development.

(4) The determination of building construction, siting and design measures required to achieve internal noise levels shall be in accordance with *AS 2107:2016 Acoustics–Recommended design sound levels and reverberation times for building interiors* and *AS 3671:1989 Acoustics – Road traffic noise intrusions – Building siting and construction*. Alternative methods may be used where they can be justified as being appropriate to the circumstances of the particular situation and location.

(5) When the requirements of *AS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors* and *AS 3671:1989 Acoustics – Road traffic noise intrusions – Building siting and construction* need to be achieved, the developer/owner shall engage the service of an acoustic engineer to certify (RPEQ) that the architectural measures (including air conditioning) have been incorporated into the building envelope. This will require the engineer to undertake inspections both during and at the end of construction.

Notes: Rail noise criteria

(1) For the purposes of this overlay, LAeq (1hr) (6am to 10pm) represents the highest 1 hour equivalent continuous A-weighted sound pressure level between 6am and 10pm. The LAeq (1hr) is to be calculated from the highest four consecutive 15 minute samples, and is not restricted to measurement from the hour.

(2) For the purpose of this overlay, the average Lmax (10pm to 6am) represents the average of the A-weighted maximum sound pressure levels of train pass-by events between 10pm and 6am.

(3) The calculation and prediction of rail noise levels is to be in accordance with the requirements of the *Queensland Rail Code of Practice – Rail Noise Management*. Alternative rail noise prediction methods may be used where they can be justified as being appropriate to the circumstances of the particular situation and location.

(4) An assessment of rail noise is to be based on the ultimate traffic flow for the railway. If such data does not exist, a 10-year planning projection is to be used.

(5) The external formal living area criteria represent the rail noise level to be achieved, whether free field or non-free field. A correction of plus 2.5 dB(A) for facade reflection is to be included in the calculation, where appropriate.

(6) External areas exceeding the design level criteria for the external the formal living area(s) will not be considered as external formal living.

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

8.2.14 Regional infrastructure overlay code

8.2.14.1 Application

This code applies to assessing material change of use, reconfiguring a lot or operational work for development subject to the Regional infrastructure overlay and the State controlled roads, rail corridor and transport noise corridors overlay where indicated within **Part 5.10 Categories of development and assessment – Overlays**.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3** in **Part 5**.

Note: For the purpose of this code, the term 'noise' encompasses road traffic noise, road construction noise and road maintenance noise.

8.2.14.2 Purpose

(1) The purpose of the Regional infrastructure overlay code is to:

- (a) ensure that development is compatible with, and does not adversely affect the viability, integrity, operation and maintenance of existing and planned regional infrastructure, including:
  - (i) high voltage electricity transmission lines and substations;
  - (ii) water supply pipelines and infrastructure;
  - (iii) state-controlled roads; and
  - (iv) railways.
- (b) regulate development of properties adjacent to all state-controlled roads or near rail operations to ensure that potential conflicts between sensitive land uses are mitigated.

(2) The purpose of the code will be achieved through the following overall outcomes:

(a) Existing and planned regional infrastructure facilities, networks and corridors are protected from incompatible development.

(b) Development adjacent to existing and planned regional infrastructure facilities, networks and corridors:

(i) is appropriately located, designed, constructed and operated to avoid compromising the integrity, operational efficiency and maintenance of regional infrastructure;

(ii) protect the amenity, health and safety of people and property.

(c) Sensitive land uses (excluding Office, Relocatable home park, Short-term accommodation and Tourist park) proposed to be located adjacent to a state-controlled road or located within 100m of the Gold Coast rail corridor are appropriately attenuated.

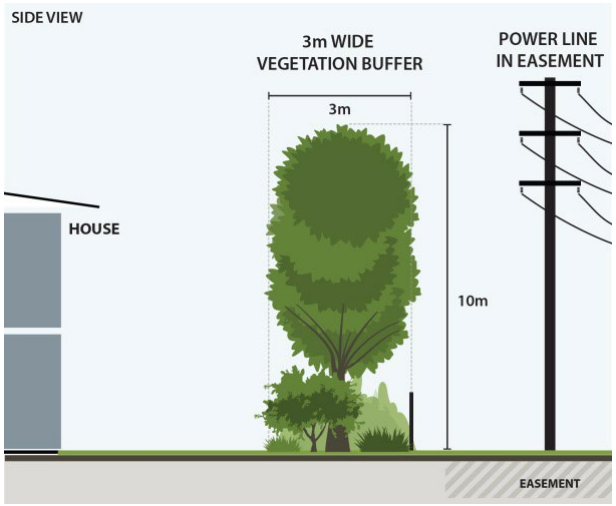
(d) The number of people exposed to potential adverse impacts emanating from regional infrastructure is minimised.

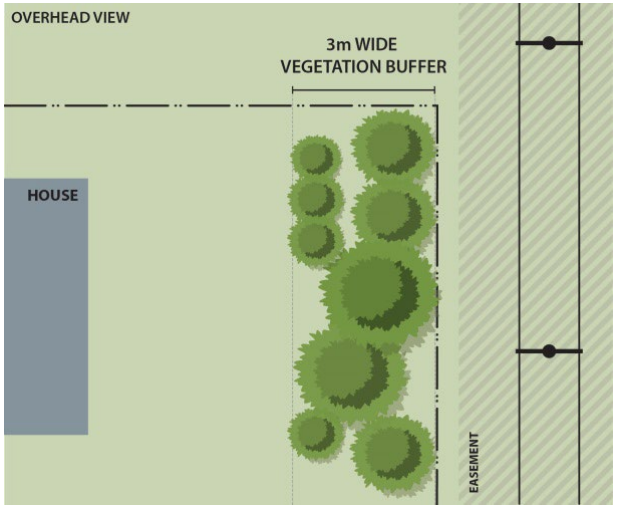
8.2.14.3 Specific benchmarks for assessment

PART B – ASSESSABLE DEVELOPMENT BENCHMARKS

Table 8.2.14-2: Regional infrastructure overlay code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Setbacks **Where directly abutting the existing Energex Ferry Road 110kV high voltage electricity corridor, Southport between Bundall Substation (Lot 1, 2 and 3 on RP89651) and Southport Substation (Lot 1 on RP801646 and Lot 893 on SP191060)**			
PO1 Development does not compromise the integrity, functionality, access to or efficient delivery of the electricity corridor.	**AO1** Front boundary setbacks are as follows: (a) Medium density residential zone – 4m (where the building height is no greater than 9m), otherwise 6m. (b) Mixed use, Neighbourhood centre and Centre zones – 2m (where the building height is no greater than 9.5m), otherwise 6m.	**AO1 NOT APPLICABLE**	
Major electricity infrastructure			
PO2 Sensitive land uses are appropriately located to ensure	**AO2** Buildings and outdoor use areas associated with a sensitive land use are setback from the closest boundary	**AO2 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
the amenity, health and safety of people and property are protected, and to avoid compromising the integrity, operational efficiency and maintenance of regional infrastructure.	of an easement for, or an area otherwise affected by, a high voltage electricity line corridor, in accordance with the following: (a) 20m for transmission lines up to 132kV; (b) 30m for transmission lines between 133kV and 275kV; and (c) 40m for transmission lines exceeding 275kV.		
PO3 There is sufficient space within the site to establish landscaping which substantively assists in screening and softening obtrusive high voltage electricity lines and substations.	**AO3** A minimum 3m wide densely planted landscaped buffer is provided along the boundary adjoining high voltage electricity lines and/or substations, including provision for advanced trees and shrubs that will grow to a minimum height of 10m. 	**AO3 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
			
PO4 High voltage electricity lines on private land are included in an easement.	**AO4** Existing infrastructure easements are maintained and where none currently exist, new easements are created which are sufficient for the electricity provider's requirements.	**AO4 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Water supply infrastructure			
PO5 Development within a water supply pipeline buffer: (a) is located, designed and constructed to protect the integrity of the water supply pipeline; and (b) maintains adequate access for any required maintenance or upgrading work to the water supply pipeline.	**AO5** Buildings and structures are located outside of the water supply pipeline buffer area, as identified on a **Regional infrastructure overlay map**.	**AO5 COMPLIES** The site is located outside of the water supply pipeline buffer area.	
PO6 Development is located and designed to maintain required access to water supply infrastructure.	**AO6** Development does not restrict access to water supply infrastructure of any type or size, having regard to: (a) buildings or structures; (b) gates and fences; (c) storage of equipment or materials; and (d) landscaping, earthworks, stormwater or other infrastructure.	**AO6 COMPLIES** The proposed development will not restrict access to any water supply infrastructure of any type or size.	
Protection from road traffic and rail noise			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO7 Development mitigates noise intrusion to provide acceptable levels of amenity for occupants of the development.	**AO7** All sensitive land uses (excluding Office, Relocatable home park, Short-term accommodation and Tourist park) comply with the Design level – road and rail noise criteria identified in **Table 8.2.14-3: Design level – road and rail noise criteria** through the implementation of 1 or more of the following noise attenuation measures: (a) the use of earth mounds and noise barrier fences, between the noise source and the sensitive land use; and/or (b) the use of appropriate buffer distances between the noise source and the sensitive land use.	**AO7 COMPLIES** Refer to Acoustic Report prepared by Acoustic Works	
PO8 Noise barriers are designed to mitigate impacts on visual amenity.	**AO8** Noise barriers are set back from the property boundary and adequately screened with dense landscaping.	**AO8 COMPLIES** Refer to Acoustic Report prepared by Acoustic Works	
Lot design (for subdivision only)			
PO9 Reconfiguration of lots does not compromise or adversely impact upon the efficiency and integrity of major electricity and water supply infrastructure networks.	**AO9** Urban residential lots and buildings and structures are not located within an easement for, or an area otherwise affected by, a high voltage electricity transmission line or water supply pipeline as identified on the **Regional infrastructure overlay map**.	**AO9 NOT APPLICABLE**	
PO10 Reconfiguring of lots ensures that access requirements of major electricity and water supply infrastructure are maintained.	**AO10** Major electricity or water supply infrastructure traversing or within private land are protected by an easement in favour of the service provider for access and maintenance.	**AO10 NOT APPLICABLE**	

Table 8.2.14-3: Design level – road and rail noise criteria

Measurement location	Design level road noise criteria
1m in front of the most exposed part of a proposed sensitive land use	**For road noise** (a) 60 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are greater than 40 dB (A) L^{90} (8 hour) between 10pm and 6am. (L^{10} (18 hour) is the arithmetic average of 18 hourly L^{10} levels measured in dB (A) between the hours of 6am and midnight). (b) 57 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are less than or equal to 40 dB (A) L^{90} (8 hour) between 10pm and 6am. (c) Where the above criteria cannot be met, internal maximum design criterion levels specified in *Table 1 AS/NZS 2107:2016 Acoustics–Recommended design sound levels and reverberation times for building interiors* apply, particularly for buildings greater than 1 storey high. **For rail noise** (a) 65 dB (A), assessed as the 24-hour average equivalent continuous A-weighted sound pressure level; (b) 87 dB (A), assessed as a single event maximum sound pressure level.
Balconies and formal external open space	**For road noise** (a) 60 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are greater than 45 dB (A) L^{90} (18 hour). (b) 57 dB (A) L^{10} (18 hour) or less, where existing levels measured at the setback for the zone are less than or equal to 45 dB (A) L^{90} (18 hour).
Classrooms and meeting rooms	**For road noise** (a) 48 dB (A) L^{10} (1 hour) or less, as measured or calculated (in the centre of the room) as an indoor level between the hours of 8am and 4pm.
Inside bedrooms, living areas and noise-sensitive areas of non-residential uses (e.g. classrooms)	**For rail noise** Average Lmax (10pm to 6am) not greater than 50 dB (A).
External formal living area	**For rail noise** LAeq (1hr) (6am to 10pm) not greater than 55 dB (A).

Notes: Road noise criteria

(1) For the measurements above, all external levels stated are free field, and the expectation is that an additional 2.5 dB (A) increase is applied for the façade correction when the building is constructed. This will achieve a level equal to, or less than, 63 dB (A) and 60 dB (A), respectively, 1m from the most exposed façade of a building.

(2) The calculation and prediction of road noise levels is to be in accordance with the *Road Traffic Noise Management Code of Practice 2008*, published by the Queensland Department of Main Roads, and measurement is to be in accordance with *AS 2702–1984: Acoustics – Methods for the measurement of road traffic noise*. Alternative road traffic noise prediction models may be used where they can be justified as being appropriate to the circumstances of the particular situation and location and have been validated for Australian conditions.

(3) An assessment of road traffic noise is to be based on an ultimate ten-year traffic plan for the road, from the completion of construction of the development.

(4) The determination of building construction, siting and design measures required to achieve internal noise levels shall be in accordance with *AS 2107:2016 Acoustics–Recommended design sound levels and reverberation times for building interiors* and *AS 3671:1989 Acoustics – Road traffic noise intrusions – Building siting and construction*. Alternative methods may be used where they can be justified as being appropriate to the circumstances of the particular situation and location.

(5) When the requirements of *AS 2107:2016 Acoustics – Recommended design sound levels and reverberation times for building interiors* and *AS 3671:1989 Acoustics – Road traffic noise intrusions – Building siting and construction* need to be achieved, the developer/owner shall engage the service of an acoustic engineer to certify (RPEQ) that the architectural measures (including air conditioning) have been incorporated into the building envelope. This will require the engineer to undertake inspections both during and at the end of construction.

Notes: Rail noise criteria

(1) For the purposes of this overlay, LAeq (1hr) (6am to 10pm) represents the highest 1 hour equivalent continuous A-weighted sound pressure level between 6am and 10pm. The LAeq (1hr) is to be calculated from the highest four consecutive 15 minute samples, and is not restricted to measurement from the hour.

(2) For the purpose of this overlay, the average Lmax (10pm to 6am) represents the average of the A-weighted maximum sound pressure levels of train pass-by events between 10pm and 6am.

(3) The calculation and prediction of rail noise levels is to be in accordance with the requirements of the *Queensland Rail Code of Practice – Rail Noise Management*. Alternative rail noise prediction methods may be used where they can be justified as being appropriate to the circumstances of the particular situation and location.

(4) An assessment of rail noise is to be based on the ultimate traffic flow for the railway. If such data does not exist, a 10-year planning projection is to be used.

(5) The external formal living area criteria represent the rail noise level to be achieved, whether free field or non-free field. A correction of plus 2.5 dB(A) for facade reflection is to be included in the calculation, where appropriate.

(6) External areas exceeding the design level criteria for the external the formal living area(s) will not be considered as external formal living.

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

9.4.4 General development provisions code

9.4.4.1 Application

The code applies to assessing material change of use, building work, reconfiguring a lot or operational work where indicated within **Part 5 Tables of assessment**.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3**, in **Part 5**.

9.4.4.2 Purpose

(1) The purpose of the General development provisions code is to provide a consistent approach to city wide issues and avoid duplication of regulation throughout the City Plan.

(2) The purpose of the code will be achieved through the following overall outcomes:

- (a) Development is designed to maintain the expected level of amenity for the area.
- (b) Development promotes a safe environment and reduces the potential for crime.
- (c) Development is designed to respect the natural values of the land, including vegetation, natural topography and development on steep slopes to minimise impacts on the landscape character of the city's rural, urban and hinterland areas.
- (d) Development does not result in unsightly retaining walls.
- (e) Building services and storage areas are designed and located to avoid nuisance to adjoining premises and avoid an unattractive appearance when viewed from the street.
- (f) Development does not cause adverse stormwater drainage impacts on or off the site.

(g) Development is connected to essential services and public utilities in accordance with infrastructure provider requirements.

(h) Development is designed and located to ensure it does not adversely impact on Council infrastructure.

9.4.4.3 Specific benchmarks for assessment

PART B – ASSESSABLE DEVELOPMENT BENCHMARKS

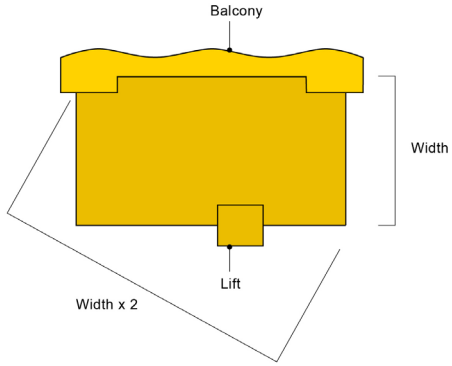
Table 9.4.4-2: General development provisions code – for assessable development

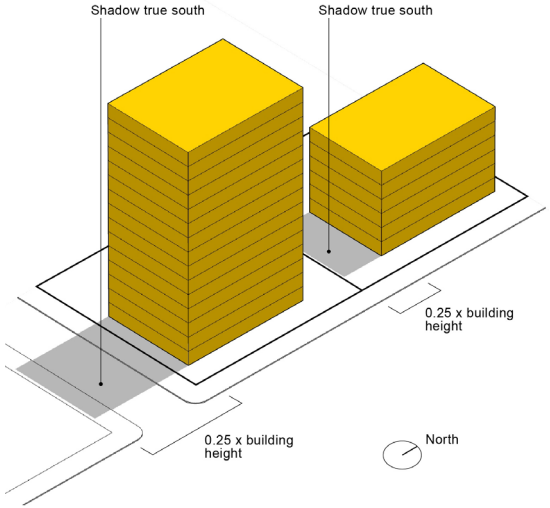
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Amenity protection			
PO1 Development mitigates any negative effects to amenity, health and safety from existing surrounding activities having regard to: (a) noise; (b) hours of operation; (c) traffic; (d) signage; (e) visual amenity; (f) wind effects; (g) privacy; (h) vibration; (i) contaminated substances; (j) hazardous chemicals; (k) odour and emissions; and (l) safety.	**AO1** No acceptable outcome provided.	**PO1 COMPLIES** The proposed Multiple Dwelling is a residential development located within a residential zoned area. There are no anticipated impacts from surrounding activities that would affect the development in terms of amenity, health, or safety. ▪ Hours of Operation: The hours of operation will align with those typical of a residential building. ▪ Signage: There will be no signage that negatively affects the surrounding area. ▪ Visual Amenity: The building will be visually attractive and appropriate for its surroundings. ▪ Privacy: The privacy of both the residents within the development and those in the surrounding area will be protected and maintained. ▪ Vibration: The development will not emit any vibrations that could affect the surrounding area. ▪ Contaminants and Emissions: There will be no release of contaminated substances, hazardous chemicals, odours, or emissions from the development. ▪ Safety: Safety measures will be thoroughly implemented and maintained. The enclosed specialist reports will provide further details on the following Noise, Traffic and Wind. Overall, the development is designed to integrate seamlessly into the residential area, ensuring a high	

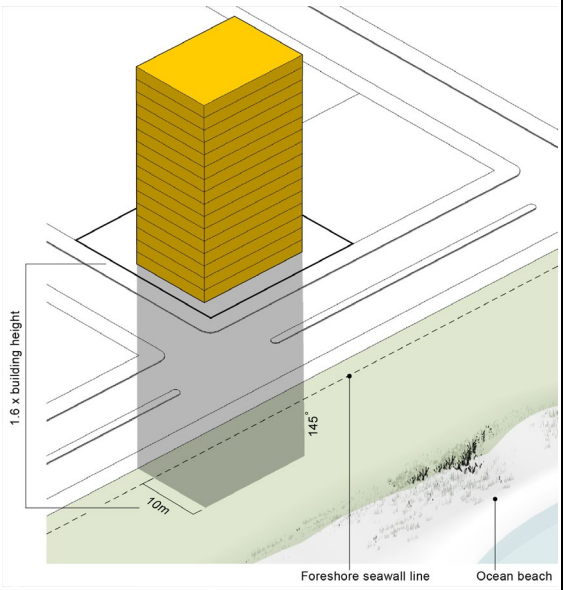
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
		standard of living for its residents and minimal impact on the surrounding community.	
PO2 The proposed development prevents loss of amenity and threats to health and safety, having regard to: (a) noise; (b) hours of operation; (c) traffic; (d) signage; (e) visual amenity; (f) wind effects; (g) privacy; (h) vibration; (i) contaminating substances; (j) hazardous chemicals; (k) odour and emissions; and (l) safety.	**AO2** No acceptable outcome provided.	**PO2 COMPLIES** The proposed Multiple Dwelling development effectively prevents loss of amenity and mitigates threats to health and safety by addressing the following considerations: ▪ Noise: The development will adhere to noise regulations, ensuring minimal impact on the surrounding area. Detailed analysis is provided in the enclosed Noise Report ▪ Hours of Operation: The hours of operation will be consistent with those expected of a residential building, ensuring no disruption to the surrounding community. ▪ Traffic: Traffic impact has been carefully assessed, with findings detailed in the enclosed Traffic Report ▪ Signage: There will be no signage that negatively affects the surrounding area. ▪ Visual Amenity: The building will be visually attractive and appropriate for its surroundings, enhancing the overall aesthetic of the area. ▪ Wind Effects: Wind effects have been analysed to ensure they do not negatively impact the development or surrounding areas. Detailed findings are provided in the enclosed Wind Effects Report ▪ Privacy: The privacy of both the residents within the development and those in the surrounding area will be protected and maintained through thoughtful design and placement. ▪ Vibration: The development will not emit any vibrations that could affect the surrounding area. ▪ Contaminating Substances: There will be no release of contaminated substances from the	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
		development. ▪ Hazardous Chemicals: The development will not involve the use or storage of hazardous chemicals. ▪ Odour and Emissions: There will be no odours or emissions from the development that could impact the surrounding area. ▪ Safety: Comprehensive safety measures will be implemented and maintained to ensure the well-being of all residents and the surrounding community. Overall, the proposed development is designed to integrate seamlessly into the residential area, ensuring a high standard of living for its residents and minimal impact on the surrounding community.	
Development along the Pacific Motorway and heavy railway line			
PO3 Development adjacent to the Pacific Motorway and heavy railway line minimises views of the storage of outdoor plant and equipment, including service areas to provide an attractive outlook for persons using the transport network.	**AO3** Where the site is adjacent to the Pacific Motorway or a heavy rail line, areas used for outdoor storage, including service areas are screened from view from users of the motorway or heavy rail line by buildings, solid fencing or vegetation.	**AO3 NOT APPLICABLE**	
Landscaping			
PO4 The proposal provides landscape work that protects and enhances the character of the local area.	**AO4.1** For all development except dwelling houses, dual occupancies, caretaker's accommodation and community residences a Statement of Landscape Intent prepared in accordance with **SC6.13 City Plan policy – Landscape work** demonstrating that the landscaping will provide amenity for site users and will protect and enhance the character of the local area. **AO4.2** An Open Space Management Statement is	**AO4.1-4.2 COMPLIES** A Statement of Landscape Intent has been prepared by Urbis, in accordance with *SC6.13 City Plan policy – Landscape work*.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	prepared in accordance with **SC6.13 City Plan policy – Landscape work** where landscape works are proposed to be undertaken on land that is or is intended to be, public open space.		
Building services			
PO5 All mechanical equipment is located and housed so as not to cause disturbance to residents within or adjoining the development.	**AO5** **For all development except dwelling houses, dual occupancies, caretaker's accommodation and community residences:** The mechanical equipment, including air-conditioning plant and swimming pool pumps, is incorporated within the building. OR The mechanical equipment, including air-conditioning plant and swimming pool pumps, is housed external to the principal building and: (a) is contained within a solid structure; and (b) located no closer than 1.5m to any site boundary.	**AO5 COMPLIES** All of the associated mechanical equipment for the proposed development has been integrated appropriately within the architectural plans.	
Casual surveillance and lighting			
PO6 Development facilitates casual surveillance of public areas and incorporates lighting to reduce opportunities for crime.	**AO6** No acceptable outcome provided.	**PO6 COMPLIES** Each unit in the development is afforded private open space in the form of a balcony, and also communal open space. These areas provide opportunity to overlook the street, facilitating casual surveillance.	
Lighting			
PO7 Lighting associated with any development does not cause a nuisance.	**AO7** Direct or reflected light emissions from the premises must be positioned and shielded to prevent light spillage outside the boundaries of the site.	**AO7 COMPLIES** The proposed developments' lighting is positioned in such a way that it is shielded to prevent light spillage outside the boundaries of the site.	
Shadow impacts – for all development 3 or more storeys			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO8 The building is designed and located to ensure that the shadow cast by the building does not detract from a comfortable living and ground level environment and the access of adequate sunlight to private and public spaces having regard to: (a) the degree of containment of the shadow on the subject site at different times of the day on the summer and winter solstice and spring and autumn equinox; (b) the cumulative impact of the shadow and existing shadows; (c) the effect of the shadow on the ocean beach, Broadwater foreshore, or riverside or beachside public open space; (d) the location of the shadow on non-residential areas external to the site; and (e) the effect of the shadow on any other site or other building.	**AO8.1** The width of the shadow cast in any direction by each level of the building, excluding balconies and lift wells, does not exceed twice the width of the shadow cast in any other direction.  **Figure 9.4.4-1** Illustration showing width ratio shadow outcome	**PO8 COMPLIES** Refer to **Section 6** of the Town Planning Report.	
	AO8.2 The shadow cast by the building in a true south direction has a length 0.25 times the height of the building, as measured from ground level adjacent to the southern side of the subject building to the top of the topmost storey, and does not intrude onto any other site, or does not cast shadow onto any other building on the same site.	**PO8 COMPLIES** Refer to the Town Planning Report.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	 **Figure 9.4.4-2** Illustration showing southern shadow outcome		
	AO8.3 **Bermuda Point precinct** The shadow cast by the building in a true south direction has a length 0.25 times the height of the building, as measured from the top of the podium adjacent to the southern side of the subject building to the top of the topmost storey, and does not intrude onto any other site, or does not cast shadow onto any other building on the same site. **Note: The podium is excluded from any southern shadow calculations.**	**AO8.3 NOT APPLICABLE**	
	AO8.4 The shadow cast by any building does not cover any part of the ocean beach or Broadwater foreshore when the shadow has a bearing of 145° east of true north and the length of the shadow is	**AO8.4 COMPLIES** The proposed development does not create any shadows on any part of the ocean beach or Broadbeach foreshore.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	1.6 times the height of the building as measured from the ground level to the top of the topmost storey. **Note: For the purpose of this acceptable outcome, the ocean beach is defined as that area east of a line 10m east of and parallel to the foreshore seawall line and the Broadwater foreshore is defined as that area east of the leading edge of the revetment wall.**  **Figure 9.4.4-3** Illustration showing ocean beach and Broadwater foreshore shadow outcome		
	AO8.5 The shadow cast by the building in the direction of true south does not intrude more than 10m into a riverside public open space reserve.	**AO8.5 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Earthworks and treatment of retaining walls			
PO9 Earthworks and retaining walls associated with the development do not create a negative visual impact upon neighbouring properties or the streetscape.	**AO9** Retaining walls and batters comply with the requirements of **SC6.12 City Plan policy – Land development guidelines, Section 3 – Change to ground level standards**.	**AO9 WILL COMPLY** Any retaining walls and batters will comply with the City Plan policy.	
Stormwater drainage			
PO10 Development does not cause adverse stormwater drainage impacts on or off the site.	**AO10** All development incorporates stormwater drainage works to comply with the requirements of **SC6.12 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design standards**.	**AO10 COMPLIES** Stormwater drainage system will comply with the requirements of *SC6.12 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design standards*. Please refer to the Stormwater Management Plan prepared by OSKA Consulting Group	
Infrastructure			
PO11 All development ensures connection to public utilities to meet the needs of the development, including sewer, water, electricity and communications services.	**AO11** All development is provided with services, as follows: (a) electricity supply and communication services (b) reticulated water supply, when within the mapped 'water supply service area' identified in the Local government infrastructure plan, and not located in the Conservation, Extractive industry, Major tourism (Island resorts precinct), Open space or Rural zones (c) reticulated sewer network, when within the mapped 'wastewater service area' identified in the Local government infrastructure plan, and not located in the Conservation, Extractive industry, Major tourism (Island resorts precinct), Open space, Rural or Rural residential zones.	**AO11 COMPLIES** Services to the site such as electricity and communication, water supply, and sewer network are all existing. The development will be afforded access to these services.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO12 Development is undertaken in accordance with the Performance Criteria specified in the *Queensland Development Code MP1.4 – Building over or near relevant infrastructure*.	**AO12** Development is undertaken in accordance with the Acceptable Solutions specified in the *Queensland Development Code MP1.4 – Building over or near relevant infrastructure*.	**AO12 COMPLIES** Development will be undertaken in accordance with the Acceptable Solutions specified in the *Queensland Development Code MP1.4 – Building over or near relevant infrastructure*.	
Site analysis			
PO13 Development is designed to: (a) complement the character and address any impacts on the amenity and environment of the local area; (b) avoid any risk to life or property arising from natural hazards; and (c) protect significant natural habitat areas, wildlife corridors, wetlands and waterway corridors.	**AO13** A site analysis plan is prepared in accordance with **SC6.14 City Plan policy – Site analysis**.	**AO13 COMPLIES** The site will be prepared in accordance with the *SC6.14 City Plan policy – Site analysis*. Refer to the plans accompanied with this application package.	

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

9.3.9 High-rise accommodation design code

9.3.9.1 Application

This code applies to assessing material change of use for development for Multiple dwellings, Residential care facilities, Resort complexes, Retirement facilities, Rooming accommodation and Short-term accommodation uses over 32m in height where indicated within **Part 5 Tables of Assessment**.

Note: Where a development involves commercial uses, that component of the development shall be assessed against the Commercial design code.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3** in **Part 5**.

9.3.9.2 Purpose

The purpose of the High-rise accommodation design code is to responsibly encourage diverse, innovative and engaging sub-tropical high-rise forms that enhance the city skyline.

The purpose of the code will be achieved through the following overall outcomes:

(a) Development is designed to create attractive, high-quality visually appealing buildings and protect the privacy and amenity of neighbouring residential premises.

(b) Slender towers relate to existing high-rises and enhance views of the city skyline.

(c) Tower development mitigates negative visual and physical impacts through appropriate setbacks and design.

(d) Where they occur (in accordance with zone intentions), podiums are designed to engage with the street and be of a scale that is complementary to adjoining and nearby buildings.

(e) Development provides a high-standard of amenity and visual interest for users and neighbours, including a high-standard of communal and private open space.

(f) Development is designed and orientated to promote a safe environment within the site, adjoining streets and public realm.

(g) Development is complemented by high-quality landscaping that contributes to the desired character of the area.

(h) Development is designed to promote safe and convenient pedestrian and vehicle access to and from the site.

(i) Development supports the provision of diversity of housing for various types of households within the city to meet the needs of existing and future residents.

(j) Residential care facilities and retirement facilities are provided with self contained services and recreational facilities to meet the needs of residents.

(k) Development provides private and communal open spaces that respond to the subtropical climate, maximise outdoor living opportunities, enhance amenity for residents and provide engagement with streets and public open spaces.

9.3.9.3 Specific benchmarks for assessment

PART B– ASSESSABLE DEVELOPMENT BENCHMARKS

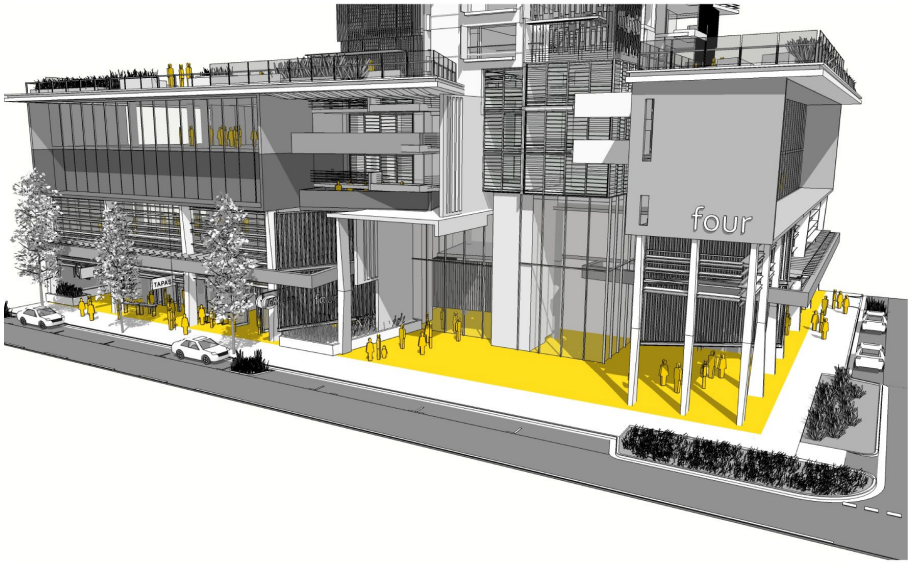
Table 9.3.9-1: High-rise accommodation design code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Tower base (podium)			
PO1 Where podiums are envisaged by the zone, tower base form respects the framework of established built form, adjacent streets, parks and public or private open spaces.	**AO1.1** Tower base heights: (a) are well-proportioned to frame adjacent park land and on-site open space; (b) match neighbouring low-set built form; or (c) are no greater than 10.5 metres in height where no neighbouring low-set built form exists.	**PO1 COMPLIES** Refer to Section 6.3 of the Town Planning Report.	

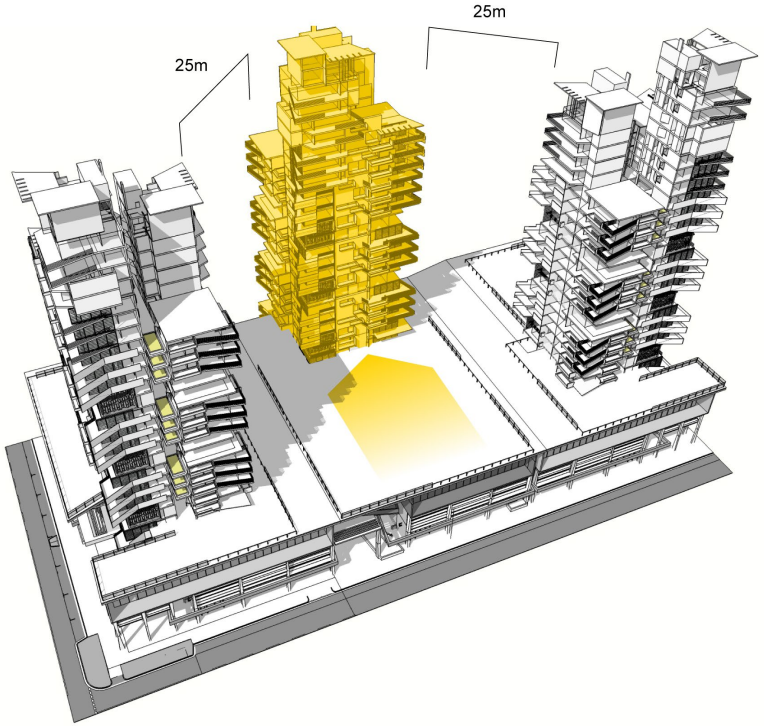
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	AO1.2 Tower base setbacks: (a) match adjacent established setbacks; and (b) continue public open space areas provided along street frontages.		
 **Figure 9.3.9-1** Illustration showing High-rise accommodation design outcome where the tower base (podium) height matches neighbouring low-set built form and match adjacent established setbacks			

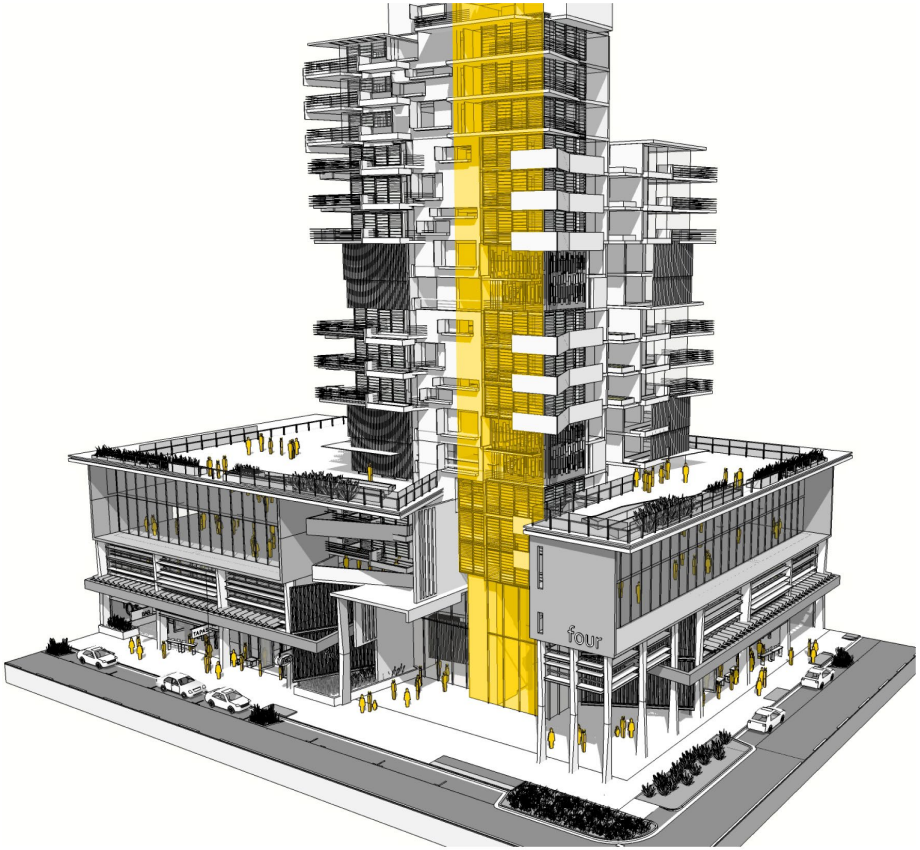
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO2 Tower base façades reinforce the intended neighbourhood character and enhance the pedestrian experience.	**AO2** Tower base façades avoid blank, featureless walls by patterning high-quality architectural elements, like window bays, canopies, and fenestration.	**AO2 COMPLIES** The proposed development will feature no blank or featureless walls. The tower base/podium will showcase exceptionally high-quality architectural elements, drawing inspiration from the traditional owners' term "Karat-Paraki," which relates to weaving or baskets. This design concept creates a visually striking, unique, and culturally significant aesthetic that enhances the development itself and the surrounding area. Landscaping at the tower base/podium will further elevate the architectural appeal, integrating structured greenery to soften the built form at street level. The distinctive centre grassed feature wall at the frontage of the site will provide a unique element to the building, as well as the subtropical plantings throughout the rest of the podium.	
 **Figure 9.3.9-2**			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Illustration showing High-rise accommodation design outcomes where the tower base facades reinforce the intended neighbourhood character and enhance the pedestrian experience with high quality architectural elements and windows			
PO3 Tower base form animates the street level by engaging primary and secondary street frontages appropriately.	**AO3.1** Where entirely residential development is proposed: (a) along the primary street frontages ground floor units are grade-separated (up to 600mm high) with soft screening landscaping and direct individual entrances; and (b) private and communal open space areas provide casual surveillance to all street frontages.	**AO3.1 COMPLIES** (a) There will be no residential units on the Ground Floor. (b) Private and communal open space areas throughout the building will provide opportunity for casual surveillance to all street frontages.	
	AO3.2 Short-term accommodation uses locate grand lobbies or other signature features along primary street frontages and prominent street corners.	**AO3.2 COMPLIES** The lobby is located at the Ground Level facing the primary street frontage being Surf Parade.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-3** Illustration showing High-rise accommodation design outcomes where the tower base form animates the street by engaging primary and secondary street frontages through the use of grand lobbies or other signature features			
Tower form design			
PO4 Slender tower form promotes: (a) open, attractive and distinct skyline; (b) small, fast moving shadows; (c) view corridors between nearby towers; (d) efficient interior climate control; and (e) balconies as an extension of indoor living space.	**AO4.1** Tower floor plate is limited to 750m^2 per tower (includes all services, lift and stairwell annex, etc.). **Note**: **Balconies are excluded from calculations to encourage larger private outdoor space areas.**	**AO4.1 COMPLIES** The approximate Tower floor plate is 556m^2, therefore well under the maximum 750m^2 allowance for area.	
	AO4.2 Tower form provides a unique profile when compared to nearby existing and proposed	**AO4.2 COMPLIES** The tower form of the proposed development presents a unique profile form compared to all nearby development in its	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	towers of similar height.	general vicinity of similar height.	
PO5 Tower form mitigates negative visual and physical impacts, including impacts on privacy, by setting back from streets, parks, open space and adjacent properties and tower forms.	**AO5.1** Tower form (including balconies) along: (a) single frontages step in at least 3m from the base (podium); or (b) corner frontages can have up to 1/3 tower width extend straight down at the corner point to reinforce the intersection if negative ground level wind effects are mitigated.	**AO5.1 COMPLIES** The proposed building fronts a single street. The tower form is stepped in 3.000m – 4.775m on all four angles.	
	AO5.2 New towers are separated a minimum distance of 25m from any existing or approved adjacent and on-site tower(s).	**AO5.2 COMPLIES** There are no towers adjacent to the proposed development, or any additional on-site towers proposed/existing.	
	AO5.3 Tower form is coordinated to off-set with adjacent existing and proposed towers to ensure: (a) prominent tower views to natural features like the beach and rivers are not obstructed; and (b) views of the sky and access to sunlight from the public realm and private open space areas are maximised.	**AO5.3 NOT APPLICABLE**	

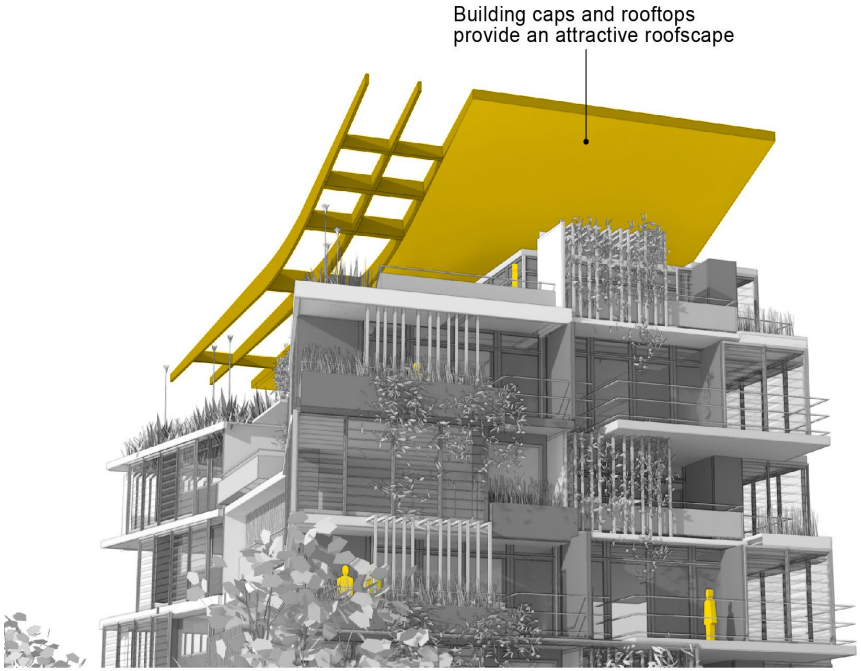
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-4** Illustration showing High-rise accommodation outcomes for separation between towers.			

