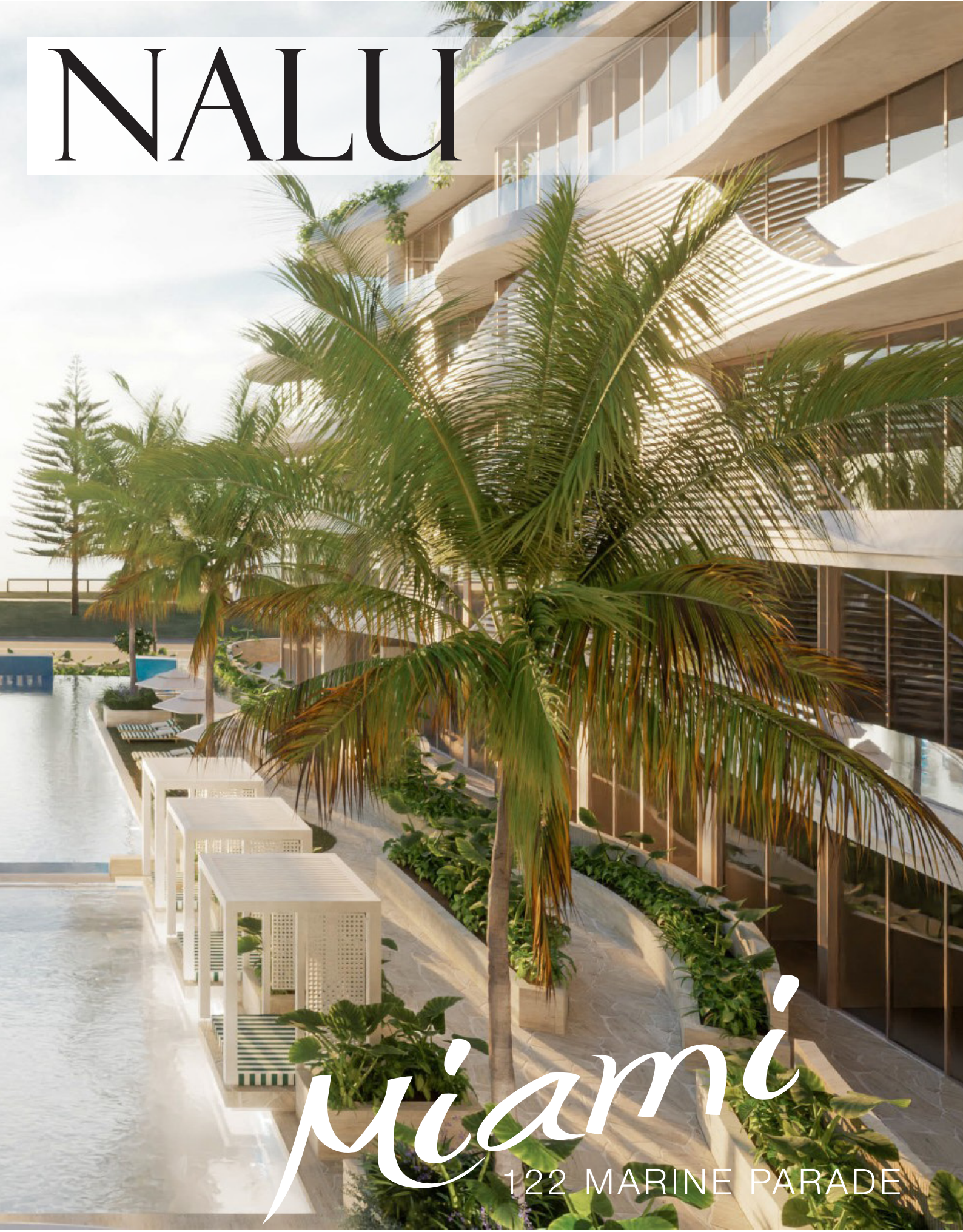
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Miami

122 MARINE PARADE

UPS
URBAN PLANNING SERVICES

INFORMATION REQUEST RESPONSE | MCU/2025/155 | JUNE 2025
SECTION 1: SUPPORTING INFORMATION



ABN 29 430 237 320

Reference: 3675
Council Reference: MCU/2025/155

20 June 2025

The Chief Executive Officer
Council of the City of Gold Coast
Attention: Jusmeet Atwal
City Development
BY EMAIL: mail@goldcoast.qld.gov.au

Dear Jusmeet,

RE: RESPONSE TO INFORMATION REQUEST – DEVELOPMENT PERMIT FOR MAKING A MATERIAL CHANGE OF USE (IMPACT ASSESSMENT) FOR MULTIPLE DWELLING (46 UNITS)

SITE: 122 MARINE PARADE, MIAMI QLD 4220
LOT 122 ON SP284713

1. Introduction

Urban Planning Services Pty Ltd ('**UPS**') has been engaged by Monaco Property Group Pty Ltd (the '**Applicant**') to respond to the Information Request relating to the Development Application seeking the approval of the Council of the City of Gold Coast for a Development Permit for Material Change of Use (Impact Assessment) for Multiple dwellings (46 units), on the site located at 122 Marine Parade, Miami, properly described as Lot 122 on SP284713 (the **'subject site'**).

Further detail regarding the Information Request is provided below.

- **Council of the City of Gold Coast (Assessment Manager)**
  The Council of the City of Gold Coast (the '**Council**' or '**CCGC**') Information Request is dated 28 May 2025 and Council's file reference is MCU/2025/155. A copy of the Information Request is provided at **Section 1, Attachment 1**.

The following sections of this correspondence respond to all of the information requested by CCGC pursuant to Section 13.2(a) of the Development Assessment Rules (the '**DAR**'), under the *Planning Act 2016*.

Coupled with this Response to the Council's Information Request are some further minor changes to the proposed development. Whilst some changes have been made in direct response to the matters raised in the Council's Information Request, some further changes have also been incorporated within the proposals, being partly influenced by considerations arising in response to matters raised in the Information Request, and are included with the revised Architectural Drawings prepared by BDA Architecture and Koichi Takada Architects presented at **Section 2, Attachment 8**.

The proposed changes are minor in nature and are outlined in the following section, together with assessment to confirm that the changes satisfy the relevant considerations for a Minor Change and, thereby, do not alter the assessment process for this Development Application.

2. Minor Change to Development Application

As noted above, coupled with this response to Council's Information Request the Applicant has undertaken some further refinement to details of the proposed development. This has resulted in minor changes being incorporated within the revised Architectural Drawings prepared by Koichi Takada Architects and BDA Architecture, provided at **Section 2, Attachment 8**. The proposed minor changes are summarised as follows.

- Deletion of the Type B apartment at Ground Floor Level in the northern wing of the building to provide an improved arrival lobby, managers office and residents lounge affording a visual connection and desirable outlook to the communal open space facilities through the lobby space.
- Minor changes to the eastern balcony profiles, preserving the curvilinear form whilst reducing the angle of curves within corner edges slightly at Levels 2 to 4 and slight adjustment to the eastern balcony edge at Level 5 and at the private roof terrace edge.
- Minor changes to elements within the communal recreational facilities including an enlarged gym with yoga and pilates rooms, additional steam rooms within the female amenities, golf simulation facility, residents function space and boardroom.
- Minor changes to the shape of swimming pools within private roof terraces with related increase in landscape planter provision at this level.
- Minor changes to lift and stair access layouts to private roof terraces.
- Incorporation of minor changes to address fire engineer, services and structural engineering requirements, including addition of basement fire stairs and relocating of the booster cabinet and water meter enclosure to address the Fraser Avenue frontage for service and maintenance access.

With the minor changes in place, we note that some minor changes to the setback and site cover parameters of the development occur. The scope of the proposed changes in this respect is summarised in **Table 1** below.

Table 1: Summary of Proposed Changes to Development Parameters

Parameter	Development Application	Proposed Minor Change
Description of Development	Development Application for a Development Permit for Material Change of Use (Impact Assessment) for Multiple Dwelling (46 units)	Development Application for a Development Permit for Material Change of Use (Impact Assessment) for Multiple Dwelling (45 units)
Building Height	22.46m (maximum) Five storeys + private roof terraces	22.5m (maximum) Five storeys + private roof terraces
	Note: private roof terrace components do not comprise a 'storey' under City Plan	
Residential Unit Mix	46 units, comprising: • 1 two-bed unit • 40 three-bed units • 5 five-bed units	45 units, comprising: • 1 two-bed unit • 40 three-bed units • 4 five-bed units
Residential Density	147 bedrooms | 1 bed per 49.5sqm	141 bedrooms | 1 bed per 51.7sqm
Building Setbacks	Front (Marine Parade): ○ Minimum setback of 1.5m to private outdoor terraces at Ground Level; ○ Minimum 4.0m to balcony edge – Levels 2 to 5; and ○ Minimum 8.93m to external walls.	Front (Marine Parade): ○ Minimum setback of 1.65m to private outdoor terraces at Ground Level; ○ Minimum 5.5m to balcony edge – Levels 2 to 4; ○ Minimum 4.3m to balcony edge – Level 5; and

Table 1: Summary of Proposed Changes to Development Parameters

Parameter	Development Application	Proposed Minor Change
		○ Minimum 8.93m to external walls.
	Northern Site Boundary: Ground Level ○ Minimum setback of 5.75m to external walls, ranging to 7.5m through varied building planes along the length of the building. Levels 2 - 4 ○ Minimum setback of 3.5m to balcony edges, ranging up to 6.0m ○ Minimum setback of 5.75m to the enclosed facades, ranging up to 7.5m through the varied wall planes along the length of the building Level 5 ○ Minimum setback of 3.5m to balcony edges, ranging up to 6.0m ○ Minimum setback of 6.1m to the enclosed facades, ranging up to 7.5m through the varied wall planes along the length of the building	Northern Site Boundary: Ground Level ○ Minimum setback of 5.75m to external walls, ranging to 7.5m through varied building planes along the length of the building. Levels 2 - 4 ○ Minimum setback of 3.45m to raised planter at balcony edges, ranging up to 6.1m ○ Minimum setback of 5.75m to the enclosed facades, ranging up to 7.5m through the varied wall planes along the length of the building Level 5 ○ Minimum setback of 3.45m to raised planter at balcony edges, ranging up to 6.1m ○ Minimum setback of 6.1m to the enclosed facades, ranging up to 7.5m through the varied wall planes along the length of the building
	Western Site Boundary: Ground Level ○ Minimum setback of 4.0m to external walls. Levels 2 - 5 ○ Setback of 5.0m to the enclosed facades of the building ○ Setback of 3.5m to the balcony edges	Western Site Boundary: Ground Level ○ Minimum setback of 4.0m to external walls. Levels 2 - 5 ○ Setback of 5.0m to the enclosed facades of the building ○ Setback of 3.8m to the balcony edges
	Southern Site Boundary: Ground Level ○ Minimum setback of 2.0m to the private outdoor terrace of south-eastern apartment; and ○ Minimum setback of 5.0m to external walls, varying to 7.5m through varied building planes along the length of the building. Levels 2 – 4 ○ Minimum setback of 3.5m to balcony edges, ranging up to 6.0m ○ Minimum setback of 5.75m to the enclosed facades, ranging up to 7.5m	Southern Site Boundary: Ground Level ○ Minimum setback of 2.0m to the private outdoor terrace of south-eastern apartment; and ○ Minimum setback of 5.0m to external walls, varying to 7.5m through varied building planes along the length of the building. Levels 2 – 4 ○ Minimum setback of 3.5m to balcony edges, ranging up to 6.1m ○ Minimum setback of 5.75m to the enclosed facades, ranging up to 7.5m

Table 1: Summary of Proposed Changes to Development Parameters		
Parameter	**Development Application**	**Proposed Minor Change**
	through the varied wall planes along the length of the building Level 5 ○ Minimum setback of 3.5m to balcony edges, ranging up to 6.0m ○ Minimum setback of 6.1m to the enclosed facades, ranging up to 7.5m through the varied wall planes along the length of the building	through the varied wall planes along the length of the building Level 5 ○ Minimum setback of 3.5m to balcony edges, ranging up to 6.1m ○ Minimum setback of 6.1m to the enclosed facades, ranging up to 7.5m through the varied wall planes along the length of the building
Site Cover	Ground Level – Level 3: 56.9% Level 4: 56.2% Level 5: 47.7% Private Roof Terraces: 10.4%	Ground Level – Level 3: 56.9% Level 4: 56.9% Level 5: 50.5% Private Roof Terraces: 10.4%

With regard to the application procedures and the incorporation of the minor changes outlined above and illustrated within the revised Architectural Drawings, we note that as the proposed changes to the Development Application fall within the parameters of a Minor Change, pursuant to s.52(3) of the Planning Act 2016 (the '**PA**') the proposed change does not affect the development assessment process.

To confirm that the scope of proposed changes satisfies the relevant considerations to proceed as a Minor Change to the Development Application, we provide within **Tables 2 and 3** below, a review of the scope of proposed changes against the definition of 'minor change' provided at Schedule 2 of the PA, and the related considerations for determining that the proposed changes to not comprise 'substantially different development' as prescribed by Schedule 1 of the DAR, respectively.

Table 2: Minor Change Definition		
Parameter	**Notes**	**Compliance**
Schedule 2 Minor Change (a)(i) A change that does not result in a 'substantially different development'.	Our review of the 'substantially different development' considerations set out within **Table 2** below, confirms that the proposed changes do not result in 'substantially different development'.	**COMPLIES**
Schedule 2 Minor Change (a)(ii)(A) A change would not cause the inclusion of prohibited development in the application.	The proposed changes do not involve the inclusion of prohibited development.	**COMPLIES**
Schedule 2 Minor Change (a)(ii)(B) A change that does not require referral to a referral agency if there were no referral agencies for the development application.	The proposed changes do not alter the referral requirements for this application.	**COMPLIES**
Schedule 2 Minor Change (a)(ii)(C)	The proposed changes do not require referral to extra referral agencies.	**COMPLIES**

Table 2: Minor Change Definition		
Parameter	**Notes**	**Compliance**
A change that does not require referral to any extra referral agencies.		
Schedule 2 Minor Change (a)(ii)(D) A change that does not require referral to a referral agency to assess the application against, or have regard to, matters prescribed by regulation under section 55(2), other than matters the referral agency must have assessed the application against, or had regard to, when the application was made.	The proposed changes do not require referral.	**COMPLIES**
Schedule 2 Minor Change (a)(ii)(E) A change that does not require public notification if public notification was not required for the development application.	Public notification was required for the development when the application was originally lodged, as set out within the Council's Confirmation Notice dated 14 May 2025. The proposed changes to the application do not alter the requirement for public notification.	**COMPLIES**

Considerations relating to 'substantially different development' having regard to part (a)(i) of the 'minor change' definition, and the parameters set out at Schedule 1 of the DAR are addressed in **Table 3** as follows.

Table 3: Substantially Different Development		
Parameter	**Notes**	**Compliance**
Involves a new use	There is no new land use proposed.	**COMPLIES**
Results in the application applying to a new parcel of land.	There is no new parcel of land.	**COMPLIES**
Dramatically changes the built form in terms of scale, bulk and appearance.	The proposed changes involve a very minor fraction of an increase to the overall height of the development, with height to the top of the lift overrun increasing from 22.46m to 22.5m, an increase of 0.04m that will be imperceptible in public views to the development. No substantial changes are proposed to the overall scale, bulk and appearance of the development.	**COMPLIES**
Changes the ability of the proposed development to operate as intended.	The proposed changes do not change the ability of the proposed development to operate as intended, being a luxury Multiple Dwelling development.	**COMPLIES**
Removes a component that is integral to the operation of the development.	The proposed changes do not remove a component of the development that is integral to the operation of the development.	**COMPLIES**

Table 3: Substantially Different Development		
Parameter	**Notes**	**Compliance**
Significantly impacts on traffic flow and the transport network, such as increasing traffic to the site.	The proposed minor changes to the Development Application, incorporating deletion of one apartment, do not incur impacts, significant or otherwise, on traffic flow or the transport network.	**COMPLIES**
Introduces new impacts or increases the severity of known impacts.	No significant impacts have been identified through the assessment to date of the Development Application and the proposed minor changes to the Development Application do not introduce new impacts or increase the severity of known impacts.	**COMPLIES**
Removes an incentive or offset component that would have balanced a negative impact of the development.	No significant impacts were identified through the assessment to date of the Development Application to warrant requirement for an incentive or offset component to balance such impacts. Accordingly, the proposed minor changes to the application do not remove any such incentive or offset component.	**COMPLIES**
Impacts on infrastructure provisions.	The proposed minor changes, including the deletion of one residential apartment, do not introduce any additional impacts on infrastructure provision.	**COMPLIES**

The considerations set out in **Tables 2 and 3** above confirm that the scope of changes to this Development Application are consistent with the definition of a 'minor change'. Pursuant to s.52(1) of the PA this Change to the Development Application is accompanied by a Notice of the Change to the Development Application, located at **Section 1, Attachment 1**.

Having regard to s.52(2) of the PA it is noted that the Change to the Development Application does not involve a change of applicant and, therefore, requirements of s.52(2) relating to the provision of written consent of the applicant are not applicable. As noted previously, pursuant to s.52(3) of the PA, as the proposed changes to the Development Application satisfy the relevant considerations to determine that the change is a Minor Change, the development assessment process will not be affected.

As the Development Application has progressed to the Information Request stage of the development assessment process, and our response to the matters raised in the Council's Information Request is also provided herewith, the Applicant will proceed to the public notification stage of the development assessment process pursuant to section 53 of the PA and Part 3, Section 10.1(b) of the DAR.

3. Supporting Documentation

This correspondence is also accompanied by supporting documents and additional information, where required, in response to the CCGC Information Request. The structure of the supporting documents is as shown below.

Attachment No.	Document
Section 1 – Supporting Information	
1	Notice about Change to Development Application, duly completed
2	CCGC Information Request dated 28 May 2025
3	Electrical Engineering Advice provided by Ampflo
4	Response to Transport Assessment items prepared by Bitzios Consulting
5	Response to Information Request and updated Acoustic Report prepared by Acoustic Works
6	Revised Site Based Stormwater Management Plan prepared by Arcadis
7	Revised Waste Management Plan prepared by MRA Environmental
Section 2 – Drawings	
8	Revised Architectural Design Report prepared by BDA Architecture and Koichi Takada Architects
9	Photomontage Views prepared by Mark Elliot Illustrations
10	Photomontage Views with 15m height parameter overlay prepared by Mark Elliot Illustrations
11	Response to Information Request and Revised Landscape Intent Statement prepared by LDG Landscape Architects

As the Development Application was made with Council via electronic lodgement, this Information Request Response is provided via electronic submission, as requested on page 10 of the CCGC Information Request.

4. Council of the City of Gold Coast – Information Request

In accordance with Section 7.2(a) of Part 2 of the DAR, the Applicant has instructed UPS and the Project Team to respond to all of the items raised in the Information Request dated 28 May 2025. Response to the matters raised in the Information Request is provided as follows.

Planning Assessment

4.1 Item 1: Building bulk

Officers have concerns that the length of the development as viewed from the north and south elevations would appear imposing. While officers note and acknowledge that this is partly due to the dimensions of the site, the building height exceeding the mapped height is considered to exacerbate the dominance of the built form. To demonstrate compliance with the Strategic outcomes of the Urban neighbourhood's element, the applicant is requested to address the following:

a) Provide additional screening elements / building breaks / recessing to break up the built form. Changes could be coupled with integrated landscaping embellishments to further soften and add visual interest.

RESPONSE TO ITEM 1:

A site meeting was attended with Council officers on 18 May 2025 to discuss and consider outcomes relating to the matters raised in Item 1. In determining a desirable response to the treatment of the northern and southern facades it is initially important to acknowledge that the built form incorporates considerable changes in the wall planes of the external walls of the building to ensure that visual relief and variation in the appearance of the development along both the northern and southern elevations is achieved, coupled with the sweeping curvilinear balcony edges which contribute positively to the cohesive architectural language exhibited throughout the whole of the development.

With this in mind, proposals were put forward and agreed upon in terms of preserving the distinctive architectural qualities of the development, whilst introducing subtle amendments to provide further variation and visual interest in the northern and southern facades. This is achieved by minor modifications building to create longer sweeping lines in the curvilinear forms of the balcony edges in the western area of the building, incorporated also to address structural engineering advice, introducing additional feature screening elements for enhanced privacy both within the site and adjacent properties together with the inclusion of additional integrated landscape plantings arranged centrally in both the northern and southern facades of the building, creating desirable greening and further visual enhancement in the interface with the public realm as viewed along both Fraser Avenue and Nagel Avenue.

The thoughtful approach to the architectural design of the development, seeking to balance the achievement of efficient use of the subject site with design outcomes that contribute positively to the visual character of the site and its setting has produced a built form outcome of exemplary quality that will contribute successfully to the planned evolution of the local urban neighbourhood within which the site is located. In this respect, the subject site is located within the Medium Density Residential Zone and within an area identified with a Building height category of 15m (3 storeys) and benefitting from the opportunity for building height uplift of 50%. Many examples of existing taller buildings and recent development approvals granted by Council throughout this corridor of Miami, and the adjoining neighbourhood of Mermaid Beach, demonstrate the evolving nature of this urban neighbourhood, incorporating varied building heights up to the maximum building height uplift parameters in both metres and storeys, in line with the City Plan intent for such neighbourhoods to become more compact and pedestrian friendly. This is explored at length within the Town Planning Report accompanying this Development Application, where it is noted that the subject site exhibits size and dimension attributes in the local context that represent a unique opportunity for redevelopment to deliver design outcomes that celebrate the opportunities of the site and its setting within this well-serviced beachfront corridor of Miami.

The design outcomes of the proposed development enthusiastically deliver upon these opportunities, successfully integrating excellence in architectural design with bespoke landscape enhancements to create a development of particular distinction in the streetscape, with a form and scale that is thoughtfully managed to blend with and complement both the existing and emerging local character and sense of place.

These design outcomes of the development are further enhanced by the incorporation of the minor changes to the northern and southern elevations of the building which have been adopted through helpful and constructive dialogue

RESPONSE TO ITEM 1:

with Council officers in response to the matters raised in Item 1 of the Information Request. These changes are illustrated in the revised Architectural Design Report prepared by BDA Architecture and Koichi Takada Architects, located at **Section 2, Attachment 8**, including perspective views of interface with the public realm of both Fraser and Nagel Avenue presented in extract in **Figure 1** below.

Review of the built form with these changes in place reveals a development that is highly resolved with a coherent and cohesive design strategy that combines a sophisticated and refined 'minimalism' featuring curvilinear forms and a stepped height that effectively mitigates the visual impact of the building bulk while complementing and enhancing the local character.

The addition of further screening elements beyond what is depicted on the elevations is not necessary to achieve further visual privacy or sun screening. The addition of further screening would be 'decorative' and inconsistent with the design philosophy. To provide a building break or recess in the north and south facades, unless aligned with the visual axis along Fraser Avenue and Nagel Avenue would not be visible from the surrounding area nor offer any real benefit. Conversely, the impact of providing building breaks or recesses would impact on the floor planning and potentially lead to a sequence of further changes and other impacts that might be potentially detrimental to the current well-considered resolution of the form and appearance of the building.

The building form is not shown to be unacceptably dominant in relation to the streetscapes. Other existing buildings have a pre-existing dominance that characterises the streetscapes and contributes to their varied character. The north and south facing facades of the proposed development are obstructed by the adjoining existing built form and are clearly less visible than the existing dominant buildings. The proposed development will not dominate the local character but will integrate successfully within the varied pattern of built form presently existing and as it further evolves in line with the intent of the City Plan for this urban neighbourhood.

These considerations confirm that the design and appearance of the proposed development deliver positively to the achievement of relevant Strategic Outcomes of the City Plan including the Specific Outcomes for Urban Neighbourhoods, at section 3.3.2.1(9) of the City Plan.



Northern View of Proposed Development from Fraser Avenue

RESPONSE TO ITEM 1:



Southern View of Proposed Development from Nagel Avenue
Figure 1: *Perspective Views of Proposed Development from Northern and Southern adjoining public realm*

4.2 Item 2: Private footpath connections

The ground floor plan shows several private footpath connections to Marine Parade. The applicant is requested to reduce the number of these connections by combining them where possible. This will reduce the maintenance burden and increase opportunities for deep landscaping at the street edge.

RESPONSE TO ITEM 2:

The Applicant has given due consideration to the amendment requested by Item 2, however, has determined to retain the pedestrian connections to the street frontage of Marine Parade.

In this respect, we note some key relevant considerations as follows.

- The subject site has a frontage width of over 80m to Marine Parade and the proposed development incorporates direct pedestrian connections from four Ground Level apartments, and two connections to the generously proportioned communal open space facilities situated centrally within the site.
- This averages out to one pedestrian connection, set amongst an open landscaped frontage, at approximately every 13m. Comparatively, it is noted that to the south of the site are a series of properties with approximately 10m wide frontages to Marine Parade, each with high secure fencing and individual pedestrian connections to each property.
- In contrast, the pedestrian entrances to the proposed development represent very small punctuations along an open landscaped and very long site frontage, such that a total length of 65.5m is dedicated to landscaping along the site frontage, or 81.3% of the overall frontage length of the site.
- The pedestrian connections provide more active engagement with the street frontage, both directly from four of the Ground Level apartments and for residents of all apartments via the communal open space routes, promoting a desirable level of pedestrian activity and engagement at the streetscape interface of the subject site.

These characteristics of the proposals demonstrate that the development achieves an open and attractively landscaped frontage to the Marine Parade corridor which is enhanced by the activity afforded through the pedestrian connections to the street frontage.

Architecture Assessment

4.3 Item 3: Excellent standard of appearance

The development proposes additional height above the mapped height therefore must achieve an excellent standard of appearance. Officers have concerns with the stark appearance of the ground plane pedestrian and vehicle entry from Nagel Avenue and Fraser Avenue. To ensure the proposal achieves the above outcome SO9(e) officers recommend the following:

a) Provide additional opportunity for seating and pedestrian connection with the lobby to the north.
b) Confirm treatment of all ground level under croft soffits. These should include high quality textured materials and finishes with fine grain human scale detail and conceal all visible services.
c) Officers recommend textured soffits to the upper level also for high quality visual interest.
d) Most landscaping appears to be located outside the north and south boundary. Provide further opportunity for canopy trees and vegetation within the site.
e) Confirm finishes to the loading bay and planter services walls which face the south boundary and adjoining residential developments. Officers suggest that higher quality façade treatment may be required.

RESPONSE TO ITEM 3:

In response to Item 3, the Applicant has undertaken a review of the pedestrian and vehicular entrance to the site via Fraser Avenue and the vehicular entrance to the site via Nagel Avenue, to incorporate additional landscape elements and further enhance the visual quality and character of the development at its interface with the public realm in these adjoining street corridors. In response to the individual recommendations of officers under Item 3, we note the following responses.

a) Minor modifications have been made to the porte-cochere design addressing Fraser Avenue, including the incorporation of covered seating within landscaped surrounds. The pedestrian connection to the lobby is more clearly defined through surface paving materials with attention drawn to the pedestrian route due to the incorporation of the seating space provided. We also refer to the proposed Minor Change to the Development Application outlined previously in this Report, including the decision by the Applicant to remove the central Type B unit from this central position in the northern wing of the development to accommodate a substantially enhanced lobby and residents lounge addressing the porte-cochere and affording views through to the exemplary landscaped communal open space facilities in the centre of the site. Incorporating these elements, in addition to further landscape features as explored in response to Item 3(d) below and Item 1 above, ensures that the high-quality design outcomes at the interface of the development with Fraser Avenue are further enhanced to reinforce the outcomes of design excellence in the appearance of the development. The extract comparative views of the porte-cochere zone within the development presented in **Figure 2** below illustrate these outcomes, demonstrating the high-standards of excellence achieved by the proposals for the subject site.



Porte-cochere Perspective View from Fraser Avenue – as originally lodged

RESPONSE TO ITEM 3:



Porte-cochere Perspective View from Fraser Avenue – revised in response to Information Request
Figure 2: *Comparative Perspective Views – Porte-cochere from Fraser Avenue*

b) The revised Architectural Design Report prepared by BDA Architecture and Koichi Takada Architects provided at **Section 2, Attachment 8**, includes materiality detail identifying the proposed soffit treatment to the porte-cochere. The materials selected for the porte-cochere soffit are purposefully adopted to accentuate the clean lines and distinctive materiality of the architectural language expressed throughout the built form of the development, whilst incorporating raised ellipse features with integrated recessed LED lighting adding a sense of depth and luxurious street appeal in the arrival experience for residents and their guests.

The soffit material selection for the porte-cochere comprises textured popcorn render finish, in CCS Snow colour. We also note that all services are concealed and not visible or suspended below the soffit finishes. The distinctive design outcomes are illustrated in the extract Perspective View of the porte-cochere within the northern edge of the subject site, presented in **Figure 3** below.



Figure 3: *Proposed porte-cochere entrance from Fraser Avenue*

As noted in response to item 3(b) above, the revised Architectural Design Report prepared by BDA Architecture

RESPONSE TO ITEM 3:

and Koichi Takada Architects incorporates materiality detail identifying the proposed soffit treatments, including to the upper level of the development. Again, the materials selected for the upper-level soffit treatments have been purposefully adopted to accentuate the clean lines and distinctive architectural language expressed throughout the built form of the development, reinforcing a cohesive architectural character unifying the whole of the development throughout all levels and spaces. Materiality selected for the upper-level soffit comprises textured popcorn render finish, in CCS Snow colour.

c) The Applicant has reviewed the development design and adopted changes to introduce additional landscaping planting opportunities within the northern and southern areas of the subject site as sought by Item 3(d). Changes adopted in this respect include:

- deletion of the private ground level car parking spaces previously proposed adjacent to the north-eastern and south-eastern apartments at Ground Floor level, facilitating additional landscape planting areas in each of these locations, particularly in the southern edge of the site, where the enlarged landscape planting area is punctuated only by a fire egress stair from the basement level below and additional palm tree planting has been incorporated;
- adjustment to the position of the padmount transformer adjoining the northern site boundary to move closer to the porte-cochere driveway entrance for improved access for installation and servicing, as addressed elsewhere in this Report, providing for increased deep planting landscape opportunities in this north-western area of the site;
- reconfiguring of the private swimming pool and terrace area for the north-eastern apartment at Ground Floor level providing for improved landscape planting opportunities adjacent to the northern site boundary in this location; and
- planting within the northern site boundary setback area has also been augmented to include canopy tree and small canopy tree planting to enhance the landscape interface of the subject site at this northern boundary.

It is noted that further input on location of services has resulted in minor changes to the location of the fire booster cabinet and water metre enclosure to have direct road frontage and accessibility from Fraser Avenue, whilst a gas meter is positioned in the north-eastern corner of the site addressing Marine Parade. The services enclosure addressing Fraser Avenue is designed to reflect and complement the architectural character of the development overall, including material selection that ensures visual integration with the architectural appearance as illustrated in **Figure 2** above. Further, the enlarged landscape planting area at the eastern side of the enclosure accommodates enhanced landscape planting, including provision for accent shrub planting addressing the northern site boundary in this location.

d) Materials and finishes within the loading bay and to the external wall of the loading bay and temporary bin store enclosure adjoining the loading bay are clarified within the revised Architectural Design Report provided at **Section 2, Attachment 8**, referring to page 44. The material selection for the loading bay and external wall comprises the use of Travertine Tile ensuring an attractive visual interface is presented to the adjacent public realm and southern site boundary. The materials selection for these elements of the development embrace the high-quality materiality and visual character that is exhibited throughout the proposed development overall, again ensuring a cohesive architectural language and expression in all levels and facades of the development. This is illustrated in the perspective view presented in **Figure 4** below.

RESPONSE TO ITEM 3:



Figure 4: *Perspective View of Loading Bay from Nagel Avenue*

The detail of materiality adopted in the proposed development, the additional landscape enhancements adopted in response to Item 3, and the attention to detail in the selection of finishes and the quality of materiality throughout all levels and elements of the development demonstrate a commitment by the Applicant to ensuring the development delivers an excellent standard of appearance in the built form presentation to all street edges and neighbouring property boundaries.

This is evidenced through the revised drawings and detail provided within the Architectural Design Report located at **Section 2, Attachment 8**, and within the updated Landscape Intent Statement prepared by LDG Landscape Architects, located at **Section 2, Attachment 11**.

In summary and having regard to the considerations of Specific Outcome 3.3.2.1(9)(e), we note further key conclusions as follows.

- The appearance of the building expresses its use as a residential building with legible human scale storeys, extensive fenestration and generous functional balconies. The balconies and fenestration reflect a subtropical design response with managed access to daylight, breezes and views to facilitate an indoor/outdoor coastal lifestyle.
- The principal pedestrian and vehicle entrance from Fraser Avenue is legible without being intrusive to the existing streetscape. It provides a restrained and understated transition between public and private space. The pedestrian entrances from the Marine Parade frontage to the ground level apartments and central communal open space provides connectivity to the site along the landscaped frontage. The entrances and landscape animate and activate the frontage to reinforce the human scale and pedestrian engagement.
- The simple but elegant expression of the floor plates to layer the building height provide clear expression of the principal structural elements, adopting them as primary architectural features that 'float' between the transparency of the external walls to articulate the appearance of the building. The minimalist expression creates a lightness of appearance that responds to the sub-tropical context and the relationship between indoor and outdoor space.
- The restrained embellishment of the architectural envelope to provide measured articulation relies on the subtle integration landscaping and batten screens to complement the inherent visual interest of the curvaceous forms that reflect the moving sand and ocean opposite.
- The proposed development has a U-shaped form that modulates length of the building along the frontage. This configuration is a primary formal feature of the design and creates two smaller wings separated by a central landscape space. The size of the separation is effective in avoiding the appearance of bulk in the most visible principal façade of the development. The modulation of the built form along the frontage also provides

RESPONSE TO ITEM 3:

for effortless integration of the built form of the development into the streetscape, reinforcing the visual rhythm of the established and evolving neighbourhood.

- An understated palette of sophisticated material finishes, and soft colour variation provides further finesse in the articulation to the appearance of the built form. The materials and colours assist to differentiate architectural elements, walls and soffits to subtly highlight elements and animate the appearance of the building.
- The visibility of the central landscaped communal open space forms a visual feature of the development in the streetscape, emphasising the separation of the built form and will engage positively with the landscape character of Thorn Park, reinforcing the landscape amenity of the streetscape.
- The white undulating edges of the projecting balconies and floor plate edges provide visual references to the whitewater of the breaking ocean waves and the movement and erosion of the sand on the beach opposite the subject site.
- The setbacks of the built form at Level 5, allows the lower levels to be more visually prominent and to complement the varying heights of the neighbouring built form, whilst the setbacks and strategic positioning of screening elements assist to preserve the visual privacy of the interface of the built form with the adjoining neighbouring properties. The layering of the building height also assists to mitigate any sense of overbearing. In essence, the proposed development sits comfortably on the site and will effectively integrate with the surrounding urban context to enhance the character and identity of the locality.
- The design philosophy adopted by the Applicant has given due consideration to the modulation of the building bulk and the articulation of its appearance through architectural elements, finishes and colours. The design strategy is shown to have effectively employed a rational blend of components to achieve an excellent standard of appearance that is visually coherent and optimises contextual compatibility and the effective mitigation of visual impacts.

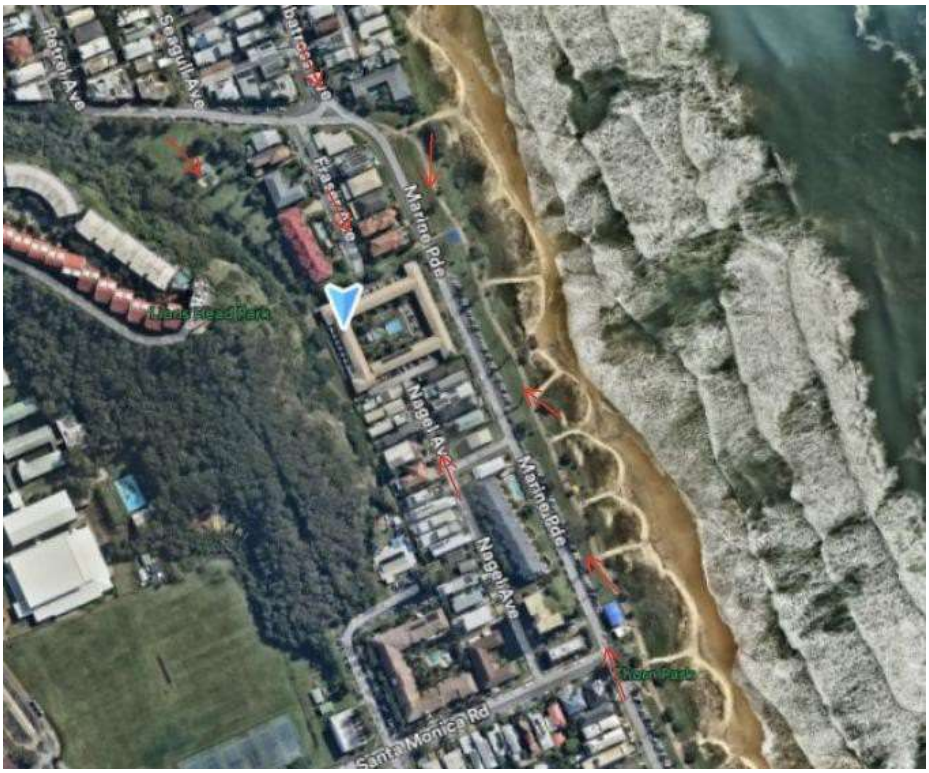
This approach by the Applicant ensures that the objectives of Specific Outcome 3.3.2.1(9)(e) of the City Plan, being the achievement of an excellent standard of appearance of the built form and street edge, is satisfied by the proposals for the subject site.

4.4 Ubject stem 4: Visual impact assessment

Officers have concerns with the proposed bulk, height and scale, where the applicant has not adequately demonstrated that the uplift proposal reinforces local identity SO9(b) and sense of place and provides well managed interfaces SO9(c).

Officers request that accurate perspective views of the proposal in context with the surrounding local area be provided from 4 locations to the north and 4 to the south, see below. This will assist officers to determine the appearance of the proposal, its bulk, scale and height and how it will be viewed from the Oceanway, Lions Head Park and local streets.

Note: the perspectives should include the amendments as outlined in this information request.



RESPONSE TO ITEM 4:

In response to Item 4, photomontage views have been prepared by Mark Elliot Illustrations, accurately presenting views toward the subject site with the proposed development in place. The photomontage views package, provided at **Section 2, Attachment 9**, has incorporated views from all positions nominated in the map to Item 4 above.

The photomontage views demonstrate that the proposed development fits comfortably within the varied building height profile of the streetscape context of the subject site.

Having regard for Specific Outcomes 3.3.2.1(9)(b) and (c) of the City Plan, which seek development to achieve a reinforced local identity and sense of place, and a well-managed interface with and relationship to nearby development, including the reasonable amenity expectations of nearby residents, in the context of the photomontage views, we note as follows.

- Review of the local identity and sense of place in this local urban beachfront neighbourhood of Miami, includes the adjacent neighbourhood extending through from Marine Parade to Albatross Avenue, connecting to Nobby Beach and Mermaid Beach to the north of the site, and views to Magic Mountain above the site to the west. This local neighbourhood context includes an established character of varied building heights, ranging from remnant single storey buildings through to buildings of 5 and 9 storeys in close proximity to the north and south of the subject site, respectively.
- Alongside existing taller buildings within the local area is a growing number of recent development approvals granted by the Council for redevelopment outcomes incorporating built form characteristics exceeding 3 storeys and 15 metres in height within the surrounding 3 storey (15m) building height category that extends through this neighbourhood. This is explored at length within the Town Planning Report accompanying this Development Application and demonstrates the evolving character of the local urban neighbourhood context of the site, where investment is emerging to bring forward more compact and efficient forms of residential land use activity in accordance with the intent of the City Plan for this well-serviced area of the City.
- The photomontage views demonstrate that the proposed development fits comfortably within the established and evolving building height profile of its immediate local context, as illustrated by the sample photomontage view presented in **Figure 5** below.

RESPONSE TO ITEM 4:



Figure 5: *Extract copy of Photomontage View VP B by Mark Elliot Illustrations*

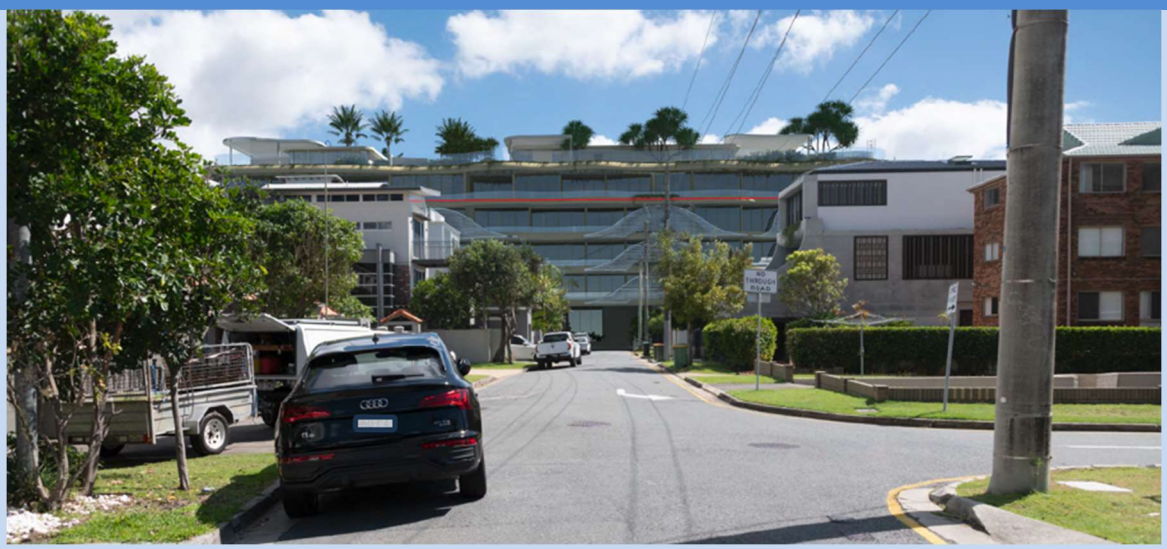
- It is also relevant, therefore, to consider the future redevelopment potential that is provided for by the City Plan intent for the locality of the subject site, with reasonable expectations that continued redevelopment activity will emerge throughout the corridor including building heights of up to and above 15 metres.

  To assist with interpreting this context an additional set of photomontage images overlaid with the 15 metre height parameter in views toward the site along both Fraser and Nagel Avenue, from the north and south respectively, is provided at **Section 2, Attachment 10**. Extracts of which are presented in **Figure 6** below. These images, and the full suite of photomontage images, demonstrate that the proposed built form and building height profile comfortably fit within the established and planned local character and identity of the subject site and its setting.



Perspective View with overlay – View along Fraser Avenue

RESPONSE TO ITEM 4:



Perspective View with overlay – View along Nagel Avenue

Figure 6: *Perspective Views to Proposed Development with 15m height line overlaid in red*

- In addition to the photomontage views, we note that the revised Architectural Drawings prepared by BDA Architecture and Koichi Takada Architects, located at **Section 2, Attachment 8**, have incorporated a series of Section Drawings to assist with understanding the relationship and separation distances between the proposed development and the nearest adjoining residential neighbours, being existing dwellings to the south of the site on Marine Parade and Nagel Avenue. The Section Drawings provided include detail of the additional privacy screen features and integrated landscape planters incorporated in the southern elevation of the development and include the diagrams presented in extract in **Figure 7** below.

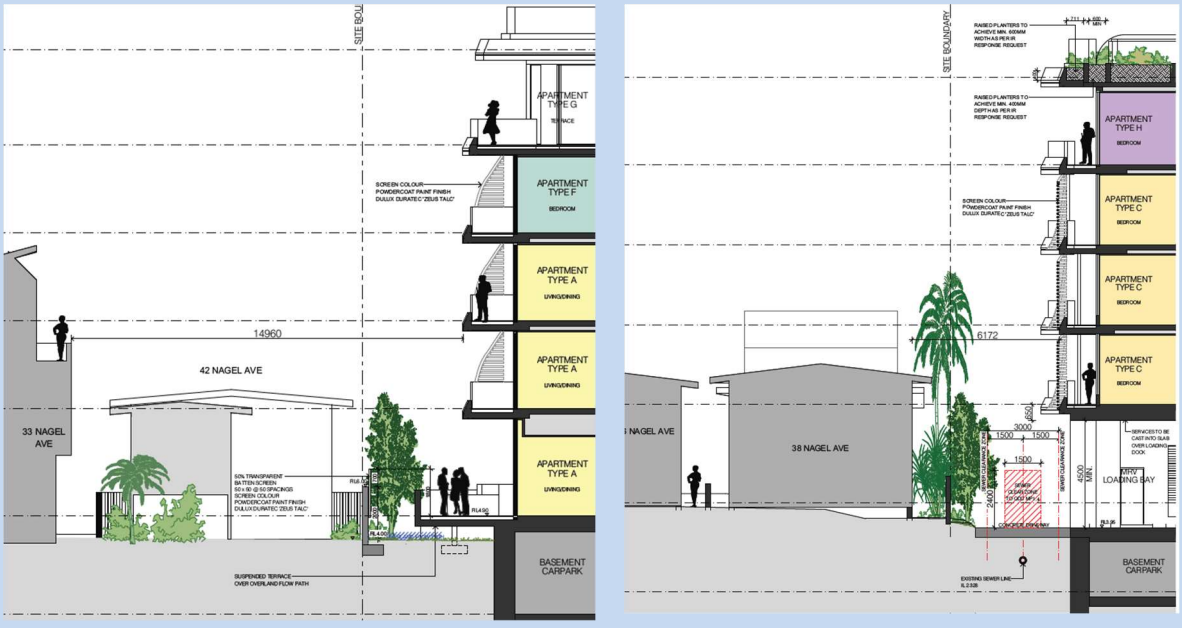


Figure 7*: Sections through the Proposed Development at the southern boundary to 42 and 38 Nagel Avenue*

- The Section drawings demonstrate the respectful approach adopted in the site layout and overall design of the development, with the Applicant seeking to optimise separation from neighbouring property boundaries and incorporating privacy screening feature elements and deep planting landscape setback areas. Importantly, the siting of built form ensures that generous setbacks from the side property boundaries are provided, considerably exceeding the minimum 'deemed to comply' setback requirements set out under AO1 of the Medium Density Residential Zone Code. This is illustrated in overall Section drawings of the development provided in the

RESPONSE TO ITEM 4:

Architectural Design Report, and in the extract drawing presented in **Figure 8** below for ease of reference. The City Plan setback parameters are identified by red dashed outline.



Figure 8: *Overall Section through Proposed Development with City Plan Setback Parameters Overlay*

- The development, therefore, takes the opportunity to optimise separation between built form on the subject site and neighbouring property boundaries, incorporates varied wall planes, feature curvilinear balconies and screening elements together with integrated raised landscape planters in the facades of the development to ensure the preservation of privacy and amenity within the subject site and neighbouring properties. Further, these design qualities of the development provide visual interest in the facades of the building whilst also preserving views and breezes between buildings, both existing neighbouring buildings and preserving future re-development potential for neighbouring properties.

It is, therefore, evident that the design philosophy of the proposed development demonstrates a thoughtful and responsible approach to the site layout and built form outcomes, in the context of the character and setting of the site, satisfying the intent of Specific Outcomes 3.3.2.1(9)(b) and (c).

4.5 Item 5: Drawing information

The proposal does not include sufficient documentation to enable officers to complete a full assessment. Please provide the following further information in the drawing package.

a) Details of all screening elements, including size type and spacing.
b) All materials, finishes and colours.
c) Provide large scale coloured elevation perspectives of the north and south ground level interface with the changes noted above.
d) Provide an overall Marine Parade streetscape elevation showing the adjoining developments, including dimensioned height, from Santa Monica Road at the south through to Chairlift Avenue at the north.

RESPONSE TO ITEM 5:

The revised Architectural Design Report prepared by BDA Architecture and Koichi Takada Architects has incorporated the additional detail requested by Item 5. For ease of reference, brief notes in this respect are provided as follows.

a) Screening element details are provided in the Colours and Finishes Drawings (refer to pages 47-49) and the Typical Screen Details drawing (page 94). The proposed screening elements comprise of Aluminium screen – white look in Dulux Duratec – Zeus Talc, with horizontal battens of 75 Ø at 150 C/C.

b) The Colours and Finishes Drawings provide detailed views and sample panels of all proposed materials and finishes.

c) Large scale coloured perspective views are provided toward the development site from the northern and southern approaches to the site via Fraser Avenue and Nagel Avenue, respectively as shown in **Figures 2, 3**

RESPONSE TO ITEM 5:

and 4 above. Additionally, full coloured elevation drawings of the northern and southern elevations are provided at pages 69 and 71, respectively.

d) An overall Marine Parade streetscape elevation, from Santa Monica Road through to Chairlift Avenue, is provided at page 76, demonstrating that the overall height of the development fits comfortably within the varied building height profile of the setting of the site and achieving the City Plan intent for a varied and interesting local skyline.

Landscape & Open Space Assessment

4.6 Item 6: Frontage landscaping

The proposal is not considered to comply with the elements Performance outcome PO4 of the General development provisions code and the requirement to demonstrate an excellent standard of appearance of the built form and street edge pursuant to Specific outcome 3.3.2.1 9 (e) & 16 of the Strategic Framework. From a landscaping perspective, there are elements of the proposed design which are problematic to meeting those benchmarks as detailed below:

a) The proposed design consists of approx. 1m high wall resulting in reduction of the required 1.5m clear width for the healthy tree planting along the frontage boundary presenting to most of the streetscape. This substantially adds to the visual dominance of the built form and is sought to be modified in order to achieve a green edge to the development. The applicant is requested to remove all the raised walls located at ground floor in between frontage deep landscaping area and public road reserve fronting Marine Parade and include in ground, at grade planting instead.

b) There is an inconsistency between the architectural drawings and Statement of Landscape Intent regarding the location of the proposed palms located within the frontage setback area. Ensure all application material is amended to present a consistent development proposal.

RESPONSE TO ITEM 6:

In response to Item 6, minor changes have been incorporated to the Landscape Intent Statement prepared by LDG Landscape Architecture, located at **Section 2, Attachment 11**. The adopted changes have removed retaining walls at the site frontage in the location of proposed tree planting areas and centrally adjacent to the communal open space area to ensure deep planting provision and softening the ground level planting zone interface with the streetscape of Marine Parade.

Raised planters have been located in other locations adjacent to private open space terraces, integrating with the individual pedestrian access points and contributing to legibility in the streetscape in supporting the definition between the public and private realm at the streetscape edge.

As identified in response to Item 2 above, the landscape design outcomes of the development achieve an open and attractive landscaped frontage, with over 81% of the 80m site frontage dedicated to landscape, both in-ground and structured within raised planters. It is clear that the frontage character of the proposed development is predominantly given over to landscaping.

