



Environmental Assessment Report

Maroochydore Surf Life Saving Club

Proposed Ministerial Infrastructure Designation

34-36 Alexandra Pde, Maroochydore
Lot 471 on SP142403

Prepared for
Maroochydore Surf Life Saving Club Inc.

May 2024

Our Ref: 230503
DHLGPPW Ref: MID-1124-0885

Infrastructure Entity Details

The Infrastructure Entity for the proposed Ministerial Infrastructure Designation is Maroochydhore Surf Life Saving Club Inc. It is requested that all project correspondence is provided to Maroochydhore Surf Life Saving Club Inc. care of ADAMS + SPARKES Town Planning.

Contact Details and Project Team

Specialty Field	Company	Contact Person
Town Planning	ADAMS + SPARKES	Cameron Adams cameron@astpd.com.au
Architect	BRD Group	Andrew Mullamphy andrew@brdg.com.au
Landscape Architect	Bird Landscape Design	Brian Bird brian@birdgolfdesign.com
Civil Engineer	Arcos Group	Lachlan Swan lachlanswann@arcosgroup.com.au
Stormwater Management	Arcos Group	Lachlan Swan lachlanswann@arcosgroup.com.au
Environment and Ecology	Burchills	Caroline Kelly caroline.kelly@burchills.com.au
Coastal Hazard	Burchills	Phillip Bell philip.bell@burchills.com.au
Traffic Engineer	Bitzios Consulting	Nathan Edwards nedwards@bitziosconsulting.com.au
Acoustic Engineer	MWA Environmental	Paul King paulk@mwaenviro.com.au

Document Control and Verification

This Environmental Assessment Report has been prepared and reviewed by the identified key personnel in accordance with Part 5 of the *Planning Act 2016*, as well as the requirements under the *Minister's Guidelines and Rules (MGR)* and *Operational Guidance for making or amending a MID*.

ADAMS + SPARKES is led by Directors Cameron Adams and Pete Sparkes, who have a combined experience of over 30 years in both public and private sectors. ADAMS + SPARKES have extensive experience in the management of development applications including residential, commercial, retail and mixed-use developments, industrial projects and mining and infrastructure projects.

Project Principal

Cameron Adams
Managing Director

Project Support

Aspen Dunn
Senior Town Planner

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Abbreviations

ACHA	<i>Aboriginal Cultural Heritage Act 2003</i>
ASTP	ADAMS + SPARKES Town Planning
Council	Sunshine Coast Council
DES	Department of Environment and Science
DHLGPPW	Department of Housing, Local Government, Planning and Public Works
DTMR	Department of Transport and Main Roads
EAR	Environmental Assessment Report
EP Act	Environmental Protection Act 1994 (Qld)
Guidelines	Cultural Heritage Duty of Care Guidelines
MGR	Minister Guidelines and Rules – July 2023 (Version 2.0)
MID	Ministerial Infrastructure Designation
Minister	Minister for Housing, Local Government, Planning and Public Works
MLES	Matters of Local Environmental Significance
MNES	Matters of National Environment Significance
MSES	Matters of State Environmental significance
MSLSC	Maroochydore Surf Life Saving Club
PA	<i>Planning Act 2016</i>
Planning Scheme	<i>Sunshine Coast Planning Scheme 2014 (version 27 dated 23 January 2024)</i>
Regulation/s	<i>Planning Regulation 2017</i>
SARA	State Assessment and Referral Agency
SEQRP/Regional Plan	South East Queensland Regional Plan

1. Executive Summary

1. This Environmental Assessment report has been prepared by ADAMS + SPARKS Town Planning on behalf of Maroochydore Surf Life Saving Club Inc and seeks approval from the Department of Housing, Local Government, Planning and Public Works to designate the subject site for a type of infrastructure defined as '*Item 3: community and cultural facilities, including community centres, galleries, libraries and meeting halls*' and '*Item 17: Sporting facility*'.
2. Maroochydore Surf Lifesaving Club (hereafter 'MSLSC') was founded over 100 years ago and was the first surf lifesaving club founded on the Sunshine Coast. The club has been proudly patrolling Maroochydore Beach and the Maroochy River Estuary since 1916 and to-date maintains its proud record of 'No Lives Lost' between the 'red and yellow' flags. The MSLSC also facilitates a range of surfing, surf lifesaving and triathlon events each year on Maroochydore Beach that garner state-wide, national and international attention. The proposed Infrastructure Designation seeks to redevelop the existing MSLSC, noting that parts of the existing clubhouse date back to the 1960s and the last major renovation occurred approximately 20 years ago. The club has since outgrown the space, with a need now for additional watercraft storage forcing the club to seek offsite storage options that inevitably impact operations, as well as increased members areas that support community and sport and recreation activities associated with the club.
3. To allow the club to grow with the population and projected number of new members, proposal plans to demolish and rebuild the club, which includes an expansion of the existing building footprint, have been prepared for the Minister's consideration.
4. The total build cost of the project is expected to be approximately \$25 million.
5. This Environmental Assessment Report undertakes an assessment against Section 36 of the *Planning Act 2016*, as well as State and local planning interests, and confirms that all legislative requirements and applicable assessment benchmarks are complied with. In addition, this EAR undertakes an Environmental Assessment, which confirms that the development will not result in any adverse impacts upon the visual amenity of the area, surrounding properties, infrastructure networks, ecological features, or cultural heritage and native title considerations.
6. Overall, the proposed redevelopment of the MSLSC will offer a community benefit by enhancing the safety of not only the club members, but the public, by improving the standard of surf lifesaving facilities and increasing the capacity of the club to perform beach monitoring and lifesaving functions. Whilst also proposing to improve the visual amenity and functionality of the club, so as to create an enhanced experience for the community.