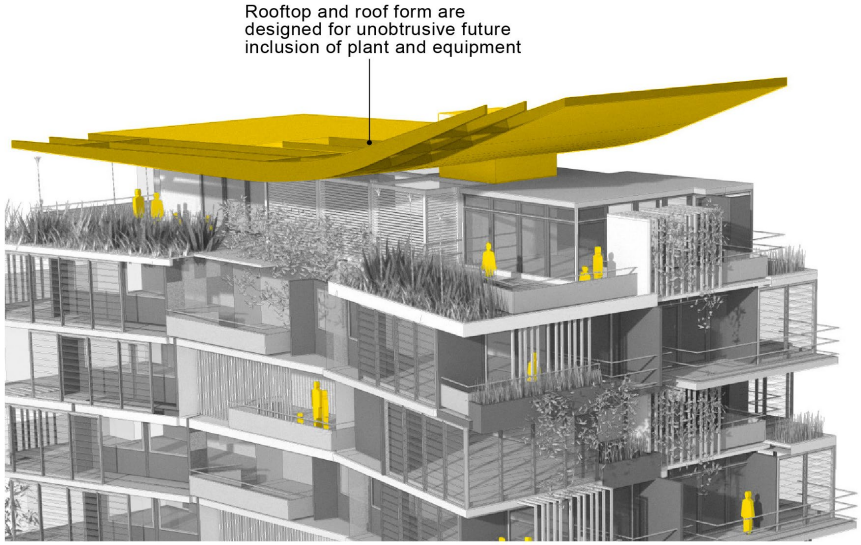
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-5** Illustration showing High-rise accommodation design outcomes where the tower form mitigates negative visual and physical impacts by setting back from streets			
PO6 Tower form orientation and articulation promotes sub-tropical design excellence and innovation.	**AO6.1** Tower form is orientated to: (a) reduce the perceived mass of the	**AO6.1 COMPLIES** (a) Tower form is designed to be slim and appropriate in sizing, reducing the perceived mass of the building at street level; and	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	building; and (b) provide privacy for both communal and private open space amenity areas.	(b) Privacy will be achieved for both communal and private open space areas in the tower form by way of orientation and design.	
	AO6.2 Tower façades are: (a) articulated to manage passive solar gain in summer; (b) well-glazed with functional windows where possible to reduce reliance on artificial cooling; (c) designed with high-quality sustainable materials and finishes that promote building longevity; and (d) varied in design and articulation to promote visual interest.	**AO6.2 COMPLIES** The tower's design features articulated elements to enhance visual interest and manage solar gain. Well-glazed, functional windows reduce the need for artificial cooling. The use of high-quality, sustainable materials ensures the building's longevity.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-6** Illustration showing High-rise accommodation design outcome where tower facades are articulated to manage passive solar gain in summer and varied in design and articulated to promote visual interest			
PO7 Balconies maximise building performance while minimising negative impacts on the building mass and public realm.	**AO7** Balconies: (a) are not made with materials susceptible to solar gain; (b) are not made with transparent materials that spill light from the dwellings; and (c) integrate into the building profile.	**AO7 COMPLIES** The proposed balconies are constructed from materials that resist solar gain and avoid transparent elements that spill light from the dwellings. They are designed to seamlessly integrate into the building's profile.	
Tower cap design			

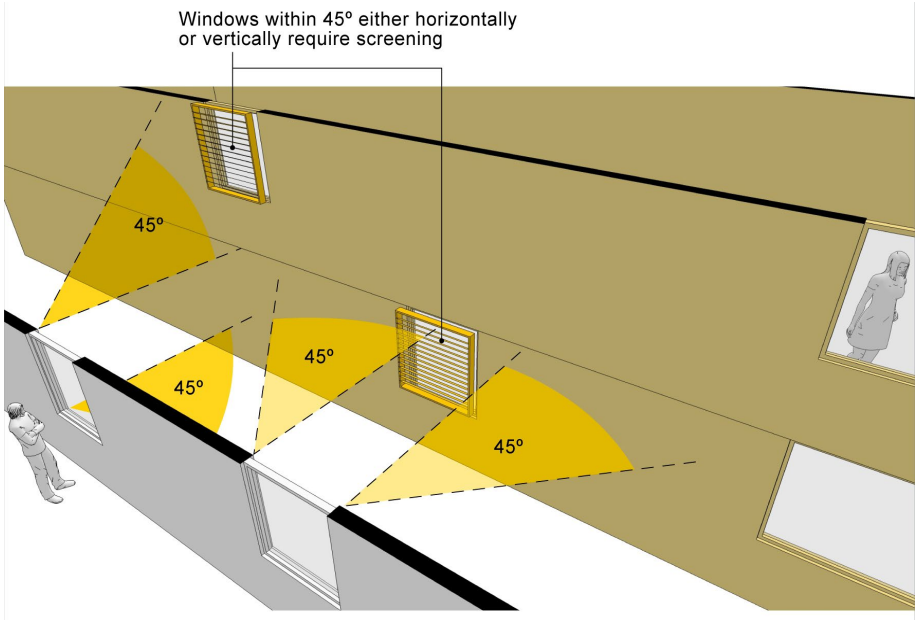
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO8 Tower caps reinforce the Gold Coast skyline. **Note: building height incorporates allowance for plant and equipment, attractive building caps and rooftop features.**	**AO8** Where building height creates an identifiable protrusion in the skyline or the site terminates a viewpoint, the following are provided: (a) a signature cap strengthening the identity as a landmark; and (b) decorative lighting that highlights key architectural features. OR Where lower building height forms part of the urban backdrop a subtle cap that integrates with the overall design is provided.	**AO8 COMPLIES** The proposed tower cap is designed to integrate with the development, enhancing the Broadbeach skyline and contributing to the broader Gold Coast vision. It will strengthen the area's sense of place and identity, serving as a landmark, with lighting that accentuates its architectural features.	
PO9 Tower cap design attractively integrates all signage, telecommunications, service structures, lift motor rooms and mechanical plants.	**AO9** No acceptable outcome provided.	**PO9 COMPLIES** The proposed tower cap is artistically designed to enhance the Broadbeach skyline. As shown in the Architectural Plans, the design seamlessly incorporates signage, telecommunications, service structures, lift motor rooms, and mechanical plant within the Plant Level.	

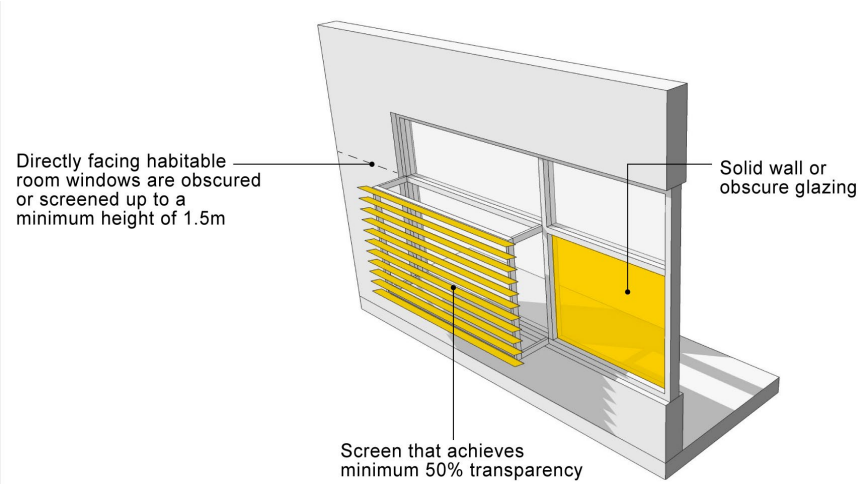
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-7** Illustration showing High-rise accommodation outcomes for building caps and rooftops			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-8** Illustration showing High-rise accommodation outcomes for roof top and roof form			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Housing need and choice			
PO10 Development provides a mix of housing sizes and affordability outcomes to meet housing needs.	**AO10** No acceptable outcome provided.	**PO10 COMPLIES** The proposed development provides a mix of dwelling sizes, different bedroom options per dwelling, and varying affordability outcomes to meet housing needs.	
Communal and private space areas			
PO11 Communal space areas: (a) are accessible, useable and safe; (b) are designed for the subtropical climate, maximising outdoor living opportunities and enhancing amenity for residents; (c) enhance the attractiveness of the development; (d) provide opportunities for social interaction; and (e) create pleasantly shaded outdoor areas.	**AO11.1** Communal space is provided at a rate of 6.5m^2 per dwelling and is designed for simultaneous use by individuals and groups.	**AO11.1 COMPLIES** The proposed development incorporates generous communal open space on Level 4, which includes a swimming pool, hot spa, sunbeds and decked area, pool lounge/games room, sauna, large gym, and outdoor BBQ area with plenty of space for movement. ▪ Required communal space: 6.5m^2 per dwelling (100 dwellings) ▪ 6.5 x 100 = 650m^2 ▪ Provided communal space: 790.5m^2 Therefore, AO11.1 is fulfilled.	
	AO11.2 Landscaping in open communal space areas: (a) have minimum and average widths of 1.5m and 3m; (b) are at-grade with adjacent footpaths; (c) comprises 50% deep planting; and (d) do not screen views to the street or entries.	**PO11 COMPLIES** Refer to Section 6.4 of the Town Planning Report.	
	AO11.3 Where the communal open space is for a residential care facility or retirement facility, the open space is provided with outdoor facilities for the health and wellbeing of residents such as sheltered gardens, circuit walkways, gardening beds and a space of	**AO11.3 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	sufficient size for a resident to take a visiting family with young children.		
PO12 Development provides attractive, accessible and functional private open space for residents, which are designed for the subtropical climate to maximise outdoor living opportunities and enhance amenity for residents.	**AO12.1** Above ground private open space for each dwelling: (a) mitigates negative wind effects on intended users; (b) has a minimum area of 3m x 3m; (c) is accessible from the living room; and (d) has a maximum gradient not exceeding one in ten.	**AO12.1 COMPLIES** The proposed design includes private open spaces for each unit, each with an area of 13.5m^2. These spaces are directly accessible from the main living areas. The private open spaces are functional and offer a high level of amenity for future residents. Additionally, the gradient of these spaces will not exceed a slope of 1 in 10.	
	AO12.2 Ground floor private open space for each dwelling: (a) has a minimum area of 25m²; (b) has a minimum width of 5m; (c) is accessible from the living room; and (d) has a maximum gradient not exceeding one in ten.	**AO12.2 NOT APPLICABLE**	
Privacy			
PO13 Privacy for users and neighbouring properties is accomplished by windows that are appropriately obscured by glazing, shuttering, location or other similar treatments.	**AO13** Habitable room windows do not 'directly face': (a) private open space of adjoining dwellings; (b) another habitable room window within 10m; and (c) an at-grade access way, footpath or communal open space area within 3m. OR	**AO13 COMPLIES** (a) All 3 adjoining properties are not in view from Level 5, which is the first level of the private apartments; (b) There are no other habitable room windows within 10m from another; and (c) Habitable rooms do not face at an-grade access way, footpath or communal open space area.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	Where habitable room windows must face, the privacy is achieved through windows that: (a) have fixed obscure glazing in any part of the window below 1.5m above floor level; and (b) have privacy screens that cover a minimum of 50% window view. **Note: 'directly facing' means an angle within 45° either horizontally or vertically.**		
 **Figure 9.3.9-9** Illustration showing High-rise accommodation design privacy outcomes where windows and doors are appropriately obscured by screening			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
 **Figure 9.3.9-10** Illustration showing High-rise accommodation outcomes for privacy.			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Safety and security			
PO14 Building design enhances safety and security for intended users.	**AO14.1** Above ground floor windows and balconies overlook all on-site pedestrian paths and communal open spaces.	**AO14.1 COMPLIES** The proposed private open space areas have been designed to overlook on-site ground floor pedestrian paths for high-level casual surveillance.	
	AO14.2 Lighting at 4m intervals is provided along all on-site pedestrian paths and communal open spaces.	**AO14.2 WILL COMPLY** All lighting requirements can be conditioned by Council accordingly.	
	AO14.3 Entrances and exits to the street are directly accessible, illuminated and highly visible.	**AO14.2 WILL COMPLY** All lighting requirements can be conditioned by Council accordingly.	
	AO14.4 Dead-end corridors, alleyways, pathways and refuse areas are signed and secured to prevent unauthorised access.	**AO14.4 COMPLIES** Any dead-end corridors, alleyways, pathways and refuse areas will be signed and secured to prevent unauthorised access.	
Services			
PO15 Servicing, utilities, loading and other 'back of house' activities are either located underground, screened or hidden away from public view.	**AO15** No acceptable outcome provided.	**PO15 COMPLIES** The servicing, utilities, loading and other 'back of house' activities have been located on various levels including Basement, Ground Floor, Mezzanine and Podiums Level 1-3, and are all appropriately screened and hidden from public view.	
Services and recreational facilities for residential care facilities and retirement facilities			
PO16 A range of self-contained services and recreational facilities are provided.	**AO16** Developments that have between 11 and 25 units include a community meeting room. OR Developments that have 26 units or more	**AO16 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	include a community meeting room and one or more of the following: (a) community vehicle; (b) on-site personal care; (c) on-site meal service; and (d) recreational facilities, in addition to the open space requirements in **PO11**.		

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

8.2.2 Airport environs overlay code

8.2.2.1 Application

This code applies to assessing any Operational work or Material change of use where indicated as accepted subject to requirements or assessable development within **Part 5.10 Categories of development and assessment – Overlays**.

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3**, in **Part 5**.

8.2.2.2 Purpose

(1) The airport environs overlay deals with issues relating to development in the vicinity of certain airports and aviation facilities. This includes:

- the Obstacle Limitation Surface (OLS)
- public safety area
- wildlife hazard buffer zones
- lighting area buffer zones
- Australian Noise Exposure Forecast (ANEF) contour
- Procedures for Air Navigation Services – Aircraft Operational (PANS-OPS) surfaces
- aviation facilities
- it may also include locally identified issues that relate to airport environments.

(2) The purpose of the Airport environs overlay code is to

(a) recognise Gold Coast Airport as essential economic infrastructure and protect and assure its ongoing operation and continued development;

(b) regulate development that may affect the operational efficiency of Gold Coast Airport at Coolangatta and the Airservices Australia Aviation Facilities related to the operation of the airport;

(c) minimise incompatible development within the public safety area adjacent to the airport;

(d) minimise the adverse impacts of airport noise on residential and other noise sensitive land uses in the vicinity of the airport.

(3) The purpose of the code will be achieved through the following overall outcomes:

(a) The Gold Coast Airport continues to contribute to the tourism industry, the business sector and communities of Gold Coast.

(b) Development does not impact on the operation of Gold Coast Airport.

(c) The maximum height of buildings and other structures, within the area designated as the airport's 'prescribed airspace' pursuant to the Airports (Protection of Airspace) Regulations 1996, as shown in the mapping of the **Obstacle Limitation Surface (OLS)** and the **Procedures for Air Navigation Services – Aircraft Operational (PANS-OPS) surfaces**, is not exceeded.

(d) Buildings and other structures do not encroach into the sensitive areas around aviation facilities pursuant to International Civil Aviation Organisation (ICAO) principles and *Air Services Act 1996*.

(e) The operation of artificial lighting sources does not exceed the maximum light source intensities imposed by the Gold Coast Airport Master Plan and the Civil Aviation Safety Authority.

(f) Potential hazards to safety of aircraft operations brought about by bird or bat strikes are minimised.

(g) Potential hazards to safety of aircraft operations resulting from the emission of smoke, dust or other particulate matter, or creation of air turbulence are minimised.

(h) Potential hazards to safety of aircraft operations resulting from reflection of sunlight, and any another potential causes of temporary interference with pilot vision are minimised.

(i) New development within the public safety area of the airport does not significantly increase population density or the use and storage of hazardous materials within this area.

(j) Potential impacts on residential and other noise-sensitive development in close proximity to the airport are minimised by ensuring that new development is subject to appropriate acoustic treatment pursuant to *AS 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction*, according to noise contours shown on **Airport environs – Australian Noise Exposure Forecast (ANEF) contour overlay map**.

8.2.2.3 Specific benchmarks for assessment

PART B – ASSESSABLE DEVELOPMENT BENCHMARKS

Table 8.2.2-2: Airport environs overlay code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Heights of buildings and other structures			
PO1 Building height and structure height does not affect the current or future operational efficiency of Gold Coast Airport or create a hazard to the safe navigation of aircraft using the airport's prescribed airspace. **Note: The requirements associated with the heights of buildings are also applicable to temporary intrusions into prescribed airspace, such as cranes utilised during building construction.** Editor's note – A development proposal involving a building, structure, crane or other construction equipment which exceeds 110m is required to be notified to CASA. Furthermore, any building, structure, crane or other construction equipment which exceeds 150m above ground level must be regarded as an obstacle unless assessed otherwise by CASA. Council is required to refer such development proposals to the airport manager for assessment, who will then refer the proposal to CASA. Refer to the SPP guidelines for more information regarding the Australian Government's role and assessment processes for intrusions into operational airspace of strategic airports.	**AO1** Building height and structure height does not exceed the current maximum allowable height applicable to the subject site, as identified on **Airport environs – Procedures for Air Navigation Services – Aircraft Operational (PANS-OPS) surfaces overlay map** and **Airport environs – Obstacle Limitation Surface (OLS) overlay map**. Editor's note – A development proposal involving a building, structure, crane or other construction equipment which encroaches into the operational airspace of a Leased Federal or other strategic airport must be referred by Council to the airport manager for assessment, who will on refer the proposal to the Australian Government if required.	**AO1 COMPLIES** The development is proposed to have a finished building height of 30 storeys | 99.4m. The site is mapped at HP335.28 and therefore is not considered to exceed this height during or post construction.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Acoustic treatment to buildings to lessen the impact of aircraft noise (on land within the Airport environs – Airport Noise Exposure Forecast (ANEF) contour overlay map)			
PO2 Development, other than an extension to an existing Dwelling house, on land within the 20 ANEF contour or greater as shown on the latest approved ANEF plan for Gold Coast Airport, is designed and constructed to prevent adverse impacts from aircraft noise. **Note: The current ANEF mapping for Gold Coast Airport as at the date of adoption of the planning scheme is shown in Airport environs – Australian Noise Exposure Forecast (ANEF) contour overlay map.**	**AO2** Development within the 20 ANEF contour or greater, as identified on **Airport environs – Australian Noise Exposure Forecast (ANEF) contour overlay map** is acoustically insulated to the applicable standard required by *AS 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction*.	**AO2 NOT APPLICABLE**	
Reflective roof materials, advertising devices and artificial light sources (on land within the Gold Coast Airport lighting zone)			
PO3 Development involving reflective roof materials, illuminated advertising devices or other artificial light sources, including street lighting and coloured lights, do not create a visual hazard for aircraft operation on approach to, or take off from, the Gold Coast Airport. **Note: For advice on how to meet aviation safety requirements refer to *Civil Aviation Safety Authority (CASA) guidelines: Lighting in the Vicinity of Aerodromes – Advice to Lighting Designers*.** **Note: Use of a reflective roof surface in the Lighting Zone of Gold Coast Airport constitutes a 'controlled activity', and**	**AO3.1** The illuminated advertising device or artificial light source does not exceed the maximum intensity of illumination within the respective light intensity zone, as identified on **Airport environs – lighting area buffer zones overlay map**.	**AO3.1 NOT APPLICABLE**	
	AO3.2 Configurations of lights in straight parallel lines 500m to 1,000m long (e.g. sporting fields and large parking areas) are not located within the Outer lighting zone, as identified on **Airport environs – lighting area buffer zones overlay map**.	**AO3.2 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
requires approval from the operator of Gold Coast Airport. (Roof materials having solar absorbency greater than 0.35 are deemed to be pre-approved).	**AO3.3** Glare or flashes (e.g. sporting stadia), flare plumes, refineries, upward shining lights, laser lights, flashing or sodium (yellow) lighting are not located within 6 km of the airport runway, as identified on **Airport environs – lighting area buffer zones overlay map**.	**AO3.3 NOT APPLICABLE**	
	AO3.4 The roof of any building located on land identified on **Airport environs – lighting area buffer zones overlay map** has a solar absorbency greater than 0.35.	**AO3.4 NOT APPLICABLE**	
Development within public safety areas			
PO4 Development within the Public Safety Area for Gold Coast Airport as identified on **Airport environs – public safety area overlay map** does not increase the amount of people living and using the area or increase the risk to airport operations.	**AO4** Development within the Public Safety Area for the Gold Coast Airport as identified on the **Airport environs – public safety area overlay map** does not: (a) Increase the number of people living in the area, and proposes no greater density than a Dwelling house. (b) Introduce or intensify community, commercial, industrial or any other uses. (c) Involve the manufacturing or bulk storage of hazardous (explosive or noxious) or flammable materials.	**AO4 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Aviation facilities			
PO5 Development in the area, around Airservices Australia Aviation Facilities identified on **Airport environs – Airservices Australia aviation facilities overlay map**, does not adversely impact on the functioning of these facilities. **Note: If development has the potential to adversely affect the functioning of Airservices Australia Aviation Facilities, approval is required from the Manager, Operational Requirements and Services (Airservices Australia).**	**AO5.1** Development that involves electrical or electromagnetic fields (e.g. arc welding) or that creates a permanent or temporary physical line of sight obstruction between transmitting and receiving devices, is not located within the VHF 500m buffer overlay for the Springbrook VHF facility (as identified on the **Airport environs – Airservices Australia aviation facilities overlay map**).	**AO5.1 NOT APPLICABLE**	
	AO5.2 Development that involves any of the following, is not included within the VOR 1000m buffer overlay for the Jacobs Well VOR facility (as identified on **Airport environs – Airservices Australia aviation facilities overlay map**): (a) creating a permanent or temporary physical line of sight obstruction; (b) overhead lines exceeding 5m in height; (c) metallic structures exceeding 8m in height; (d) trees and open lattice towers exceeding 10m in height; (e) wooden structures exceeding 13m in height.	**AO5.2 NOT APPLICABLE**	
	AO5.3 Development that involves any of the following, is not located within the	**AO5.3 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	building restricted area for the Mt Somerville PSR and SSR facilities (as identified on the **Airport environs - Airservices Australia aviation facilities overlay map**). (a) creating a permanent or temporary physical line of sight obstruction; (b) overhead lines exceeding 5m in height; (c) metallic structure exceeding 8m in height.		
	AO5.4 Development that involves any of the following, is not located within the building restricted area for the Coolangatta DVOR, DME and NDB facilities (as identified on the **Airport environs - Airservices Australia aviation facilities overlay map**). (a) creating a permanent or temporary physical line of sight obstruction; (b) overhead lines exceeding 5m in height; (c) metallic structures exceeding 8m in height.	**AO5.4 NOT APPLICABLE**	
Potential bird or bat strike on aircraft (on land within the Gold Coast Airport wildlife hazard buffer zones)			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO6 Development in the bird/bat strike zones of Gold Coast Airport, as identified on **Airport environs – wildlife hazard buffer zones overlay map**, does not exacerbate the potential for bird or bat strike on aircraft.	**AO6.1** In locations within 3km of the Gold Coast Airport, as identified on **Airport environs – wildlife hazard buffer zones overlay map**, where planting as part of a development could result in increased attraction of birds or bats, with the possibility of creating a hazard for aircraft operations, plant species will be selected which are not subject to heavy flowering or fruiting. **Editors Note: The operator of Gold Coast Airport maintains a preferred plant species list that is available for the assistance of development proponents, if required.**	**AO6.1 NOT APPLICABLE**	
	AO6.2 In the case of any development within an allotment located within 3km of the Gold Coast Airport, as identified on **Airport environs – wildlife hazard buffer zones overlay map**, with the potential to create or increase a hazard of bird or bat strike on aircraft evidence is provided to confirm that approval has been obtained from the operator of Gold Coast Airport.	**AO6.2 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	AO6.3 The following land uses are not located within 3km of the airport runway, as identified on **Airport environs – wildlife hazard buffer zones overlay map**: (a) Cropping (turf farm or fruit tree farm) (b) Intensive animal industry (piggery) (c) Aquaculture (fish processing/packing plant) (d) Conservation state (e.g. wetland) (e) Major sport, recreation and entertainment facility (showground) (f) Low impact industry, Medium impact industry, high impact industry (food processing plant) (g) Food/organic waste facility: and (h) Putrescible waste facility (e.g. landfill, transfer station)	**AO6.3 NOT APPLICABLE**	
	AO6.4 Where the uses listed in AO6.3 are located between 3km and 13km from the airport runway, as identified on the **Airport environs – wildlife hazard buffer zones overlay map**, measures that prevent wildlife attraction are undertaken (e.g. covering of potential food/waste sources and other wildlife deterrence methods). **Note: Where exceptional circumstances justify approval of development within 3km – 13km of the airport runway, rigorous wildlife management measures to avoid**	**AO6.4 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	attracting wildlife should be incorporated in the development proposal.		
	AO6.5 The following land uses include appropriate measures that prevent wildlife attraction (e.g. covering of potential food/waste sources and other wildlife deterrence methods) if located within 13km of the airport runway, as identified on the **Airport environs – wildlife hazard buffer zones overlay map:** (a) Animal husbandry (cattle/dairy farm); (b) Intensive animal industry (poultry farm); (c) Conservation estate (all other than mentioned in AO6.3); (d) Major sport, recreation and entertainment facility (all other than mentioned in AO6.3); (e) Outdoor sport and recreation; (f) Park; (g) Non-putrescible waste facility (e.g. landfill, transfer station) (h) Sewerage/wastewater treatment facility	**AO6.5 NOT APPLICABLE**	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Emission of particulate matter and air turbulence (inside the outer horizontal surface 15km)			
PO7 Development in the Gold Coast Airport's prescribed airspace does not compromise the operation of aircraft engines or create air turbulence or a potential visual hazard for aircraft operation around the Gold Coast Airport due to emission of smoke, steam or other particulate matter. **Note: The Gold Coast Airport's 'Prescribed Airspace' is indicated by the OLS and the PANS-OPS on Airport environs – Procedures for Air Navigation Services – Aircraft Operational (PANS-OPS) surfaces overlay map and Airport environs – Obstacle Limitation Surface (OLS) overlay map.** **Note: If development has the potential to cause a hazard to aircraft operations through the emission of particulate matter, approval of the operator of Gold Coast Airport is required.**	**AO7.1** The development will not cause a potential hazard to the operation of aircraft through the emission of smoke, steam, dust or other particulate matter.	**AO7.1 NOT APPLICABLE**	
	AO7.2 The development will not cause a potential hazard to the operation of aircraft through the emission of a gaseous plume at a velocity exceeding 4.3m per second.	**AO7.2 NOT APPLICABLE**	
Transient aviation activities			

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
PO8 Development does not adversely impact on the Gold Coast Airport's prescribed airspace. **Note: The Gold Coast Airport's 'Prescribed Airspace' is indicated by the OLS and the PANS-OPS on Airport environs – Procedures for Air Navigation Services – Aircraft Operational (PANS-OPS) surfaces overlay map and Airport environs – Obstacle Limitation Surface (OLS) overlay map.**	**AO8** Activities involving transient intrusions such as parachuting, hot air ballooning or hang gliding are not located within the airspace of the Gold Coast Airport.	**AO8 NOT APPLICABLE**	

City Plan code template

This code template supports the preparation of a development application against either the acceptable outcome(s) or performance outcome(s) contained in the code. Development assessment rules are outlined in **Section 5.3.3** of the City Plan.

Please note:

For assessment against the overall outcomes, refer to the appropriate code.

Note: The whole of the planning scheme is identified as the assessment benchmark for impact assessable development. This specifically includes assessment of impact assessable development against this strategic framework. The strategic framework may contain intentions and requirements that are additional to and not necessarily repeated in zone, overlay or other codes. In particular, the performance outcomes in zone codes address only a limited number of aspects, predominantly related to built form. Development that is impact assessable must also be assessed against the overall outcomes of the code as well as the strategic framework.

8.2.1 Acid sulfate soils overlay code

8.2.1.1 Application

This code applies to assessing material change of use, reconfiguring a lot and operational work, for development subject to the Acid sulfate soils overlay where indicated within **Part 5.10 Categories of development and assessment – Overlays.**

When using this code, reference should be made to **Section 5.3.2** and, where applicable, **Section 5.3.3**, in **Part 5**.

8.2.1.2 Purpose

(1) The Acid sulfate soils overlay deals with areas of land identified in a State planning policy as being subject to acid sulfate soils. It may include areas of land identified in the local government area as having potential or actual acid sulfate soils.

(2) The purpose of the Acid sulfate soils overlay code is to protect the natural environment, built environment and infrastructure from impacts of acid sulfate soils.

(3) The purpose of the code will be achieved through the following overall outcomes:

- (a) Acid sulfate soils are identified and managed to ensure the release of acid and associated metal contaminants into the environment does not occur.
- (b) Buildings and infrastructure are protected from the effects of acid sulfate soils.

8.2.1.3 Specific benchmarks for assessment

PART B – ASSESSABLE DEVELOPMENT BENCHMARKS

Table 8.2.1-1: Acid sulfate soils overlay code – for assessable development

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
Acid sulfate soils			
PO1 The extent and severity of the acid sulfate soils risk is accurately characterised.	**AO1** Acid sulfate soils are identified through an acid sulfate soils investigation, carried out in accordance with **SC6.2 City Plan policy – Acid sulfate soils management**.	**CONDITIONED TO COMPLY** The Applicant accepts Council will impose a condition to ensure an Acid Sulfate Soils investigation is carried out.	
PO2 The natural environment, built environment and/or infrastructure is protected by ensuring that soil disturbance or development of land does not result in the release of acid and metal contaminants.	**AO2** Development does not: (a) excavate or otherwise remove soil or sediment identified as containing acid sulfate soils; (b) permanently or temporarily extract groundwater resulting in aeration of previously saturated acid sulfate soils; or (c) fill land (where at or below 5m AHD) that results in: (i) actual acid sulfate soils being moved below the watertable; or (ii) previously saturated potential acid sulfate soils being aerated. OR Where acid sulfate soils are disturbed, building design, infrastructure and filling/excavation works are managed in accordance with an acid sulfate soils management plan to:	**CONDITIONED TO COMPLY** The Applicant accepts Council will impose a condition to ensure an Acid Sulfate Soils investigation is carried out.	

Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets either the performance outcome or overall outcome	Internal use
	(a) protect the natural environment, buildings and infrastructure; and (b) neutralise existing acidity and ensure the release of acid and metal contaminants does not occur. The Acid sulfate soils management plan is to be prepared in accordance with **SC6.2 City Plan policy – Acid sulfate soils management**. **Note: A condition will be included on any approval requiring certification from a suitably qualified and experienced professional. This certification must be submitted to Council confirming that the management of the acid sulfate soils has complied with the approved management plan.**		

Pre-lodgement Advice agenda and minutes

Planning and Regulation
City Development
Planning Assessment
Po Box 5042 GOLD COAST MC QLD 9726
P 07 5582 8866
E prelodgementadvice@goldcoast.qld.gov.au
W cityofgoldcoast.com.au

Pre-lodgement Meeting							
PLO Number	PLO/2024/270	**Date**	16/01/2025	**Time**	12:30pm	**Venue**	N-G.4
Chairperson	Nathan Griffey					**Minutes**	Jusmeet Atwal

City of Gold Coast Planning Assessment and Internal referral teams	**Applicant and Applicant's consultancy team**
Council Attendees: • Nathan Griffey • Jusmeet Atwal • Architecture Assessment **Comments By:** • Landscaping Assessment • Hydraulic & Water Quality • Water and Waste • Transport Assessment	**Applicant Attendees:** • Patrick Hefferan, Urbis Town Planning • Lawson Royes, Rothe Lowman Architecture • Daniel Faigen, H&F Property Group Land Owner • Lee Flueckiger Traffic Engineering • Nicole Johnson Town Planning

Conflicts of Interest to declare
The Chair requested any member to acknowledge any conflicts of interest

Application Information	
Address	7-9 Surf Parade, BROADBEACH QLD 4218
Lot and plan	Lot 0-6 BUP3459, Lot 0-6 BUP2545
Site area	1012m^2
City Plan version	11
Zone/Precinct	High density residential
Overlays	Acid Sulfate Soils: • Land at or below 20m AHDAirport Environs – Obstacle Limitation Surface (OLS) Airport Environs – Procedures for Air Navigation Services – Aircraft Operational (PANS-OPS) surfaces: • PANS-OPS contour Building Height – HX (unrestricted) Coastal Erosion Hazard Foreshore seawall setback • Foreshore seawall setback (0-500m west) Dwelling House Overlay Area Light Rail Urban Renewal Area – Boundary and Frame Areas Residential Density – RD8 (1 bed/13m2) State Controlled Roads, Rail Corridor and Transport Noise Corridor:

	• Transport noise corridor Local Government Infrastructure Plan: • Priority Infrastructure AreaLGIP projection areas

Reports / Other documents considered (as submitted)				
Drawing title	Author	Date	Drawing reference no.	Ver
Planning Brief	Urbis	19/12/2024	-	-

Plans / Drawings considered (as submitted)				
Drawing title	Author	Date	Drawing reference no.	Ver
Plans	Rothelowman	19/12/2024	224261	P2

Proposal Summary		
Multiple Dwelling 31-storey high-rise apartment complex		
	Discussion question	**Pre-lodgement meeting discussions**
1	Confirmation of Suitability of the proposed use	**Planning Assessment:** • The site is located in a High density residential zone with no building height limit. Having regard to the amalgamation of sites and being located within a Frame area as identified by the Light rail overlay, the scale and building height proposed is envisaged in this location. **Architecture Assessment:** • Officers have no in principle concerns with the proposal for a podium/tower development in this location provided that an appropriate built form is achieved which meets the outcomes of the overlay, zone and development codes, including appropriate setbacks, site cover and design to protect amenity and maintain and open and attractive skyline with a high quality tower development. • The building is located within a HX mapped area, therefore the proposed tower height of 31 storeys does not exceed this limit. **Applicant comments in response to discussion:** • Noted.
2	Request for Architectural Design Input	**Planning Assessment:** <u>Podium setbacks:</u> • The podium is proposed to be setback 1m to the northern and southern sides and 2m to the rear. To gain officer support, further information is required to substantiate the interface with adjoining developments. The applicant is requested to consider the comments provided by Architecture Assessment and Landscape Assessment below as the design progresses.

		• To support any consideration of alternative setbacks, the podium should be designed to soften any perceived intensity to ensure an appropriate interface is achieved through landscaping, materiality and movement in the façade. <u>Tower setbacks:</u> • Officers are not satisfied the side setbacks of 4m is appropriate at this scale as it may limit the development opportunities of adjoining lots if a similar outcome were to be achieved due to insufficient tower separation. • While officers can appreciate the future potential development to the northern side as shown on Drawing SK00.03 could allow for an appropriate degree of separation, greater certainty of the development outcome would be required to support the current 4m setback to the north. At the southern side, the same drawing shows that if the southern adjoining lot were to accommodate a tower with similar setbacks, a 9m building separation could be achieved. This separation is not considered appropriate for towers of this scale and not considered to comply with the appliable benchmarks within the High-density residential zone code and High-rise accommodation code. **Architecture Assessment:** <u>Podium:</u> • The development proposes a 3 storey high podium with 2 levels of parking and an overall height of 11.4m. Officers note that the podium height is reasonably consistent with other development applications and recent approvals in the immediate area, however have concerns with the proposed setbacks of only 1m to the north and south side boundaries. Officers recommend increasing these setbacks, to allow opportunity for landscaping and separation between built form on adjoining properties for view corridors, sunlight ingress and to mitigate wind impacts in accordance with the above outcomes. • The podium design features a rectilinear form which has been designed to appear as a 2-storey element with an open ground plane and 2 levels of screened car parking, however potential 3 storey sheer walls interface with the adjoining 3-4 storey ‘Blue Surf’ development to the east, the 2 storey residential development to the south and the 2 storey residential development to the north. Officers note that these may be potential future development sites, however recommend further modulation, articulation and

		movement to break down the bulk of the built form to protect adjacent amenity. This may include further exploration of options for the podium screening including, scale and spacing of battens, transparency of screens etc. to ensure a high level of visual interest with human scale detailing in accordance with the above outcomes. <u>Tower:</u> • The tower has proposed setbacks of 4m to 5m with east oriented balconies which will assist to break down the bulk of the tower form with open edges. Officers recommend further modulation and articulation to the tower form with deep recesses particularly to the west elevation which is currently shown with sheer unarticulated walls. • Consider the integration of high-quality textured wall treatments, shade elements, expressed slab edges, screens, tower cap design etc. in addition to sub-tropical design elements and integrated planters in accordance with the above outcomes of the high rise accommodation design code. **Landscape Assessment:** <u>Basement & Ground Levels</u> • Due to the basement set down extending through the three levels of basement for the deep planting to the northern boundary (27m2), officers request that the building setback be increased to this corner to facilitate a large canopy tree that will assist in appropriately balancing built form and greenery. The installation of a large canopy tree with a mature height in excess of 10m (Cook Pine (Araucaria columnaris) or similar) is recommended and will make use of the proposed deep planting area. The water meter and booster location interfere with the proposed deep planting. Any planting proposed to this area should facilitate a minimum 3m clear separation between tree species and edge of the building. • Basement setdown (ramp area) does not facilitate at grade planting to entry sequence. Basement would need to be setdown in order to achieve the planting suggested in the renders and plans. A minimum of 1m soil depth would facilitate at grade deep planting with a minimum of $6m^2$ to achieve larger canopy tree planting to the frontage which also would assist in balancing the built form and greenery. A lack of vertical clearance available between the ground level and the above podium suggests that only small screening

		plants would be achieved to this area. • The 1m side setbacks do not facilitate larger species to be installed. It's likely that only screening shrubs would be able to be installed. A larger setback for ongoing maintenance. Information around maintenance of these areas is requested. <u>Podium Levels</u> • All planter box widths and depths are to be indicated on the SLI to ensure a minimum width of 600mm – 800mm is achieved. The soil depth should be appropriate to facilitate growth and ensure installation is possible whilst indicating ongoing maintenance. • Consistency with renders and architectural drawings. Although the render shows landscaped areas to either side of the columns nearest to the pool, the plans are not suggestive of this. If included, these garden beds are requested to be incorporated through the architectural plans along with cross sections that detail how they are intended to work with soil depths etc. Specimens with short mature height to be specified to ensure no run in with building edge (alternatively, building edge to be reconsidered for no run ins). <u>Street trees</u> • Retention of existing street tree is requested. Propose an additional street tree location to the front of PMT / temp bins to assist with softening of the built form to this boundary. Services and existing power poles / lines within the road verge should also be highlighted. Any street tree planting is to be in accordance with SC6.12 City Plan policy – Land development guidelines and SC6.13 City Plan policy – Landscape work.
		Applicant comments in response to discussion: • Applicant states that the plans are preliminary at this stage and take on officer feedback. • Applicant has advised that changes are likely be made to the tower plate and balcony locations/orientation. • Applicant has advised that setbacks are generally informed by the feasibility of the number of units

		proposed. **Council response to applicant comments:** • Noted.
3	Request for Transport, Access and Servicing Design Input	**Water & Waste:** <u>Waste servicing arrangement</u> • If kerbside collection – illustrate the waste collection vehicle during servicing not impacting the entry/exit of vehicles of the development. • If proposing on-site servicing - provide RPEQ-certified swept path analysis to demonstrate entry/exit of WCV in a forward gear. **Transport Assessment:** <u>Car parking supply (AO1/PO1):</u> • Proposed car parking supply for residents (102) and visitors (10 spaces) exceeds/meets AO1 requirements. <u>Vehicle circulation & ramp management (PO16 & AO20.1/PO20):</u> • It appears that circulation on ramps will be limited to single-lane, two-way; hold lines shall be shown on development drawings, in appropriate locations allowing opposing vehicles to pass (supported by swept paths) • Swept paths shall also be submitted demonstrating that compliant vehicle circulation is achieved within all basement and podium levels, and to/from ground level, with compliant vehicle circulation clearances maintained in accordance with AS2890.1 (300mm on the inside of the swept path and 600mm on the outside of the swept path) • A queuing assessment shall be submitted to demonstrate that sufficient queuing provision is provided at ground level (within both the northern and southern access driveways), based on proposed ramp

		management measures • Submit swept paths to demonstrate the ability for two-way passenger vehicle access to be maintained via the southern access when an MRV is on-site. Vehicles entering the site must be able to access the hold line with an MRV on-site, and must be able to move from the hold line to the podium ramp (in a continuous, forward motion, in both cases). • Note – the MRV standing area need only be 8.8m long x 2.5m wide, which may assist with vehicle manoeuvring. <u>Design of car parking facilities (AO20.1/PO20):</u> • Provide 1m aisle extensions beyond the last car parking spaces, at the eastern end of each aisle (basement, ground and podium levels), as required by AS2890.1; alternatively, provide swept paths to demonstrate compliant manoeuvring to/from these parking spaces • Remove 'res' notation from visitor car parking spaces (ground level and podium level 2) • Correctly identify PWD parking space and adjoining 'shared area' through notations ('shared area' is shown as PWD space); show bollard in 'shared area', located in accordance with AS2890.6 requirements • Note – both the PWD parking space and the 'shared area' can each be a minimum of 2.4m wide • The proposed 'temp bins' area conflicts with the pedestrian sight triangle (departure side of southern crossover); demonstrate a physical restraint for the 'temp bins' area so that bins do not encroach into the pedestrian sight triangle area • 'Secure line' (podium level 2) will need to be offset a minimum of 1m from the turn-around bay (to allow room for vehicles to manoeuvre to/from the turn-around bay); this will result in the loss of a residential car parking space, which is acceptable given the surplus of residential parking proposed (97 spaces required / 102 spaces proposed) • Include the following notation in relation to pedestrian sight triangles: "Pedestrian sight triangles to be kept clear of obstructions to visibility. Low level landscaping permitted to a maximum mature height of 500mm above driveway level."

		Note – a sight triangle is required on the 'departure' side only of the northern crossover (and both sides of the southern crossover, due to service vehicle access) • Provide full dimensions for all car parking facilities, including bay lengths and widths, aisle widths and grades (for all ramps / ramp transitions) <u>Bicycle parking facilities (AO7.1, AO7.3/PO7):</u> • Identify provision for visitor bicycle parking, at ground level, designed to AS2890.3 requirements • Identify the number of bicycles able to be accommodated in each 'bikes/store' area for residents <u>Pedestrian infrastructure (AO8.1/PO8 & PO9):</u> • Demonstrate provision for a new 1.5m wide pathway, for the full site frontage to Surf Parade, and a (minimum) 1.5m wide 'connecting' pathway within the verge of Surf Parade, connecting the development's proposed pedestrian access point to the new public footpath. <u>Traffic impacts (PO16):</u> • Submit a Traffic Impact Assessment, addressing the operation of surrounding Council-controlled intersections (peak hour operation), in addition to 'daily' road capacities (with reference to road capacities prescribed by Council's *Land development guidelines*).
		Applicant comments in response to discussion: • Applicant has advised that a Traffic Engineer has provided input on the current design which supports compliant swept path circulation. These details will be provided at time of lodgement. • Applicant has advised that further investigations may be had regarding hold points/signalising options. **Council response to applicant comments:** • Noted.

4	Supporting documents required for the application	**Planning Assessment / Architecture Assessment:** • Due to the scale of the development, a Wind Report will be required to support the proposal. The applicant is requested to undertake the wind assessment and incorporate required treatment prior to lodging an application. **Hydraulic & Water Quality:** • The proposal increases the imperviousness of the site, and involves a multiple dwelling, triggering assessment against several Performance Outcomes of the Healthy Waters Code. The applicant is requested to provide a Stormwater management plan, prepared by a registered Professional Engineer (RPEQ) demonstrating compliance with Healthy waters code and General development provisions code, including (but not limited to): o Demonstrate adequate stormwater management for quality and quantity, to ensure there is no adverse drainage impacts on or off the site. o Provide detailed drawings including plan views, cross and long sections of the proposed stormwater management devices, showing dimensions, invert levels and inlet/outlet controls, to ensure the systems will work as intended. o Ensure any areas bypassing the proposed stormwater system are included in the assessment. o Determine how external flows from upstream catchments are to be managed (if any), to ensure no adverse impacts external to the site. o The applicant is to determine a lawful point of discharge for the development in accordance with 4.4.5 (Downstream drainage requirements). o Provide any modelling files for Council's review and record purposes. **Water & Waste:** • Same as specialist reports required (see below) • Sewer Network Capacity Assessment Report

		• Engineering Services Plan • Waste Management Report ○ (If applicable) Swept path for waste collection vehicle. **Landscape Assessment:** • The proposed development is requested to include a Statement of Landscape Intent prepared in accordance with SC6.13 City Plan Policy – Landscape Work. The Statement of Landscape Intent is to demonstrate that the landscaping will provide amenity for site users and will protect and enhance the character of the of the local area. The Statement of Landscape Intent is to include details of all proposed podium planter boxes, including height, width, and soil volume, demonstrating that quality landscape outcomes can be achieved and sustained. Cross sections of any relevant areas should also be provided.
		Applicant comments in response to discussion: • Noted.