The changes are reflected in the revised Perspective Views of the development, including the extract image presented in **Figure 9** below, demonstrating the high standard of design excellence achieved by the proposed development in views from the public realm of Marine Parade.

RESPONSE TO ITEM 6:



Figure 9: *Streetscape View of Proposed Development from Marine Parade*

The revised Landscape Intent Statement and Architectural Drawings provided with this Information Request Response have been reviewed to ensure consistency in the detail presented between the documents as requested by Item 6(b).

4.7 Item 7: Planter boxes

The submitted Statement of Landscape Intent includes some planter boxes with a width and depth of less than 600mm. Officers are concerned that proposed planter boxes with less than 600mm width and depth will not be able to support healthy planting in the long term; as such, the applicant is requested to amend the planter box widths and depths to achieve the following:

a) Provide all raised planter boxes with a minimum width and depth of 600mm (excluding planter box walls) for shrubs and cascading plantings.
b) Provide all raised planter boxes where trees/palms are to be planted with a minimum depth of 1200mm and a minimum surface area of 6m^2 (excluding planter box walls).

RESPONSE TO ITEM 7:

The revised Landscape Intent Statement has incorporated changes to address Item 7, with detail relating to planter depths and surface areas presented in Section Drawings and Soil Depth Analysis Drawing at pages 38-47 and 58-59, respectively.

Where planter depths or widths of less than 600mm or 1200mm are proposed, or where surface area of planters falls below 6sqm for tree planting in limited cases, LDG Landscape Architects have identified that species selection is suited to the particular soil dimensions of individual planters and that the outcomes proposed are aligned with feedback obtained through engagement with Council officers in relation to this item. This is outlined within the response to the Information Request prepared by LDG Landscape Architects, located at **Section 2, Attachment 11**.

4.8 Item 8: Western boundary

The applicant is requested to amend the Statement of Landscape Intent, as there is an inconsistency between the architectural drawings and Statement of Landscape Intent regarding the length of the retaining walls proposed along the western setback area. Ensure all application material is amended to present a consistent development proposal.

RESPONSE TO ITEM 8:

The revised Landscape Intent Statement provided at **Section 2, Attachment 11**, has been reviewed to ensure consistency with the detail of the proposed Architectural Drawings in respect of retaining walls along the western setback area.

4.9 Item 9: Planting in Lions Heads Park

The applicant has proposed a coastal screening planting mix within the Lions Head Park, adjacent to the western boundary. Officers do not support the proposed coastal planting within the Lions Head Park, located at the rear of the site. The applicant is requested to amend the Statement of Landscape Intent to achieve the following:

a) The applicant is requested to remove all proposed planting within the open space area located at the rear of the site. This area is requested to remain grassed to ensure continued access for maintenance of the hill side fence and rock wall.

RESPONSE TO ITEM 9:

The Applicant has removed proposals for planting within the open space area to the rear of the site (Lot 1 on WD6367), confirmed by review of the revised Landscape Intent Statement provided at **Section 2, Attachment 11**, as requested by Item 9.

Open Space Planning

4.10 Item 10: Pad mount transformer

The ground floor plan shows the pad mount transformer at the northern boundary, adjoining Lot 2 on WD810476. City officers from Open Space Planning do not support the proposed location of the pad mount transformer at the interface with Lions Head Park as it appears to rely on access through the park for installation and replacement. City officers request that plans are amended to locate the pad mount transformer to the street frontage or demonstrate how access will be provided to the pad mount transformer from the sites frontage.

RESPONSE TO ITEM 10:

In response to Item 10, written advice has been provided by Ampflo, located at **Section 1, Attachment 3**, explaining the installation and maintenance access requirements for the padmount transformer, which we note has also shifted slightly closer to the vehicular driveway crossover from Fraser Avenue to facilitate access for these purposes via the road corridor of Fraser Avenue and avoiding Lot 2 on WD810476.

The advice provided by Ampflo states that the location of the padmount transformer is in accordance with Energex requirements for all weather heavy vehicle access provided that the driveway is rated sufficiently to accommodate a mobile crane carrying 6t of load.

It is further confirmed that incoming cabling and conduits will be provided wholly within the subject site and connected via the public road reserve of Fraser Avenue without the need to cross Lot 2 on WD810476.

4.11 Item 11: Proposed landscaping outside of the property boundary

City officers request that the Landscape Intent Statement is amended to clearly identify that landscape outside of the property boundary, and in the public parks, is subject to a review in the Maintenance Management Agreement (MMA) at the Operational works stage.

At the western boundary, the area should remain grassed to ensure access is maintained for maintenance of the hill side fence and rock wall. City officers will review the planting proposed in the MMA to determine if planting is suitable and if there is sufficient room for future maintenance of the fence and rock wall.

The applicant needs to be aware that at any time, Council could remove the landscape for works in the open space lot and any repair would be at no cost to Council. Therefore, please amend the plan to clearly identify that this landscape proposed in this development application is subject to review in the MMA. Officers also support

an onsite meeting prior to the MMA submission and lodgement of the OPW to discuss landscape proposals with the Parks Asset Lead.

RESPONSE TO ITEM 11:

As requested by Item 11, the revised Landscape Intent Statement prepared by LDG Landscape Architecture provided at **Section 2, Attachment 11**, has removed landscape planting from outside the western boundary of the subject site (i.e. within Lot 1 on WD6367) with this area retained as grass cover. Annotations have also been incorporated to reference landscape embellishments offered by the Applicant within the adjacent public parks, noting that the proposed enhancements will be subject to review in a Maintenance Management Agreement at the operational works stage.

4.12 Item 12: Proposed footpath

The proposed plans show the potential upgrade of the existing footpath within Lot 3 on WD810476. City officers seek confirmation if the applicant seeks to upgrade this footpath as part of this development application. Any upgrades must include footpaths with a width of 2m, and at the applicant's expense. Pathways must be in accordance with the City Plan Land Development Guidelines.

The plans show a dashed alignment for an informal turfed access in Lot 2 on WD810476. The linkage begins at the entry to the subject site, and it is unclear where the pathway is proposed to end within the park. Confirmation is sought as to whether the applicant intends to upgrade this footpath as part of the development application. The pathway should link to the existing pathway and provide a safe connection to Lot 3 (to the east). The pathway should provide connection through to the park and end in a logical location.

The applicant will need to consider Crime Prevention Through Environmental Design (CPTED) principles within the public open spaces.

RESPONSE TO ITEM 12:

The revised Landscape Intent Statement provided at **Section 2, Attachment 11**, provides clarification in response to Item 12. In this respect, provision for improvement to the pedestrian path within Lot 3 on WD810476 is identified as 2m in width, as requested.

For clarification, reference to a pathway through Lot 2 on WD810476 has been removed, with open space embellishments in this location limited to enhanced landscape planting.

4.13 Item 13: General requirements

For the landscaping proposed, the applicant will be required to enter into a Maintenance management agreement with Open Space Planning for Lot 1 on WD6367, Lot 2 on WD810476 and Lot 3 on WD810476.

The developer will be responsible for the maintenance of landscaping proposed in these lots for the entire life of the development. This agreement must be entered into prior to lodgement of the Operational work (OPW) and must accompany the OPW application.

Please note, if the applicant does not agree to enter into this agreement, landscaping outside of the property boundary will not be supported and the park lots are to remain in their current form.

The following comments are made:

a) The applicant is requested to provide detail on the irrigation for the landscaped area, irrigation should be located and maintained within the private lot and not within public land.
b) The asset custodian owners' consent has not been obtained for the stormwater and reshaping works proposed in Lot 3 on WD810476. The applicant will need to obtain asset custodian owners consent prior to the submission of the operations works in the park lot.

RESPONSE TO ITEM 13:

In response to Item 13, the Applicant acknowledges that a Maintenance Management Agreement will be required to be entered into with Council's Open Space Planning in respect of proposed landscape enhancement works within Lots 2 and 3 on WD810476. We note that no works are proposed within Lot 1 on WD6367 with proposals for

RESPONSE TO ITEM 13:

landscape enhancement removed from this lot in accordance with the requests of Council through Item 11 above.

In response to the comments under Item 13, we note as follows.

a) It is anticipated that irrigation details will be addressed through the required Maintenance Management Agreement at the Operational Works stage.

b) Clarification in respect of improvement works to the grading and stormwater infrastructure within Lot 3 on WD810476 is provided within the revised Site Based Stormwater Management Plan prepared by Arcadis and located at **Section 1, Attachment 6**, where it is explained, at section 5.3, that minor re-shaping of the existing levels within Lot 3 on WD810476 is proposed to improve the free-flowing relief flow path to Marine Parade.
It is further explained that these works are aligned with the proposed landscape enhancements and improvement to the pedestrian footpath connection between Fraser Avenue and Marine Parade, which have been offered by the Applicant as a proposed public benefit following consultation with Council's Open Space and Landscape teams. The re-shaping works have the added benefit of removing the retaining wall and fence around the existing drainage pit, mitigating associated fall / trip risks, thereby improving public safety, whilst reducing the steepness of the existing batter will improve usability of this open space corridor.

Transport Assessment

4.14 Item 14: Servicing

The applicant is requested to address the following to demonstrate compliance with Performance outcome PO3 of the Transport code.

a) The service vehicle swept path does not account for parking which is occurring on Nagel Avenue. The applicant is requested to submit a revised swept path analysis / design that assumes vehicles are parked on Nagel Avenue.

b) The applicant is requested to identify a practical route between the service vehicle area and lifts/units that will allow for the unimpeded manoeuvring of goods.

RESPONSE TO ITEM 14:

A full response to Item 14 has been prepared by Bitzios Consulting and is provided at **Section 1, Attachment 4**. The response from Bitzios Consulting is briefly summarised as follows.

a) Updated swept path analysis is provided with the analysis confirming that all service vehicles traversing along Nagel Avenue achieve compliant clearances to parked vehicles based on a B99 vehicle occupying the furthest north legal parking location along Nagel Avenue.

b) The revised Architectural Drawings prepared by BDA Architecture and Koichi Takada Architects, located at **Section 2, Attachment 8**, have allowed for clear paths of travel between the loading bay and routes to the circulation cores and lifts within the development for unimpeded delivery of goods, as illustrated in mark-up to the proposed Ground Floor Plan presented in **Figure 10** below. It is expected that deliveries to the loading bay will be co-ordinated with, and managed by, building management.

RESPONSE TO ITEM 14:

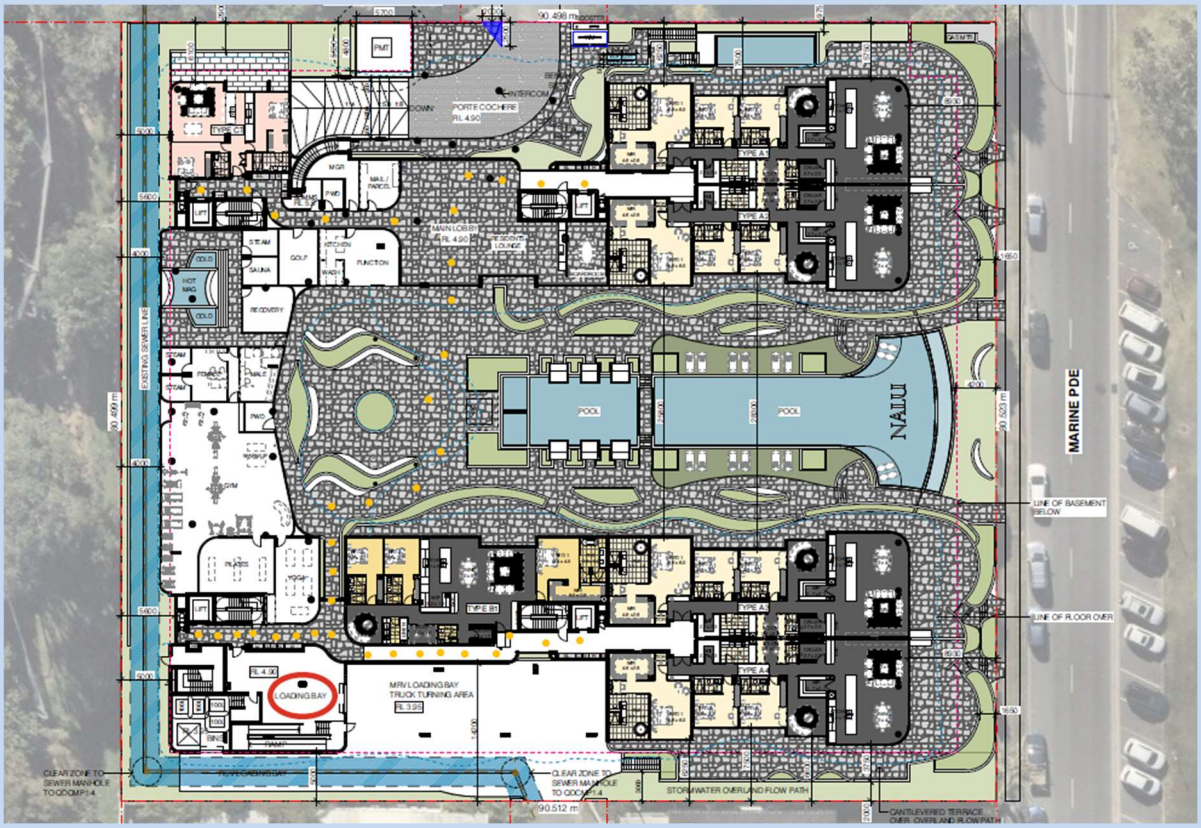


Figure 10: *Loading Bay (circled red) and internal delivery routes (marked in yellow)*

4.15 Item 15: Vehicle movement – Fraser Avenue

To demonstrate compliance with Performance outcome PO16 of the Transport code, the applicant is requested to demonstrate, with a vehicle swept path analysis, that that two-way vehicle flow is achievable on Fraser Avenue if kerbside parking is occupied.

RESPONSE TO ITEM 15:

A full response to Item 15 has been prepared by Bitzios Consulting and is provided at **Section 1, Attachment 4**, and the swept path analysis provided in response to Item 15 confirms that two-way vehicle flow along Fraser Avenue is achieved with compliant clearances to B99 vehicle types occupying kerbside parking within the western road verge.

We note that yellow line marking extends along the entirety of the length of the eastern verge of Fraser Avenue, as such no kerbside parking is accommodated on this side of the road.

4.16 Item 16: Ingress and egress

To demonstrate compliance with Performance outcome PO14 of the Transport code, the applicant is requested to demonstrate, with a vehicle swept path analysis, that a visitor (B99 design vehicle) can turnaround to exit the site in a forward gear (prior to the basement ramp) if access via the intercom is not achieved.

RESPONSE TO ITEM 16:

In response to Item 16, review of the porte-cochere design has been undertaken with Bitzios Consulting, with minor changes incorporated in the revised Architectural Drawings provided at **Section 2, Attachment 8**. The revised design is informed by swept path analysis provided by Bitzios Consulting to ensure the ability of a visitor (B99 design vehicle) can manoeuvre to exit the site in a forward gear if basement access via intercom is not achieved. Please refer to the response provided by Bitzios Consulting for the full response to Item 16.

4.17 Item 17: Design of off-street parking facilities

To demonstrate compliance with Performance outcome PO20 of the Transport code, the applicant is requested to:

a) Fully dimension the off-street parking facilities in accordance with AS2890.1:2004. Typical dimensions can be used where relevant.
b) Show ramp widths and grades in accordance with AS2890.1:2004, and demonstrate two-way circulation for the full length of the basement ramp (B99 design vehicle passing a B85 design vehicle)
c) Dimension the pedestrian sight triangles in accordance with Figure 3.3 of AS2890.1:2004.
d) Provide bollards outside the lift landing areas in accordance with Section 2.4.5.5 of AS2890.1:2004.
e) Individually number the car parking spaces on the drawings for ease of reference.

RESPONSE TO ITEM 17:

A full response to Item 17 has been prepared by Bitzios Consulting and is provided at **Section 1, Attachment 4**. In summary, the response from Bitzios Consulting advises as follows.

a) The revised Architectural Drawings prepared by BDA Architecture and Koichi Takada Architects, located at **Section 2, Attachment 8**. have included dimensions of all car parking spaces, as requested.
b) Updated swept path analysis based on the revised Architectural Drawings has been undertaken and confirms two-way passing on the basement ramp with compliant clearances is achieved. Ramp widths and gradients are identified on the revised Architectural Drawings as requested.
c) Dimensioned pedestrian sight triangles are identified at the driveway crossovers in accordance with AS2890.1 (2004) on the revised Architectural Drawings as requested.
d) The requested bollards have been incorporated in the revised Architectural Drawings outside lift landing areas.
e) The revised Architectural Drawings have included individual numbering of all residential and visitor car parking spaces as requested.

4.18 Item 18: Bicycle parking

To demonstrate compliance with Performance outcome PO7 of the Transport code, the applicant is requested to dimension the bicycle parking areas on the drawings in accordance with AS2890.3.

RESPONSE TO ITEM 18:

In response to Item 18 the revised Architectural Drawings provided at **Section 2, Attachment 8**, have included dimensions to all proposed bicycle parking spaces, as requested.

Refer also to the Response to Transport Assessment items prepared by Bitzios Consulting, located at **Section 1, Attachment 4**, in this regard.

Subdivision Assessment

4.19 Item 19: Pad mount transformer location

Officers note that the architectural drawings and engineering drawings show a proposed Pad Mount Transformer located at the northern boundary of the site, adjacent to Lot 2WD810476, which is Public Open Space, not Public Road Reserve. The Applicant is requested to provide written confirmation from the relevant electrical authority (eg. Energex) that this proposed location is supported.

RESPONSE TO ITEM 19:

In response to Item 19 we note that Energex will typically provide advice such as that requested at the stage where construction works are moving forward to deliver the development. Accordingly, the Applicant has consulted with electrical consultants, Ampflo, who have provided advice in the correspondence located at **Section 1, Attachment 3**, confirming that the location of the proposed padmount transformer is in accordance with Energex requirements for all weather heavy vehicle access provided that the driveway is rated sufficiently to accommodate a 25t mobile

RESPONSE TO ITEM 19:

crane carrying a 6t load. It is anticipated that these structural requirements will be satisfied at construction stage and a relevant condition is anticipated in this respect.

Environmental Health Assessment

4.20 Item 20: Acoustic report

Submission of the acoustic report prepared by 'Acoustic Works', dated 24 April 2025 (reference 2025024 R01D 122 Marine Parade, Miami ENV.docx) is acknowledged. Following review of the report, the applicant is requested to address the following further acoustic information via the submission of an amended report:

a) Include assessment of the potential noise impact of the loading dock and back of house ground floor servicing area to the existing residential premises located immediately to the south of the development against the Environmental Protection (Noise) Policy background creep and acoustic quality objectives criteria, as well as the World Health Organisation sleep disturbance criteria.
b) Provide updated noise calculation tables.
c) Provide updated control measures to ensure compliance with the applicable legislation and standards.

RESPONSE TO ITEM 20:

Response to Item 20 has been provided by Acoustic Works, together with an updated Acoustic Report, both of which are provided at **Section 1, Attachment 5**. Initially, we would also note that the position of the servicing area, accessed via Nagel Avenue, is influenced by the requirement to accommodate the side lift waste collection vehicle operated by the Council's contractor to enter the site and perform a turnaround manoeuvre when servicing properties along Nagel Avenue, so that it may exit Nagel Avenue in a forward gear.

The response by Acoustic Works to the matters raised by Item 20 is briefly summarised as follows.

- Assessment of the loading bay (MRV) activities has been included within the updated Acoustic Report, with discussion at Sections 7.2 and 7.4 confirming that the loading bay activities achieve compliance with background creep criteria for all time periods with the incorporation of acoustic treatments recommended at Section 8. The recommendations relate to acoustic treatment to be applied to the surface area of the ceiling in the MRV loading bay.
- With regard to waste management activities, it is noted that waste collection will continue to occur within the south-western corner of the subject site in a similar arrangement to that occurring at present. In this respect, acoustic monitoring has been undertaken of existing waste collection activities by Council's contractors at the subject site, involving collection of 3000L metal bins by front lift truck. In contrast, the proposed development will incorporate servicing by rear lift vehicle for collection of 1,100L plastic bins and Acoustic Works have undertaken monitoring of a service collection conducted by Veolia using the same type of bins and collection vehicle proposed for servicing the development at the subject site.
- Table 4 below assists to clarify the comparative operational outcomes of the proposed waste management strategy, versus the existing waste management servicing carried out on the subject site.

Table 4: Comparative Analysis of Waste Servicing Operations | Existing and Proposed

Items	Existing	Proposed	Outcome
Frequency	3 times per week general 2 times per week recycling	1-2 times per week general 1-2 times per week recycling	**IMPROVED ☑**
Time of service	5:30 am onwards	9:30am - 2:30 pm (private)	**IMPROVED ☑**
Acoustic	89 dBA to 109 dBA	84dBA to 9dBA **5 to 20 dBA less**	**IMPROVED ☑**

RESPONSE TO ITEM 20:

Duration of service	Approx 2 mins	Approx 2 - 3 mins	**CONSISTENT ☑**
Type of Bin	Metal bin	Plastic bin	**IMPROVED ☑**

- The results of these comparative monitoring events identifies that waste and recycle collection servicing activities at the subject site, as set out within the proposed Waste Management Plan prepared by MRA Environmental provided at **Section 1, Attachment 7**, will generate noise levels 5dBA lower for the Leq (1min) and approximately 20dBA lower for the Lmax noise level when compared to the waste and recycle servicing activities presently being carried out for servicing the existing premises on the subject site. Accordingly, the proposed waste and recycle servicing associated with the proposed development will deliver an improvement in terms of noise levels generated by these activities on the site.
- Further to this, we note that the Applicant has received advice from Veolia waste contractors advising that waste and recycle servicing of the development can be conducted using a rear lift truck between the hours of 9.30am and 2.30pm weekly. A copy of this advice is provided within the appendices to the Waste Management Plan by MRA Environmental. Accordingly, the Applicant proposes that the collection activities within the development be carried out during these hours to further mitigate potential for disturbance to sensitive residential neighbours.
- We also note that the updated Acoustic Report has incorporated the noise calculation tables and updated recommendations for mitigation management within the development, as requested by Item 20.

Hydraulics Assessment

4.21 Item 21: Overland flow path

Council's available information indicates that Fraser Avenue and Nagel Avenue slope towards the subject site, which appears to be at a low point and sits lower than Marine Parade. The Stormwater Management Details Plan includes a proposal to fill and regrade Lot 3 Marine Parade (Lions Head Park, Lot 3 WD810476), which currently features a trapped low point adjacent to Fraser Avenue. Additionally, the creation of an overland flow path on the southern side of the development may also affect the existing drainage pattern. As such, the applicant is requested to submit a hydraulic impact assessment that confirms:

a) The proposal does not adversely impact adjacent properties; and
b) The proposal does not result in afflux for all storm events up to 1% AEP.

RESPONSE TO ITEM 21:

In response to Item 21, an updated Site Based Stormwater Management Plan ('SBSMP') has been prepared by Arcadis and is provided at **Section 1, Attachment 6**, with the updates incorporated to provide clarification on the matters sought by Item 21. Notably, no changes are proposed to the stormwater management regime incorporated with the original lodgement of this Development Application. It is also noted that the stormwater pit within Lot 3 on WD810476 is an existing lawful point of discharge for the subject site as identified in section 5.1 of the SBSMP.

In providing the clarification in response to Item 21, explanation of the works within Lot 3 on WD810476 is provided as follows.

"Maintaining overland flow capacity to the existing drainage pit and through to Marine Parade. Minor reshaping of Council's open space (Lot 3 on WD810476) is proposed to improve the free-flowing relief flow path to Marine Parade.

- *The proposed works are in line with the proposed landscape enhancement and improvements to the existing pedestrian footpath connection between Fraser Avenue and Marine Parade, which have been offered by the Applicant as a public benefit following consultation with Council's Open Space and Landscape teams.*
- *The reshaping works have the added benefit of removing the retaining wall and fence around the existing drainage pit, mitigating associated fall / trip risks, thereby improving public safety. Additionally. the steepness of the existing batter is reduced, improving usability.*

Accordingly existing sensitive drainage characteristics are preserved and capacity maintained or increased which

RESPONSE TO ITEM 21:

will not give rise to unacceptable or adverse impacts to private property."

Water and Waste Assessment

4.22 Item 22: Sewer maintenance clearances

Performance outcome PO12 of the General development provisions code requires that development is undertaken in accordance with the Performance Criteria specified in the Queensland Development Code MP1.4 – Building over or near relevant infrastructure.

Council acknowledges the information provided by the applicant however the report has not demonstrated unobstructed vertical clearance over the sewer maintenance structure closest to Nagel Avenue. The applicant is requested to:

a) Provide updated drawings demonstrating unobstructed vertical clearance over the sewer maintenance structure(s).

RESPONSE TO ITEM 22:

The revised Architectural Design Report prepared by BDA Architecture and Koichi Takada Architects, located at **Section 2, Attachment 8**, has incorporated additional Section Drawings identifying the location of existing underground sewer infrastructure within the subject site and clearly identifying the required unobstructed vertical clearance areas above.

This detail is illustrated on the following drawings:

- Detail Section B at page 78;
- Detail Section W-W at page 81; and
- Detail Section X-X at page 82.

An extract of Detail Section W-W is provided in **Figure 11** below for ease of reference with the vertical clearance over the subject sewer infrastructure identified by red dashed volume.

RESPONSE TO ITEM 22:

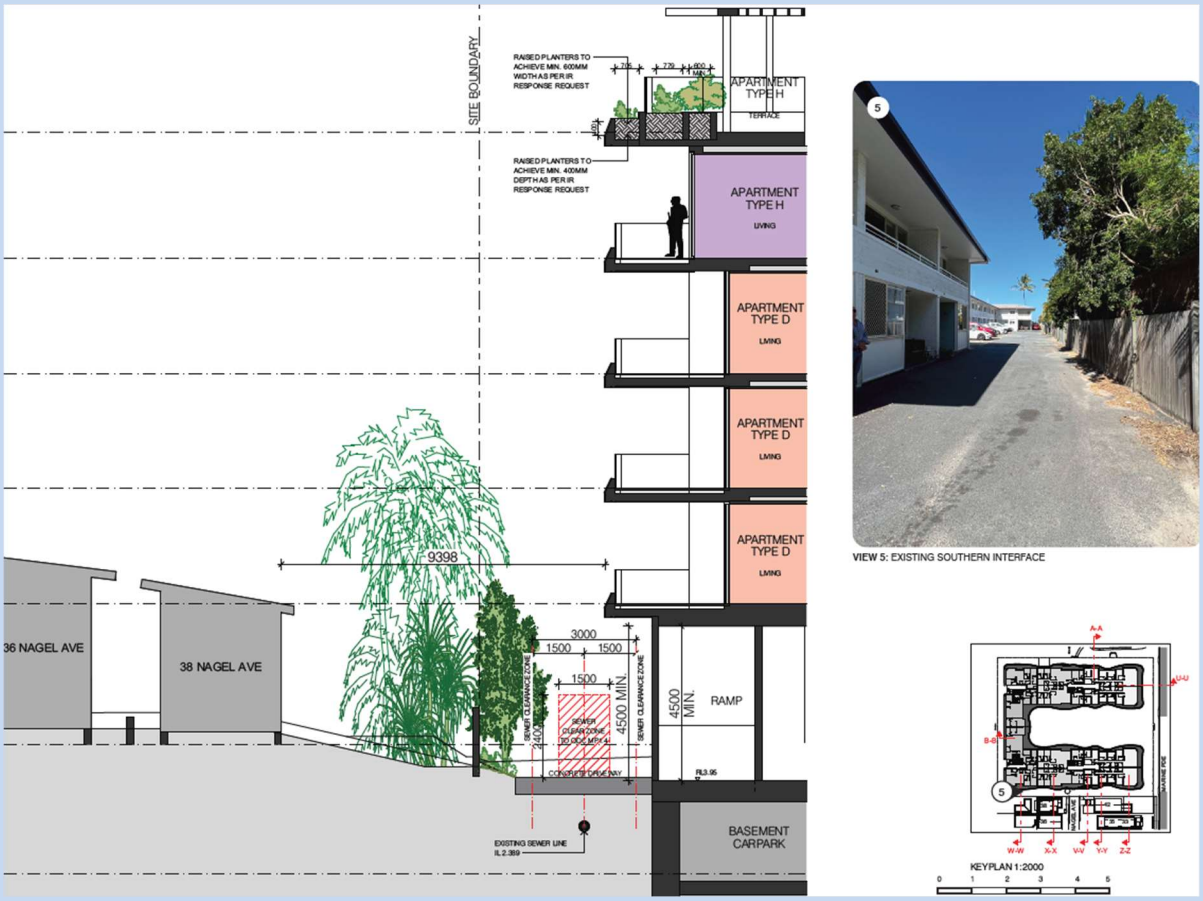


Figure 11: *Extract of Detail Section Drawing W-W – Sewer Infrastructure Vertical Clearance*

4.23 Item 23: Waste collection vehicle swept paths

Performance outcomes PO3 and PO14 of the Transport code requires that the development accommodates the required design service vehicle and for all vehicles enter and exit in a forward gear.

Council acknowledges the information provided by the applicant however the report has not Demonstrated Council's side-lift waste collection vehicle will be able to perform a turnaround manoeuvrer within the subject site. The applicant is requested to:

a) Provide a swept path analysis for Council's side-lift waste collection vehicle to turn around within the subject site – entering and exiting in forward gear from Nagel Avenue.

RESPONSE TO ITEM 23:

A full response to Item 23 has been prepared by Bitzios Consulting and is provided at **Section 1, Attachment 4**. The response provided by Bitzios incorporates additional swept path diagrams as requested by Item 23, including swept paths for the Council's side lift waste collection vehicle to enter the subject site and perform a turnaround manoeuvre when servicing properties along Nagel Avenue to the south, and exiting back onto Nagel Avenue in a forward gear.

The assessment by Bitzios Consulting has also confirmed that the clearances required in accordance with AS2890.2 (2018) are achieved to the kerbside parking lane of Nagel Avenue.

We also note that the swept path analysis is included within the updated Waste Management Plan prepared by MRA Environmental, provided at **Section 1, Attachment 7**, where it is also confirmed that the turnaround location within the subject site is designed to ensure vertical clearance requirements are achieved for movement of the side lift waste collection vehicle operated by Council's contractor.

5. Conclusion

With reference to Part 3, section 13.2(a) of the Development Assessment Rules this correspondence and accompanying documentation provides a full response to the information requested within the Information Request issued by the Council in relation to this Development Application. Accordingly, we respectfully request that Council proceed with the assessment of the application.

We note that public notification of the Change Application will commence following submission of this Information Request Response and separate notice will be given to Council at the commencement of the public notification pursuant to the provisions of the DAR.

Should you have any questions or wish to discuss any of the above matters further, please do not hesitate to contact our Leanne Croft on 07 5570 4994 or by email to lcroft@urbanps.com.au

Yours Faithfully



Michael Falk
Director & Town Planner
Urban Planning Services Pty Ltd
Office Telephone: (07) 5570 4994
Email: mfalk@urbanps.com.au

ATTACHMENT 1

Notice about Change to Development Application, duly completed



Notice about change to development application

Section 52(1) of the Planning Act 2016

MCU/2025/155	[*application reference number*]
MONACO PROPERTY GROUP PTY LTD	[*applicant's name*]
C/- URBAN PLANNING SERVICES PTY LTD PO BOX 2091 SURFERS PARADISE QLD 4217 Email: admin@urbanps.com.au	[*contact address/email address*]
07 5570 4994	[*contact number*]
19 JUNE 2025	[*notice date*]
COUNCIL OF THE CITY OF GOLD COAST	[*assessment manager's name*]
PO BOX 5042, GOLD COAST MC, QLD, 9726	[*assessment manager's address*]

RE: DEVELOPMENT APPLICATION FOR: DEVELOPMENT PERMIT FOR MATERIAL CHANGE OF USE (IMPACT ASSESSMENT) FOR MULTIPLE DWELLING (46 UNITS)

[*details of proposed development*]

122 MARINE PARADE, MIAMI, QLD, 4220 [*street address*]

LOT 122 ON SP284713 [*real property description*]

Dear JUSMEET ATWAL [*sir/madam/name*]

In accordance with section 52(1) of the *Planning Act 2016*, I would like to advise that I am changing the development application identified above. The change is:

MINOR CHANGES TO INTERNAL LAYOUT AT GROUND FLOOR LEVEL TO DELETE ONE APARTMENT AND PROVIDE IMPROVED LOBBY, RESIDENTS LOUNGE AND COMMUNAL FACILITIES

MINOR CHANGES TO EASTERN BALCONY PROFILES, PRESERVING CURVILINEAR FORM WHILST REDUCING ANGLE OF CURVES IN CORNER EDGES AT LEVELS 2 TO 4 AND SLIGHT ADJUSTMENT TO EASTERN BALCONY EDGE AT LEVEL 5 AND PRIVATE ROOF TERRACE EDGE

MINOR CHANGES TO LAYOUT OF SWIMMING POOLS, LANDSCAPE AND LIFT AND STAIR ACCESS AT THE PRIVATE ROOF TERRACE LEVEL

RESULTANT CHANGE TO DESCRIPTION OF DEVELOPMENT AS FOLLOWS:

DEVELOPMENT APPLICATION FOR A DEVELOPMENT PERMIT FOR MATERIAL CHANGE OF USE (IMPACT ASSESSMENT) FOR MULTIPLE DWELLINGS (45 UNITS)

[*Provide details about the change being made to the development application.*]

I believe this change should be considered as: [*tick applicable box*]

☒ a minor change in accordance with the Planning Act
☐ a change in response to an information request
☐ a change in response to a further advice notice
☐ a change in response to a properly made submission
☐ another change as described below

For the following reasons:

THE PROPOSED MINOR CHANGES HAVE BEEN CONSIDERED AGAINST THE DEFINITION OF MINOR CHANGE UNDER SCHEDULE 2 OF THE PLANNING ACT 2016 AND AGAINST THE CONSIDERATIONS RELATING TO SUBSTANTIALLY DIFFERENT DEVELOPMENT UNDER SCHEDULE 1 OF THE DEVELOPMENT ASSESSMENT RULES. THIS ASSESSMENT IS PROVIDED WITHIN THE ACCOMPANYING REPORT BY URBAN PLANNING SERVICES PTY LTD, CONFIRMS THAT THE SCOPE OF PROPOSED CHANGES TO THE DEVELOPMENT APPLICATION ARE MINOR AND SATISFY THE RELEVANT TESTS FOR DETERMINING A MINOR CHANGE STATUS.

[*Include reasons why you believe the change to be of the type identified above.*]

Please find attached to this notice further information and documentation about the change, including:

Town Planning Report [Information Request Response and Minor Change to Development Application] prepared by Urban Planning Services Pty Ltd

Electrical Engineering Advice provided by Ampflo

Response to Transport Assessment items prepared by Bitzios Consulting

Response to Information Request and updated Acoustic Report prepared by Acoustic Works

Revised Site Based Stormwater Management Plan prepared by Arcadis

Revised Waste Management Plan prepared by MRA Environmental

Revised Architectural Design Report prepared by BDA Architecture and Koichi Takada Architects

Photomontage Views prepared by Mark Elliot Illustrations

Revised Landscape Intent Statement prepared by LDG Landscape Architecture

[*List attachments provided with this notice.*]

If you wish to discuss this matter further, please contact me on the above telephone number.

Yours sincerely

MONACO PROPERTY GROUP PTY LTD

C/- URBAN PLANNING SERVICES



Michael Falk – Director | Urban Planning Services Pty Ltd - 19 June 2025

ATTACHMENT 2

CCGC Information Request dated 28 May 2025



CITY OF GOLDCOAST.

Date: 28 May 2025
Contact: Jusmeet Atwal
Location: City Development
Your reference: 3675
Our reference: MCU/2025/155

Monaco Property Group Pty Ltd
C/- Urban Planning Services Pty Ltd
PO BOX 2091
SURFERS PARADISE QLD 4217

Dear Sir/Madam

Information Request

I refer to the development application lodged by:
Monaco Property Group Pty Ltd

in relation to development of land/premises described as:
Lot 122 SP284713 – 122 Marine Parade, MIAMI QLD 4220

Council of the City of Gold Coast (Council) officers have reviewed the development application and supporting information and determined that further information is required to properly assess the application.

Pursuant to sections 13.2 and 13.3 of the Development Assessment Rules under the *Planning Act 2016*, the applicant may respond to this information request by giving to the assessing authority:

1 all of the information requested below; or
2 part of the information requested below; or
3 part of the information requested below together with a notice advising the assessing authority that it must proceed with the assessment of the application; or
4 a notice stating that none of the information requested below will be provided; or
5 a notice stating that none of the information requested below will be provided together with a notice advising the assessing authority that it must proceed with the assessment of the application.

You are advised that pursuant to section 13.1 of the Development Assessment Rules, the period for the applicant to respond to this information request is three (3) months of the date of this letter.

If no response is provided or only part of the information is provided to this request within the three (3) month period, Council will continue its assessment of the application based on the information submitted.

It would be in the applicant's best interest to address all of the information requested.
Please note that the provision of sufficient information to properly assess an application is a requirement for a favourable decision.

Council's Project Team

The assessment of this application will be undertaken by the following Council project team.

Section	Officer	Contact Details
Assessment Manager	Jusmeet Atwal, Senior Planner	**P:** 07 5583 8365 **E:** jatwal@goldcoast.qld.gov.au
Planning Coordinator	Nathan Griffey, A/Coordinator (Central)	**P:** 07 5582 8742 **E:** ngriffey@goldcoast.qld.gov.au
Architecture Assessment	Meagan York, Principal Architect	**P:** 07 5581 7799 **E:** myork@goldcoast.qld.gov.au
Landscape Assessment	Uma Giri, Landscape Planner	**P:** 07 5667 3949 **E:** ugiri@goldcoast.qld.gov.au
Environmental Health	Narelle Bellman, Environmental Health Officer	**P:** 07 5581 6932 **E:** nbellman@goldcoast.qld.gov.au
Hydraulics Assessment	Rohit Khanduja, Senior Stormwater and Floor Engineer	**P:** 07 5582 8917 **E:** rkhanduja@goldcoast.qld.gov.au
Transport Assessment	Elisha Augustine, Senior Transport Engineer	**P:** 07 5582 8806 **E:** eaugustine@goldcoast.qld.gov.au
Subdivision Assessment	David Crosswell, Senior Civil Engineer	**P:** 07 5582 9351 **E:** dcrosswell@goldcoast.qld.gov.au
Water and Waste	Chris Burges, Civil Engineer	**P:** 07 2114 3400 **E:** cburgess@goldcoast.qld.gov.au

INFORMATION REQUEST

Planning Assessment

1. Building bulk

Officers have concerns that the length of the development as viewed from the north and south elevations would appear imposing. While officers note and acknowledge that this is partly due to the dimensions of the site, the building height exceeding the mapped height is considered to exacerbate the dominance of the built form. To demonstrate compliance with the Strategic outcomes of the Urban neighbourhood's element, the applicant is requested to address the following:

a) Provide additional screening elements / building breaks / recessing to break up the built form. Changes could be coupled with integrated landscaping embellishments to further soften and add visual interest.

2. Private footpath connections

The ground floor plan shows several private footpath connections to Marine Parade. The applicant is requested to reduce the number of these connections by combining them where possible. This will reduce the maintenance burden and increase opportunities for deep landscaping at the street edge.

Architecture Assessment

3. Excellent standard of appearance

The development proposes additional height above the mapped height therefore must achieve an excellent standard of appearance. Officers have concerns with the stark appearance of the ground plane pedestrian and vehicle entry from Nagel Avenue and Fraser Avenue. To ensure the proposal achieves the above outcome SO9(e) officers recommend the following:

a) Provide additional opportunity for seating and pedestrian connection with the lobby to the north.

b) Confirm treatment of all ground level under croft soffits. These should include high quality textured materials and finishes with fine grain human scale detail and conceal all visible services.

c) Officers recommend textured soffits to the upper level also for high quality visual interest.

d) Most landscaping appears to be located outside the north and south boundary. Provide further opportunity for canopy trees and vegetation within the site.

e) Confirm finishes to the loading bay and planter services walls which face the south boundary and adjoining residential developments. Officers suggest that higher quality façade treatment may be required.

4. Visual impact assessment

Officers have concerns with the proposed bulk, height and scale, where the applicant has not adequately demonstrated that the uplift proposal reinforces local identity SO9(b) and sense of place and provides well managed interfaces SO9(c).

Officers request that accurate perspective views of the proposal in context with the surrounding local area be provided from 4 locations to the north and 4 to the south, see below. This will assist officers to determine the appearance of the proposal, its bulk, scale and height and how it will be viewed from the Oceanway, Lions Head Park and local streets.

Note: the perspectives should include the amendments as outlined in this information request.



5. Drawing information

The proposal does not include sufficient documentation to enable officers to complete a full assessment. Please provide the following further information in the drawing package.

a) Details of all screening elements, including size type and spacing.

b) All materials, finishes and colours.

c) Provide large scale coloured elevation perspectives of the north and south ground level interface with the changes noted above.

d) Provide an overall Marine Parade streetscape elevation showing the adjoining developments, including dimensioned height, from Santa Monica Road at the south through to Chairlift Avenue at the north.

Landscape & Open Space Assessment

6. Frontage landscaping

The proposal is not considered to comply with the elements Performance outcome PO4 of the General development provisions code and the requirement to demonstrate an excellent standard of appearance of the built form and street edge pursuant to Specific outcome 3.3.2.1 9 (e) & 16 of the Strategic Framework. From a landscaping perspective, there are elements of the proposed design which are problematic to meeting those benchmarks as detailed below:

a) The proposed design consists of approx. 1m high wall resulting in reduction of the required 1.5m clear width for the healthy tree planting along the frontage boundary presenting to most of the streetscape. This substantially adds to the visual dominance of

the built form and is sought to be modified in order to achieve a green edge to the development. The applicant is requested to remove all the raised walls located at ground floor in between frontage deep landscaping area and public road reserve fronting Marine Parade and include in ground, at grade planting instead.

b) There is an inconsistency between the architectural drawings and Statement of Landscape Intent regarding the location of the proposed palms located within the frontage setback area. Ensure all application material is amended to present a consistent development proposal.

7. Planter boxes

The submitted Statement of Landscape Intent includes some planter boxes with a width and depth of less than 600mm. Officers are concerned that proposed planter boxes with less than 600mm width and depth will not be able to support healthy planting in the long term; as such, the applicant is requested to amend the planter box widths and depths to achieve the following:

a) Provide all raised planter boxes with a minimum width and depth of 600mm (excluding planter box walls) for shrubs and cascading plantings.

b) Provide all raised planter boxes where trees/palms are to be planted with a minimum depth of 1200mm and a minimum surface area of 6m^2 (excluding planter box walls).

8. Western boundary

The applicant is requested to amend the Statement of Landscape Intent, as there is an inconsistency between the architectural drawings and Statement of Landscape Intent regarding the length of the retaining walls proposed along the western setback area. Ensure all application material is amended to present a consistent development proposal.

9. Planting in Lions Heads Park

The applicant has proposed a coastal screening planting mix within the Lions Head Park, adjacent to the western boundary. Officers do not support the proposed coastal planting within the Lions Head Park, located at the rear of the site. The applicant is requested to amend the Statement of Landscape Intent to achieve the following:

a) The applicant is requested to remove all proposed planting within the open space area located at the rear of the site. This area is requested to remain grassed to ensure continued access for maintenance of the hill side fence and rock wall.

Open Space Planning

10. Pad mount transformer

The ground floor plan shows the pad mount transformer at the northern boundary, adjoining Lot 2 on WD810476. City officers from Open Space Planning do not support the proposed location of the pad mount transformer at the interface with Lions Head Park as it appears to rely on access through the park for installation and replacement. City officers request that plans are amended to locate the pad mount transformer to the street frontage or demonstrate how access will be provided to the pad mount transformer from the sites frontage.

11. Proposed landscaping outside of the property boundary

City officers request that the Landscape Intent Statement is amended to clearly identify that landscape outside of the property boundary, and in the public parks, is subject to a review in the Maintenance Management Agreement (MMA) at the Operational works stage.

At the western boundary, the area should remain grassed to ensure access is maintained for maintenance of the hill side fence and rock wall. City officers will review the planting proposed in the MMA to determine if planting is suitable and if there is sufficient room for future maintenance of the fence and rock wall.

The applicant needs to be aware that at any time, Council could remove the landscape for works in the open space lot and any repair would be at no cost to Council. Therefore, please amend the plan to clearly identify that this landscape proposed in this development application is subject to review in the MMA. Officers also support an onsite meeting prior to the MMA submission and lodgement of the OPW to discuss landscape proposals with the Parks Asset Lead.

12. Proposed footpath

The proposed plans show the potential upgrade of the existing footpath within Lot 3 on WD810476. City officers seek confirmation if the applicant seeks to upgrade this footpath as part of this development application. Any upgrades must include footpaths with a width of 2m, and at the applicant's expense. Pathways must be in accordance with the City Plan Land Development Guidelines.

The plans show a dashed alignment for an informal turfed access in Lot 2 on WD810476. The linkage begins at the entry to the subject site, and it is unclear where the pathway is proposed to end within the park. Confirmation is sought as to whether the applicant intends to upgrade this footpath as part of the development application. The pathway should link to the existing pathway and provide a safe connection to Lot 3 (to the east). The pathway should provide connection through to the park and end in a logical location.

The applicant will need to consider Crime Prevention Through Environmental Design (CPTED) principles within the public open spaces.

13. General requirements

For the landscaping proposed, the applicant will be required to enter into a Maintenance management agreement with Open Space Planning for Lot 1 on WD6367, Lot 2 on WD810476 and Lot 3 on WD810476.

The developer will be responsible for the maintenance of landscaping proposed in these lots for the entire life of the development. This agreement must be entered into prior to lodgement of the Operational work (OPW) and must accompany the OPW application.

Please note, if the applicant does not agree to enter into this agreement, landscaping outside of the property boundary will not be supported and the park lots are to remain in their current form.

The following comments are made:

a) The applicant is requested to provide detail on the irrigation for the landscaped area, irrigation should be located and maintained within the private lot and not within public land.

b) The asset custodian owners' consent has not been obtained for the stormwater and reshaping works proposed in Lot 3 on WD810476. The applicant will need to obtain asset custodian owners consent prior to the submission of the operations works in the park lot.

Transport Assessment

14. Servicing

The applicant is requested to address the following to demonstrate compliance with Performance outcome PO3 of the Transport code.

a) The service vehicle swept path does not account for parking which is occurring on Nagel Avenue. The applicant is requested to submit a revised swept path analysis / design that assumes vehicles are parked on Nagel Avenue.

b) The applicant is requested to identify a practical route between the service vehicle area and lifts/units that will allow for the unimpeded manoeuvring of goods.

15. Vehicle movement – Fraser Avenue

To demonstrate compliance with Performance outcome PO16 of the Transport code, the applicant is requested to demonstrate, with a vehicle swept path analysis, that that two-way vehicle flow is achievable on Fraser Avenue if kerbside parking is occupied.

16. Ingress and egress

To demonstrate compliance with Performance outcome PO14 of the Transport code, the applicant is requested to demonstrate, with a vehicle swept path analysis, that a visitor (B99 design vehicle) can turnaround to exit the site in a forward gear (prior to the basement ramp) if access via the intercom is not achieved.

17. Design of off-street parking facilities

To demonstrate compliance with Performance outcome PO20 of the Transport code, the applicant is requested to:

a) Fully dimension the off-street parking facilities in accordance with AS2890.1:2004. Typical dimensions can be used where relevant.

b) Show ramp widths and grades in accordance with AS2890.1:2004, and demonstrate two-way circulation for the full length of the basement ramp (B99 design vehicle passing a B85 design vehicle)

c) Dimension the pedestrian sight triangles in accordance with Figure 3.3 of AS2890.1:2004.

d) Provide bollards outside the lift landing areas in accordance with Section 2.4.5.5 of AS2890.1:2004.

e) Individually number the car parking spaces on the drawings for ease of reference.

18. Bicycle parking

To demonstrate compliance with Performance outcome PO7 of the Transport code, the applicant is requested to dimension the bicycle parking areas on the drawings in accordance with AS2890.3.

Subdivision Assessment

19. Pad mount transformer location

Officers note that the architectural drawings and engineering drawings show a proposed Pad Mount Transformer located at the northern boundary of the site, adjacent to Lot 2WD810476, which is Public Open Space, not Public Road Reserve. The Applicant is requested to provide written confirmation from the relevant electrical authority (eg. Energex) that this proposed location is supported.

Environmental Health Assessment

20. Acoustic report

Submission of the acoustic report prepared by 'Acoustic Works', dated 24 April 2025 (reference 2025024 R01D 122 Marine Parade, Miami ENV.docx) is acknowledged. Following review of the report, the applicant is requested to address the following further acoustic information via the submission of an amended report:

a) Include assessment of the potential noise impact of the loading dock and back of house ground floor servicing area to the existing residential premises located immediately to the south of the development against the *Environmental Protection (Noise) Policy* background creep and acoustic quality objectives criteria, as well as the World Health Organisation sleep disturbance criteria.

b) Provide updated noise calculation tables.

c) Provide updated control measures to ensure compliance with the applicable legislation and standards.

Hydraulics Assessment

21. Overland flow path

Council's available information indicates that Fraser Avenue and Nagel Avenue slope towards the subject site, which appears to be at a low point and sits lower than Marine Parade. The Stormwater Management Details Plan includes a proposal to fill and regrade Lot 3 Marine Parade (Lions Head Park, Lot 3 WD810476), which currently features a trapped low point adjacent to Fraser Avenue. Additionally, the creation of an overland flow path on the southern side of the development may also affect the existing drainage pattern. As such, the applicant is requested to submit a hydraulic impact assessment that confirms:

a) The proposal does not adversely impact adjacent properties; and

b) The proposal does not result in afflux for all storm events up to 1% AEP.

Water and Waste Assessment

22. Sewer maintenance clearances

Performance outcome PO12 of the General development provisions code requires that development is undertaken in accordance with the Performance Criteria specified in the Queensland Development Code MP1.4 – Building over or near relevant infrastructure.

Council acknowledges the information provided by the applicant however the report has not demonstrated unobstructed vertical clearance over the sewer maintenance structure closest to Nagel Avenue. The applicant is requested to:

a) Provide updated drawings demonstrating unobstructed vertical clearance over the sewer maintenance structure(s).

23. Waste collection vehicle swept paths

Performance outcomes PO3 and PO14 of the Transport code requires that the development accommodates the required design service vehicle and for all vehicles enter and exit in a forward gear.

Council acknowledges the information provided by the applicant however the report has not Demonstrated Council's side-lift waste collection vehicle will be able to perform a turnaround manoeuvrer within the subject site. The applicant is requested to:

a) Provide a swept path analysis for Council's side-lift waste collection vehicle to turn around within the subject site – entering and exiting in forward gear from Nagel Avenue.