2. Introduction

7. This Environmental Assessment Report has been prepared by ADAMS + SPARKES Town Planning (hereafter 'ADAMS + SPARKES / ASTP') for the purpose of a request for a Ministerial Infrastructure Designation (MID) on land located at 34-36 Alexandra Pde, Maroochydore (Lot 471 on SP142403).
8. This Environmental Assessment Report (hereafter 'EAR') has been prepared for and on behalf of the Infrastructure Entity, Maroochydore Surf Life Saving Club Inc. In accordance with Chapter 2, Part 5 of the *Planning Act 2016*, Maroochydore Surf Life Saving Club Inc. seeks approval from the Minister for Housing, Local Government, Planning and Public Works (hereafter the 'Minister') to designate the site for the following types of infrastructure, which relate to the redevelopment of the existing MSLSC building:
 - Item 3: community and cultural facilities, including community centres, galleries, libraries and meeting halls.
 - Item 17: sporting facilities.
9. This MID proposal has been made to the Minister for the development of essential community infrastructure prescribed under Schedule 5 of the *Planning Regulation 2017*. This EAR will describe the legislative context in which this report is prepared, describe the subject site and the infrastructure proposed, will address any associated impacts and will provide an assessment of the relevant Local and State Government planning considerations with respect to the proposal. This EAR should be read in conjunction with the following supporting documentation:

Appendix 1	Department of Housing, Local Government, Planning and Public Works Pre-Lodgement Advice
Appendix 2	Architectural Plans prepared by BRD Group
Appendix 3	Landscape Design Plans prepared by Bird Landscape Design
Appendix 4	Stormwater Management Plan prepared by Arcos Group
Appendix 5	Coastal Hazard Assessment prepared by Burchills
Appendix 6	Ecological Assessment prepared by Burchills
Appendix 7	Traffic Impact Assessment prepared by Bitzios Consulting
Appendix 8	Noise Impact Assessment prepared by MWA Environmental
Appendix 9	Surrounding Properties Consultation Map
Appendix 10	Council Preliminary Engagement Comments
Appendix 11	Preliminary Engagement Responses (Other)
Appendix 12	Endorsement Correspondence
Appendix 13	Cultural Heritage Register Search
Appendix 14	Contaminated Land and Environmental Management Register Search
Appendix 15	Contour and Detail Survey prepared by Murray & Associates

2.1 Legislative Context

10. Chapter 2, Part 5 of the *Planning Act 2016* sets out the way in which an Infrastructure Designation can be undertaken. Further, Sections 36 and 37 of the *Act* describe the criteria and process for making an Infrastructure Designation. Under Section 36, to make a designation, the Minister must be satisfied that:

- (a) *The infrastructure will satisfy statutory requirements, or budgetary commitments, for the supply of the infrastructure; or*
- (b) *There is or will be a need for the efficient and timely supply of the infrastructure.*

11. Additionally, the Minister must be satisfied that adequate environmental assessment and consultation has been carried out in relation to the development that is the subject of the Infrastructure Designation.

12. Schedule 5 of the *Planning Regulation 2017* (hereafter the 'Regulation') details the infrastructure types, which can be designated by the Minister. The infrastructure type, that is the subject of this EAR, is described as 'community and cultural facilities, including community centres, galleries, libraries and meeting halls' and 'sporting facilities'.

13. Section 36 (3) of the *Planning Act 2016* and Division 4, Sections 14 and 15 of the *Planning Regulation 2017* refer to the *Minister's Guidelines and Rules* (MGR) for the process in which environmental assessment and consultation are to be undertaken. The applicable guideline in this instance is Chapter 7 (*Guidelines for the process for environmental assessment and consultation for making or amending a Ministerial designation*) of the MGR. This application is made in accordance with the legislative framework for Infrastructure Designations prescribed under the aforementioned legislation.

2.2 Pre-Application Process

14. In accordance with the Operational Guidance for Making or Amending a Ministerial Infrastructure Designation, the following pre-application processes have been undertaken.

2.2.1 Initial Advice (Pre-Lodgement Meeting)

15. The Department of Housing, Local Government, Planning and Public Works (hereafter the 'DHLGPPW') provided Pre-Lodgement Written Advice (**Appendix 1**) on 31 October 2023.

16. The Pre-Lodgement Written Advice confirmed the type of infrastructure as being 'Item 3 - community and cultural facilities, including community centres, galleries, libraries and meeting halls' and 'Item 17 - sporting facilities'. The Written Advice also outlined the State interests relevant to the assessment, which include the following:

- Biodiversity – MSES - MSES - Wildlife habitat (endangered or vulnerable), MSES - Wildlife habitat (special least concern animal), and MSES - Regulated vegetation (essential habitat)
- Coastal environment - Coastal management district
- Natural hazards, risk and resilience – flood hazard area (Local government flood mapping area), Erosion prone area
- Strategic airports and aviation facilities - Obstacle limitation surface area, and Wildlife hazard buffer zone (8km)
- Water quality – Climatic regions – stormwater management design objectives

17. The Written Advice identified the technical reporting recommended to be provided in support of the application. **Table 1** below demonstrates the recommended reporting detailed within the Written Advice and confirms this EAR has provided the required supporting documentation.