Additional comments and Actions

Additional comments

Water & Waste:

- Water
  - Water network capacity assessment is **NOT** required.
  - Condition will be provided for 15L/s fire loading.
- Sewer
  - A considerable increase in EP is expected from proposed development.

- Accordingly, a sewer capacity assessment report **would be required** to identify all impacts on the sewer network due to the proposed development.

- Solid Waste
  - Waste Management Report is required.
  - Swept path analysis required for any onsite waste servicing proposed

Further actions identified

N/A

Summary of specialised reports / plans and drawings required as part of DA

Hydraulic & Water Quality:

- Stormwater management plan, prepared by a registered Professional Engineer (RPEQ) demonstrating compliance with Healthy waters code and General development provisions code.

Water & Waste:

- Sewer Network Capacity Assessment Report
- Engineering Services Plan
- Waste Management Report
  - (If applicable) Swept path for waste collection vehicle.

Architecture Assessment:

- In the submission please include a site context and urban design analysis that assists to inform the building design, how it is designed to respect and fit with the local character of the precinct, including building height, interfaces with adjoining buildings, subtropical design elements and outline how the proposal will enhance the skyline.
- In the submission, please include a full architectural set of drawings with floor plans, roof plan, elevations, sections. Please include on the plans,

elevations and sections the outline of adjoining buildings and separation distances.

- Partial ground cross sections: Please include partial ground plane cross sections of the site showing boundary interfaces to adjoining neighbours and roads (including level differences) indicating the outline of adjoining buildings, separation distances, fencing, retaining walls, landscaping, levels, dimensions and heights.
- Mechanical plant equipment: The proposal must ensure all mechanical plant equipment is fully screened from public view and indicate the proposed locations on the plans and elevations. All screening elements must be fully specified on the drawings outlining the percentage openings, size of members, nominal spacing, materials, colours and finishes. The screening should form a positive contribution to the overall architectural language.
- Material & Colour Schedule: In the submission please include a page in the architectural set for a full Materials and colour and finishes schedule and ensure these are clearly annotated to coloured elevations. For any feature element such as batten screens, please submit the specifications showing the batten size and nominal spacing.
- 3D Colour Photomontages: In the submission please include additional 3D colour photomontages of the development and include the surrounding context to demonstrate the proposal fits within the character of the area. This includes from both streets and from the north and the south.
- Due to the height and location of the proposed development, in any submission, officers request that a Wind Impact Report is prepared by a qualified and experienced consultant outlining there are no significant, unsafe or adverse wind impacts to pedestrians within and around the building. This includes ground level, communal recreation deck level, rooftop and balconies, as well as adjoining public realm and footpaths. The report is requested to outline mitigation strategies and recommendations to any of the following: the building design, landscaping, and/or screening.

Transport Assessment:

- Traffic Impact Assessment

Landscape Assessment:

- Statement of Landscape Intent (SLI)

Pre-lodgement Disclaimer

In participating in this Pre-lodgement meeting, the applicant accepted:

The primary purpose of the Pre-lodgement meeting was to provide an opportunity for applicants and Council officers to discuss key issues relevant to the assessment of any subsequent development application prior to lodgement.

The comments provided by Officers are advice only. The Pre-lodgement meeting did not constitute a detailed assessment and does not indicate the outcome of any subsequent assessment process.

Advice has been provided on Officer's research of the issues/ questions detailed by the applicant in the 'Agenda questions' section of the E-service request and on the Information, drawings and plans submitted with the Request. Any new drawings, information and plans tabled either after the initial Request or at the Pre-lodgement meeting have been minuted and subject to review by Officers outside the Pre-lodgement meeting.

Council in its assessment of the subsequent application may raise other issues. Applicants cannot rely on Council officers to identify all areas of non-compliance during Pre-lodgement meetings.

Confirmation of Minutes

Officer name	Title	Signature	Date
Jusmeet Atwal	Senior Planner	JA	16/01/2025
Nathan Griffey	Coordinator	N.Griffey	17/01/2025

acousticworks

Proposed Residential Development
7-9 Surf Parade
Broadbeach

ACOUSTIC REPORT




Client:
Hirsch Broadbeach Pty Ltd

Reference:
2025056 R01C 7-9 Surf Parade, Broadbeach ENV.docx

Date Issued:
31 March 2025

Document Information

Contact Details

Acoustic Works
Suite 17/10 Benson Street
Toowong QLD 4066
(07) 3393 2222
ABN: 56 157 965 056

PO Box 69
Toowong DC
QLD 4066

Greg Pearce
Email: gpearce@acousticworks.com.au

Mark Enersen
Email: menersen@acousticworks.com.au

Report Register

Date	Revision	Author	Reviewer	Manager
26/03/25	R01A (DRAFT)	Kaitlyn Meldrum	Mark Enersen	ME
28/03/25	R01B (DRAFT)	Kaitlyn Meldrum	Mark Enersen	ME
31/03/25	R01C	Kaitlyn Meldrum	Mark Enersen	ME

Disclaimer

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1. Introduction

This report is in response to a request by Hirsch Broadbeach Pty Ltd for an environmental noise assessment of a proposed residential development to be located at 7-9 Surf Parade, Broadbeach. To facilitate the assessment, previous unattended noise monitoring was utilised to establish the criteria for onsite activities. Based on the outcomes of the assessment, recommendations for management controls and/or acoustic treatments specified in this report.

2. Site Description

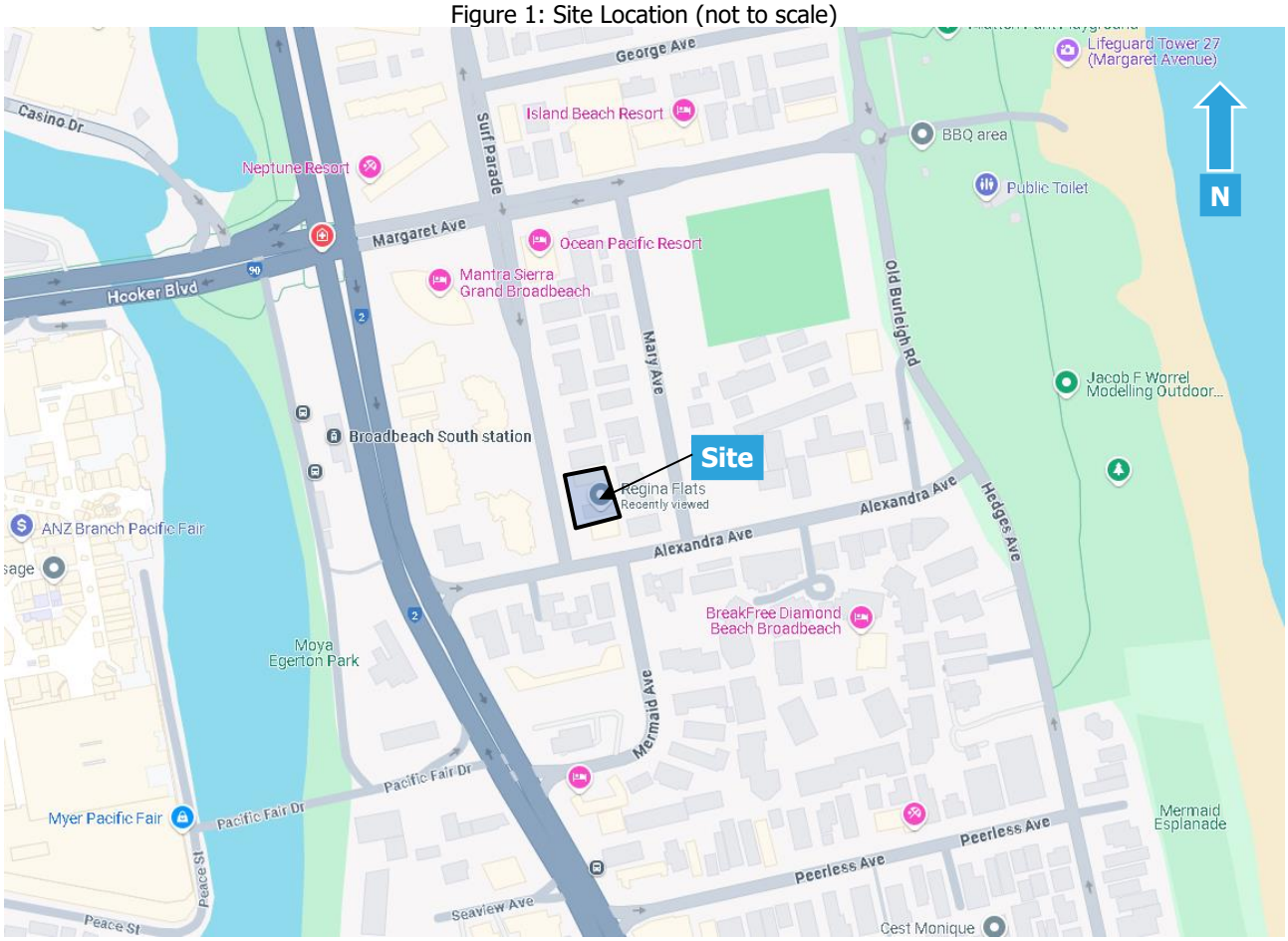
2.1 Site Location

The site is described by the following:

7-9 Surf Parade, Broadbeach
Lots 0 on BUP2545 and BUP3459

Refer to Figure 1 for site location.

Figure 1: Site Location (not to scale)



A site survey was conducted on 21 March 2025 and identified the following:

a) The site is currently occupied by two 2 storey residential buildings and will be demolished to make way for the development.
b) Surf Parade bounds the site to the west, separating the site from a multi storey residential building (Bel Air on Broadbeach).
c) A single-storey residential building) bounds the site to the north.
d) A two storey residential building is located adjacent the southern boundary of the site
e) A three and two storey residential building are located to the east of the site.

2.2 Proposal

The proposal is to construct a 32-storey residential development as follows:

- Site Area: 1,012m^2
- Total 110 car parking spaces, located between 3 basement levels, ground floor, mezzanine and podiums:
  - 23 residential car spaces on basement 3.
  - 22 residential car spaces on basement 2.
  - 16 residential and 2 visitor car spaces on basement 1.
  - 7 residential and 8 visitor car spaces on ground level.
  - 3 residential car spaces on mezzanine.
  - 18 residential car spaces on podium 2
  - 11 residential car spaces on podium 3.
- 100 residential units total from levels 5 to 29.
- An indoor communal area is to be located on ground level.
- Level 4 podium will include a gym, pool/lounge/games room, sauna and recreational areas including a pool.
- Dining lounge is located on level 30.
- Site access via Surf Parade.

Refer to the Appendices for development plans.

2.3 Acoustic Environment

The site and surrounding area are primarily affected by road traffic from local roads and surf noise.

3. Equipment

The following equipment was used to record noise levels:

- Rion NL42 Environmental Noise Monitor
- Pulsar Model 105 Sound Calibrator

The Rion NL42 Environmental Noise Monitor hold current NATA Laboratory Certification and were field calibrated before and after the monitoring period, with no significant drift from the reference signal recorded.

4. Receivers and Noise Monitoring

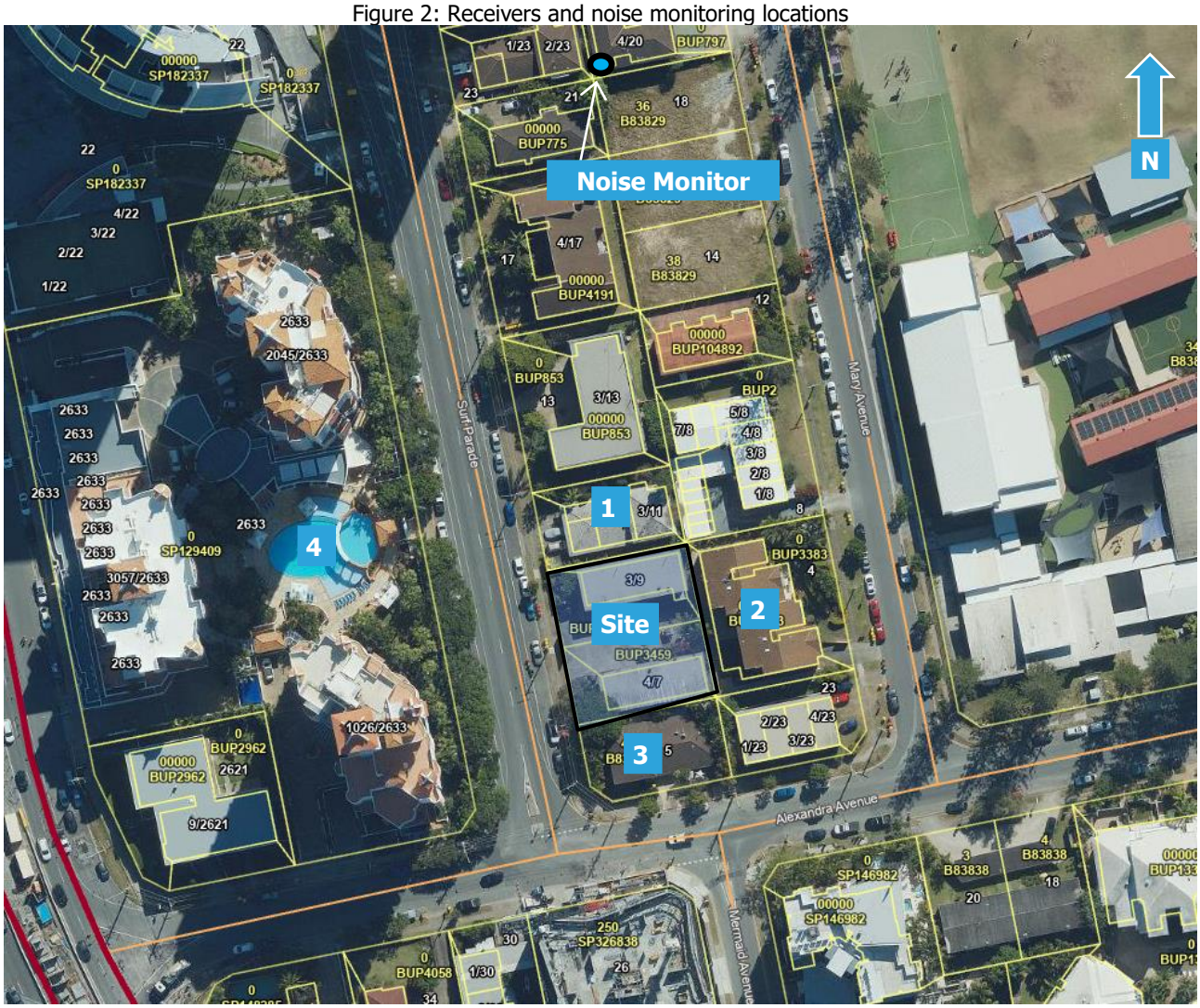
4.1 Receiver Locations

The nearest residential receiver locations were identified as follows;

1. A two-storey residential building is located to the north of the site at 11 Surf Parade.
2. A three-storey residential apartment building is located to the east of the site at 4 Mary Avenue.
3. A two-storey residential apartment building is located adjacent the southern site boundary at 5 Alexandra Avenue.
4. A multi-storey residential building (Bel Air on Broadbeach) is located at 2633 Gold Coast Highway west of the site.

These locations were chosen as being representative of the nearest residential receivers to the proposed development. Refer to Figure 2 for these locations.

Figure 2: Receivers and noise monitoring locations



4.2 Unattended Noise Monitoring

Construction noise from 28 Alexandra Avenue (Naia Broadbeach) and 7-9 Mermaid Avenue (Yves) was found to be audible at all the nearby receivers to the site. To minimise potential construction noise affecting the monitoring data, previous ambient noise monitoring that was not affected by construction noise has been utilised. The location of the monitor is detailed in the following sections.

4.2.1 Ambient Noise Monitoring

The Rion NL42 environmental noise monitor was previously placed onsite at 20 Mary Avenue to measure the ambient noise levels. The monitor was placed in this location as it was considered representative of the nearest residential receivers. The monitor was located in a free field position with the microphone approximately 1.4 metres above ground surface level. The noise monitor was set to record noise levels between 19 and 29 July 2024.

The environmental noise monitor was set to record noise levels in "A" Weighting, Fast response using 15-minute statistical intervals. Ambient monitoring was conducted generally in accordance with Australian Standard AS 1055:2018 Acoustics – Description and measurement of environmental noise.

Refer to Figure 2 for noise monitoring location.

5. Measured Noise Levels

The following tables present the measured ambient noise levels from the unattended noise survey. Any periods of inclement weather or extraneous noise were omitted from the measured data prior to determining the results.

5.1 Meteorological Conditions

Meteorological observations during the unattended noise monitoring period were obtained from the Bureau of Meteorology website (http://www.bom.gov.au/climate/data), shown in Table 1 below.

Table 1: Meteorological Conditions – Gold Coast Seaway

Day	Date	Rainfall (mm)	Wind			
			9am		3pm	
			Direction	Speed (km/h)	Direction	Speed (km/h)
Friday	19/07/2024	0	WNW	13	WNW	13
Saturday	20/07/2024	0	NNW	15	WNW	22
Sunday	21/07/2024	0	W	17	W	15
Monday	22/07/2024	0	SSW	9	SE	24*
Tuesday	23/07/2024	0	SW	7	SE	28*
Wednesday	24/07/2024	0	SSW	9	SE	15
Thursday	25/07/2024	2.2	WNW	7	N	13
Friday	26/07/2024	0	NW	9	NNW	17
Saturday	27/07/2024	0	NW	9	N	15
Sunday	28/07/2024	0	WNW	11	W	17
Monday	29/07/2024	0	WSW	4	ESE	20*

5.2 Ambient Noise Levels

The ambient levels measured at the monitoring location are as follows;

Table 2: Measured ambient noise levels – all time periods

Day	Date	L90 dB(A)		
		Day	Evening	Night
Friday	19/07/2024	48	45	44
Saturday	20/07/2024	46	47	43
Sunday	21/07/2024	46	44	43
Monday	22/07/2024	49	45	43
Tuesday	23/07/2024	49	46	45
Wednesday	24/07/2024	50	45	45
Thursday	25/07/2024	49	46	43
Friday	26/07/2024	50	47	44
Saturday	27/07/2024	47	46	44
Sunday	28/07/2024	46	45	42
Monday	29/07/2024	48	-	41
Overall value		48	46	43

*Note: Although high wind speeds were recorded on 22, 23 and 29 July, they were not found to affect the measured noise levels and therefore the data has been utilised.

Refer to the appendix for graphical representation of the noise monitoring.

6. Noise Criteria

6.1 Environmental Noise Criteria

The noise criteria as applied by City of Gold Coast are as follows;

6.1.1 Acoustic Quality Objectives

Table 3 presents the acoustic quality objectives at noise sensitive receptors as detailed in Schedule 1 of the EPP (Noise) 2008.

Table 3: Acoustic Quality Objectives at Noise Sensitive Properties

Sensitive Receptor	Time of Day	Acoustic Quality Objectives, dB(A)		
		$L_{Aeq,adj,1hr}$	$L_{A10,adj,1hr}$	$L_{A1,adj,1hr}$
Dwelling (outdoors)	Day and Evening (7am – 10pm)	50	55	65
Dwelling (Indoors)	Day and Evening (7am – 10pm)	35	40	45
	Night (10pm – 7am)	30	35	40

6.1.2 Background Creep

The Background Creep criteria are as follows;

Time-varying noise:

$$L_{Aeq,adj,T,} \leq \text{Ambient } L_{A90,T} + 5\text{dB(A)}$$

Steady-state noise:

$$L_{A90,T} \leq \text{Ambient } L_{A90,T}$$

The time period (T) is a time interval of at least 15 minutes, or if the noise continues for less than 15 minutes, the duration of the noise source.

Based on the results of ambient noise monitoring, the project specific background creep noise limits are shown in Table 4.

Table 4: Background creep noise limits

Time Period	Noise Level Limits SPL dB(A)	
	$L_{A90,T}$	$L_{Aeq,T}$
Day 7am – 6pm	53	48
Evening 6pm – 10pm	51	46
Night 10pm – 7am	48	43

6.2 Sleep Disturbance Criteria

Criteria for sleep disturbance under the WHO Guideline is addressed is as follows:

> *"As a rule for planning for short-term or transient noise events, for good sleep over 8 hours the indoor sound pressure level measured as a maximum instantaneous value should not exceed approximately 45 dB(A) $L_{A,(Max)}$ more than 10 or 15 times per night'.*
>
> *'Where noise is continuous, the equivalent sound pressure level should not exceed 30 dB(A) indoors, if negative effects on sleep are to be avoided'."*

7. Environmental Assessment

7.1 Onsite Activities

Noise associated with the development was assessed based on previous measurements of similar activities. The calculations assume that the nominated activities are located at the closest representative point within the development site to each receiver location. Any relevant shielding, building transmission loss or recommended acoustic screens are taken into account for these activities.

7.1.1 Acoustic Quality Objectives

The average maximum noise source levels and predicted levels at the receiver locations are shown in Table 5. Note: L_{A10} and L_{A1} results are not shown in cases where the total duration of the events is less than the minimum time required e.g. $L_{A10(1hr)}$ requires noise events to occur for at least 360 seconds of an hour long period. LAeq results are not shown where the calculated total is less than 0dBA.

Table 5: Acoustic quality objective noise levels, 1 hour

Receiver	Description	Source Leq@1m dB(A)	Correction dB(A)*	Corrected Leq@1m dB(A)	No. of events per 1hr Day	No. of events per 1hr Eve	No. of events per 1hr Night	Duration per event	Distance (m)	No	Barrier (height (m	Barrier screening dB	Building TL or shield dB	Topo screening dB	Dist atten. @-6 dB/dd	LAeq adj.,1hr ext. dB(A) Day	LAeq adj.,1hr int. dB(A) Day	LAeq adj.,1hr ext. dB(A) Eve	LAeq adj.,1hr int. dB(A) Eve	LAeq adj.,1hr ext. dB(A) Night	LAeq adj.,1hr int. dB(A) Night	LA10 adj.,1hr ext. dB(A) Day	LA10 adj.,1hr int. dB(A) Day	LA10 adj.,1hr ext. dB(A) Eve	LA10 adj.,1hr int. dB(A) Eve	LA10 adj.,1hr ext. dB(A) Night	LA10 adj.,1hr int. dB(A) Night	LA1 adj.,1hr ext. dB(A) Day	LA1 adj.,1hr int. dB(A) Day	LA1 adj.,1hr ext. dB(A) Eve	LA1 adj.,1hr int. dB(A) Eve	LA1 adj.,1hr ext. dB(A) Night	LA1 adj.,1hr int. dB(A) Night	Amenity LAeq Compliance			LA10 Compliance			LA1 Compliance		
	Receivers 1.11 Surf Parade (N) 2. 4 Mary Avenue (E) 3. 5 Alexandra Avenue(S) 4. 2633 Gold Coast Highway (W)																																										
																																					Day / eve	Day / eve indoor	Night indoor	Day / eve	Day / eve indoor	Night indoor	Day / eve	Day / eve indoor	Night indoor
	Criteria																																			50	35	30	55	40	35	65	45	40
	Car passby (Ground)	69		69	16	12	8	15	13				-7.8		-23	26	16	25	15	23	13								31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1	Car door closure (Ground)	75	2	77	16	12	8	2	7				-7.8		-17	32	22	31	21	29	19														Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Ground)	74	2	76	16	12	8	2	7				-7.8		-17	31	21	29	19	28	18														Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Basement)	74		74	144	72	36	10	7				-35		-17	18	8	15	5	12	2	21	11	21	11	21	11	25	15	25	15	25	15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Basement)	69		69	144	72	36	15	13				-35		-22	9		6		3		12	2	12	2	12	2	14	4	14	4	14	4	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	144	72	36	2	7				-35		-17	14	4	11	1	8								19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Basement)	74	2	76	144	72	36	2	7				-35		-17	13	3	10		7								19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	80	72	60	2	7				-20		-17	26	16	26	16	25	15							32	22	32	22	32	22	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	80	72	60	10	7				-20		-17	30	20	30	20	29	19	33	23	33	23	33	23	37	27	37	27	37	27	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Podium)	69		69	80	72	60	15	13				-20		-22	21	11	21	11	20	10	24	14	24	14	24	14	26	16	26	16	26	16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Podium)	74	2	76	80	72	60	2	7				-20		-17	25	15	25	15	24	14							31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym Podium	79	2	81	4	4	4	900	27				-26	-16	-29	10		10		10		14	4	14	4	14	4	21	11	21	11	21	11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Pool/loung/games room	70		70	4	4	4	900	18				-25	-8	-25	11	1	11	1	11	1	13	3	13	3	13	3	15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4	0	900	7				-24		-17	39	29	39	29			44	34	44	34			51	41	51	41			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Dining Lounge	70		70	4	4	4	900	11				-28	-16	-21	5		5		5		9		9		9		12	2	12	2	12	2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															41	31	41	31	35	25	44	34	44	34	34	24	51	41	51	41	41	31	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																			50	35	30	55	40	35	65	45	40
	Car passby (Ground)	69		69	16	12	8	15	7				-30		-17	10		9		7								15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Car door closure (Ground)	75	2	77	16	12	8	2	11				-30		-21	6		4		3													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Ground)	74	2	76	16	12	8	2	11				-30		-21	5		3		2													Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Basement)	74		74	144	72	36	10	7				-35		-17	18	8	15	5	12	2	21	11	21	11	21	11	25	15	25	15	25	15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Basement)	69		69	144	72	36	15	7				-35		-17	15	5	12	2	9		18	8	18	8	18	8	20	10	20	10	20	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	144	72	36	2	11				-35		-21	10		7		4								15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Basement)	74	2	76	144	72	36	2	11				-35		-21	9		6		3								15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	80	72	60	2	12				-20		-22	22	12	21	11	21	11							28	18	28	18	28	18	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	80	72	60	10	7				-20		-17	31	21	30	20	29	19	34	24	34	24	34	24	38	28	38	28	38	28	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Podium)	69		69	80	72	60	15	7				-20		-17	27	17	27	17	26	16	30	20	30	20	30	20	32	22	32	22	32	22	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Podium)	74	2	76	80	72	60	2	12				-20		-22	21	11	20	10	20	10							27	17	27	17	27	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym Podium	79	2	81	4	4	4	900	16				-23	-16	-24	18	8	18	8	18	8	22	12	22	12	22	12	29	19	29	19	29	19	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Pool/loung/games room	70		70	4	4	4	900	24				-30	-16	-28							2		2		2		4		4		4		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4		900	12				-23		-22	35	25	35	25			40	30	40	30			47	37	47	37			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Dining Lounge	70		70	4	4	4	900	9				-25	-16	-19	10		10		10		14	4	14	4	14	4	17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															37	27	37	27	32	22	42	32	42	32	36	26	48	38	48	38	40	30	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																			50	35	30	55	40	35	65	45	40
	Car passby (Ground)	69		69	16	12	8	15	12				-30		-22	5		4		2								10		10		10		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Car door closure (Ground)	75	2	77	16	12	8	2	6				-30		-16	11	1	10		8														Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Ground)	74	2	76	16	12	8	2	6				-30		-16	10		9		7														Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Basement)	74		74	144	72	36	10	18				-35		-25	10		7		4		13	3	13	3	13	3	17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Basement)	69		69	144	72	36	15	12				-35		-22	10		7		4		13	3	13	3	13	3	15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	144	72	36	2	6				-35		-16	15	5	12	2	9								20	10	20	10	20	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Basement)	74	2	76	144	72	36	2	6				-35		-16	14	4	11	1	8								20	10	20	10	20	10	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	80	72	60	2	6				-20		-16	28	18	27	17	27	17							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	80	72	60	10	12				-20		-22	26	16	25	15	25	15	29	19	29	19	29	19	33	23	33	23	33	23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Podium)	69		69	80	72	60	15	6				-20		-16	29	19	28	18	27	17	32	22	32	22	32	22	34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Podium)	74	2	76	80	72	60	2	6				-20		-16	27	17	26	16	26	16							33	23	33	23	33	23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym Podium	79	2	81	4	4	4	900	11				-24	-16	-21	20	10	20	10	20	10	24	14	24	14	24	14	31	21	31	21	31	21	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Pool/loung/games room	70		70	4	4	4	900	19				-25	-16	-26	4		4		4		6		6		6		8		8		8		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4		900	28				-28		-29	23	13	23	13			28	18	28	18			35	25	35	25			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Dining Lounge	70		70	4	4	4	900	11				-25	-16	-21	8		8		8		12	2	12	2	12	2	15	5	15	5	15	5	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															34	24	34	24	33	23	35	25	35	25	34	24	41	31	41	31	40	30	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																			50	35	30	55	40	35	65	45	40
	Car passby (Ground)	69		69	16	12	8	15	52				-35		-22	12	21	11	19	9								27	17	27	17	27	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Car door closure (Ground)	75	2	77	16	12	8	2	52				-34		-22	12	21	11	19	9														Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Ground)	74	2	76	16	12	8	2	52				-34		-21	11	20	10	18	8														Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Basement)	74		74	144	72	36	10	68				-35		-37							3		3		3		7		7		7		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Basement)	69		69	144	72	36	15	52				-35		-34							3		3		3		5		5		5		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	144	72	36	2	52				-35		-34													5		5		5		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Basement)	74	2	76	144	72	36	2	52				-35		-34													6		6		6		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	80	72	60	2	52						-34	29	19	29	19	28	18							35	25	35	25	35	25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	80	72	60	10	68						-37	31	21	30	20	30	20	34	24	34	24	34	24	38	28	38	28	38	28	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby (Podium)	69		69	80	72	60	15	52						-34	30	20	29	19	29	19	33	23	33	23	33	23	35	25	35	25	35	25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start (Podium)	74	2	76	80	72	60	2	52						-34	28	18	28	18	27	17							34	24	34	24	34	24	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym Podium	79	2	81	4	4	4	900	45					-16	-33	32	22	32	22	32	22	36	26	36	26	36	26	43	33	43	33	43	33	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Pool/loung/games room	70		70	4	4	4	900	45					-16	-33	21	11	21	11	21	11	23	13	23	13	23	13	25	15	25	15	25	15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4		900	47						-33	47	37	47	37			52	42	52	42			59	49	59	49			Yes	No	n/a	Yes	No	n/a	Yes	No	n/a
	Dining Lounge	70		70	4	4	4	900	62				-20	-16	-36							4		4		4		7		7		7		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															47	37	47	37	37	27	52	42	52	42	39	29	59	49	59	49	46	36	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**

*Correction due to tonality and impulsiveness as per AS1055:2018.

Exceedances of the acoustic quality objective criteria are predicted at receiver 3 and 4. However, as these criteria are already exceeded by the background noise levels, the impacts do not necessarily affect the acoustic amenity. Recommendations are provided in Section 8 to reduce noise impacts to surrounding sensitive receivers.

7.1.2 Background Creep

Based on assessment of all time periods, the noise source levels and predicted impacts at the receiver locations are shown as follows;

Table 6: Onsite Background Creep Noise Levels, 15min

Receiver	Description	Source Leq@1m dB(A)	Correction dB(A)*	Corrected Leq@1m dB(A)	No. of events per 15min Day	No. of events per 15min Eve	No. of events per 15min Night	Duration per event	Distance (m)	Barrier (height (m	No	Barrier screening dB	Building Screening odB	Building TL dB	Dist atten. @-6dB/dd	LAeq adj,T ext. dB(A) Day	LAeq adj,T int. dB(A) Day	LAeq adj,T ext. dB(A) Eve	LAeq adj,T int. dB(A) Eve	LAeq adj,T ext. dB(A) Night	LAeq adj,T int. dB(A) Night	LAeq 15 min Compliance Day	Eve	Night
	Receivers																							
	1.11 Surf Parade (N) 2. 4 Mary Avenue (E) 3. 5 Alexandra Avenue(S) 4. 2633 Gold Coast Highway (W)																							
	Criteria																					53	51	48
	Car passby (Ground)	69		69	4	3	2	15	13				-7.8		-23	26	16	25	15	23	13	Yes	Yes	Yes
1	Car door closure (Ground)	75	2	77	4	3	2	2	7				-7.8		-17	32	22	31	21	29	19	Yes	Yes	Yes
	Car start (Ground)	74	2	76	4	3	2	2	7				-7.8		-17	31	21	29	19	28	18	Yes	Yes	Yes
	Car on ramp (Basement)	74		74	36	18	9	10	7				-35		-17	18	8	15	5	12	2	Yes	Yes	Yes
	Car passby (Basement)	69		69	36	18	9	15	13				-35		-23	9		6		3		Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	36	18	9	2	7				-35		-17	14	4	11	1	8		Yes	Yes	Yes
	Car start (Basement)	74	2	76	36	18	9	2	7				-35		-17	13	3	10		7		Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	20	18	15	2	7				-20		-17	26	16	26	16	25	15	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	20	18	15	10	7				-20		-17	30	20	30	20	29	19	Yes	Yes	Yes
	Car passby (Podium)	69		69	20	18	15	15	13				-20		-23	21	11	21	11	20	10	Yes	Yes	Yes
	Car start (Podium)	74	2	76	20	18	15	2	7				-20		-17	25	15	25	15	24	14	Yes	Yes	Yes
	Gym Podium	79	2	81	1	1	1	900	27				-26	-16	-29	10		10		10		Yes	Yes	Yes
	Pool/loung/games room	70		70	1	1	1	900	18				-25	-8	-26	11	1	11	1	11	1	Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1		900	7				-24		-17	39	29	39	29			Yes	Yes	n/a
	Dining Lounge	70		70	1	1	1	900	11				-28	-16	-21	5		5		5		Yes	Yes	Yes
	Total															41	31	41	31	35	25	**Yes**	**Yes**	**Yes**
	Criteria																					53	51	48
	Car passby (Ground)	69		69	4	3	2	15	7				-30		-17	10		9		7		Yes	Yes	Yes
2	Car door closure (Ground)	75	2	77	4	3	2	2	11				-30		-21	6		4		3		Yes	Yes	Yes
	Car start (Ground)	74	2	76	4	3	2	2	11				-30		-21	5		3		2		Yes	Yes	Yes
	Car on ramp (Basement)	74		74	36	18	9	10	7				-35		-17	18	8	15	5	12	2	Yes	Yes	Yes
	Car passby (Basement)	69		69	36	18	9	15	7				-35		-17	15	5	12	2	9		Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	36	18	9	2	11				-35		-21	10		7		4		Yes	Yes	Yes
	Car start (Basement)	74	2	76	36	18	9	2	11				-35		-21	9		6		3		Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	20	18	15	2	12				-20		-22	22	12	21	11	21	11	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	20	18	15	10	7				-20		-17	31	21	30	20	29	19	Yes	Yes	Yes
	Car passby (Podium)	69		69	20	18	15	15	7				-20		-17	27	17	27	17	26	16	Yes	Yes	Yes
	Car start (Podium)	74	2	76	20	18	15	2	12				-20		-22	21	11	20	10	20	10	Yes	Yes	Yes
	Gym Podium	79	2	81	1	1	1	900	16				-23	-16	-24	18	8	18	8	18	8	Yes	Yes	Yes
	Pool/loung/games room	70		70	1	1	1	900	24				-30	-16	-28							Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1		900	12				-23		-22	35	25	35	25			Yes	Yes	n/a
	Dining Lounge	70		70	1	1	1	900	9				-25	-16	-19	10		10		10		Yes	Yes	Yes
	Total															37	27	37	27	32	22	**Yes**	**Yes**	**Yes**
	Criteria																					53	51	48
	Car passby (Ground)	69		69	4	3	2	15	12				-30		-22	5		4		2		Yes	Yes	Yes
3	Car door closure (Ground)	75	2	77	4	3	2	2	6				-30		-16	11	1	10		8		Yes	Yes	Yes
	Car start (Ground)	74	2	76	4	3	2	2	6				-30		-16	10		9		7		Yes	Yes	Yes
	Car on ramp (Basement)	74		74	36	18	9	10	18				-35		-25	10		7		4		Yes	Yes	Yes
	Car passby (Basement)	69		69	36	18	9	15	12				-35		-22	10		7		4		Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	36	18	9	2	6				-35		-16	15	5	12	2	9		Yes	Yes	Yes
	Car start (Basement)	74	2	76	36	18	9	2	6				-35		-16	14	4	11	1	8		Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	20	18	15	2	6				-20		-16	28	18	27	17	27	17	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	20	18	15	10	12				-20		-22	26	16	25	15	25	15	Yes	Yes	Yes
	Car passby (Podium)	69		69	20	18	15	15	6				-20		-16	29	19	28	18	27	17	Yes	Yes	Yes
	Car start (Podium)	74	2	76	20	18	15	2	6				-20		-16	27	17	26	16	26	16	Yes	Yes	Yes
	Gym Podium	79	2	81	1	1	1	900	11				-24	-16	-21	20	10	20	10	20	10	Yes	Yes	Yes
	Pool/loung/games room	70		70	1	1	1	900	19				-25	-16	-26	4		4		4		Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1		900	28				-28		-29	23	13	23	13			Yes	Yes	n/a
	Dining Lounge	70		70	1	1	1	900	11				-25	-16	-21	8		8		8		Yes	Yes	Yes
	Total															34	24	34	24	33	23	**Yes**	**Yes**	**Yes**
	Criteria																					53	51	48
	Car passby (Ground)	69		69	4	3	2	15	52						-35	22	12	21	11	19	9	Yes	Yes	Yes
4	Car door closure (Ground)	75	2	77	4	3	2	2	52						-34	22	12	21	11	19	9	Yes	Yes	Yes
	Car start (Ground)	74	2	76	4	3	2	2	52						-34	21	11	20	10	18	8	Yes	Yes	Yes
	Car on ramp (Basement)	74		74	36	18	9	10	68				-35		-37							Yes	Yes	Yes
	Car passby (Basement)	69		69	36	18	9	15	52				-35		-34							Yes	Yes	Yes
	Car door closure (Basement)	75	2	77	36	18	9	2	52				-35		-34							Yes	Yes	Yes
	Car start (Basement)	74	2	76	36	18	9	2	52				-35		-34							Yes	Yes	Yes
	Car door closure (Podium)	75	2	77	20	18	15	2	52						-34	29	19	29	19	28	18	Yes	Yes	Yes
	Car on ramp (Podium)	74		74	20	18	15	10	68						-37	31	21	30	20	30	20	Yes	Yes	Yes
	Car passby (Podium)	69		69	20	18	15	15	52						-34	30	20	29	19	29	19	Yes	Yes	Yes
	Car start (Podium)	74	2	76	20	18	15	2	52						-34	28	18	28	18	27	17	Yes	Yes	Yes
	Gym Podium	79	2	81	1	1	1	900	45					-16	-33	32	22	32	22	32	22	Yes	Yes	Yes
	Pool/loung/games room	70		70	1	1	1	900	45					-16	-33	21	11	21	11	21	11	Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1		900	47						-33	47	37	47	37			Yes	Yes	n/a
	Dining Lounge	70		70	1	1	1	900	62				-20	-16	-36							Yes	Yes	Yes
	Total															47	37	47	37	37	27	**Yes**	**Yes**	**Yes**

*Correction due to tonality and impulsiveness as per AS1055:2018.

Compliance is predicted on the condition the recommendations provided in Section 8 are implemented.

7.2 Sleep Disturbance

The noise source levels and predicted levels of noise at the receiver locations are shown in Table Table 7.

Table 7: Maximum and average noise levels from site activities – Night-time

Receiver	Receivers 1.11 Surf Parade (N) 2. 4 Mary Avenue (E) 3. 5 Alexandra Avenue(S) 4. 2633 Gold Coast Highway (W) Description	Source @1m dB(A)	Correction dB(A)*	Corrected dB(A)	Distance (m)	Inc Barrier (height (m))	Barrier screening dB	Building TL or shield dB	Topo screening dB	Dist atten. @-6dB/dd	LAmax adj,T ext. dB(A)	LAmax adj,T int. dB(A)	Complies Lmax Yes/No
	Criteria												45
	Car passby (Ground)	74		74	13			-8		-22	44	34	Yes
1	Car door closure (Ground)	79	2	81	7			-8		-17	56	46	No
	Car start (Ground)	78	2	80	7			-8		-17	55	45	Yes
	Car on ramp (Basement)	82		82	7			-35		-17	30	20	Yes
	Car passby (Basement)	74		74	13			-35		-22	17	7	Yes
	Car door closure (Basement)	79	2	81	7			-35		-17	29	19	Yes
	Car start (Basement)	78	2	80	7			-35		-17	28	18	Yes
	Car door closure (Podium)	79	2	81	7			-20		-17	44	34	Yes
	Car on ramp (Podium)	82		82	7			-20		-17	45	35	Yes
	Car passby (Podium)	74		74	13			-20		-22	32	22	Yes
	Car start (Podium)	78	2	80	7			-20		-17	43	33	Yes
	Gym Podium	87	2	89	27			-26	-16	-29	19	9	Yes
	Pool/loung/games room	78		78	18			-25	-8	-25	19	9	Yes
	Dining Lounge	78		78	11			-28	-16	-21	13	3	Yes
	Car passby (Ground)	74		74	7			-30		-17	27	17	Yes
	Car door closure (Ground)	79	2	81	11			-30		-21	30	20	Yes
2	Car start (Ground)	78	2	80	11			-30		-21	29	19	Yes
	Car on ramp (Basement)	82		82	7			-35		-17	30	20	Yes
	Car passby (Basement)	74		74	7			-35		-17	22	12	Yes
	Car door closure (Basement)	79	2	81	11			-35		-21	25	15	Yes
	Car start (Basement)	78	2	80	11			-35		-21	24	14	Yes
	Car door closure (Podium)	79	2	81	12			-20		-22	39	29	Yes
	Car on ramp (Podium)	82		82	7			-20		-17	45	35	Yes
	Car passby (Podium)	74		74	7			-20		-17	37	27	Yes
	Car start (Podium)	78	2	80	12			-20		-22	38	28	Yes
	Gym Podium	87	2	89	16			-23	-16	-24	26	16	Yes
	Pool/loung/games room	78		78	24			-30	-16	-28	4	-6	Yes
	Dining Lounge	78		78	9			-25	-16	-19	18	8	Yes
	Car passby (Ground)	74		74	12			-30		-22	22	12	Yes
	Car door closure (Ground)	79	2	81	6			-30		-16	35	25	Yes
3	Car start (Ground)	78	2	80	6			-30		-16	34	24	Yes
	Car on ramp (Basement)	82		82	18			-35		-25	22	12	Yes
	Car passby (Basement)	74		74	12			-35		-22	17	7	Yes
	Car door closure (Basement)	79	2	81	6			-35		-16	30	20	Yes
	Car start (Basement)	78	2	80	6			-35		-16	29	19	Yes
	Car door closure (Podium)	79	2	81	6			-20		-16	45	35	Yes
	Car on ramp (Podium)	82		82	12			-20		-22	40	30	Yes
	Car passby (Podium)	74		74	6			-20		-16	38	28	Yes
	Car start (Podium)	78	2	80	6			-20		-16	44	34	Yes
	Gym Podium	87	2	89	11			-24	-16	-21	28	18	Yes
	Pool/loung/games room	78		78	19			-25	-16	-26	12	2	Yes
	Dining Lounge	78		78	11			-25	-16	-21	16	6	Yes
	Car passby (Ground)	74		74	52					-34	40	30	Yes
	Car door closure (Ground)	79	2	81	52					-34	47	37	Yes
4	Car start (Ground)	78	2	80	52					-34	46	36	Yes
	Car on ramp (Basement)	82		82	68			-35		-37	10	0	Yes
	Car passby (Basement)	74		74	52			-35		-34	5	-5	Yes
	Car door closure (Basement)	79	2	81	52			-35		-34	12	2	Yes
	Car start (Basement)	78	2	80	52			-35		-34	11	1	Yes
	Car door closure (Podium)	79	2	81	52					-34	47	37	Yes
	Car on ramp (Podium)	82		82	68					-37	45	35	Yes
	Car passby (Podium)	74		74	52					-34	40	30	Yes
	Car start (Podium)	78	2	80	52					-34	46	36	Yes
	Gym Podium	87	2	89	45				-16	-33	40	30	Yes
	Pool/loung/games room	78		78	45				-16	-33	29	19	Yes
	Dining Lounge	78		78	62			-20	-16	-36	6	-4	Yes

*Correction due to tonality and impulsiveness as per AS1055:2018.