Advice Note

The applicant is advised that should Council give further advice about the application (in accordance with s35 of the DA Rules) to resolve outstanding items not adequately addressed within the information request response, the applicant will be requested to complete a 'Notice to Stop the Current Period' for the above-mentioned application until the items within the further advice are adequately addressed. Alternatively, the applicant may choose to provide a reasonable extension to the Decision period, as advised by the Assessment manager. If the applicant does not stop the Current Period or provide a reasonable extension to the Decision period, Council officers will proceed with assessing and deciding the application based on the information provided in the information request response, which could result in an unfavourable recommendation by Council officers.

Notice to Stop the Current Period Form:
https://dsdmipprd.blob.core.windows.net/general/Applicanttemplate9.0-Noticeaboutstoppingthecurrentperiod.doc

DA Rules extract:

s35.1 An assessment manager or concurrence agency for the application may, at any time before the application is decided, give further advice about the application to the applicant.

s35.2 Further advice may include advice about how the applicant may change the application.

Response format

As this application was lodged electronically, please direct all future correspondence regarding this application in the required PDF format i.e.:

- **Supporting documents** (separate the supporting documents into individual PDF appendices)
- **Plans** (combine as one single PDF)
- **Specialist reports** (separate each specialist report into individual PDF appendices)

Do not password protect the PDF.

The electronic response should be forwarded to mail@goldcoast.qld.gov.au with the Assessment Manager Jusmeet Atwal copied into the email jatwal@goldcoast.qld.gov.au.Please note, all development applications are publicly viewable on the Council's City of Gold Coast's PD Online: cityofgoldcoast.com.au/pdonline.

Contacting us

Should you wish to clarify any issues contained in this letter, please do not hesitate to contact Planning Assessment on 07 5582 8866.Yours faithfully



Nathan Griffey
A/Coordinator Development Assessment (Central)
For the Chief Executive Officer
Council of the City of Gold Coast

ATTACHMENT 3

Electrical Engineering Advice provided Ampflo



Electrical and Telecommunication Design Consultants

CERTIFICATION

Padmount Transformer Location

Date 12 June 2025

Ampflo project no **255144**
Energex project no **TBA**
Council reference **MCU-2025-155**

Development location **122 Marine Parade Miami**
Developer **122 Marine Parade Pty Ltd**

I, Daniel Altoft, on behalf of Ampflo Pty Ltd, have reviewed the proposed Padmount Transformer location as shown on drawing 568100_A1.102_B - WIP_SITE PLAN - GROUND FLOOR PLAN along with survey plan SP284713. As the proposed Padmount Transformer location has direct access from the Fraser Avenue Road Reserve via the internal driveway, this location is in accordance with Energex requirements for all weather heavy vehicle access provided the driveway is rated sufficiently to accommodate a 25t mobile crane carrying 6t of load.

Incoming conduits and all associated cabling and padmount transformer enabling works is wholly located within the private lot and will be supplied via the existing network located within the public road reserve of Fraser Avenue without the need to cross lot 2 on WD810476.

Regards,

Daniel Altoft
Design Manager

07 3372 9280
projects@ampflo.com.au
ampflo.com.au
12/53 Metroplex Avenue Murarrie Qld 4172

ATTACHMENT 4

Response to Transport Assessment items prepared by Bitzios Consulting



Gold Coast
Suite 26, 58 Riverwalk Avenue
Robina QLD 4226
P: (07) 5562 5377

Brisbane
Level 2, 428 Upper Edward Street
Spring Hill QLD 4000
P: (07) 3831 4442

Sydney
Studio 203, 3 Gladstone Street
Newtown NSW 2042
P: (02) 9557 6202

W: www.bitziosconsulting.com.au

M: PO Box 5102 Q Super Centre
Mermaid Waters QLD 4218

E: admin@bitziosconsulting.com.au

Your reference: MCU/2025/155
Our reference: P6870.001L 122 Marine Parade Miami IR Letter

18 June 2025

Monaco Property Group
C/- Eastview QLD Pty Ltd
The Wave, Level 3, 89/91 Surf Parade
Broadbeach QLD 4218

Attention: **Nick Ensor**
Sent via email: ***nensor@eastview.com.au***

Dear Nick

RE: INFORMATION REQUEST LETTER RESPONSE - 122 MARINE PARADE, MIAMI
TRANSPORT ITEMS 14 – 18 & WASTE ITEM 22

1. Introduction

This letter has been prepared in response to the Information Request issued by City of Gold Coast (Council) dated 28 May 2025 (ref: MCU/2025/155) in relation to the proposed multiple dwelling development application over 122 Marine Parade, Miami. Specifically, this letter responds to Traffic / Transport items 14 through 18, and the Water and Waste item 22.

Amended development plans were prepared in response to the IR and are provided in **Attachment A** (relevant to transport and waste).

Amended swept paths were also prepared in response to the IR and are provided in **Attachment B**. To minimise potential conflicts between vehicles using the southern service vehicle area (accessed via Nagel Avenue (either between conflicting heavy vehicles, or between a heavy vehicle on-site and a passenger vehicle illegally using the site to turnaround), the following treatments should be included:

- A Heavy Vehicle sign; W5-22 per AS1742.2 (2009), should be installed on one (1) or both of the columns closest to the Nagel Avenue entry, per Figure 1.1 and Figure 1.2



Figure 1.1: Heavy Vehicle Sign

- A convex mirror should be installed on one (1) or both of the columns closest to the Nagel Avenue entry, per Figure 1.2
- Threshold treatment should be used upon entry to the property from Nagel Avenue (e.g. chevroned line marking, hatched area etc.) to delineate the area as clearly different to Nagel Avenue and discourage any vehicle access other for those permitted to enter.

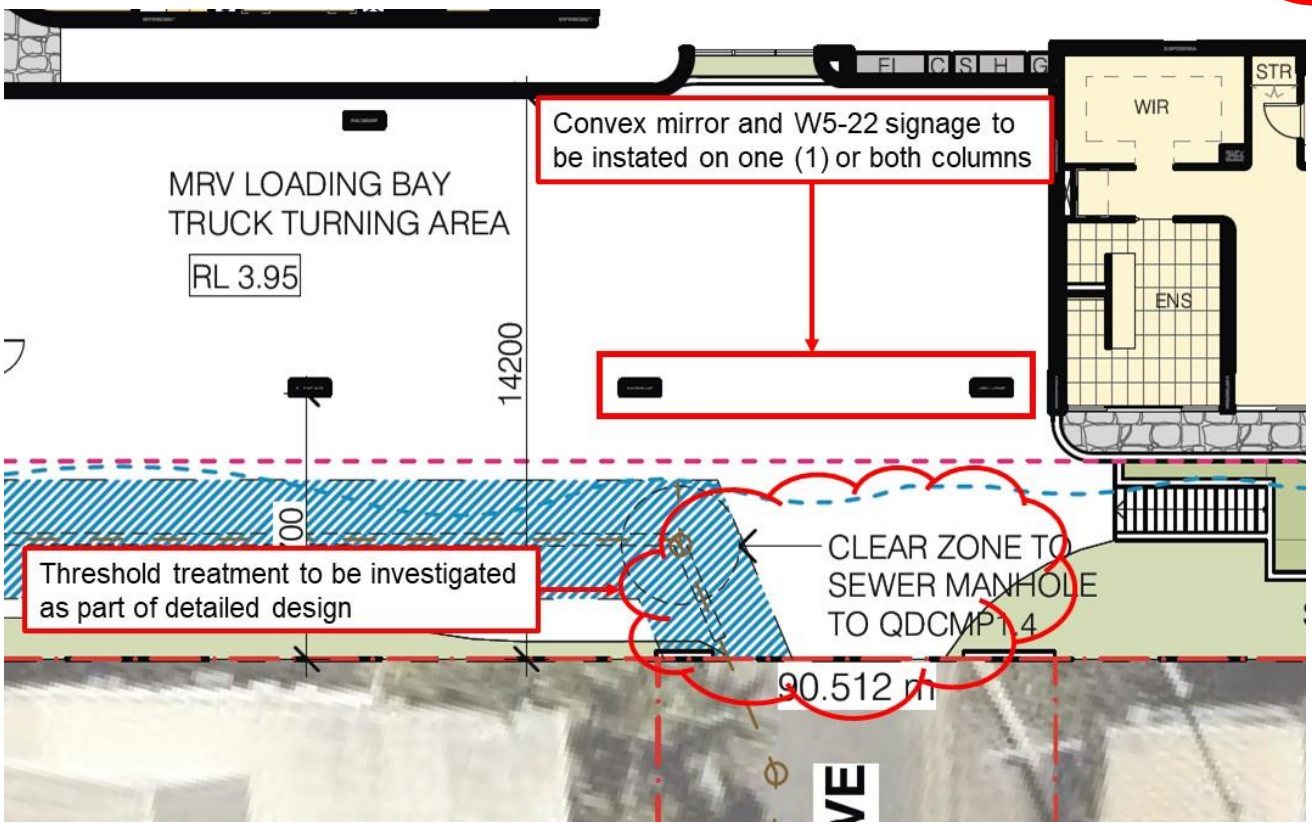


Figure 1.2: Service Vehicle Area Treatments

These can be resolved as part of detailed design.

2. Response to Transport / Water & Waste Items

2.1. Item 14 – Servicing

The applicant is requested to address the following to demonstrate compliance with Performance outcome PO3 of the Transport code.

a) The service vehicle swept path does not account for parking which is occurring on Nagel Avenue. The applicant is requested to submit a revised swept path analysis / design that assumes vehicles are parked on Nagel Avenue.

b) The applicant is requested to identify a practical route between the service vehicle area and lifts/units that will allow for the unimpeded manoeuvring of goods.

Response:

a) Swept paths have been undertaken and provided in **Attachment B** demonstrating all service vehicles traversing along Nagel Avenue without conflicting with the on-street parking area. Legal parking locations have been highlighted on the swept paths at the furthest north point on Nagel Avenue, allowing for storage of a 2m vehicle; representing the B99 width per AS2890.1 (2004). Compliant clearances are achieved in accordance with AS2890.2 (2018).

b) Updated drawings have been included in **Attachment A** which demonstrate the practical routes between the service vehicle area and the lifts / units to allow for the unimpeded manoeuvring of goods.

As such, the proposed development is compliant with PO3 of Council's Transport Code (ver. 11).

2.2. Item 15 – Vehicle Movement – Fraser Avenue

To demonstrate compliance with Performance outcome PO16 of the Transport code, the applicant is requested to demonstrate, with a vehicle swept path analysis, that that two-way vehicle flow is achievable on Fraser Avenue if kerbside parking is occupied.

Response:

Swept paths have been undertaking and provided in **Attachment B** which demonstrate two-way passing along Fraser Avenue assuming kerbside parking by 2m wide vehicles; representing the B99 width per AS2890.1 (2004). Compliant clearances are achieved in accordance with AS2890.1 (2004). As such, the proposed development is compliant with PO16 of Council's *Transport Code* (ver. 11).

2.3. Item 16 – Ingress and Egress

To demonstrate compliance with Performance outcome PO14 of the Transport code, the applicant is requested to demonstrate, with a vehicle swept path analysis, that a visitor (B99 design vehicle) can turnaround to exit the site in a forward gear (prior to the basement ramp) if access via the intercom is not achieved.

Response:

Swept paths have been undertaken and provided in **Attachment B** which demonstrate a turnaround from the intercom by a B99, allowing the vehicle to exit in a forward gear. Compliant clearances are achieved in accordance with AS2890.1 (2004). As such, the proposed development is compliant with PO14 of Council's *Transport Code* (ver. 11).

2.4. Item 17 – Design of Off-Street Parking Facilities

To demonstrate compliance with Performance outcome PO20 of the Transport code, the applicant is requested to:

a) Fully dimension the off-street parking facilities in accordance with AS2890.1:2004. Typical dimensions can be used where relevant.

b) Show ramp widths and grades in accordance with AS2890.1:2004, and demonstrate two-way circulation for the full length of the basement ramp (B99 design vehicle passing a B85 design vehicle)

c) Dimension the pedestrian sight triangles in accordance with Figure 3.3 of AS2890.1:2004.

d) Provide bollards outside the lift landing areas in accordance with Section 2.4.5.5 of AS2890.1:2004.

e) Individually number the car parking spaces on the drawings for ease of reference.

Response:

a) Updated drawings have been included in **Attachment A** which show dimensions in accordance with AS2890.1 (2004)

b) Updated drawings have been included in **Attachment A** which show ramp widths and grades. Swept paths have been undertaken and included in **Attachment B** which demonstrate two-way passing on the ramp by a B99 and B85. Compliant clearances have been achieved in accordance with AS2890.1 (2004)

c) Updated drawings have been included in **Attachment A** which show dimensioned sight triangles in accordance with AS2890.1 (2004)

d) Updated drawings have been included in **Attachment A** which show bollards at the lift landing areas in accordance with AS2890.1 (2004)

e) Updated drawings have been included in **Attachment A** which show consecutively numbered car parking spaces.

The proposed development is compliant with PO20 of Council's *Transport Code* (ver. 11).

2.5. Item 18 – Bicycle Parking

> *To demonstrate compliance with Performance outcome PO7 of the Transport code, the applicant is requested to dimension the bicycle parking areas on the drawings in accordance with AS2890.3.*

Response:

Updated drawings have been included in **Attachment A** which show dimensioned bicycle parking areas in accordance with AS2890.3 (2015).

2.6. Item 23 – Waste Collection Vehicle Swept Paths

> *Performance outcomes PO3 and PO14 of the Transport code requires that the development accommodates the required design service vehicle and for all vehicles enter and exit in a forward gear.*
>
> *Council acknowledges the information provided by the applicant however the report has not Demonstrated Council's side-lift waste collection vehicle will be able to perform a turnaround manoeuvrer within the subject site. The applicant is requested to:*
>
> *a) Provide a swept path analysis for Council's side-lift waste collection vehicle to turn around within the subject site – entering and exiting in forward gear from Nagel Avenue.*

Response:

Swept paths have been undertaken and provided in **Attachment B** demonstrating turnaround by Council's side-lift waste collection vehicle wholly on-site, with compliant clearances, allowing the vehicle to enter and exit the site in a forward gear. Pursuant to Item 14 of Council's IR, compliant clearances in accordance with AS2890.2 (2018) have been achieved to the kerbside parking lane of Nagel Avenue.

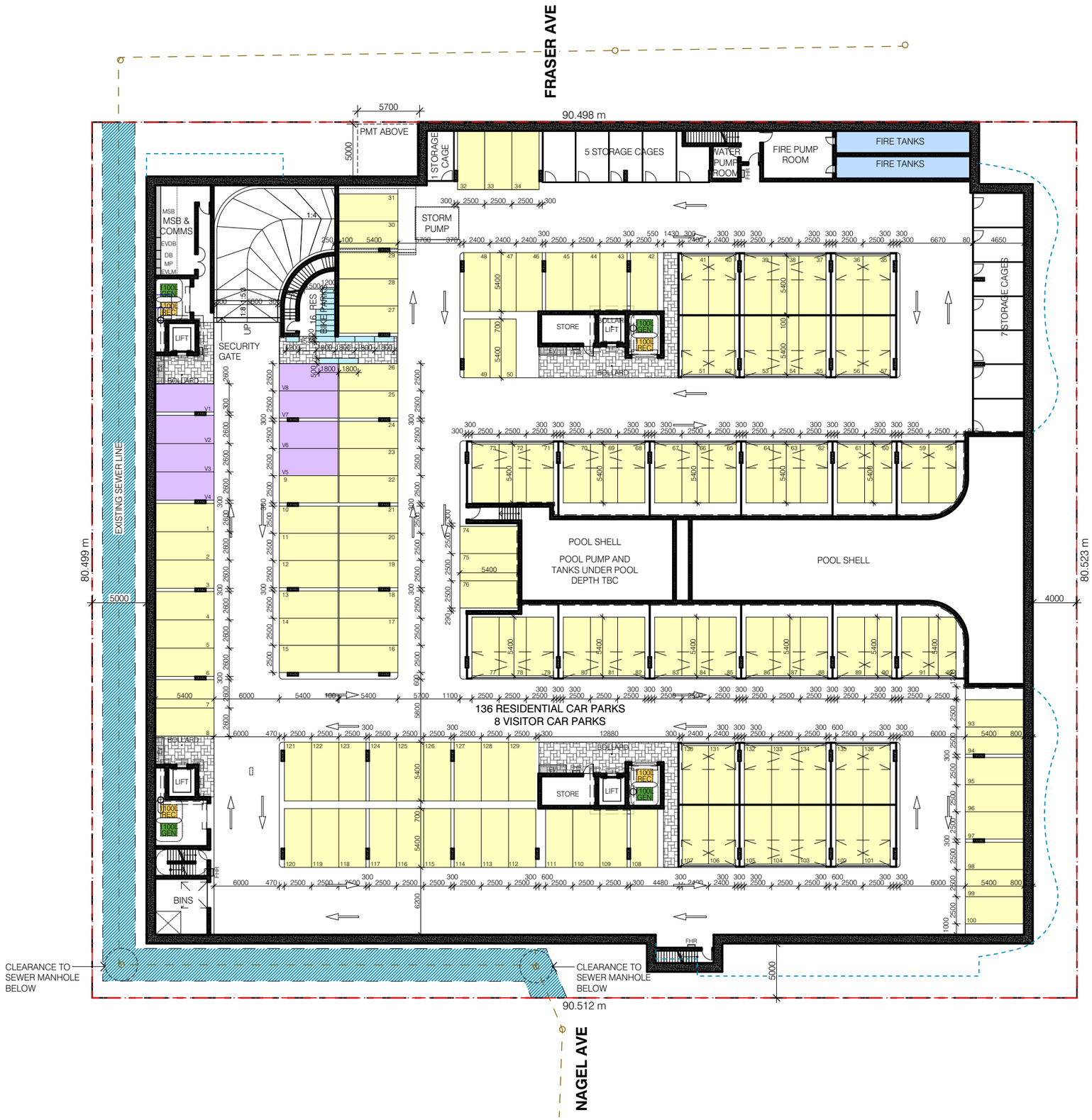
3. Concluding Statement

I trust that the additional information provided herein is sufficient to respond to Council's Information Request in relation to the Transport, and Water and Waste items and will allow Council to prepare reasonable and relevant conditions of approval.

Matthew Bitzios
Manager – Gold Coast and Northern NSW
Principal Transport Planner
BITZIOS CONSULTING
Attachments:
A: Development Plans
B: Swept Path Diagrams

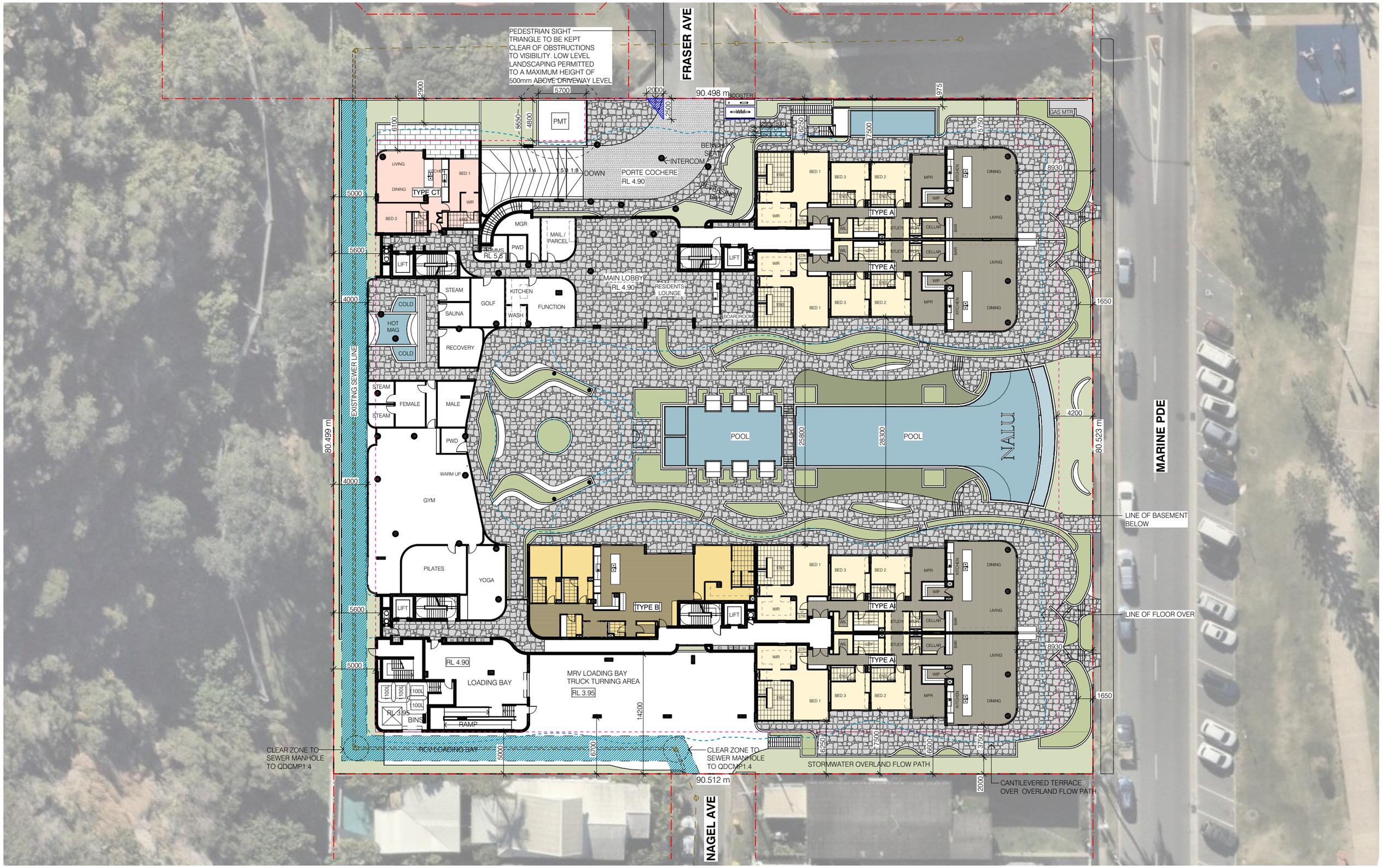
Attachment A

Development Plans



BASEMENT FLOOR PLAN - 1:400 (A3)

APPLICANT 122 MARINE PARADE P/L ATF 122 MARINE PARADE UNIT TRUST	DISCLAIMER These drawings are conceptual design drawings only. The information contained herewith is subject to design development and further input from independant planning, structural, services and other technical consultants.	COPYRIGHT Copyright in this drawing is the property of BDA Architecture and may not be retained, copied in whole or in part or used other than for the specific uses, licence and site for which it has been prepared and issued.	PROJECT NAME 122 MARINE PARADE	DRAWING BASEMENT FLOOR PLAN	PROJECT NO.: 568100 SCALE: 1:400 (A3) DATE: 17/06/2025	DRAWING NO. SK2.101	ISSUE E		50 Peerless Avenue, Mermaid Beach QLD 4218 Phone: 07 5555 2600 Email: bda@bdaarch.com.au bda architecture



GROUND - FLOOR PLAN - 1:400 (A3)

APPLICANT 122 MARINE PARADE P/L ATF 122 MARINE PARADE UNIT TRUST	DISCLAIMER These drawings are conceptual design drawings only. The information contained herewith is subject to design development and further input from independant planning, structural, services and other technical consultants.	COPYRIGHT Copyright in this drawing is the property of BDA Architecture and may not be retained, copied in whole or in part or used other than for the specific uses, licence and site for which it has been prepared and issued.	PROJECT NAME 122 MARINE PARADE	DRAWING GROUND - FLOOR PLAN	PROJECT NO.: 568100 SCALE: 1:400 (A3) DATE: 17/06/2025	DRAWING NO. SK2.102	ISSUE E		50 Peerless Avenue, Mermaid Beach QLD 4218 Phone: 07 5555 2600 Email: bda@bdaarch.com.au bda architecture

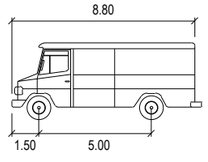
Attachment B

Swept Path Diagrams

Notes:

- Service vehicle area to include signage, convex mirror and entry treatment to minimise vehicular conflict. Refer Bitzios Letter Report '*P6870.001L 122 Marine Parade Miami IR Letter*'
- Pursuant to Heavy Vehicle National Law (Queensland), all heavy vehicles are required to be fitted with reversing lights
- All heavy vehicles using the area also require a device that emits a regular, intermittent sound whilst the vehicle is in reverse gear
- Passenger vehicles are not required nor permitted to enter the service vehicle area

Vehicle Clearance (300mm)



MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

DESIGN VEHICLE



Gold Coast
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Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

Project: 122 Marine Parade Miami TIA

Title: MRV Swept Path Entry

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

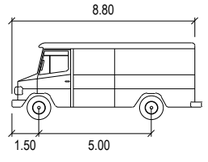
Date: 18.06.2025

Project Number	Sheet Number	Issue
P6870	1	001

Notes:

- Service vehicle area to include signage, convex mirror and entry treatment to minimise vehicular conflict. Refer Bitzios Letter Report '*P6870.001L 122 Marine Parade Miami IR Letter*'
- Pursuant to Heavy Vehicle National Law (Queensland), all heavy vehicles are required to be fitted with reversing lights
- All heavy vehicles using the area also require a device that emits a regular, intermittent sound whilst the vehicle is in reverse gear
- Passenger vehicles are not required nor permitted to enter the service vehicle area

Vehicle Clearance (300mm)



MRV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 38.7

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REVISIONS

Issue	Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

Project: 122 Marine Parade Miami TIA

Title: MRV Swept Path Exit

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

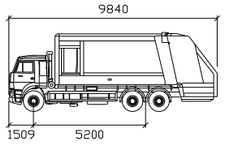
Date: 18.06.2025

Project Number	Sheet Number	Issue
P6870	2	001

Notes:

- Service vehicle area to include signage, convex mirror and entry treatment to minimise vehicular conflict. Refer Bitzios Letter Report '*P6870.001L 122 Marine Parade Miami IR Letter*'
- Pursuant to Heavy Vehicle National Law (Queensland), all heavy vehicles are required to be fitted with reversing lights
- All heavy vehicles using the area also require a device that emits a regular, intermittent sound whilst the vehicle is in reverse gear
- Passenger vehicles are not required nor permitted to enter the service vehicle area
- Grey *landscaping* to remain at most 300mm height where blue *vehicle clearance* overhangs

Vehicle Clearance (300mm)



JJR Rear Load RCV

mm

Width	: 2480
Track	: 2480
Lock to Lock Time	6.0
Steering Angle	: 42.0

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 — 0 1 2 3 4 5 6 7 — 1:150

ENGINEERING CERTIFICATION (RPEQ)

Name	Signature	No.	Date
M. DAVIDSON		#27524	18.06.2025

Project: 122 Marine Parade Miami TIA

Title: Rear-Loader RCV Swept Path Entry

Design	Drawn	Checked
T.R	T.R	M.D

CONCEPT ONLY

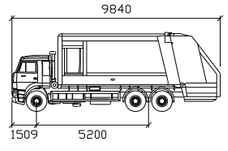
Date: 18.06.2025

Project Number	Sheet Number	Issue
P6870	3	001

Notes:

- Service vehicle area to include signage, convex mirror and entry treatment to minimise vehicular conflict. Refer Bitzios Letter Report '*P6870.001L 122 Marine Parade Miami IR Letter*'
- Pursuant to Heavy Vehicle National Law (Queensland), all heavy vehicles are required to be fitted with reversing lights
- All heavy vehicles using the area also require a device that emits a regular, intermittent sound whilst the vehicle is in reverse gear
- Passenger vehicles are not required nor permitted to enter the service vehicle area
- Grey *landscaping* to remain at most 300mm height where blue *vehicle clearance* overhangs

Vehicle Clearance (300mm)



JJR Rear Load RCV

mm

Width	: 2480
Track	: 2480
Lock to Lock Time	6.0
Steering Angle	: 42.0

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 — 0 1 2 3 4 5 6 7 — 1:150

ENGINEERING CERTIFICATION (RPEQ)

Name	Signature	No.	Date
M. DAVIDSON		#27524	18.06.2025

Project: 122 Marine Parade Miami TIA

Title: Rear-Loader RCV Swept Path Exit

Design	Drawn	Checked
T.R	T.R	M.D

CONCEPT ONLY

Date: 18.06.2025

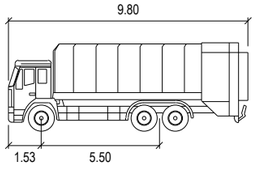
Project Number	Sheet Number	Issue
P6870	4	001



Notes:

- Service vehicle area to include signage, convex mirror and entry treatment to minimise vehicular conflict. Refer Bitzios Letter Report '*P6870.001L 122 Marine Parade Miami IR Letter*'
- Pursuant to Heavy Vehicle National Law (Queensland), all heavy vehicles are required to be fitted with reversing lights
- All heavy vehicles using the area also require a device that emits a regular, intermittent sound whilst the vehicle is in reverse gear
- Passenger vehicles are not required nor permitted to enter the service vehicle area
- Grey *landscaping* to remain at most 300mm height where blue *vehicle clearance* overhangs

Vehicle Clearance (300mm)



CoGC Side Load RCV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 40

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

ENGINEERING CERTIFICATION (RPEQ)

Name	Signature	No.	Date
M. DAVIDSON		#27524	18.06.2025

Project: 122 Marine Parade Miami TIA

Title: Side-Loader RCV Swept Path Turnaround

Design	Drawn	Checked
T.R	T.R	M.D

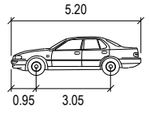
CONCEPT ONLY

Date: 18.06.2025

Project Number	Sheet Number	Issue
P6870	5	001



Vehicle Clearance (600mm)



B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 0 5 10 15 20 25 1:500

Project: 122 Marine Parade Miami TIA

Title: B99 Swept Path Fraser Ave Passing

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

Date: 18.06.2025

Project Number	Sheet Number	Issue
P6870	6	001

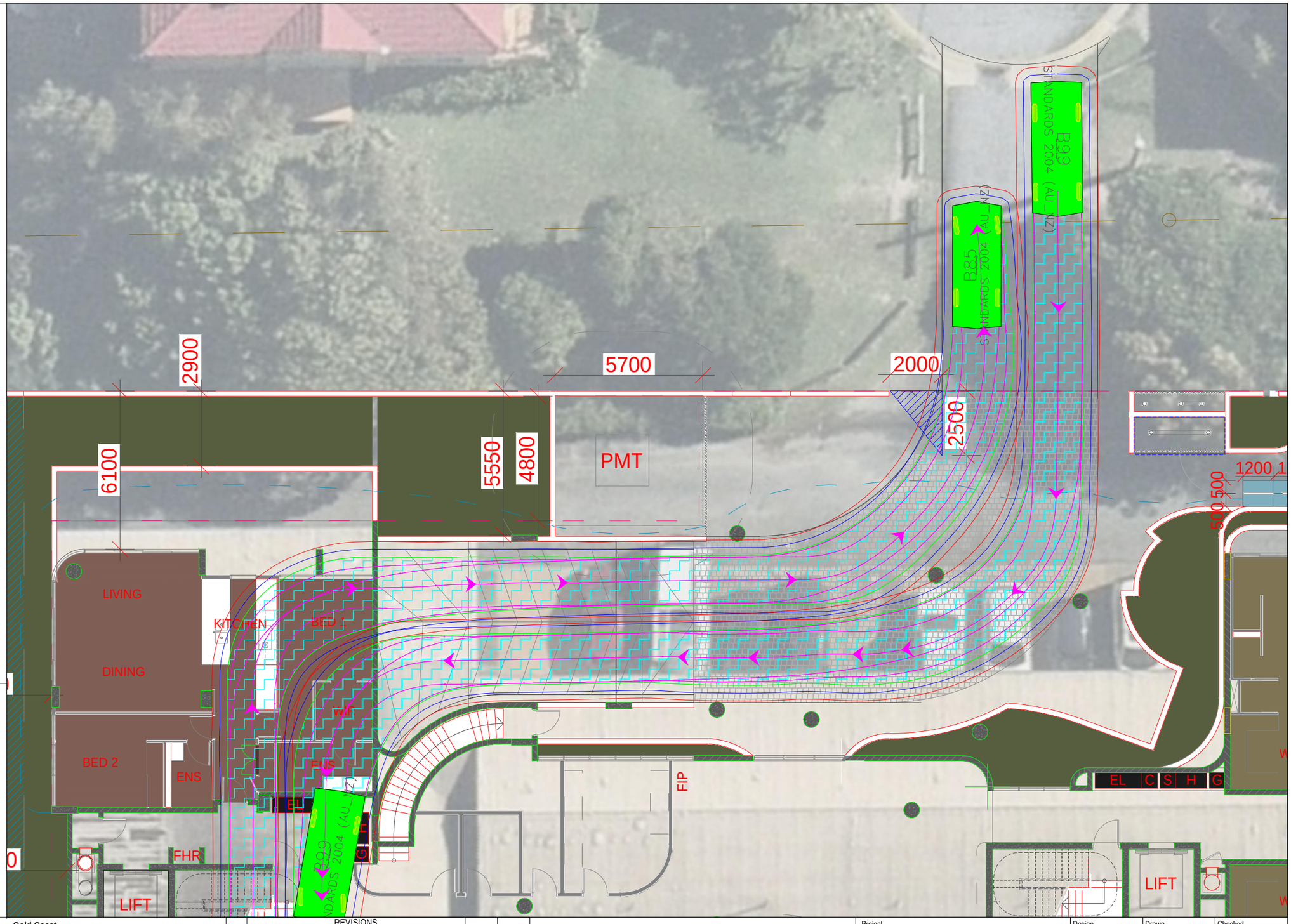


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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

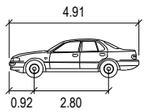
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Project: 122 Marine Parade Miami TIA	Design: T.R	Drawn: T.R	Checked: M.B
Title: B99 Swept Path Ramp Passing	CONCEPT ONLY	Date: 18.06.2025
	Project Number: P6870	Sheet Number: 7	Issue: 001

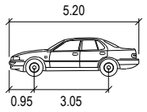


Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 38.5



B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 — 0 1 2 3 4 5 6 7 — 1:150

Project: 122 Marine Parade Miami TIA

Title: B99 Swept Path Ramp Passing

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

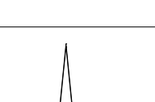
Date: 18.06.2025

Project Number	Sheet Number	Issue
P6870	8	001

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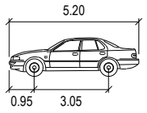
Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



B85 meters

Width	:	1.87
Track	:	1.77
Lock to Lock Time	:	6.0
Steering Angle	:	38.5



B99 meters

Width	:	1.94
Track	:	1.84
Lock to Lock Time	:	6.0
Steering Angle	:	38.0

DESIGN VEHICLE

5700
PMT ABOVE
5000
90.498 m
ERASER
1 STORAGE CAGE
5 STORAGE CAGES
MSB
MSB & COMMS
EVDB
DB
MP
EVLM
1100L GEN
1100L REC
LIFT
FHR
EV
BOLLARD
1:4
STORM PUMP
SECURITY
UP
1:8
1:5.8
300
5600
1500
1200
16 RES BIKE PARKS
1540
1800
500
2500
V1
V7
V8
STORE
BOLLARD
LIFT
700
5400
49
50
31
30
29
28
27
26
25
32
33
34
48
47
46
45
44
43
42
B99 STANDARDS 2004 (AU/NZ)
B85 STANDARDS 2004 (AU/NZ)

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P: (02) 9557 6202

REVISIONS

Issue	Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

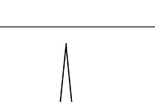
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Project: 122 Marine Parade Miami TIA	Design: T.R	Drawn: T.R	Checked: M.B
Title: B99 Swept Path Ramp Passing	CONCEPT ONLY		Date: 18.06.2025
	Project Number: P6870	Sheet Number: 9	Issue: 001

N

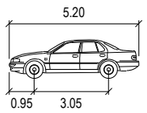
Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



B85 meters

Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 38.5



B99 meters

Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE

5700
PMT ABOVE
5000
1 STORAGE CAGE
5 STORAGE CAGES
90.498 m
FRASER
B85 AS2890.1:2004
32
33
34
31
30
29
28
27
26
25
24
1:4
300
2500
STORM PUMP
5700
370
2400
250
100
5400
550
MSB
MSB & COMMS
EVDB
DB
MP
EVLM
1100L GEN
1100L REC
LIFT
FHR
EV
BOLLARD
SECURITY GATE
1.8
1.5
1.8
1500
1200
16 RES BIKE PARKS
1540
1800
500
V1
V8
V7
48
47
46
45
44
43
42
49
50
700
STORE
BOLLARD
LIFT
1100L GEN
1100L REC
EV
FHR
BOLLARD

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REVISIONS

Issue	Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

Project: 122 Marine Parade Miami TIA	Design: T.R	Drawn: T.R	Checked: M.B
Title: B99 Swept Path Ramp Passing	CONCEPT ONLY		Date: 18.06.2025
	Project Number: P6870	Sheet Number: 10	Issue: 001



Vehicle Clearance (300mm)

B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE

Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	18.06.2025

Scale @ A3 — 0 1 2 3 4 5 6 7 — 1:150

Project	Design	Drawn	Checked
122 Marine Parade Miami TIA	T.R	T.R	M.B
Title: B99 Swept Path Turnaround	CONCEPT ONLY	Date	18.06.2025
	Project Number: P6870	Sheet Number: 11	Issue: 001

ATTACHMENT 5

Response to Information Request and updated Acoustic Report prepared by Acoustic Works



acousticworks)))

18 June 2025
Reference: *2025024 L01B 122 Marine Parade, Miami ENV - RFI response 250618.docx*

Gold Coast City Council
PO Box 5042
Gold Coast Mail Centre
QLD 9729

RE: 122 Marine Parade, Miami
Acoustic Response to Information Request MCU/2025/155

This letter is in response to Gold Coast City Council's further information request (ref: MCU/2025/155), dated 28 May 2025 in relation to the application for the proposed residential development to be located at 122 Marine Parade, Miami. The acoustic issues raised by council, and the response from Acoustic Works are detailed as follows:

Environmental Health Assessment

20. Acoustic report

Submission of the acoustic report prepared by 'Acoustic Works', dated 24 April 2025 (reference 2025024 R01D 122 Marine Parade, Miami ENV.docx) is acknowledged. Following review of the report, the applicant is requested to address the following further acoustic information via the submission of an amended report:

Council Issue

a) *Include assessment of the potential noise impact of the loading dock and back of house ground floor servicing area to the existing residential premises located immediately to the south of the development against the Environmental Protection (Noise) Policy background creep and acoustic quality objectives criteria, as well as the World Health Organisation sleep disturbance criteria.*

Response:
Section 7 of the revised report has been updated to include the truck (MRV) loading activities. It should also be noted that due to the expected clientele the loading bay is not expected to be used more than a few times a year.

Acoustic Works has also conducted noise monitoring of the current waste collection and the proposed waste collection for the site to determine the extent of noise impacts to the neighbouring sensitive receiver. The outcomes, comparison of the measurements and an assessment of the waste collection based on the existing and proposed bins has been included within Section 7.4 of the revised report. The assessment has been conducted during the daytime period as confirmed in the waste management report and supporting letter from Veolia (ref. Miami Development letter 122 Marine pde, dated 18 June 2025).

Acoustic Works, 17/10 Benson Street, Toowong QLD 4066
P.O. Box 69 Toowong 4066 Phone (07) 3393 2222
ABN: 56 157 965 056
Internet: www.acousticworks.com.au
Email: gpearce@acousticworks.com.au
menersen@acousticworks.com.au

Council Issue

b) Provide updated noise calculation tables.

Response:
Section 7 of the revised acoustic report has been updated based on the above information.

Council Issue

c) Provide updated control measures to ensure compliance with the applicable legislation and standards.

Response:
Section 8 of the revised acoustic report has been updated to include additional acoustic recommendations based on the loading bay and waste collection.

We trust this information meets your current requirements. If you should have any further queries, please do not hesitate to contact us.

Yours faithfully,



Kayleigh Duce
Acoustic Consultant
acousticworks)))

acousticworks

Proposed Residential Development
122 Marine Parade
Miami

ACOUSTIC REPORT






Client:
Monaco Property Group Pty Ltd
c/ Eastview QLD Pty Ltd

Reference:
2025024 R01H 122 Marine Parade, Miami ENV.docx

Date Issued:
19 June 2025

Document Information

Contact Details

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Report Register

Date	Revision	Author	Manager
10/03/25	R01A (DRAFT)	Kayleigh Duce	Mark Enersen
17/04/25	R01B	Kayleigh Duce	Mark Enersen
22/04/25	R01C	Kayleigh Duce	Mark Enersen
24/04/25	R01D	Kayleigh Duce	Mark Enersen
16/06/25	R01E	Kayleigh Duce	Mark Enersen
18/06/25	R01F	Kayleigh Duce	Mark Enersen
18/06/25	R01G	Kayleigh Duce	Mark Enersen
18/06/25	R01H	Kayleigh Duce	Mark Enersen

Disclaimer

Reports produced by Acoustic Works are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed between Acoustic Works and the Client. Under no circumstances shall information and/or report(s) prepared by Acoustic Works be used by other parties other than the Client without first obtaining written permission from Acoustic Works.

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1. Introduction

This report is in response to a request by Monaco Property Group Pty Ltd for an environmental noise assessment of a proposed residential development to be located at 122 Marine Parade, Miami. To facilitate the assessment, unattended noise monitoring was conducted to determine to establish the criteria for onsite activities to sensitive receivers in proximity to the development. Based on the outcomes of the assessment, recommendations for acoustic treatments are specified.

This report has been issued in response to the City of Gold Coast Council information request (ref. MCU/2025/155, email dated 28 May 2025).

2. Site Description

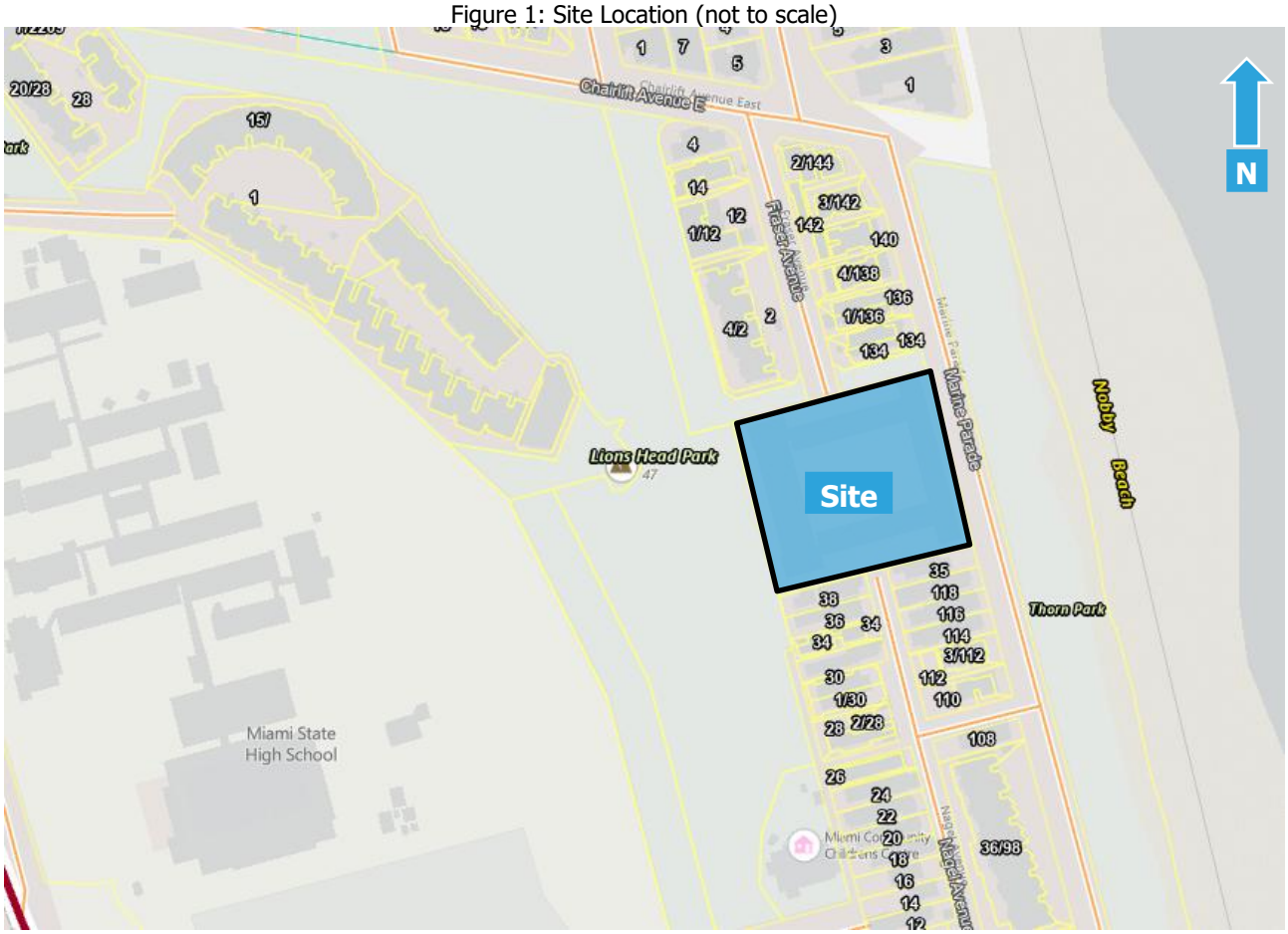
2.1 Site Location

The site is described by the following:

122 Marine Parade, Miami
Lot 122 on SP284713

Refer to Figure 1 for site location.

Figure 1: Site Location (not to scale)



A comprehensive site survey was conducted on the 30 January 2025 and identified the following:

a) The site is currently occupied by a two-storey residential building which will be demolished for the development.
b) Residential land uses bound the site to the north and south.
c) Marine Parade bounds the site to the east separating it from the beach and park lands.
d) Lions Head Park bounds the site to the west separating it from residential land uses.

2.2 Proposal

The proposal is to construct a residential development as follows:

- Site Area: 7,284m^2
- A single storey basement to house 137 residential car parks and 8 visitor car parks.
- The ground floor consists of residential lobby, pool and recreation area, gym, wellness centre and 6 residential units.
- Level 2-3 consists of 12 units on each level.
- Level 4 consists of 10 units.
- Level 5 consists of 5 units.
- Private Roof Terrace Level includes the 11-penthouse private open spaces.
- Access of development via Fraser Avenue.

Refer to the Appendices for development plans.

2.3 Acoustic Environment

The site and surrounding area is primarily affected by local traffic noise 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 noise monitor holds current NATA Laboratory Certification and was 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 three-storey residential building is located at 2 Fraser Avenue to the northwest of the site.
2. A two-storey residential building is located at 134 Marine Parade to the northeast of the site.
3. A two-storey residential building is located at 120 Marine Parade to the southwest of the site.
4. A three-storey residential building is located at 38 Nagel Avenue to the southwest of the site.
5. A three-storey residential building is located at 1 Great Hall Drive to the 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

An Rion NL42 environmental noise monitor was placed on site at 122 Marine Parade to measure ambient noise levels. This location was chosen as it considered representative at the nearest sensitive receiver. 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 30 January and 12 February 2025.

The environmental noise monitor was set to record noise levels in "A" Weighting, Fast response using 15-minute statistical intervals. Ambient noise monitoring was conducted generally in accordance with Australian Standard AS1055:1997 *Acoustics – Description and measurement of environmental noise* with road traffic conducted in accordance with Australian Standard *AS2702:1984 'Acoustics – Methods for the measurement of road traffic noise'*.

5. Measured Noise Levels and Weather Conditions

The following tables present the measured noise levels from the unattended noise survey and weather conditions during the monitoring period. 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	
			Speed (km/h)	Direction	Speed (km/h)	Direction
Thursday	30/01/25	0	15	NE	19	NE
Friday	31/01/25	0	9	E	15	E
Saturday	1/02/25	3.6	17	SE	35	SE
Sunday	2/02/25	1	22	SSE	37	SE
Monday	3/02/25	2.6	30	ESE	30	SE
Tuesday	4/02/25	6.2	24	ESE	26	E
Wednesday	5/02/25	2.6	7	SW	13	E
Thursday	6/02/25	2	19	SSE	22	SE
Friday	7/02/25	0.4	13	SSE	20	SE
Saturday	8/02/25	0	15	SSE	17	E
Sunday	9/02/25	0	17	SE	22	ESE
Monday	10/02/25	8.6	13	ENE	15	E
Tuesday	11/02/25	0	7	SE	20	ENE
Wednesday	12/02/25	0	4	E	19	ENE

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	Eve	Night
Thursday	30/01/25	45	47	45
Friday	31/01/25	44	46	43
Saturday*	1/02/25	48	48	45
Sunday	2/02/25	47	47	46
Monday*	3/02/25	50	47	51
Tuesday*	4/02/25	50	50	48
Wednesday*	5/02/25	47	46	45
Thursday	6/02/25	47	49	46
Friday	7/02/25	47	48	46
Saturday	8/02/25	47	49	45
Sunday*	9/02/25	47	50	45
Monday	10/02/25	46	48	48
Tuesday	11/02/25	47	50	44
Wednesday	12/02/25	45	-	45
Overall value		47	48	45

*Note heavy rainfall recorded during the monitoring period were found to have affected the measured results, therefore the data was omitted for the affected time periods.

Refer to the Appendix for a 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)	
	$L_{Aeq,T}$	$L_{A90,T}$
Day 7am – 6pm	52	47
Evening 6pm – 10pm	53	48
Night 10pm – 7am	50	45

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) $_{LA,(Max)}$ 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.