Table 1 Recommended and Provided Reporting

Reporting Recommended	Provided Reporting
Architectural Plans, including building elevations and materials/colour palette and identifying demolished, retained and proposed aspects of the development.	Architectural Plans – BRD Group – Appendix 2
Landscape Plans	Landscape Design Plans – Bird Landscape Design – Appendix 3
Stormwater Management Plan	Stormwater Management Plan – Arcos Group – Appendix 4
Coastal Hazard Assessment	Coastal Hazard Assessment – Burchills Engineering Solutions – Appendix 5
Ecological Assessment	Ecological Assessment Report – Burchills Engineering Solutions – Appendix 6
Traffic Impact Assessment	Traffic Impact Assessment – Bitzios Consulting – Appendix 7
Noise Impact Assessment	Noise Impact Assessment – MWA Environmental – Appendix 8

18. In addition to the above, the Written Advice identified that the department had concerns with the scale and expansion of uses on the site that operate outside the functional requirements of surf lifesaving activities. These include activities undertaken onsite by the Maroochydore Surf Life Saving Supporters Association Inc (hereafter the 'supporters club'), such as restaurant, café, bar, private functions and gaming. It was previously proposed to increase the supporters club use areas to cater for increased membership and create new community use space.
19. To enable the proposal to be assessed under the MID process, the area of supporters club and community spaces were required to be reduced to a like-for-like replacement of the existing facilities. The Written Advice established that this would enable the supporters club facilities to remain ancillary/subservient to the lifesaving operational areas.
20. Revised Architectural Plans were provided to the department with the request for Endorsement to Proceed, reflecting the required changes. such that the supporters club areas have been reduced onsite as part of the new design for the MSLSC redevelopment (refer to **Section 4.3** [Proposal Overview] below for further detail).

2.2.2 Preliminary Stakeholder Engagement

21. In accordance with DHLGPPW Written Advice dated 31 October 2023, the following pre-engagement activities were required to be undertaken prior to requesting the Endorsement to Proceed:
 - i. Consultation with Sunshine Coast Council;
 - ii. Consultation with the relevant Native Title / traditional owners for the area (Kabi Kabi/Gubbi Gubbi);
 - iii. Letters sent to Local, State and Federal elected members (via email or registered post);
 - iv. Letters sent to identified adjoining landowners and affected residents (via email or registered post); and,
 - v. Letters sent to surrounding business operators (via email or registered post).
22. Details for the identified landowners and affected residents (illustrated on the map supplied by DHLGPPW in **Appendix 9**) were provided by Sunshine Coast Council on 31 January 2024. Previous advice received from Alan Houston of DHLGPPW has confirmed that email correspondence to the stakeholders is an appropriate and logical means of contact for the required preliminary stakeholder engagement. The majority of stakeholder email addresses were publicly available, and where not publicly available,

were either independently sourced by ASTP or letters were posted via registered mail in lieu. Further, advice received from Alan Houston of DHLGPPW on 21 February 2024 confirmed that, where the identified property is under a Body Corporate Community Titles Scheme, it is acceptable for the notice to be provided to the Body Corporate rather than individual unit owners.

23. The preliminary consultation period ran from 27 February 2024 to 26 March 2024. The initial period for comment was advertised as 10 business days (ending 12 March 2024), however, on day 8 this was extended to a total of 20 business days (ending 26 March 2024). All identified stakeholders were notified of the extension.

24. Four (4) responses were received during the 20-business day preliminary stakeholder engagement phase. The response received from Sunshine Coast Council is provided in **Appendix 10**. A collated copy of the remaining responses is provided in **Appendix 11**. A summary of the responses is supplied below:

- An email response from the Office of Federal MP for Fairfax, Mr Ted O'Brien, advising:

"Mr O'Brien is very supportive of surf life saving club's expansions/redevelopments and has supported them via grants and grant submissions. Ted will continue to work with Maroochy SLSC on any Federal grant opportunity that arises."

- A letter response received from the Sunshine Coast Council;
- An email response received from surrounding landowner, Lachlan Reid; and,
- An email response received from surrounding landowner, Con Comino (on behalf of unit complex Beaches at Maroochy).

25. Council's comments have been addressed in **Section 7.2.1** (Response to Sunshine Coast Council Preliminary Comments) of this EAR. Further, the surrounding landowner comments have been addressed in **Section 7.2.2** (Response to Surrounding Resident Preliminary Comments) of this EAR.

2.2.3 Pre-Lodgement Endorsement

26. After the completion of the Initial Advice and Preliminary Stakeholder Engagement processes, a request was lodged with DHLGPPW for an Endorsement to Proceed (10 April 2024). On 06 August 2024, DHLGPPW confirmed the proposed project has been endorsed for the Infrastructure Designation assessment process (**Appendix 12**) and advised that the proponent may submit this MID Proposal.

3. Site Overview

3.1 Site Details and Characteristics

27. This section of the EAR will describe the site context (regional, local and site specific), detail the proposed tenure of the site, identify any existing approvals and comment on existing infrastructure supporting the site.

28. **Table 2** below, provides a summary of the details applying to the subject site.