A minor exceedance of the sleep disturbance criteria is predicted for visitor carparks for receiver 1. WHO states that the maximum instantaneous value should not exceed 45dB(A) more the 10 to 15 times per night. As the development only has 2 visitor car parks no screened by the ground floor façade, the traffic movements are predicted to be infrequent and are not expected to occur more than a few times during the night-time period (10pm-7am).

8. Recommendations

8.2 Onsite Activities

Based on the predicted noise levels of the site and surrounds for all time periods, the following acoustic treatments are recommended:

- We recommend waste collection be conducted in accordance with existing residential collections in the area to reduce the potential for disturbance.
- Carpark finished surfaces should consist of materials which provides low tyre squeal characteristics. Any traversable drainage grates must be securely fastened.
- Pool and recreational areas operating hours are to be limited between 7am to 10pm (day and evening time periods).

8.3 Gym and Pool Recommendations

We recommend that the following acoustic treatments be incorporated into the development to mitigate onsite gym and pool noise:

- The exact nature of the type of exercise use for the gym is not known at this stage. Once the use characteristics have been determined a detailed acoustic investigation will be completed. Depending on the use it is likely that an acoustic floor material would be necessary to reduce vibration into the building structure. Such a system may include Sonosfit or other similar materials Exercise machines where possible should be installed incorporating resilient mounts and/or be installed on resilient flooring.

- The gym has provision of air-conditioning to allow windows and doors to be kept closed when necessary.

- The level 4 podium pool will require acoustic isolation to reduce unwanted vibration and noise through the building structure. Detailed design should be undertaken at the detailed design phase of the building by an engineer(s) with suitable experience.

8.4 Onsite Mechanical Plant

No information regarding mechanical services was available at the time of the assessment. We recommend that any new mechanical plant is designed to comply with the criteria stated and an assessment by qualified acoustic consultant to be conducted prior to installation.

9. Conclusion

An environmental noise assessment was conducted for the proposed residential development to be located at 7-9 Surf Parade, Broadbeach. On the condition the recommendations detailed in Section 8 are implemented, noise impacts for nearby sensitive receivers will be reduced.

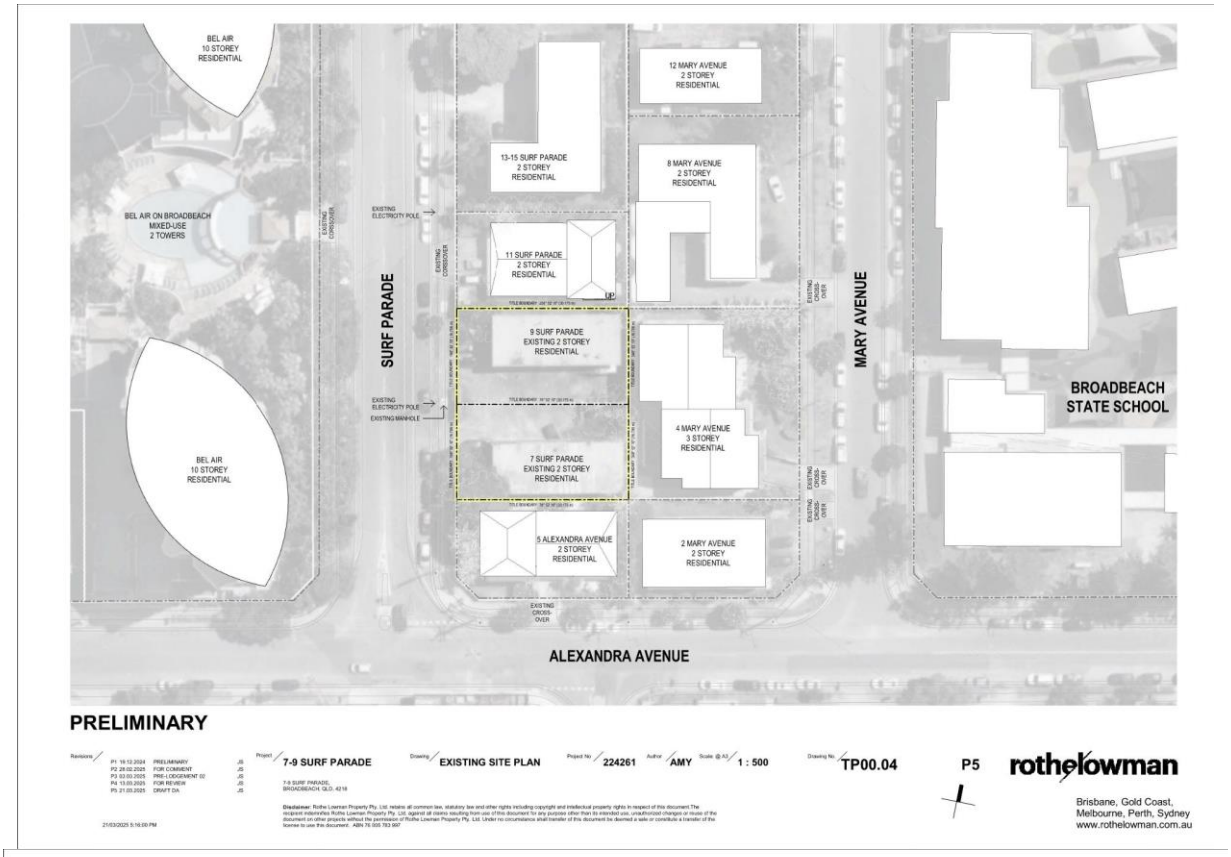
If you should have any queries please do not hesitate to contact us.

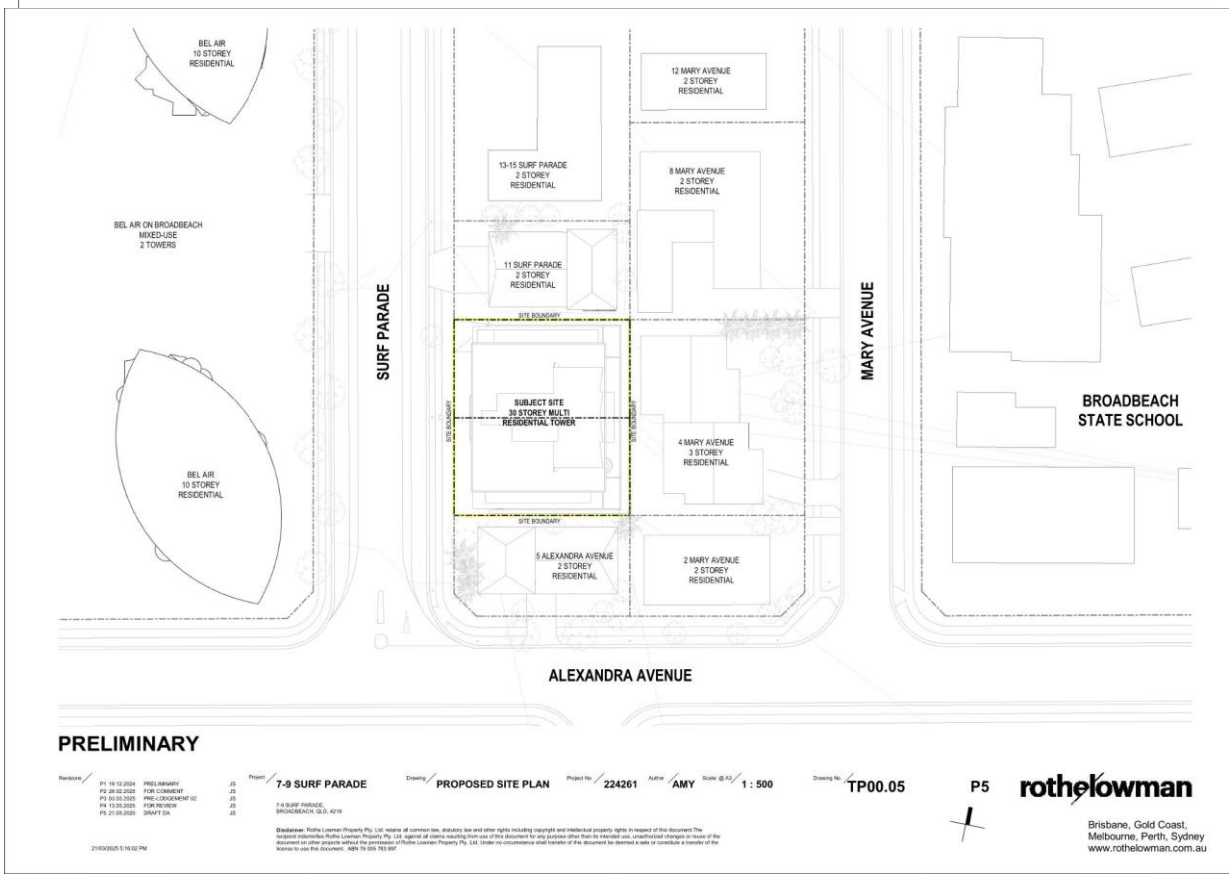
Report Prepared By

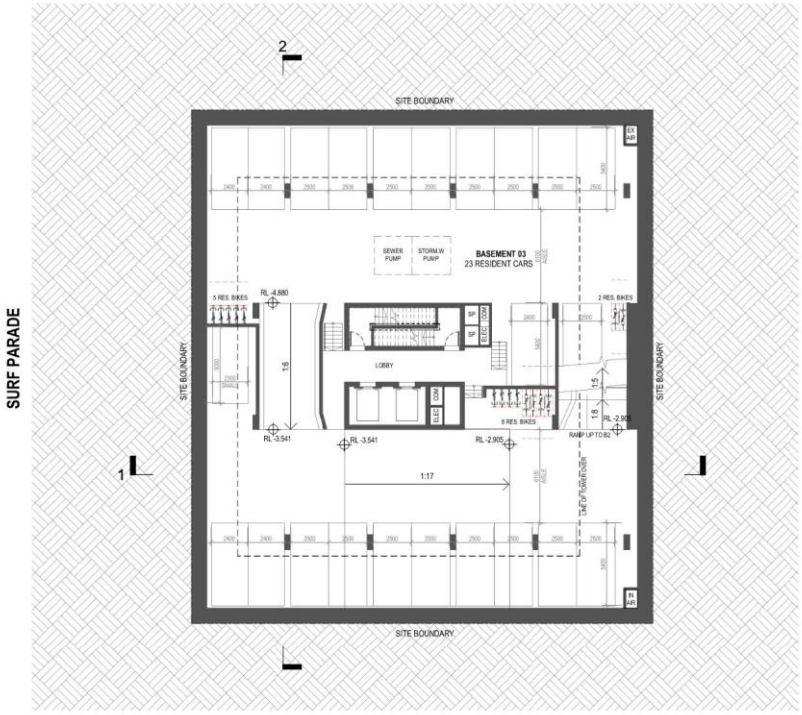
Kaitlyn Meldrum
Acoustic Consultant
acousticworks)))

10. Appendices

10.1 Development Plans







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P5	28.02.2025	FOR COMMENT	JS
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P8	21.03.2025	DRAFT DA	JS

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7-9 SURF PARADE,
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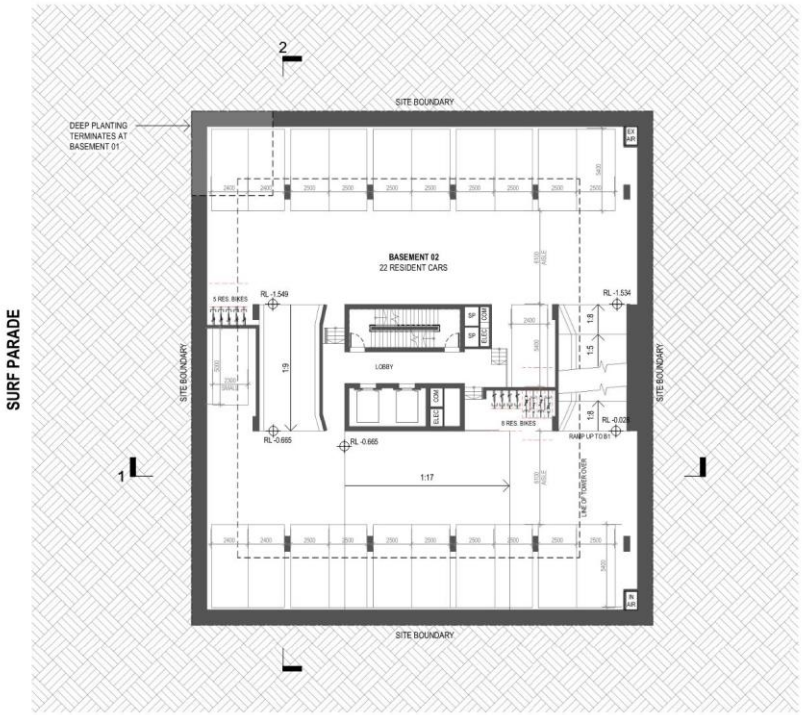

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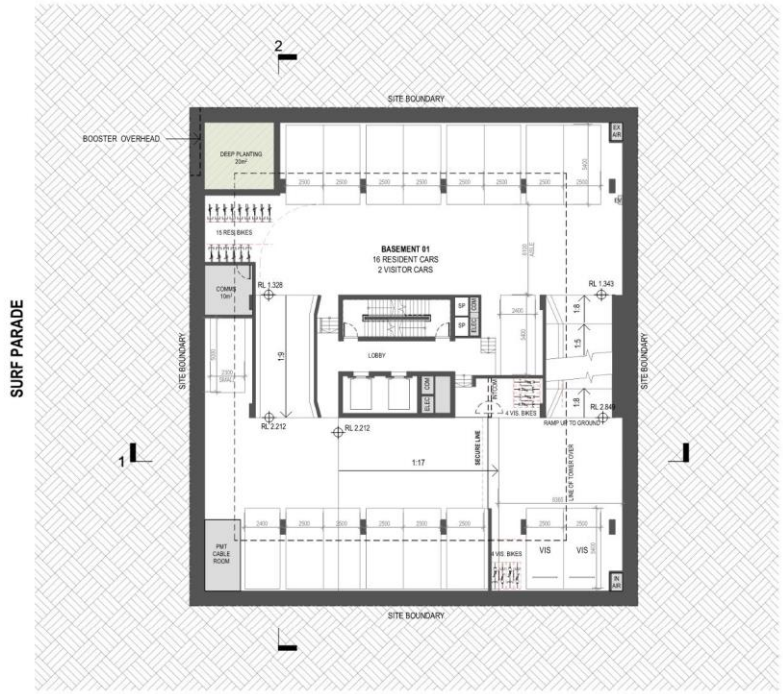

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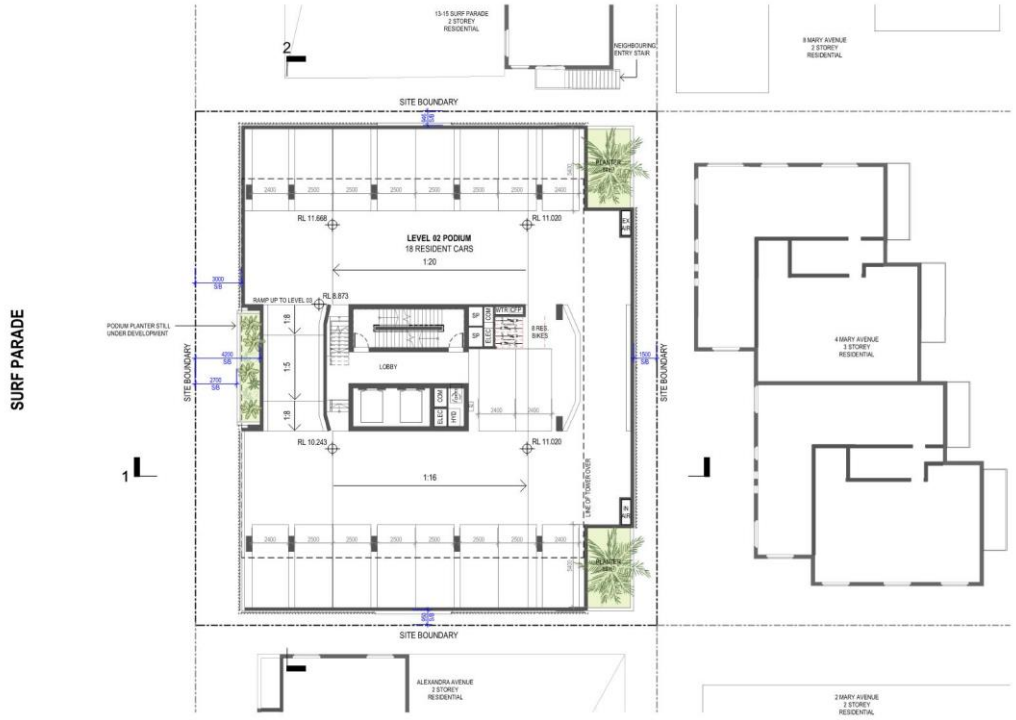

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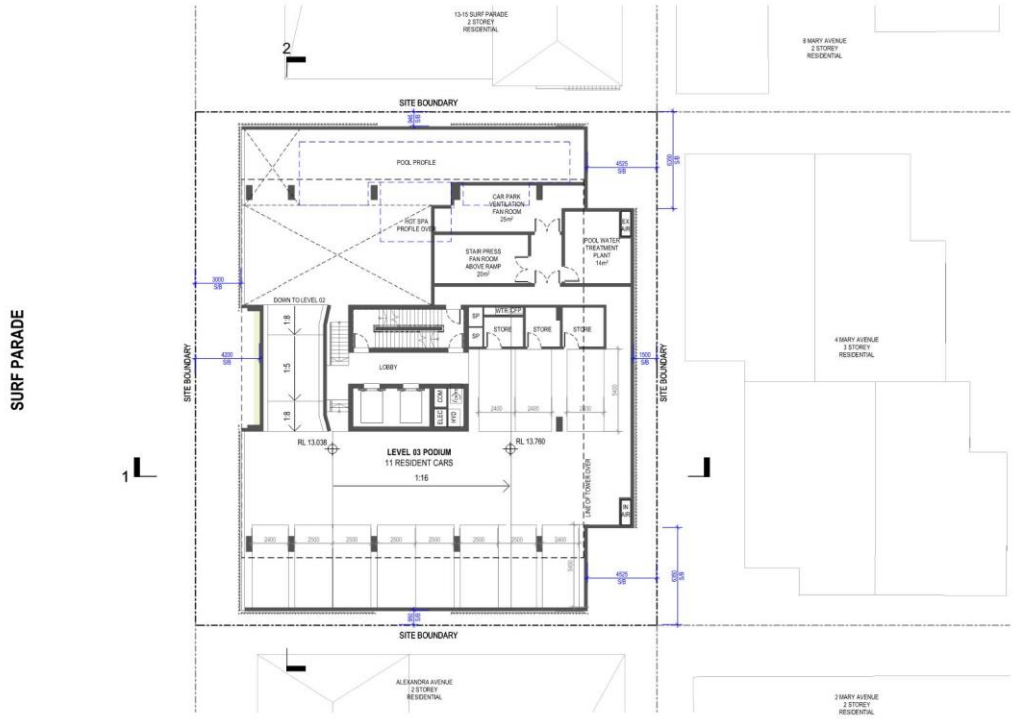

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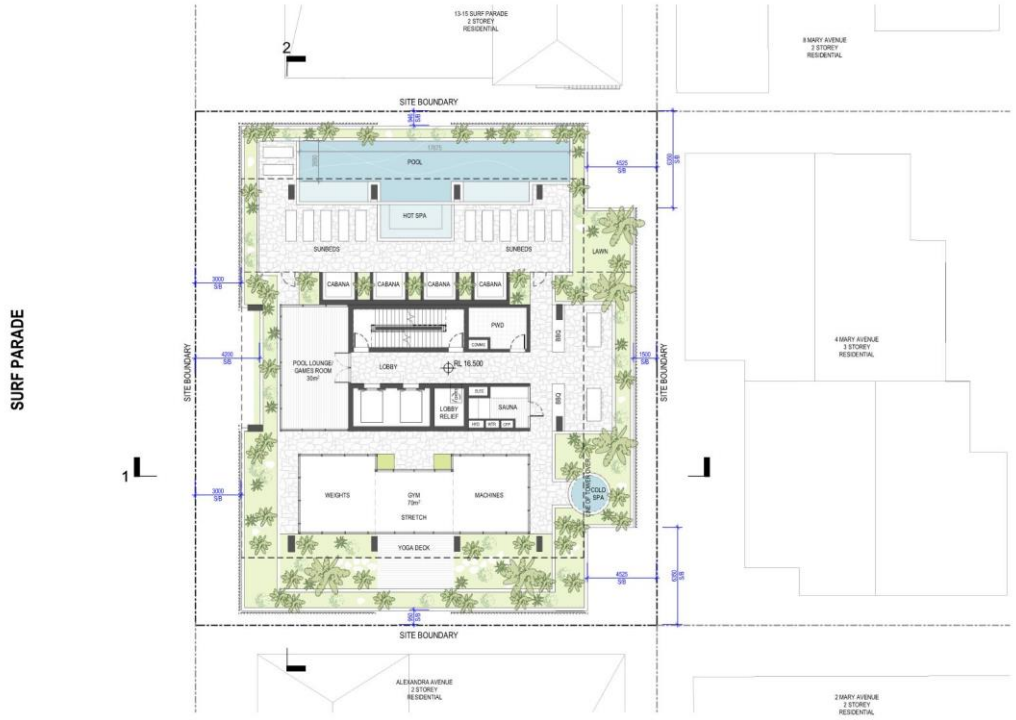

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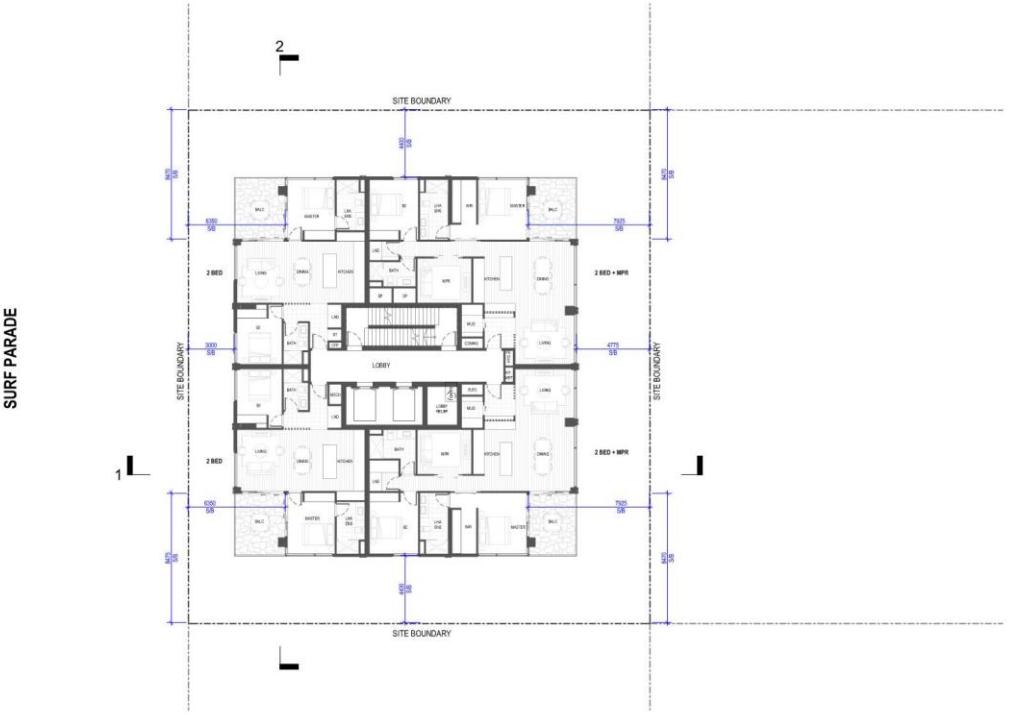

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Author: **RG**

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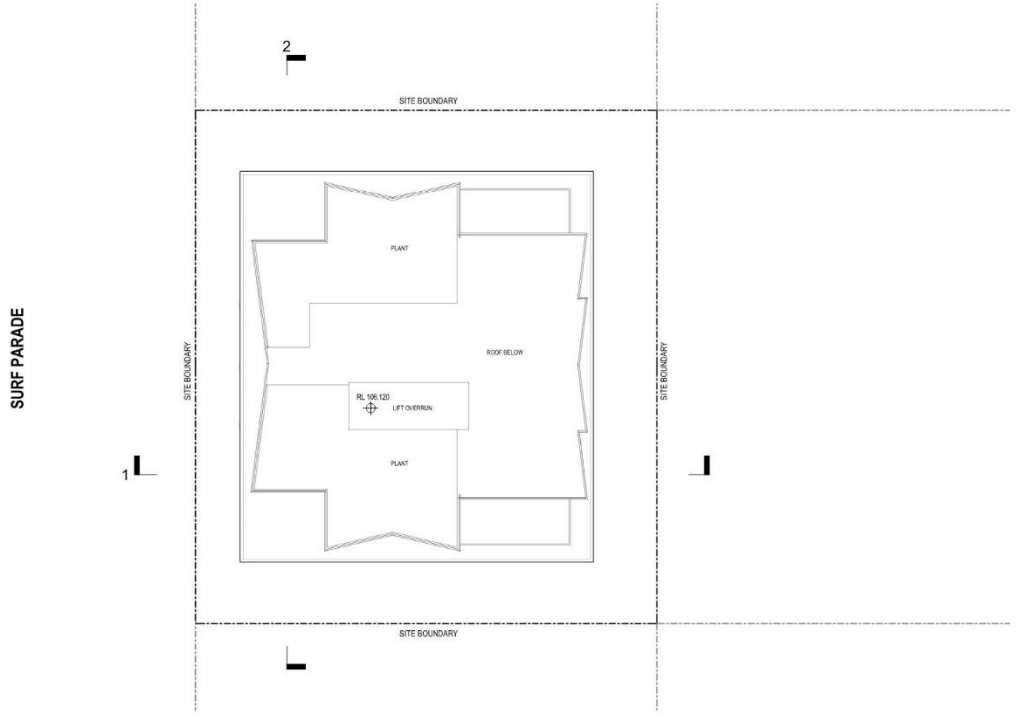

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7-9 SURF PARADE,
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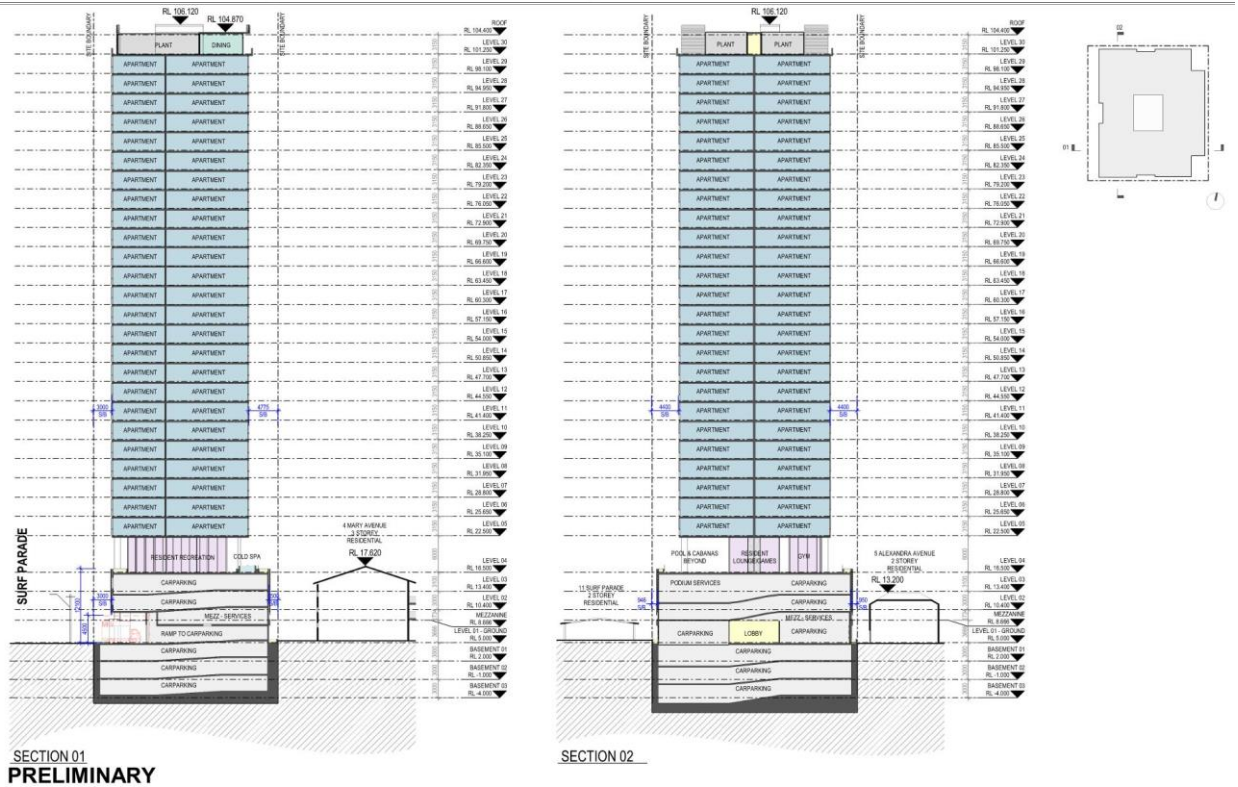

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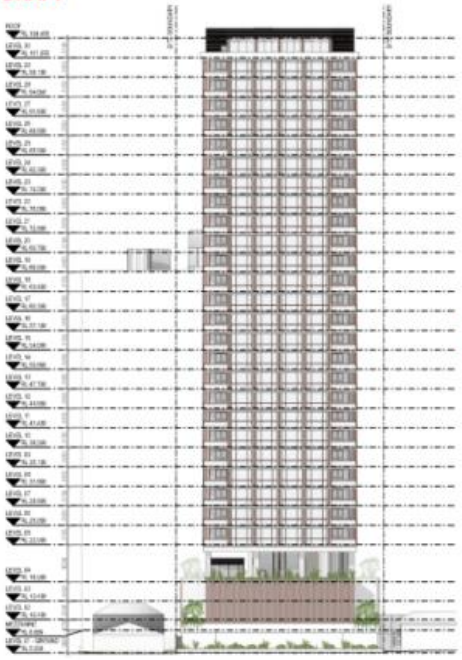

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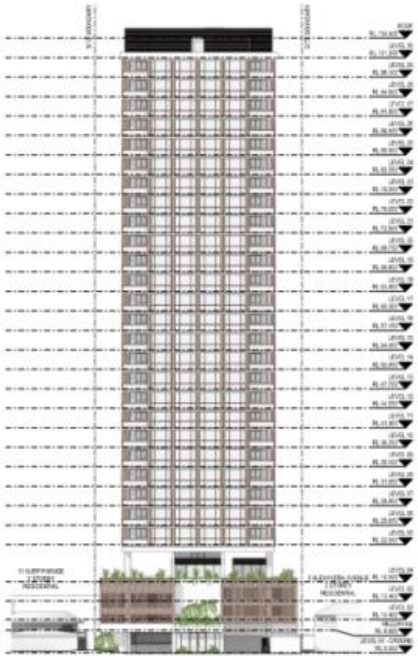

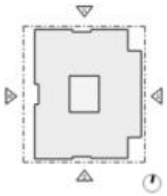

EAST ELEVATION

WEST ELEVATION

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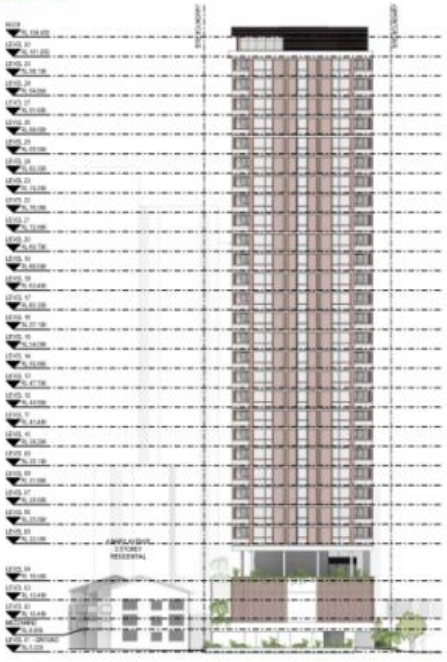

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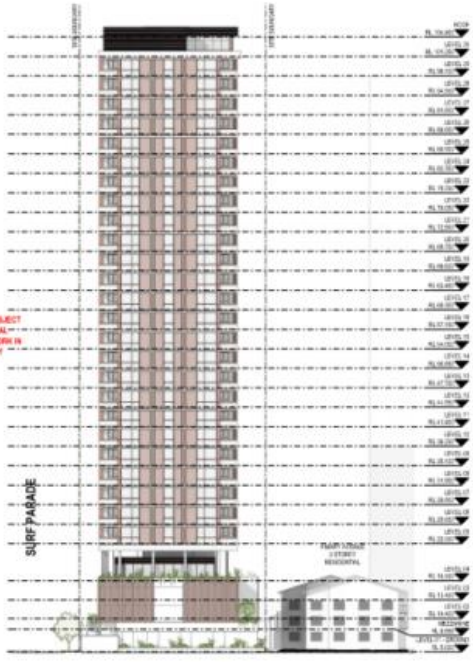
SURF PARADE



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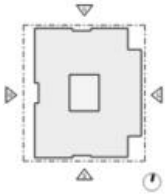

NORTH ELEVATION

SOUTH ELEVATION

PRELIMINARY

7-9 SURF PARADE	NORTH & SOUTH ELEVATIONS	224261	RG	1 : 500	TP02.01	P1	rothelowman

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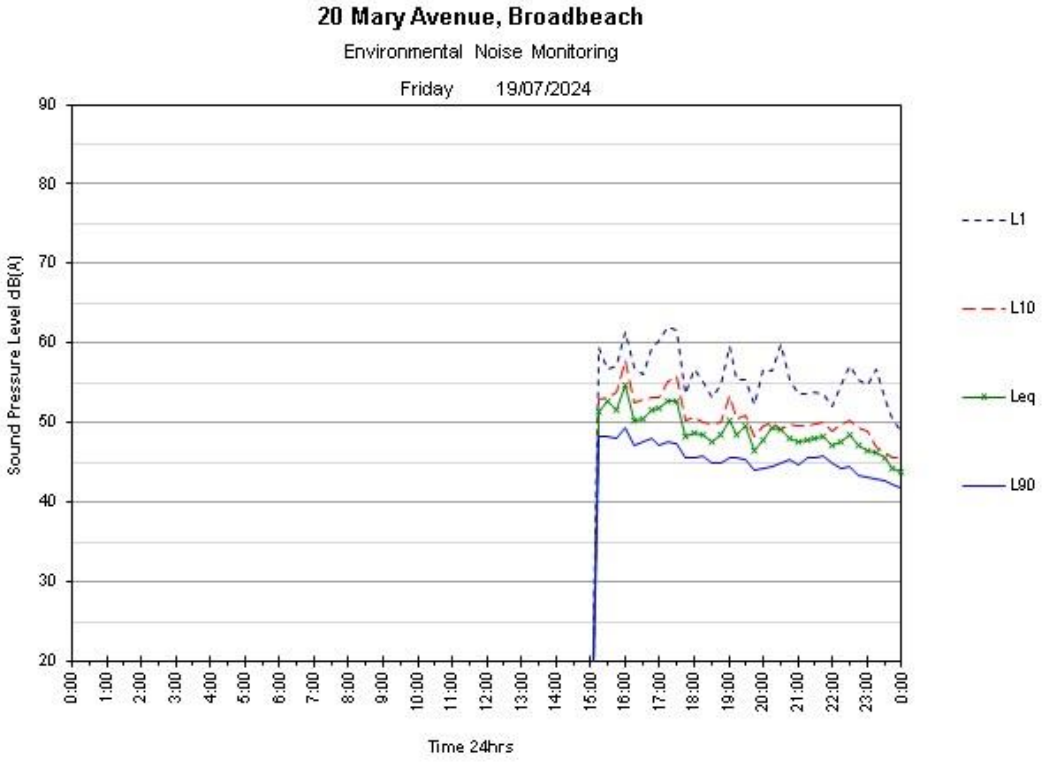
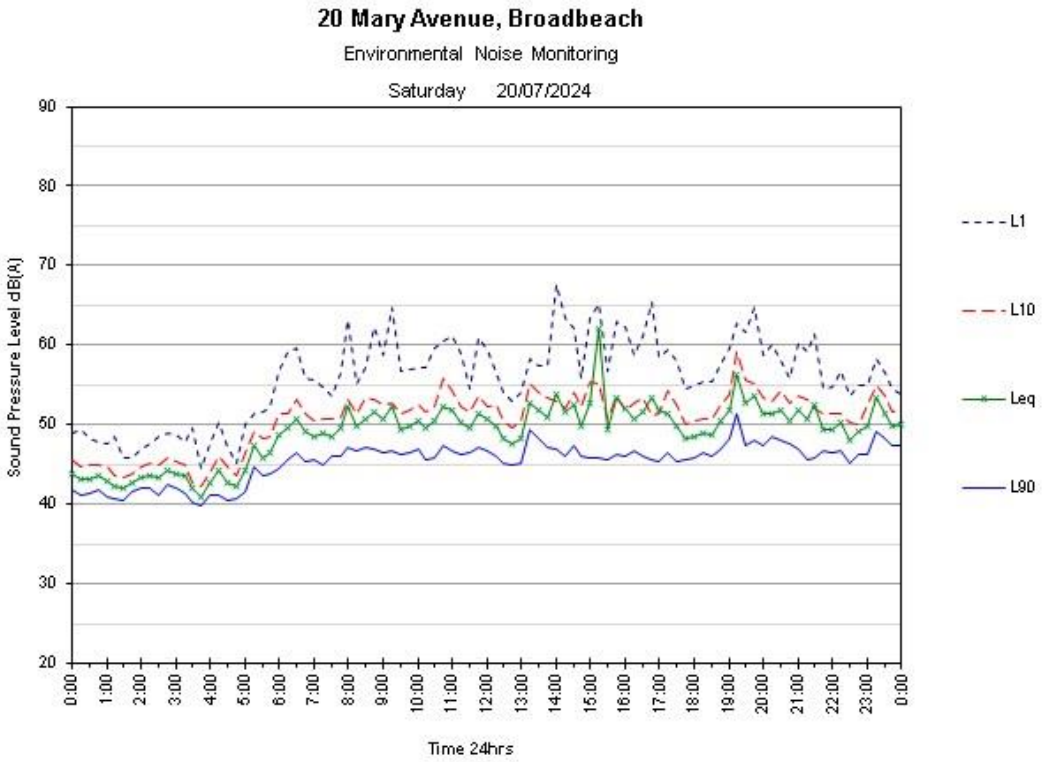
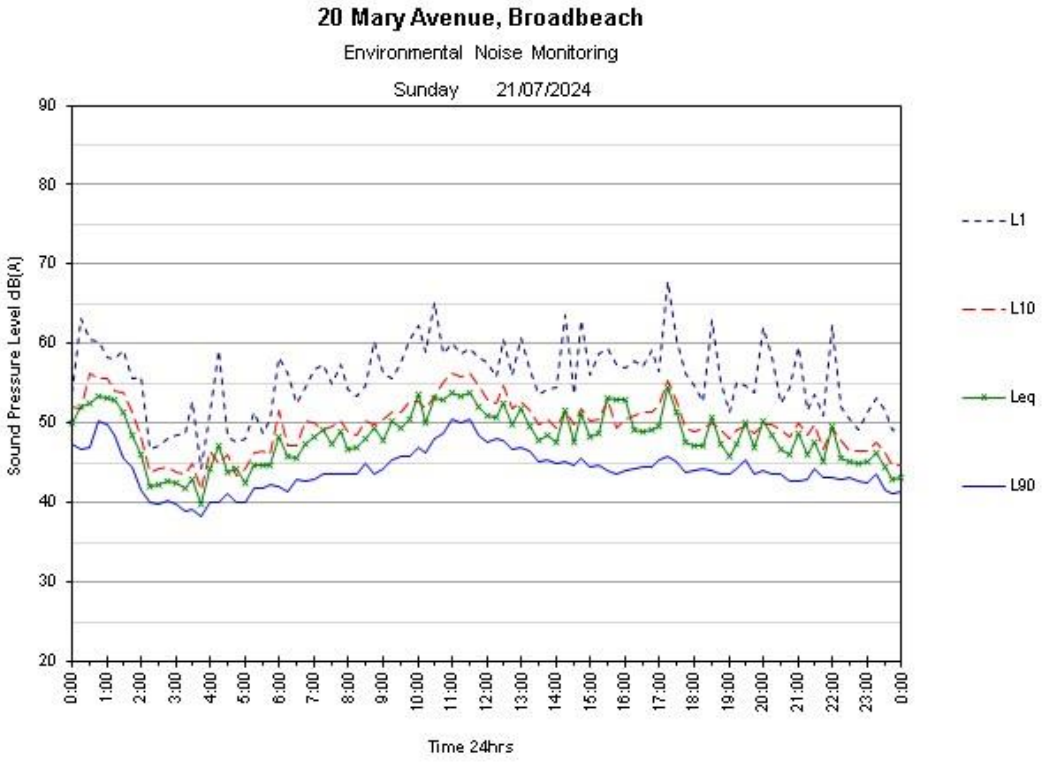
www.rothelowman.com.au