7.2 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. @ -6dB/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) Nigh	LAeq adj.1hr int. dB(A) Nigh	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) Nigh	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		
	1. 2 Fraser Avenue (W) 2. 134 Marine Parade (NE) 3. 120 Marine Parade (SE) 4. Nagel Avenue (SW) 5. 1 Great Hall Drive (W)																																				Day / eve	Day / eve indoor	Night indoor	Day / eve	Day / eve indoor	Night indoor	Day / eve	Day / eve indoor	Night indoor
1	Criteria																																				50	35	30	55	40	35	65	45	40
	Car door closure	75	2	77	80	40	20	2	20				-15		-27	21	11	18	8	15	5								26	16	26	16	26	16	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	80	40	20	15	20						-26	38	28	35	25	32	22	41	31	41	31			43	33	43	33	43	33	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	80	40	20	2	20				-15		-26	20	10	17	7	14	4								25	15	25	15	25	15	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp	74		74	80	40	20	10	20						-26	40	30	37	27	34	24	43	33	43	33			46	36	46	36	46	36	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4	4	900	60				-18		-36	26	16	26	16	26	16	31	21	31	21	31	21	38	28	38	28	38	28	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym	79	2	81	4	4	4	900	46				-25		-33	22	12	22	12	22	12	26	16	26	16	26	16	33	23	33	23	33	23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	1	0	0	30	85				-18		-39	4																		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck door closing	83		83	2	0	0	2	85				-18		-39																			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck reverse alarm (broadband)	90		90	1	0	0	30	85				-18		-39	12	2																	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck starting	90		90	1	0	0	2	85				-18		-39																			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Total															43	33	40	30	37	27	46	36	46	36	32	22	49	39	49	39	49	39	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
2	Criteria																																				50	35	30	55	40	35	65	45	40
	Car door closure	75	2	77	80	40	20	2	16				-30		-25	8		5		2								13	3	13	3	13	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	80	40	20	15	21						-26	38	28	35	25	32	22	41	31	41	31			43	33	43	33	43	33	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	80	40	20	2	16				-30		-24	8		5		2								13	3	13	3	13	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp	74		74	80	40	20	10	40						-32	35	25	32	22	29	19	38	28	38	28			41	31	41	31	41	31	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4	4	900	44				-22		-33	25	15	25	15	25	15	30	20	30	20	30	20	37	27	37	27	37	27	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym	79	2	81	4	4	4	900	55				-25		-35	21	11	21	11	21	11	25	15	25	15	25	15	32	22	32	22	32	22	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	1			30	89				-22		-39																			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck door closing	83		83	2			2	89				-20		-39																			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck reverse alarm (broadband)	90		90	1			30	89				-20		-39	10																		Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck starting	90		90	1			2	89				-20		-39																			Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total															40	30	37	27	35	25	43	33	43	33	31	21	46	36	46	36	46	36	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
3	Criteria																																				50	35	30	55	40	35	65	45	40
	Car door closure	75	2	77	80	40	20	2	11				-30		-21	12	2	9		6								17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	80	40	20	15	11				-30		-21	13	3	10		7		16	6	16	6			18	8	18	8	18	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	80	40	20	2	11				-30		-21	12	2	9		6								17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp	74		74	80	40	20	10	77				-30		-38							3		3				6		6		6		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4	4	900	34				-20		-31	29	19	29	19	29	19	34	24	34	24	34	24	41	31	41	31	41	31	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym	79	2	81	4	4	4	900	53				-25		-34	22	12	22	12	22	12	26	16	26	16	26	16	33	23	33	23	33	23	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	1			30	11				-3		-21	37	27																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck door closing	83		83	2			2	11				-3		-21	30	20																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck reverse alarm (broadband)	90		90	1			30	11				-3		-21	45	35																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck starting	90		90	1			2	11				-3		-21	34	24																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total															46	36	30	20	30	20	35	25	35	25	35	25	42	32	42	32	42	32	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
4	Criteria																																				50	35	30	55	40	35	65	45	40
	Car door closure	75	2	77	80	40	20	2	10				-30		-20	13	3	10		7								18	8	18	8	18	8	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	80	40	20	15	10				-30		-20	14	4	11	1	8		17	7	17	7			19	9	19	9	19	9	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74	2	76	80	40	20	2	10				-30		-20	12	2	9		6								17	7	17	7	17	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp	74		74	80	40	20	10	70				-30		-37							4		4				7		7				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4	4	900	42				-15		-32	33	23	33	23	33	23	38	28	38	28	38	28	45	35	45	35	45	35	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym	79	2	81	4	4	4	900	30				-25		-30	26	16	26	16	26	16	30	20	30	20	30	20	37	27	37	27	37	27	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	1			30	15						-24	38	28																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck door closing	83		83	2			2	28						-29	25	15																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck reverse alarm (broadband)	90		90	1			30	20						-26	43	33																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck starting	90		90	1			2	28						-29	29	19																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total															45	35	34	24	34	24	38	28	38	28	38	28	45	35	45	35	45	35	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
5	Criteria																																				50	35	30	55	40	35	65	45	40
	Car door closure	75		75	80	40	20	2	101				-30		-41																			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car passby	69		69	80	40	20	15	104				-30		-40																			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car start	74		74	80	40	20	2	101				-30		-40																			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Car on ramp	74		74	80	40	20	10	104				-30		-40																			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Rec area inc pool	78	2	80	4	4	4	900	147				-43		-43	37	27	37	27	37	27	41	31	41	31	41	31	45	35	45	35	45	35	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gym	79	2	81	4	4	4	900	120				-25		-42	14	4	14	4	14	4	17	7	17	7	17	7	22	12	22	12	22	12	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Truck passby	82		82	1			30	138						-43	18	8																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck door closing	83		83	2			2	138						-43	11	1																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck reverse alarm (broadband)	90		90	1			30	138						-43	26	16																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Truck starting	90		90	1			2	138						-43	15	5																	Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total															37	27	37	27	37	27	41	31	41	31	41	31	45	35	45	35	45	35	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

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

Some exceedances of the acoustic quality objective criteria are predicted at receiver 3. However, as these criteria are already exceeded by the background noise levels, the impacts do not necessarily affect the acoustic amenity. Therefore, assessment to the background creep criteria only is recommended.

7.3 Background Creep

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

Table 6: Predicted Background Creep 15-minute compliance

Receiver	Receivers 1. 2 Fraser Avenue (W) 2. 134 Marine Parade (NE) 3. 120 Marine Parade (SE) 4. Nagel Avenue (SW) 5. 1 Great Hall Drive (W) 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 Nigl	Duration per event	Distance (m)	No Barrier (height (m))	Barrier screening dB	Building TL or shield dB	Building screening 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
1	Criteria																					54	52	49
	Car door closure	75	2	77	20	10	5	2	20			-15		-27	21	11	18	8	15	5		Yes	Yes	Yes
	Car passby	69		69	20	10	5	15	20					-26	38	28	35	25	32	22		Yes	Yes	Yes
	Car start	74	2	76	20	10	5	2	20			-15		-27	20	10	17	7	14	4		Yes	Yes	Yes
	Car on ramp	74		74	20	10	5	10	20					-27	40	30	37	27	34	24		Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1	1	900	60			-18		-36	26	16	26	16	26	16		Yes	Yes	Yes
	Gym	79	2	81	1	1	1	900	46			-25		-34	22	12	22	12	22	12		Yes	Yes	Yes
	Truck passby	82		82	1			30	85			-18		-39	10							Yes	n/a	n/a
	Truck door closing	83		83	2			2	85			-18		-39	2							Yes	n/a	n/a
	Truck reverse alarm (broadband)	90		90	1			30	85			-18		-39	18	8						Yes	n/a	n/a
	Truck starting	90		90	1			2	85			-18		-39	6							Yes	n/a	n/a
	Total														43	33	40	30	37	27		**Yes**	**Yes**	**Yes**
2	Criteria																					54	52	49
	Car door closure	75	2	77	20	10	5	2	16			-30		-25	8		5		2			Yes	Yes	Yes
	Car passby	69		69	20	10	5	15	21					-26	38	28	35	25	32	22		Yes	Yes	Yes
	Car start	74	2	76	20	10	5	2	16			-30		-24	8		5		2			Yes	Yes	Yes
	Car on ramp	74		74	20	10	5	10	40					-32	35	25	32	22	29	19		Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1	1	900	44			-22		-33	25	15	25	15	25	15		Yes	Yes	Yes
	Gym	79	2	81	1	1	1	900	55			-25		-35	21	11	21	11	21	11		Yes	Yes	Yes
	Truck passby	82		82	1			30	89			-22		-39	6							Yes	n/a	n/a
	Truck door closing	83		83	2			2	89			-20		-39								Yes	n/a	n/a
	Truck reverse alarm (broadband)	90		90	1			30	89			-20		-39	16	6						Yes	n/a	n/a
	Truck starting	90		90	1			2	89			-20		-39	4							Yes	n/a	n/a
	Total														40	30	37	27	35	25		**Yes**	**Yes**	**Yes**
3	Criteria																					54	52	49
	Car door closure	75	2	77	20	10	5	2	11			-30		-21	12	2	9		6			Yes	Yes	Yes
	Car passby	69		69	20	10	5	15	11			-30		-21	13	3	10		7			Yes	Yes	Yes
	Car start	74	2	76	20	10	5	2	11			-30		-21	12	2	9		6			Yes	Yes	Yes
	Car on ramp	74		74	20	10	5	10	77			-30		-38								Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1	1	900	34			-20		-31	29	19	29	19	29	19		Yes	Yes	Yes
	Gym	79	2	81	1	1	1	900	53			-25		-34	22	12	22	12	22	12		Yes	Yes	Yes
	Truck passby	82		82	1			30	11			-3		-21	43	33						Yes	n/a	n/a
	Truck door closing	83		83	2			2	11			-3		-21	36	26						Yes	n/a	n/a
	Truck reverse alarm (broadband)	90		90	1			30	11			-3		-21	51	41						Yes	n/a	n/a
	Truck starting	90		90	1			2	11			-3		-21	40	30						Yes	n/a	n/a
	Total														52	42	30	20	30	20		**Yes**	**Yes**	**Yes**
4	Criteria																					54	52	49
	Car door closure	75	2	77	20	10	5	2	10			-30		-20	13	3	10		7			Yes	Yes	Yes
	Car passby	69		69	20	10	5	15	10			-30		-20	14	4	11	1	8			Yes	Yes	Yes
	Car start	74	2	76	20	10	5	2	10			-30		-20	12	2	9		6			Yes	Yes	Yes
	Car on ramp	74		74	20	10	5	10	70			-30		-37								Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1	1	900	42			-15		-32	33	23	33	23	33	23		Yes	Yes	Yes
	Gym	79	2	81	1	1	1	900	30			-25		-30	26	16	26	16	26	16		Yes	Yes	Yes
	Truck passby	82		82	1			30	15					-24	44	34						Yes	n/a	n/a
	Truck door closing	83		83	2			2	28					-29	31	21						Yes	n/a	n/a
	Truck reverse alarm (broadband)	90		90	1			30	20					-26	49	39						Yes	n/a	n/a
	Truck starting	90		90	1			2	28					-29	35	25						Yes	n/a	n/a
	Total														51	41	34	24	34	24		**Yes**	**Yes**	**Yes**
5	Criteria																					54	52	49
	Car door closure	75		75	20	10	5	2	101			-30		-41								Yes	Yes	Yes
	Car passby	69		69	20	10	5	15	104			-30		-40								Yes	Yes	Yes
	Car start	74		74	20	10	5	2	101			-30		-40								Yes	Yes	Yes
	Car on ramp	74		74	20	10	5	10	104			-30		-40								Yes	Yes	Yes
	Rec area inc pool	78	2	80	1	1	1	900	147					-43	37	27	37	27	37	27		Yes	Yes	Yes
	Gym	79	2	81	1	1	1	900	120			-25		-42	14	4	14	4	14	4		Yes	Yes	Yes
	Truck passby	82		82	1			30	138					-43	24	14						Yes	n/a	n/a
	Truck door closing	83		83	2			2	138					-43	17	7						Yes	n/a	n/a
	Truck reverse alarm (broadband)	90		90	1			30	138					-43	32	22						Yes	n/a	n/a
	Truck starting	90		90	1			2	138					-43	21	11						Yes	n/a	n/a
	Total														38	28	37	27	37	27		**Yes**	**Yes**	**Yes**

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

Compliance with the background creep criteria is predicted for all time periods with the additional acoustic treatments recommended in Section 8.

7.4 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. 2 Fraser Avenue (W) 2. 134 Marine Parade (NE) 3. 120 Marine Parade (SE) 4. Nagel Avenue (SW) 5. 1 Great Hall Drive (W) Description	Source LAmax @1m dB(A)	Correction dB(A)*	Corrected dB(A)	Distance (m)	Barrier (height (m No	Barrier screening dB	Building TL or shield dB	Building screening dB	Dist atten. @-6dB/dd	LAmax adj,T int. dB(A)	Complies Night dB(A)
1	Criteria											45
	Car passby	74		74	20			-15		-26	23	Yes
	Car door closure	79	2	81	20					-26	45	Yes
	Car start	78	2	80	20			-15		-26	29	Yes
	Car on Ramp	77		77	20					-26	41	Yes
	Rec area inc pool	86	2	88	60			-18		-36	24	Yes
	Gym	89		89	46			-25		-33	21	Yes
2	Criteria											45
	Car passby	74		74	16			-30		-24	10	Yes
	Car door closure	79		79	21					-26	43	Yes
	Car start	78	2	80	16			-30		-24	16	Yes
	Car on Ramp	77	2	79	40					-32	37	Yes
	Rec area inc pool	86	2	88	44			-22		-33	23	Yes
	Gym	89		89	55			-25		-35	19	Yes
3	Criteria											45
	Car passby	74		74	11			-30		-21	13	Yes
	Car door closure	79		79	11			-30		-21	18	Yes
	Car start	78	2	80	11			-30		-21	19	Yes
	Car on Ramp	77	2	79	77			-30		-38	1	Yes
	Rec area inc pool	86	2	88	34			-20		-31	27	Yes
	Gym	89		89	53			-25		-34	20	Yes
4	Criteria											45
	Car passby	74		74	10			-30		-20	14	Yes
	Car door closure	79		79	10			-30		-20	19	Yes
	Car start	78	2	80	10			-30		-20	20	Yes
	Car on Ramp	77	2	79	70			-30		-37	2	Yes
	Rec area inc pool	86	2	88	42			-15		-32	31	Yes
	Gym	89		89	30			-25		-30	24	Yes
5	Criteria											45
	Car passby	74		74	101			-30		-40	-6	Yes
	Car door closure	79		79	104			-30		-40	-1	Yes
	Car start	78	2	80	101			-30		-40	0	Yes
	Car on Ramp	77	2	79	104			-30		-40	-1	Yes
	Rec area inc pool	86	2	88	147					-43	35	Yes
	Gym	89		89	120			-25		-42	12	Yes

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

Compliance with the sleep disturbance criteria is predicted for all time periods without the need for further acoustic treatment.

7.5 Waste Collection

An assessment has been undertaken to compare the existing and proposed waste collection operations at 122 Marine Parade. As the waste collection is suggested to be located in the same location as the current waste collection Acoustic Works has conducted on-site noise monitoring of the current City of Gold Coast Council waste bin collection on Thursday, 12 June 2025, between 7:00 am and 8:00 am. Acoustic Works has also conducted additional noise monitoring of the proposed Veolia waste collection were carried out on Friday, 13 June 2025, between 10:00 am and 11:00 am.

The current waste management system comprises two 3000L metal bins (one general waste and one recycling), which are serviced two to three times per week by a front-lift truck. Noise monitoring recorded noise levels ranging from 87–89 dBA Leq (1 min), with maximum levels (Lmax) between 105–107 dBA.

The proposed system involves four 1100L plastic bins (two general waste and two recycling), to be collected one to three times per week by a rear-lift truck. The measured sound pressure levels for this system ranged from 80–82 dBA Leq (1 min), with the maximum levels (Lmax) between 84–88 dBA.

The data indicates that the proposed plastic bins generate noise levels approximately 5 dBA lower for the Leq (1min) and with the Lmax noise level approximately 20 dBA lower when comparing measured noise levels to the existing metal bins. An assessment of the existing waste collection and the proposed system has been conducted to compare and evaluate the potential impacts on neighbouring properties.

The assessment has been conducted during the daytime period as confirmed in the waste management report and supporting letter from Veolia (ref. Miami Development letter 122 Marine pde, dated 18 June 2025). The duration of the waste collection has been based on the previous noise measurements of the rear lift waste collections.

7.5.1 Current Waste Collection Assessment

7.5.1.1 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 8: Acoustic quality objective noise levels, 1 hour

Receiver	Receivers 1. 2 Fraser Avenue (W) 2. 134 Marine Parade (NE) 3. 120 Marine Parade (SE) 4. Nagel Avenue (SW) 5. 1 Great Hall Drive (W) 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)	Barrier (height (m)) Inc	Barrier screening dB	Building TL or shield dB	Building screening dB	Dist atten. @-6dB/dd	Source L10-Leq dB	Source L1-leq dB	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		
																																				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
1	Current Waste collection	89	2	91	2			240	85				-18	-39	3	5	25	15					28	18					30	20							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																25	15					28	18					30	20							**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																			50	35	30	55	40	35	65	45	40
2	Current Waste collection	89	2	91	2			240	104				-20	-41	3	5	21	11					24	14					26	16							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																22	12					24	14					26	16							**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
	Criteria																																			50	35	30	55	40	35	65	45	40
3	Current Waste collection	89	2	91	2			240	7					-17	3	5	65	55					68	58					70	60							No	No	n/a	No	No	n/a	No	No	n/a
	Total																65	55					68	58					70	60							**No**	**No**	**Yes**	**No**	**No**	**Yes**	**No**	**No**	**Yes**
4	Criteria																																			50	35	30	55	40	35	65	45	40
	Current Waste collection	89	2	91	2			240	47					-34	3	5	48	38					51	41					53	43							Yes	No	n/a	Yes	No	n/a	Yes	Yes	n/a
	Total																48	38					51	41					53	43							**Yes**	**No**	**Yes**	**Yes**	**No**	**Yes**	**Yes**	**Yes**	**Yes**
5	Criteria																																			50	35	30	55	40	35	65	45	40
	Current Waste collection	89	2	91	2			240	126					-43	3	5	39	29					42	32					44	34							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																39	29					42	32					44	34							**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

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

7.5.1.2 Background Creep

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

Table 9: Predicted Background Creep 15-minute compliance

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 TL or shield dB	Building screening dB	Dist atten. @-6dB/dd	LAeq adj,T ext. dB(A) Day	LAeq adj,T ext. dB(A) Eve	LAeq adj,T ext. dB(A) Night	LAeq 15 min Compliance Day	Eve	Night
	Criteria																	54	52	49
1	Current Waste collection	89	2	91	1			240	85				-18	-39	28			Yes	n/a	n/a
	Total														28	12	11	**Yes**	**Yes**	**Yes**
	Criteria																	54	52	49
2	Current Waste collection	89	2	91	1			240	104				-20	-41	24			Yes	n/a	n/a
	Total														24	11	11	**Yes**	**Yes**	**Yes**
	Criteria																	54	52	49
3	Current Waste collection	89	2	91	1			240	7					-17	68			No	n/a	n/a
	Total														68	12	12	**No**	**Yes**	**Yes**
4	Criteria																	54	52	49
	Current Waste collection	89	2	91	1			240	47					-34	51			Yes	n/a	n/a
	Total														51	12	12	**Yes**	**Yes**	**Yes**
5	Criteria																	54	52	49
	Current Waste collection	89	2	91	1			240	126					-43	42			Yes	n/a	n/a
	Total														42	12	12	**Yes**	**Yes**	**Yes**

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

7.5.1 Proposed Waste Collection Assessment

7.5.1.1 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 10: 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)	Barrier (height (m)) No	Barrier screening dB	Building TL or shield dB	Topo screening dB	Dist atten. @-6dB/dd	Source L10-Leq dB	Source L1-Leq dB	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 Day/ eve	Day/ eve indoor	Night indoor	LA10 Compliance Day/ eve	Day/ eve indoor	Night indoor	LA1 Compliance Day/ eve	Day/ eve indoor	Night indoor
1	Criteria																																			50	35	30	55	40	35	65	45	40
	1100L Plastic bin collection	82		82	2			300	85		-18			-39	3	5	17	7					20	10					22	12							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																19	9	13	3	13	3	21	11	13	3	13	3	23	13	13	3	13	3	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
2	Criteria																																			50	35	30	55	40	35	65	45	40
	1100L Plastic bin collection	82		82	2			300	104		-20			-41	3	5	13	3					16	6					18	8							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																16	6	13	3	13	3	18	8	13	3	13	3	19	9	13	3	13	3	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
3	Criteria																																			50	35	30	55	40	35	65	45	40
	1100L Plastic bin collection	82		82	2			300	7					-17	3	5	57	47					60	50					62	52							No	No	n/a	No	No	n/a	Yes	No	n/a
	Total																57	47	13	3	13	3	60	50	13	3	13	3	62	52	13	3	13	3	**No**	**No**	**Yes**	**No**	**No**	**Yes**	**Yes**	**No**	**Yes**
4	Criteria																																			50	35	30	55	40	35	65	45	40
	1100L Plastic bin collection	82		82	2			300	47					-34	3	5	40	30					43	33					45	35							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																40	30	13	3	13	3	43	33	13	3	13	3	45	35	13	3	13	3	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
5	Criteria																																			50	35	30	55	40	35	65	45	40
	1100L Plastic bin collection	82		82	2			300	126					-43	0	0	31	21					31	21					31	21							Yes	Yes	n/a	Yes	Yes	n/a	Yes	Yes	n/a
	Total																31	21					31	21					31	21							**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

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

7.5.1.2 Background Creep

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

Table 11: Predicted Background Creep 15-minute compliance

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 TL or shield dB	Building screening 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. 2 Fraser Avenue (W) 2. 134 Marine Parade (NE) 3. 120 Marine Parade (SE) 4. Nagel Avenue (SW) 5. 1 Great Hall Drive (W)																						
1	Criteria																				54	52	49
	1100L Plastic bin collection	82		82	1			300	85			-18		-39	20	10					Yes	n/a	n/a
	Total														21	11	13	3	13	3	**Yes**	**Yes**	**Yes**
2	Criteria																				54	52	49
	1100L Plastic bin collection	82		82	1			300	104			-20		-41	16	6					Yes	n/a	n/a
	Total														18	8	13	3	13	3	**Yes**	**Yes**	**Yes**
3	Criteria																				54	52	49
	1100L Plastic bin collection	82		82	1			300	7					-17	60	50					No	n/a	n/a
	Total														60	50	13	3	13	3	**No**	**Yes**	**Yes**
4	Criteria																				54	52	49
	1100L Plastic bin collection	82		82	1			300	47					-34	43	33					Yes	n/a	n/a
	Total														43	33	13	3	13	3	**Yes**	**Yes**	**Yes**
5	Criteria																				54	52	49
	1100L Plastic bin collection	82		82	1			300	126					-43	34	24					Yes	n/a	n/a
	Total														34	24	13	3	13	3	**Yes**	**Yes**	**Yes**

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

Exceedances of the background creep criteria are predicted at receiver 3 for waste collection. Recommendations are included in Section 8.

8. Recommendations

8.1 Onsite Activities

Based on the predicted noise levels of the site and surrounds for all time periods, noise impacts at the residential receiver locations are predicted to comply on the condition the following acoustic treatments are implemented:

- The loading bay is recommended to be limited to daytime use only (7am to 6pm). With truck installed with broadband reverse beepers only.
- Carpark finished surfaces should consist of materials which provides low tyre squeal characteristics. Any traversable drainage grates must be securely fastened.
- The Pool and recreation areas are compliant for all time periods.

8.2 MRV Loading Bay

To improve the acoustic performance under various scenarios, acoustic treatments should be incorporated onto the roof surfaces of the MRV loading bay. Acoustic treatments should be applied to the underside of any roof/ceiling area. The treatment should cover all available surface area of the ceiling of the MRV loading bay.

Any treatments should provide a minimum 0.9 NRC (Noise Reduction Coefficient) or greater. In terms of individual frequency bands, the following absorption per square metre would be required;

Table 12: Absorptive panel performance

Description	Octave Band Centre Frequency (Hz)						
	125	250	500	1k	2k	4k	8k
Typical absorption per square metre (metric Sabins)	0.20	0.60	0.95	1.00	1.00	0.95	0.75

For composite systems, these figures are based on the total performance of the system (infill plus face material).

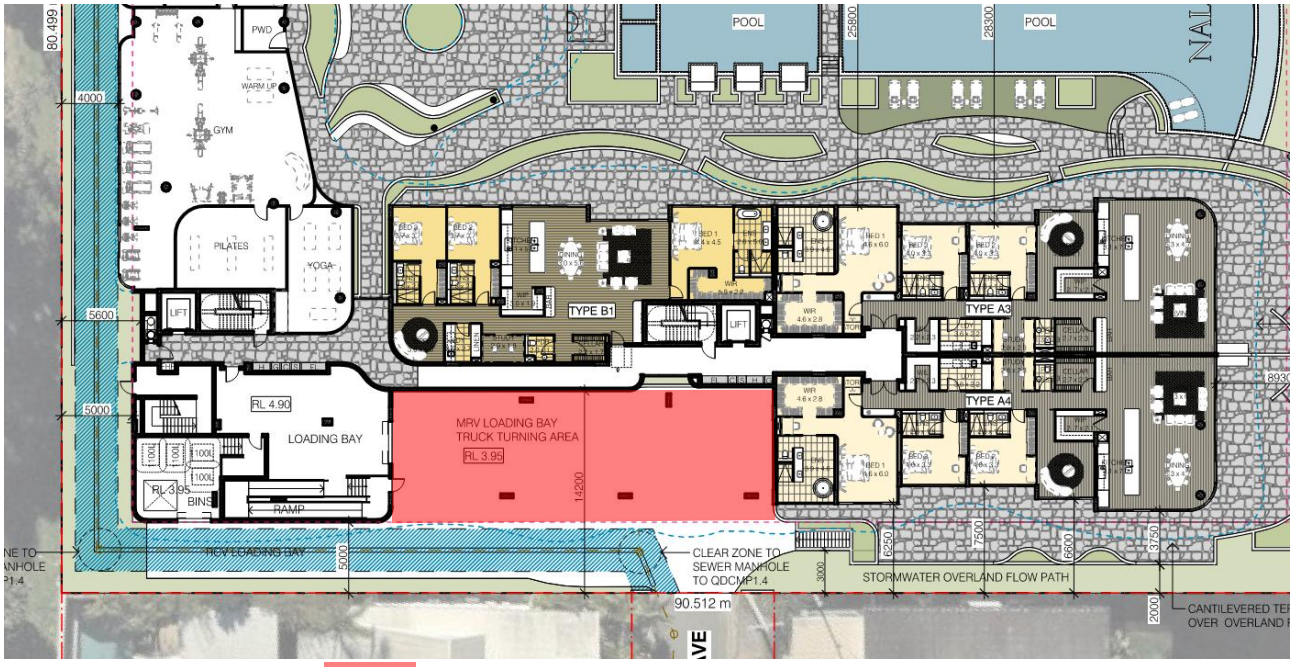
Recommended treatments may include commercial products, and-or 'in-principle' acoustic designs. Commercial options are those that are available off-the-shelf from acoustic companies. In-principle designs are acoustic treatments that can be constructed from scratch using widely available building products.

In-principle designs include (but not limited to);

- Slotted timber or slats with insulation behind.
- Perforated corrugated metal (such as Stramit Corrugated, Lysaght/ Bluescope, Renhurst Ripplesound, Renhurst Rippletone) with 50mm insulation behind. The nominal percentage of open area should be 11% or greater.

Perforated fibre cement sheet with 50mm insulation behind. The nominal percentage of open area should be 13% or greater. Preferred layouts are shown below;

Figure 3: Recommended loading bay ceiling acoustic lining



Recommended extent of acoustic ceiling lining

8.3 Waste Collection

As per Section 7.5 the proposed waste collection is 1100L plastic bins are recommended to be collected during the daytime period as confirmed in the waste management report and supporting letter from Veolia (ref. Miami Development letter 122 Marine pde, dated 18 June 2025) to reduce the noise impacts the that at sensitive receivers.

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 noise criteria stated in Section 6.1.2 with 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 located at 122 Marine Parade, Miami. Recommendations have been included in relation to onsite activity noise impacts to neighbouring receivers.

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

Report Prepared By

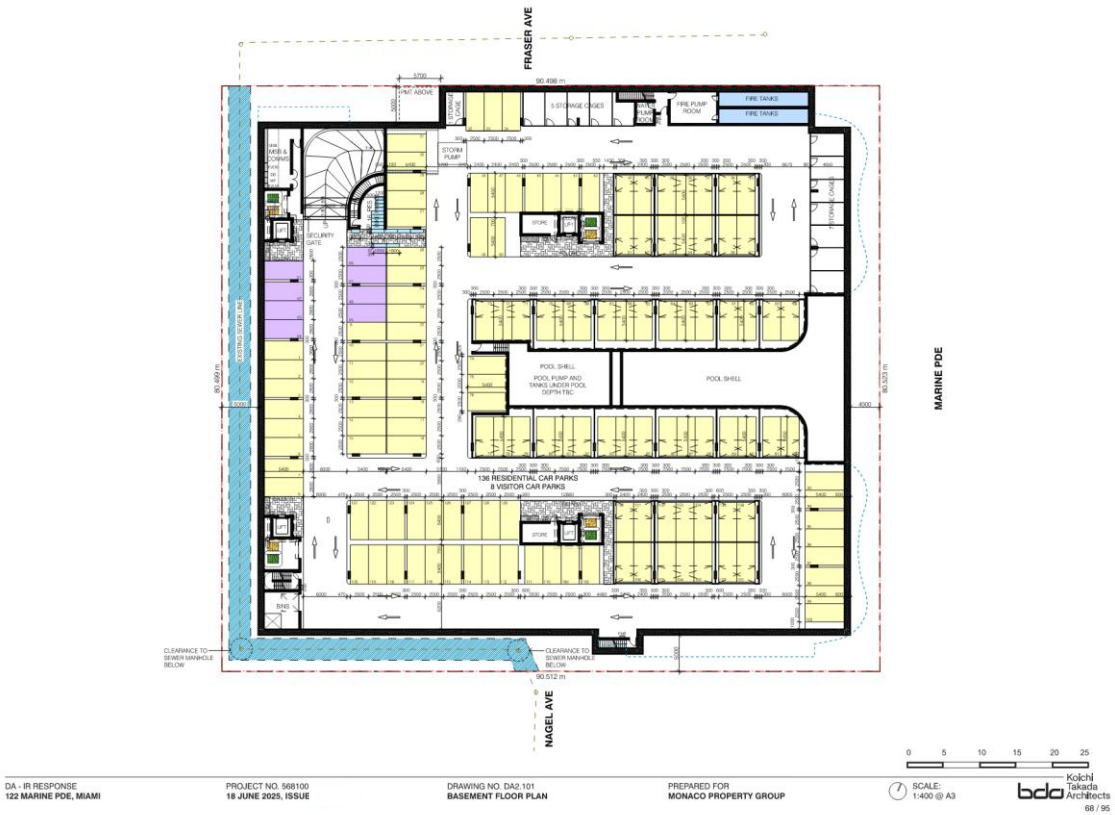


Kayleigh Duce
Acoustic Consultant
acousticworks)))

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10. Appendices

10.1 Development Plans







DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA2.103
LEVEL 2 PLAN

PREPARED FOR
MONACO PROPERTY GROUP

SCALE:
1:400 @ A3

Koichi Takada Architects

70 / 95



DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA2.104
LEVEL 3 PLAN

PREPARED FOR
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SCALE:
1:400 @ A3

Koichi Takada Architects

71 / 95



DA - IR RESPONSE
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PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA2.105
LEVEL 4 PLAN

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SCALE:
1:400 @ A3

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72 / 95



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PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA2.106
LEVEL 5 PLAN

PREPARED FOR
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SCALE:
1:400 @ A3

Koichi Takada Architects

73 / 95



DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA2.107
ROOFTOP RECREATION LEVEL

PREPARED FOR
MONACO PROPERTY GROUP

SCALE:
1:400 @ A3

Koichi Takada Architects

74 / 95



DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA2.108
ROOF PLAN

PREPARED FOR
MONACO PROPERTY GROUP

SCALE:
1:400 @ A3

Koichi Takada Architects

75 / 95



NORTH ELEVATION - 1:300 (A3)

0 3 6 9 12 15

DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA3.101
NORTH ELEVATION

PREPARED FOR
MONACO PROPERTY GROUP

SCALE:
1:300 @ A3

bda Koichi Takada Architects

76 / 95



EAST ELEVATION - 1:300 (A3)

0 3 6 9 12 15

DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA3.102
EAST ELEVATION

PREPARED FOR
MONACO PROPERTY GROUP

SCALE:
1:300 @ A3

bda Koichi Takada Architects

77 / 95



SOUTH ELEVATION - 1:300 (A3)

0 3 6 9 12 15

DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE I

DRAWING NO. DA3.103
SOUTH ELEVATION

PREPARED FOR
MONACO PROPERTY GROUP

SCALE:
1:300 @ A3

bda Koichi Takada Architects

78 / 95



WEST ELEVATION - 1:300 (A3)

0 3 6 9 12 15

DA - IR RESPONSE
122 MARINE PDE, MIAMI

PROJECT NO. 568100
18 JUNE 2025, ISSUE

DRAWING NO. DA3.104
WEST ELEVATION

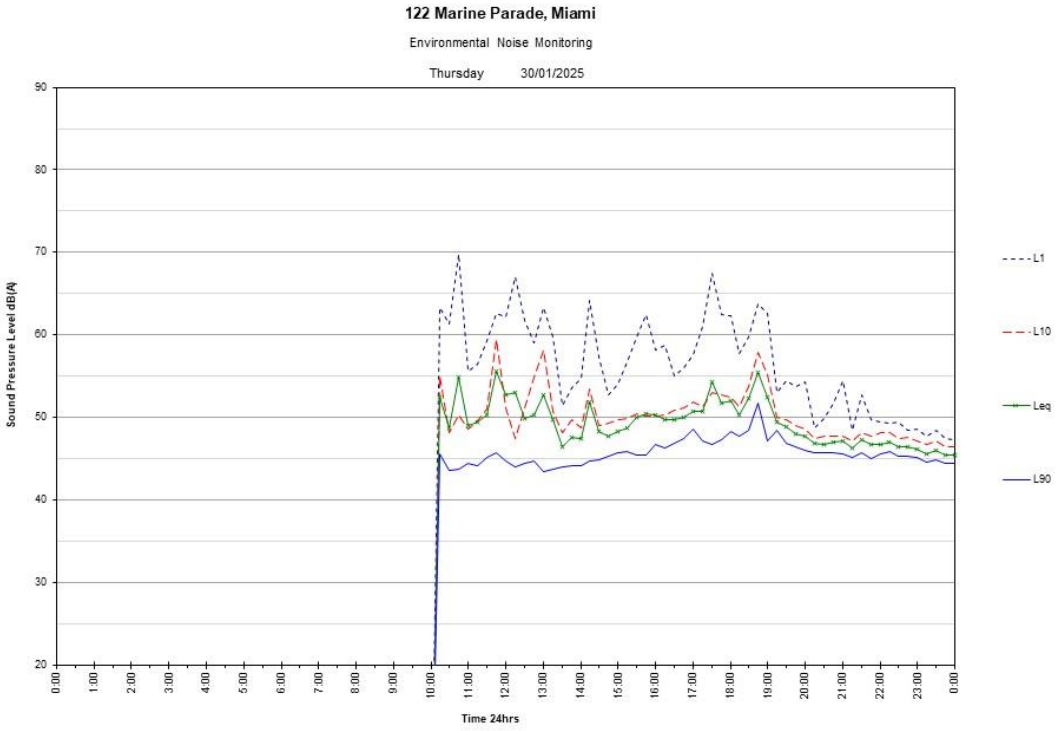
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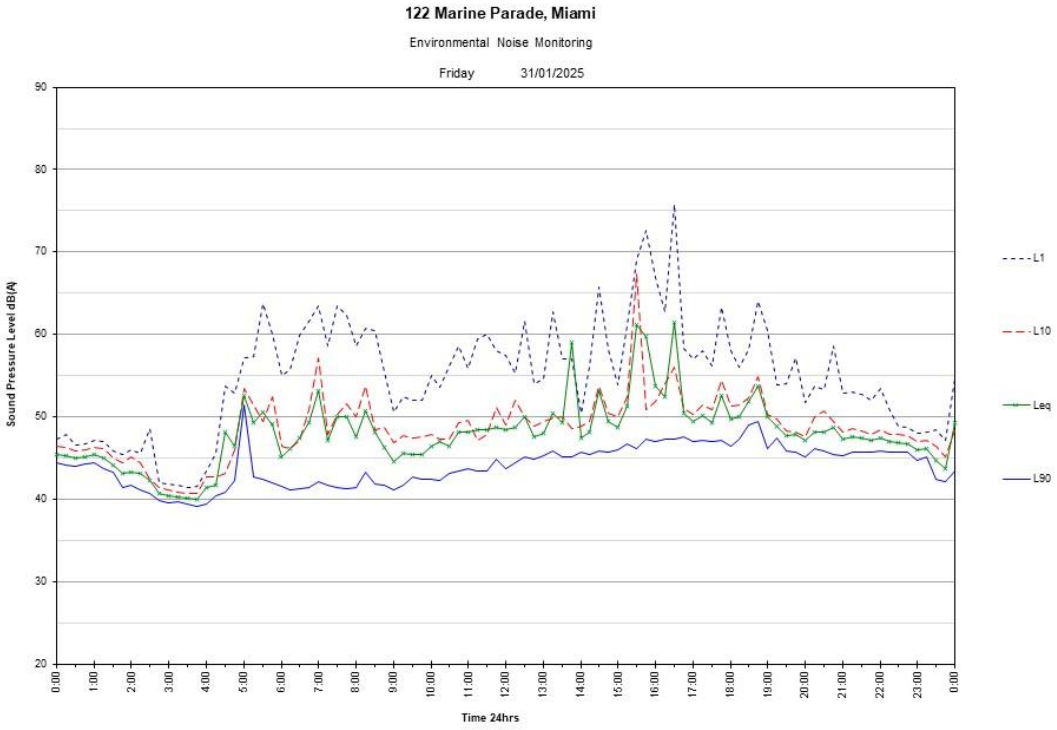
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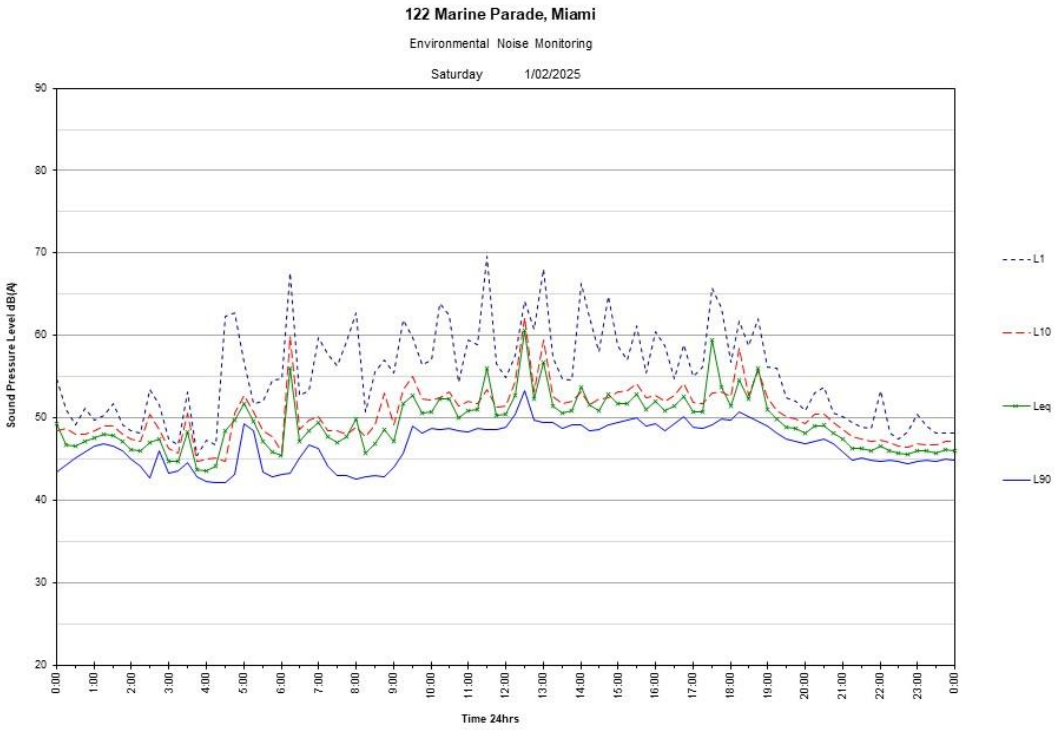
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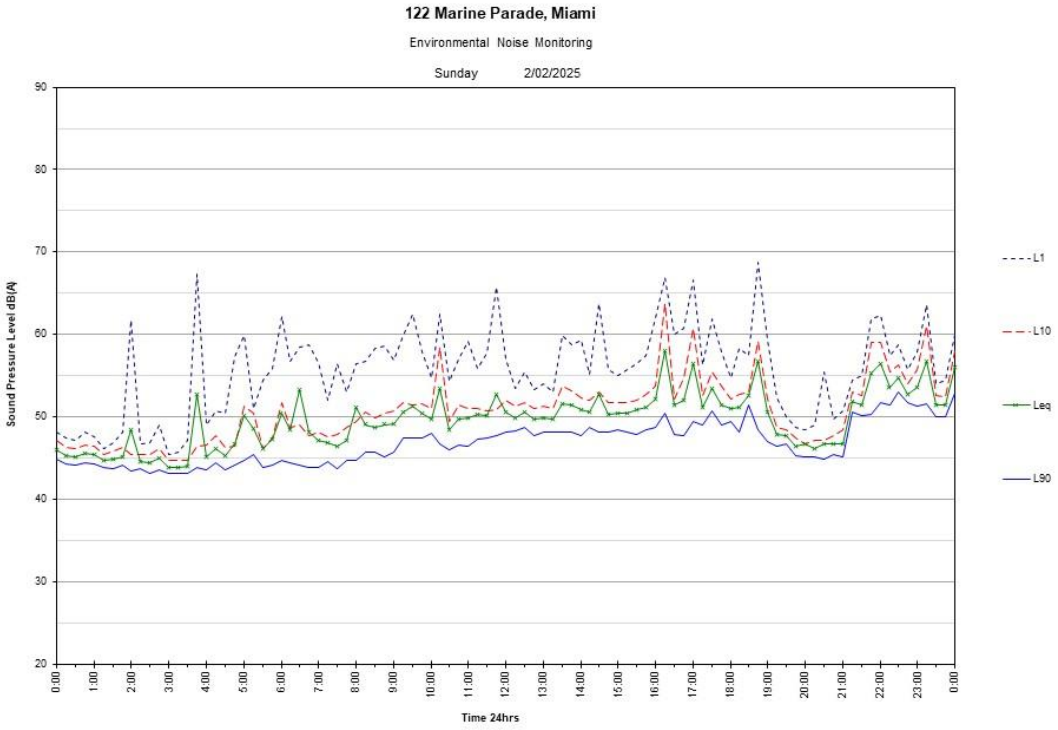
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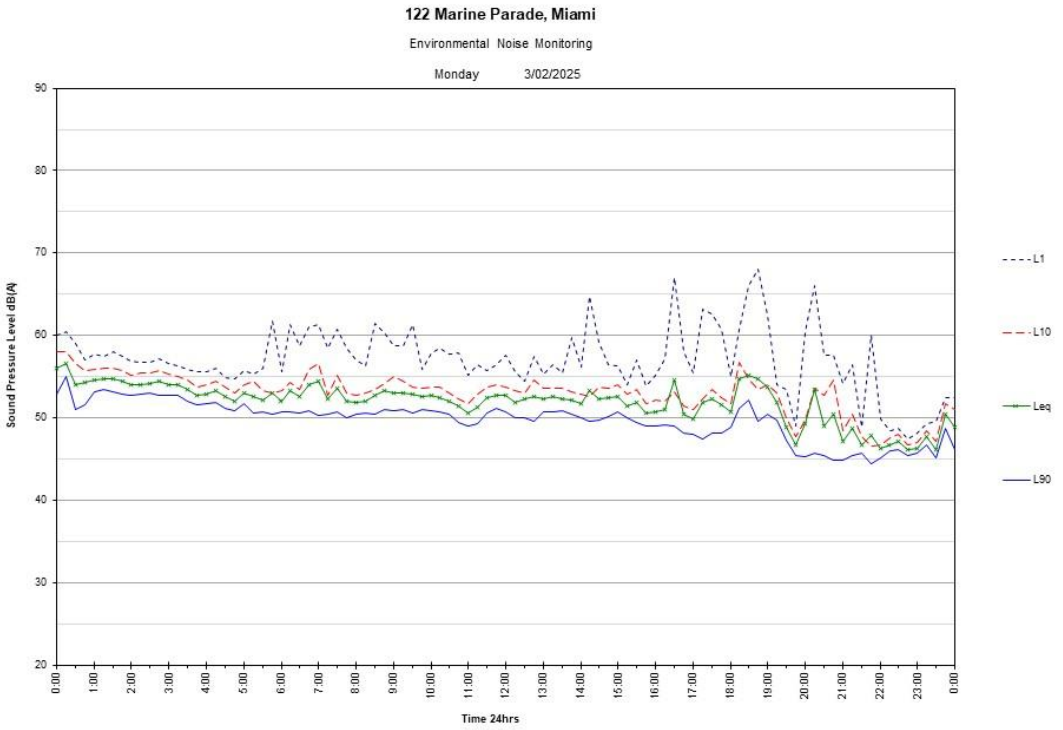
10.2 Noise Monitoring Charts