Table 2 Site Summary Table

Address	34-36 Alexandra Parade, Maroochydore
Property description	Lot 471 on SP142403 and adjoining road reserve
Site area	Current lot/lease area 1,291m ² Proposed lot/lease area 2,284m ²
Frontage	Current lot/lease area ~55m to Alexandra Parade Proposed lot/lease area ~79m to Alexandra Parade
Local Government Authority	Sunshine Coast Council
Zone	Open Space Zone Sport and Recreation Zone
Landowner	The State of Queensland
Lessee	Maroochydore Surf Life Saving Club Inc.
Tenure	Current lot/lease area - Lands Lease (tenure reference TL 215727) Lot/lease expansion area - Unallocated State Land (Road Reserve)
Leases	For the current lot/lease area, a lease is in place until 24/04/2031 under tenure reference TL 215727. The lease has been granted by the State of Queensland to Maroochydore Surf Life Saving Club Inc. The proponent will obtain the required expansion to the lease area by way of a 'Permanent Road Closure and Term Lease' administered through the Department of Resources.
Cultural Heritage Register Search	A Cultural Heritage Register Search is provided in Appendix 13 . There are no registered Aboriginal cultural heritage sites on the subject site or within a buffer of 100 metres from the site.
Easements/Encumbrances	Nil known
Contaminated Land/ Environmental Management Register Search	The site is not listed on either register as searched on 23 May 2024 (refer to Appendix 14).
Notable site features	<ul style="list-style-type: none">The subject site comprises the existing MSLSC building. The building, which covers the entirety of the lot/lease area, is three (3) storeys in height.

	<ul style="list-style-type: none"> • The adjoining unallocated State Land / Road Reserve that is proposed to form part of the lease area comprises coastal dunes, vegetation and beach foreshore. • The site has direct access to Maroochydore Beach. • The site adjoins a public pedestrian promenade to the east and a public car park to the south. • The opposing side of Alexandra Parade contains a mix of unit developments and commercial development (restaurants). • There are no car parks provided onsite currently. • Vehicular access is not currently provided to the site. • A loading dock is provided on the western elevation of the building, directly adjoining Alexandra Parade. A signed loading bay is provided within in Alexandra Parade, adjoining the lot/lease area.
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29. The subject site is depicted in **Figure 1** below.



Figure 1 Subject Site (Source: QLD Globe 2024)

3.2 Regional Context

30. The site is located in Maroochydore, the principal regional activity centre of the Sunshine Coast region and adjoins the Maroochydore Beach foreshore. Maroochydore is centrally located along the coastal fringe of the Sunshine Coast and is established as a diverse coastal urban area comprising a number of

urban and suburban residential neighbourhoods, short term tourist accommodation, high intensity residential accommodation areas, business and industry areas and major community and sport and recreation facilities. Refer to **Figure 2** below for the geographical regional context of the site.

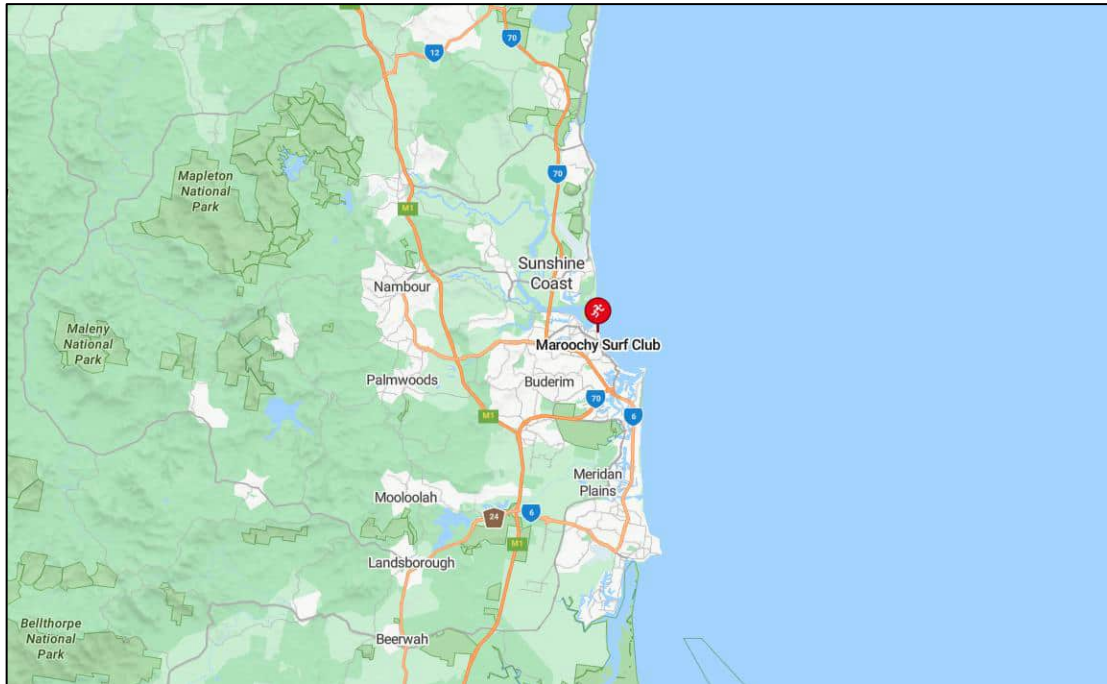


Figure 2 Regional Context (Source: Safari Maps 2024)

3.3 Local Context

31. The subject site is located on the coastal fringe of Maroochydhore, adjacent to the Maroochydhore Beach foreshore. The site is located 5.5km south of the Sunshine Coast Airport and 1km east of the Maroochydhore City Centre Priority Development Area (State Development) (see **Figure 3** below). The site is positioned 1.9km north-east of the Sunshine Motorway and 10km east of the Bruce Highway.