10.2 Noise Monitoring Charts



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Time 24hrs
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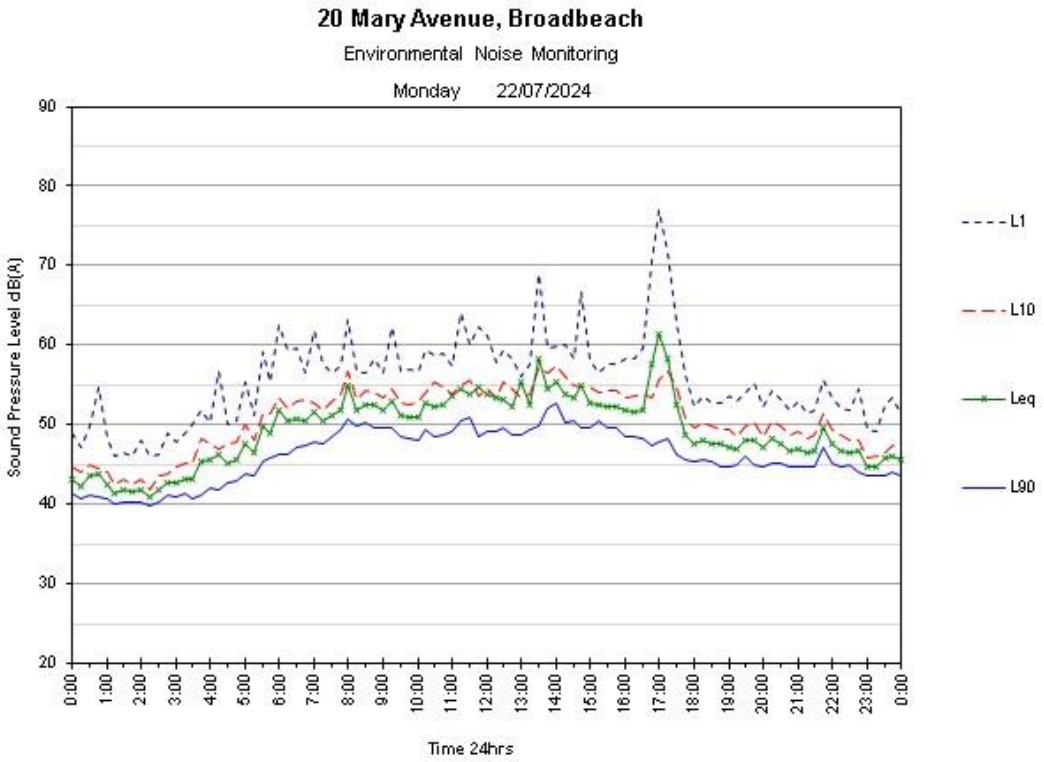
L10
Leq
L90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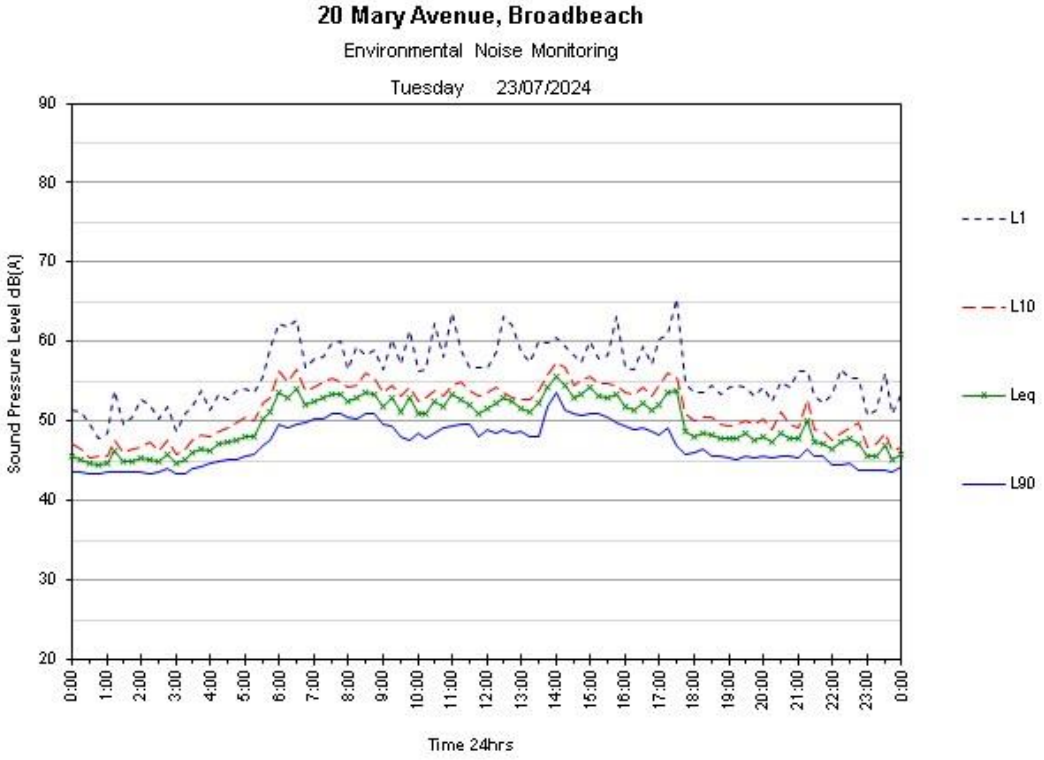
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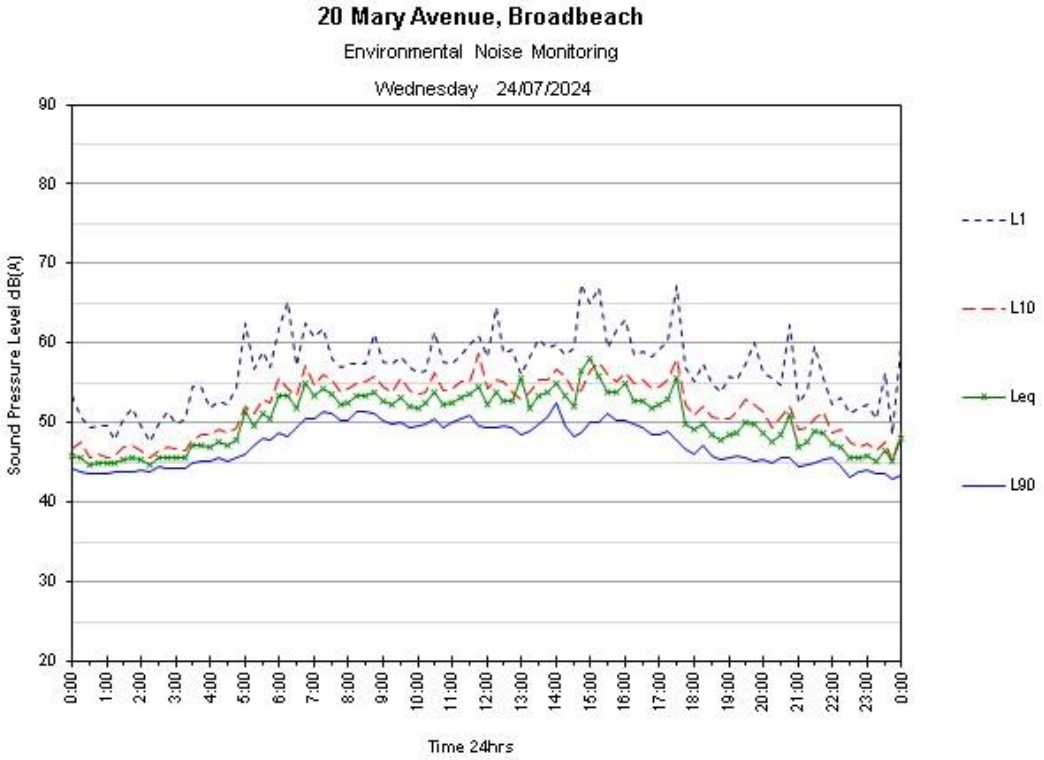
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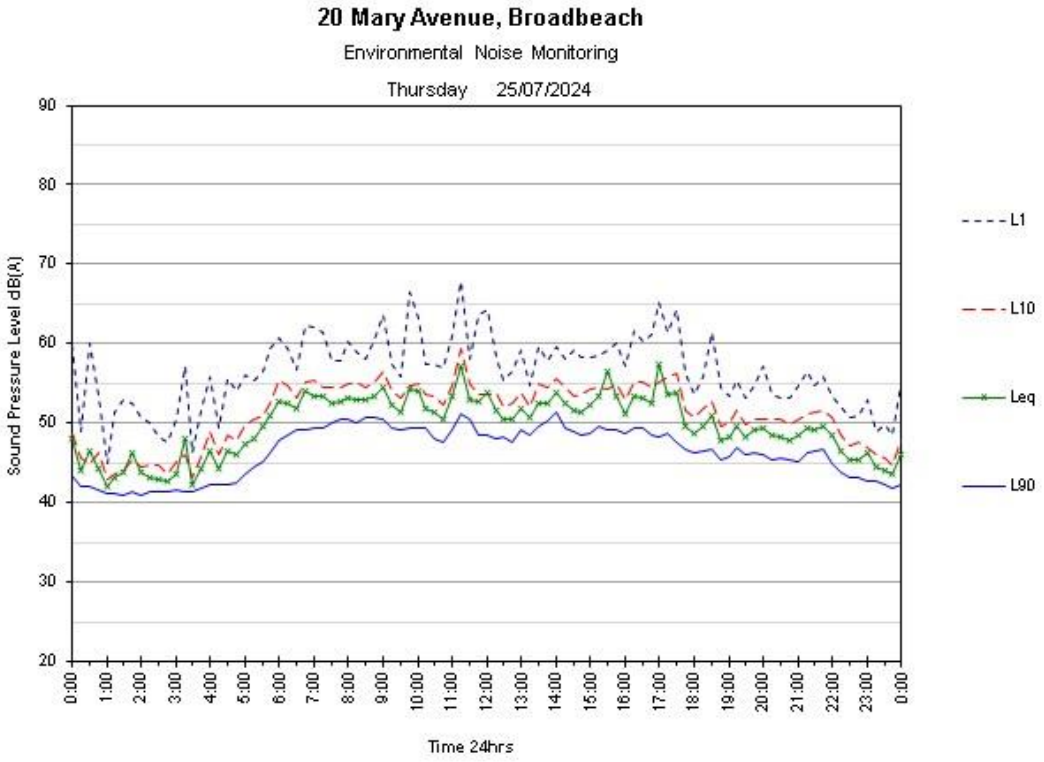
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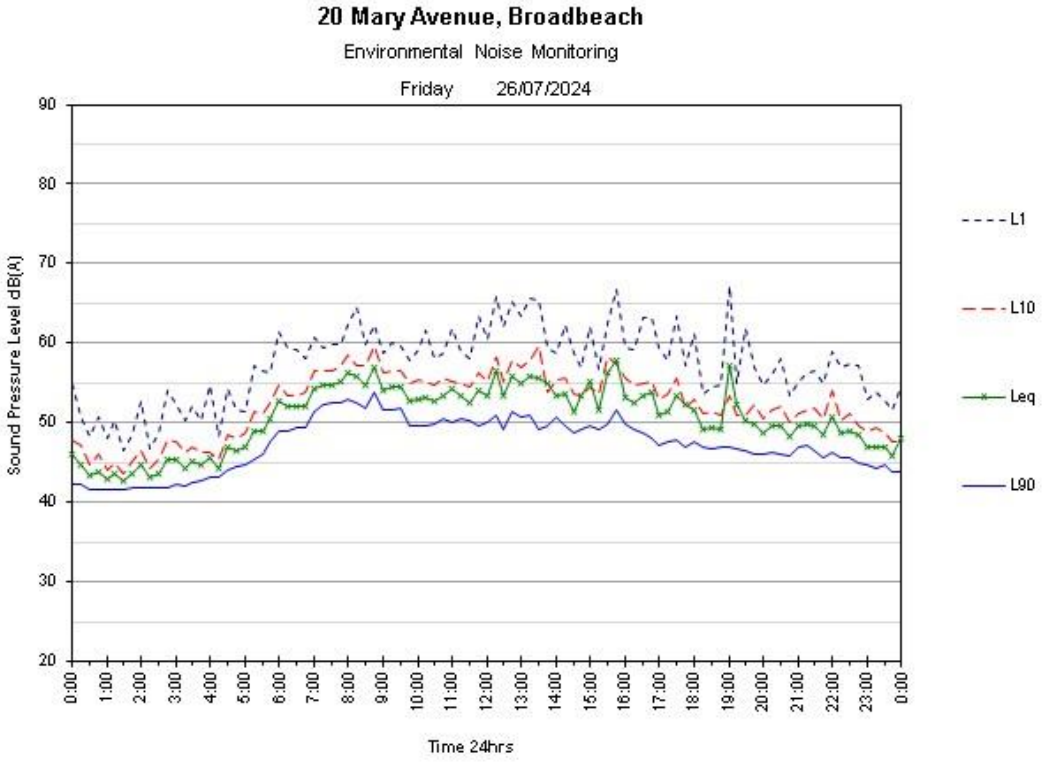
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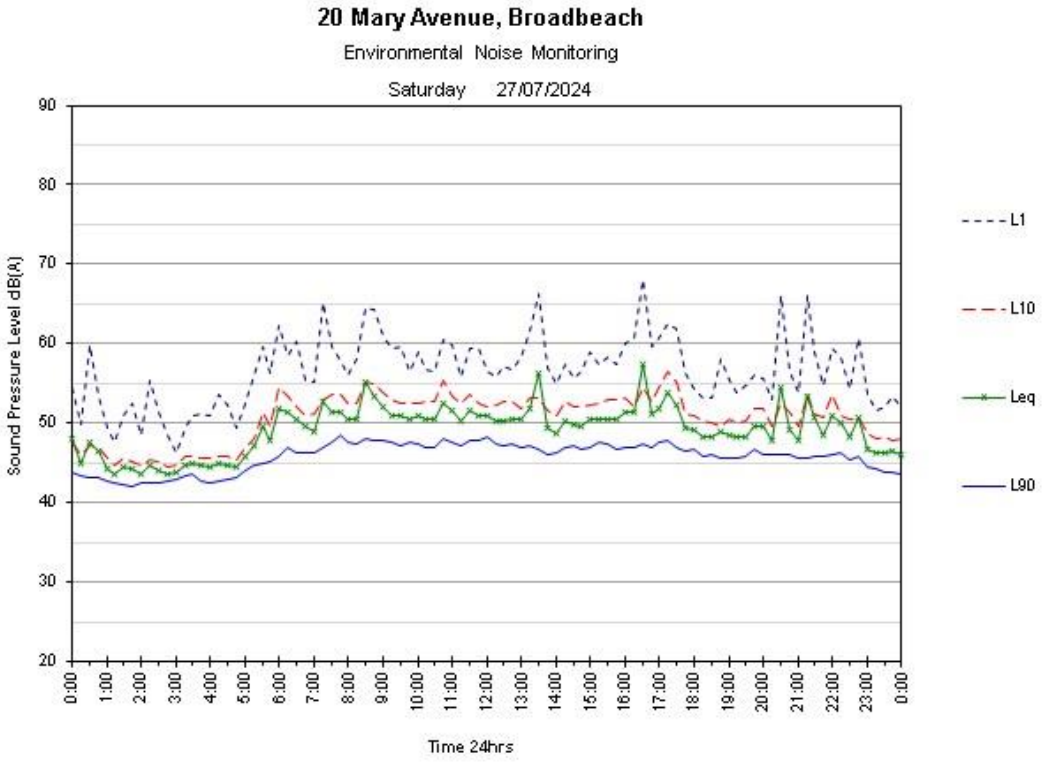
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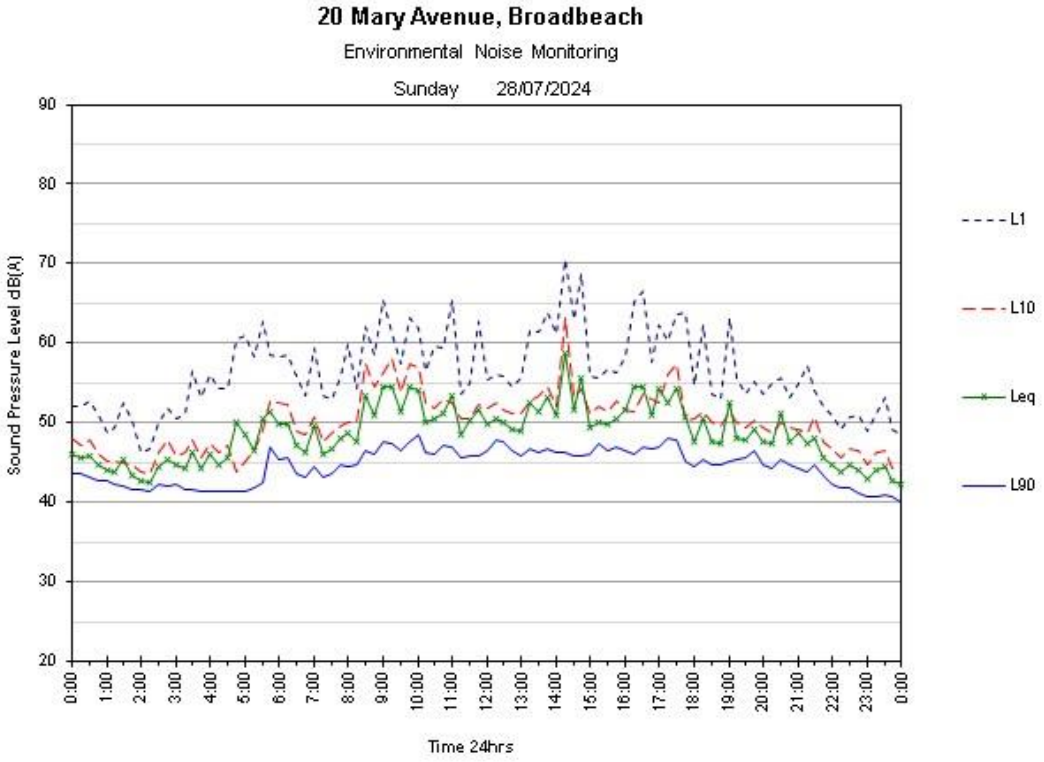
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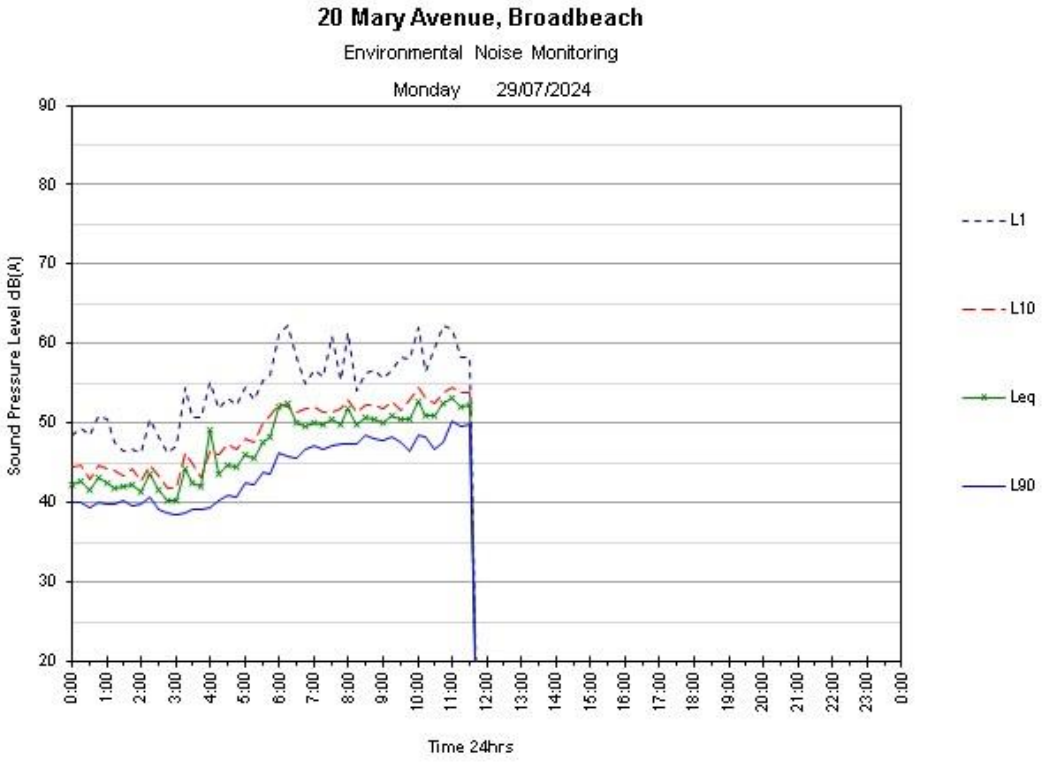
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Time 24hrs
L1
L10
Leq
L90

7-9 SURF PARADE, BROADBEACH QLD 4218

Traffic Impact Assessment

Prepared for

HIRSCH & FAIGEN GROUP

25 March 2025

URBIS

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

Director	Andy Johnston
	
	RPEQ: 24764
Associate Director	
Senior Consultant	Lee Flueckiger
Consultant	Parinaz Yousefian, Brendan Chui
Project Code	P0056926
Report Number	1

Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.

We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.

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CONTENTS

FIGURES

TABLES

1. INTRODUCTION

Urbis has been engaged by Hirsch & Faigen Group to provide transport and traffic engineering advice for a proposed Multiple dwelling and short-term accommodation development at Surfers Paradise. The purpose of this assessment is to review the development proposals traffic and transport aspects, design, and potential impacts through a Transport Impact Assessment.

The site is located at 7-9 Surf Parade, Broadbeach with frontage road to Surf Parade. It is understood that the Transport Impact Assessment is to be lodged with a Development Application to the City of Gold Coast (CoGC).

1.1. SCOPE

This report will investigate the transport and traffic conditions and impacts associated with the proposed development. The scope of these investigations will include:

- Parking Supply and estimated development parking demands.
- Appropriate carparking design.
- Identify and assess the estimate development traffic volumes on the local road network.
- Inform the access design for interface with the public space and road network.
- Assess the level of public transport service and accessibility within the proximity of the subject site.
- Provide advice on the facilities required to accommodate pedestrian and cyclist requirements.
- Review and assess the service vehicle requirements and appropriate servicing area design.

Assessment of this report is conducted in accordance with City of Gold Coast Transport Code, with reference made to the following local and national guidelines and planning documentation.

- City of Gold Coast City Plan v11 – 9.4.13 Transport Code
- City of Gold Coast City Plan v11 – 9.4.2 Driveway & Vehicle Crossing
- Austroads Guide to Road Design Part 3
- Austroads Cycling Aspects
- Road Planning and Design Manual – Department of Transport and Main Roads
- Australian Standards 2890.1, 2890.2, 2890.3, 2890.6

2. DEVELOPMENT PROFLE

2.1. SITE LOCATION

The site is located at 7-9 Surf Parade, Broadbeach formally identified as Lots 0-6 on BUP3459 and BUP2545. The site is located within the CoGC's Transport Hub Area and is zoned as High Density Residential. This site is currently occupied by 2 x two-storey residential dwellings which will be removed for the development. The location of the site is shown in Figure 2-1 below.

Figure 2-1. Site Location and Surrounding Streets

Source: Near Map

2.2. LAND USES AND YIELDS

The development proposes to deliver a High-Density Multiple Dwelling and Short Term Accommodation (e.g., holiday rental) development consisting of 100 x 2-bedroom units. The combination of Multiple Dwelling and Short Term Accommodation is commonly applied across the Gold Coast to provide a flexibility in use.

2.3. ACTIVE TRANSPORT

Bicycle parking rooms are provided for visitors and residents throughout the Basement levels.

2.4. ACCESS STRATEGY

Two vehicular accesses are proposed on Surf Parade, both intended for resident use with one also serving as the designated visitor entry. The characteristics of the access are:

- Both accesses are 6.1 m wide and located along the western property boundary.
- All movements are permitted at both accesses.
- Visitor parking is uncontrolled.
- Secure gates are installed at the resident-only access points.
- Type A driveway is provided for both accesses as per IPWEAQ RS-051.

2.5. PARKING ASSESSMNET

Carparking is provided on-site across the basement and podium levels. The proposed provision is:

- 100 residential carparking spaces including 3 small car spaces.
- 10 visitor carparking spaces including 1 PWD space.

2.6. SERVICING ARRANGEMENTS

A designated Medium Ridge Vehicle (MRV) servicing bay is proposed at the ground level at the southern access.

3. EXISITING TRANSPORT NETWORK

3.1. PUBLIC AND ACTIVE TRANSPORT

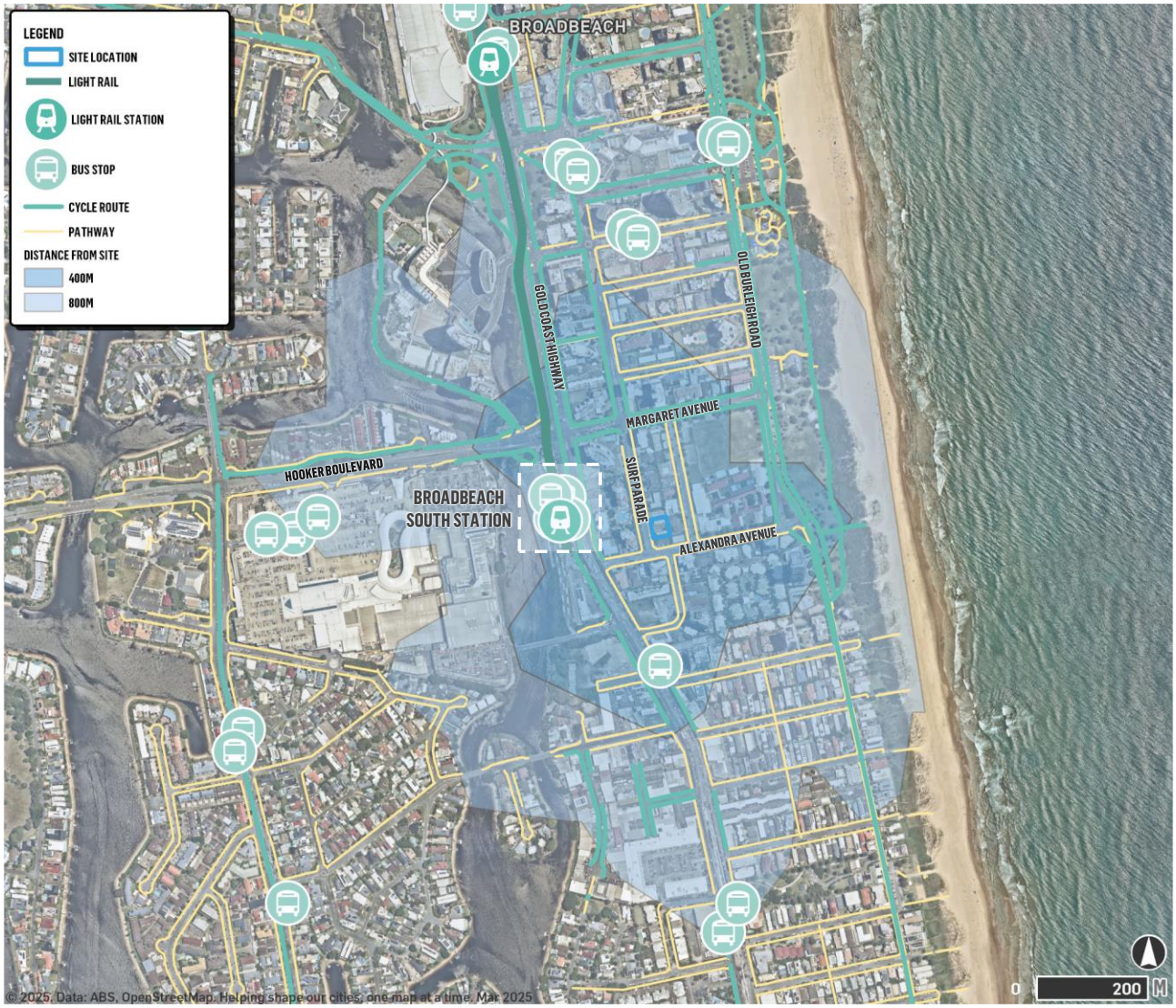
The Gold Coast City Council Cycling Guide was referred to for walking and cycling tracks within the vicinity of the subject site. A footpath is provided across the surrounding roads, connecting the site across the Greater Broadbeach. On-street cycle lanes are provided across Surf Parade, Gold Coast Highway and Old Burleigh Road. The surrounding active transport network is shown in Figure 3-1.

Figure 3-1. Active Transport Network

As shown in Figure 3-1, the active transport paths (footpath and cycle path) connect the site to Broadbeach South Light Rail Station which is identified as a public transport hub located within 400 m walking distance of the subject site.

Figure 3.2 overlays the Broadbeach South Station and the surrouding bus stations within walking distance isochrones, highlighting the site's high connectivity to public transport.

Figure 3-2. Public Transport Accessibility, 400m and 800m Walking Distance



The site is located approximately 6 minutes walking distance from the Broadbeach South Station which provides bus and light rail (G:link) services. The G:link connects the site to the Greater Gold Coast and other Heavy Rail Stations to Brisbane, and have a frequency between 7.5 to 15 minutes.

The Broadbeach South Bus Station is serviced by a variety of bus routes with a frequency between 15 minutes and 1 hour. Table 3-1 provides an overview of the bus routes which service the Broadbeach South Bus Station.

Table 3-1: Bus Route Details (Broadbeach South Station)

Route	Route Description	Frequency
700	Tweed Heads to Broadbeach and Griffith University station via Burleigh Heads	10-15 min
705	Broadbeach to Sea World/ Main Beach	15 min
731	Broadbeach South station to Southport	1 hour
736	Broadbeach South station to Nerang	1 hour

738	Broadbeach South station to Griffith University station via Ashmore	Weekdays: 30 min Weekends: 1 hour
741	Broadbeach South station to Southport via Ashmore	1 hour
743	Broadbeach South station to Nerang station via Pappas Way	1 hour
744	Broadbeach South station to Nerang station via Highland Park	1 hour
745	Broadbeach South station to Nerang station via Pacific Fair	30 min
750	Broadbeach South station to Robina via Bond University	15 min
751	Broadbeach South station to Robina via Mermaid Waters	1 hour
752	Broadbeach South station to Robina via Robina Woods	1 hour
753	Broadbeach South station to Burleigh Heads via Bond University and Varsity Lakes station	1 hour
754	Broadbeach South station to Burleigh Heads via Varsity Lakes	1 hour
755	Broadbeach South station to Robina	1 hour
756	Broadbeach South station to West Burleigh via Miami	1 hour
777	Gold Coast Airport to Broadbeach South station	15 min

As noted above, the proposed site is well-serviced by existing public transport infrastructure which provides provided access to various locations and the wider public transport network. Importantly, the proposed site does not trigger the need for modifications to the existing public transport network.

3.2. ROAD HIERARCHY

The surrounding roads within the vicinity of the site are controlled by CoGC and connect to higher-order State-controlled roads (e.g., Gold Coast Highway and Hooker Boulevard). The local road network hierarchy and characteristics are listed below in Figure 3-3 and Table 3-2.

Figure 3-3. Site Location and Surrounding Road Hierarchy

The local road network and their characteristics are listed below in Table 3-2.

Table 3-2: Local Road Network Summary

Road	Hierarchy	Cross Section	Speed Limit
Gold Coast Highway	State Road	4 lanes median divided with on-street cycle lanes. The Gold Coast Light Rail track is located along the western side of the road corridor.	60km/h
Hooker Boulevard	State Road	4-6 lanes median divided.	60km/h
Margaret Avenue	Local Road	2 lanes undivided.	50km/h*
Alexandra Avenue	Local Road	2 lanes undivided.	50km/h*
Old Burleigh Road	Local Road	2 lanes undivided with on-street parking and cycle lanes.	30-40km/h
Surf Parade	Local Road	2 lanes undivided with on-street cycle lanes.	50km/h*

**Default speed limit for built-up areas*

3.3. PLANNED TRANSPORT NETWORK

Urbis has reviewed the Local Government Infrastructure Plan (LGIP) and Queensland Transport and Roads Investment Program (QTRIP) for the region. There is no future road works specified that may impact or be impacted upon by the development.

As mentioned in Section 3.2, the site is located adjacent to the Broadbeach South Station which is involved in the Gold Coast Light Rail Stage 3 Program. The upgrade work involves:

- Extending the existing rail line southbound from Broadbeach South Station to Burleigh Heads.
- Dual track line to be located in the centre of the Gold Coast Highway.
- Retaining the 2-lane road corridor of Gold Coast Highway.
- The rail system is expected to be opened for passenger service in mid-2026.

Figure 3-4 illustrates the extension upgrade of the existing Broadbeach South Station.

Figure 3-4. Broadbeach South Station Upgrade Illustration

Source: Department of Transport and Main Roads (DTMR)

As noted in 3.1, the site's proximity to the Broadbeach South Station already provides access to a wide range of public transport services. The southern extension of the Gold Coast Light Rail will further expand the existing public transport network to the south of Gold Coast up to Burleigh Heads., which will further enhance connectivity and broaden travel options for residents and visitors. This upgrade is expected to encourage greater public transport usage and help manage traffic congestion thought the Gold Coast region.

4. CAR PARKING AND INTERNAL TRAFFIC MANAGEMENT

4.1. PARKING PROVISION

4.1.1. Car Parking

CoGC provides car parking rates for specific land uses. The parking requirement for the subject development is listed below in Table 4-1, as per Council Transport Code's Table 9.4.13-4: Car parking rates – Centre zone and High-density residential zone – Transport Hub Area.

It is noted that the site is proposed to accommodate a mix of high-density residential and short-term accommodation land uses. The specific allocation of dwellings between both land uses will be determined during the detailed design stage. For the purpose of this assessment, it is conservatively assumed that 100% of the proposed dwellings will be designated as residential, which is subject to a higher parking supply requirement by CoGC.

Table 4-1: Parking Requirements – Car Parking (High Density Residential Zone in Transport Hub Area)

Land Use	**Yield**	**CoGC Parking Code Requirement**	**Parking Requirement**	**Parking Provision**
Residential Multiple Dwelling / Short Term Accommodation	100 units	Residents: 1 per unit or dwelling Visitors: 1 per 10 units or dwelling	100 residential carparks 10 visitor carparks	97 Standard resident carparks + 3 small car spaces 10 visitor carparks including 1 PWD bay
		Total	110 Carparks	110 Carparks

The CoGC Planning Scheme requires a minimum number of 110 parking spaces, comprising 100 residential carparks and 10 visitor carparks for the site in accordance with requirements. As indicated above, the proposed car parking provision, inclusive of the small car spaces, is compliant with the requirements of the City Plan.

Three (3) small car spaces are provided throughout the basement levels. Whilst small car spaces are typically not counted toward the total parking supply under standard provision, it is acknowledged that each unit will be assigned a parking space with the appropriately sized vehicles or tenants with compatible parking needs. A small car will be listed as a condition of sale within the contract for the unit, this is a marketing/building management component, separate to the assessment of parking demand. The residential parking proposed, at 1 carpark per unit, is deemed acceptable from a traffic engineering perspective.

4.1.2. Bicycle Parking

The City Plan outlines the bicycle parking requirements by land use. The residential bicycle parking rate is for 1 park per unit, a commonly accepted alternative is the Austroads Guide to Cycling Aspects. Austroads recommends a bicycle parking rate for this particular land use at 1 park per 3 units for residents. The required bicycle parking rates for the proposed development are listed below in Table 4-2.

Table 4-2. Land Use Parking Requirements – Bicycles

Land Use	Yield	Austroads Parking Code Requirement	Parking Requirement	Parking Provision
Multiple Dwelling	100 units	Residents: 1 per 3 dwellings Visitors: 1 per 12 dwellings	34 residential carparks 8 visitor carparks	41 resident carparks (Class B) 8 visitor carparks (Class C)
		Total	42 Carparks	49 Carparks

A total of 49 bicycle parking spaces will be designated for residents, with the property featuring 8 additional bike spaces for visitors. This is compliant with the City Plan Transport Code for visitors and the Austroads's bicycle parking requirements for residential demand.

4.2. PARKING DESIGN

Reference is made to the Australian Standards 2890.1 car park design to meet City of Gold Coast design requirements.

Table 4-3 identifies the characteristics of the proposed parking module(s) and the corresponding design requirement.

Table 4-3: Parking Design Compliance

Design Component	AS2890.1 Requirement	Provision	Compliance
Car Park Bay Length - Standard - Visitor - Small Car	5.4m 5.4m 5.0m	5.4m 5.4m 5.0m	✓ ✓ ✓
Car Park Bay Width - Standard - Visitor - Small Car	2.4m (User Class 1A) 2.5m (User Class 2) 2.3m	2.4m min. 2.5m min. 2.3m	✓ ✓ ✓
Aisle Width: - Parking Aisle - Circulation Aisle	5.8m plus 0.3m to a wall Two way 5.5m plus 0.3m to each wall 1 way 3.0m plus 0.3m to each wall	6.1m 6.1m 3.6m	✓ ✓ ✓
AS2890.1 Parking Envelope Clearances	Obstructions (columns) permitted between 0.75m and 1.75m of the aisle	0.75 to 1.75m	✓
Parking Envelope Door Opening Clearances	0.3m	0.3m	✓
End of Aisle Treatment	1.0m beyond last bay and/or 8.0m aisle	0.3m and upwards	See Section 4.2.1
Maximum Gradients - Parking Bay	1:20 in direction of parking	1:16 across	✓

Design Component	AS2890.1 Requirement	Provision	Compliance
- Parking Aisle	1:16 across the parking	1:16	✓
Maximum Change in Grade	1:8 summit 1:6.67 sag	1:8 summit 1:8 sag	✓ ✓
Height Clearance	2.2 m over car parks 2.5m above PWD carparking 4.5m Height clearance for MRV	3m Basement >2.5m at ground 4.5m over loading bay	✓ ✓ ✓

As shown above, the proposed site layout generally complies with AS2890. Performance outcomes are discussed and demonstrated below.

4.2.1. End of Aisle Treatment

Across the carparks, there are two areas that have less than 1.0m end of aisle extension:

A Ground Floor end of aisle Visitor and Resident spaces.

B Basement Small Car bays on the western side of the basement.

A vehicle swept path analysis has been conducted for each of these locations to confirm accessibility of these carparks remains feasible. These are shown on drawings P0056926_01A & 03A, see enclosed **Appendix B**.

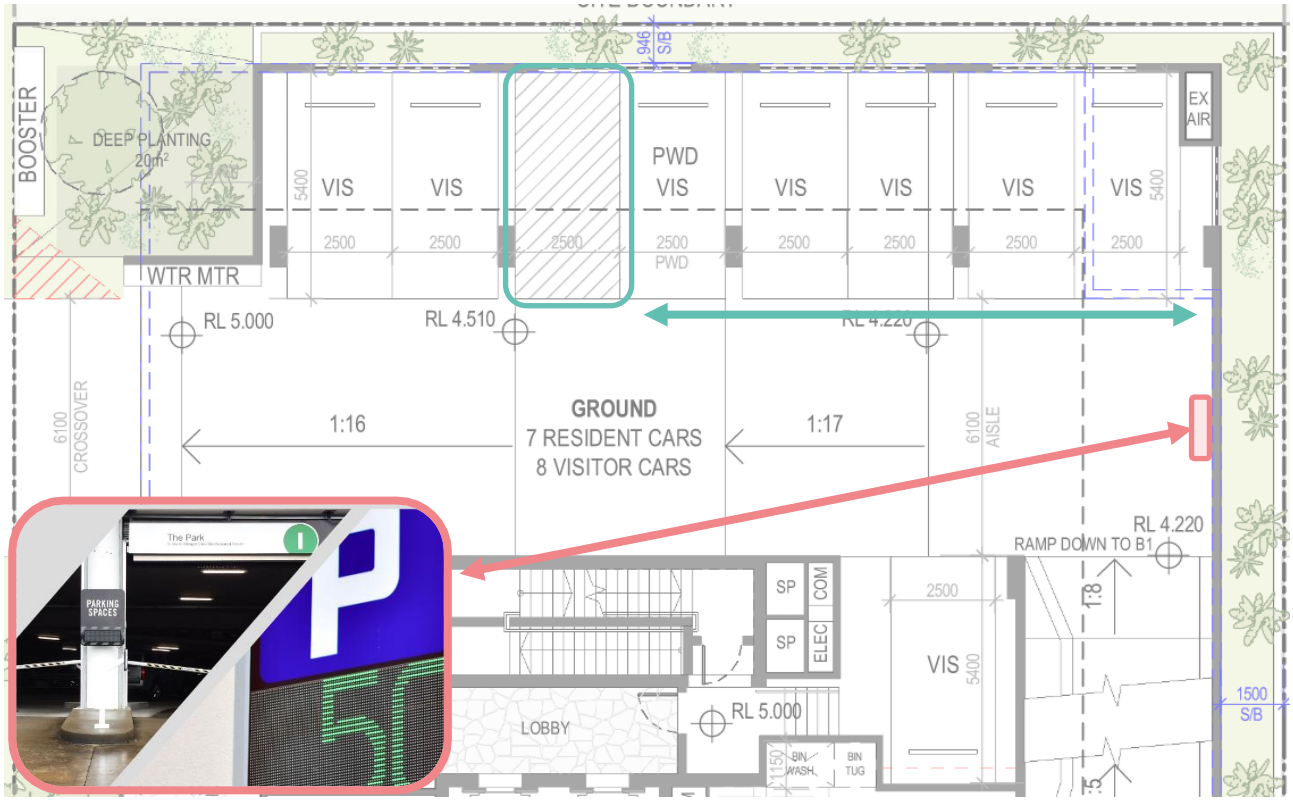
4.2.2. Visitor Turn Around

At the ground floor the third parking space is hatched out and positioned 5 carparks from the end of the aisle. This space can be used for visitor turnaround across the ground floor. AS2890.1 specifies that a turnaround space should be positioned within 6 parking spaces from the end of a parking aisle. As the turnaround is 5 spaces from the end of the aisle, the turnaround area is appropriately located.

As there are a further 2 visitor carparks within the basement, the site shall provide signages to improve the accessibility and convenience of the site. This signage shall indicate the availability of the two visitor spaces within the basement to reduce and/or remove the need to enter the basement levels to check the parking availability, see Figure 4-1. This system is simple and affordable to integrate with the proposed ramp management system (see following Section 4.2.3).

Should a visitor enter the basement without checking the signages, a B99 sized vehicle is required to make a 5-point turn to exit the basement. This movement is demonstrated on drawing P0056926_05A, see enclosed **Appendix B.**

Figure 4-1: Visitor Turnaround and Signage



4.2.3. One-Way Ramp Circulation

It is proposed that the one-way ramp be signalised to formalise access arrangements and eliminate potential conflicts between opposing vehicle movements. The following key traffic control measures are recommended for the site, in accordance with the Department of Transport and Main Roads' Manual of Uniform Traffic Control Devices (MUTCD):

- Stop line pavement marking at the top and bottom of the ramps for vehicle to store when signals are red.
- Line marking and signage indicating where vehicles are required to stop prior to entering the ramp.
- Signalised infrastructure directed at approaching or stationary vehicles to ensure clear awareness of access controls.

It is understood that that the signalised arrangements will operate as below:

- Signals will default to green for inbound vehicles.
- Inbound vehicles may proceed directly up/down the ramp while the signal is green, with no need to stop or wait.
- When an outbound vehicle exits a parking space and approaches the ramp, it will wait at the stop line until the signal changes to green. The system will be activated by the outbound vehicle, turning the opposing (inbound) signal red on the next level, allowing sufficient clearance time for any vehicles on the ramp, before turning green to permit outbound egress.
- The ground level inbound light will only turn red once the egressing vehicle is 1 level away from the exit point. This is facilitated by the exiting hold point on each level. Meaning that the maximum delay for an inbound vehicle is the time taken from the first hold point to the ground level.

This proposed arrangement is relatively straightforward and is consistent with one-way ramp signalisation adopted in similar developments across the CoGC. Swept path analysis confirms that the ramp design and

stop line locations can accommodate the expected vehicle movements safely and efficiently. Assessment of the queuing probability is detailed in Section 4.2.4 below.

Within the swept path assessment, Urbis has applied a B99 vehicle for all ramp/holding point circulation movement on both the inbound and outbound directions. Clearances for these swept paths have been applied in accordance with the AS2890.1.

The clearances that must be maintained for this assessment are outlined in AS2890.1 Appendix B Paragraph B3.2.

(a) Manoeuvring clearance To cater for slow moving vehicles travelling within parking aisles or manoeuvring into parking spaces, i.e. at 10 km/h or less, a clearance of 300 mm shall be added to both sides of the turning path.

(b) Circulation clearance Circulating vehicles travelling at speeds higher than 10 km/h, i.e. those travelling on access roadways, ramps, circulation roadways and circulation aisles, require a further clearance of 300 mm added to one side only.