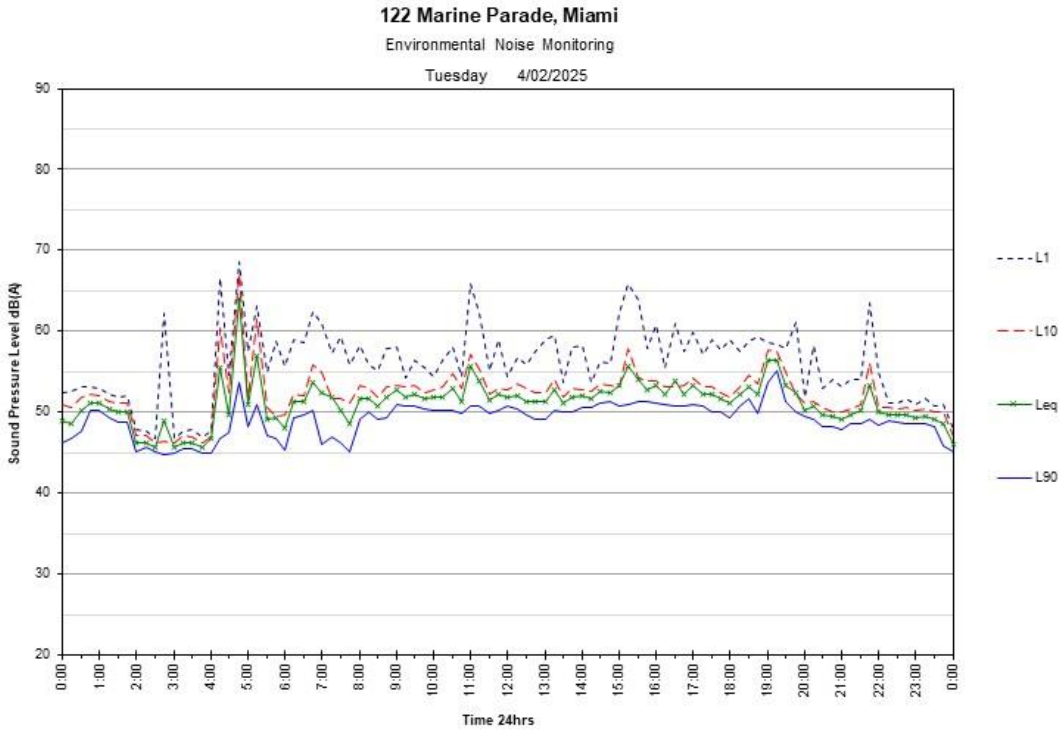


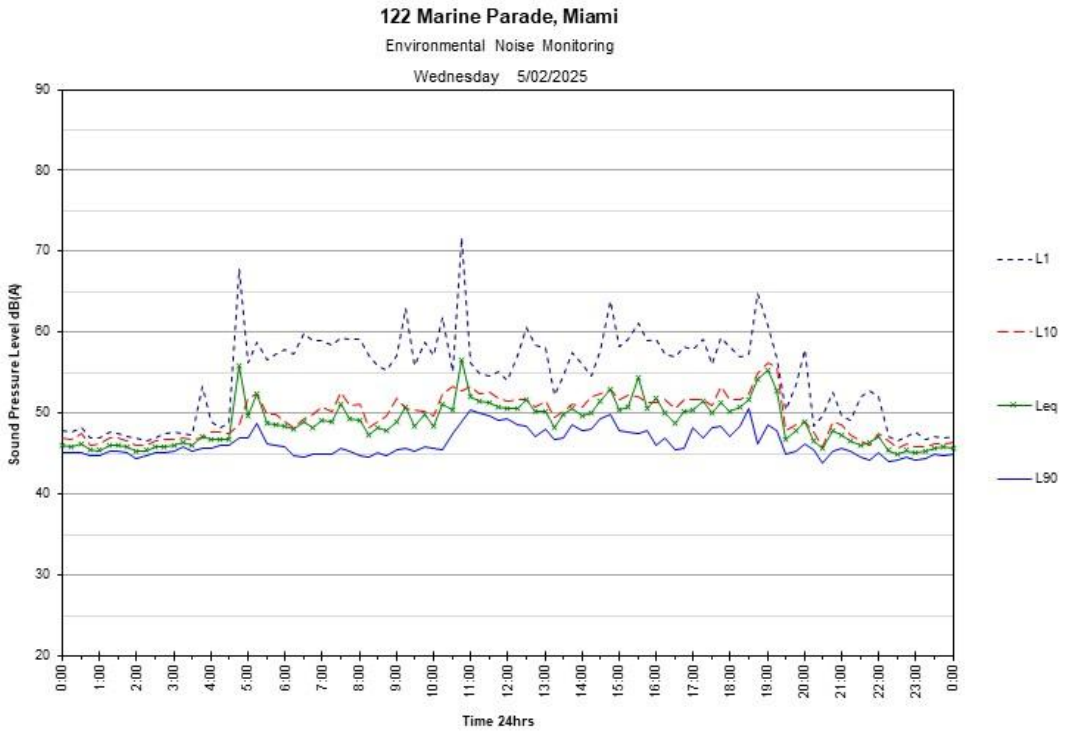


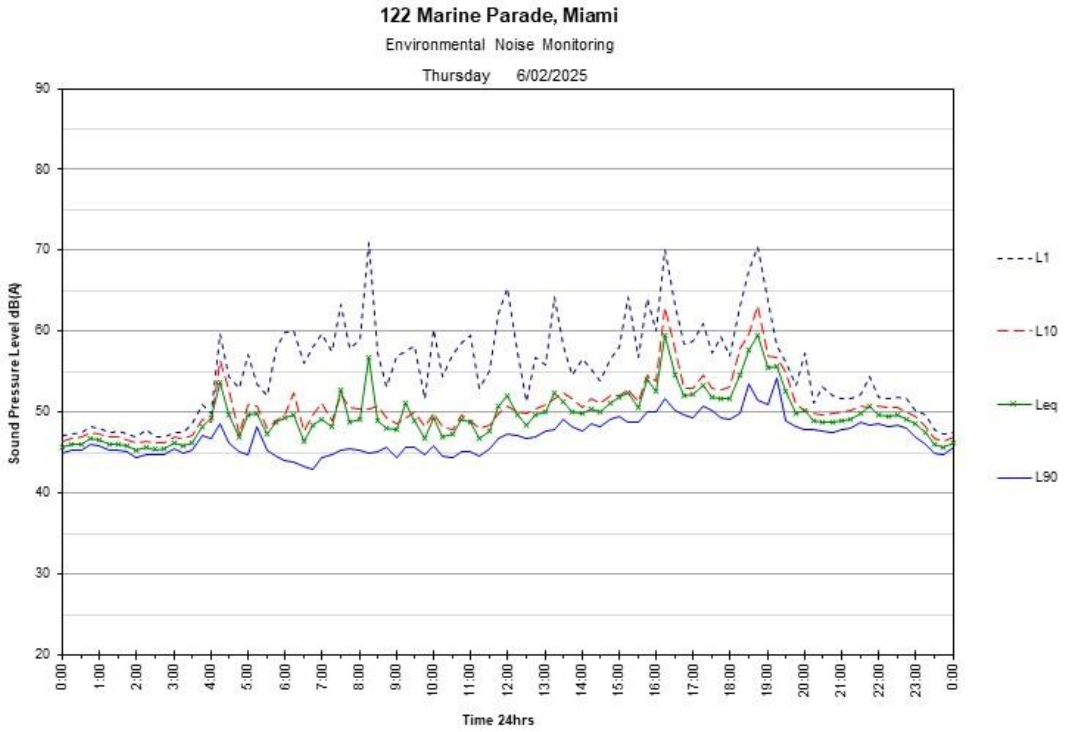

122 Marine Parade, Miami
Environmental Noise Monitoring
Saturday 1/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

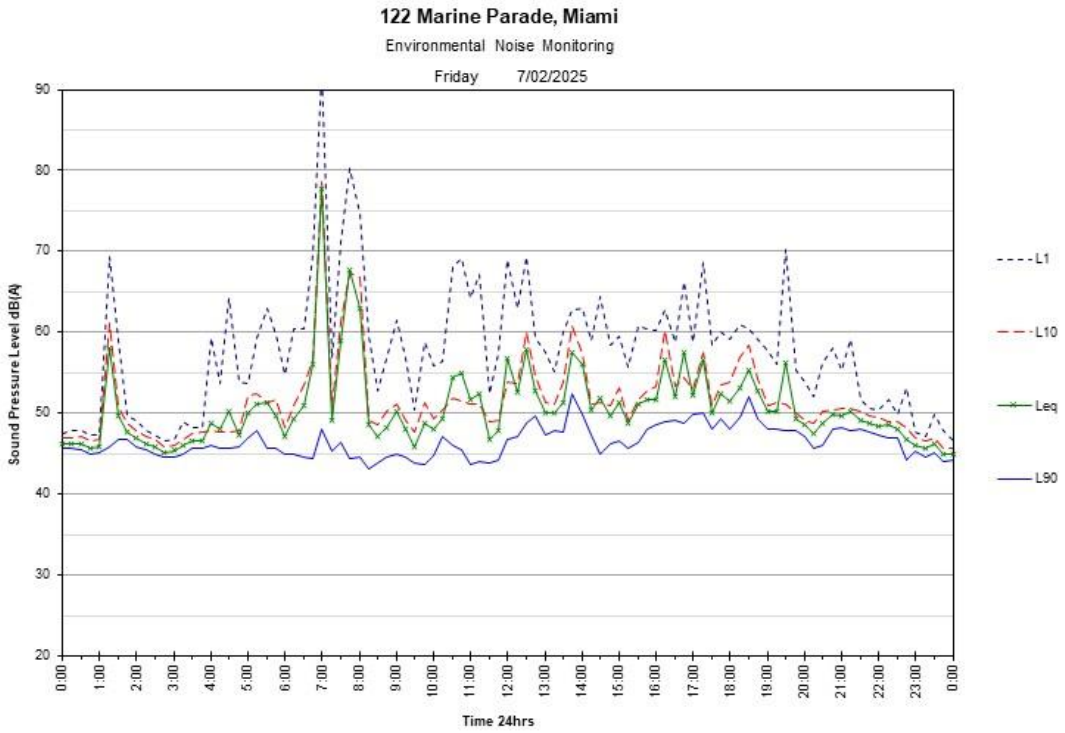

122 Marine Parade, Miami
Environmental Noise Monitoring
Sunday 2/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

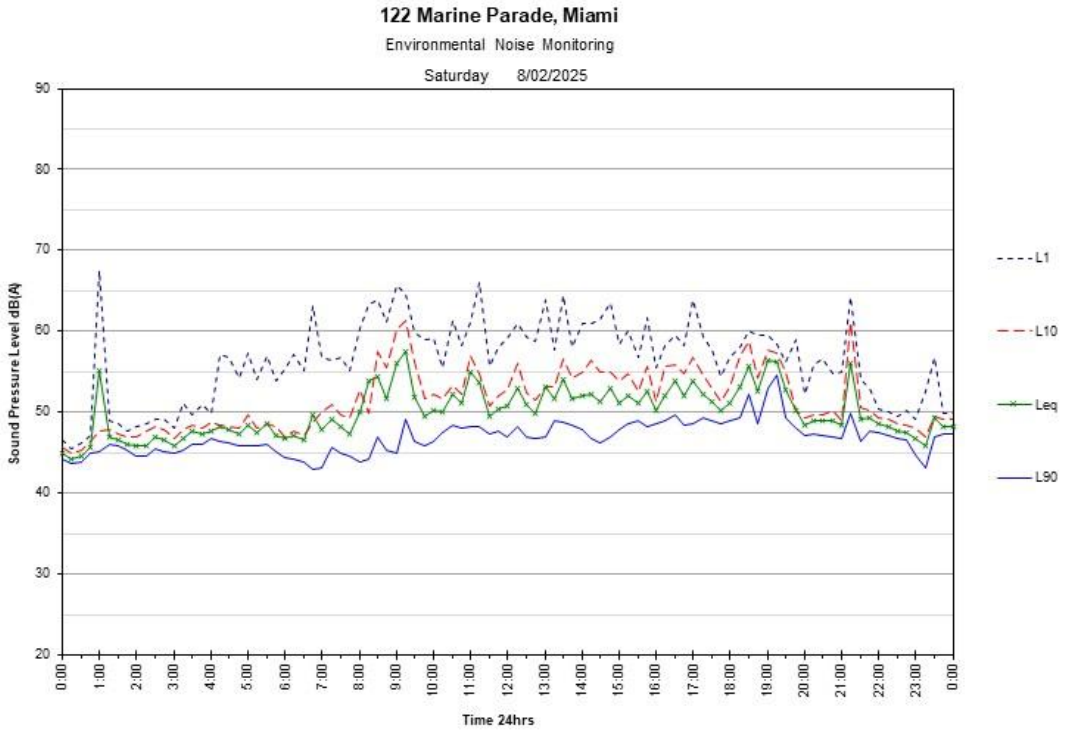

122 Marine Parade, Miami
Environmental Noise Monitoring
Monday 3/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

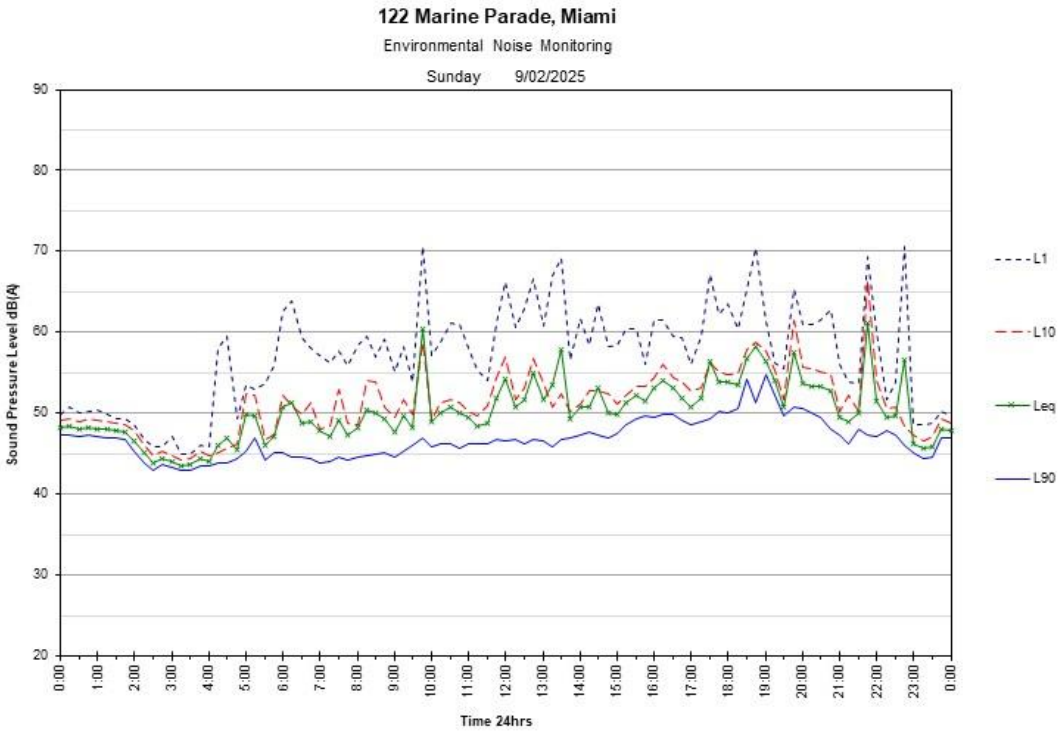

122 Marine Parade, Miami
Environmental Noise Monitoring
Tuesday 4/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

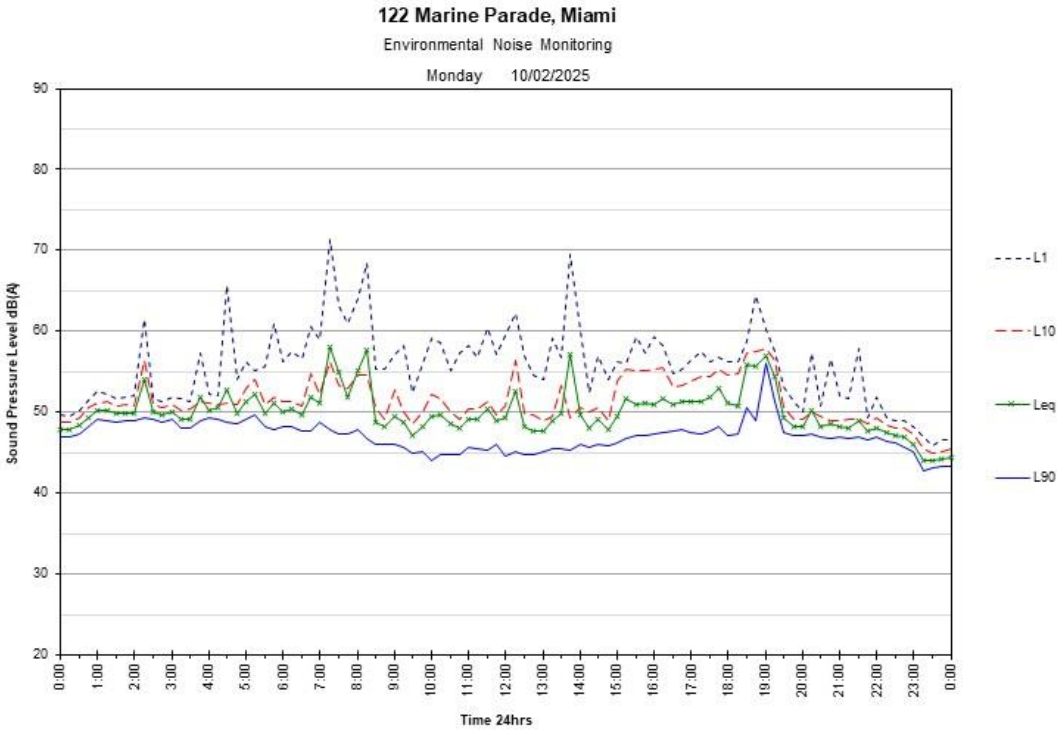

122 Marine Parade, Miami
Environmental Noise Monitoring
Wednesday 5/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

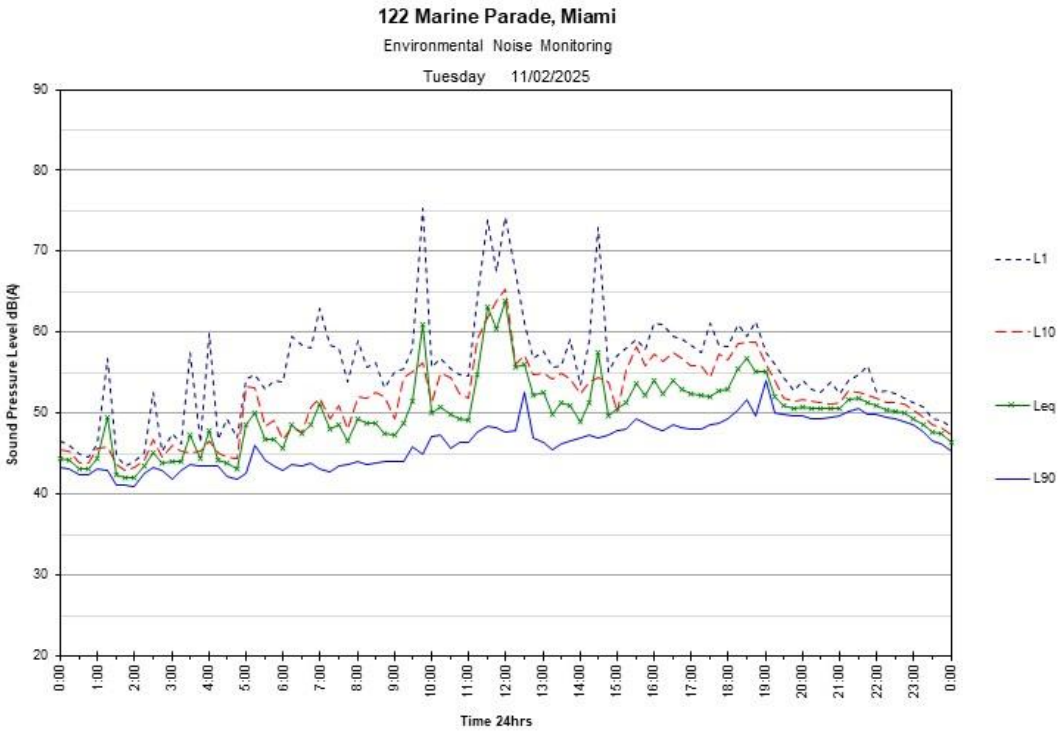

122 Marine Parade, Miami
Environmental Noise Monitoring
Thursday 6/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

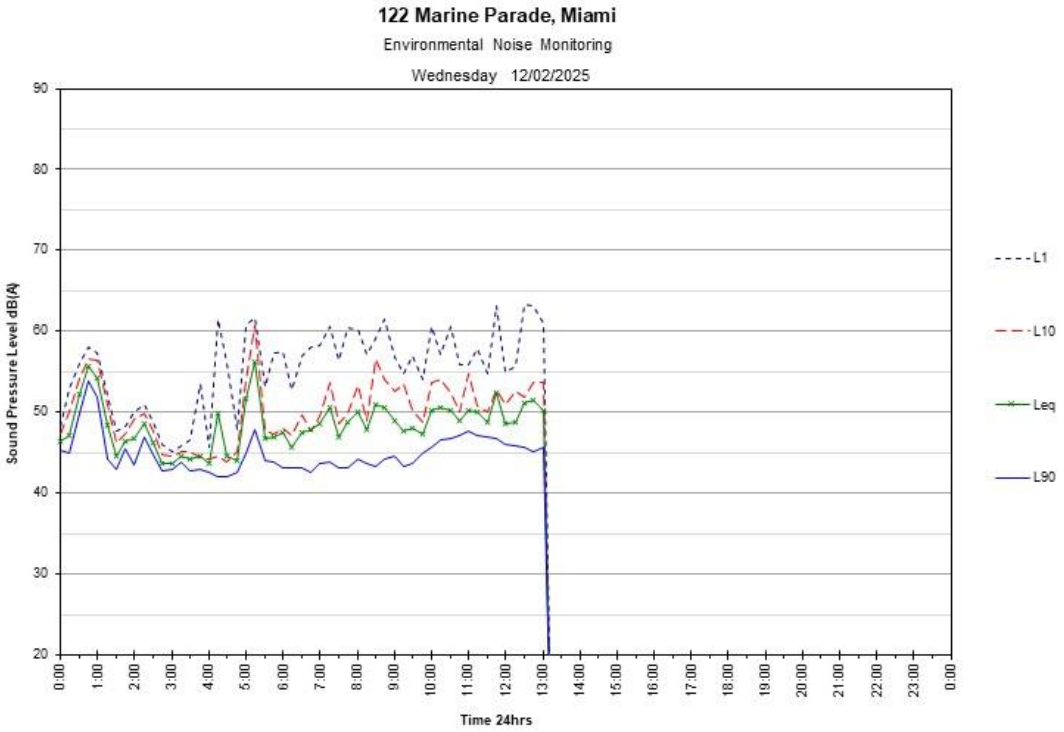

122 Marine Parade, Miami
Environmental Noise Monitoring
Friday 7/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


122 Marine Parade, Miami
Environmental Noise Monitoring
Saturday 8/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


122 Marine Parade, Miami
Environmental Noise Monitoring
Sunday 9/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


122 Marine Parade, Miami
Environmental Noise Monitoring
Monday 10/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


122 Marine Parade, Miami
Environmental Noise Monitoring
Tuesday 11/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90


122 Marine Parade, Miami
Environmental Noise Monitoring
Wednesday 12/02/2025
Sound Pressure Level dB(A)
Time 24hrs
L1
L10
Leq
L90

ATTACHMENT 6

Revised Site Based Stormwater Management Plan
prepared by Arcadis



ARCADIS

SITE BASED STORMWATER MANAGEMENT PLAN

122 MARINE PARADE, MIAMI

MONACO PROPERTY GROUP PTY LTD



IMPROVING QUALITY OF **LIFE**

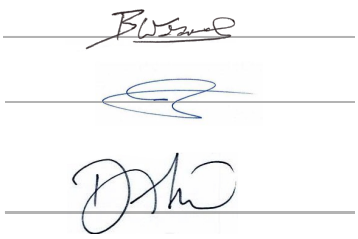
122 MARINE PARADE, MIAMI

SITE BASED STORMWATER MANAGEMENT PLAN

Author Ben Wieser

Checker James Stockwell

Approver Darlan Castro
RPEQ19918



Project No 30264961-3

Report No GA0002

Revision 02

Date 13/06/2025

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Revision	Date	Description
01	24/04/2025	Issue for Approval
02	13/06/2025	Updated for Information Request Response

Should you require any further information, please contact our Gold Coast office and ask to speak to the report author denoted above.

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APPENDIX B

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APPENDIX C

Existing Catchment Areas

APPENDIX D

Developed Catchment Areas

APPENDIX E

SQIDEP Approvals

APPENDIX F

Healthy Waters Code

APPENDIX G

Council Hydraulics Correspondence

GLOSSARY OF TERMS

Australia Rainfall and Runoff (ARR) 2019 recommends adaptation of new terminology relating to storm events summarised in Table A below. As recommended, this report documents data with respect to AEP (%).

The following definitions should be noted:

- EY = Number of exceedances per year.
- AEP = Annual Exceedance Probability.
- AEP (1 in x) = 1/AEP.
- ARI = Average Recurrence Interval (years).

The below table should be refereed to for a comparison of storm events.

Table A – Storm Events Terminology

EY	AEP (%)	AEP (1 in ….)	ARI
1	63.21	1.58	1
0.69	50	2	1.44
0.5	39.35	2.54	2
0.22	20	5	4.48
0.2	18.13	5.52	5
0.11	10	10	9.49
0.05	5	20	20
0.02	2	50	50
0.01	1	100	100

ASSOCIATED MODELLING FILES

For internal reference, the following modelling file packages are associated with this report.

- 30264961-3-EDA0001-01 - DRAINS
- 30264961-3-EDB0001-01 - MUSIC

1 EXECUTIVE SUMMARY

Monaco Property Group Pty Ltd has commissioned Arcadis to prepare a Site Based Stormwater Management Plan (SBSMP) for a development application for the site located over the following allotment(s):

- Lot 122 on SP284713 (122 Marine Parade, Miami).

The proposed development intended for the site involves the construction of a residential apartment building.

This report demonstrates the proposed development will be constructed and operated in accordance with the Water Sensitive Urban Design (WSUD) Requirements of Council, the South-East Queensland State Planning Policy (SPP), the Queensland Development Code, the Queensland Urban Drainage Manual (QUDM), Australian Rainfall and Runoff (2019) and the Environmental Protection (Water) Policy (2009). The primary objectives of this Site Based Stormwater Management Plan (SBSMP) are achieved as follows:

Lawful Point of Discharge (LPoD)

The site proposes to maintain the existing LPoD being Marine Parade. The site proposes to discharge stormwater to Marine Parade after receiving appropriate treatment on site.

The conveyance of potential external flows to Marine Parade is to be maintained or improved.

Stormwater Quantity

This report includes a hydrological assessment using DRAINS software for the quantity of stormwater discharging from the site in the pre-development (existing) and post-development (developed) scenarios. This assessment estimates that the stormwater discharging from the proposed development is generally consistent with the flows discharging from the existing site. Accordingly, no on-site stormwater detention is applied.

Stormwater Quality

A stormwater quality assessment is provided which demonstrates that a specially tailored treatment system will be required in order to meet the pollutant removal targets of City of Gold Coast (CoGC) during the operational phase of the proposed development. An Ocean Protect treatment system is proposed.

All the stormwater quality controls detailed in this document are contained within the development site and will remain a private asset of the property owner. Regular maintenance of the treatment devices must be undertaken to ensure the continuing performance of the stormwater quality treatment train.

Waterway Stability

The development is proposing to discharge into a hard lined kerb, pit and piped stream and therefore waterway stability is not applicable.

Erosion and Sediment Control

Construction phase sediment control devices are to be implemented during construction works in accordance with requirements associated with Type 3 sediment discharge zones, comprising of a vehicle shakedown, sediment fences and gully inlet protection.

1.1 Revision 02

Revision 02 of this report has been prepared to assist the development approval response to Council's request for further information reference MCU/2025/155 dated 28 May 2025. The key updates are:

- Updated Section 5.3 to reflect discussions and clarification of information with Council following meeting and agreement dated 02/06/2025.
  - Email discussions have been included in Appendix G of this report.
- Updated Appendix B drawings to reflect updated development plans.

Importantly, no change to the original submitted discharge strategy and stormwater management device strategy has occurred. Stormwater modelling has remained unchanged. This update provides relevant clarifications to these strategies as described above.

2 SITE CHARACTERISTICS

2.1 Location Details

The subject site is located within Miami, South-East Queensland, Australia over the following allotment(s):

- Lot 122 on SP284713 (122 Marine Parade, Miami).

The site is bordered by Fraser Avenue, as well as residential, open space properties to the north, Marine Parade to the east, Lions Head Park (open space) to the west, and Nagel Avenue, as well as residential properties to the south.

The total area of the site is approximately 7,284m^2.

The City of Gold Coast is the local government authority.

2.2 Land Usage

In its current state, the project site contains a residential apartment building with associated driveways, entries, parking and planting areas. Figure 2-1 below provides a current locality plan of the site.



Figure 2-1 Site Locality Plan (Aerial Imagery Courtesy of Nearmap)

2.3 Topography and Features

The site topography grades towards Marine Parade, east of the site. The site has a high point of approximately RL 4.65m AHD and a low point of RL 3.86m AHD. Refer to the site survey within Appendix A of this report for further information.

3 PROPOSED DEVELOPMENT

The proposed development involves the construction of a residential apartment building, including:

- Residential apartments.
- Residential amenities.
- 1 level of basement parking.

A plan extract of the proposed development has been provided in Figure 3-1.

A full set of Architectural plans are provided within the development application package and should be referred to for further information.

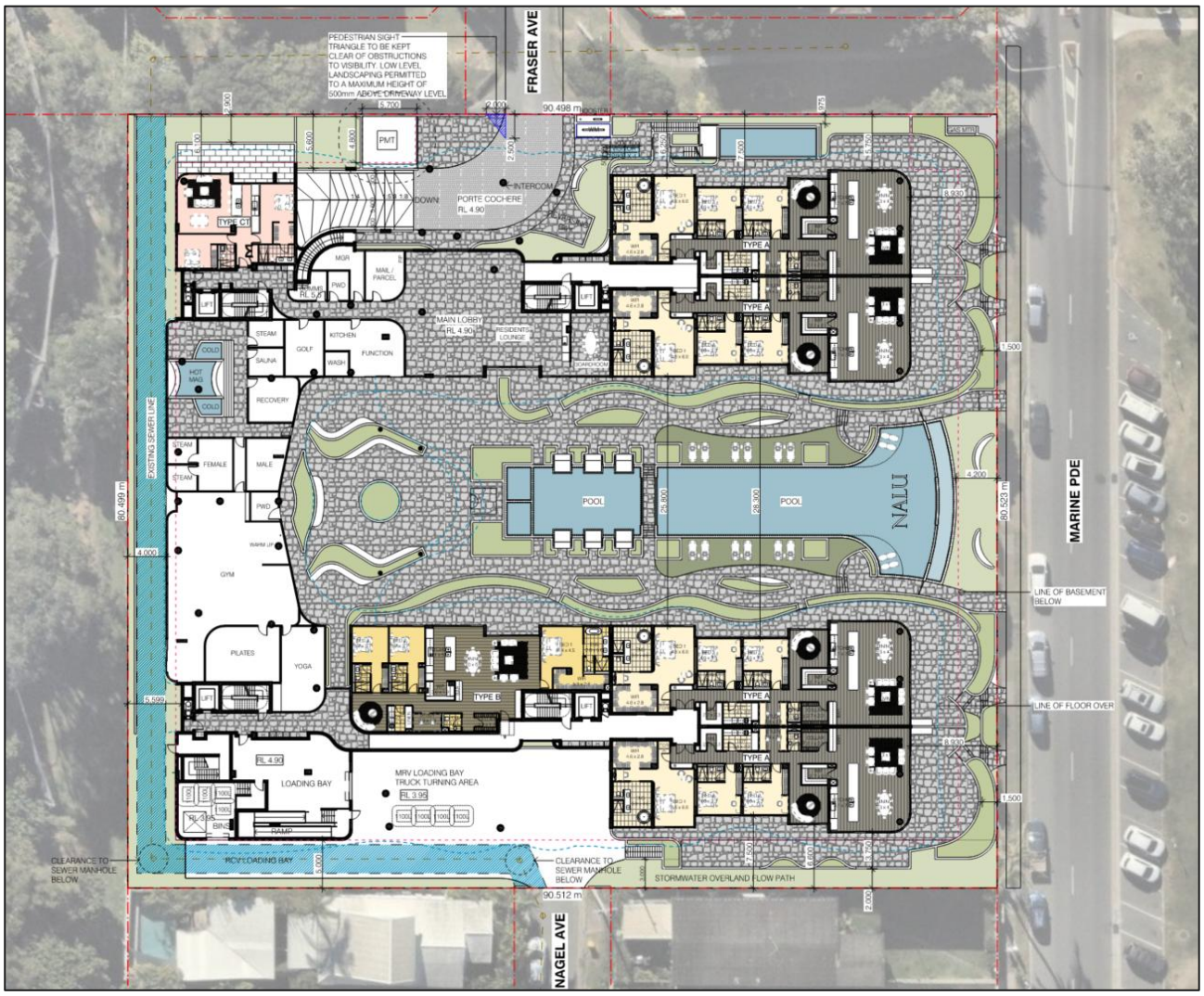


Figure 3-1 Proposed Development Ground Floor

4 STORMWATER MANAGEMENT OBJECTIVES

In accordance with QUDM and the City Plan Healthy Waters code, the following stormwater management components have been investigated.

- Lawful point of discharge (LPOD) | Section 5 of this report.
- Stormwater Quantity, including waterway stability where applicable | Section 5 & 6 of this report.
- Stormwater Quality Operational Phase | Refer to Section 7 of this report.
- Stormwater Quality Construction Phase | Refer to Section 8 of this report.

The Healthy Waters Code has been completed as part of this development application package as a stand-alone document and is also included in Appendix F of this report.

5 LAWFUL POINT OF DISCHARGE AND DRAINAGE

5.1 Existing Stormwater Drainage

Stormwater runoff generated by the site is discharged to Marine Parade via connections to underground drainage and overland flow. Local runoff in Marine Parade, including runoff from the subject site, ultimately arrives in a sag ~20m south of the subject site before discharging via pipe to Miami Beach. The pipe sizes within this network range from DN300 to DN1300.

The following existing stormwater drainage and catchments have been identified adjacent to the development site from both CoGC ArcGIS mapping (online) and 1m DTM, field survey (Appendix A) and site inspection.

1. Fraser Avenue grades south towards the subject site, however, municipal drainage at the cul-de-sac adjacent the site is shown to drain north (backgrading) per Council's online mapping. Currently the VXO at the cul-de-sac head acts as a weir and controls how much runoff can enter the site (if any). Runoff then traverses along the northern boundary within the site & Council's park land Lot 3 on WD810476 before entering an existing drainage pit and conveying to Marine Parade. Runoff in excess of the network's capacity will flow overland to Marine Parade.
2. Nagel Avenue grades north towards the subject site, however, municipal drainage at the site interface is shown to drain south (backgrading) per Council's online mapping. There is potential for runoff (in excess of Council's drainage system capacity) to spill into the subject site before spilling eastbound to Marine Parade. Currently the road stub acts as a constraint controlling how much runoff can enter the site. Runoff then traverses along the southern boundary before passing through to Marine Parade. Based on site inspection, it was determined that water would also pass through the southern adjoining private property Lot 5 on RP46948 due to the existing site topography.
3. A small portion of Lions Head Park to the west grades to the southwest corner of the site before it drains into the site's private infrastructure and out to Marine Parade.

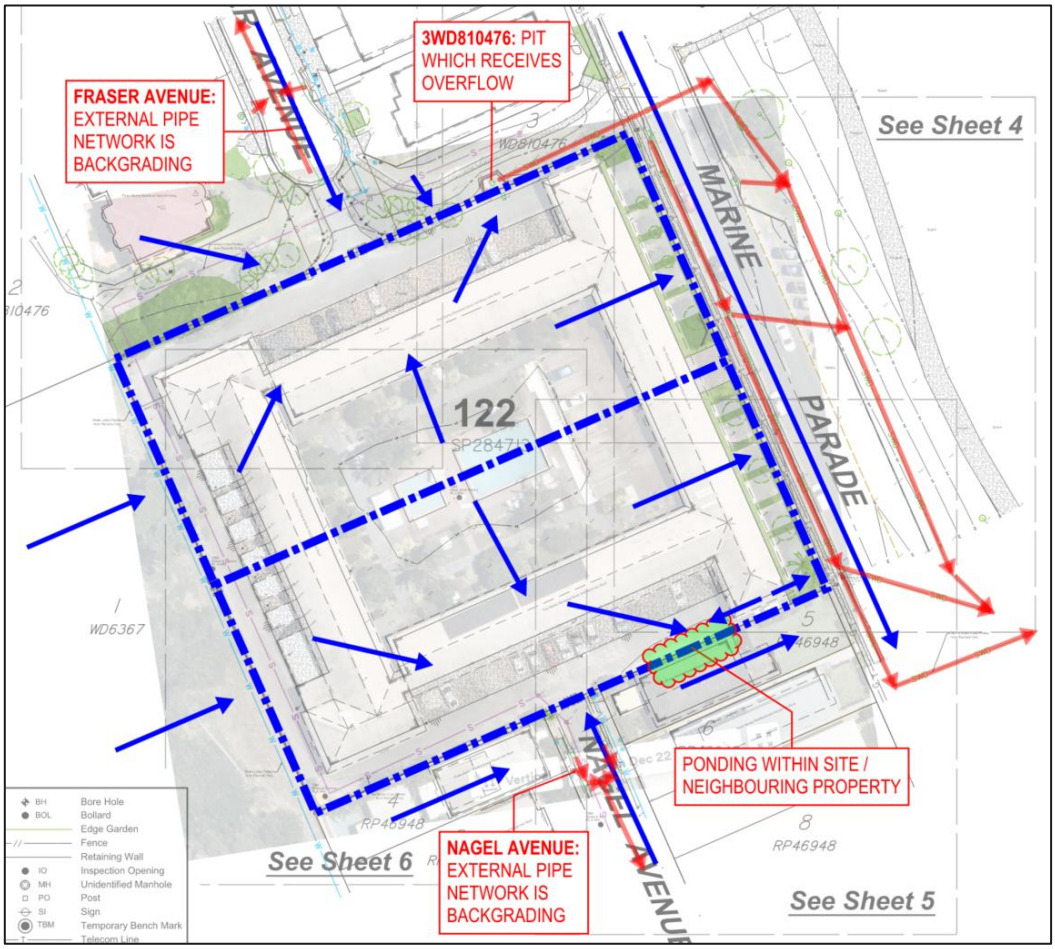


Figure 5-1 General Site Flows

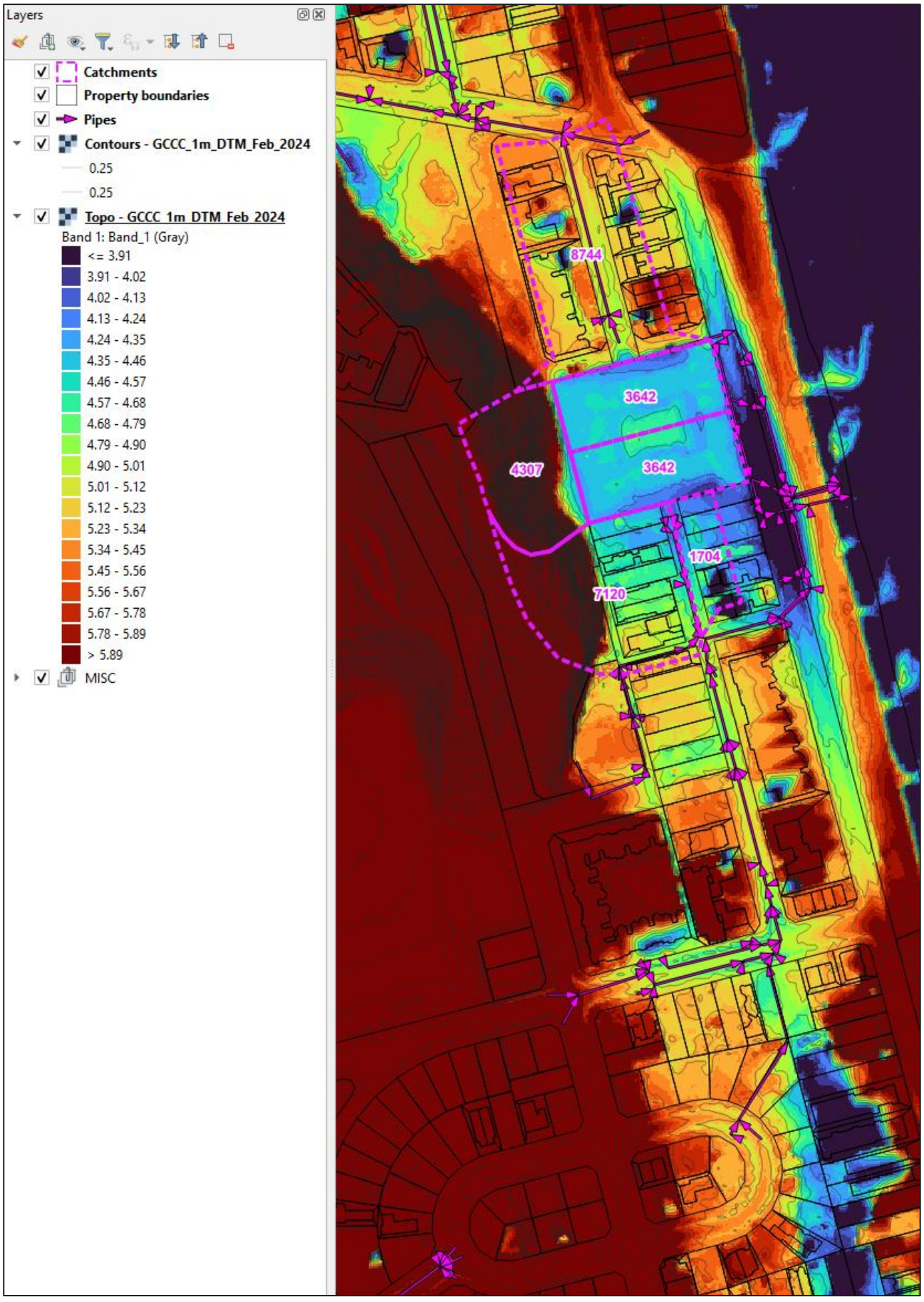


Figure 5-2 External Stormwater Catchments (Overland) and Local Pipe Network

5.2 Proposed Drainage Characteristics and LPOD Test

In the developed case, the site demonstrates compliance with the QUDM as follows:

The location of the discharge is under the lawful control of the local government or other statutory authority from whom permission to discharge has been received. This will include park, drainage or road reserve, stormwater drainage easement.

The proposed development will manage stormwater via the use of private infrastructure to achieve Council's objectives. The site will maintain its discharge location being Marine Parade via connection to underground drainage and overland flow.

Provision for conveyance of runoff from the abovementioned sources, including potential spill areas, to Marine Parade has been made. The adopted strategy is to maintain or improve conveyance of runoff to municipal infrastructure, creating an improvement to existing conditions for the site, Council land and adjacent properties.

Drainage within the subject site will remain private.

At a minimum, 4EY flows from the site catchment areas are to be directed to the stormwater quality treatment system as documented in Section 7 of this report. It should be noted that the design and documentation of private drainage will be addressed by a building hydraulic engineer during the detailed design for Building Approval phase to achieve the objectives of this report.

It is noted that no pumped discharge directed to the kerb is proposed.

Figure 5-3 below illustrates the proposed drainage philosophy for the site, which is adopted for the purposes of detailed calculations in subsequent reporting sections. Further details can be found on Engineering Drawings in Appendix B.

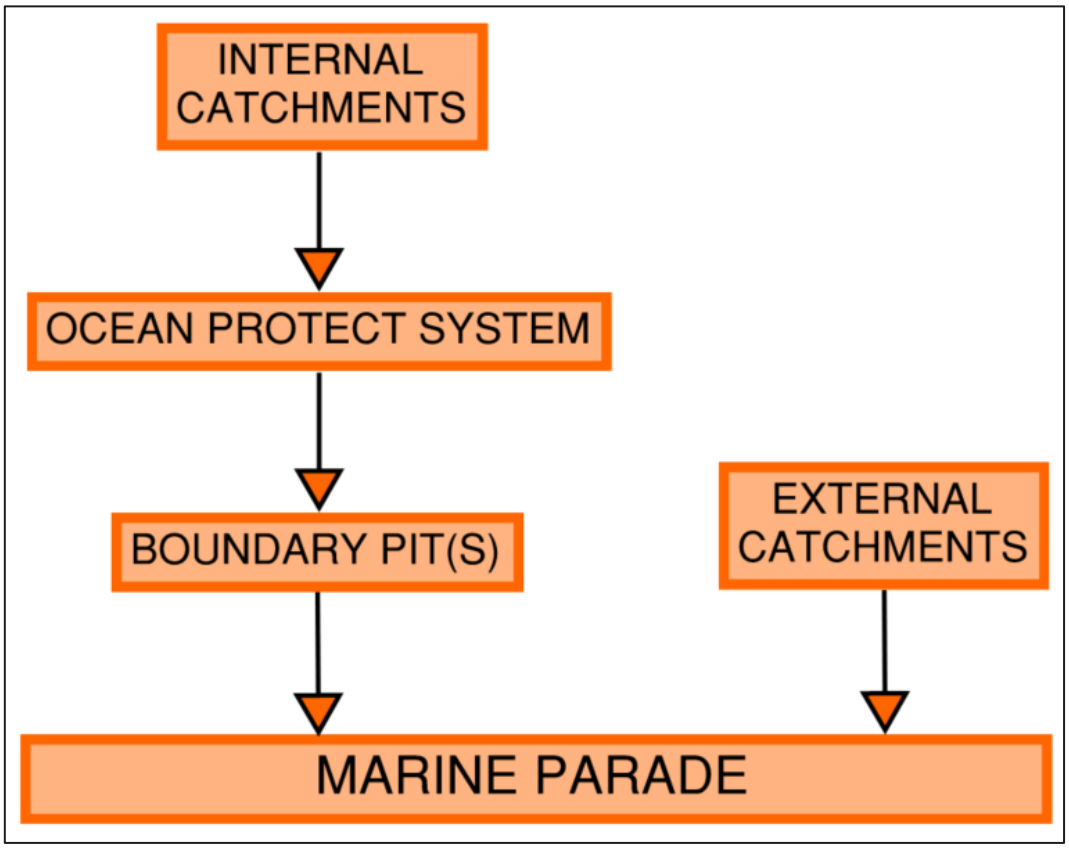


Figure 5-3 Drainage Schematic

That in discharging in that location, the discharge will not cause an actionable nuisance. In general terms this implies no worsening as a result of discharge.

Sections 6, 7 and 8 of this report provide detailed calculations and discussions illustrating no actionable nuisance anticipated.

5.3 External Catchment Conveyance

With reference to the existing drainage identified in Section 5.1, the following outcomes are achieved. These outcomes have been discussed in further detail with Council's hydraulics officer over Teams and email (the latter of which is provided in Appendix G of this report).

1. **Fraser Avenue (flows in excess of Council drainage)**

- The proposed works maintain or improve the current arrangement by:
    - No change to the weir control (therefore no impact to upstream areas).
    - Maintaining overland flow capacity to the existing drainage pit and through to Marine Parade. Minor reshaping of Council's open space (Lot 3 on WD810476) is proposed to improve the free-flowing relief flow path to Marine Parade.
        - The proposed works are in line with the proposed landscape enhancement and improvements to the existing pedestrian footpath connection between Fraser Avenue and Marine Parade, which have been offered by the Applicant as a public benefit following consultation with Council's Open Space and Landscape teams.
        - The reshaping works have the added benefit of removing the retaining wall and fence around the existing drainage pit, mitigating associated fall / trip risks, thereby improving public safety. Additionally. the steepness of the existing batter is reduced, improving usability.
- Accordingly existing sensitive drainage characteristics are preserved and capacity maintained or increased which will not give rise to unacceptable or adverse impacts to private property.
- The figure below provides context of the pre and post development outcomes.



Figure 5-4 Drainage Schematic – Fraser Avenue

2. **Nagel Avenue (flows in excess of Council drainage)**

- The proposed works maintain or improve the current arrangement by:
    - No change to the road stub or increase in site levels within the receiving area.
    - Improving pit and pipe drainage capacity within the site, reducing frequency/severity of pass-through overland flow.
    - Widening and deepening (not lifting) the existing onsite choke point, increasing the site's share of any overland flow. This is achieved by a 2m wide area free from structures, as well as cantilevered flooring for the outdoor areas up to the edge of the basement walls, totalling minimum 3m width. The below supplementary calculations indicate overland flow capacity of the site, not including any pit and pipe infrastructure.
        - On the basis the minor design 10% AEP at minimum is captured via pit and pipe, this results in a difference of 0.389 m^3/s potentially entering the site.
        - Manning's calculations for a 3m wide relief flow path with a 0.15% grade (based on existing levels at the Nagel Avenue interface and southwest side boundary), and assuming a manning's roughness coefficient of 0.05 for landscaped surfaces, indicate this flow can be conveyed at a depth of 0.375m and velocity of 0.35 m/s (resulting in a depth velocity product of 0.13 m^2/s).
- Accordingly existing sensitive drainage characteristics are preserved and capacity maintained or increased which will not give rise to unacceptable or adverse impacts to private property.
- The figure below provides context of the pre and post development outcomes.

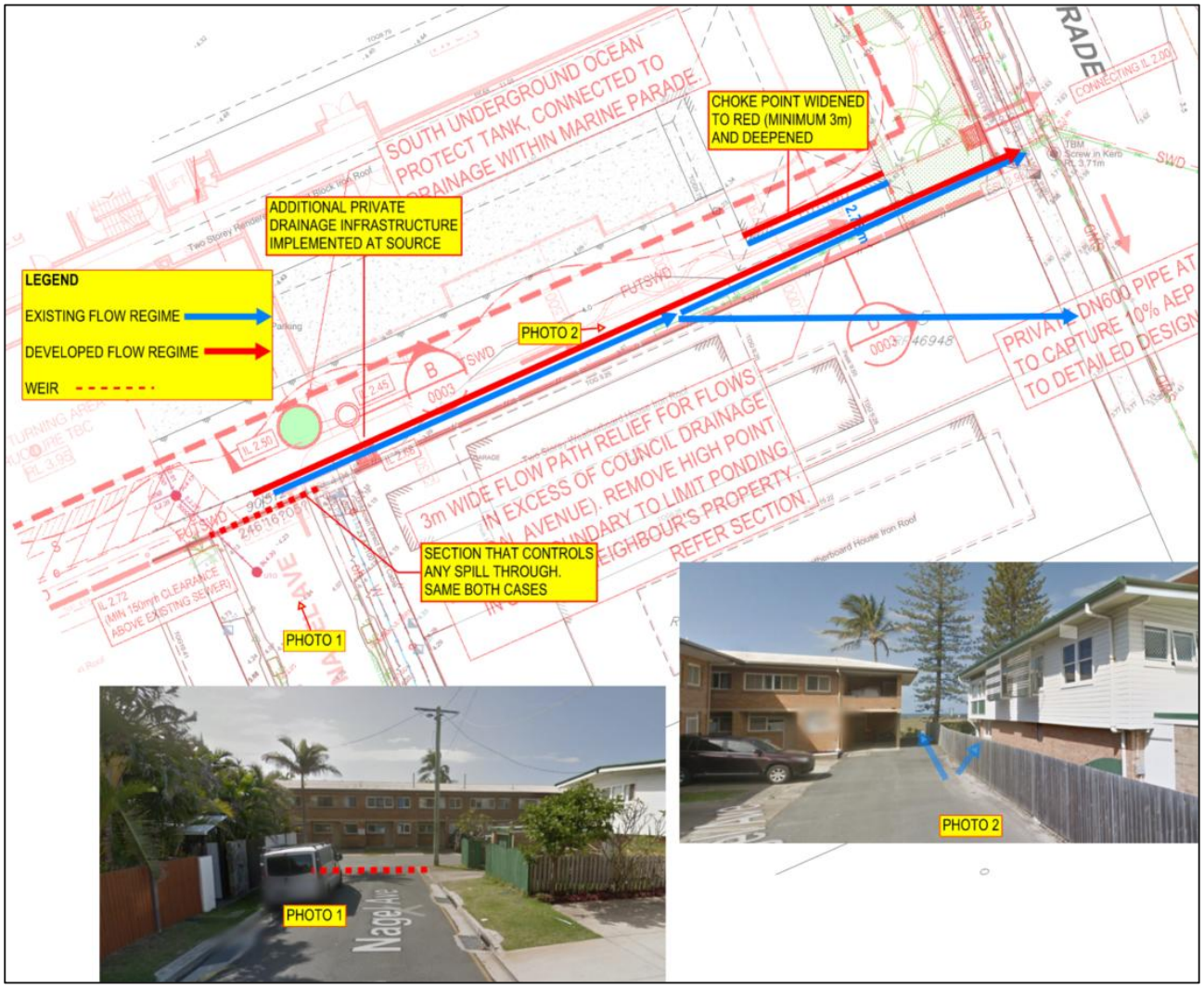


Figure 5-5 Drainage Schematic – Nagel Avenue

3. **Lions Head Park (overland flow)**

- Private drainage is proposed to capture nuisance overland flow from Lions Head Park to the west.
- These flows are to bypass the internal quality treatment system and discharge to Marine Parade. The same at-grade landscaping buffer as mentioned above provides provision for overland flow to Marine Parade.

The Engineering Drawings provided within Appendix B of this report should be referred to for further details for the proposed external catchment conveyance.

6 STORMWATER QUANTITY

6.1 Objective

Stormwater discharge from the development must be detained to pre-development flow rates for the median storm event up to and including the 1% AEP ("no-worsening"). The hydrological assessment undertaken measures the site flow rates up to and including the 1% AEP event for both the pre- and post-development scenarios.

6.2 Methodology and Assessment

The hydrological assessment presented in this report has been undertaken in accordance with the methodology documented in the Australia Rainfall & Runoff 2019. This methodology incorporates an ensemble approach (i.e., 10 temporal distribution per storm duration) and uses the design rainfall inputs sourced from the AR&R (2016) data hub.

For the site catchment identified as having an increase in peak flow rates when developed, a hydrologic model was created using DRAINS. The median storm event was determined via an investigation of multiple storm distributions for durations ranging from 10mins to 3hours.

It should be understood that the median results of each ensemble have been extracted to determine peak flows for the assessed catchments, as is standard practice.

6.2.1 Catchment Locality

In accordance with CoGC's City Plan SC6.12.4.4.3 & ARR2019, Rainfall Intensities Frequency Duration data were obtained from The Bureau of Meteorology (http://www.bom.gov.au/water/designRainfalls/revised-ifd/?year=2016). The Latitude and Longitude used for the site is summarised in Table 6-1 below.

Table 6-1 Site Latitude and Longitude

Parameter	Value
Latitude	-28.0622
Longitude	153.4419

6.2.2 Catchment Summary

The site was assessed under three cases:

- **Existing Scenario** – The site in its existing state.
- **Developed Scenario** – The site in its developed state per the proposal.

It should be noted that:

- Catchments are represented using the ILSAX hydrological model to represent urbanised catchment conditions per ARR 2019 recommendations.
- Catchment areas only consider deep planting to be pervious. All other planter beds are considered impervious, but with the same depression storage (i.e. no infiltration losses for non-deep planting areas).

The following catchment details in Table 6-2 were determined from the site survey within Appendix A and the architectural plans, which can be found within the full development application package.

Catchment markups have been provided in Appendix C and D for existing and developed scenarios respectively.

Table 6-2 Modelling Catchment Details

Scenario	Catchment Name	Area (ha)	Impervious Fraction (%)	Time of Concentration (min)
Existing	EX_N	0.3642	83	5,7
	EX_S	0.3642	84	5,7
Developed	DEV_N (Impervious & Deep Planting)*	0.3162	90	5,7
	DEV_N_PLANTER (Planter Beds)*	0.0480	100*	5,7
	DEV_S (Impervious & Deep Planting)*	0.3296	89	5,7
	DEV_S_PLANTER (Planter Beds)*	0.0346	100*	5,7

**Detailed assessment for the mitigated scenario (eg. NORTH = DEV_N + DEV_N_PLANTER). Planter beds have been modelled as a separate node with 5mm initial loss as an impervious area (to remove infiltration losses).*

6.2.3 DRAINS Model Setup

An image of the DRAINS model setup has been provided below for ease of reference.