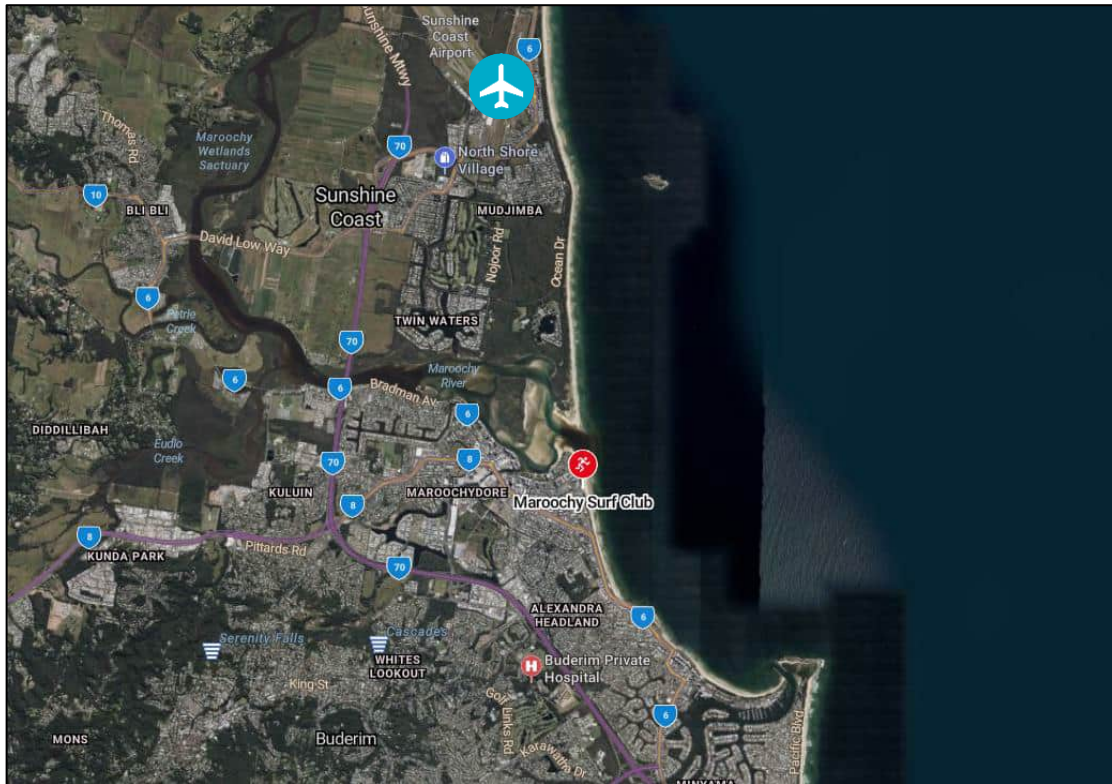


Figure 3 Local Site Context (Source: Safari Maps 2024)

3.4 Site Description

3.4.1 Site Tenure

32. The subject site/current lot is identified as a Lands Lease area, with a lease being in place until 24/04/2031 under tenure reference TL 215727. The lease has been granted by the State of Queensland to Maroochydore Surf Life Saving Club Inc.

33. As mentioned above, it is proposed to expand the lease area by approximately 993m² (actual area to be determined by surveyor) into unallocated State land nominated as road reserve between Alexandra Parade and the beach. It is proposed that the area of road reserve to be occupied by the new MSLSC building will be permanently closed and the existing lease area will be expanded to accommodate the development. MSLSC will liaise with the Department of Resources to obtain a revised lease agreement following the decision of the designation application.

3.4.2 Existing Uses / Site Condition

34. The existing lot/lease area is wholly occupied by the existing surf club building and surrounding concrete hardstand. This area has a level topography and is retained by an existing revetment wall between the building and the beach. The revetment wall is situated partially below ground and also retains the public pedestrian promenade adjoining the site to the east and south.

35. The area to be included in the expanded lease area includes part of the concrete public pedestrian promenade to the south and east, beach foreshore to the east and a vegetated sand dune to the north. The dunal area to the north comprises uneven topography, grading east to the coastline.

36. The site levels vary from 4m AHD within the current lease area to 8.5m AHD in the dunal area to the north. Refer to the Contour and Detail Survey prepared by Murray & Associates in **Appendix 15**. The development footprint falls within the existing developed area and over densely vegetated land to the north of the existing building. The proposed development is adjoined by public parking infrastructure

and driveway access to the south, which connects directly to Alexandra Parade. The context of the site is demonstrated in **Figures 4 to 8** below.



Figure 4 Western edge of dune/lease expansion area looking east (Source: ASTP site visit 23 May 2024)



Figure 5 Western edge of existing building looking south-east (Source: ASTP site visit 23 May 2024)



Figure 6 South-western corner of existing building looking north-east (Source: ASTP site visit 23 May 2024)



Figure 7 Southern edge of existing building looking north (Source: ASTP site visit 23 May 2024)



Figure 8 Eastern edge of existing building looking west (Source: ASTP site visit 23 May 2024)

3.4.3 Relevant Approval History

37. A summary of historic and/or existing development approvals over the subject site is provided below:

- 15 March 2000 - Original Decision Notice (ref MCU99/8052) received for:
 - Development Permit for Material Change of Use of Premises (Redevelopment of Surf Lifesaving Club, Carparking Relaxation and Site Landscaping Relaxation);
 - Preliminary Approval for Building Works; and,
 - Preliminary Approval for Operational Works (Landscaping).
- 04 April 2002 - Change to or Cancel Conditions Decision Notice received (ref. CCC02/0008)
- 21 April 2010 - Generally In Accordance with 'existing use rights' (ref GA10/0026)
- 05 April 2011 - Changes to an Existing Approval - agreeing to change and add new conditions (ref MCU99/8052.04)
- 05 June 2015 - Generally In Accordance with approved plans (ref MCU99/8052.05)
- 08 October 2015 - Operational Works for Prescribed Tidal Works - North Seawall (OPW14/0656)

38. Approval reference MCU99/8052 relates to the most recent renovation to the MSLSC building currently onsite. The works associated with the approval were carried out circa 2000, with various Change and 'Generally In Accordance' approvals granted in relation to this Development Permit over time since the approval commenced.