Within the recent draft of the AS2890.1 review, there has been additional information provided around the Design Speed vs Turn Radius at this tight locations, proposed as Section B.3.3. While it is acknowledged that this remains a draft document and is not yet endorsed, other guidance documents do not specify vehicle speeds within this low range. This addition shows that vehicles required to make a turn with an 8m radius or less, are likely travelling at 5km/h.

Figure 4-2: Draft Australian Standards 2890.1 Section B.3.3.

Table B.3 – Design speed vs turn radius

Turn radius (m)	Minimum turn speed km/h)
5.8 to 8	5
8 to 12	10
12 to 20	20
Over 20	30

Interpreting these vehicle speeds upon the subject site, turning movements from the parking aisle onto either side of the ramps, and around the building core, are likely occurring at 5km/h.

To this end, vehicle circulation within the basement is proposed as follows:

- On the basement & podium ramps, an additional 300mm clearance is applied on the outside of the vehicle path to obstructions greater than 150mm in height.
- At the exit of the ramps, at the turning points of circulation, drivers tend to provide additional space across the nose of their vehicle, as such the additional 300mm clearance is applied on the outside of the vehicle path to obstructions greater than 150mm in height.

4.2.4. One-way Ramp Queues

As the traffic flows are highly tidal, with most residents travelling in the same direction, the likelihood for two vehicles to meet at the conflict point is significantly low.

Nonetheless, Austroads Guide to Traffic Management Part 2 recommends application of Poissons queueing theory to estimate the likelihood of two vehicles meeting within a given time frame and the queue length that may occur while waiting for clearance. The parameters for this calculation are given as:

- From the Basement it takes a vehicle approximately **35s** to traverse from the hold point up to the ground entry point. Calculated as 45m at 5km/h.
- From the Podium it takes a vehicle approximately **55s** to traverse from the hold point up to the ground entry point. Calculated as 75m at 5km/h.
- From Section 7, the highest trip generation occurs in the AM peak hour with **19 vehicles per hour.**
- For a conservative estimate, the below calculations are provided as all 19 vehicles using a single ramp. Realistically, there will be a split between the Podium carparks and the basement carparks which will further reduce the probability of 2 vehicles within the same waiting period.

Table 4-4: Queueing Estimation for Basement Ramp Clearance

Scenario; Probability of More than *N* vehicles arrive within the delay period	Probability
Prob of more than 1 vehicle arriving	1.5%
Prob of more than 2 vehicles arriving	0.1%
Prob of more than 3 vehicles arriving	0.00%

Table 4-5: Queueing Estimation for Podium Ramp Clearance

Scenario; Probability of More than *N* vehicles arrive within the delay period	Probability
Prob of more than 1 vehicle arriving	3.5%
Prob of more than 2 vehicles arriving	0.3%
Prob of more than 3 vehicles arriving	0.02%

The above tables demonstrate that the 95th percentile queue length is 1 vehicle for either the podium or the basement entry. With the application of the ramp signalling system, the assessment of the proposed arrangements is considered safe, and acceptable.

5. VEHICULAR ACCESS

5.1. DRIVEWAY DESIGN REQUIREMENTS

The development proposes two accesses, a northern driveway to the basement levels, and a southern driveway to the podium levels.

Visitor carparks are only accessed via the northern driveway and clear signage is to be provided as such.

The driveway requirements outlined in Table 5-1. Performance solutions or alternative designs are discussed in the following sections.

Table 5-1: Typical Driveway Requirements and Provision across Both Accesses

Design Component	Council Requirement	Proposed Provision	Compliance
Distance from an Intersection	6.0m from tangent point and AS2890.1 exclusion areas	Approx 12.0m from the southern access	✓
Distance from an adjacent driveway	3.0 m	9.5m to adjacent property. 8.3m at the property boundary between the Northern access and the Southern access	✓ ✓
Distance from a property boundary	2.0m	6.5m for both access	✓
Distance from public infrastructure	1.0m	approx. 3.0m to the power pole for both accesses	✓
Sight Distance	60km/h (AS2890.1) - 69m Desirable - 45m Minimum	North approach: >69m both accesses South approach:40m to southern access from the Alexandra Avenue intersection	See below
Driveway Type	IPWEAQ RS-051 – Type A AS2890.1 Category 2	Generally in accordance with IPWEAQ RS-051 – Type A for both accesses	✓
Entry / Exit Width	6.0m – 9.0m Heavy Vehicle Access	6.1m for both accesses	✓
Minimum Queuing Provision	1st 100 cars: 3% of capacity 2nd 100 cars: 2% of capacity Additional cars: 1% of capacity	6.5m from the first carpark to the property boundary at the northern access. 9.0m from the first carpark to the property boundary at the southern access.	See below
Pedestrian Sight Triangle	2.5m by 2.0m on the egress side of a driveway	2.5m by 2.0m on the egress side of a driveway	✓

5.1.1. Sight Distances

Sight distance requirements from the access points between vehicles are required by the AS2890.1. The view along the Southern Approach of Surf Parade is limited to approximately 40.0m due to the intersection with Alexandra Avenue. As a T intersection, a vehicle needs to make a 90 degree turn into Surf Parade, this substantially increases the observation time of an approaching vehicle as the car slows through the turn. Therefore, the sight distance of 40m across the southern approach to the access points is considered an acceptable outcome for the site.

5.1.2. Queueing Provision

Based on the AS2890.1 a minimum queueing provision of 2 vehicle lengths are required prior to the first carpark for both access points However, Urbis considers this level of queuing provision excessive for multi-unit residential dwellings due to the following:

- Access and Egress is uncontrolled from the property boundary.
- Queueing into the ramps is estimated at a 95th percentile of 1 vehicle.
- Multi-unit residential dwellings have tidal traffic flows**.**
- Road frontage is a low volume access street with low traffic volumes.

Overall, the traffic situation at the residential development appears to be well-managed and should not cause any significant issues for residents or visitors. Urbis consider that the queuing provision meets the needs of the residents and is consistent with the communities' expectations.

6. SERVICE VEHICLE REQUIREMENTS

6.1. COUNCIL REQUIREMENTS

Service vehicle requirements are outlined within the CoGC Transport Code. Table 6-1 outlines the service vehicles for the multi-unit residential dwellings.

Table 6-1: Service Vehicle Requirements

Land Use	Minimum Class of Service Vehicle
Short Term Accommodation	Coach (12.5m bus)
Multiple dwelling if: more than 3 dwellings	Standing area for an MRV on-site

6.2. SHORT TERM ACCOMMODATION – COACH

As mentioned in Section 2.2, the inclusion of the short term accommodation land use is intended to provide flexibility for unit owners to engage in holiday rentals (e.g., Airbnb), rather than supporting full-scale hotel or resort operations. This arrangement is consistent with other similar Multiple-Dwelling developments approved by GoCC (such as 14 Australia Avenue Broadbeach).

Given the combined residential and holiday-rental nature of the proposed development, coaches or large tourist buses are not anticipated to service the site. Visitors are expected to arrive primarily in private vehicles, ride-share vehicles, taxis, or smaller passenger vans/mini-buses.

As such, provision for access and servicing of a 12.5 coach is considered unnecessary. Instead, design accommodation for a MRV is considered appropriate and sufficient for the operational needs of the proposed development.

6.3. MUTLIPLE DWELLING – MRV

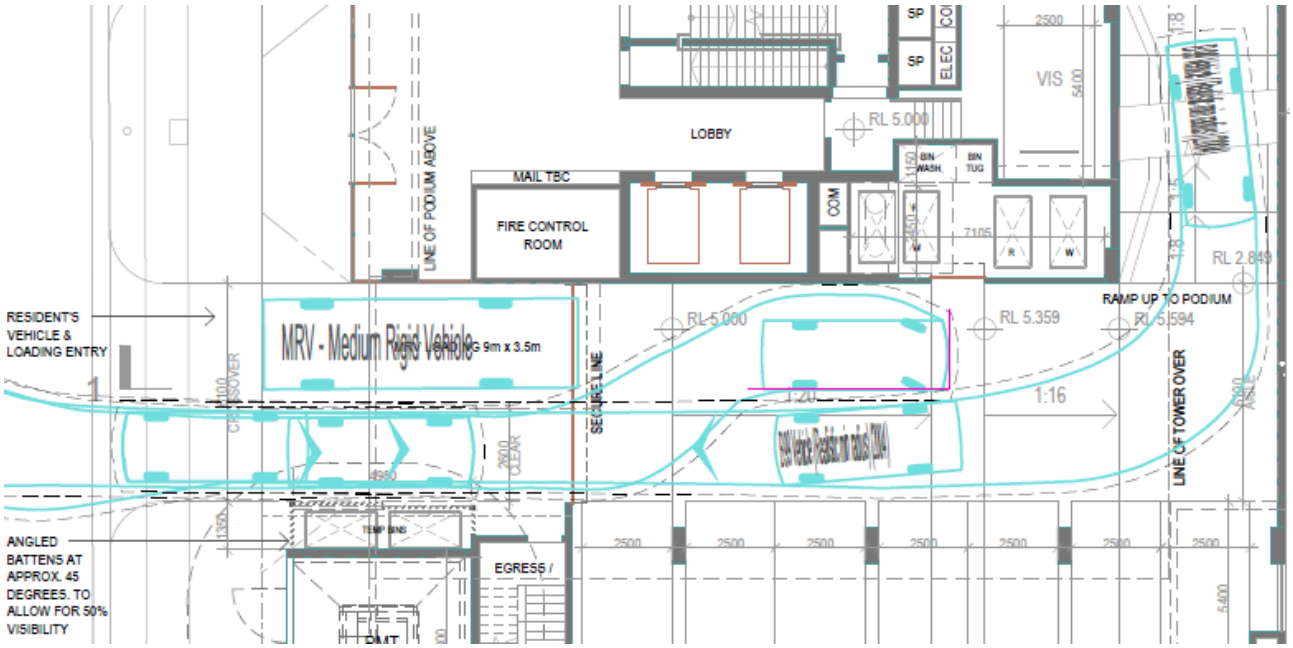
As a multiple dwelling development, the MRV should be considered the usual service vehicle for the subject site. Service vehicle demand for a residential development is generated by removalists and deliveries. MRV servicing is proposed to be undertaken in aisle at the southern access towards the front of the site. This allows for the MRV to reverse onto the site, undertake in aisle servicing, and exit the site in a forward gear.

To ensure that servicing is not impeded across the rear of a large truck, the security gates will be kept open during all times a service vehicle is on-site. This is to be facilitated by either on-site management or the installation of height specific sensors that can open the gates for larger vehicles.

As the driveway is all at ground level, there are good sightlines from the internal carpark, past an MRV, and to the road frontage. Any vehicle looking to egress the site will be able to see past the MRV to give-way in case there is any on-coming entering vehicle. Regular servicing and deliveries typically require only a few minutes on site throughout the day, resulting in minimal impact to regular resident traffic. As demonstrated by the queueing assessment, the likelihood of more than 1 vehicle que occurring at the entrance of the site is unlikely.

Urbis have also conducted a vehicle swept path analysis of the MRV accessing and egressing the site, and a B99 (car) can still access and exit the site while servicing is being undertaken.

Figure 6-1: B99 Passing Standing MRV, See **Appendix B** Drawing 06A



Consequently, Urbis has concluded that the existing arrangement is deemed to be appropriate and safe.

7. TRAFFIC GENERATION

7.1. PROPOSED DEVELOPMENT TRAFFIC

The Department of Transport and Main Roads Guide to Traffic Impact Assessments (GTIA),2024 recommends using specific generation rates, for planning purposes, for different development types. TfNSW Guide to Transport Impact Assessments is listed as a preferred source for traffic generation rates. The proposed site is considered as high-density area with high public transport accessibility.

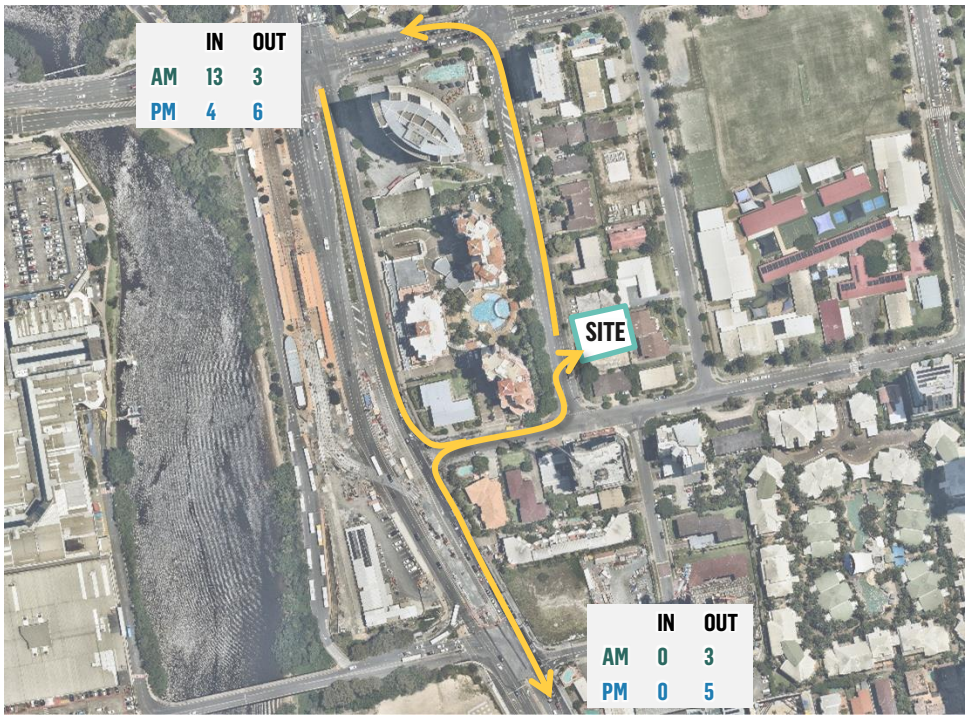
A 70:30 AM peak and 30:70 PM Peak trip generation split is applied for the multiple dwellings land use.

Table 7-1: Peak Hour Trip Generation

Land Use	Yield	GTIA 2024 Vehicle Trip Rate (Weekday Rates)	Trip Generation (VPH)	Splits In: Out %	Splits In: Out (VPH)
Multiple Dwelling / Short Term Accommodation	100 Units	AM – 0.19 per dwelling PM – 0.15 per dwelling	AM: 19 PM: 15	70%:30% 30%:70%	13:6 4:11

The subject site is projected to generate 19 trips during the AM peak and 15 trips during the PM peak, with a maximum of 13 trips in a single direction during the peaks. The trip distribution from/to the subject site is shown in figure below.

Figure 7-1. Trip Distribution



In consideration of this, the low trip volume generated by the development should have minimal impact upon the safety, efficiency or operation of the local network.

8. CONCLUSION

This traffic impact assessment has been prepared to report the traffic and transport impacts of the proposed development. The following key points outline the findings of this assessment:

- The development proposes the Residential Multiple Dwelling & Short Term Accommodation building located at 7-9 Surf Parade, Broadbeach (100 units).
- Carparking is provided at a rate compliant with the CoGC for Residential Multiple Dwelling and Short Term Accommodation. The application of 3 small cars (B50) are appropriate for the transport needs of the site. The restraint to the carpark size is to be clearly stated on the contract of sale.
- Bicycle parking arrangements are consistent with the Austroads for Residential needs and the Transport Code for visitors. Parking provisions are to be compliant with the AS2890.3 design requirements.
- The design of the carparking areas is generally consistent with the requirements of the CoGC Transport Code and AS2890.1. A managed ramp system is proposed with signals to and hold lines to manage access and egress. The assessed 95th percentile queue is 1 vehicle length, easily accommodated by the sites design.
- Visitor turnaround occurs at the ground level, with a digital signage to inform drivers of the availability of spaces within the basement level. Should a driver make a mistake and enter the basement, they can easily manoeuvre out of the basement and exit to ground level.
- Access arrangements are generally consistent with the requirements of the CoGC and AS2890.1.
- Servicing for the site is compliant with the needs of the CoGC Transport Code.
- The site is expected to generate a maximum of 19 trips in the AM Peak hour. The low trip volume generated by the development should have minimal impact upon the safety, efficiency or operation of the local network.

Based on the assessment contained within this report, Urbis supports the proposed development and considers it acceptable and safety sound from a traffic engineering perspective.

APPENDIX A DEVELOPMENT PLANS

7-9 SURF PARADE, BROADBEACH

NO.	TITLE	REV.
TP00.00	COVER SHEET	P4
TP00.01	DEVELOPMENT SUMMARY	P7
TP00.04	EXISTING SITE PLAN	P5
TP00.05	PROPOSED SITE PLAN	P5
TP01.01	BASEMENT 03	P8
TP01.02	BASEMENT 02	P8
TP01.03	BASEMENT 01	P8
TP01.04	LEVEL 01 - GROUND FLOOR	P8
TP01.05	MEZZANINE	P6
TP01.06	LEVEL 02 - PODIUM	P8
TP01.07	LEVEL 03 - PODIUM	P8
TP01.08	LEVEL 04 - PODIUM RECREATION	P6
TP01.11	LEVEL 05-29 - TYPICAL LEVELS	P6
TP01.34	PLANT LEVEL	P4
TP01.35	ROOF LEVEL	P4
TP03.01	BUILDING SECTIONS 01 & 02	P6

INDICATIVE IMPRESSIONS ONLY

PRELIMINARY

Revisions

P1	28.02.2025	FOR COMMENT	JS
P2	03.03.2025	PRE-LODGEMENT 02	JS
P3	13.03.2025	FOR REVIEW	JS
P4	21.03.2025	DRAFT DA	JS

Project: **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing: **COVER SHEET**

Project No: **224261**

Author: **RG**

Scale: @ A3

Drawing No.: **TP00.00**

P4

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DEVELOPMENT SUMMARY

SITE AREA	1013m^2
GBA	555m^2
SITE COVER	54.7%
TOTAL YIELD	**100 UNITS**
2 BED	50
2 BED + MPR	50
LANDSCAPING	330m^2 (32.5%)
GROUND DEEP PLANTING	20m^2 (1.9%)
BIKE PARKING REQ. (AUSROADS RATES)	34 RES. (1 PER 3 UNITS) 9 VIS. (1 PER 12 UNITS) **43 TOTAL REQ.**
	51 RES. BIKES PROVIDED 8 VIS. BIKES PROVIDED **59 TOTAL PROVIDED**

	APARTMENTS			CARS	AREAS (m²)		
	2 BED	2 BED + MPR	TOTAL YIELD	CAR PARKS	GSA INTERNAL + EXTERNAL	NSA INTERNAL	BALCONY / EXTERNAL / POS
INTERNAL SALEABLE AREA	82	120					
EXTERNAL SALEABLE AREA	14	13					
GROSS SALABLE AREA	96	133					
BASEMENT 03				23			
BASEMENT 02				22			
BASEMENT 01				18			
LEVEL 01 - GROUND				15			
MEZZANINE				3			
LEVEL 02 - PODIUM				18			
LEVEL 03 - PODIUM				11			
LEVEL 04 - PODIUM RECREATION							
LEVEL 05	2	2	4		453	403	50
LEVEL 06	2	2	4		453	403	50
LEVEL 07	2	2	4		453	403	50
LEVEL 08	2	2	4		453	403	50
LEVEL 09	2	2	4		453	403	50
LEVEL 10	2	2	4		453	403	50
LEVEL 11	2	2	4		453	403	50
LEVEL 12	2	2	4		453	403	50
LEVEL 13	2	2	4		453	403	50
LEVEL 14	2	2	4		453	403	50
LEVEL 15	2	2	4		453	403	50
LEVEL 16	2	2	4		453	403	50
LEVEL 17	2	2	4		453	403	50
LEVEL 18	2	2	4		453	403	50
LEVEL 19	2	2	4		453	403	50
LEVEL 20	2	2	4		453	403	50
LEVEL 21	2	2	4		453	403	50
LEVEL 22	2	2	4		453	403	50
LEVEL 23	2	2	4		453	403	50
LEVEL 24	2	2	4		453	403	50
LEVEL 25	2	2	4		453	403	50
LEVEL 26	2	2	4		453	403	50
LEVEL 27	2	2	4		453	403	50
LEVEL 28	2	2	4		453	403	50
LEVEL 29	2	2	4		453	403	50
LEVEL 30 - PLANT / DINING							
ROOF							
TOTAL	50	50	**100**	**110**	11325	10075	1250
APARTMENT TYPE PERCENTAGE MIX (%)	50.0%	50.0%	100%				
MIX PERCENTAGE MIX (%)	50.0%	50.0%	100%				
TYPE PERCENTAGE MIX	2 BED						
GCCC RESIDENTIAL REQUIRED CAR PARKING RATE	1	1					
GCCC RESIDENTIAL REQUIRED CAR PARKS	50	50	100				
PROPOSED RESIDENTIAL CAR PARK RATE	1	1					
PROPOSED PROPOSED RESIDENTIAL CAR PARKS	50	50	100				
VISITOR CAR PARK RATE	0.1	0.1					
VISITOR CAR PARKS	5	5	10				
TOTAL CAR PARKS REQ. GCCC RATE			110				
TOTAL CAR PARKS REQ. PROPOSED RATE			110				
TOTAL CAR PARKS PROVIDED				**110**			

ALL AREAS ARE APROXIMATE AND SUBJECT TO FURTHER DETAILED REVIEW

PRELIMINARY

Revisions

P1	19.12.2024	PRELIMINARY JS
P2	20.12.2024	PRE-LODGEMENT LR
P3	07.02.2025	FOR REVIEW JS
P4	28.02.2025	FOR COMMENT JS
P5	03.03.2025	PRE-LODGEMENT 02 JS
P6	13.03.2025	FOR REVIEW JS
P7	21.03.2025	DRAFT DA JS

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Project: **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing: **DEVELOPMENT SUMMARY**

Project No: **224261** Author: **RG** Scale: @ A3

Drawing No.: **TP00.01** **P7**

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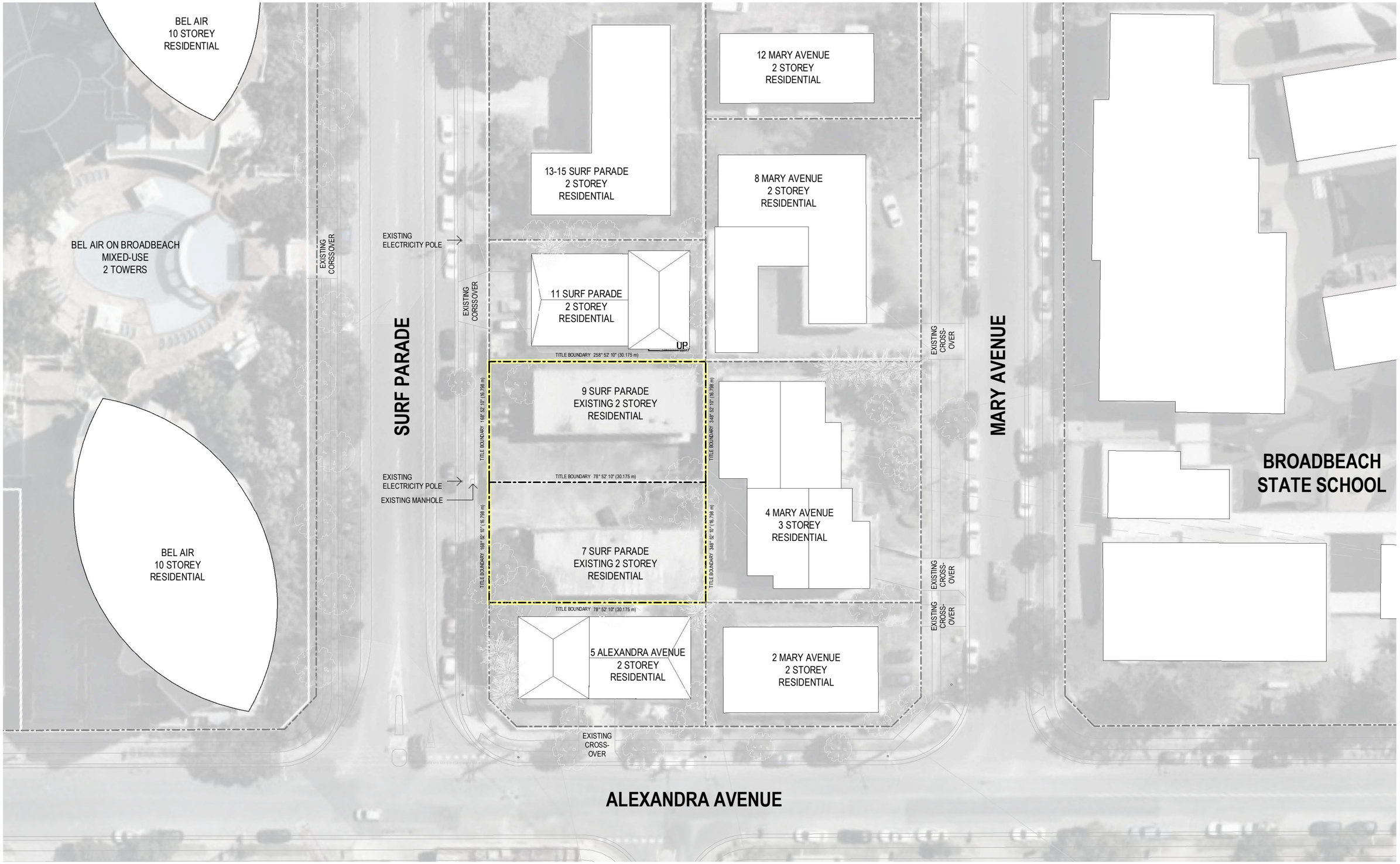

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P4	13.03.2025	FOR REVIEW	JS
P5	21.03.2025	DRAFT DA	JS

Project: **7-9 SURF PARADE**

Drawing: **EXISTING SITE PLAN**

Project No: **224261**

Author: **AMY**

Scale: @ A3 **1 : 500**

Drawing No.: **TP00.04**

P5

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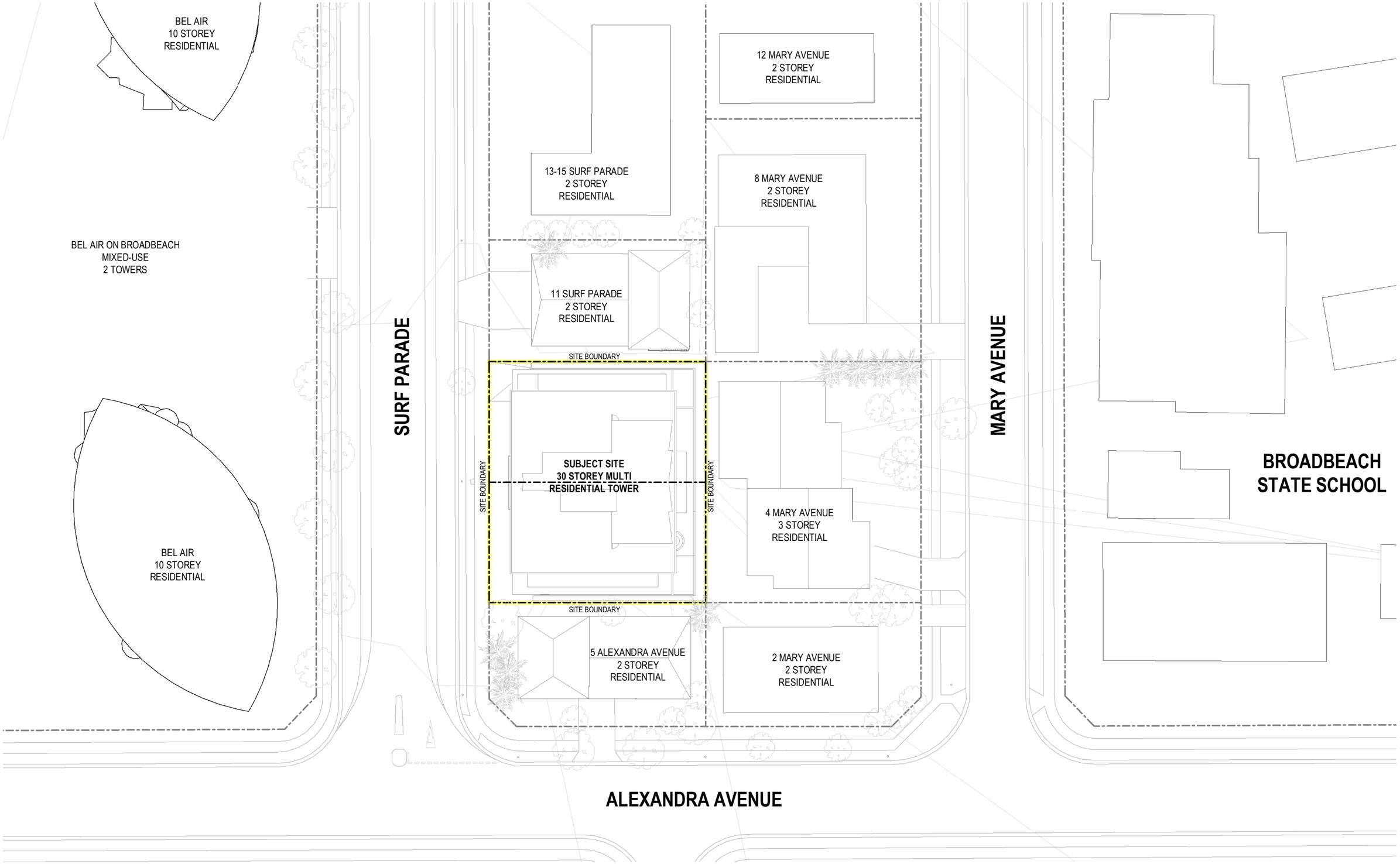

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P4	13.03.2025	FOR REVIEW	JS
P5	21.03.2025	DRAFT DA	JS

Project **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing **PROPOSED SITE PLAN**

Project No **224261**

Author **AMY**

Scale: @ A3 **1 : 500**

Drawing No. **TP00.05**

P5

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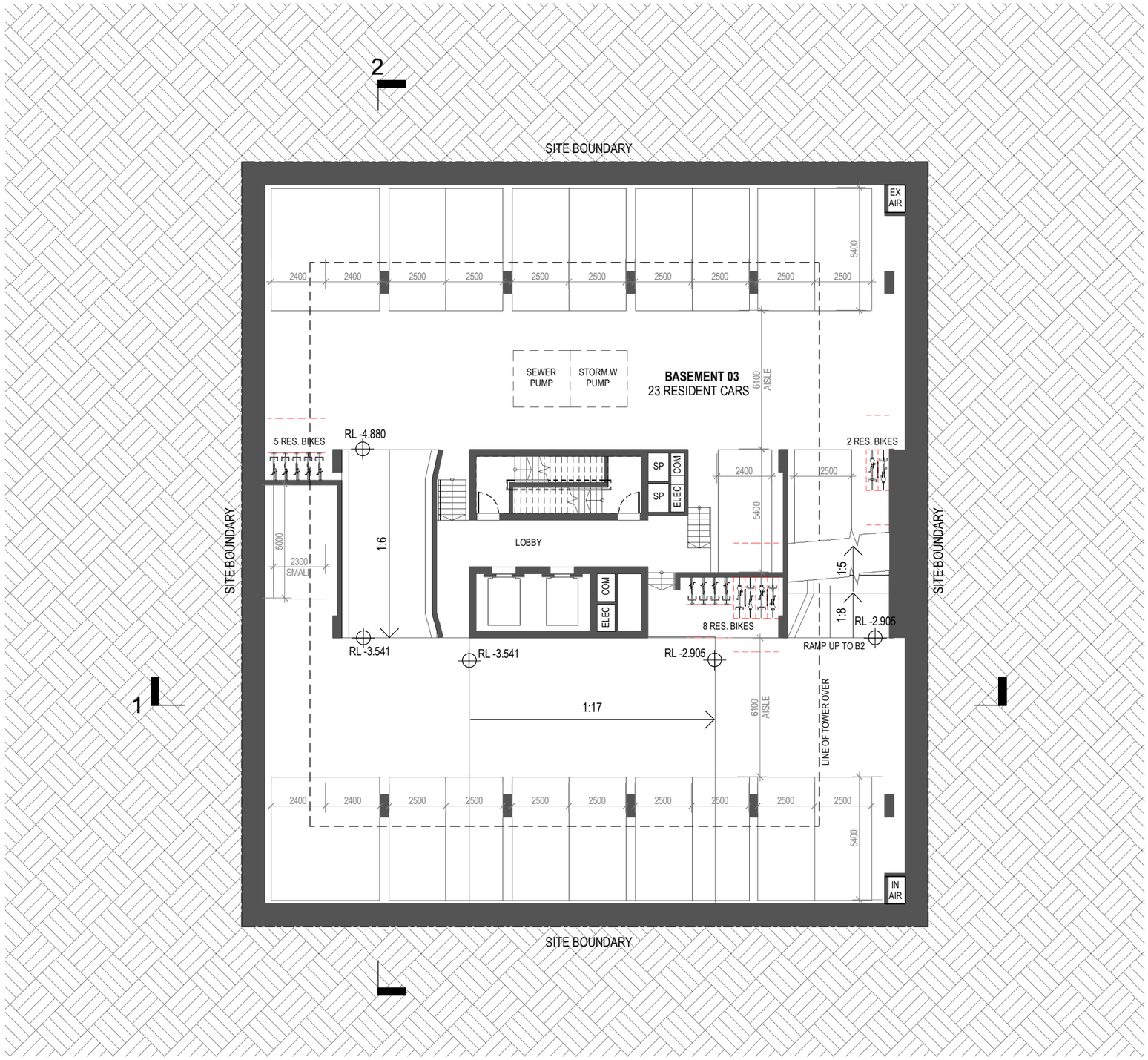

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Drawing: **BASEMENT 03**

Project No: **224261**

Author: **JS**

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Drawing No.: **TP01.01**

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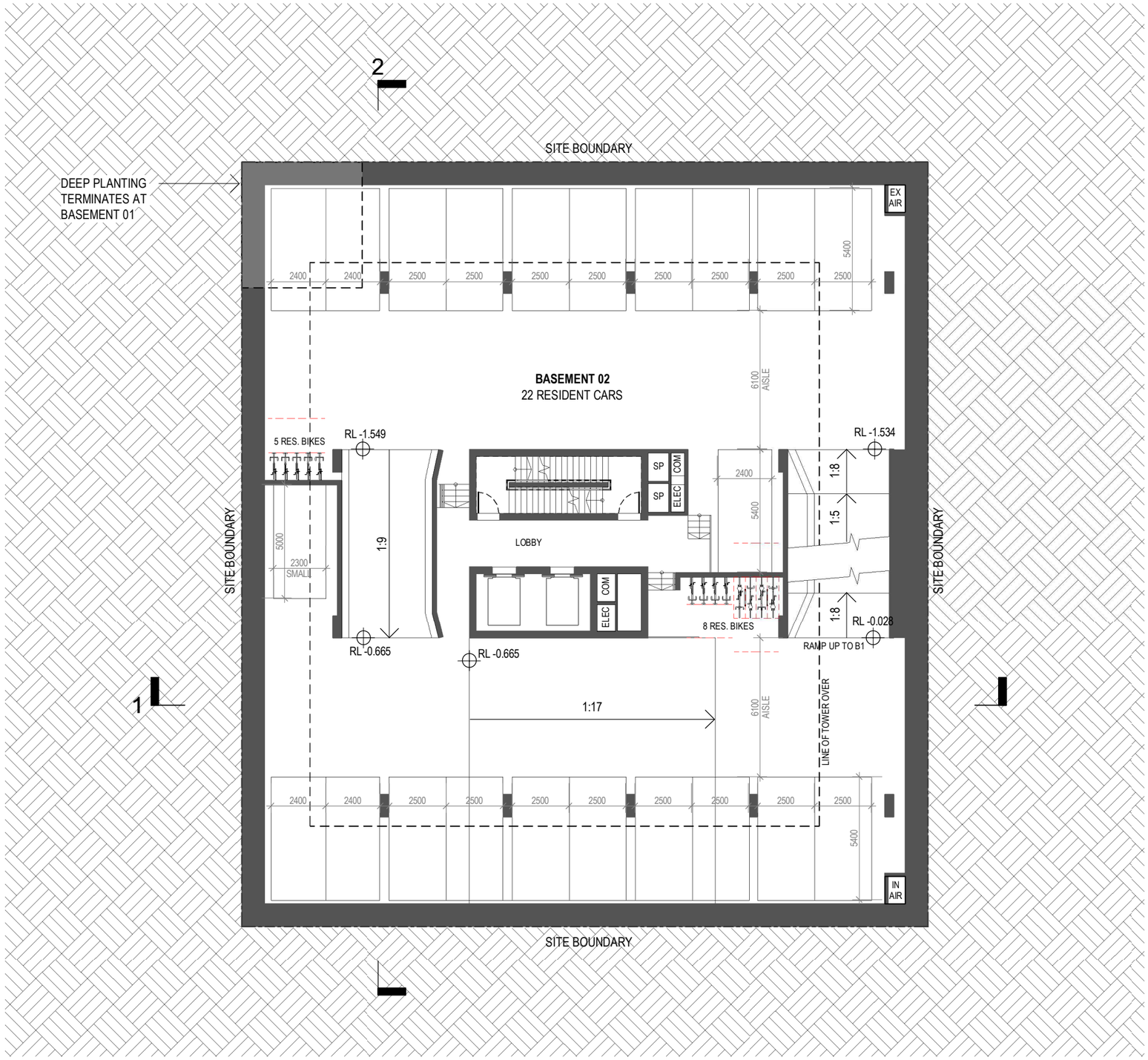

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Drawing: **BASEMENT 02**

Project No: **224261**

Author: **JS**

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Drawing No.: **TP01.02**

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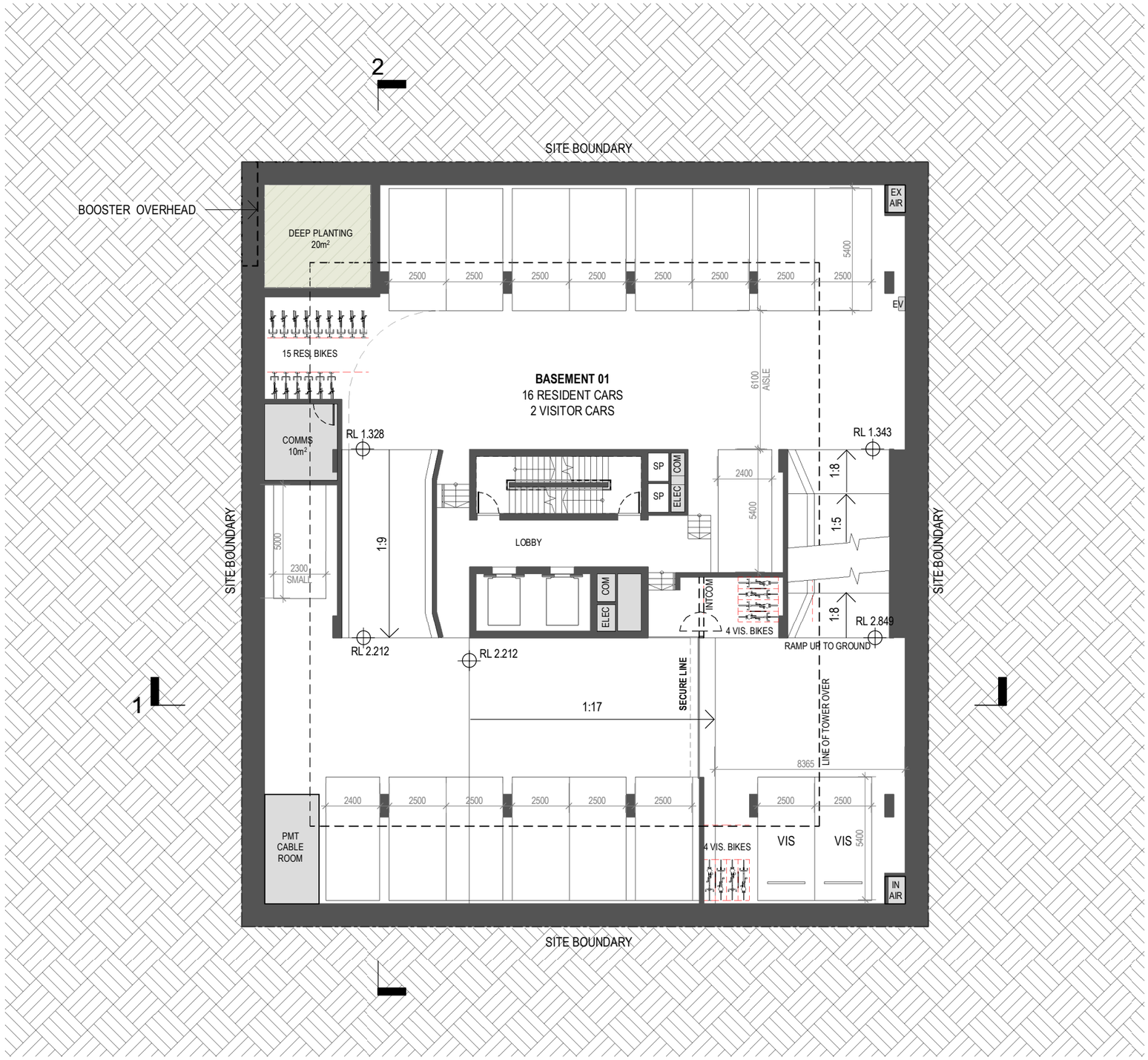

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Drawing / **BASEMENT 01**

Project No / **224261**

Author / **JS**

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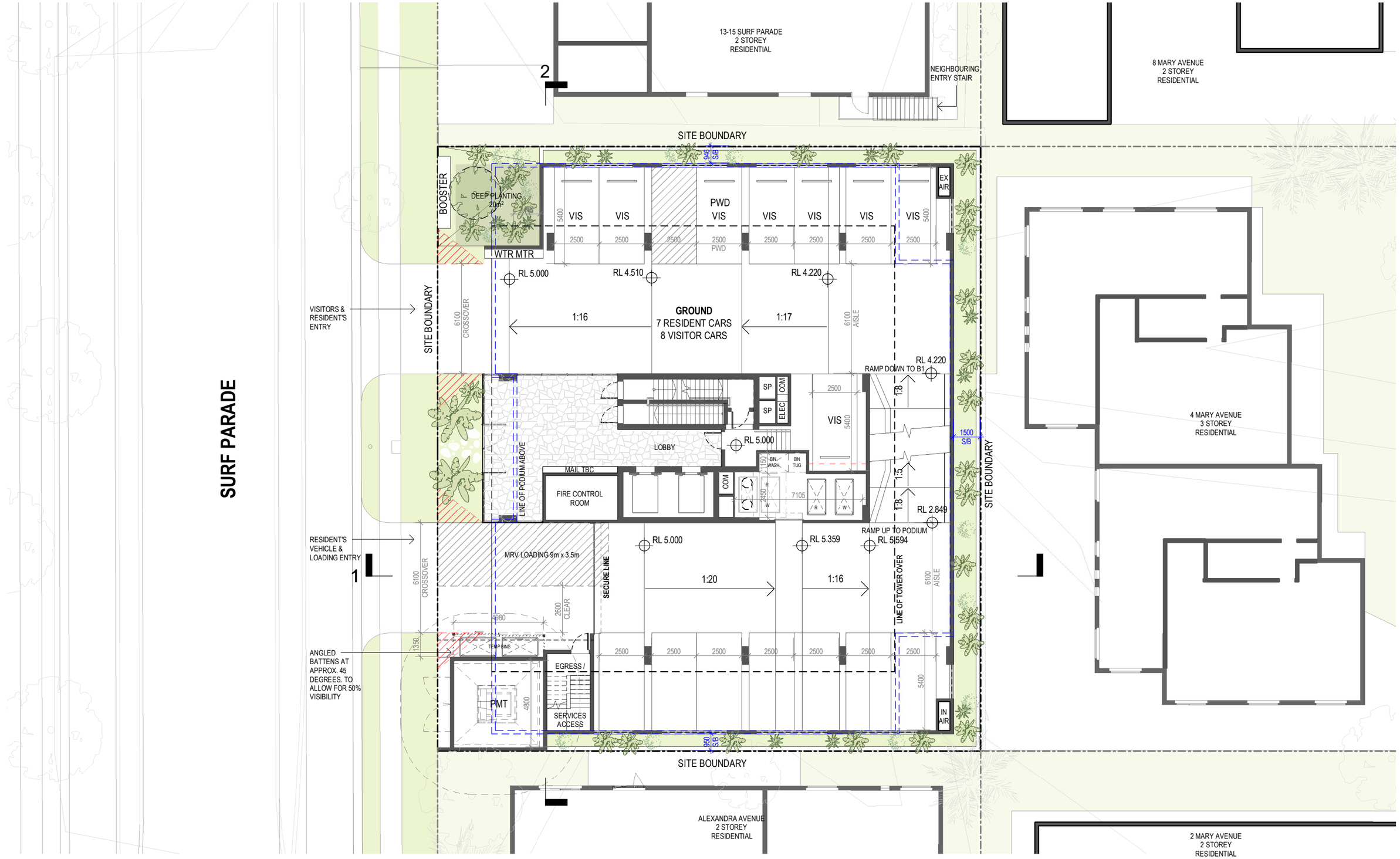