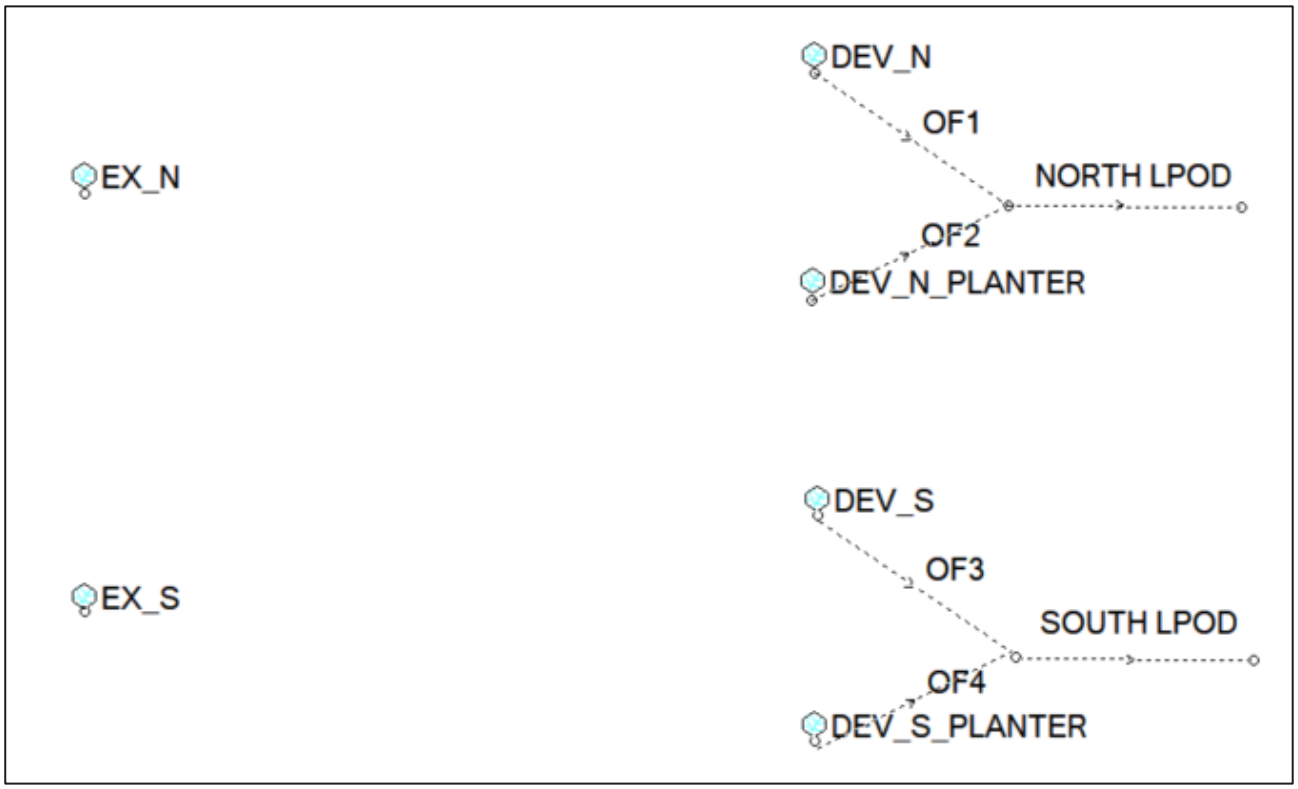


Figure 6-1 DRAINS Model Setup (Existing and Developed Scenarios, Left to Right)

6.2.4 Model Results

The following results have been captured from the DRAINS model. Table 6-3 below summarises the peak flow rates for each identified critical storm across the assessed AEP range at the assessment point for the catchment.

Table 6-3 Summary of DRAINS Hydrologic Results

LPOD	Scenario	AEP (%)	50	20	10	5	2	1
North	Existing	Median Flow (m^3/s)	0.107	0.149	0.184	0.211	0.245	0.271
	Developed	Median Flow (m^3/s)	0.110	0.151	0.187	0.214	0.248	0.274
South	Existing	Median Flow (m^3/s)	0.108	0.150	0.184	0.212	0.245	0.271
	Developed	Median Flow (m^3/s)	0.109	0.152	0.187	0.214	0.247	0.274

6.3 Objective Discussion

The above hydrologic investigation has demonstrated that there is no significant increase in median discharge flow rates being directed off-site to existing infrastructure for 50% AEP events to 1% AEP events in accordance with QUDM and ARR2019.

7 STORMWATER QUALITY (OPERATION)

7.1 Objectives

The following operational water quality objectives are set out by Council:

- Gross Pollutants (>5mm) – 90% reduction in mean annual load.
- Total Suspended Solids (TSS) – 80% reduction in mean annual load.
- Total Phosphorous (TP) – 60% reduction in mean annual load.
- Total Nitrogen (TN) – 45% reduction in mean annual load.

7.2 Proposed Stormwater Treatment Devices

WSUD aims to minimise the impact of a development on the natural water cycle by reducing the export of pollutants, sediments and nutrients from the site into the natural watercourse. To treat the stormwater runoff from the site, various treatment devices can be used throughout the development area and these concepts can be integrated into the overall design of the road layouts, road cross sections, stormwater layouts and water supply reticulation systems. Stormwater from each development stage will follow a specially designed stormwater quality treatment train prior to discharge from the site, which will ensure compliance with the water quality objectives.

A treatment train has been proposed for the site which comprises of several individually designed treatment devices that collectively contribute to the achievement of whole site water quality objectives. It should be noted that pools and transformers have been excluded from the quality treatment areas.

7.3 Modelling

Modelling of the site was undertaken using the 'Model for Urban Stormwater Improvement Conceptualisation (MUSIC)' as promoted by CoGC and the South East Queensland Healthy Waterways Partnership. The development was modelled using the split catchment approach. An appropriate type of land use was applied to all surface types within the developed catchments; where individual treatment devices were assigned the relevant modelling treatment parameters. Consequently, a treatment train was established for each site, ensuring that water discharging from site adheres to the specified Water Quality Objectives.

Meteorological data for input into MUSIC was obtained from Elanora Rainfall Station 40609 from the Bureau of Meteorology. Six-minute time step rainfall data was obtained for the climate period from 1/1/1989 to 31/12/1998. The catchment parameters of the MUSIC modelling are specified within the Water by Design MUSIC Modelling Guidelines Version 3 (2018) and have been modelled as such.

7.3.1 Pollutant Source Node Details

The pollutant source node parameters input into the MUSIC model were determined using the Water by Design MUSIC Modelling Guidelines Version 3 (2018), specifically Tables 3.7 and 3.8 for urban residential surface types. It is noted that all base flow parameters for roof surfaces are adopted as 0.00 or N/A.

Approximate landscape imperviousness was considered for ground areas to ensure an accurate generation of pollutants.

A summary of the source these nodes have been provided in Table 7-1 below. The developed catchment markup provided in Appendix D informed the modelled catchment areas.

Table 7-1 Summary of Source Node Details

LPOD	MUSIC Source Node	Area (ha)*	Imperviousness (%)
North	Roof	0.043	100
	Road	0.005	100
	Ground	0.316	75
South	Roof	0.049	100
	Road	0.018	100
	Ground	0.297	76

7.3.2 Treatment Device Details – Ocean Protect

An Ocean Protect treatment system has been designed specifically to ensure that the site meets the stormwater quality requirements. This treatment system includes a NPSorb StormFilter cartridge system. These are Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP) approved products by Stormwater Australia. Copies of the SQIDEP certification for all proposed devices has been provided in Appendix D of this report.

Once the site is fully developed, the stormwater run-off from sub-catchments will be collected via a private drainage system and directed to the relevant areas per Figure 5-3.

Details of the location and conceptual design of the proposed treatment devices are presented in the Engineering Drawings in Appendix B of this report, which should be referred to for further design information. It is critical to understand that the design provided as part of this report is conceptual in nature, and that further coordination will be required with other consultants and the proprietor during detailed design, prior to construction.

Table 7-2 Ocean Protect Design Parameters

LPOD	Tall (690mm) NPSorb StormFilter Cartridges
North	x12
South	x12

7.3.3 Model Layout and Results

A diagrammatical view and pollutant reduction results can be found in Figure 7-1 below.

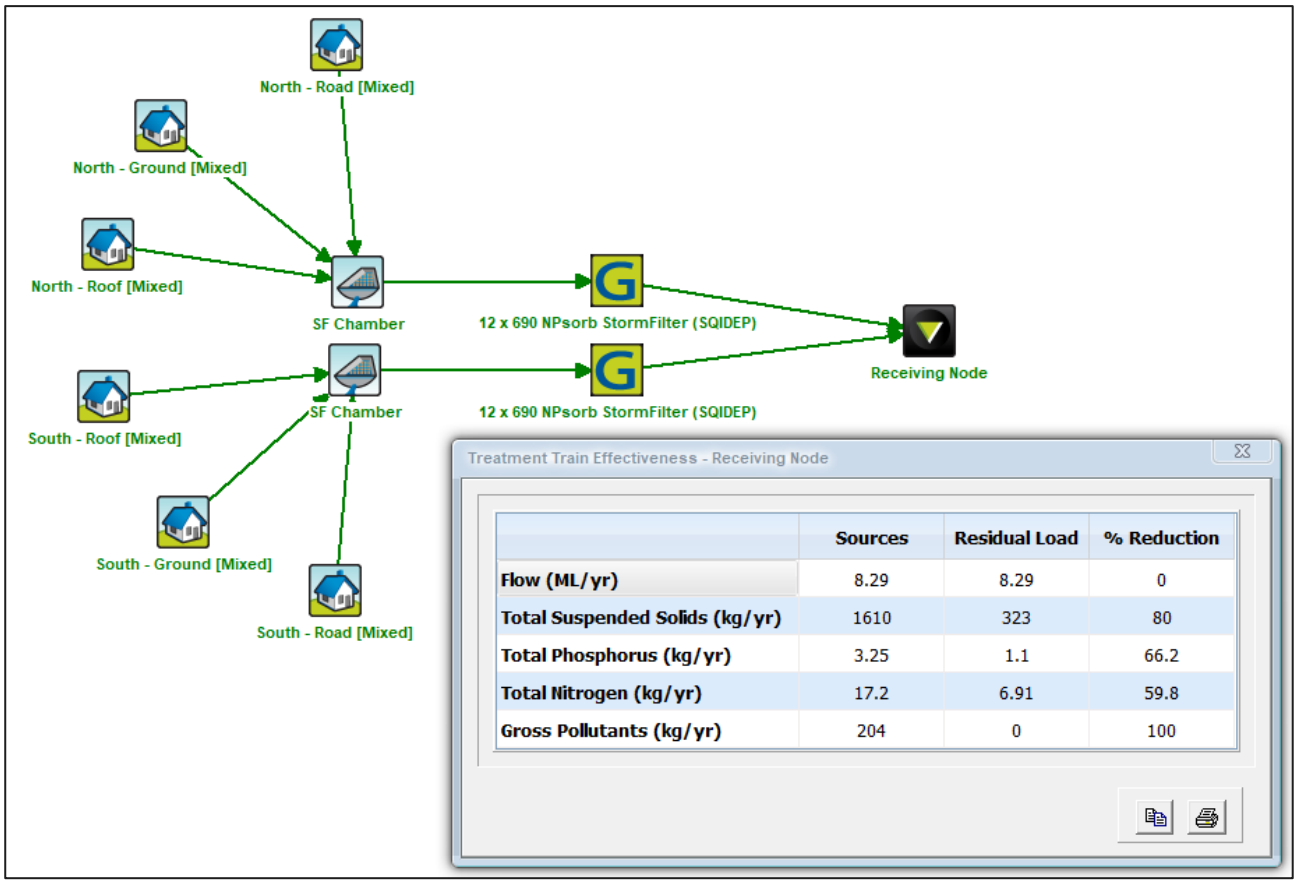


Figure 7-1 MUSIC Model Layout and Results

7.3.4 Hydraulic Performance

A general check for Hydraulic Grade Line (HGL, head) in the downstream pipe systems has been made to verify the performance of the proposed underground treatment systems.

1. **North Ocean Protect System** – The contributing flows to the connection location (450mm pipe) in a 4EY (Q3 month) event is only nuisance runoff the adjacent Council Park areas, totalling less than 0.1ha at ~10% imperviousness (approx. 2 L/s in a 4EY event). No significant tailwater conditions are foreseen for this connection location.
2. **South Ocean Protect System**
    a. **Pipe within the site** – The contributing flows to the connection location (600mm pipe) in a 4EY (Q3 month) event consist of runoff from the Lions Head Park to the west. This area totals approximately 0.431ha at ~60% impervious (approx. 46 L/s in a 4EY event). Based on a Mannings calculation for a 600mm pipe at 1% grade, the pipe would have approximately 111mm depth of water (RL 2.56 at the connection location). The Ocean Protect system invert is at RL 2.50 therefore will operate in the target treatment event per manufacturers requirements.
    b. **Gully pit connection** – The contributing flows to the connection location (750mm pipe) in a 4EY (Q3 month) event consist of runoff from the southern portion of the site, Lions Head Park to the west, some properties to the north and a portion of Marine Parade. This area totals approximately 1.3ha at ~80% impervious (approx. 143 L/s in a 4EY event). Based on a Mannings calculation for a 750mm pipe at 1% grade, the pipe would have approximately 182mm depth of water (RL 2.03 at the connection location). The Ocean Protect system invert is at RL 2.50 therefore will operate in the target treatment event per manufacturers requirements.

8 STORMWATER QUALITY (CONSTRUCTION)

8.1 Water Quality Objectives

Table 8-1 Construction Phase Quality Objectives (SPP and CoGC LDG)

Pollutant	Criteria
Drainage Control	Design life and design storm of temporary drainage works: • Disturbed area open for <12 months—1 in 2 ARI. • Disturbed area open for 12-24 months—1 in 5 ARI. • Disturbed area open for > 24 months—1 in 10 ARI.
Erosion Control	• Minimise exposure of disturbed soils at any time. • Avoid or minimise large construction activities in the wet season. • Divert water run-off from undisturbed areas around disturbed areas. • Use erosion risk ratings to determine appropriate erosion control measures.
Sediment Control	Use soil loss rates to determine appropriate sediment control measures Design storm for sediment control basins should be based on retaining the maximum sediment quantity for the maximum volume of water run-off Site discharge during sediment basin dewatering should not exceed 50 mg/L TSS and pH between 6.5–8.5
Stormwater Drainage / Flow Management	Hydraulics and hydrology—Take all reasonable and practicable measures to minimise significant changes to the natural waterway hydraulics and hydrology from: • peak flow for the one-year and 100-year ARI event (respectively for aquatic ecosystems and flood protection). • run-off frequency and volumes entering receiving waters. • Uncontrolled release of contaminated stormwater.
Water Quality Outcomes	Stormwater flows from undisturbed and disturbed areas—manage to help protect environmental values Coarse sediment—coarse sediment is retained on site Fine sediment—Site discharge during sediment basin dewatering has a TSS concentration less than 50 mg/L Turbidity—Site discharge during sediment basin dewatering has a turbidity (NTU) less than 10% above receiving waters turbidity— measured immediately upstream of the site Nutrients (N & P)—Nitrogen and phosphorus are managed through sediment control. pH—Site discharge during sediment basin dewatering has a pH range 6.5–8.5 Litter and other waste—Prevent litter/waste entering the site, the stormwater system or watercourses that discharge from the site. Also minimise or sufficiently contain on-site litter and waste production and regularly clear waste bins Hydrocarbons and other contaminants—Hydrocarbons and other contaminants are prevented from entering the stormwater system or internal watercourses that discharge from the site. Wash down water—Wash down water is prevented from entering the stormwater system or internal watercourses that discharge from the site Cations and anions—Cations and anions including aluminium, iron and Sulfate are managed as required under an approved acid Sulfate soil management plan

Table 8-1 provides the construction phase stormwater quality objectives outline by the State Planning Policy. Additional relevant acts, policies and information that may be useful for construction phase planning include:

- Environmental Protection Act (1994).
- Environmental Protection (Water) Policy (2009).
- Queensland Development Code, Sediment and Erosion Control (2010).
- Best Practice Erosion and Sediment Control for Building and Construction Sites Guidelines (2008).

8.2 Erosion and Sediment Control Plan Purpose

During the construction phase it shall be the Principal Contractor's responsibility to ensure the objectives of Table 8-1 are achieved.

The following section of this report provides a suggested framework for an Erosion and Sediment Control Plan. This includes recommended actions and responses for specific activities; monitoring and reporting; and construction of specifically designed site-specific sediment basins.

8.3 Specific Activities

8.3.1 Erosion and Sediment Control of Disturbed Land

During the construction phase it shall be the Principal Contractor's responsibility to ensure the following:

- Diversion of any clean water runoff that may interfere with land disturbance by the use of earth bunds, or other control devices deemed appropriate by a suitable supervisor.
- Reduction of sediment migration from disturbed land parcels by implementing silt fences, sediment basins or other control devices as deemed appropriate by a suitable supervisor.
- Where cut to fill operations produce a spoil it is recommended that the excess material be placed upstream of the excavation location to ensure any sediment runoff is directed back into the trench. Earth bunds or sediment fences may be required to control direction of sediment flow should the spoil be placed on the downstream side of the excavation site.
- Control measures such as a gully pit sediment barrier shall be installed around inlet pits where required reducing the potential for sediment discharge into the surrounding stormwater system.
- Any sediment deposited from construction vehicles will be swept up and removed.
- Erosion and sediment control devices may only be removed once disturbed lands which they are protecting are rehabilitated and capable of resisting further erosion.

8.3.2 Spoil and Stockpile Management

It shall be the Principal Contractor's responsibility to oversee the following controls during the construction phase unless otherwise specified:

- The placement of spoil and stockpile material shall be kept at a maximum distance from stormwater inlets, gutters and stormwater pipes to reduce unnecessary sediment migration into nearby infrastructure.
- Spoil and stockpile material shall be placed in a way that reduces the likelihood of sedimentation, erosion and slippage. Advice from an appropriate project manager/representative shall be sought in this instance.
- Spoil or stockpile material that is deemed a contaminant shall be placed on a designated zone of either fill material, plastic or concrete with the installation of appropriate containment devices. Advice from an appropriate project manager/representative shall be sought in this instance as the resulting control will be highly dependent on the severity of contamination.
- It shall be the Project Manager's responsibility to foresee and develop appropriate control measures to prevent the impacts of spoil and stockpile material prior to construction activities. Monitoring and reporting shall also be required during the implementation of any given device associated with spoil and stockpile management.

8.3.3 Erosion Control

It shall be the Principal Contractor's responsibility to oversee the following controls during the construction phase:

- Traffic of any type shall be kept away from areas of rehabilitation to promote stabilisation of the zone.
- Where wind and water are acknowledged as potential erosion sources temporary protection shall be installed. Such measures only apply to zones of spoil, stockpile and land disturbance which are unlikely to receive works within a period of 6-8 weeks. Further advice from an appropriate project manager/representative shall be sought in this instance as the resulting control will be highly dependent on the disturbance type and erosion source.
- Once viable, final landscaping shall be undertaken on applicable zones to increase stability.

8.3.4 Personnel Training

It shall be the Principal Contractor's responsibility to oversee the following training protocols during the construction phase:

- Environmental management and incident reporting is to be included on all site induction courses.
- All personnel are to receive adequate training in workplace health and safety issues, environmental management, best practice erosion and sediment control practices, incident reporting procedures and where applicable site inspection and maintenance procedures.

8.3.5 Miscellaneous

It is the Principal Contractor's responsibility to ensure erosion and sediment controls are operated and maintained in an effective operational condition. These structures are not allowed to accumulate sediment volume in excess of 70% sediment storage design capacity as per Section 6 of the Urban Stormwater Quality Planning Guidelines 2010.

- Sediment removed from control measures must be disposed of in a manner approved by the local Council that does not cause pollution and forms part of the Contractor's obligation.
- Any chemicals, fuel or oil stored on site shall be stored under cover in a bounded area or placed sufficiently above ground level to prevent contamination of surface water.
- A waste concrete receptor (disposal area) must be established if significant concreting is to occur on site. The site must be surrounded by perimeter bunds and be clearly signed.
- A general waste collection area shall be established which is to include appropriate pollutant runoff controls, dependent on the nature of the waste.

8.4 Project Personnel Responsibilities

A description of the key personnel involved with implementing the Erosion and Sediment Control Plan are listed in Table 8-2. It is recommended that all parties involved attend a pre-construction conference to discuss and clarify all issues associated with sediment and erosion control as well as this plan.

Table 8-2 Project Personnel Responsibilities

Project Role	Responsibilities
Superintendent	• Authorisation of this plan; and • Review and monitoring of this plan.
Contractor / Site Manager	• Implementation of this plan; • Monitoring of this plan; • Supervising any activities or requirements required by this plan; • Ensuring all personnel are aware of the contractual agreements associated with this plan.
All Personnel	• Ensuring they are aware of the contractual agreements associated with this plan; and • Informing appropriate personnel of any issues that may arise with respect to the desired sediment and erosion control measures.

8.5 Monitoring and Responsibility

8.5.1 All Personnel

It is the obligation of all personnel to report any failures in the erosion and sediment control works utilised during the project life cycle. Any identified errors within the sediment and erosion control system shall be reported in writing to a relevant project manager. A formal inquiry shall be undertaken in accordance with the reported issue as well as the relevant party procedures (i.e., Principal Contractor).

8.5.2 Contractor/Contractor's Foreman

It shall be the responsibility of the Contractor and Contractor's Foreman to monitor and report on the erosion and sediment control measures utilised in the construction phase. Inspections are to be undertaken:

- On a daily basis during earthworks, land disturbance, spoil or stockpile activities and rain events.
- Weekly during site inactivity.
- Within 24 hours prior to expected rainfall and 18 hours prior to intense rainfall events.

The following shall be inspected or reported on:

- Erosion and sediment control devices are in the correct location and are working as defined by this plan.
- Drainage systems both internal and external to the site are operating effectively or to pre-construction efficiencies.
- Spilled material is removed if it can potentially mobilise via stormwater runoff or wind.
- Stabilisation of disturbed land parcels has been undertaken in an effective manner.
- Excess sediment has been removed from erosion and sediment measures appropriately if the device is operation ineffectively or requires decommissioning.
- It is understood that repairs, maintenance or reinstallation may be required if any control measures are operating inadequately, or if infrastructure is damaged due to inefficient operation of the outlined measures.

8.5.3 Environmental Representative

It shall be the responsibility of the environment representative to periodically inspect and report on the effectiveness of the erosion and sediment controls during the construction phase of the project. Technical advice shall be given to personnel outlying any uncertainty with regards to the applicability, installation, operation, maintenance, removal or rehabilitation of any sediment and erosion control.

8.6 Construction Phase Sediment Control Devices

As the site has been assessed as a single catchment, it is appropriate to approach the assessment of construction phase sediment devices in a similar manner.

In accordance with the Best Practice Erosion and Sediment Control Manual (IECA 2009) the construction phase catchment has been classified to determine the level of sediment and erosion control techniques required. The site is identified as per Table 4.4.6 (IECA 2009) to be closest to the Southport locality and therefore attracts an average monthly rainfall depth of 56m to 205mm.

As the extent of soil disturbance is minimal, Type 3 techniques will be used in accordance with Table 4.5.3. This will require control techniques such as a vehicle shakedown at the site entry, and sediment fences. Specific detailed design plans will be formulated at respective future phases of the development such as operational works.

9 ASSET MAINTENANCE AND HANDOVER

All the stormwater quality controls detailed in this document are contained within the development site and will remain an asset of the development's property owner, Body Corporate or similar internal authority.

The below denotes the anticipated access location for the proposed treatment devices.

- **Ocean Protect cartridge systems:** Access from ground floor driveways.

Additional information including integration drawings and maintenance requirements can be found in Appendix B and on Ocean Protect's website respectively (https://oceanprotect.com.au/stormfilter/).

10 CONCLUSION

This SBSMP has been prepared to provide a design proposal and guide to the stormwater management techniques for the site.

The primary objectives of this report are achieved as follows:

Lawful Point of Discharge (LPoD)

- The site proposes to maintain the LPoD (Marine Parade) after receiving appropriate treatment on site.
- The conveyance of external flows to Marine Parade is to be maintained.

Stormwater Quantity

- The hydrological assessment undertaken has determined that the developed site peak flow rates are generally aligned with the peak existing flow rates.

Stormwater Quality

- An Ocean Protect system is proposed to meet operational phase stormwater quality objectives.

Erosion and Sediment Control

- Type 3 sediment discharge techniques will be used comprising of a vehicle shakedown, sediment fences and gully inlet protection.

APPENDIX A
Survey



Legend

CAG	Comms Above Ground	BH	Bore Hole
COMK	Comms Marker	BOL	Bollard
COMP	Comms Pit		Edge Garden
CUG	Comms Under Ground	//	Fence
SWD	Drainage Swug		Retaining Wall
	Drainage Centre Line	IO	Inspection Opening
SWMH	Stormwater MH	MH	Unidentified Manhole
SWGT	Stormwater Gully Trap	PO	Post
SWFI	Field Inlet Pit	SI	Sign
SWKA	Stormwater Kerb Adaptor	TBM	Temporary Bench Mark
UE	Power Line Under Ground	T	Telecom Line
	Power Line Above Ground	TEL	Telecom Pit
ELMK	Electrical Marker	TELBOX	Telecom Telbox
ELP	Electrical Pillar	TEM	Telecom Marker
ELPI	Electrical Pit	TP	Telecom Pole
GW	Guy Wire Anchor		Bottom of Bank
LAMP	Lamp Post		Top of Bank
LP	Light Pole		Change of Grade
PP #	Power Pole		Water Line
PPL	Power Pole with Light	TR 0306	Edge of Vegetation; Tree - 0.3m Dia Trunk & 6m Canopy Spread
PPLT	PP with Light & Transformer	W	Water Main
PPT	Power Pole with Transformer	HR	Fire Hose Reel
G	Gas Main	HY	Water Hydrant
GM	Gas Meter	SPR	Water Sprinkler
GV	Gas Valve	SV	Water Valve
	Road Crown	TAP	Water Tap
	Edge of Bitumen	WBE	Hydrant Booster
	Edge Track	WM	Water Meter
GP	Guide Post	WMK	Water Marker
	Guard Rail		Bitumen
	Road Kerb Invert		Concrete
S	Sewer Main		Dirt
SMH	Sewer Manhole		Garden
SMK	Sewer Marker		Gravel / Rock
SVE	Sewer Vent		Pavers
	Awning / Top of Gutter		Tiles
TOG RL	Top of Gutter		

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RP Description: Lot 122 on SP284713

Locality: Miami
Date of Survey: 28/11/2024
Level Datum: AHD (der)
Origin: OPM 21031 (RL 4.82)
Level Bk / Fld Bk: Digital
Horizontal Datum: IS306901
Contour Interval: 0.5m

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1 : 750@A3 (Before Reduction)

Approved: DGB

Notes

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Issue	Description	Date	Appd.
A	Original Issue	05/12/24	DGB
B	Sewer Added	17/12/24	DGB
C	Services and Contour Updated	25/03/25	SJM

Client

122 Marine Parade P/L
ATF 122 Marine Parade Unit Trust

122 Marine Parade Miami

Detail Survey Sheet 1 of 6

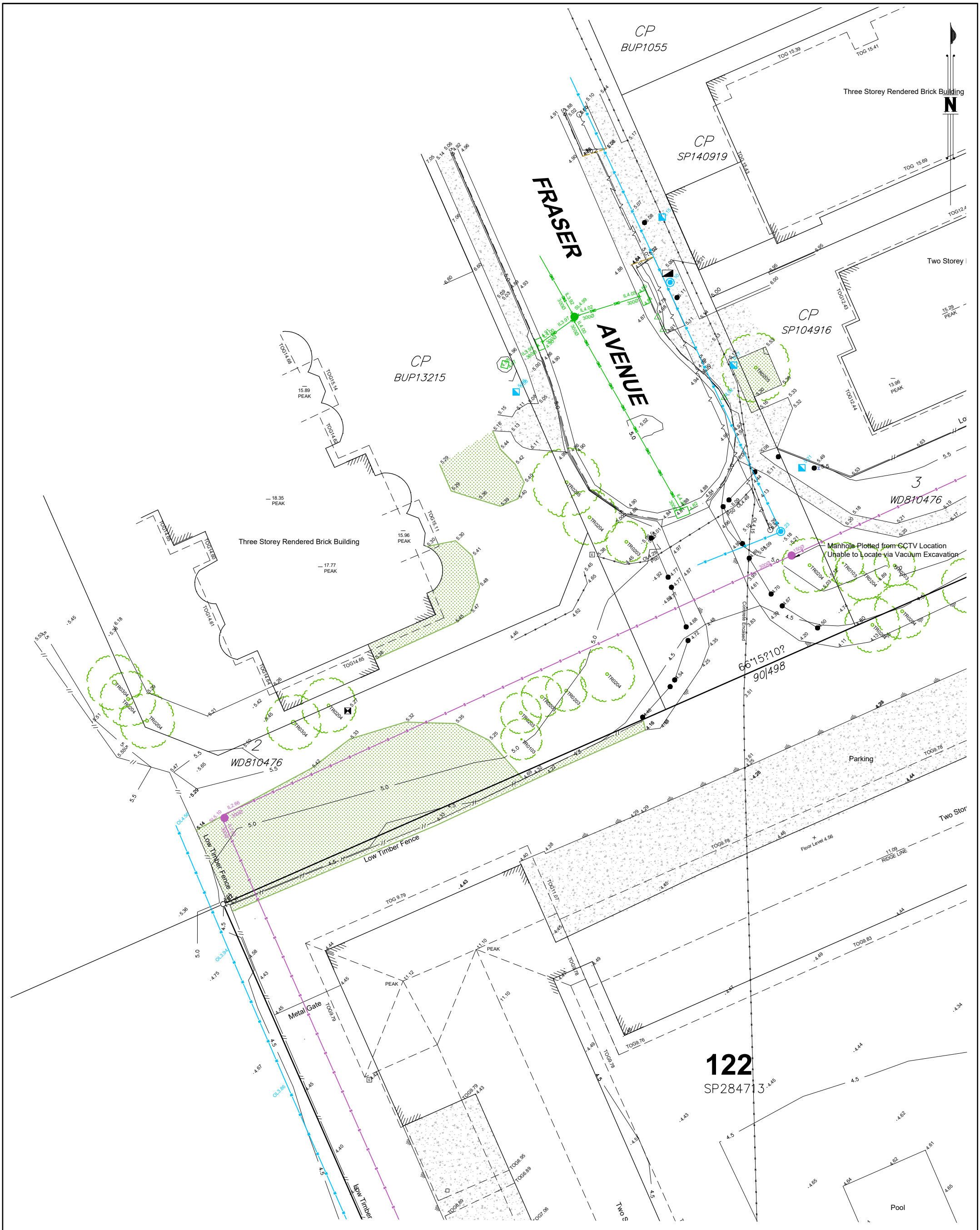
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S-11287-001	C	A3

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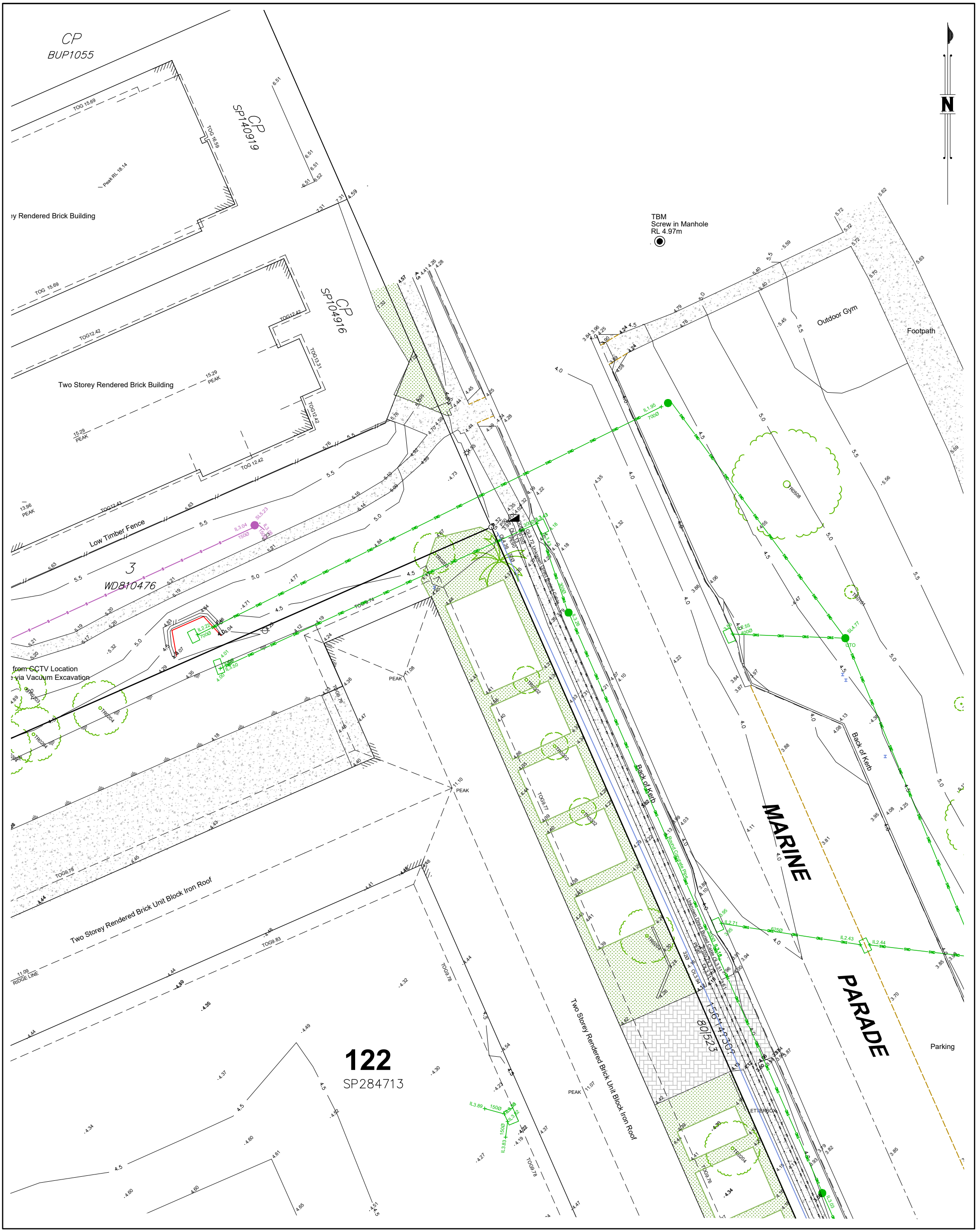
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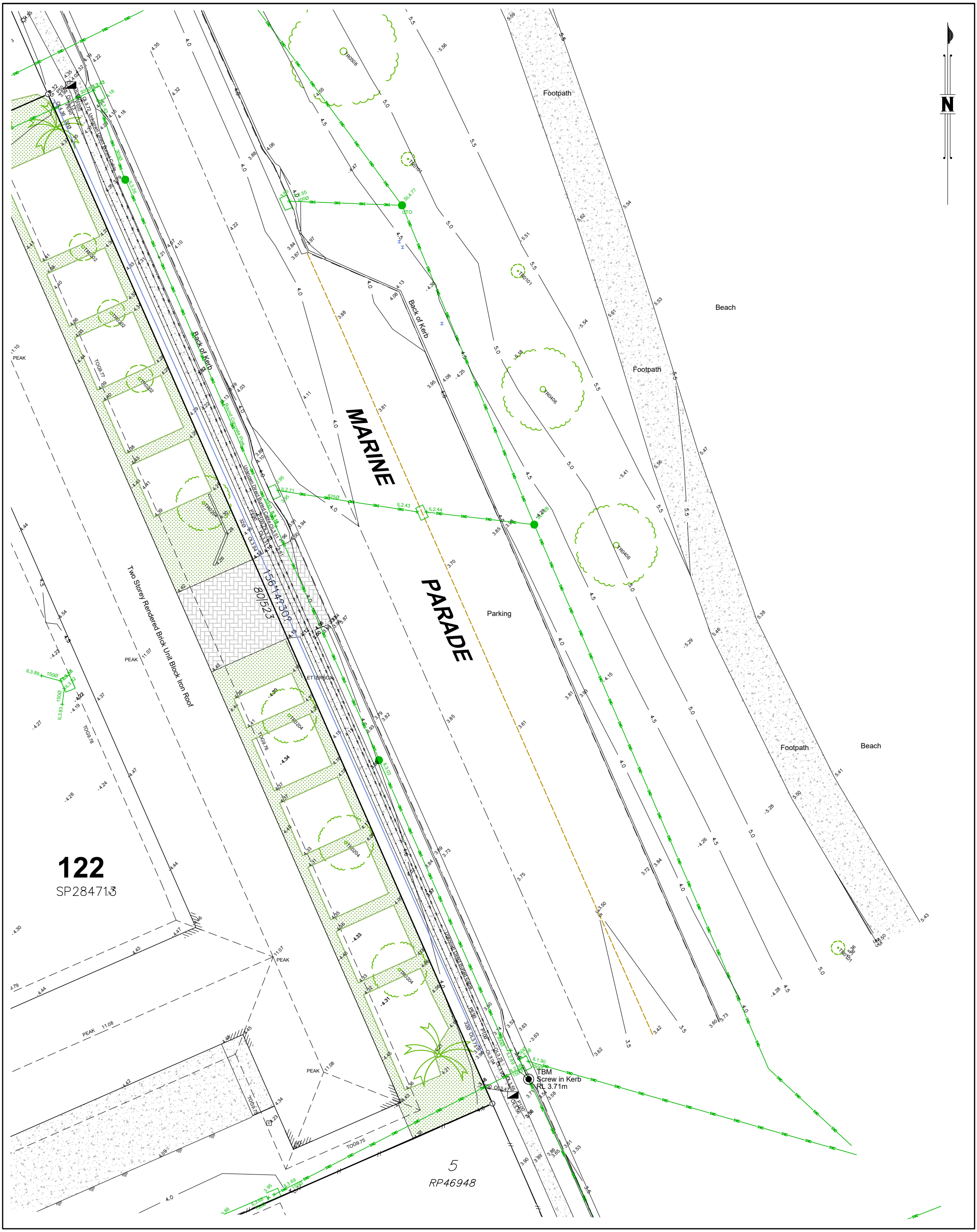
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122 Marine Parade Miami

Detail Survey Sheet 4 of 6

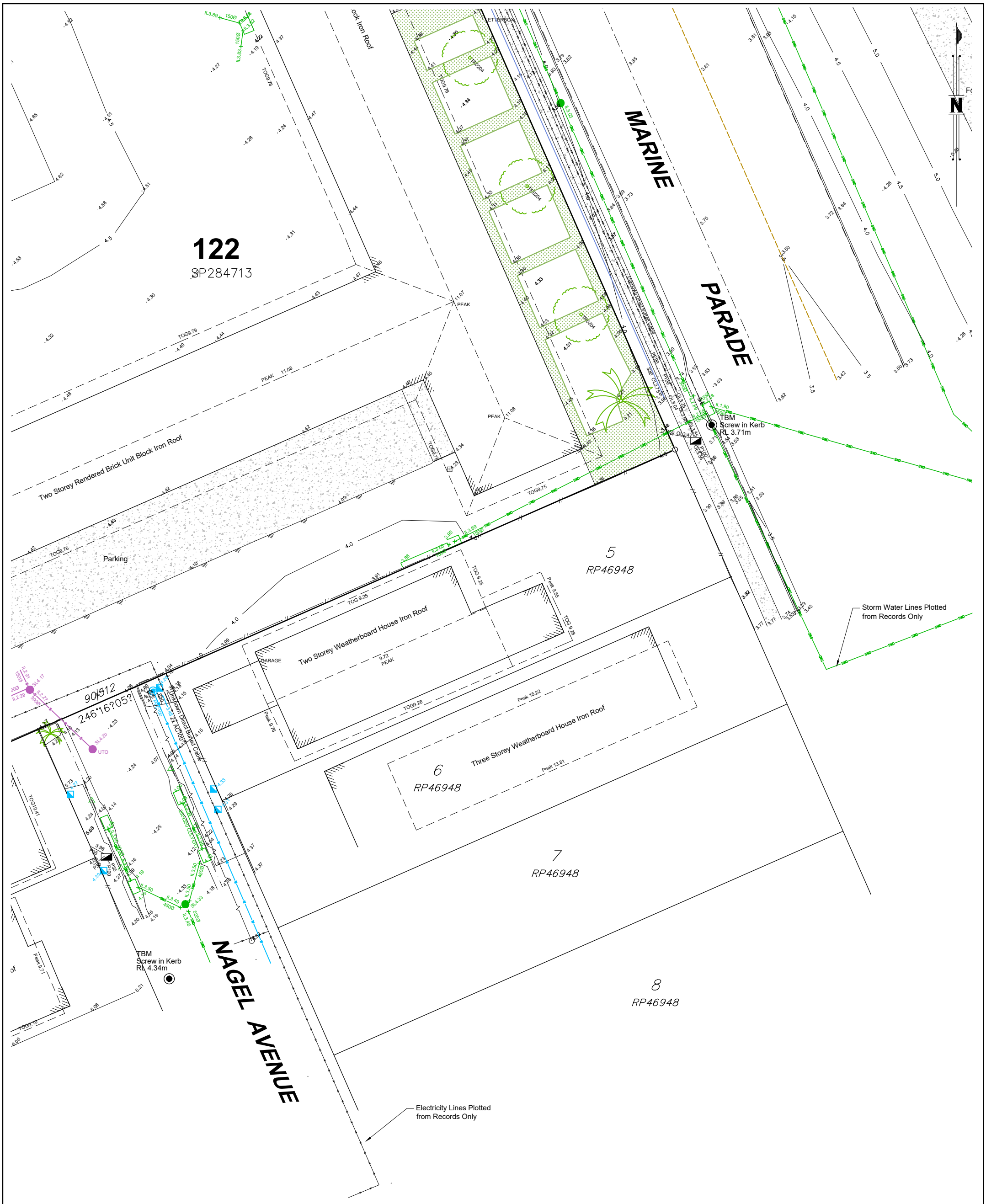
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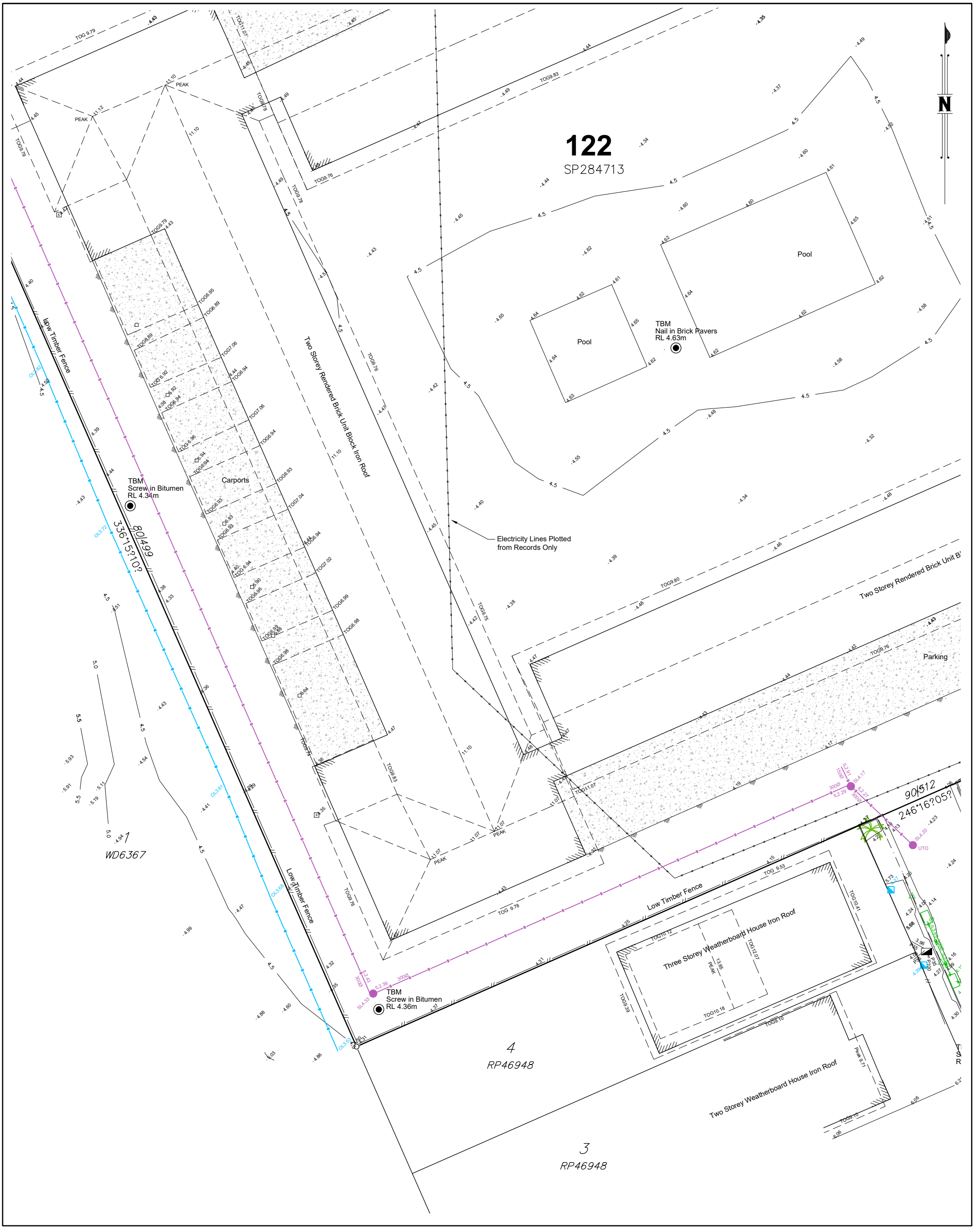
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Detail Survey
Sheet 5 of 6

Drawing No.	Issue	Original Size
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Sheet 6 of 6

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APPENDIX B
Engineering Drawings

REFER INSET 01 (DRG 0003)

UPGRADED 2m WIDE FOOTPATH, DESIGN SUBJECT TO DA APPROVAL AND FUTURE OPW APPLICATION.

RESHAPING WORK WITHIN PARKS PROPERTY (LOT 3 ON WD810476) TO CONVEY OVERFLOW FROM COUNCIL DRAINAGE NETWORK AND REMOVE FALL RISK STRUCTURES AND STEEP BATTER SLOPES. REFER INSET (DRG 0003) FOR FURTHER DETAILS.

CONCEPT ALTERNATIVE PIPE ALIGNMENT THROUGH BASEMENT (RESULTS IN LAYOUT CHANGES).

NORTH UNDERGROUND OCEAN PROTECT TANK, CONNECTED TO NEW DRAINAGE WITHIN LOT 2 AND 3 ON WD810476 (COUNCIL OPEN SPACE).

EXTERNAL CATCHMENT FROM LIONS HEAD PARK, REFER REPORT FOR FURTHER DETAILS.

PRIVATE INTERNAL DRAINAGE BY BUILDING HYDRAULICS.

AREA TO REMAIN AT GRADE WITH REAR BOUNDARY TO CAPTURE EXTERNAL FLOWS FROM COUNCIL RESERVE. LENGTH OF PIPE SHOWN IS PROVISIONAL.

SOUTH UNDERGROUND OCEAN PROTECT TANK, CONNECTED TO DRAINAGE WITHIN MARINE PARADE.

BOUNDARY PIT TO ENABLE SURCHARGE. SURFACE TO GRADE TO STREET FOR SURCHARGE (>10% AEP).

PRIVATE DRAINAGE SYSTEM TO CAPTURE EXTERNAL FLOWS FROM COUNCIL RESERVE. DN300 PIPE AT 1% GRADE TO CAPTURE 10% AEP, SUBJECT TO DETAILED DESIGN.

PRIVATE TRENCH GRATE.

3m WIDE FLOW PATH RELIEF FOR FLOWS IN EXCESS OF COUNCIL DRAINAGE (NAGEL AVENUE). REMOVE HIGH POINT ADJACENT BOUNDARY TO LIMIT PONDING IN SITE AND NEIGHBOUR'S PROPERTY. REFER SECTION.

PRIVATE DN600 PIPE AT 1% GRADE TO CAPTURE 10% AEP, SUBJECT TO DETAILED DESIGN.

CONNECTION TO EXISTING GULLY PIT WITHIN MARINE PARADE.

NOTES

1. PROPOSED SERVICES SHOWN ARE CONCEPTUAL ONLY AND SUBJECT TO DETAILED FIELD SURVEY, DESIGN AND APPROVAL BY AUTHORITIES.
2. REFER TO PROJECT SURVEY AND OTHER ASSET INFORMATION FOR LOCATION EXISTING SERVICES AND ASSUMPTIONS.
3. INTERNAL DRAINAGE IS INDICATIVE AND SUBJECT TO BUILDING HYDRAULIC ENGINEER DESIGN.
4. REFER TO STORMWATER MANAGEMENT PLAN FOR MANAGEMENT DEVICE DETAILS AND SPECIFICATIONS.