39. Approval reference OPW14/0656 has not been acted on to date. This approval relates to the proposal to construct a seawall along the 1.3km stretch of beach between the Alexandra Headland Surf Lifesaving Club and MSLSC in response to the risk of erosion in the area. Based on the proposal plans supplied to Council for assessment as part of this application, it is indicated that the seawall ceases south of the

site/public car park and will therefore not impact the development of the subject site. It is however acknowledged in the application material that the extent of the seawall (if delivered) will be determined at the time of construction.

3.4.4 Existing Infrastructure

40. Through a review of existing infrastructure plans, as well as a Dial Before You Dig (BYD) enquiry, it was confirmed what service infrastructure is currently available to the site and/or is within the proposed development footprint. The results are identified in the **Table 3** below. Commentary in relation to existing transport infrastructure available to the site is also provided in **Table 3**.

Table 3 Existing Infrastructure

Water	The site has access to Unitywater’s reticulated town water supply, with an existing connection in place to this service.
Sewer	The site has access to Unitywater’s sewerage infrastructure, with an existing connection in place to this service.
Stormwater	A portion of the existing site discharges stormwater to the kerb and channel of Alexandra Parade through piped connections to kerb adaptors. The remainder of the site discharges to the beach and sand dunes where it falls towards the ocean and drains through the sandy soil into the water table below.
Telecommunications	The site is connected to existing telecommunications infrastructure via the NBN.
Electricity	Overhead electrical infrastructure is located along the property frontage on the opposing side of Alexandra Parade.
Transport – Road Network	The subject site is adjacent to a part of Alexandra Parade that is a local access street. The northern end of the site’s frontage adjoins a one-way section of the road before returning to a two-way street. Alexandra Parade turns into an Arterial Road 600 metres south of the site. The speed limit adjacent to the subject site is 50km/h.
Transport – Public and Active Transport	There are two (2) bus stops in close proximity to the subject site (Sixth Avenue) servicing northbound and southbound travellers. The nearest bus stops are a within 200 metres/an approx. 2 minute walk from the site. The site is approximately 700 metres walking distance to the Public Transport Priority Corridor on Alexandra Parade. Existing public pedestrian footpaths surround the site on both sides of Alexandra Parade, Beach Parade (adjacent) and along the beach foreshore. A zebra crossing adjacent to the southern end of the street frontage provides access to either side of Alexandra Parade.
Transport – Existing Access and Parking	The site does not comprise any vehicle access or car parking areas at present. As such, the existing building and lease area are accessible on foot only.

41. **Figure 9** below provides a context view of the subject site and surrounding public transport infrastructure and higher order roads.

Walking distance to surrounding bus stops

Sixth Ave at Maroochy Library	2 min 0.1 km
600 Caloundra station	
Sixth Ave at Maroochy Library	2 min 0.2 km
600 Maroochydoore station	
King St at Cotton Tree Caravan Park	4 min 0.3 km
600 Caloundra station	
Cotton Tree Pde at Cotton Tree Carav...	5 min 0.4 km
600 Maroochydoore station	
Sixth Ave at Sea Breeze Caravan Park	7 min 0.5 km
600 Maroochydoore station	
Sixth Ave at Sea Breeze Caravan Park	7 min 0.5 km
600 Caloundra station	
Aerodrome Rd at Rose Street	9 min 0.7 km
611 Meridan Plains, Woodlands Blvd	
615 Landsborough station	
Australia Zoo	