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Project / **7-9 SURF PARADE**

7-9 SURF PARADE,
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Drawing / **LEVEL 01 - GROUND FLOOR**

Project No / **224261**

Author / **RG**

Scale: @ A3 / **1 : 200**

Drawing No. / **TP01.04**

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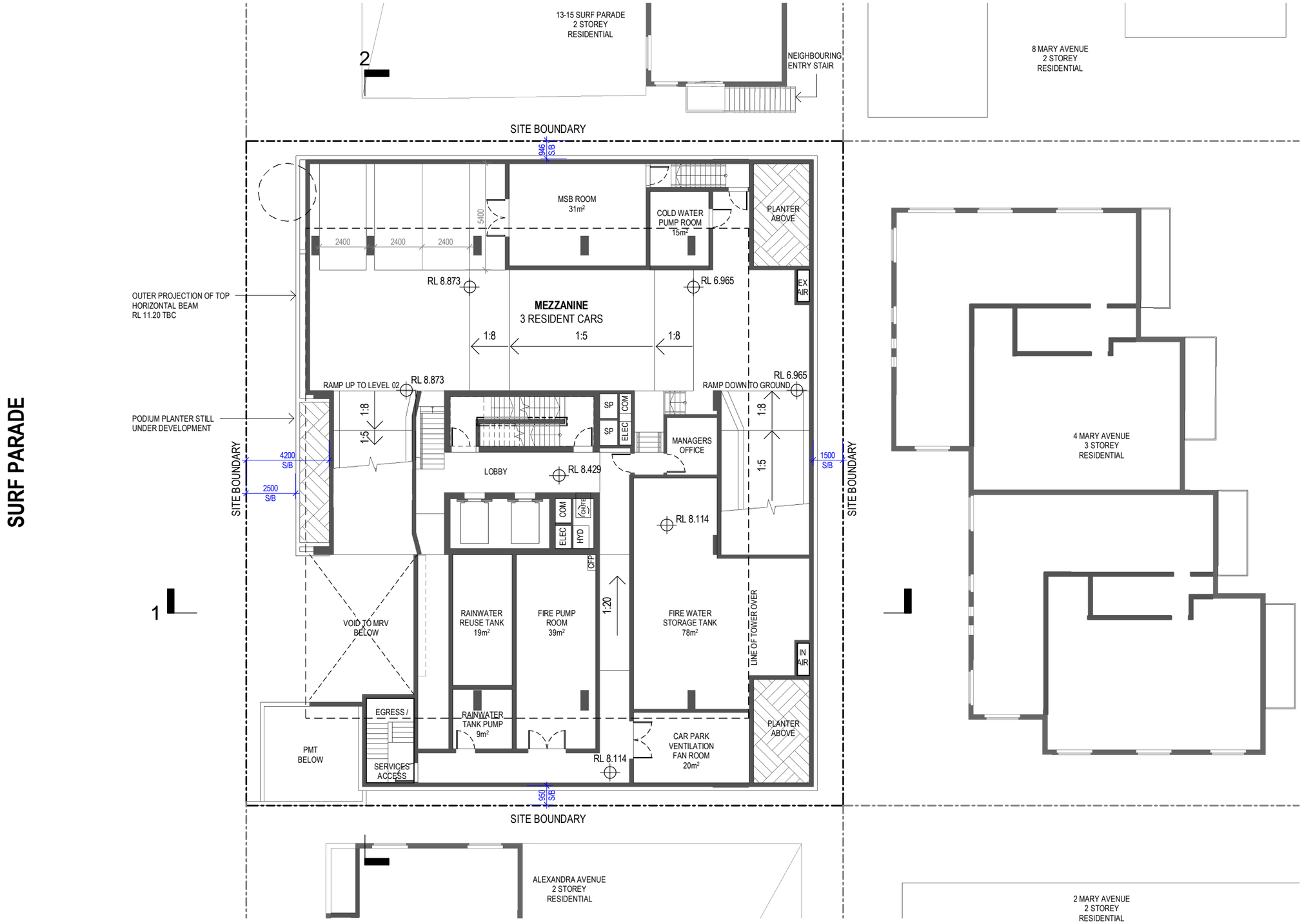

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P5 13.03.2025	FOR REVIEW	JS
P6 21.03.2025	DRAFT DA	JS

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Project: **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing: **MEZZANINE**

Project No: **224261**

Author: **JS**

Scale: @ A3 **1 : 200**

Drawing No.: **TP01.05**

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P7 13.03.2025	FOR REVIEW	JS
P8 21.03.2025	DRAFT DA	JS

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Project **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing **LEVEL 02 - PODIUM**

Project No **224261**

Author **JS**

Scale: @ A3 **1 : 200**

Drawing No. **TP01.06**

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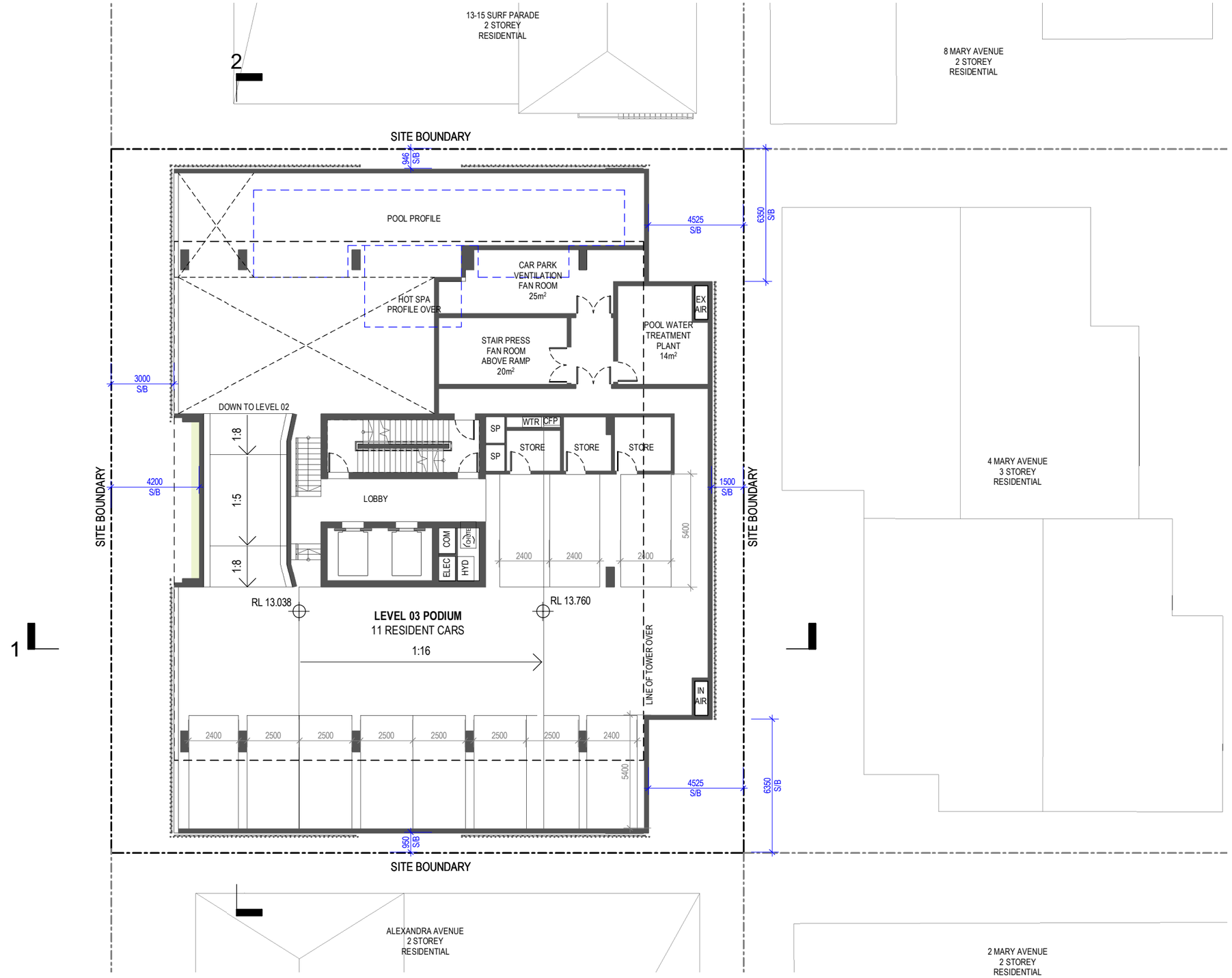

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P3 31.01.2025	FOR REVIEW	JS
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P7 13.03.2025	FOR REVIEW	JS
P8 21.03.2025	DRAFT DA	JS

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Project / **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing / **LEVEL 03 - PODIUM**

Project No / **224261**

Author / **JS**

Scale: @ A3 / **1 : 200**

Drawing No. / **TP01.07**

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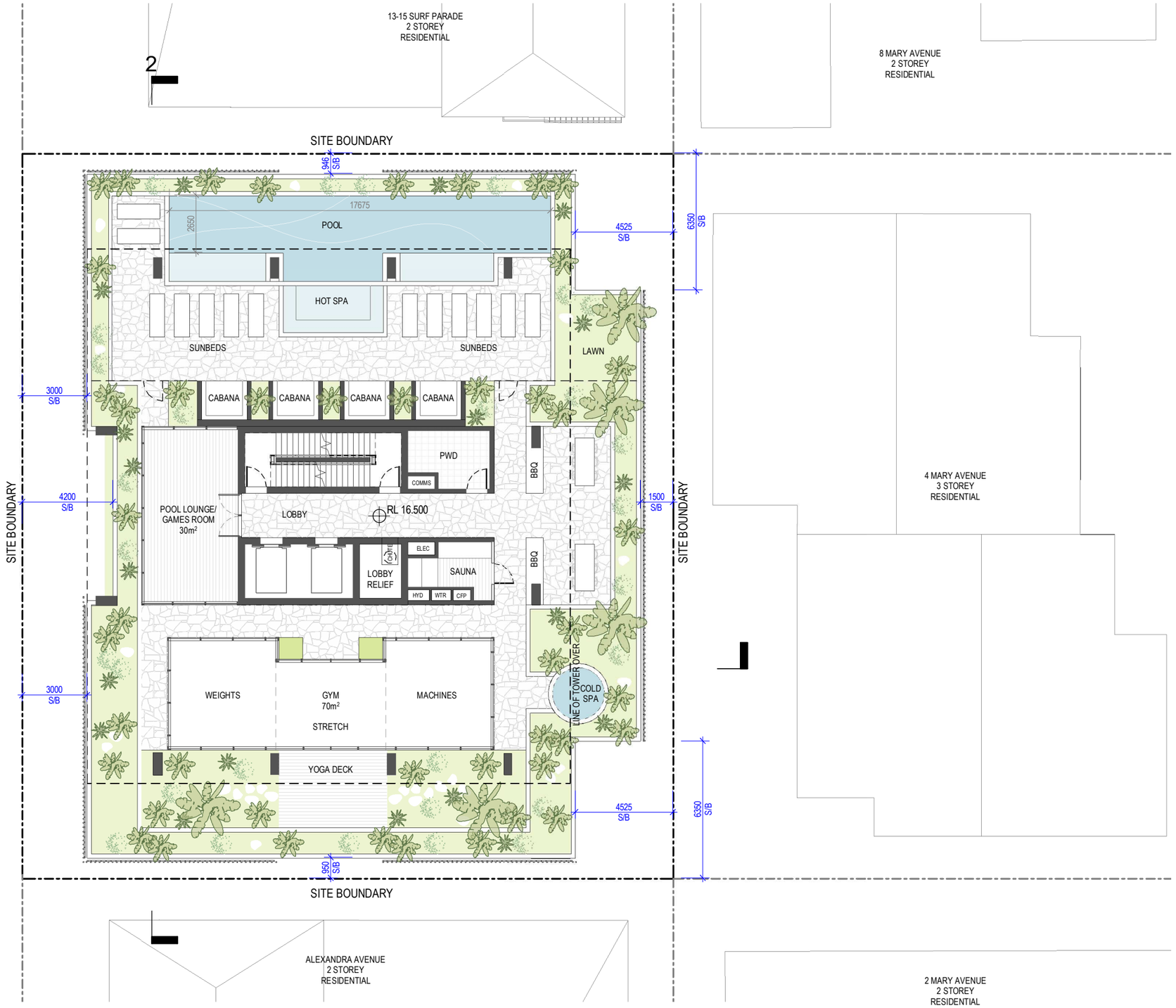
SURF PARADE



PRELIMINARY

Revisions

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P4 03.03.2025	PRE-LODGEMENT 02	JS
P5 13.03.2025	FOR REVIEW	JS
P6 21.03.2025	DRAFT DA	JS

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Project
7-9 SURF PARADE

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing
LEVEL 04 - PODIUM RECREATION

Project No
224261

Author
RG

Scale: @ A3
1 : 200

Drawing No.
TP01.08

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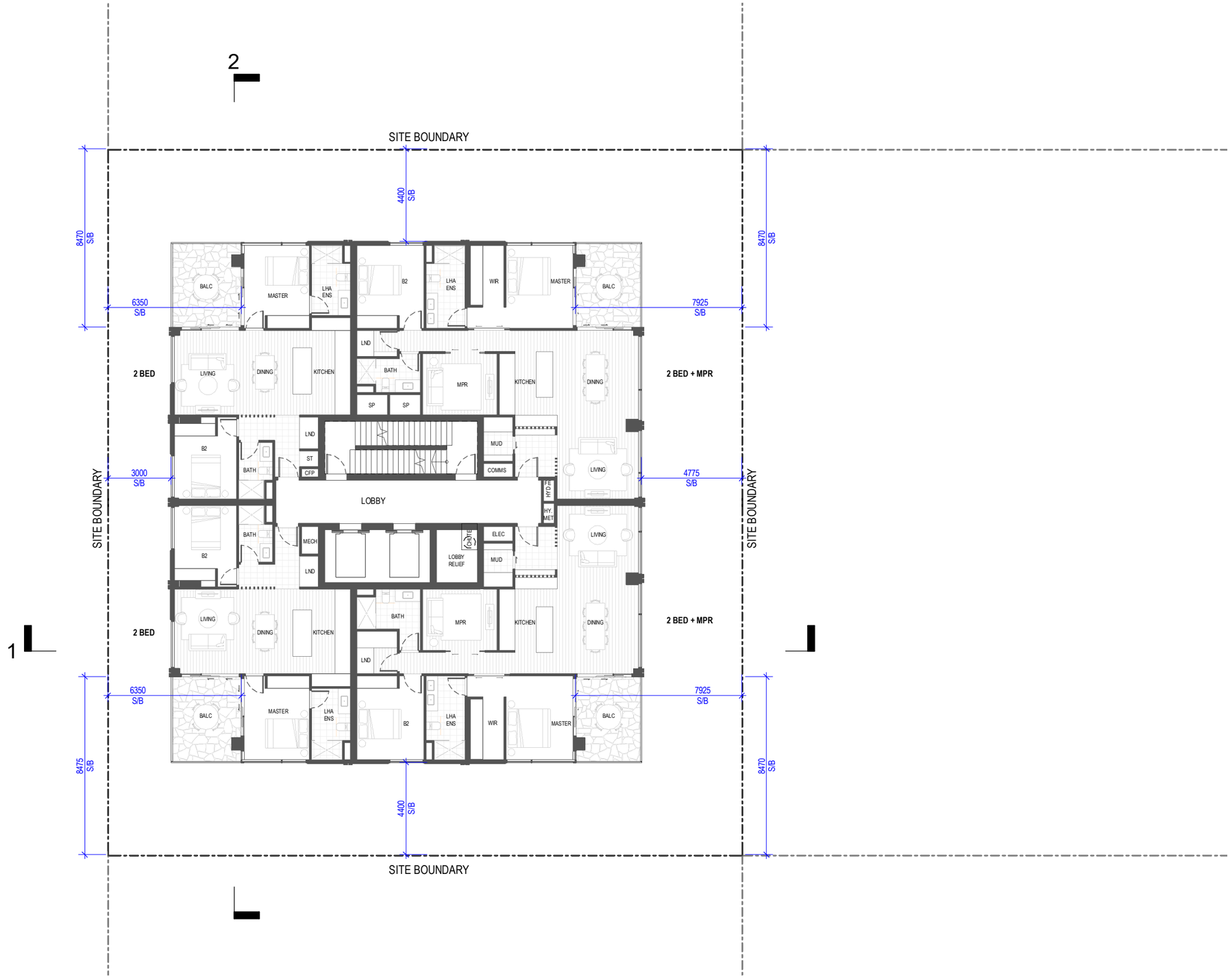
SURF PARADE



PRELIMINARY

Revisions

P1 19.12.2024	PRELIMINARY	JS
P2 20.12.2024	PRE-LODGEMENT	LR
P3 28.02.2025	FOR COMMENT	JS
P4 03.03.2025	PRE-LODGEMENT 02	JS
P5 13.03.2025	FOR REVIEW	JS
P6 21.03.2025	DRAFT DA	JS

21/03/2025 5:16:13 PM

Project
7-9 SURF PARADE

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing
LEVEL 05-29 - TYPICAL LEVELS

Project No
224261

Author
RG

Scale: @ A3
1 : 200

Drawing No.
TP01.11

P6

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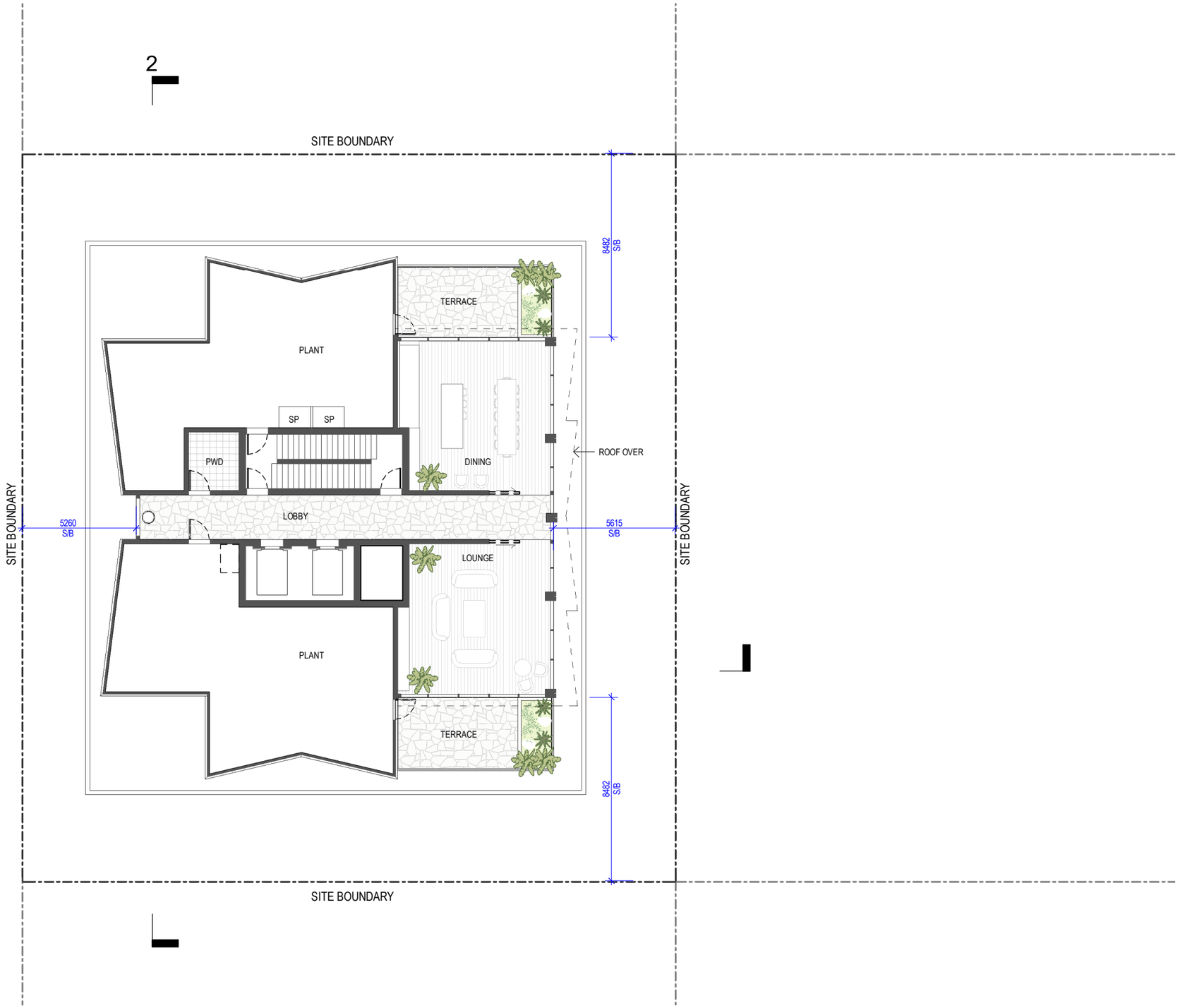
SURF PARADE



PRELIMINARY

Revisions

P1	28.02.2025	FOR COMMENT	JS
P2	03.03.2025	PRE-LODGEMENT 02	JS
P3	13.03.2025	FOR REVIEW	JS
P4	21.03.2025	DRAFT DA	JS

Project: **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing: **PLANT LEVEL**

Project No: **224261**

Author: **RG**

Scale: @ A3: **1 : 200**

Drawing No.: **TP01.34**

P4

21/03/2025 5:16:15 PM

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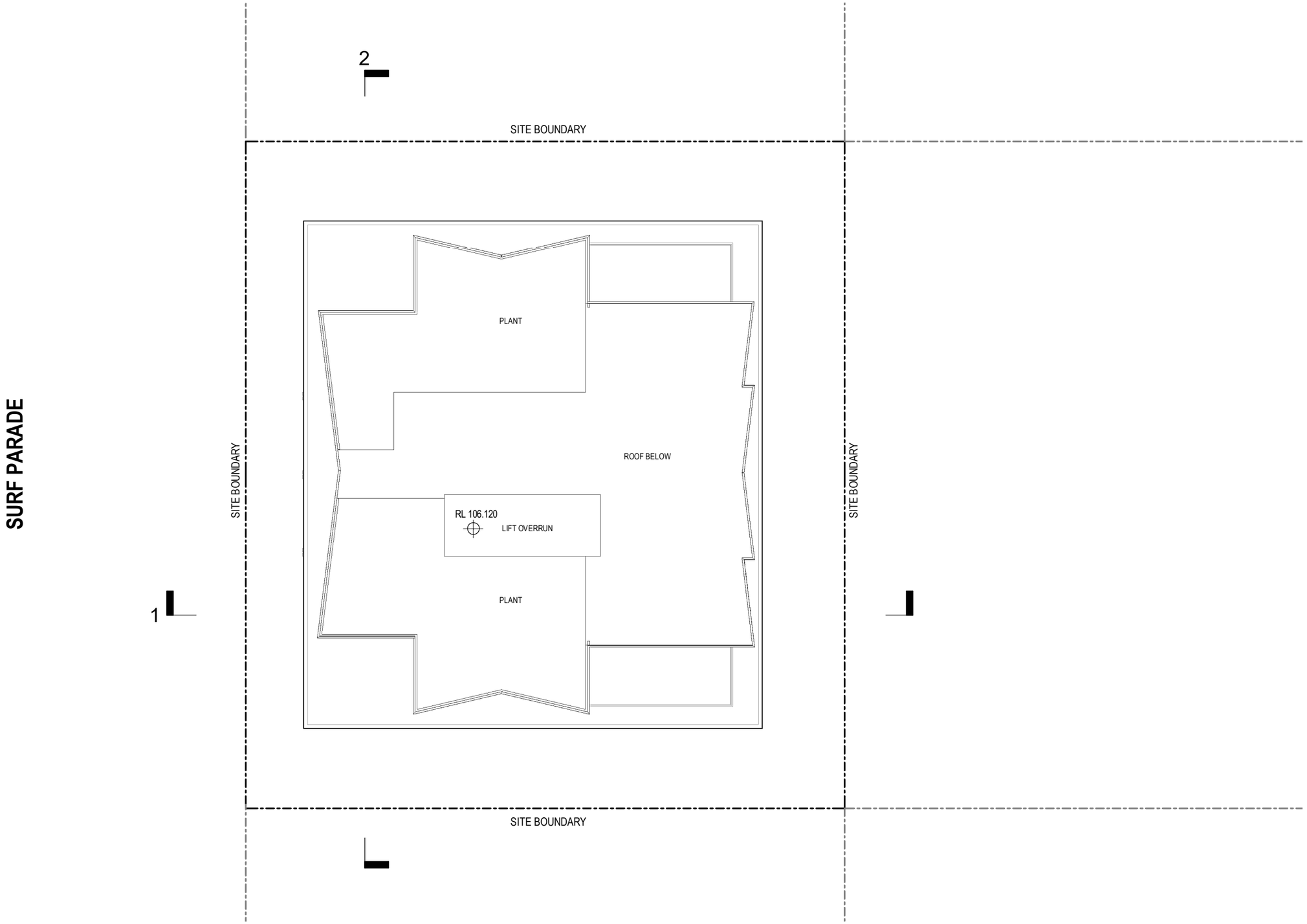

PRELIMINARY

Revisions

P1	28.02.2025	FOR COMMENT	JS
P2	03.03.2025	PRE-LODGEMENT 02	JS
P3	13.03.2025	FOR REVIEW	JS
P4	21.03.2025	DRAFT DA	JS

Project: **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing: **ROOF LEVEL**

Project No: **224261**

Author: **JS**

Scale: @ A3: **1 : 200**

Drawing No.: **TP01.35**

P4

21/03/2025 5:16:16 PM

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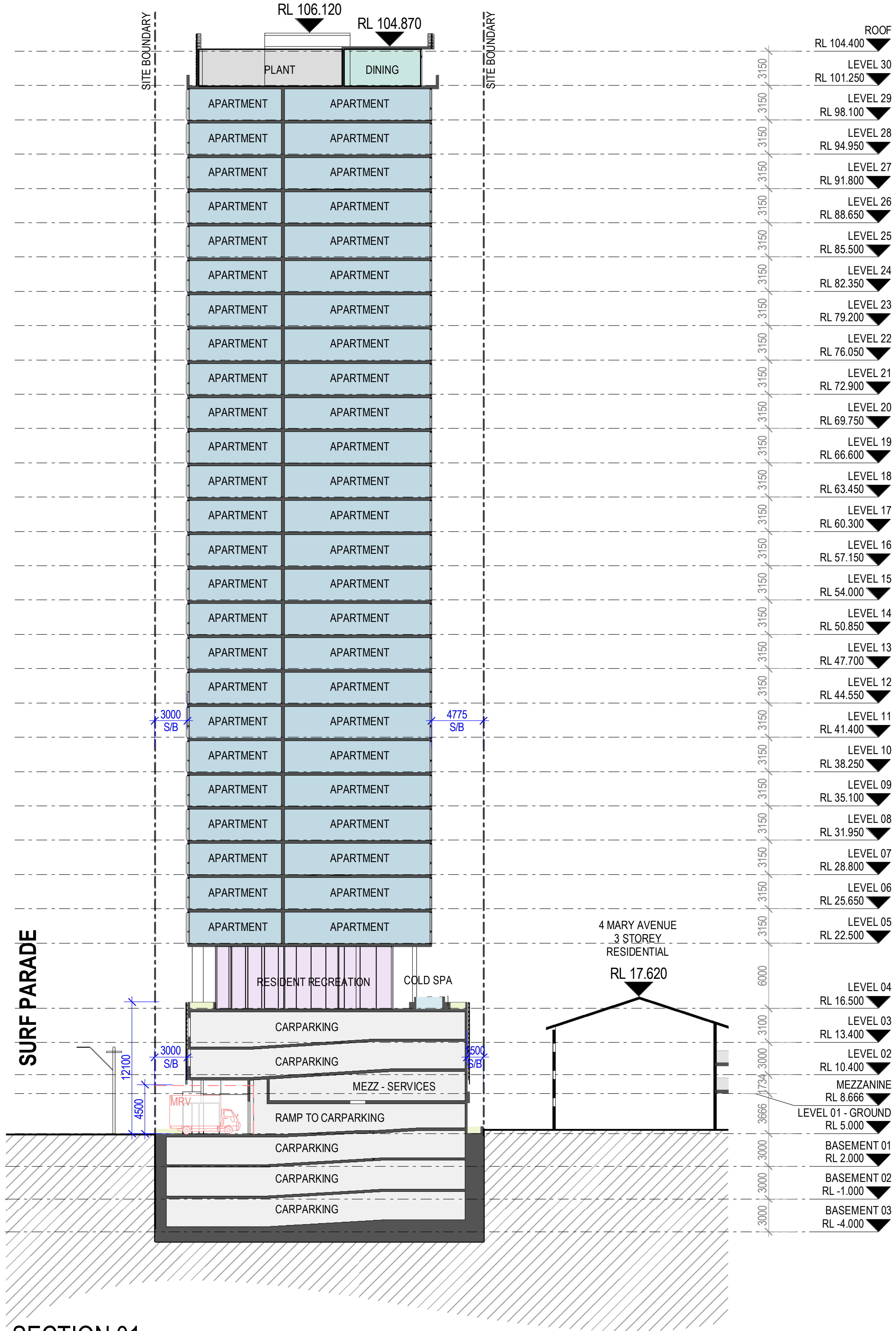
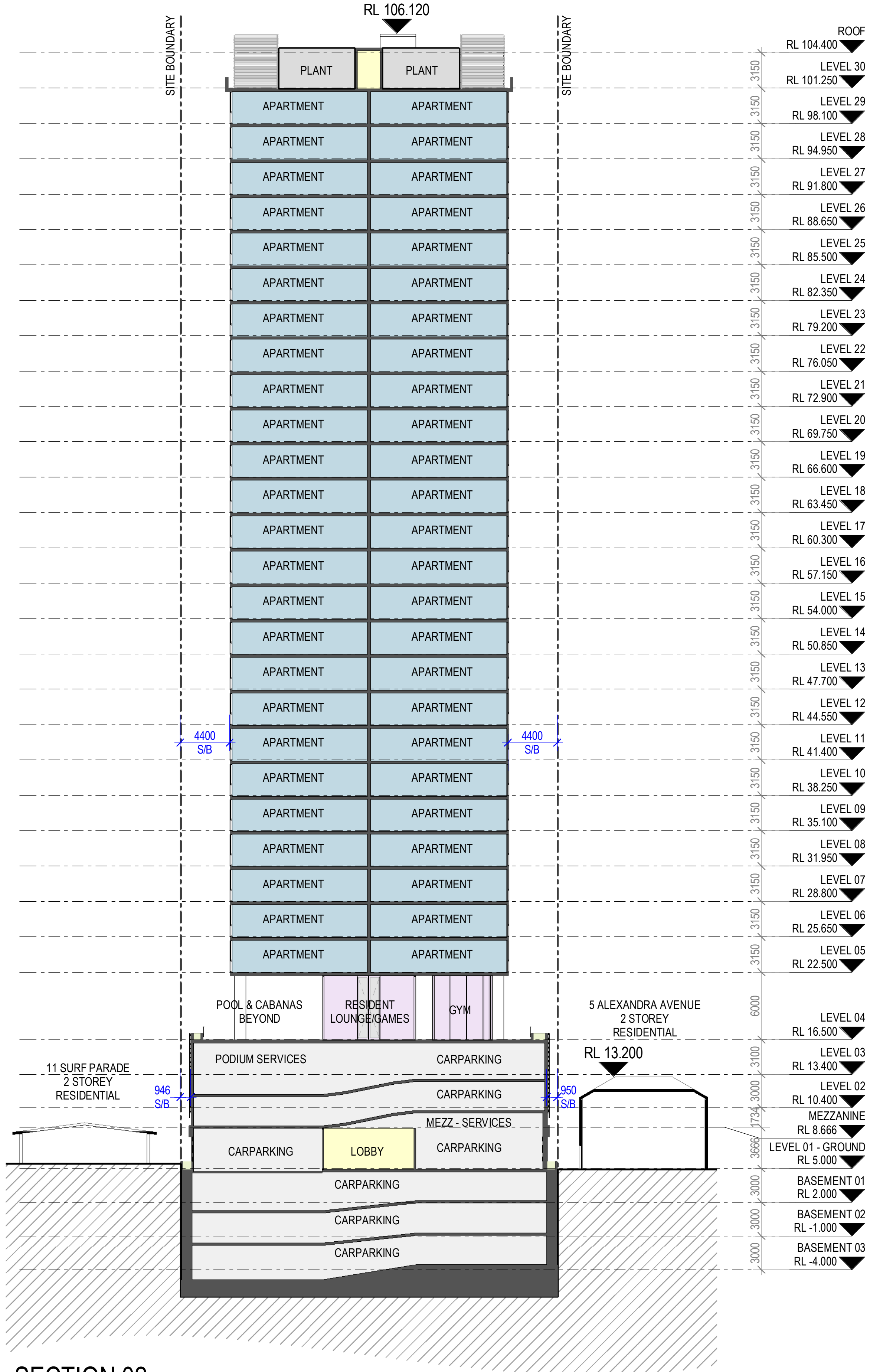


SECTION 01

PRELIMINARY



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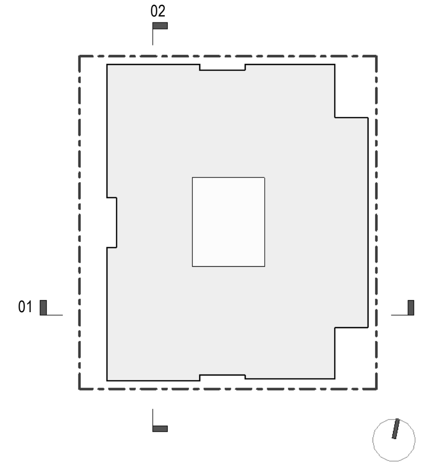

Revisions

P1 19.12.2024	PRELIMINARY	JS
P2 20.12.2024	PRE-LODGEMENT	LR
P3 28.02.2025	FOR COMMENT	JS
P4 03.03.2025	PRE-LODGEMENT 02	JS
P5 13.03.2025	FOR REVIEW	JS
P6 21.03.2025	DRAFT DA	JS

21/03/2025 5:16:17 PM

Project **7-9 SURF PARADE**

7-9 SURF PARADE,
BROADBEACH, QLD, 4218

Drawing **BUILDING SECTIONS 01 & 02**

Project No **224261**

Author **RG**

Scale: @ A3 **1 : 500**

Drawing No. **TP03.01**

P6

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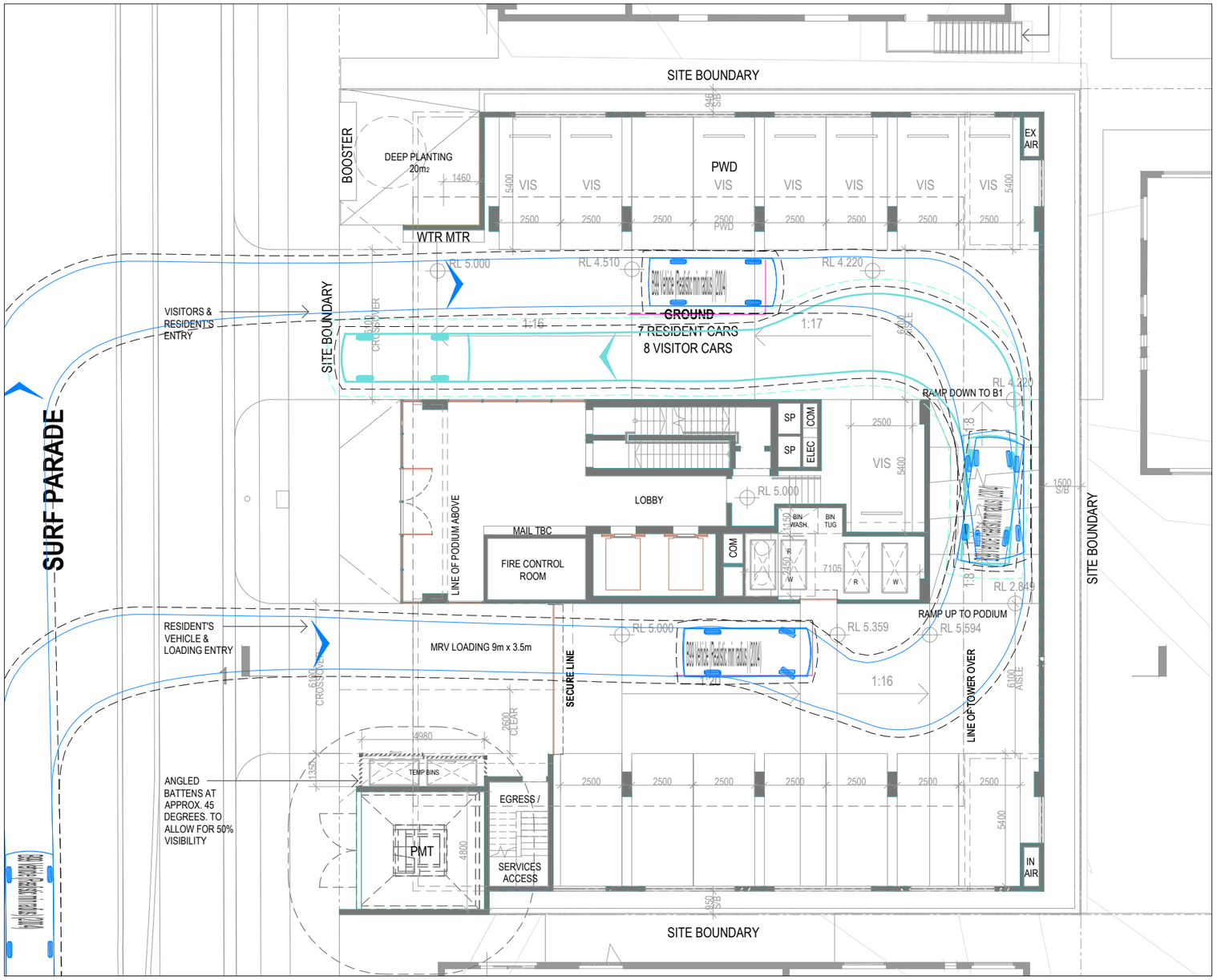
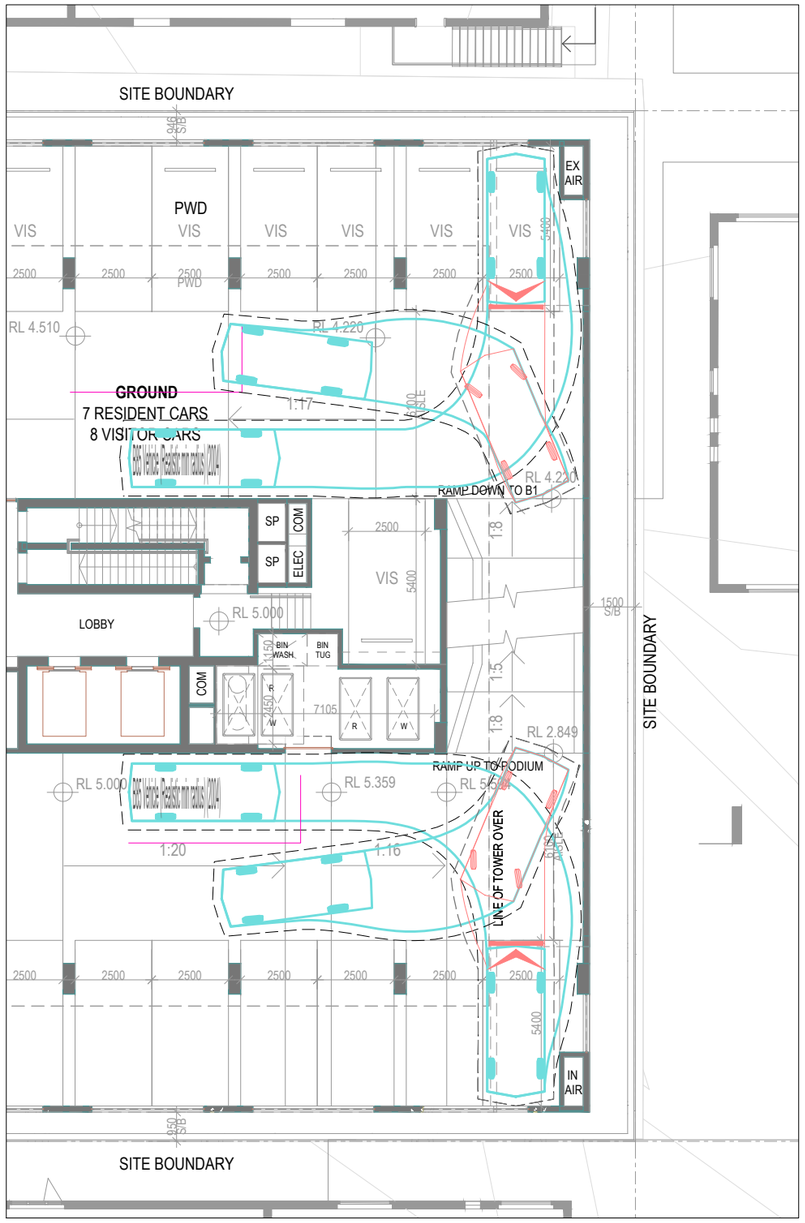
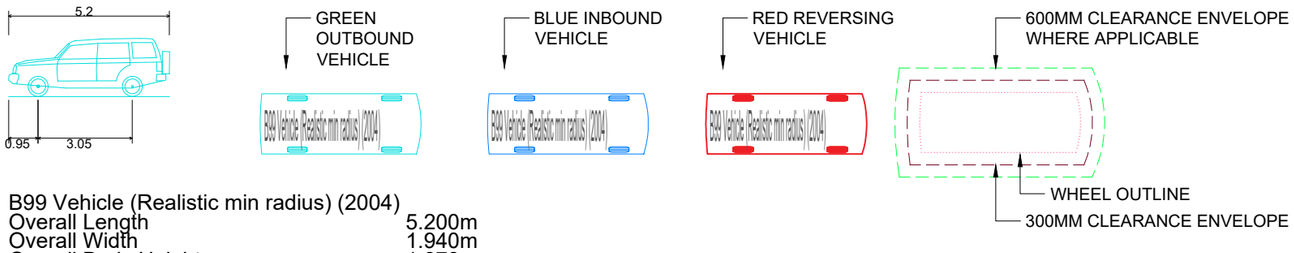
APPENDIX B URBIS SWEPT PATH DRAWINGS