LEGEND

- SITE BOUNDARY
- 4.25 EXISTING SURFACE LEVEL
- SWD EXISTING STORMWATER DRAINAGE
- S EXISTING SEWERAGE RETICULATION
- RM EXISTING SEWER RISING MAIN
- W EXISTING WATER RETICULATION
- c EXISTING COMMS RETICULATION
- e EXISTING ELECTRICAL
- oh EXISTING OVERHEAD ELECTRICAL
- fo EXISTING FIBRE OPTIC
- g EXISTING GAS
- SWD PROPOSED STORMWATER DRAINAGE
- S PROPOSED SEWERAGE RETICULATION
- W PROPOSED WATER RETICULATION
- FUTS FUTURE PRIVATE SEWER
- FUTSWD FUTURE PRIVATE STORMWATER
- FUTW FUTURE PRIVATE WATER
- SERVICE TO BE DECOMMISSIONED
- PROPOSED VXO / FOOTPATH
- 1/1 STORMWATER CATCHMENT AND LABEL
- DIRECTION OF FLOW
- INDICATIVE MAINTENANCE ACCESS
- PROPOSED STORMWATER SWALE
- TREATMENT DEVICE
- BYPASS AREA
- EDGE OF BASEMENT WALL

Issue	Description	DR	CH	VE	Date
02	INFORMATION REQUEST RESPONSE	BW	JS	DC	13.06.25
01	ORIGINAL ISSUE	BW	JS	DC	24.04.25

Scales: 0 5 10 15 20 25m — 1 : 250

Architect: BDA ARCHITECTURE

Surveyor: JENSEN BOWERS

Client: MONACO PROPERTY GROUP PTY LTD

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Original Issue Signatures			
Drawn	B. WIESER	Original Size	A1
Designed	B. WIESER	Height Datum	AHD
Project Manager	J. STOCKWELL	Grid	LOCAL
Verified	D. CASTRO		

Project: 122 MARINE PARADE MIAMI

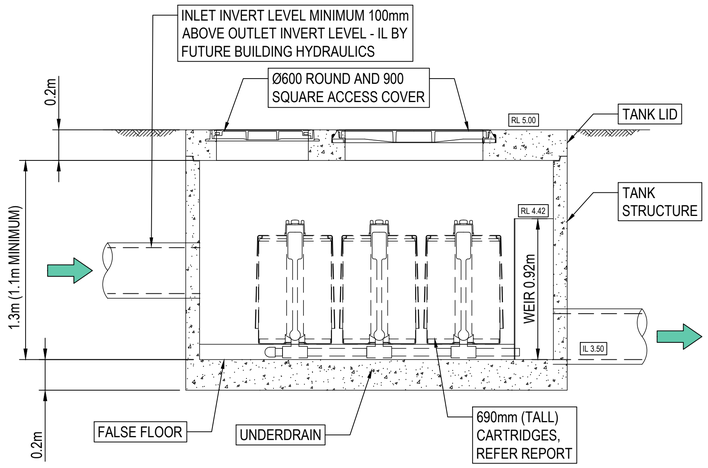
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ABN 76 104 485 289
Tel No: +61 7 5532 3933
Fax No: +61 7 5591 4778
www.arcadis.com

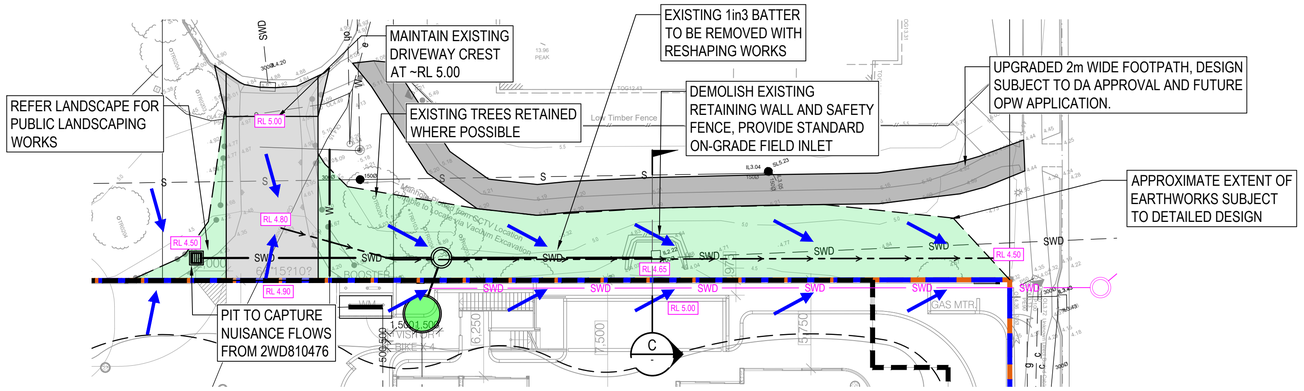
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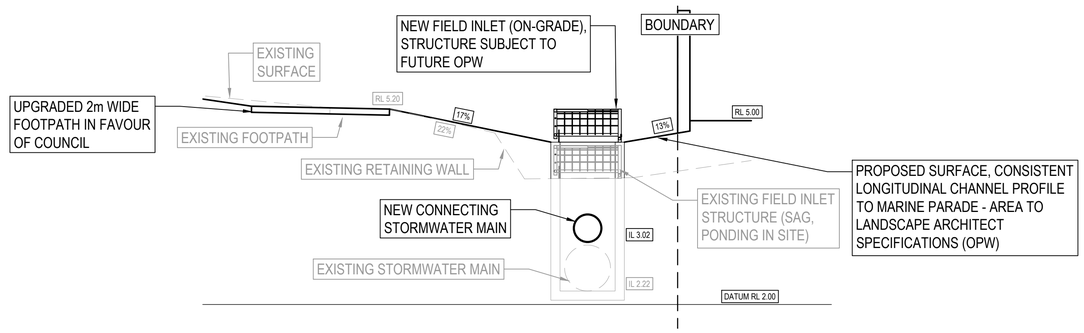
Date Plotted: 13 Jun 2025 - 05:39PM File Name: C:\Users\bw84462\ARCADIS\30264961 - UDR GC FY25 Projects 8 - Project\3 - 122 Marine Parade, Miami\D-DigEng\DA-DA Drawings\30264961-3 - Drawing Set.dwg V1



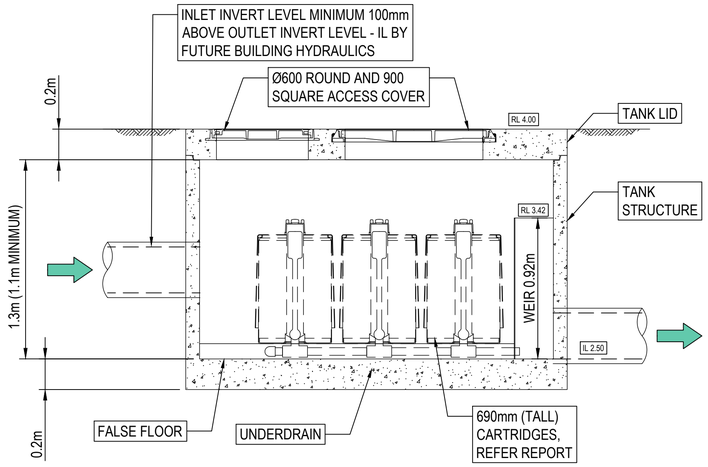
OCEAN PROTECT - NORTH A
1 : 20 0002



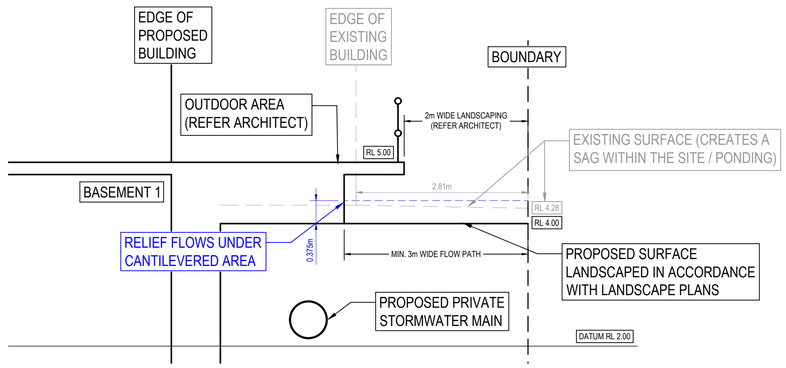
OPEN SPACE WORKS - INSET 01
1 : 200 0002



RESHAPING WORK - OPEN SPACE C
1 : 50 0002



OCEAN PROTECT - SOUTH B
1 : 20 0002



NAGAL AVENUE FLOW RELIEF D
1 : 50 0002

NOTES

1. PROPOSED SERVICES SHOWN ARE CONCEPTUAL ONLY AND SUBJECT TO DETAILED FIELD SURVEY, DESIGN AND APPROVAL BY AUTHORITIES.
2. REFER TO PROJECT SURVEY AND OTHER ASSET INFORMATION FOR LOCATION EXISTING SERVICES AND ASSUMPTIONS.
3. INTERNAL DRAINAGE IS INDICATIVE AND SUBJECT TO BUILDING HYDRAULIC ENGINEER DESIGN.
4. REFER TO STORMWATER MANAGEMENT PLAN FOR MANAGEMENT DEVICE DETAILS AND SPECIFICATIONS.

LEGEND

- SITE BOUNDARY
- 4.25 EXISTING SURFACE LEVEL
- SWD EXISTING STORMWATER DRAINAGE
- S EXISTING SEWERAGE RETICULATION
- RM EXISTING SEWER RISING MAIN
- W EXISTING WATER RETICULATION
- c EXISTING COMMS RETICULATION
- e EXISTING ELECTRICAL
- oh EXISTING OVERHEAD ELECTRICAL
- fo EXISTING FIBRE OPTIC
- g EXISTING GAS
- SWD PROPOSED STORMWATER DRAINAGE
- S PROPOSED SEWERAGE RETICULATION
- W PROPOSED WATER RETICULATION
- FUTS FUTURE PRIVATE SEWER
- FUTSWD FUTURE PRIVATE STORMWATER
- FUTW FUTURE PRIVATE WATER
- SERVICE TO BE DECOMMISSIONED
- PROPOSED VXO / FOOTPATH
- 1/1 STORMWATER CATCHMENT AND LABEL
- DIRECTION OF FLOW
- INDICATIVE MAINTENANCE ACCESS
- PROPOSED STORMWATER SWALE
- TREATMENT DEVICE
- BYPASS AREA
- EDGE OF BASEMENT WALL

Issue	Description	DR	CH	VE	Date
02	INFORMATION REQUEST RESPONSE	BW	JS	DC	13.06.25
01	ORIGINAL ISSUE	BW	JS	DC	24.04.25

100mm on Original

Scales
0 0.5 1 1.5 2m
1 : 20
0 0.5 1 2 3 4 5m
1 : 50
0 5 10 15 20m
1 : 200

Architect: BDA ARCHITECTURE
Surveyor: JENSEN BOWERS
Client: MONACO PROPERTY GROUP PTY LTD

Status: PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION
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Original Issue Signatures			
Drawn	B. WIESER	Original Size	A1
Designed	B. WIESER	Height Datum	AHD
Project Manager	J. STOCKWELL	Grid	LOCAL
Verified	D. CASTRO		

Project: 122 MARINE PARADE MIAMI
Title: STORMWATER MANAGEMENT DETAILS

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www.arcadis.com

Project No.	Folder Prefix	Zone | Stage | Phase	Discipline	Type	Drawing No.	Issue
30264961-3	DA	- AA01DA -	CV	- DRG -	0003	- 02

Date Plotted: 13 Jun 2025 - 05:39PM File Name: C:\Users\bw84462\ARCADIS\30264961 - UDR GC FY25 Projects 8 - Project\3 - 122 Marine Parade, Miami\D-DigEng\DA-DA Drawings\30264961-3 - Drawing Set.dwg V1

APPENDIX C
Existing Catchment Areas



Legend

CAG	Comms Above Ground	BH	Bore Hole
COMK	Comms Marker	BOL	Bollard
COMP	Comms Pit		Edge Garden
CUG	Comms Under Ground	//	Fence
SWD	Drainage Swug		Retaining Wall
	Drainage Centre Line	IO	Inspection Opening
SWMH	Stormwater MH	MH	Unidentified Manhole
SWGT	Stormwater Gully Trap	PO	Post
SWFI	Field Inlet Pit	SI	Sign
SWKA	Stormwater Kerb Adaptor	TBM	Temporary Bench Mark
UE	Power Line Under Ground	T	Telecom Line
	Power Line Above Ground	TEL	Telecom Pit
ELMK	Electrical Marker	TELBOX	Telecom Telbox
ELP	Electrical Pillar	TEM	Telecom Marker
ELPI	Electrical Pit	TP	Telecom Pole
GW	Guy Wire Anchor		Bottom of Bank
LAMP	Lamp Post		Top of Bank
LP	Light Pole		Change of Grade
PP #	Power Pole		Water Line
PPL	Power Pole with Light		Edge of Vegetation
PPLT	PP with Light & Transformer	TR 0306	Tree - 0.3m Dia Trunk & 6m Canopy Spread
PPT	Power Pole with Transformer	W	Water Main
G	Gas Main	HR	Fire Hose Reel
GM	Gas Meter	HY	Water Hydrant
GV	Gas Valve	SPR	Water Sprinkler
	Road Crown	SV	Water Valve
	Edge of Bitumen	TAP	Water Tap
	Edge Track	WBE	Hydrant Booster
GP	Guide Post	WM	Water Meter
	Guard Rail	WMK	Water Marker
	Road Kerb Invert		Bitumen
S	Sewer Main		Concrete
SMH	Sewer Manhole		Dirt
SMK	Sewer Marker		Garden
SVE	Sewer Vent		Gravel / Rock
	Awning / Top of Gutter		Pavers
TOG RL	Top of Gutter		Tiles

Drawn:	SS	Date:	05/12/2023
Surveyed:	AJ	Date:	28/11/2024
Checked:	DB	Date:	05/12/2023

Associated Consultants

Disclaimer

Any licence, expressed or implied, to use this document for any purpose whatsoever is restricted to the terms of the agreement or implied agreement between Jensen Bowers and the instructing party.

Local Authority: Gold Coast City Council
Authority Ref. No: .
RP Description: Lot 122 on SP284713

Locality: Miami
Date of Survey: 28/11/2024
Level Datum: AHD (der)
Origin: OPM 21031 (RL 4.82)
Level Bk / Fld Bk: Digital
Horizontal Datum: IS306901
Contour Interval: 0.5m

Scale 1:750 @ A3
0 7.5 15 22.5m
1 : 750@A3 (Before Reduction)

Approved: DGB

Notes

The services shown hereon have been located where possible by field survey. Whilst due care and attention have been exercised, T.H. Jensen and Bowers Pty. Ltd. does not warrant that the services have been located in their entirety.

The boundaries shown hereon are for plotting purposes only and are subject to final survey.

The location of underground service lines are approximate only and have been plotted from field survey observations and/or service searches. Should their accurate location be critical to detail design we recommend further investigation.

Issue	Description	Date	Appd.
A	Original Issue	05/02/23	DGB

Client
Monaco Property Group

122 Marine Parade Miami

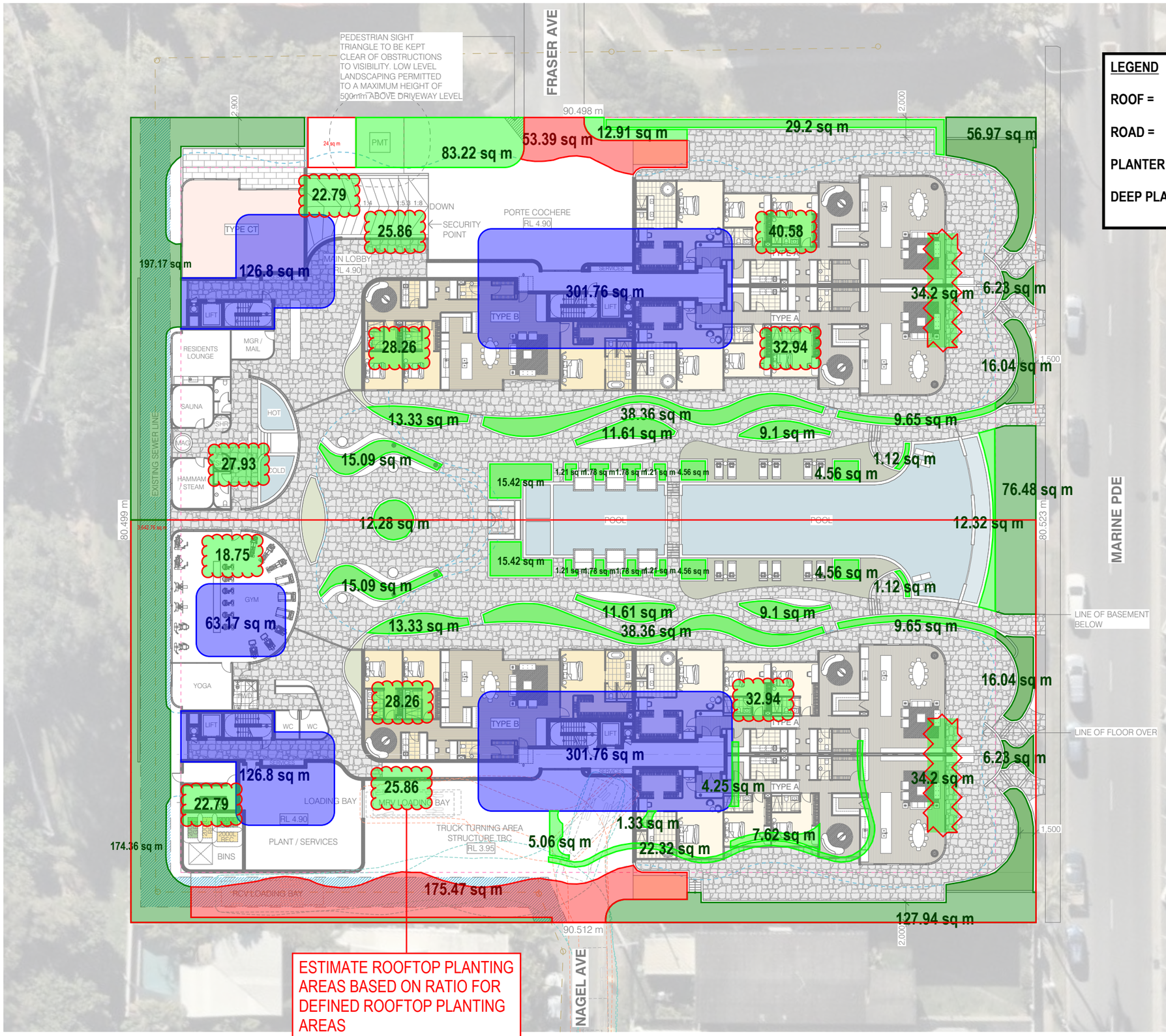
Detail Survey Sheet 1 of 6

Drawing No.	Issue	Original Size
S-11287-001	A	A3

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T.H. Jensen & Bowers Pty. Ltd. (Consulting Surveyors)
ABN. 52 010 872 607

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APPENDIX D
Developed Catchment Areas



ESTIMATE ROOFTOP PLANTING AREAS BASED ON RATIO FOR DEFINED ROOFTOP PLANTING AREAS

LEGEND

ROOF =	24.75 sq m
ROAD =	24.75 sq m
PLANTER BEDS =	24.75 sq m
DEEP PLANTING =	24.75 sq m

MMARY
7,284 m²

1 bed:6.85m² (1:49 code)

Site Cover:	TBC m² (??%)
Total Residential NSA:	TBC m²
Total GBA (Enclosed):	TBC m²
Total GBA (Unenclosed):	TBC m²

CAR PARKING	REQUIRED	PROVIDED
1 x 2 BED UNIT (1.25 CARS PER UNIT)	1.25 Car Parks	2 Car Parks
40 x 3 BED UNIT (1.5 CARS PER UNIT)	60 Car Parks	128 Car Parks
5 x 5 BED UNIT (2 CARS PER UNIT)	10 Car Parks	30 Car Parks
VISITORS (3+1 PER 10 THEREAFTER)	7 Car Parks	8 Car Parks
TOTAL	**79 Car Parks**	**168 Car Parks**
BICYCLES - RESIDENTIAL (1 PER 3 RES. & 1 PER 12 VIS.)	16 Residents 4 Visitors	?? Residents ?? Visitors

RESIDENTIAL

TYPE A	12 Units (26.1%)	3 Bed + Mpr 3.5 Bath, 3 Cars	300 m² Enclosed 90 m² Balcony 390 m² Total
TYPE B	6 Units (13%)	3 Bed + Mpr 3.5 Bath, 3 Cars	261 m² Enclosed 47 m² Balcony 308 m² Total
TYPE B + ROOF	2 Units (4.3%)	3 Bed + Mpr 3.5 Bath, 4 Cars Private Rooftop	288 m² Enclosed 240 m² Balc / Roof 528 m² Total
TYPE C	4 Units (8.7%)	3 Bed + Mpr 3.5 Bath, 3 Cars	245 m² Enclosed 48 m² Balcony 293 m² Total
TYPE C + ROOF	2 Units (4.3%)	3 Bed + Mpr 3.5 Bath, 4 Cars Private Rooftop	272 m² Enclosed 212 m² Balc / Roof 484 m² Total
TYPE D	6 Units (13%)	3 Bed 3.5 Bath, 3 Cars	186 m² Enclosed 45 m² Balcony 231 m² Total
TYPE E	6 Units (13%)	3 Bed + Mpr 3.5 Bath, 3 Cars	273 m² Enclosed 50 m² Balcony 323 m² Total
TYPE F	2 Units (4.3%)	5 Bed + Mpr 5.5 Bath, 6 Cars Private Rooftop	658 m² Enclosed 422 m² Balc / Roof 1,080 m² Total
TYPE G	2 Units (4.3%)	5 Bed + Mpr 5.5 Bath, 6 Cars Private Rooftop	774 m² Enclosed 754 m² Balc / Roof 1,528 m² Total
TYPE H	2 Units (4.3%)	3 Bed + Mpr 3.5 Bath, 4 Cars Private Rooftop	304 m² Enclosed 210 m² Balc / Roof 514 m² Total
TYPE I	1 Unit (2.1%)	5 Bed + Mpr 5.5 Bath, 6 Cars Private Rooftop	712 m² Enclosed 417 m² Balc / Roof 1129 m² Total
TYPE CT	1 Unit (2.1%)	2 Bed, 2 Bath 2 Cars	113 m² Enclosed 46 m² Balcony 159 m² Total
TOTAL	**46 DWELLINGS**	**147 BEDS**	

* NSA Enclosed areas measured to the centre line of party walls, external walls & glazing. Balconies measured to the centre line of party walls, glazing, and balustrades. Areas are approximate and will be subject to change

* GBA measured to the centre line of party walls and the outside face of external walls & glazing. Balconies measured to the centre line of party walls, and the outside face of glazing, and balconies.
Areas are approximate and will be subject to change

GROUND FLOOR PLAN - 1:400 (A3)

PRELIMINARY ISSUE

APPLICANT	DISCLAIMER	COPYRIGHT	PROJECT NAME	DRAWING	PROJECT NO.: 568100	DRAWING NO.	ISSUE
122 MARINE PARADE P/L ATF 122 MARINE PARADE UNIT TRUST	These drawings are conceptual design drawings only. The information contained herewith is subject to design development and further input from independant planning, structural, services and other technical consultants.	Copyright in this drawing is the property of BDA Architecture and may not be retained, copied in whole or in part or used other than for the specific uses, licence and site for which it has been prepared and issued.	122 MARINE PARADE	GROUND FLOOR PLAN	SCALE: 1:400 (A3) DATE: 15/04/2025	SK2.102	D

59 Peerless Avenue, Mermaid Beach QLD 4218
Phone: 07 5555 2600
Email: bda@bdaarch.com.au
bda architecture

APPENDIX E
SQIDEP Approvals

STORMWATER AUSTRALIA

Stormwater Quality Improvement Device Evaluation Protocol (SQIDEP)

VERIFICATION CERTIFICATE

Applicant Information

Applicant Name	**Ocean Protect Pty Ltd**
Applicant Address	60 Lyn Parade, Prestons, NSW 2170
Website	www.oceanprotect.com.au
Contact Email	bradd@oceanprotect.com.au

Verified Technology

Product Title	**StormFilter NPSorb**
SQIDEP Pathway	**Body of Evidence Pathway**
Reviewed Documents	The following documents form the basis of this independent evaluation: • Dalrymple B, Wicks M. (2024). *Performance report for SQIDEP review – StormFilter NPSorb*. Prepared on behalf of Ocean Protect. • Supporting information for the StormFilter NPSorb technology monitoring at the study site at Western Sydney, including plan and section drawings, site photos, sample receipt notifications, chain of custody documentation, certificate of analyses, individual storm reports, and monitoring equipment calibration and maintenance logs. • Statutory declarations from Ocean Protect personnel. • Photos of other StormFilter technology installations. • Dalrymple B, Wicks M. (2021). *A review of the application of StormFilter® in Australia*. Prepared on behalf of Ocean Protect. • Ocean Protect (2019). *StormFilter® Operations & Maintenance Manual*. • Ocean Protect (2020). *StormFilter® Technical Design Guide*.

Technology Information

Applicant's Verified Performance Claims (ER)	**Total Suspended Solids (TSS) 87 %** **Total Phosphorus (TP) 72 %** **Total Nitrogen (TN) 65 %** **Gross Pollutants 100 %**
Test Stormwater Runoff	The presented runoff pollutant test results complied with the SQIDEP typical stormwater pollutant concentrations for urban environments. The device has therefore been tested within the pollutant loading ranges specified by SQIDEP v1.3 for typical urban environments (e.g. urban roads, residential, industrial, commercial).
Test Catchment	Commercial

Maintenance Performed during monitoring	• Zero servicing or maintenance of the StormFilter NPSorb system at the study site was undertaken following the installation of the StormFilter NPSorb cartridges in April 2021 until after the last sampling event (in March 2023). Only visual inspections of the system were undertaken. • The StormFilter NPSorb system at the study site has been maintained in accordance with typical/ standard maintenance procedures for these assets, as described in the Manufacturer's guidelines.

Verified method to model in MUSIC

Modelling a StormFilter NPSorb technology in MUSIC is as follows:

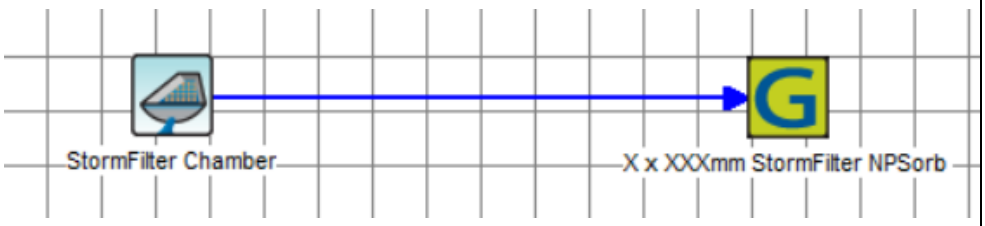


Table 1 – Summary of StormFilter NPSorb cartridge dimensions

Parameter	Cartridge name/ siphon height		
	690	460	310
Physical height (mm)	840	600	600
Typical weir height from outlet (mm)	920	690	540
Treatment flow rate (L/s)*	1.60	1.10	0.70

*: Treatment flow rate based on StormFilter NPsorb technology applied at study site.

Use the detention basin node to hydraulically represent the detention tank (or 'vault'/ storage) 'housing' the StormFilter cartridge system(s), with the properties given in Table 2.

Table 2 – Recommended values for MUSIC Detention Node (StormFilter Chamber) component for StormFilter NPSorb technology modelling

Parameter	Value for given cartridge name/ siphon height			
	690	460	310	Comments
Inlet properties				
Low flow by-pass (m^3/s)	0			No bypass of flows below treatment flow rate occurs.
High flow by-pass (m^3/s)	100			Default (very high value), noting bypass occurs in the Generic (NP Sorb) node and any overflow occurs via the overflow weir in the detention (Stormfilter chamber) node.
Storage properties				
Surface area (m^2)	Varies. Adjust to be equal to value of surface area of chamber housing StormFilter cartridges minus area of cartridges.			
Extended detention depth (m)	0.77	0.54	0.39	Standard 80mm head above top of cartridge media.
Permanent pool volume (m^3)	0			No permanent ponding of water occurs in appropriately functioning StormFilter technologies.
Initial volume (m^3)	0			
Evaporative Loss as % of PET	0			StormFilter cartridges are almost exclusively underground. Any evaporative loss is likely to be minimal.
Outlet properties				
Equivalent pipe diameter (mm)	Varies.			Depends on cartridge height, number, and chamber dimensions. Best to liaise with Ocean Protect.
Overflow weir width (m)	Varies. Adjust to be equal to width of weir structure within system.			
Notional detention time (hrs)	Varies.			
Advanced properties				
k (m/year)	Set to 1 or zero.			Ensures no additional treatment is modelled where none exists.

Use the generic node with the properties given below in Tables 3 and 4.

Table 3 – Recommended treatment flow rate & pollutant removal for StormFilter NPSorb technology (Generic Node)

High flow bypass/ treatment flow rate (TFR)	Pollutant removal up to TFR
Treatment flow rate multiplied by type and number of cartridges*	87% for TSS 72% for TP 65% for TN 100% for gross pollutants

*: Treatment flow rates for available configurations given in Table 1.

Table 4 – Recommended generic node transfer function properties for StormFilter NPSorb technology

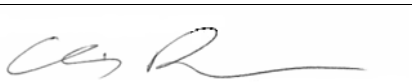
Pollutant	Influent	Effluent	Reduction
Total suspended solids (TSS)	1000	130	87%
Total Phosphorus (TP)	10	2.8	72%
Total Nitrogen	100	35	65%
Gross Pollutants	1000	0	100%

Conditions/Notes

The limitations of the acceptance of these claims include:

- The results lie within acceptable inflow limits for this type of catchment and based on the analysis are found to be representative. The device has been tested within the pollutant loading ranges specified by SQIDEP v1.3. As with the majority of treatment devices, where the influent water is more polluted there would likely be a greater percentage of pollutants removed and a higher residual load in effluent water – and, where the influent water is cleaner (i.e. below limits of detection), there would likely be a lower percentage of pollutants removed and a lower residual pollutant load in effluent water.
- Design and installation should be performed in accordance with the Manufacturer's guidelines. Results are reliant on the design of the device being consistent with the Manufacturer's guidelines.
- Regular inspection and maintenance should be performed in accordance with the Manufacturer's Operation and Maintenance Manuals. Results are reliant on the maintenance of the device being consistent with the Manufacturer's guidelines.

Independent Reviewers

Evaluator Signature	
Damian McCann Director AWC	
Chris Beardshaw Principal Engineer Afflux Consulting	

Issue of Verification Certificate

Acceptance by SQIDEP Governance Panel	16 September 2024
Acceptance by Stormwater Australia Board of Directors	16 September 2024
Verification Issued	9 September 2024
Stormwater Australia Verification Certificate Number Reference	SA-2024/10-VC

Verified under SQIDEP Version 1.3

Body of Evidence Pathway

APPENDIX F
Healthy Waters Code

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:

Note: In accordance with Section 2.1 of City Plan, an assessment against State interest - Water quality (policies 4 and 5) of the State Planning Policy 2017 is required as the Healthy water development code does not fully integrate this State interest. A response table for policies 4 and 5 have been included below.

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.

9.4.5 Healthy waters code

9.4.5.1 Application

This code applies to assessing material change of use, reconfiguring a lot or operational work for development where indicated within:

(1) **Part 5 Tables of assessment**; and

(2) **Table 9.4.5.1-1: Development triggers for applying the Healthy waters code.**

Table 9.4.5.1-1: Development triggers for applying the Healthy waters code

Topic	Assessment triggers	Applicable assessment benchmarks
Erosion and sediment control	All development.	For accepted development subject to requirements: **RO1, RO2**
		For assessable development: **PO1, PO2**
Stormwater quality and	For residential land uses involving one or more of the following:	For accepted development subject to requirements:

Topic	Assessment triggers	Applicable assessment benchmarks
waterway stability	(a) 3 or more dwellings; or (b) a land area greater than 1,200m^2; or (c) a newly constructed road (previously unformed road) exceeding 30m in total length; or (d) 200m^2 or more of uncovered new or refurbished car park area including parking bays and circulation driveways; or (e) the creation of high polluting outdoor activities (including Bulk landscape supplies, Garden centres, Tourist parks, Transport depots, Warehouses and Wholesale nurseries).	**RO3, RO5** For assessable development: **PO3, PO4, PO8 – PO13**
	For non-residential land uses involving one or more of the following: (a) a land area greater than 1,200m^2; or (b) a newly constructed road (previously unformed road) exceeding 30m in total length; or (c) 200m^2 or more of uncovered new or refurbished car park area including parking bays and circulation driveways; or (d) the creation of high polluting outdoor activities (including Bulk landscape supplies, Garden centres, Tourist parks, Transport depots, Warehouses and Wholesale nurseries).	For accepted development subject to requirements: **RO4, RO5** For assessable development: **PO3, PO4, PO8 – PO14**
Stormwater quantity	For residential activities, development associated with the creation of 3 or more dwellings, resulting in either: (a) an increase in the total impervious area; or (b) an alteration of upstream conveyance or change to existing discharge location or condition.	For accepted development subject to requirements: **RO3, RO6, RO7** For assessable development: **PO5 – PO14**
	For all other land uses, development that results in either: (a) an increase in the total impervious area; or (b) an alteration of upstream conveyance or change to existing discharge location or condition.	For accepted development subject to requirements: **RO4, RO6, RO7** For assessable development: **PO5 – PO14**
Woongoolba flood mitigation catchment area	Development that is code or impact assessable, on land within the 'Woongoolba flood mitigation catchment area' on the **Water catchments and dual supply system area overlay map**.	For assessable development: **PO15**

This code does not apply in the following instances:

(1) where the development involves internal works or minor building works to a lawfully established building; or

(2) a sales office.

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

9.4.5.2 Purpose

(1) The purpose of the Healthy waters code is to:

(a) protect the quality of the city's waters and watercourses by managing the impacts of development on quality and quantity of surface and ground water runoff; and

(b) ensure that development does not cause adverse impact on people and/or property.

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

(a) Total water cycle management and water sensitive urban design (WSUD) principles are:

(i) implemented to contribute to biodiversity areas and green space values within the city and promote co-location of assets; and

(ii) integrated into the landscape so as to maintain watercourse health, biodiversity and ecosystems.

(b) Development avoids or minimises disturbance to existing landforms, surface drainage, watercourses and groundwater.

(c) Impacts to public health and safety hazards are minimised.

(d) Adverse impacts to people and/or property are prevented and stormwater is safely managed within urban areas.

(e) Development protects existing overland flow paths and watercourses of environmental value.

(f) Development limits the quantity of key pollutants discharged in stormwater to protect the quality of receiving waters.

(g) Development avoids adverse impacts to downstream properties or environmental value from stormwater peak discharge.

(h) Development avoids or minimises adverse impacts on the environmental values of receiving waters from the release and mobilisation of nutrients and sediments.

(i) The drainage capacity of the Woongoolba Flood Mitigation Scheme Area for rainfall events up to 1 in 10 year 72 hours is maintained (contained within the Scheme drains within a 4 day period) and this capacity is not to be eroded due to cumulative impact of development.

9.4.5.3 Specific benchmarks for assessment

PART B – ASSESSABLE DEVELOPMENT BENCHMARKS

Table 9.4.5-3: Healthy waters code – for assessable development

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

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
Erosion and sediment control			
PO1 Stormwater discharge from a development site achieves the construction phase water quality objectives of **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and water sensitive urban design standards**.	**AO1** No acceptable outcome provided.	**AO1- COMPLIES** A stormwater management plan has been prepared which addresses the construction phase stormwater quality management for the proposed development. Refer to Section 8 of the SBSMP, report reference 30264961-3-GA0002.	
PO2 Erosion, sediment and dust is appropriately managed during the construction phase.	**AO2** The level of risk for soil erosion and sediment pollution to the environment is determined by an erosion hazard assessment, completed by a suitably-qualified person in accordance with the criteria in **Table 9.4.5-4: Erosion hazard assessment**. Where the erosion hazard assessment has a risk score of: (a) less than or equal to 10: A deemed to comply report is prepared by a suitably qualified person for Council approval, including conceptual location and design drawings of each treatment measure in plan and section views, in accordance with the *Best Practice Erosion and Sediment Control: International Erosion Control Association, (IECA) 2008, Australasia Chapter 2008.* (b) greater than 10 or developments involving multiple stages of disturbance or more than 1.25 ha of land: (i) For material change of use or reconfiguring a lot, a conceptual erosion and sediment control plan (ESCP) is prepared by a	**AO2 – COMPLIES** Section 8 of the stormwater report prepared by Arcadis, '30264961-3-GA0002' discusses appropriate ESC techniques for the site. The erosion hazard assessment has been completed within the table of this code response, and has scored a total of 10.	

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
	suitably-qualified person for Council approval in accordance with **SC6.12 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design standards**, and the *Best Practice Erosion and Sediment Control: International Erosion Control Association (IECA) 2008, Australasia Chapter 2008*. (ii) For operational work, a detailed ESCP is prepared by a suitably-qualified person in accordance with **SC6.12 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design standards**, and *Best Practice Erosion and Sediment Control: International Erosion Control Association (IECA) 2008, Australasia Chapter 2008*. The ESCP is to detail appropriate treatment measures for the construction phase of development, demonstrating how the minimum design objectives in **Table 9.4.5-5: Stormwater design objectives** are achieved, including: (a) measures to ensure the release of sediment-laden stormwater for the nominated design storm are minimised when the design storm is exceeded; (b) detailed design, installation, construction, monitoring and maintenance requirements of all approved proprietary products in		

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
	accordance with local conditions and manufacturer's recommendations; and (c) details of how the ESCP aligns with the approved development staging plan.		
Stormwater quality			
PO3 Development appropriately manages stormwater quality to: (a) protect natural ecosystems; (b) protect water quality; (c) reduce runoff and peak flows; and (d) meet the water quality objectives and environmental values for Queensland waters. **Note: Water quality objectives and environmental values for Queensland waters are contained within *Schedule 1* of the *Environmental Protection (Water) Policy 2009*. Water quality objectives are locally specific and vary between and within river catchments.** **Note: A stormwater quality management plan prepared by a suitably qualified person in accordance with SC6.12 City Plan policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design standards, is Council's preferred method for addressing this performance outcome.**	**AO3.1** For post developed sites, the following minimum pollutant reduction targets are achieved: (a) Gross pollutants (>5mm) – 90%; (b) Total Suspended Solids (TSS) – 80%, (c) Total Phosphorus (TP) – 60%; and (d) Total Nitrogen (TN) – 45%.	**AO3.1 – COMPLIES** A stormwater management plan has been prepared which addresses the management of operational phase stormwater quality measures for the proposed development. Refer to Section 7 of the SBSMP, report reference 30264961-3-GA0002.	
	AO3.2 For development on land less than 1.25ha, a deemed to comply solution for stormwater quality is achieved in accordance with **Table 9.4.5-6: Stormwater quality deemed to comply solutions**.	**REFER ABOVE**	
	AO3.3 For development on land greater than 1.25ha, a stormwater quality management plan is to be prepared by a suitably qualified person in accordance with **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and water sensitive urban design standards**, is required.	**REFER ABOVE**	
Waterway stability			
PO4 In-stream erosion, downstream of urban	**AO4** Post-development peak 0.632 Annual	**AO4 – COMPLIES** Refer to Section 6 of the SBSMP, report reference	

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 is prevented by controlling the rate (or magnitude) and duration of sediment transporting flows.	Exceedance Probability (AEP) event discharge within receiving waterway is limited to pre-development peak 0.632 AEP event discharge and is in accordance with **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and water sensitive urban design standards.**	30264961-3-GA0002 which addresses waterway stability requirements where applicable.	
Stormwater quantity control			
PO5 Stormwater quantity management outcomes demonstrate no adverse impact on stormwater flooding or the drainage of properties external to the subject site.	**AO5** The following is achieved external to the development site: (a) no increase in peak flood flow rate from the development site for all events up to and including the 1% AEP; (b) no increase in peak flood velocities from the development site for all events up to and including the 1% AEP; (c) no increase in peak flood level from the development site for all events up to and including the 1% AEP; and (d) stormwater outfalls or discharge is located to avoid conflict with existing usage of downstream land or impacts on existing watercourse or drainage.	**AO5 – COMPLIES** A stormwater management plan has been prepared which addresses the management of stormwater quantity for the proposed development. Refer to Section 6 of the SBSMP, report reference 30264961-3-GA0002.	
Lawful point of discharge			
PO6 Development ensures the stormwater systems are designed to not cause actionable nuisance that would adversely affect adjoining (upstream or downstream) properties.	**AO6** A lawful point of discharge must be identified and demonstrated that all discharge point/s from the development are in accordance with **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and**	**AO6 – COMPLIES** Refer to Section 5 of the SBSMP, report reference 30264961-3-GA0002 which assesses the LPoD(s) relevant to the subject site.	

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 sensitive urban design standards.		
Overland flow paths			
PO7 Development must not obstruct free open surface flow of stormwater through a site.	**AO7** Overland flowing stormwater is allowed free open surface flow between the street and any waterway at the rear or sides of a property, in accordance with the provisions of the *Building Code of Australia.*	**AO7 – COMPLIES** Provision has been made for the identified potential overland flow paths. Refer to Section 5, Section 6 and Appendix B of the SBSMP prepared by Arcadis, reference 30264961-3-GA0002.	
Whole of life costs			
PO8 Stormwater infrastructure is designed and constructed to: (a) remain fit for purpose for the life of the development and maintains full functionality in the design flood event; (b) be cost effective to maintain; and (c) ensure no structural damage to existing stormwater infrastructure.	**AO8** No acceptable outcome provided.	**AO8 – COMPIES** Private infrastructure will remain the responsibility of the body corp. All other municipal connection works have been designed to relevant standards.	
Landscape integration			
PO9 Stormwater treatment devices and stormwater infrastructure are designed to: (a) integrate with the urban design and landscape outcomes of the development; (b) complement natural environments, wetlands and watercourses; (c) protect environmental values; (d) enhance visual amenity; and (e) incorporate CPTED principles in accordance with **SC6.12 City Plan**	**AO9.1** Where stormwater treatment devices and stormwater infrastructure are integrated into public open space, a Statement of Landscape Intent is to be prepared by a suitably qualified person, for approval by Council. The plan is to demonstrate that the operation of stormwater infrastructure does not compromise the function of any co-located uses and reflect the design principles within **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and water sensitive urban design standards.**	**AO9.1 – COMPIES** Refer to Engineering Drawings within Appendix B of the SBSMP, report reference 30264961-3-GA0002 which demonstrates the location of stormwater treatment devices. The architect and landscape architect have integrated this within the proposed design as appropriate.	

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
policy – Land development guidelines, Section 4 – Stormwater drainage and water sensitive urban design standards.	**Note: A Statement of landscape intent is to be prepared in accordance with SC6.13 City Plan policy – Landscape work.**		
	AO9.2 Stormwater treatment devices are located offline to any upstream catchment. **Note: This provision relates to the integration of stormwater treatment devices and stormwater infrastructure into the landscape. Development identified on the Environmental significance – wetlands and watercourse overlay map will still require assessment against the Environmental significance overlay code.**	**AO9.2 – COMPIES** Refer to Section 5 of the SBSMP, report reference 30264961-3-GA0002 which demonstrates flows which stormwater treatment devices receive.	
	AO9.3 All stormwater outlets that are located adjacent to watercourses, creeks and drainage paths are aligned at a maximum of 45 degrees to the downstream direction of flow, and energy dissipation measures installed to minimise scour.	**NOT APPLICABLE** No outlets to watercourses, creeks or drainage paths are proposed.	
Public safety			
PO10 Stormwater treatment devices and stormwater infrastructure minimise impacts on public health and safety.	**AO10** All stormwater quantity control measures are designed in accordance with **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and water sensitive urban design standards**.	**AO10 – COMPIES** Refer to Engineering Drawings within Appendix B of the SBSMP, report reference 30264961-3-GA0002, which details the proposed treatment system including levels and location. The proposed treatment system is not in a location or position where it would pose an abnormal risk to health and safety.	
Maintenance access			

PO11 Maintenance access is provided for all stormwater management systems and considers: (a) the type of vehicle or machinery needed to service particular assets; and (b) the need to ensure a safe working environment for maintenance personnel and the public.	**AO11.1** All weather vehicle access is to be provided to inlet zones of the stormwater treatment systems in accordance with **Table 9.4.5-7: Maintenance access requirements (slope).**	**AO11.1 – COMPIES** Refer to Engineering Drawings within Appendix B of the SBSMP, report reference 30264961-3-GA0002, which illustrates appropriate maintenance access from the site frontage. It should be noted that the proposed asset is a private asset not transferred to Council.	
	AO11.2 Maintenance access is to be provided around the perimeter of all stormwater treatment systems in accordance with **Table 9.4.5-8: Maintenance access requirements (size).**	**REFER ABOVE**	
	AO11.3 A maintenance buffer is provided around the perimeter of all stormwater treatment devices and adjoining private property equal to: (a) 1m in width; or (b) the width of a perimeter maintenance access, as delivered in AO11.2, plus 0.5m. The maintenance buffer is measured from the adjacent allotment boundary to the top of batter around the treatment measure. The maximum slope on the maintenance buffer is 1 in 10.	**REFER ABOVE**	
Fauna movement			
PO12 Stormwater conveyance structures and channels are designed to ensure the safe movement of native fauna and provide for terrestrial and aquatic passage.	**AO12.1** Stormwater drainage structures and channels minimise impacts on aquatic fauna and associated habitats and provide opportunities for beneficial habitat uses of structures in accordance with the *Department of Primary Industries and Fisheries – Fisheries guidelines for Fish-friendly structures (2006).*	**NOT APPLICABLE** The proposed stormwater infrastructure is within an urbanised area which is not occupied by native fauna / does not currently provide aquatic passage.	

	AO12.2 Stormwater drainage structures allow for the safe movement of terrestrial fauna in accordance with: (a) the Queensland Government Fauna Sensitive Road Design Manual Volume 2: Preferred Practices; and (b) the Queensland Government Koala-Sensitive Design Guidelines.	**REFER ABOVE**	

Wastewater management			
PO13 Development does not discharge wastewater to receiving waters or areas external to the site unless demonstrated to be the best-practice environmental management for that site and takes into consideration: (a) the applicable water quality objectives for the receiving waters; and (b) the potential adverse impact on ecosystem health of receiving waters.	**AO13** Where the development involves the discharge of wastewater, a Wastewater Management Plan (WWMP) is prepared, demonstrating compliance with the performance outcome, by a suitably qualified person and submitted to the Council, detailing all of the following: (a) wastewater type; (b) climatic conditions; (c) water quality objectives; (d) best-practice environmental management; (e) waste management hierarchy; and (f) the WWMP provides for the management of wastewater in accordance with a wastewater management hierarchy that: (i) avoids wastewater discharge to watercourses; or (ii) if wastewater discharge to the environment cannot practicably be avoided wastewater discharge to watercourses is minimised through re-use, recycling, recovery and treatment for disposal to sewer, surface water and groundwater.	**NOT APPLICABLE** The site doesn't propose to discharge wastewater into receiving waters.	
Dewatering management			
PO14 Dewatering occurs in accordance with an approved Dewatering management plan.	**AO14** No acceptable outcome provided.	**AO14 – COMPLIES** If relevant requirements are triggered, the proposed development will be required to provide a dewatering plan to facilitate basement construction. Standard condition wording can be provided for the development approval.	
Woongoolba flood mitigation catchment area			

PO15 In the Woongoolba flood mitigation catchment area, shown on the **Water catchments and dual supply system area overlay map**, peak outflow and its timing for Q2, Q5 and Q10 for rainfall events up to 72 hours does not change as a result of development.	**AO15** No acceptable outcome provided.	**NOT APPLICABLE** The site is not within the flood mitigation scheme area.	

State Planning Policy July 2017

Policies	Demonstrate how the proposal meets the policy?	Internal use
State interest – water quality		
ASSESSMENT BENCHMARK 4 (POLICY 4): At the construction phase, development achieves the applicable stormwater management design objectives in table A (appendix 2) of the State Planning Policy.		
ASSESSMENT BENCHMARK 5 (POLICY 5): (5) At the post-construction phase, development: a) achieves the applicable stormwater management design objectives on-site, as identified in table B (appendix 2) of the State Planning Policy; or b) achieves an alternative locally appropriate solution off-site that achieves an equivalent or improved water quality outcome to the relevant stormwater management design objectives in table B (appendix 2) of the State Planning Policy.		

Table 9.4.5-3: Erosion hazard assessment

Controlling factor	Points	Score
Average slope of the whole site prior to operational works		
Slope less than 2%	0	0
More than or equal to 2% but less than 5%	1	
More than or equal to 5% but less than 10%	2	
More than or equal to 10% but less than 15%	4	
More than or equal to 15%	5	High risk
Soil type (to be disturbed)		
Gravels and sandy soils	1	1
Sandy loam	2	
Clays on flood plains	3	
Shallow soils on slopes	4	
Clays on slopes greater than 5%/imported fill or untested fill	5	High risk
Anticipated duration of site disturbance		
Duration less than 2 weeks	0	
More than 2 weeks but less than 3 months	2	
More than 3 months but less than 6 months	4	4
More than 6 months	5	High risk
Anticipated erosive rainfall risk during site disturbance		
Low (monthly average rainfall less than 45 mm)	0	
Moderate (monthly average rainfall 46 - 100 mm)	1	
High (monthly average rainfall 101 - 225 mm)	2	2
Very high (monthly average rainfall 226 - 1500 mm)	4	
Extreme (monthly average rainfall more than 1500 mm)	5	High risk

Controlling factor	Points	Score
Off-site sediment control (down-slope of the soil disturbance)		
Score 1 point if there is no purpose-built sediment trap (e.g. sediment basin, gross pollutant trap or purpose-built wetland).	1	1
Run-off entering the site		
Score 1 point if stormwater run-off is not diverted from entering the site or away from soil disturbance.	1	
Extent of site disturbance		
Score 2 points if the building works requires reshaping of the ground surface.	2	2
Total Score **Note: High erosion risk - if score 11 or greater, or five for any factor.**		

This Erosion Hazard Assessment form is adapted from the *Best Practice Erosion and Sediment Control, International Erosion Control Association (Australasia), IECA 2008 Appendix H - Building Sites, the Brisbane City Council Erosion Hazard Assessment Form* and *Attachment 2 to the QDC Draft Part 16 Erosion and Sediment Control*.

Table 9.4.5-5: Stormwater design objectives

Construction phase stormwater design objectives	Notes
Drainage control	
Design life and design storm of temporary drainage works: (1) Disturbed area open for less than 12 months - 1 in 2 ARI. (2) Disturbed area open for 12-24 months - 1 in 5 ARI. (3) Disturbed area open for more than 24 months - 1 in 10 ARI.	• ARI = Average Recurrence Interval (see Engineers Australia document Australian Rainfall and Runoff). • Design capacity excludes minimum 150mm freeboard. • A higher drainage design objective may be required for temporary drainage structures upslope of occupied properties. • A revised drainage design storm may be required if these design objectives are found to be impracticable.
Erosion control	
(1) Stage clearing and construction works to minimise the area of exposed soil at any one time. (2) Effectively cover or stabilise exposed soils prior to predicted rainfall. (3) Prior to completion of works for the development, and prior to removal of sediment controls, all site surfaces must be effectively stabilised using methods which will achieve effective short-term stabilisation. (4) Avoid or minimise large construction activities in the 'wet season'. (5) Divert water run-off from undisturbed areas around disturbed areas. (6) Use erosion risk ratings to determine appropriate erosion control measures.	• 'Wet season' means the high rainfall months, e.g. the four highest rainfall months. • For point 6, determine the erosion risk rating using local rainfall erosivity, rainfall depth, or soil loss rate or other acceptable method. A rating scale such as very low, low, moderate, high, extreme should be applied. Such ratings should reflect the local area. Example ratings may be shown in local council guidelines or detailed in best-practice guidelines.
Sediment control	
(1) Use soil loss rates to determine appropriate sediment control measures. (2) Direct runoff from exposed site soils to sediment controls that are appropriate to the extent of disturbance and level of erosion risk. (3) All exposed areas greater than 2500 metres must be provided with sediment controls which are designed, implemented and maintained to a standard which would achieve at least 80% of the average annual	• For point 1, surrogate determinations may be used such as monthly erosion or average monthly rainfall. • A commonly used design storm for basin sizing is 80th percentile five-day event. Depending on the settling characteristics of local soils, a higher 'operational' design storm can be achieved with chemical dosing operated in flow-through mode in a large storm with rainfall-activated auto-flocculent dosing, and advanced hydraulic efficiency features such as floating off-takes,

runoff volume of the contributing catchment treated (i.e. 80% hydrological effectiveness) to 50mg/L Total Suspended Solids (TSS) or less, and pH in the range (6.5–8.5).	and a sediment forebay. • TSS = Total Suspended Solids. Turbidity measurements (e.g. 60 Nephelometric Turbidity Units (NTU)) could be used; however, for accuracy, a site-specific relationship should be developed between turbidity and TSS.