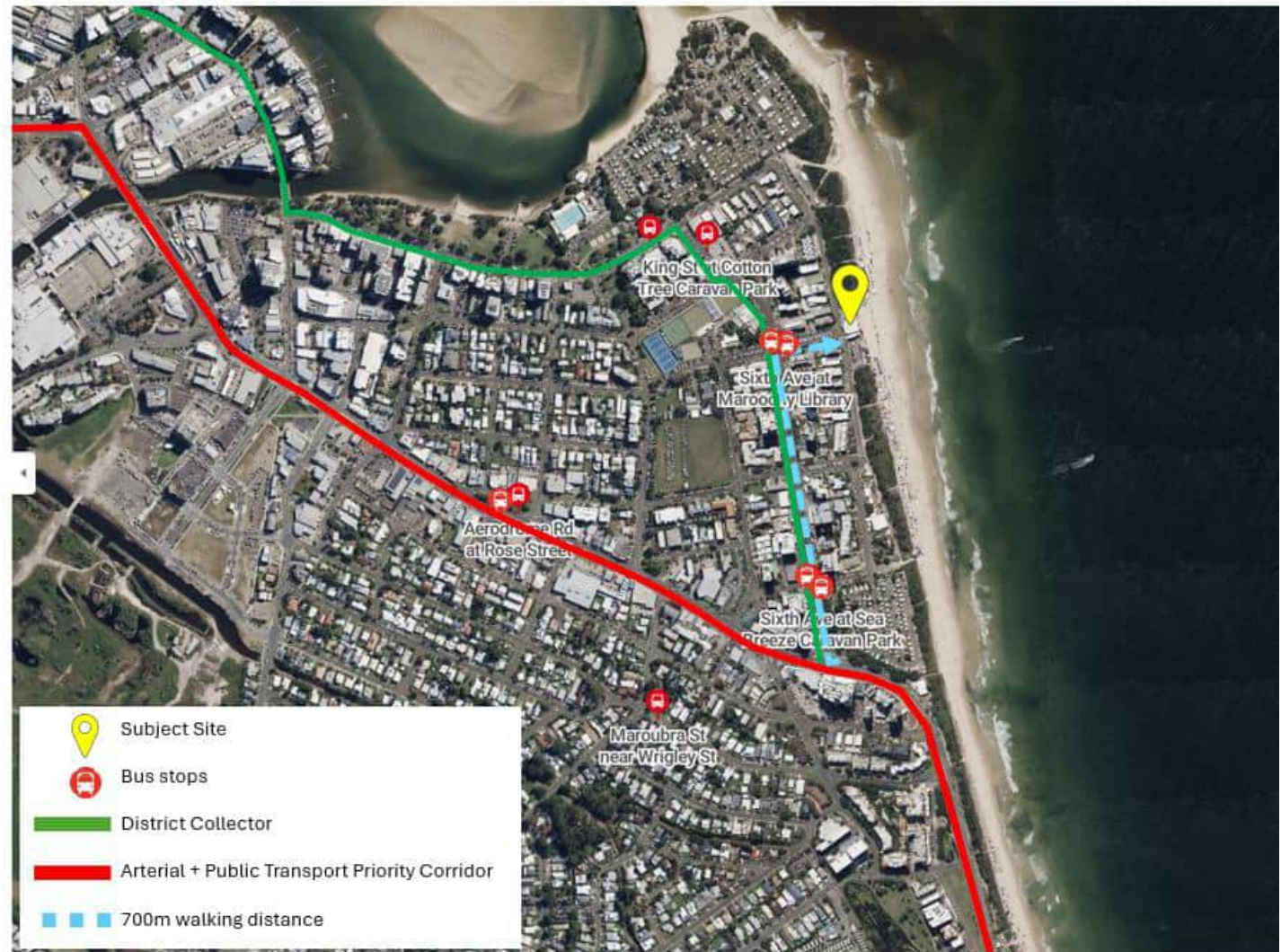


Figure 9 Transport network context map (Source: Bing Maps 2024)

4. Designation Proposal

4.1 Intent of Designation

42. Pursuant to **Chapter 2, Part 5** of the *Planning Act 2016*, it is proposed to designate the subject site for community infrastructure. The proposed community infrastructure is best described in the *Planning Regulations 2017, Schedule 5, Part 2* as:

Item 3: community and cultural facilities, including community centres, galleries, libraries and meeting halls; and

Item 17: sporting facilities

43. Section 36(1) of the *Planning Act 2016*, requires that in order to make a designation, a designator must be satisfied that:

- (a) *the infrastructure will satisfy statutory requirements, or budgetary commitments, for the supply of the infrastructure; or*
(b) *there is or will be a need for the efficient and timely supply of the infrastructure.*

44. As demonstrated throughout this EAR, the infrastructure will satisfy statutory requirements for the supply of the infrastructure and seeks to expand an existing facility that is already operating on the site. Further, as discussed in **Section 4.2** below, the proposal will satisfy budgetary commitments (funding by the supporters club and private donations) and will enable the efficient and timely delivery of the proposed infrastructure in response to a need for surf lifesaving facilities with increased capacity to support a rapidly growing population visiting Maroochydore Beach each year.

45. Due to the above, it is considered that the redevelopment of the existing Maroochy Beach Surf Lifesaving Club complies with parts (a) and (b) of Section 36 (1) of the *Planning Act 2016*.

4.2 Project History

46. MSLSC was founded over 100 years ago and was the first surf lifesaving club founded on the Sunshine Coast. The club has been proudly patrolling Maroochydore Beach and the Maroochy River Estuary since 1916 and to-date maintains its proud record of 'No Lives Lost' between the red and yellow flags. The MSLSC operates various sport and recreation activities on the adjacent Maroochydore Beach (i.e. nippers) and facilitates a range of surfing, surf lifesaving and triathlon events each year that garner state-wide, national and international attention.

47. The MSLSC has an existing 30-year lease in place ending 20 April 2031, which provides a lease area that is largely limited to the external walls of the building. The majority of the existing building was constructed circa 1960's, with the last major renovation occurring 24 years ago in 2000.

48. A need to expand the existing surf lifesaving club facilities has been identified in response to the Sunshine Coast's rapid resident population growth and increased visitation by tourists each year, resulting in the need for more lifesavers patrolling the beach and improved lifesaving facilities. These growth trends have also seen an influx of new memberships to the club each year and a rise in the number of kids joining the nippers training programs. Overall, with more people visiting the beach and Maroochy River, the club has identified an urgent need for upgraded/expanded surf lifesaving facilities within the club walls. It is noted that this expansion will require an increase to the existing lease area into the surrounding road parcel land given the current limited lease area.

49. Works for the project are intended to commence within 12 months following the receipt of Infrastructure Designation by the Minister, with the project targeted for completion by the end of 2028.