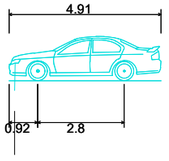
GROUND



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

END OF AISLE ACCESS



B85 Vehicle (Realistic min radius) (2004)

Overall Length	4.910m
Overall Width	1.870m
Overall Body Height	1.421m
Min Body Ground Clearance	0.159m
Track Width	1.770m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	5.750m

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URBIS

7-9 SURF PARADE
GROUND SWEPT PATHS

Level 32, 300 George Street | Brisbane QLD 4000 Australia | +61 7 3007 3800 | URBIS Pty Ltd | ABN 50 105 256 228

REV	DESCRIPTION	DWN	CHK	DATE
A	DA ISSUE	LF	AJ	25/03/2025

CLIENT
Hirsch & Faigen Group
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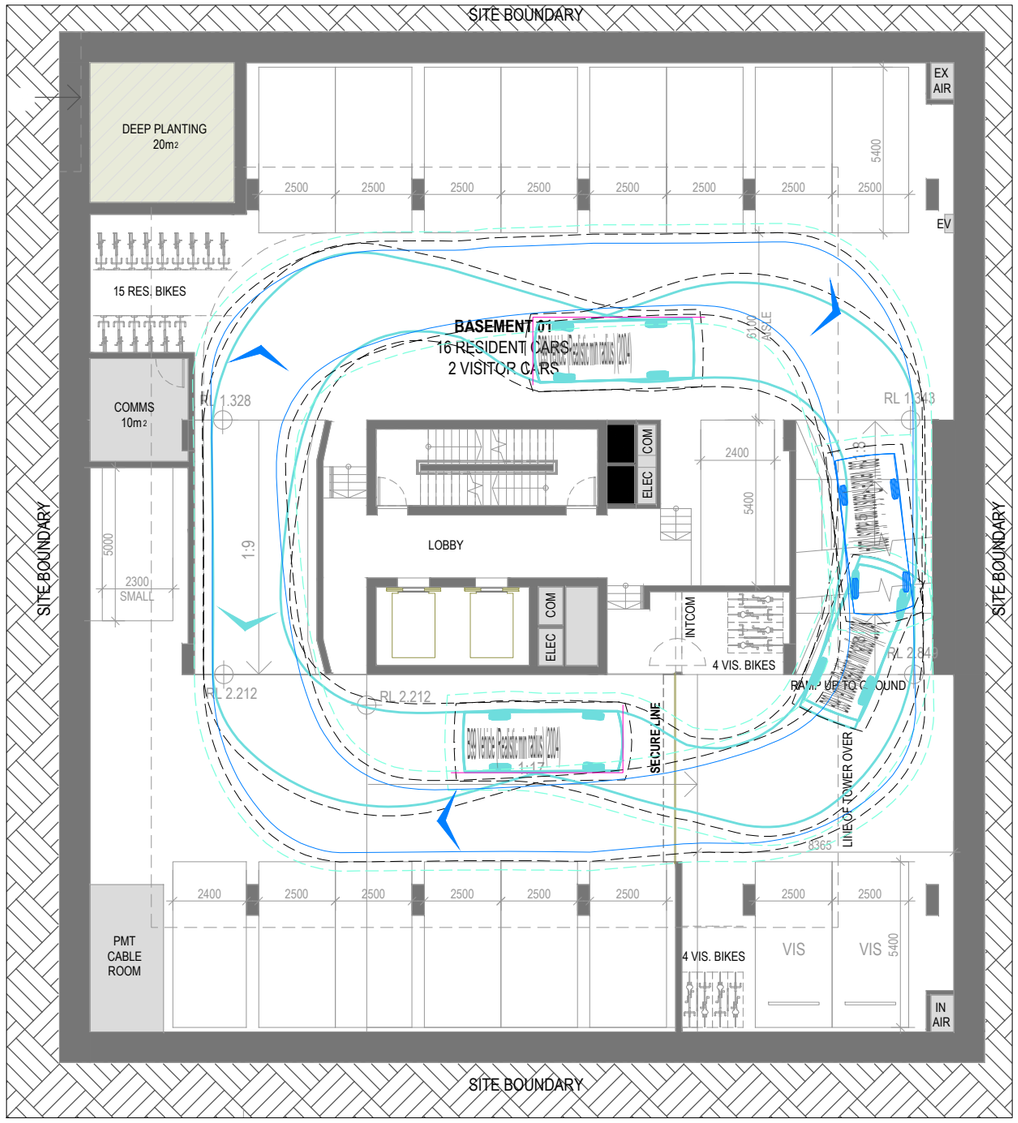
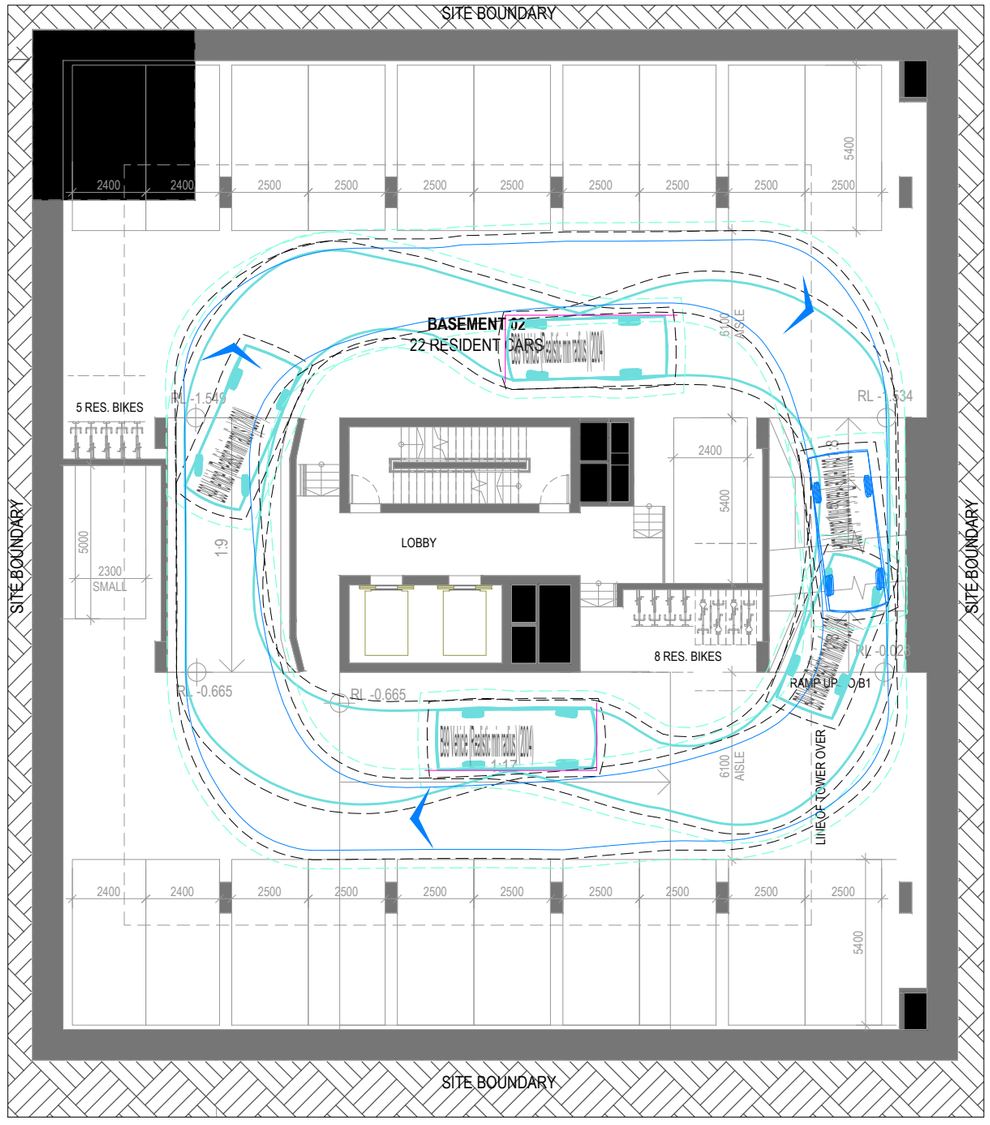
1:200 @ A3
0 1 2 3 4 5m

PROJECT NO. P0056926
DATE 25/03/2025
DRAWING NO. 1
REVISION A



B01



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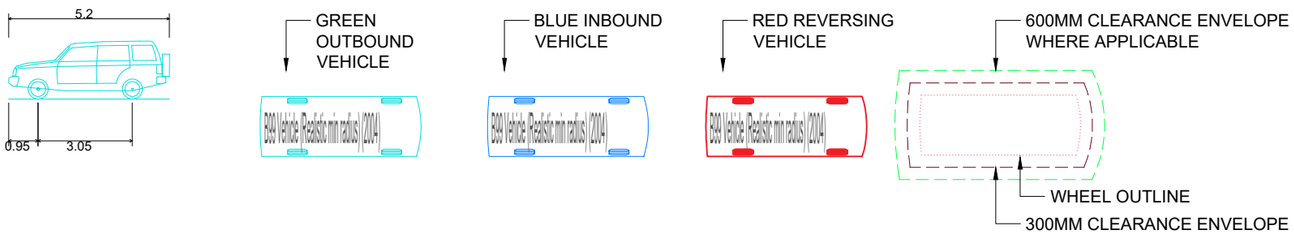

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

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7-9 SURF PARADE

BASEMENT 01 & 02 SWEPT PATHS

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REV	DESCRIPTION	DWN	CHK	DATE
A	DA ISSUE	LF	AJ	25/03/2025

CLIENT
Hirsch & Faigen Group
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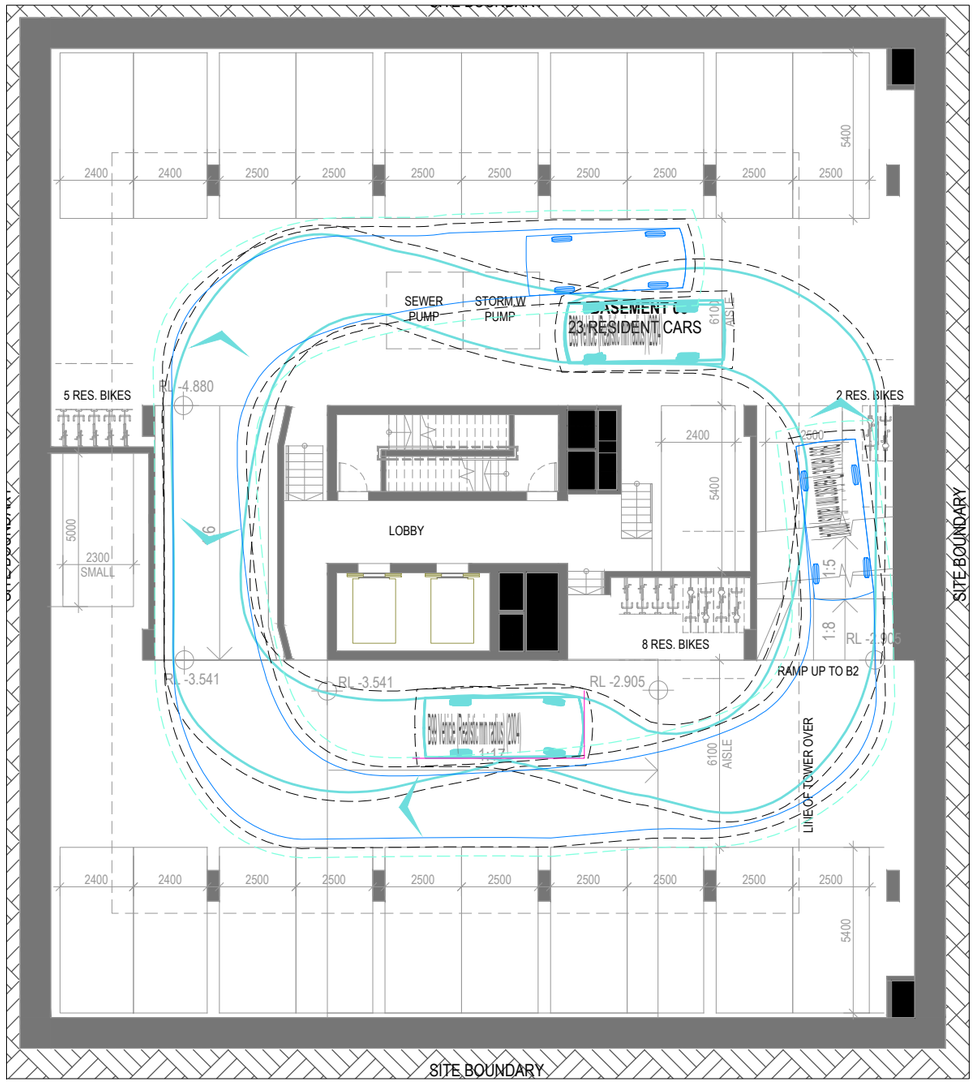
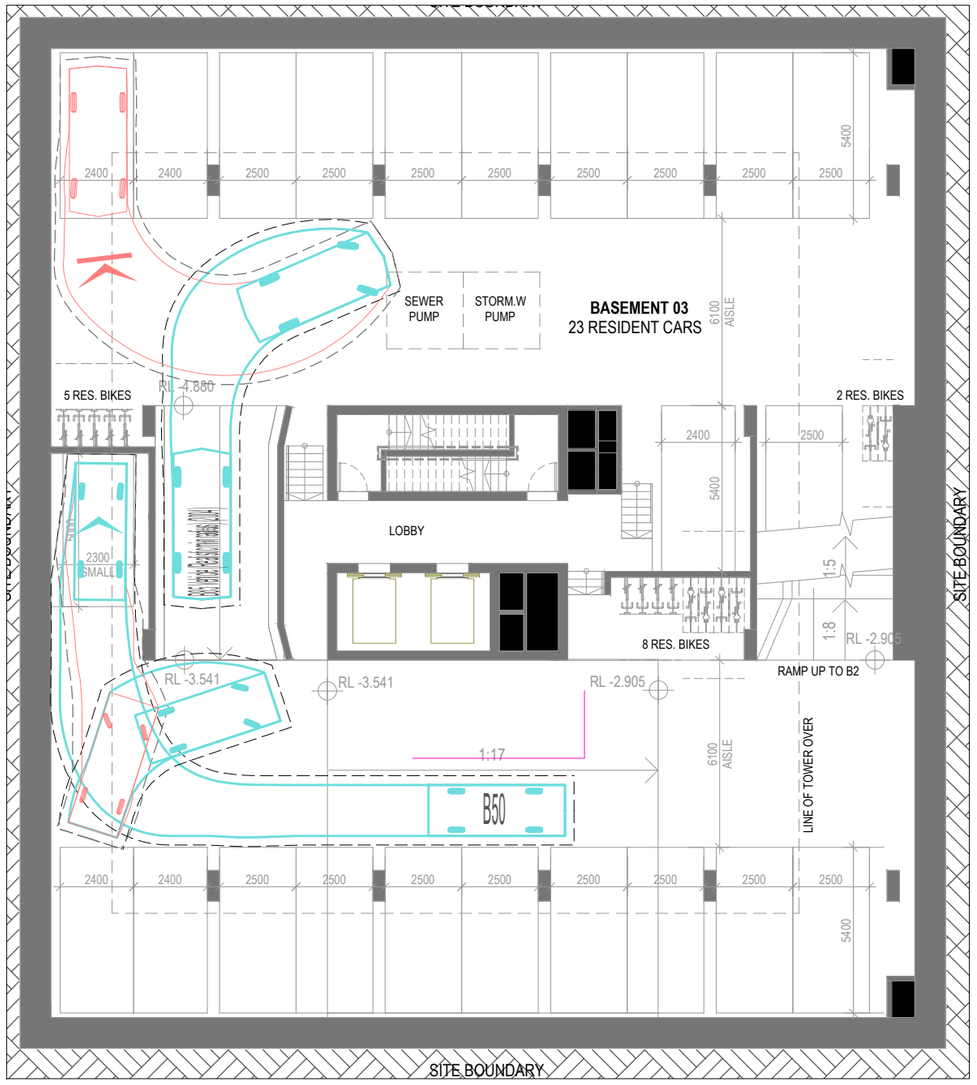
1:200 @ A3
0 1 2 3 4 5m

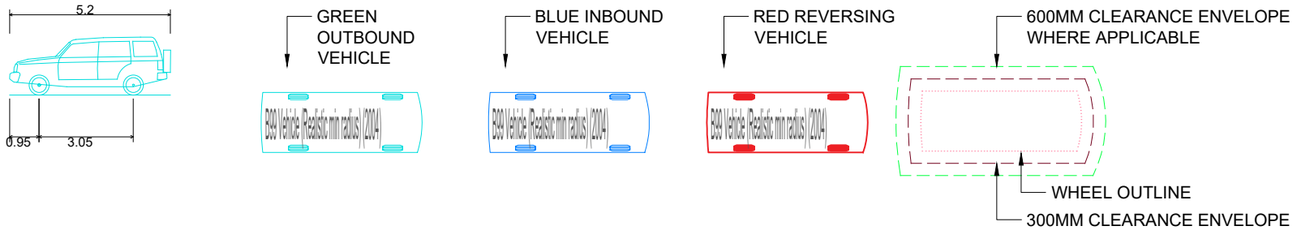
PROJECT NO. P0056926
DATE 25/03/2025
DRAWING NO. 2
REVISION A



B03



ALL BASEMENT LEVELS
END OF AISLE ACCESS AND SMALL CAR ACCESS



B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

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7-9 SURF PARADE

BASEMENT 03 SWEPT PATHS

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REV	DESCRIPTION	DWN	CHK	DATE
A	DA ISSUE	LF	AJ	25/03/2025

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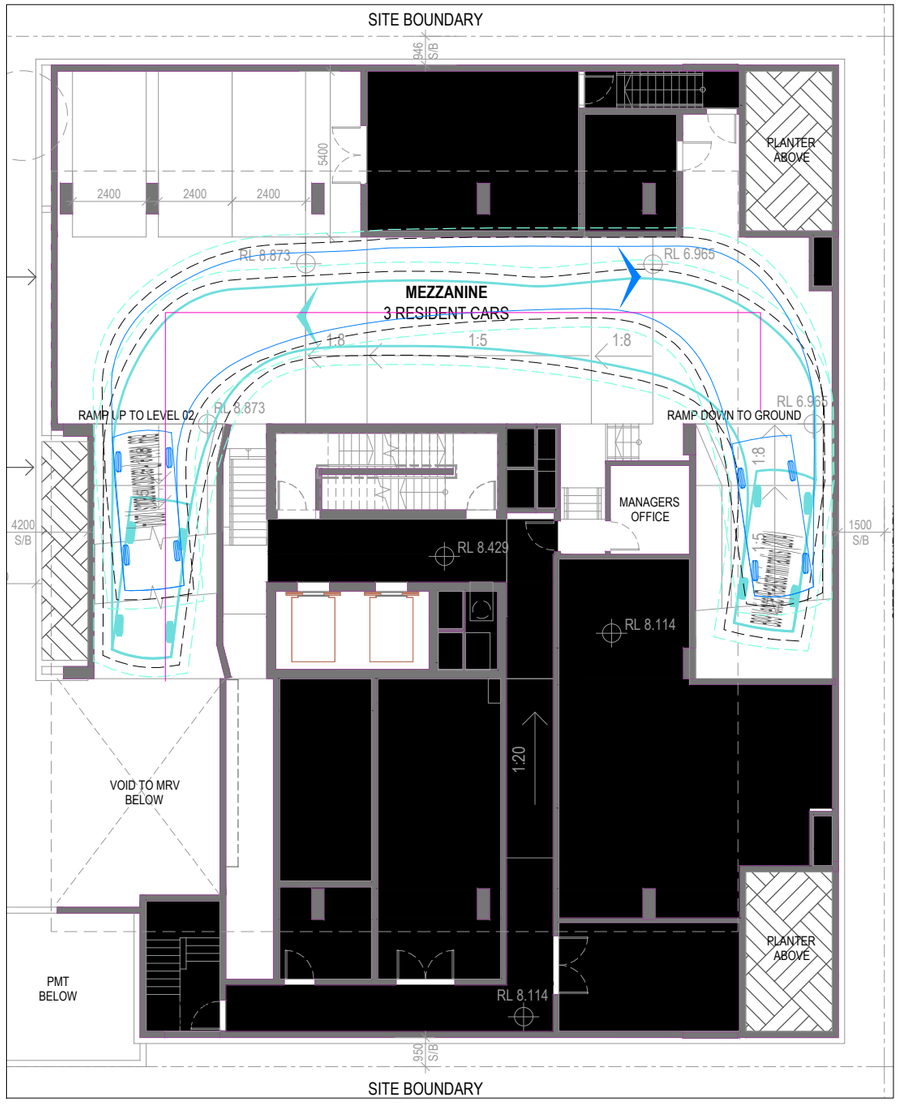
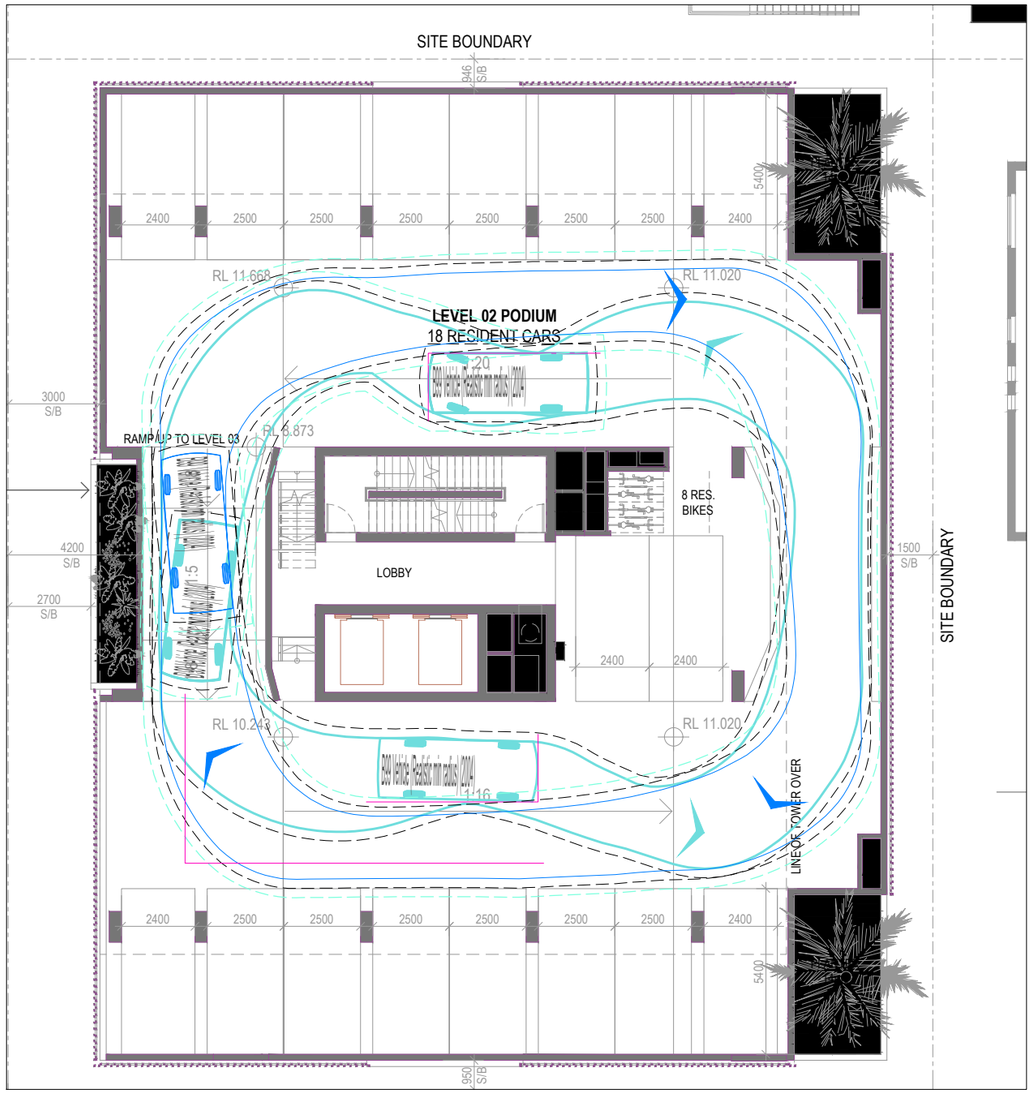
1:200 @ A3
0 1 2 3 4 5m

PROJECT NO. P0056926
DATE 25/03/2025
DRAWING NO. 3
REVISION A



P01



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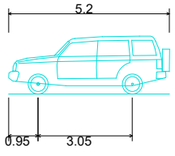

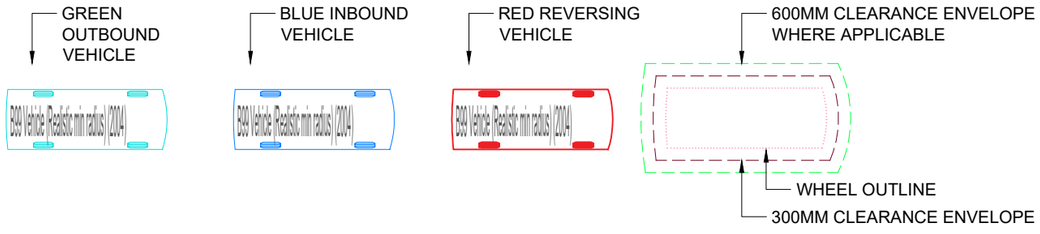

B99 Vehicle (Realistic min radius) (2004)

Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

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7-9 SURF PARADE

PODIUM 01 & 02 SWEPT PATHS

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REV	DESCRIPTION	DWN	CHK	DATE
A	DA ISSUE	LF	AJ	25/03/2025

CLIENT
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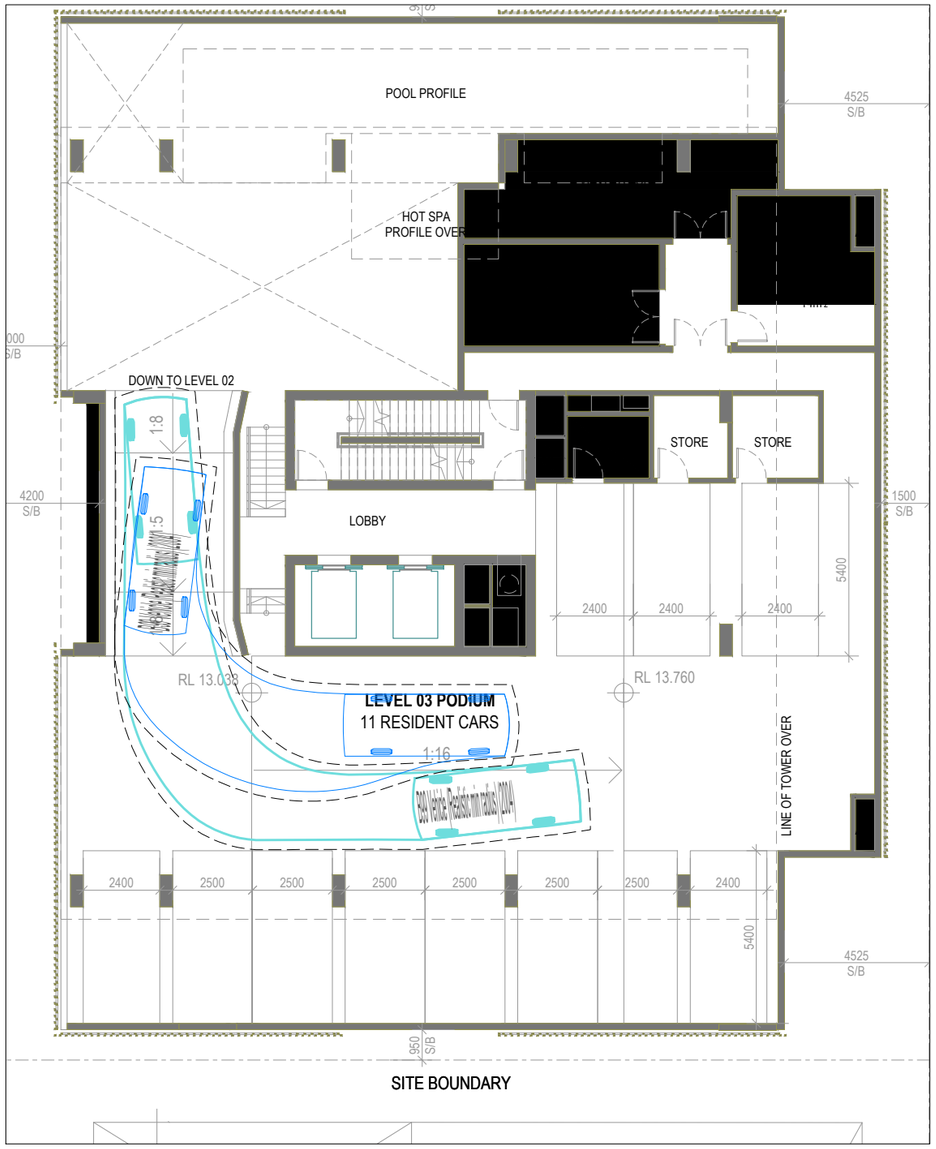
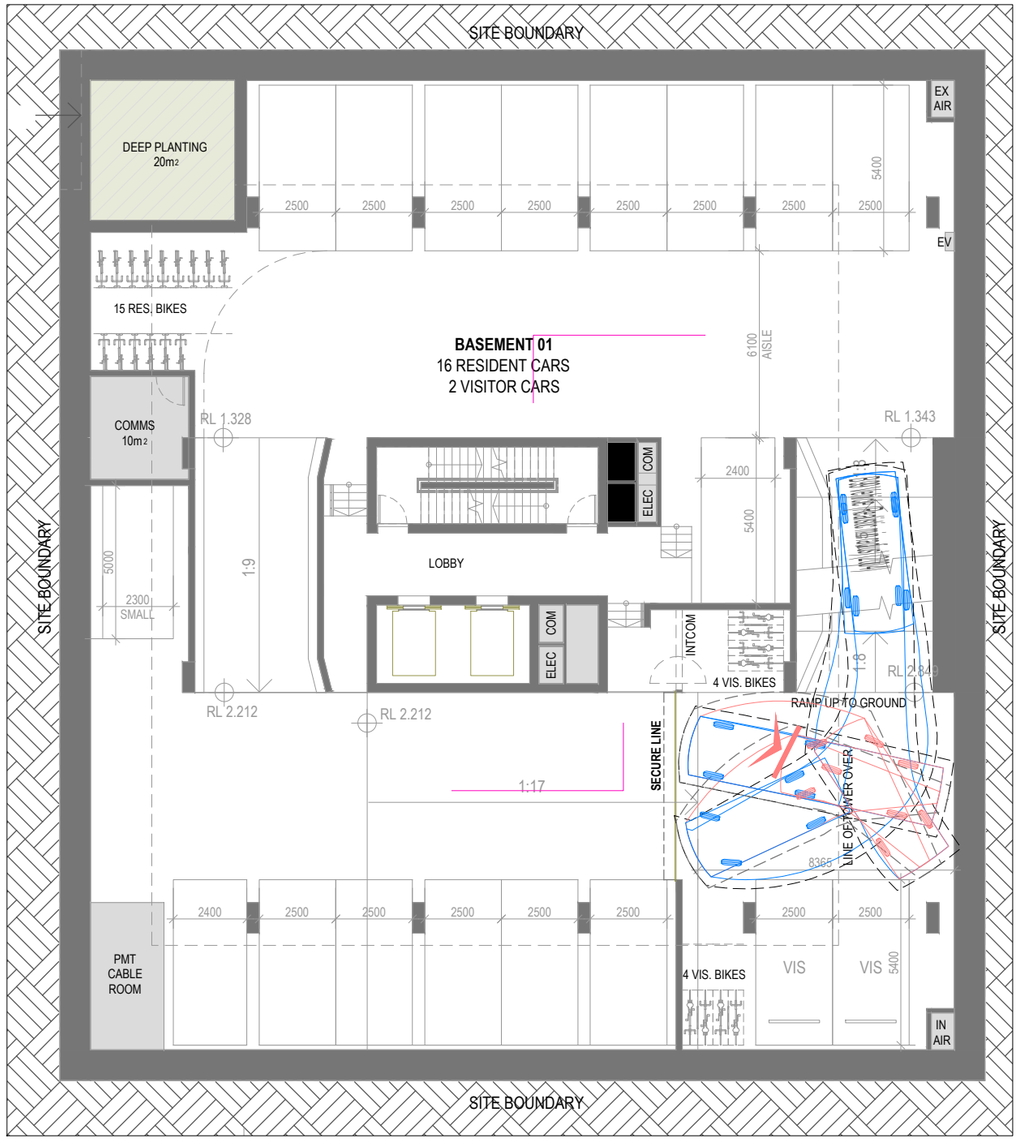
1:200 @ A3
0 1 2 3 4 5m

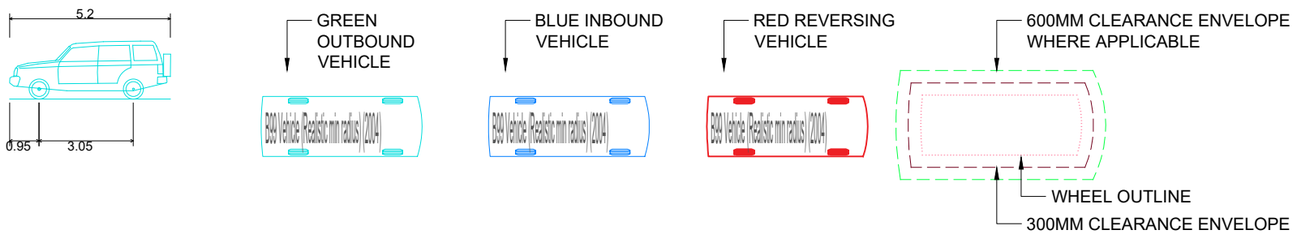
PROJECT NO. P0056926
DATE 25/03/2025
DRAWING NO. 4
REVISION A



P03



BASEMENT 5-POINT TURN B99 (AS2890.1)



B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m

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7-9 SURF PARADE

PODIUM 03 & ACCESS SWEPT PATHS

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REV	DESCRIPTION	DWN	CHK	DATE
A	DA ISSUE	LF	AJ	25/03/2025

CLIENT
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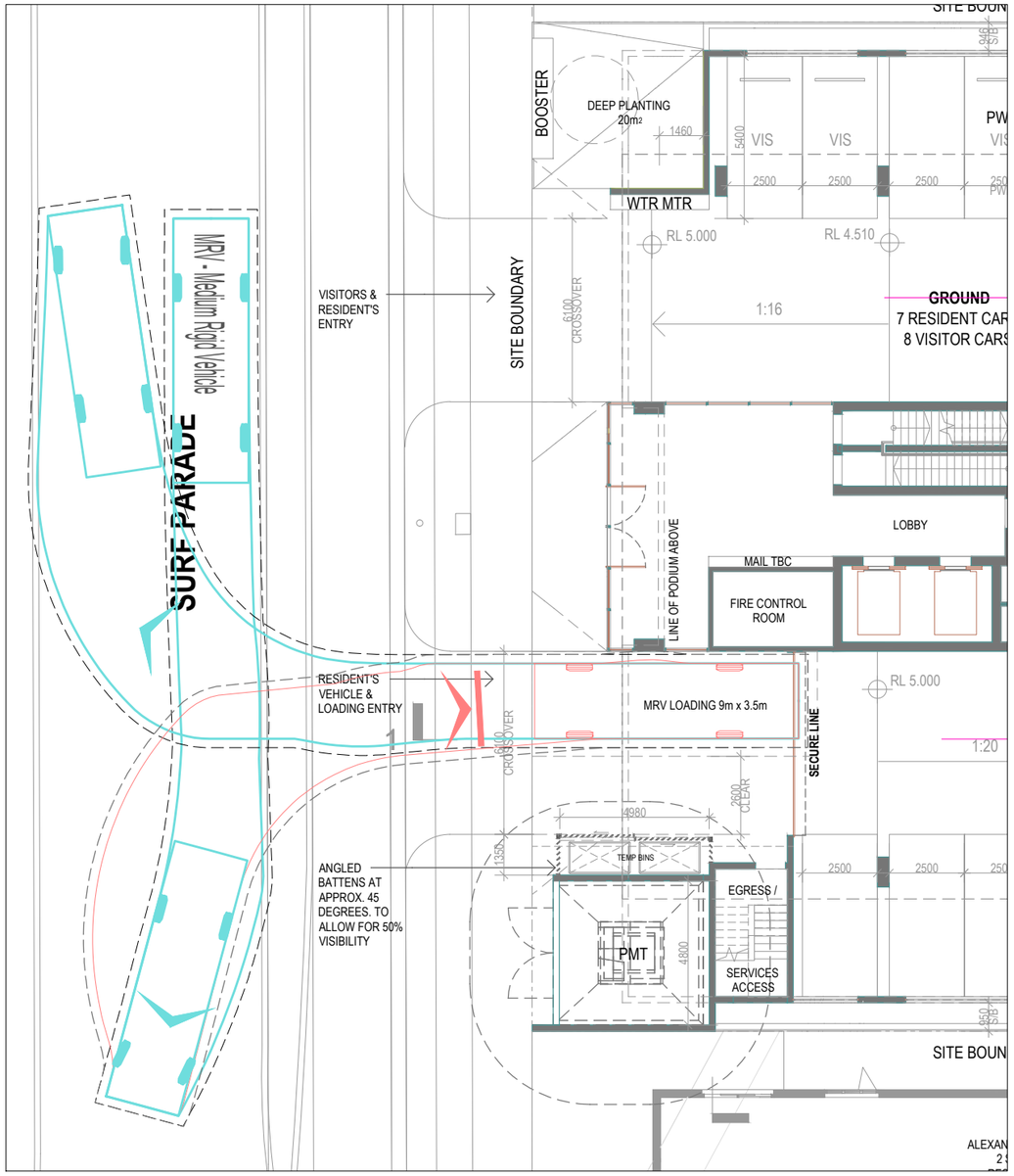
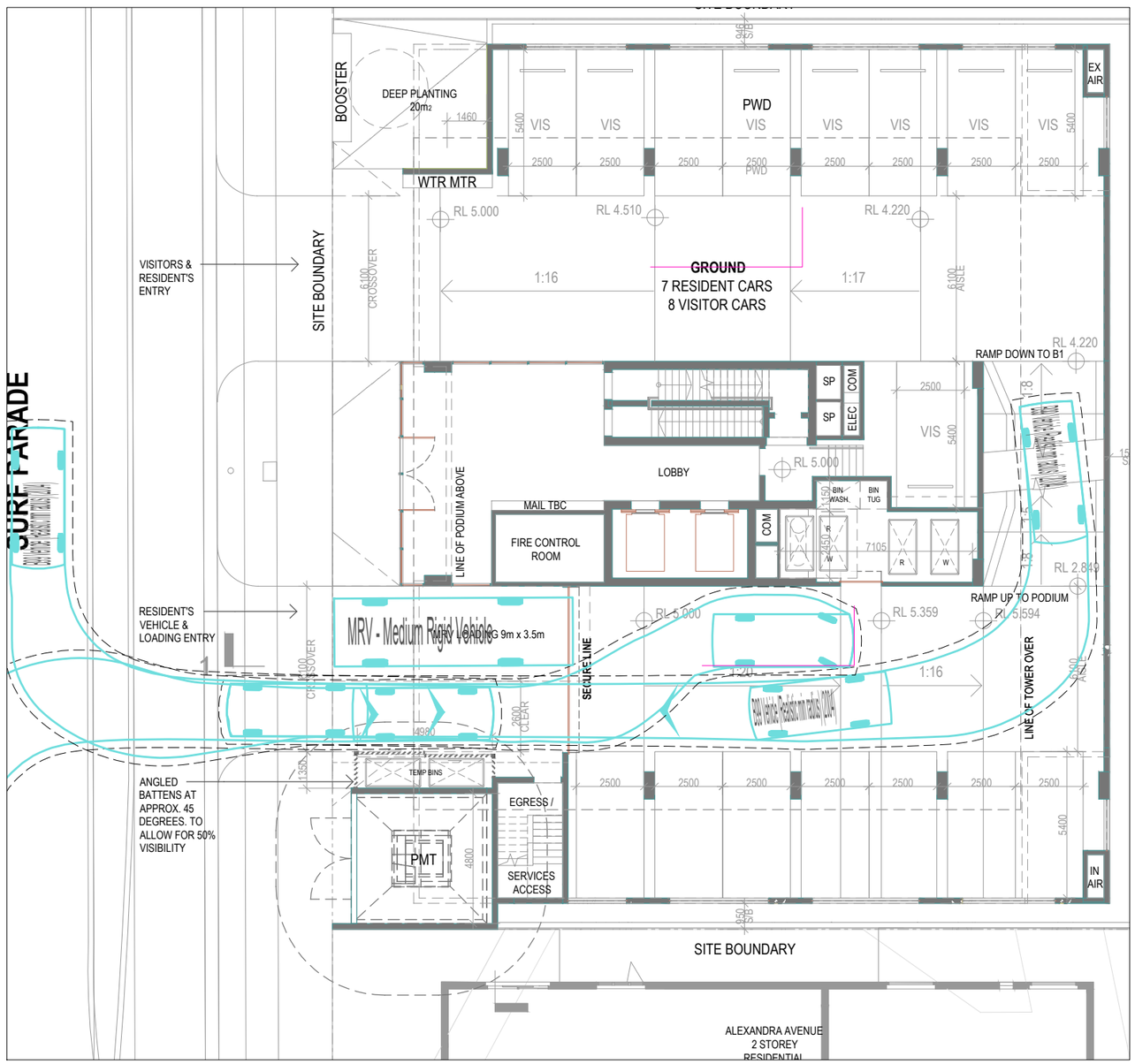
1:200 @ A3
0 1 2 3 4 5m

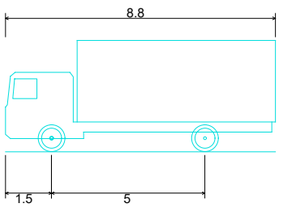
PROJECT NO. P0056926
DATE 25/03/2025
DRAWING NO. 5
REVISION A

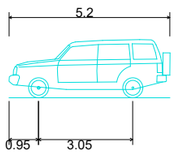




GROUND MRV ACCESS

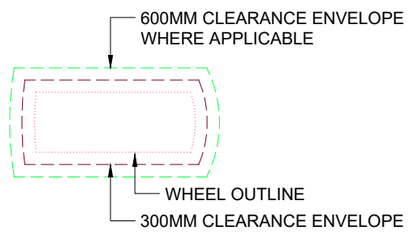
GROUND PASSING MRV





MRV - Medium Rigid Vehicle	
Overall Length	8.800m
Overall Width	2.500m
Overall Body Height	3.633m
Min Body Ground Clearance	0.428m
Track Width	2.500m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.000m

B99 Vehicle (Realistic min radius) (2004)	
Overall Length	5.200m
Overall Width	1.940m
Overall Body Height	1.878m
Min Body Ground Clearance	0.272m
Track Width	1.840m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	6.250m



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URBIS

7-9 SURF PARADE

SERVICING SWEPT PATHS

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REV	DESCRIPTION	DWN	CHK	DATE
A	DA ISSUE	LF	AJ	25/03/2025

CLIENT
Hirsch & Faigen Group
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1:200 @ A3
0 1 2 3 4 5m

PROJECT NO. P0056926
DATE 25/03/2025
DRAWING NO. 6
REVISION A

URBIS