Table 9.4.5-6: Stormwater quality deemed to comply solutions

The following deemed to comply solutions are to be documented within a Stormwater quality management plan prepared by a suitably-qualified person in accordance with **SC6.12 City Plan policy – Land development guidelines**, **Section 4 – Stormwater drainage and water sensitive urban design standards**.

Development type			**Stormwater treatment train**		**Land ownership[2]**
Land use	**Scenario**	**Scale**			
Residential	>2 lots up to 20 lots	N/A	Tank Volume per dwelling: • Detached 5 kl • Attached 3 kl	Bio retention[3] @ 1.3% of impervious catchment area.[1]	Public and/or Private
			No Tanks	Bio retention[3] @ 1.8% of impervious catchment area.[1]	Public and/or Private
			Tank Volume per dwelling: • Detached 5 kl • Attached 3 kl	Wetland @ 5% of impervious catchment area.	Public and/or Private
			No Tanks	Wetland @ 7% of impervious catchment area.[1]	Public and/or Private
	> 2 dwellings (Townhouse style up to 2 storeys	≤ 12,500m^2	Tank Volume per dwelling: • Detached 5 kl • Attached 3 kl	Bio retention[3] @ 1.3% of impervious catchment area.[1]	Private
			No Tanks	Bio retention[3] @ 1.8% of impervious catchment area. [1]	Private
			Tank Volume per dwelling: • Detached 5 kl • Attached 3 kl	Wetland @ 5% of impervious catchment area.[1]	Private
			No Tanks	Wetland @ 7% of impervious catchment area.[1]	Private

	High density multiple dwelling apartments (flats, high-rise)*	≤ 12,500m^2	Tank Volume per dwelling: • Detached 5 kl • Attached 3 kl	Bio retention[3] @ 1.8% of impervious catchment area.[1]	Private
			No Tanks	Wetland @ 7% of impervious catchment area.[1]	Private
Commercial, Industrial and Retail (including retail at the bottom floors of high rise)[4]	Commercial and/or Industrial uses	≤ 12,500m^2	Tank Volume per dwelling: • Detached 5 kl • Attached 3 kl	Gross pollutant management (GPT) + Bio retention[3] @ 1.8% of impervious catchment area.[1]	Public and/or Private
			No Tanks	Gross pollutant management (GPT) + Wetland @ 8% of impervious catchment area.[1]	Public and/or Private

[1] For developments that results in an increase in less than 15% imperviousness (i.e. roof and ground level impervious), then stormwater management to focus on the impervious areas only.

[2] Ultimate owner of the device and responsible for maintenance.

[3] For bioretention basins larger than 800m^2, an inlet pond will be required.

[4] The City requires gross pollutant management for these land uses. It is preferred that these are located on private property, but in larger scale Reconfiguring a lot applications it is logical to have a single gross pollutant trap for the site. The City will not accept proprietary devices for nutrient management on public/City land.

Table 9.4.5-7: Maintenance access requirements (slope)

Treatment type	Access track slope	Material and width
Stormwater inflows where pipe is 450mm or greater (where there is no forebay or inlet pond)	1 in 4 or flatter	2.5m wide minimum Gravel or reinforced turf from inlet
Coarse sediment forebay	1 in 4 or flatter	2.5m minimum Reinforced concrete in accordance with *IPWEAQ standard drawing RS-051* Concrete paver (subject to City approval), cement treated gravel

		250mm thick may be accepted by the City through negotiation.
Inlet pond (wet) for retention or wetland Sediment basins	1 in 4 or flatter	3m wide Reinforced concrete in accordance with Heavy Vehicle Crossing Industrial (*refer IPWEAQ standard drawing RS-051*). Where this access crosses perpendicular to pedestrian paths, the path must be 200mm thick, double reinforced and 42MPa.
Proprietary devices	1 in 4 or flatter	Reinforced concrete in accordance with Heavy Vehicle Crossing Industrial (refer *IPWEAQ standard drawing RS-051*).

Table 9.4.5-8: Maintenance access requirements (size)

Treatment type	Size	Maintenance access requirements (all paths 1 in 10 cross fall or less and maximum 1 in 4 longitudinal grade)
Bioretention	< 500m^2	Access path to > 40% of perimeter. ≥ 0.75m wide. Grass, mulch, gravel or concrete suitable for access on foot.[1]
	≥ 500m^2	Access path to > 40% of perimeter. ≥ 2.5m wide. Reinforced grass, gravel or concrete for light vehicles.[1] Remainder of perimeter as per < 500m^2 bioretention.
Wetland	<1000m^2	Access path to > 40% of perimeter. ≥ 0.75m wide. Grass, mulch, gravel or concrete

		suitable for access on foot.
	≥ 1000m^2 to < 5000m^2	Access path minimum 40% of perimeter. ≥ 2.5m wide. Reinforced grass, gravel or concrete for light vehicles.[1] Remainder of perimeter ≥ 0.75m wide.
	≥ 5000m^2	Access path 100% of perimeter. ≥ 2.5m wide. Cement treated gravel 200mm or concrete for large vehicles.

[1] Determine access path treatment based on slope, maintenance vehicle and the surrounding landscape. For example, turf is not appropriate where the treatment system is located against conservation open space, and where revegetation for the treatment system complements the surroundings, the use of gravel or concrete is preferred.

APPENDIX G
Council Hydraulics Correspondence

Wieser, Ben

From: KHANDUJA Rohit <RKHANDUJA@goldcoast.qld.gov.au>
Sent: Tuesday, 3 June 2025 9:29 AM
To: Stockwell, James
Cc: Wieser, Ben; Castro, Darlan; AMIR Sharif
Subject: RE: 122 Marine Parade (MCU/2025/155) | Item 21 | Discussion Summary and Actions

Follow Up Flag: Follow up
Flag Status: Flagged

You don't often get email from rkhanduja@goldcoast.qld.gov.au. Learn why this is important

Arcadis Warning: Exercise caution with email messages from external sources such as this message. Always verify the sender and avoid clicking on links or scanning QR codes unless certain of their authenticity.

Hi James,

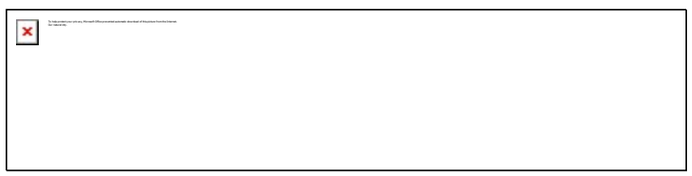
As discussed, Please include the below stated assessment in the updated SWMP. As such, no HIA is required.

Rohit Khanduja
Stormwater and Flood Engineer

Engineering and Landscape Assessment
City Development Branch, Planning & Regulation
Nerang Administration

T: 07 5582 8917
PO Box 5042 Gold Coast Mail Centre Qld 9726
cityofgoldcoast.com.au

CITY OF GOLDCOAST.



From: Stockwell, James <James.Stockwell@arcadis.com>
Sent: Monday, 2 June 2025 4:33 PM
To: KHANDUJA Rohit <RKHANDUJA@goldcoast.qld.gov.au>
Cc: Wieser, Ben <Ben.Wieser@arcadis.com>; Castro, Darlan <Darlan.Castro@arcadis.com>
Subject: 122 Marine Parade (MCU/2025/155) | Item 21 | Discussion Summary and Actions

Hi Rohit,

Thanks for your time today.

Please see below images and points discussed. As we understand Council agree that no further Hydraulic Impact Assessment is required.

We will formalise the below into an updated stormwater management plan / RFI response, but could you please confirm via return this is accepted in-principle.

Please reach out if any further queries, always happy to take a call.

Fraser Avenue (figure 1)

- Fraser Avenue grades towards the subject site with its underground drainage system grading northbound away from the subject site.
- Currently the VXO at the cul-de-sac head acts as a weir and controls how much runoff can enter the site. Runoff then traverses along the northern boundary within the site & Council's park land before entering an existing drainage pit and conveying to Marine Parade. Runoff in excess will move overland to Marine Parade also.
- The proposed works maintain or improve the current arrangement by:
    - No change to the weir control (therefore no impact to upstream areas).
    - Maintaining overland flow capacity to the existing drainage pit and through to Marine Parade.
- There is also the benefit of removing the retaining wall and fence around the existing drainage pit improving safety.
- Accordingly existing sensitive drainage characteristics are preserved and capacity maintained or increased which will not give rise to unacceptable adverse impacts to private property.

Nagal Avenue (figure 2)

- Nagel Avenue grades towards the subject site with its underground drainage system grading southbound away from the subject site, ultimately to Marine Parade.
- Currently the road stub acts as a constraint controlling how much runoff can enter the site. Runoff then traverses along the southern boundary before passing through the subject site and southern adjacent site to Marine Parade.
- The proposed works maintain or improve the current arrangement by:
    - No change to the road stub or increase in site levels within the receiving area.
    - Improving pit and pipe drainage capacity within the site, reducing frequency/severity of pass through overland flow.
    - Widening and deepening (not lifting) the existing onsite choke point increasing the site's share of any overland flow. We have demonstrated our site in isolation could facilitate all runoff per the original SBSMP).
- Accordingly existing sensitive drainage characteristics are preserved and capacity maintained or increased which will not give rise to unacceptable adverse impacts to private property.
- I note we also discussed review and providing extra drainage within the landscape flow path to mitigate flatness. This would further reduce overland flow. We will review and capture in an updated SBSMP as we agree on its benefit.

Figure 1 (Fraser Avenue Notes)

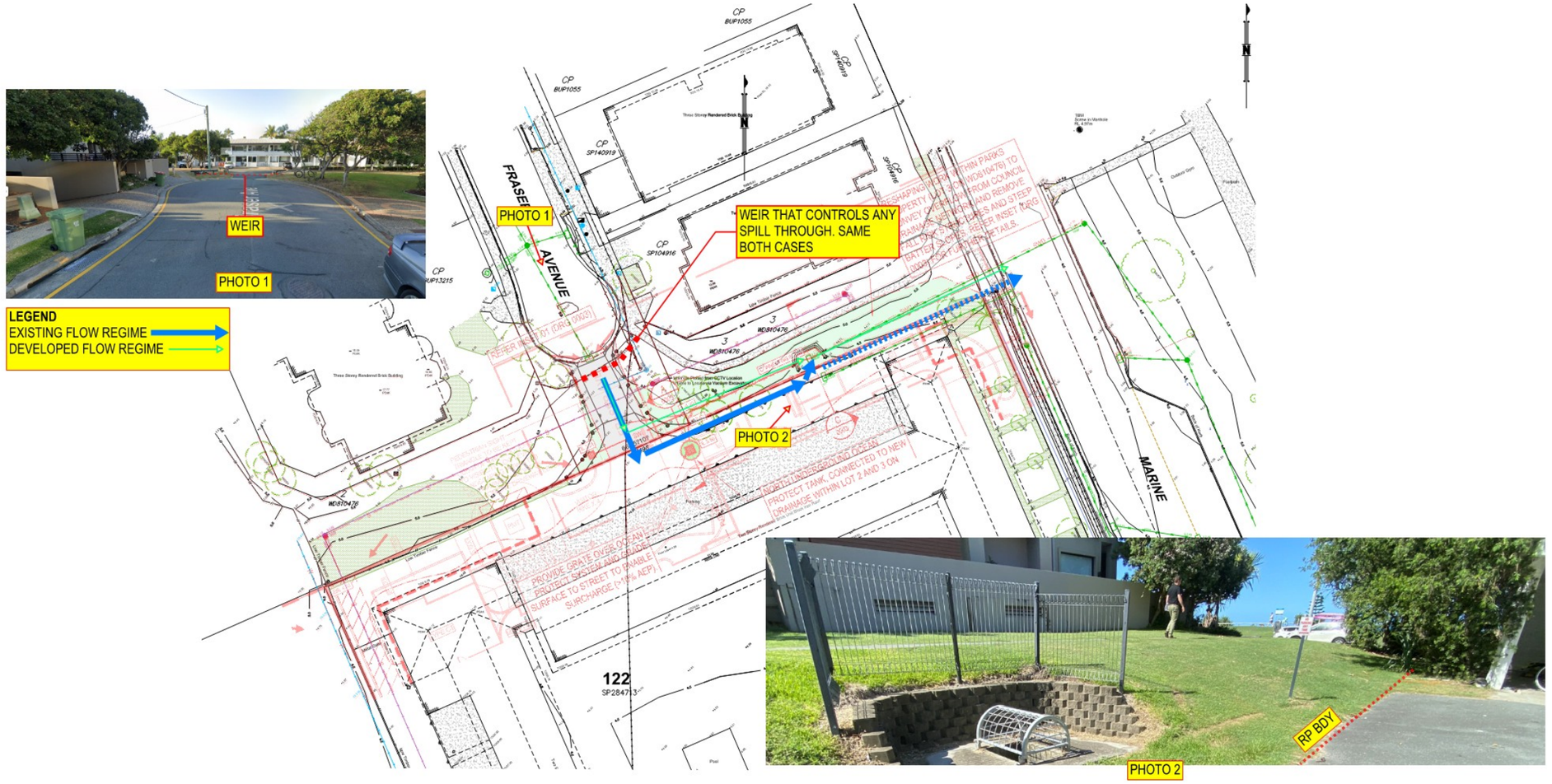
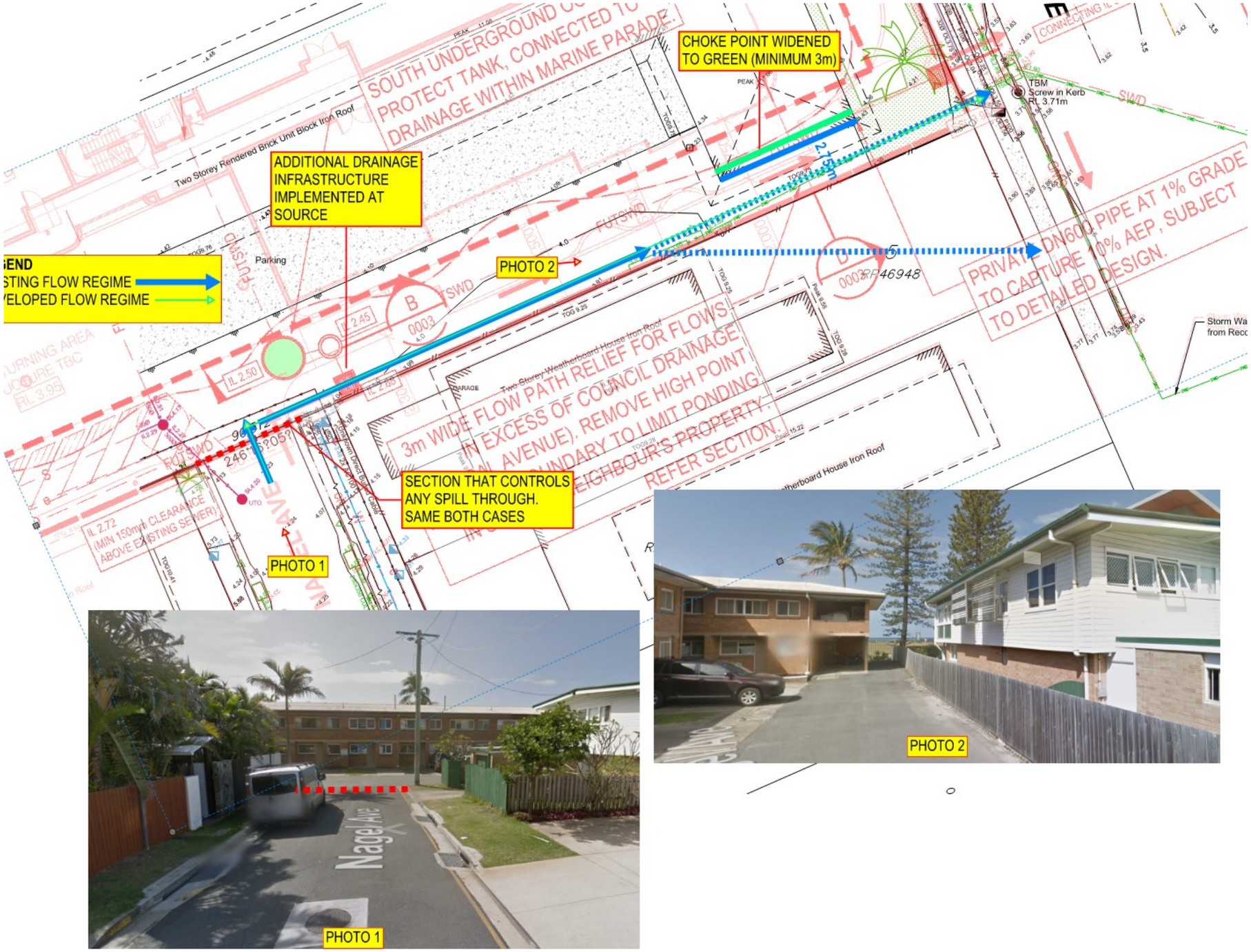


Figure 2 (Nagal Avenue Notes)



James Stockwell
Senior Civil Engineer / Team Leader

ATTACHMENT 7

Revised Waste Management Plan
prepared by MRA Environmental



MRA ENVIRONMENTAL

YOUR TRUSTED ENVIRONMENTAL PARTNER

WASTE MANAGEMENT PLAN

122 MARINE PDE
MIAMI QLD 4220



CLIENT

Monaco Property Group Pty Ltd

June 2025

DOCUMENT INFORMATION

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Client Details:

Client:	Monaco Property Group Pty Ltd c/- Eastview
Client contact:	Nick Ensor
Client Phone:	0447 501 086

Document Details:

Title:	Waste Management Plan 122 Marine Pde Miami Qld 4220
Project Number:	MRA24-227

Revision	Date	Author	Reviewed By	Issued By
V.1	17 April 2025	M Rigby	A Reiser	M Rigby
V.2	24 April 2025	A Reiser	M Rigby	A Reiser
V.3	17 June 2025	A Reiser	M Rigby	A Reiser
V.4	18 June 2025	A Reiser	M Rigby	A Reiser

Destination	Draft	Final	Rev	Rev
Monaco Property Group Pty Ltd	V.1	V.2	V.3	V.4
Eastview	V.1	V.2	V.3	V.4
MRA Environmental	V.1	V.2	V.3	V.4

LIMITATIONS

Mark Rigby & Associates Pty Ltd (MRA Environmental) has prepared this Waste Management Plan for the sole use of Monaco Property Group Pty Ltd, to support a Development Application for the proposed residential development located at 122 Marine Pde, Miami Qld 4220.

Specifically, this report supports the Development Application and relates to the waste storage and collection activities for the operational phase of the planned development in accordance with the City of Gold Coast *City Plan - SC6.16 City Plan Policy v.11 - Solid Waste Management*. This WMP will be submitted to Council as a component of the Development Application.

This report is for the sole use of Monaco Property Group Pty Ltd and in relation to the Development Application to be submitted to City of Gold Coast. It may not contain sufficient information for the purposes of other parties, for other uses or at other locations.

We have performed our services for this project in accordance with our current professional standards. No other warranty, expressed or implied, is made as to the professional advice included in this submission.

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. MRA Environmental cannot take responsibility for advice provided by any third party.

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ATTACHMENTS

Attachment A: Solid Waste Management Code
Attachment B: Swept Path Analyses
Attachment C: Private waste collection contractor correspondence

1.0 GLOSSARY OF TERMS

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, Childcare 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 wheelie bins for servicing.

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

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 toxic 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.

Roll-on roll-off bin (Ro-Ro 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 anything, 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 BACKGROUND

MRA Environmental (MRA) has been commissioned by Monaco Property Group Pty Ltd to prepare a Waste Management Plan (WMP) for the proposed residential development located at 122 Marine Pde, Miami Qld 4220.

MRA have previously prepared a WMP for this development (*MRA24-227 Waste Management Plan Nalu 122 Marine Pde, Miami QLD V.2. dated 24th April 2025*) which was lodged as part of the Development Application (MCU/2025/155) submitted to the City of Gold Coast (Council).

It is understood that an Information Request dated 28th May 2025 has subsequently been issued and Item 23 requests a waste collection vehicle swept path analysis for Council's side-lift waste collection vehicle demonstrating it can turn around within the subject site. Please refer to **Attachment B** which provides swept path analyses for both a rear-lift waste collection vehicle and Council's side-lift waste collection vehicle demonstrating they can enter & exit the site in a forward gear from Nagel Street.

It is also noted that Item 20 requests additional information regarding potential noise impacts in the loading bay/servicing area. Please refer to the project's acoustic consultant report which addresses this item. As outlined in **Section 5.2**, the applicant has commenced engagement with a private waste contractor in relation to servicing for the development. This approach for waste servicing at the development has been accepted by Council in correspondence dated 27 February 2025. The private waste contractor has also indicated that servicing can be scheduled to occur between 9.30am to 2.30pm weekdays where possible to minimise potential noise impacts during servicing. Please refer to **Attachment C** for waste contractor correspondence regarding proposed servicing timeframes.

Therefore, this updated Waste Management Plan has been prepared to be submitted to Council as part of the Information Request Response prepared for the site and ensures waste storage and collection activities for the operational phase of the development are generally in accordance with *SC6.16 City Plan Policy v.11 - Solid Waste Management*.

2.2 SITE DETAILS

The subject site is located at 122 Marine Pde, Miami QLD on a parcel of land described as Lot 122 on SP284713 (Refer to **Figure 1**). The site has street frontage on Marine Pde and is bound by Fraser Ave to the north, Nagel Ave to the south, and Lions Head Park to the west.

The subject site is approximately 7,284m^2 and the proposed development is a 5-storey building offering 45 dwellings, comprised of one (1) x 2-bedroom unit, forty-four (44) x 3+ bedroom units. Additionally, there will be a rooftop recreation area and one (1) level of basement parking.

2.3 PURPOSE & SCOPE OF REPORT

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 proposed waste collection arrangements (**Section 5.0**).

2.4 WMP OBJECTIVES & STRUCTURE

The structure of this report will be as follows:

- An introduction including the site details, summary, purpose and scope of the report along with the objectives and structure;
- Development figures including the site location and outlining the waste storage and servicing infrastructure and locations;
- Waste quantities including the type of waste, quantities of waste and the proposed development uses;
- Proposed waste storage and servicing areas including waste storage infrastructure and locations within the development; and
- Details of the waste collection including servicing frequencies, the waste servicing area and collection vehicle access.



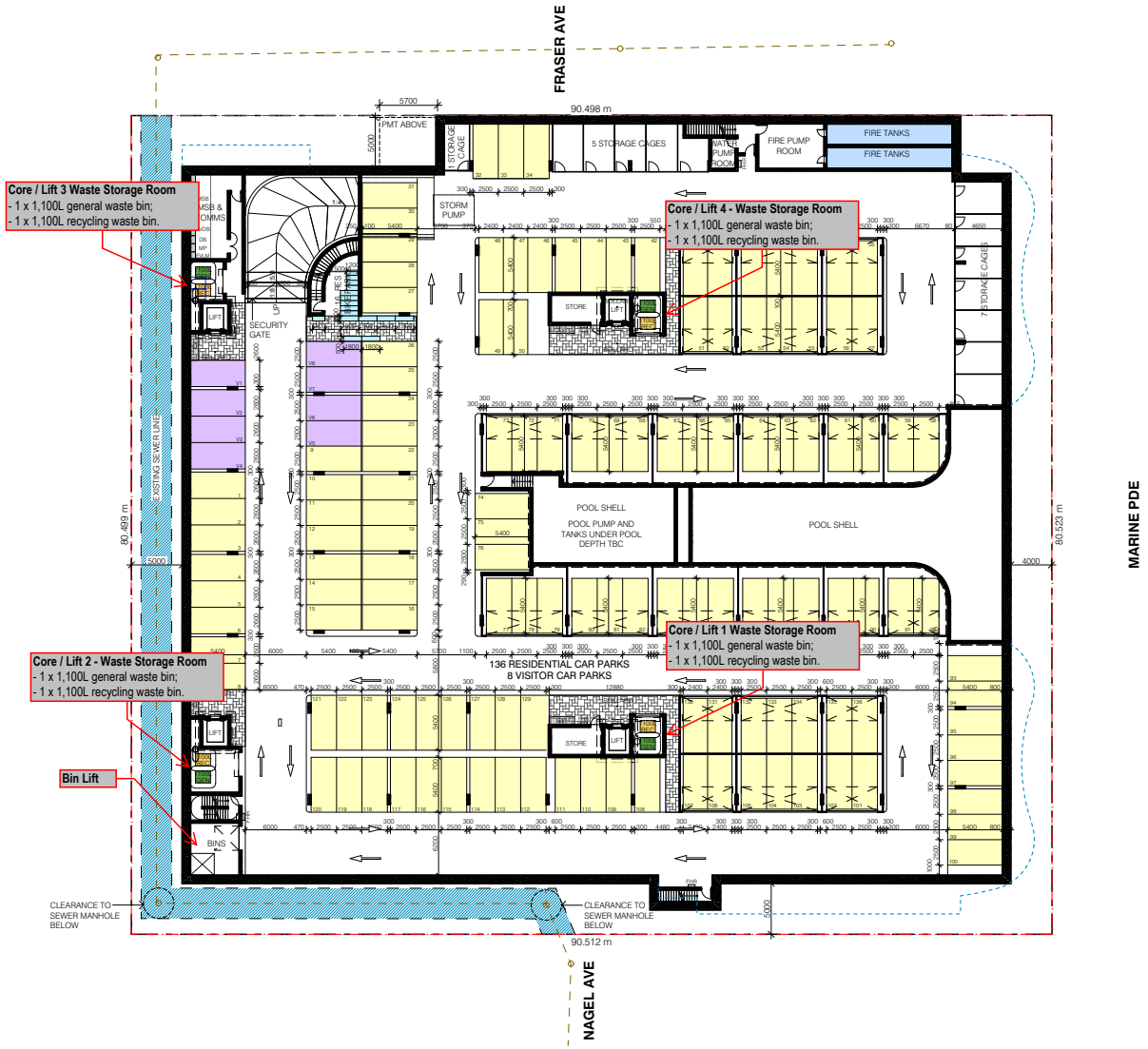
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Runaway Bay
Guanaba
Parkwood
Nerang National Park
Southport
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Surfers Paradise
Carrara
Broadbeach
Cryna
Canungra
Lower Beechmont
Worongary
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Tallai
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Kerry
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DESIGNED RP	SCALE NTS	CLIENT MONACO PROPERTY GROUP PTY LTD	JOB NUMBER MRA24-227
DRAWN RP	LEVEL DATUM -	PROJECT WASTE MANAGEMENT PLAN 122 MARINE PDE, MIAMI	DRAWING Figure 1
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DATE JUNE 2025	ISSUE FINAL		REV FINAL



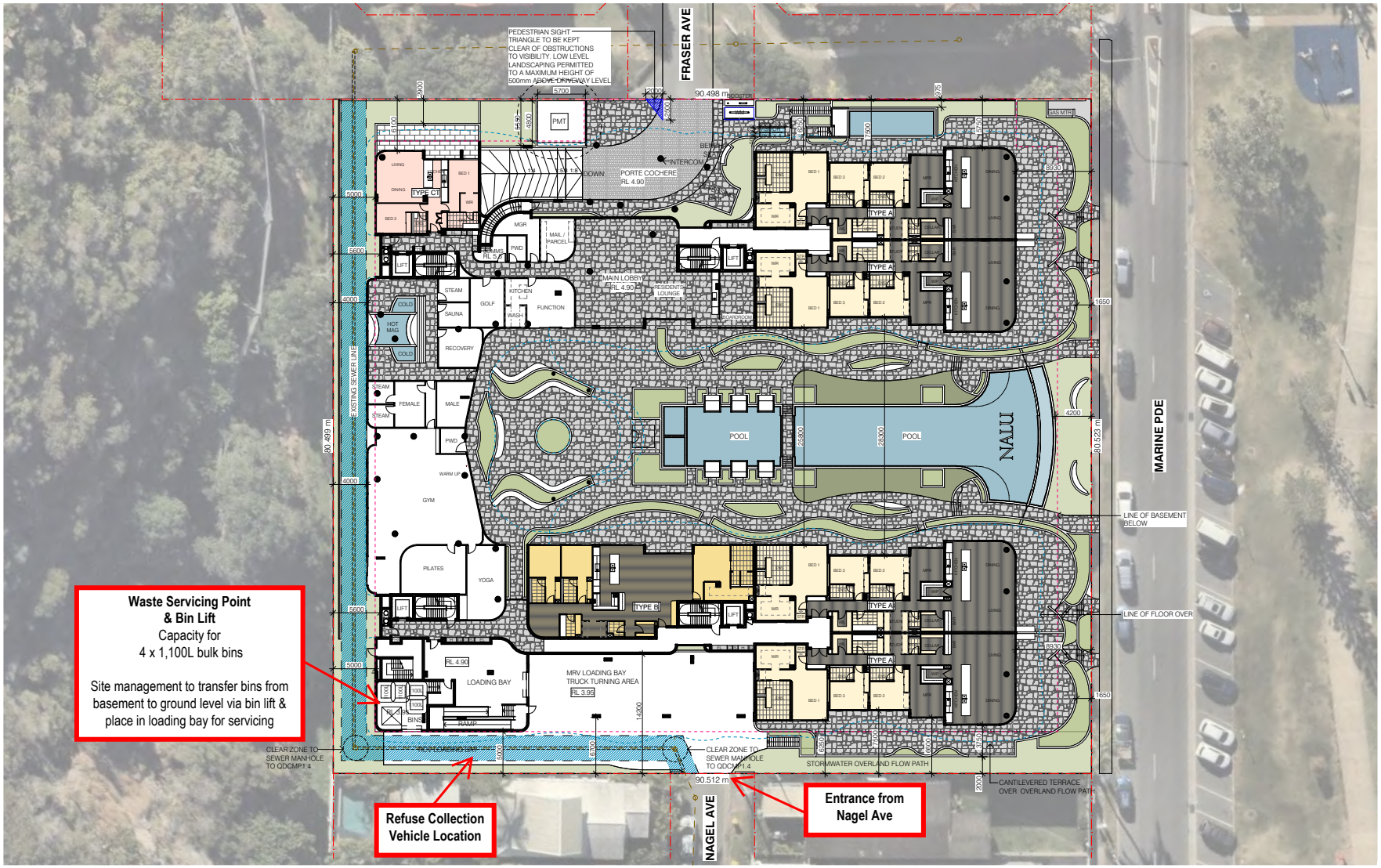
BASEMENT FLOOR PLAN - 1:400 (A3)

APPLICANT 122 MARINE PARADE P/L ATF 122 MARINE PARADE UNIT TRUST	DISCLAIMER These drawings are conceptual design drawings only. The information contained herewith is subject to design development and further input from independant planning, structural, services and other technical consultants.	COPYRIGHT Copyright in this drawing is the property of BDA Architecture and may not be retained, copied in whole or in part or used other than for the specific uses, licence and site for which it has been prepared and issued.	PROJECT NAME 122 MARINE PARADE	DRAWING BASEMENT FLOOR PLAN	PROJECT NO.: 568100 SCALE: 1:400 (A3) DATE: 17/06/2025	DRAWING NO. SK2.101	ISSUE E	50 Pentrea Avenue, Mermaid Beach QLD 4218 Phone: 07 5555 3500 Email: bda@bdarch.com.au bda architecture

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	DRAWN RP	LEVEL DATUM -	PROJECT	WASTE MANAGEMENT PLAN 122 MARINE PDE, MIAMI	DRAWING Figure 2
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	APPROVED AR	CAD FILE	TITLE	BASEMENT WASTE STORAGE ROOMS & BIN LIFT	
	DATE JUNE 2025	ISSUE FINAL			REV A

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GROUND - FLOOR PLAN - 1:400 (A3)

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DRAWN: RP	LEVEL DATUM: -	PROJECT: WASTE MANAGEMENT PLAN 122 MARINE PDE, MIAMI	DRAWING: Figure 3
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APPROVED: AR	CAD FILE:	TITLE: GROUND FLOOR SERVICING POINT & BIN LIFT	REV: A
DATE: JUNE 2025	ISSUE: FINAL		



LEVEL 3 - FLOOR PLAN - 1:400 (A3)

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DESIGNED: RP	SCALE: NTS	CLIENT: MONACO PROPERTY GROUP PTY LTD	JOB NUMBER: MRA24-227
DRAWN: RP	LEVEL DATUM: -	PROJECT: WASTE MANAGEMENT PLAN 122 MARINE PDE, MIAMI	DRAWING: Figure 4
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APPROVED: AR	CAD FILE:	TITLE: TYPICAL WASTE CHUTE & HOPPER LOCATIONS	
DATE: JUNE 2025	ISSUE: FINAL		REV: A

3.0 WASTE QUANTITIES

3.1 TYPE OF WASTE

Table 1 outlines the predicted types of waste that are expected to be generated from the proposed development.

Table 1: Predicted waste types to be generated

Tenancy Type	Predicted Waste Types
Residential units	General waste and recycling

3.2 WASTE QUANTITIES

Calculations of the anticipated waste quantities have been separated into the general waste and recycling components. The waste calculations were performed using typical waste generation rates as provided in Appendix A of Council's *SC6.16 City Plan Policy v.11 - Solid Waste Management.*

3.3 RESIDENTIAL UNITS

Table 2 displays the general waste quantities and **Table 3** displays the recycling quantities that are anticipated for the residential units for the development.

Table 2: Anticipated general waste quantities

Core	Room Type	No.	Total Required Waste Capacity (L/week)	Estimated Waste Generation (m^3/week)	Estimated Daily Waste Generation (m^3/day)
Lift 1	3+ Bedrooms	15	1,800	1.80	0.26
	Sub-total	**15**	**1,800**	**1.80**	**0.26**
Lift 2	3+ Bedrooms	8	960	0.96	0.14
	Sub-total	**8**	**960**	**0.96**	**0.14**
Lift 3	2 Bedrooms	**1**	100	0.10	0.01
	3+ Bedrooms	7	840	0.84	0.12
	Sub-total	**8**	**940**	**0.94**	**0.13**
Lift 4	3+ Bedrooms	14	1,680	1.68	0.24
	Sub-total	**14**	**1,680**	**1.68**	**0.24**
	TOTAL	**45**	**5,380**	**5.38**	**0.77**

Table 3: Anticipated recycling quantities

Core	Room Type	No.	Total Required Waste Capacity (L/week)	Estimated Waste Generation (m^3/week)	Estimated Daily Waste Generation (m^3/day)
Lift 1	3+ Bedrooms	15	1,200	1.20	0.17
	Sub-total	**15**	**1,200**	**1.20**	**0.17**
Lift 2	3+ Bedrooms	8	640	0.64	0.09
	Sub-total	**8**	**640**	**0.64**	**0.09**
Lift 3	2 Bedrooms	**1**	60	0.06	0.01
	3+ Bedrooms	7	560	0.56	0.08
	Sub-total	**8**	**620**	**0.62**	**0.09**
Lift 4	3+ Bedrooms	14	1,120	1.12	0.16
	Sub-total	**14**	**1,120**	**1.12**	**0.16**
	TOTAL	**45**	**3,580**	**3.58**	**0.51**

3.4 TOTAL WASTE CAPACITY

The 45 residential apartments of the development are estimated to generate a total of approximately **0.77m^3 per day** of general waste and **0.51m^3 per day** of recycling waste.

4.0 WASTE AND RECYCLING STORAGE

This section outlines the general design criteria of the waste storage rooms, wastes chute and hoppers as required by *SC6.16 City Plan Policy v.11 - Solid Waste Management* along with a description of the proposed bins to be used.

4.1 WASTE STORAGE ROOMS

The development is built around four (4) separate lift cores with a waste chute servicing the units within each core. Each of the four (4) waste chutes will be fitted with a diverter and terminates within waste storage rooms located in the single combined basement carpark. Bulk bins (1,100L) for both general waste and recycling are moved via a bin lift in the southwestern corner of the basement to ground level for servicing (Refer to **Figure 2**).

The waste storage rooms containing the waste chutes will be for authorised personnel only (body corporate/site management) to ensure that the safety of residents is maintained.

The four (4) waste storage rooms will be constructed to meet the requirements listed below:

1. Designed to allow the bins to be easily transported via a bin lift to a separate servicing point at ground level (no steps or lips on bin carting route);
2. Waste carting distance generally should not exceed 60 metres and in any case be reasonable 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 via hoppers on each residential level;
6. Of sufficient size to accommodate the required number of bins allowing for adequate clearances surrounding each bin;
7. Provides adequate storage for recyclable waste;
8. Constructed hardstand area with a solid concrete base or acceptable equivalent;
9. Roofed and designed to prevent entry to rainwater;
10. The waste storage rooms will be graded to fall to a drainage point that is connected to sewer and provided with a hose-cock for cleaning;
11. Not be located within a building structure unless it is in purpose-built storage area which is air-locked, fly and vermin proofed and used solely for the storage of waste.
12. Insect and vermin proof;
13. Fire rated and ventilated in accordance with the *National Construction Code – Building Code of Australia*;
14. Doors must be wide enough to allow for the easy removal of the largest container to be stored;

15. The walls, ceiling, floor and equipment of the waste storage room are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning;
16. Provided with adequate artificial lighting;
17. Not located adjacent to or within any habitable portion of a building or place used in connection with food preparation (including food storage); and
18. Permit unobstructed access for removal of the containers to the service point and for positioning of the containers correctly in relation to the waste chute and diverter.

4.2 WASTE CHUTES

The four (4) waste chutes will be fitted with a diverter and will be constructed to meet the requirements listed below:

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 use and 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; and
6. Fitted with a shutter at the base of each chute for closing off the chute manually during bin exchange and automatically in the case of fire. The manual closing mechanism must be in a safe location to protect the operator from waste discharging from the chute when activating the closure.

4.3 WASTE HOPPER CONSTRUCTION

Waste hoppers will be in dedicated compartments on each level of the development (Refer to **Figure 4**) and will be constructed to meet the requirements listed below:

1. Located on each residential floor in a position which is:
    - 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 1200 millimetres above finished floor level;

3. Hopper door automatically returns to the closed position after use;
4. Designed to permit free flow of waste into the chute;
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; and
6. The floor adjacent to the hopper is paved with a durable impervious material with a smooth finished surface.

4.4 PROPOSED WASTE BINS

To ensure that each of the waste storage rooms are sufficiently sized, details of the type and quantity of waste and number of bins to be stored within each of the waste storage rooms is detailed in **Table 4**. Dimensions of the proposed containers are detailed in **Section 4.4**.

Table 4: Details of proposed bins & servicing frequency

Waste Type	AnticipatedWaste Quantity(m^3/week) (range across the four cores)	Bins Proposed in each of the Four Waste Storage Areas	Collection Frequency/Core
General waste	0.94 – 1.8	1 x 1,100L bulk bin / core	Once/Twice per week for each of the bins/core
Recycling	0.62 – 1.2	1 x 1,100L bulk bin / core	Once/Twice per week for each of the bins/core

4.5 DIMENSIONS OF WASTE CONTAINERS

Table 5 below provides dimensions of the bins to be used on-site. The 1,100L bulk bins will be composed of plastic with lightweight plastic lids.

Table 5: Dimensions of proposed bins

Bin Type	Volume	Length (mm)	Width/ Diameter (mm)	Height (mm)	Collection Vehicle Type
Bulk bins	1,100L	1,490	1,100	1,330	Rear lift truck

4.6 DRAINAGE AND BIN WASH

A bin wash facility (including hose cock) will be provided in the each of the four waste storage rooms, which will be graded to a drainage point that is connected to sewer in accordance with trade waste requirements. This area will be utilised as the bin washing facility for both the general waste and recycling bulk bins. It will be the responsibility of site management to wash bins and to maintain the cleanliness of the waste storage room.

5.0 DETAILS OF COLLECTION

5.1 FREQUENCY

The collection frequency for residential bulk bins is shown in **Table 4**. Both the residential general waste & recycling is anticipated to be serviced once or twice per week (depending on the core being serviced). Servicing will be scheduled to occur on alternate days.

5.2 BULK BIN SERVICING POINT

It is proposed that a rear lift waste collection vehicle will service the bins on-site with access from Nagel Ave. The waste collection vehicle can enter and exit the site in a forward gear to undertake waste servicing (Refer to **Attachment B** for swept path analysis).

A bulk bin servicing point/loading bay is located at ground level in the southwest corner of the development. The servicing point/loading bay can accommodate four (4) x 1,100L bulk bins, with general waste and recycling servicing to be scheduled to occur on alternate days. (Refer to **Figure 2**).

Site management will transfer the bulk bins to / from the basement level storage rooms when scheduled via the bin lift. Whilst the path of travel for the bins in the basement is level, if necessary, a mechanical aid could be used to assist with movement of the bulk bins from the basement to/from the servicing point. There is space available for the mechanical aid to be stored in the bin lift room.

Once on ground level, site management will transfer the bulk bins from the bin lift to the loading bay. The bulk bins will be transferred to/from the loading bay by the engaged waste contractor for servicing. This waste contractor could be the Council's contractor or, if necessary, an alternate private contractor with a rear lift waste collection vehicle could also be engaged. The applicant has commenced engagement with a private waste contractor in relation to servicing for the development. This approach for waste servicing at the development has been accepted by Council in correspondence dated 27 February 2025.

It is also understood that the kerbside wheelie bin waste collection service is provided to residents in Nagel Ave and that Council's side-lift waste collection vehicles enter the subject site in order to perform a turnaround manoeuvre. The applicant has incorporated into the proposed development provision including sufficient vertical clearance for the travelling height for Council's side-lift waste collection vehicles to continue to perform this turnaround manoeuvre and exit Nagel Ave in a forward gear.

Please refer to **Attachment B** which provides swept path analyses for both a rear-lift waste collection vehicle and Council's side-lift waste collection vehicle demonstrating they can enter & exit the site in a forward gear from Nagel St.

The bulk bin servicing point will be designed to meet the following requirements:

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. Bins 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 must allow bins to be easily manoeuvred and be devoid of steps or steep rises;
6. Bin carting route must not extend through habitable parts of a building, or a food premises, and only occur through common property or publicly accessible locations;
7. Over five metres from any door, window or fresh air intake within the development or any adjoining site;
8. Bins to be removed from and returned to the storage point;
9. Constructed hardstand with a level solid concrete base or acceptable equivalent;
10. Allow for sufficient clearance surrounding the bulk bin containers and any barrier around the location to allow for ease of movement; and
11. Screened to minimise the view of bins from neighbouring properties, or passing vehicles and pedestrian traffic external to the site.

5.3 COLLECTION VEHICLE ACCESS

Table 6 details the dimensions of the rear lift truck waste collection vehicle that will service the development. The engaged contractor will service the bulk bins from within the development as outlined in **Section 5.2**.

Table 6: Typical rear lift truck dimensions

Parameter	Rear lift truck
Height	3.39m
Width	2.48m
Length	9.84m
Working Height	3.39m*
Total Tonnage	22.5 tonne maximum
Min Turning Circle	9.7m (wall-wall)
Min Turning Circle	8.7m (kerb-kerb)

*Note that the waste collection vehicle clearance height (working height) is to be calculated according to the following formula as a minimum:

SUITABLE CLEARANCE	=	VEHICLE OPERATING DIMENSIONS	+	100mm	+	CLEARANCE FOR SERVICES	+	CALCULATION FOR ROADWAY GRADIENT

6.0 SUMMARY

Details of this Waste Management Plan are summarised below:

- The subject site is located at 122 Marine Pde, Miami QLD on a parcel of land described as Lot 122 on SP284713 (Refer to Figure 1). The site has street frontage on Marine Pde and is bound by Fraser Ave to the north, Nagel Ave to the south, and Lions Head Park to the west;
- The 45 residential apartments of the development are estimated to generate a total of approximately **0.77m^3 per day** of general waste and **0.51m^3 per day** of recycling waste;
- General waste from the residential units will be disposed of via four (4) waste chutes each fitted with a diverter terminating in the basement carpark waste storage rooms located adjacent to each of the four lift cores (Refer to **Figure 2**). The waste storage room containing the waste chute will be for authorised personnel only (body corporate/site management) to ensure that the safety of residents is maintained;
- Each waste storage room will house one (1) x 1,100L general waste bulk bin, and one (1) x 1,100L recycling waste bulk bin;
- It is proposed that the bulk bins will be serviced on-site by a rear lift waste collection vehicle with access from Nagel Ave. The bulk bin servicing point/loading bay is located in the southwest corner of the development;
- Site management will transfer the bulk bins to / from the basement level storage rooms when scheduled via the bin lift. Once on ground level, site management will transfer the bulk bins from the bin lift to the loading bay. The bulk bins will be transferred to/from the loading bay by the engaged waste contractor for servicing. This waste contractor could be the Council's contractor or, if necessary, an alternate private contractor with a rear lift waste collection vehicle could also be engaged. The applicant has commenced engagement with a private waste contractor in relation to servicing for the development. This approach for waste servicing at the development has been accepted by Council in correspondence dated 27 February 2025;
- It is also understood that the kerbside wheelie bin waste collection service is provided to residents in Nagel Ave and that Council's side-lift waste collection vehicles enters the subject site in order to perform a turnaround manoeuvre. The applicant has incorporated into the proposed development provision for Council's side-lift waste collection vehicle to continue to perform this turnaround manoeuvre and exit Nagel Ave in a forward gear. Please refer to **Attachment B** which provides swept path analyses for both a rear-lift waste collection vehicle and Council's side-lift waste collection vehicle demonstrating they can enter & exit the site in a forward gear from Nagel Street; and
- A bin wash facility (including hose cock) will be provided in the waste storage room, which will be graded to a drainage point that is connected to sewer in accordance with trade waste requirements. This area will be utilised as the bin washing facility for both the general waste and recycling bulk bins. It will be the responsibility of site management to wash bins and to maintain the cleanliness of the waste storage room.

ATTACHMENT A

Solid Waste Management Code (9.4.12 v.11)

ASSESSABLE DEVELOPMENT CRITERIA
9.4.12-1 SOLID WASTE MANAGEMENT CODE (v.11)

Performance Outcomes	Acceptable Outcomes	Compliance Achieved	Comments
Waste and recycling storage and bin wash-down facilities			
PO1 Development provides waste and recycling storage and servicing facilities that are safe, convenient, efficient, appropriately sized 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 **SC6.16 City Plan policy – Solid waste management**.	✓	The Waste Management Plan confirms that the development includes waste storage points of sufficient size to accommodate the required number of waste and recyclable bins in accordance with **SC6.16 City Plan policy – Solid waste management.**
	AO1.2 Waste and recycling storage points are located, designed and sized consistent with **SC6.16 City Plan policy – Solid waste management**.	✓	The Waste Management Plan confirms that the development includes waste and recycling storage points that are located, designed and sized generally in accordance with **SC6.16 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 SC6.16 City Plan policy – Solid waste management.**	✓	The Waste Management Plan confirms that the development includes waste chutes; hoppers and separate waste storage rooms consistent with **SC6.16 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 **SC6.16 City Plan policy – Solid waste management**.	N/A	The development does not include a commercial kitchen.
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 **SC6.16 City Plan policy –Solid waste management**.	✓	The Waste Management Plan confirms that the development includes appropriately sized and located bin wash-down facilities consistent with **SC6.16 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.	✓	The Waste Management Plan confirms that direct unobstructed paths exist between waste and recycling storage and servicing points and road frontages.
	AO3.2 Waste and recycling storage points are screened by solid fencing or vegetation to ensure they are not visible from a public place or sensitive land use.	✓	The Waste Management Plan confirms that waste and recycling storage points are screened by solid fencing or vegetation to ensure they 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 **SC6.16 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.**	✓	The Waste Management Plan confirms that the waste and recycling servicing points are designed and sufficiently sized generally in accordance with **SC6.16 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 SC6.16 City Plan policy – Solid waste management, is Council's preferred method of addressing the above outcome.***	**AO5** No acceptable outcome provided.	N/A	The development is located in a serviced area.

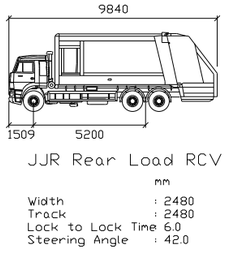
ATTACHMENT B

Waste swept path analyses (prepared by project Traffic Consultant)

Notes:

- Grey *landscaping* to remain at most 300mm height where blue *vehicle clearance* overhangs

Vehicle Clearance (300mm)



JJR Rear Load RCV

	mm
Width	: 2480
Track	: 2480
Lock to Lock Time	6.0
Steering Angle	: 42.0

DESIGN VEHICLE



Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	17.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

Project: 122 Marine Parade Miami TIA

Title: Rear-Loader RCV Swept Path Entry

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

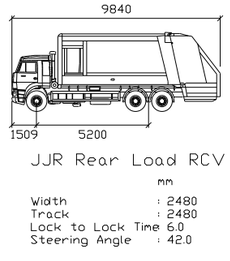
Date: 17.06.2025

Project Number	Sheet Number	Issue
P6870	3	001

Notes:

- Grey *landscaping* to remain at most 300mm height where blue *vehicle clearance* overhangs

Vehicle Clearance (300mm)



JJR Rear Load RCV

	mm
Width	: 2480
Track	: 2480
Lock to Lock Time	6.0
Steering Angle	: 42.0

DESIGN VEHICLE

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	17.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

Project: 122 Marine Parade Miami TIA

Title: Rear-Loader RCV Swept Path Exit

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

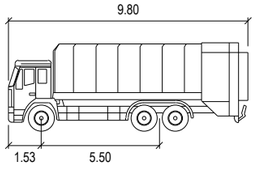
Date: 17.06.2025

Project Number	Sheet Number	Issue
P6870	4	001

Notes:

- Grey *landscaping* to remain at most 300mm height where blue *vehicle clearance* overhangs

Vehicle Clearance (300mm)



CoGC Side Load RCV

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 40

DESIGN VEHICLE



Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Paths	T.R	17.06.2025

Scale @ A3 0 1 2 3 4 5 6 7 1:150

Project: 122 Marine Parade Miami TIA

Title: Side-Loader RCV Swept Path Turnaround

Design	Drawn	Checked
T.R	T.R	M.B

CONCEPT ONLY

Date: 17.06.2025

Project Number	Sheet Number	Issue
P6870	5	001

ATTACHMENT C

Private waste collection contractor correspondence
re proposed servicing timeframes

18th June, 2025

To whom it may concern,

RE: proposed development 122 marine parade Miami, Qld, 4220

Veolia can confirm it can service the proposed development using a rear lift truck between the general hours of say 9.30am to 2.30pm weekly.

Kind Regards,

Damien Miller

Territory Manager

Veolia Australia & New Zealand

Tel : 132 955
Mob : 0474 186 924
Email: damien.miller@veolia.com



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