The total build cost of the project is expected to be approximately \$25 million, with the project being funded by the supporters club (Maroochydore Surf Life Saving Supporters Association Inc) and private donations.

50. Overall, the proposed expansion of the MSLSC will offer a community benefit by enhancing the safety of club members and the public, by improving the standard of surf lifesaving facilities and therefore increasing the capacity of surf lifesaving operations at Maroochydore Beach. It is also proposed to improve the visual amenity and functionality of the club overall, so as to create an enhanced experience for the community, while also constructing the building with materials that withstand the harsh conditions of the site's seaside location.

4.3 Proposal Overview

51. The existing building comprises three (3) storeys, including a ground level, first level and smaller second level and is predominately built to the boundaries of the lease area. The current building has a height of 13.3 metres from ground level (RL 17.09m AHD). The building consists of 1,116m² of floor area dedicated to surf lifesaving operations and 1,688m² of floor area associated with the supporters club, which includes restaurant, bar, function and gaming areas. It is proposed to demolish the existing building as part of the proposal.
52. The proposed development will comprise of three (3) storeys plus a basement level. The basement and ground levels will expand to the north of the existing lease area into the adjoining vegetated sand dune. The sand dune will then be rebuilt over the top of the roof to conceal the built form when viewed externally. Measures are proposed to be put in place to minimise impacts of the new dune system over the built infrastructure, while ensuring the current natural coastal processes are maintained once the works are complete. This includes revegetating the reconstructed dune to stabilise the sand, as shown on the Landscape Design Plans prepared by Bird Landscape Design in **Appendix 3**. Refer also to the Coastal Hazard Assessment prepared by Burchills Engineering Solutions in **Appendix 5**, which discusses the proposal to reestablish the dune. The proposed first and second levels will be constructed largely within the existing development footprint.
53. The proposed new MSLSC building will include basement and ground floor facilities associated with surf lifesaving activities, as well as both surf lifesaving and supporters club facilities over the first and second levels. The building will comprise a total floor area of 6,417m², with 4,760m² of floor area dedicated to surf lifesaving operations and 1,657m² of floor area associated with the supporters club, resulting in an increase to the floor area of buildings onsite by 3,613m² (31m² decrease in supporters club areas). It is noted that the supporters club activities are an essential part of the surf lifesaving club model as it is the source of funding for the non-profit community surf lifesaving services. As such, these elements must be retained as part of the proposed redevelopment.
54. Please refer to the proposed Architectural Plans prepared by BRD Group in **Appendix 2**. In short, the proposed development comprises the following elements:
- Basement level – 1,694m² surf lifesaving use area comprised of watercraft, trailer, vehicle and equipment storage and vehicle/pedestrian manoeuvring area.
 - Ground level (internal) – 1,734m² surf lifesaving use area comprised of watercraft, trailer, vehicle and equipment storage, vehicle/pedestrian manoeuvring area, service area/loading zone, member's club room, member's amenities and first aid.
 - First level – 306m² surf lifesaving use area comprised of a member's room (misc.).
 - First level – 1,155m² supporters club facilities area comprised of a reception and restaurant and bar areas with back of house.

- Second level – 1,026m² surf lifesaving use area comprised of a training centre/community group room and potential for short-stay accommodation facilities to accommodate travelling surf lifesaving athletes.
- Second level – 502m² supporters club facilities area comprised of a function room with back of house area.
- New covered entry terrace and breakout terrace and new deck facing east towards the beach. The new deck will cantilever over the sand. New ramp down to the beach from the MSLS building.
- Upgrade footpaths and streetscape works surrounding the development.
- Landscape areas that surround the proposed new building where not encumbered by built form elements.
- Reconstruction of the dune within the northern extent of the proposed lease area to structural engineering standards and re-sand/revegetate to blend in with the natural dune system/conceal the basement and ground levels of the built form from external view.

55. The development will cater to approximately 500 patrons per day (members and public). The proposed operating hours for the supporters club are 10:00am to midnight 7 days a week, in line with the existing operations onsite. The surf lifesaving activities commence onsite from 5.30am in order to begin beach patrols at sunrise.

4.4 Architectural Design and Built Form

56. The proposed architectural design and built form are depicted in the Architectural Plans enclosed as **Appendix 2**.

57. The proposal has a maximum height of 12.4 metres from ground level (at street level), which is lower than the existing building height of 13.3 metres at street level, and a total floor area of 6,417m² comprised of both surf lifesaving and supporters club areas. The proposed built form will be constructed to the boundaries of the proposed expanded lease area, as per the existing building onsite, which is built to the boundary of the current lease area. Increased setbacks to the new lease area are provided to the east of the proposed development to accommodate outdoor terrace and deck breakout areas overlooking the beach.

58. The proposed development will be positioned on the boundary of the lease area adjoining Alexandra Parade. The building will not be located any closer to existing residences/businesses than the existing building. No other setbacks are relevant given the subject site adjoins foreshore areas to the north, a public car park to the south and Maroochydore Beach to the east.

59. As demonstrated by the 3D perspectives provided in **Appendix 2** and **Figures 10** to **12** below, the development represents a high-quality architectural design. Ample articulation is achieved through the provision of projected batten screening (with cutouts) to the external walls, ample window glazing, recessed walls, recessed balconies and decks with transparent balustrades, a recessed entry terrace, covered walkways, projected awnings over the ground level terrace, projecting blade walls etc. Further, the design provides curves in the building profile and in the layout of deck/terrace areas, referencing the movement of water at Maroochydore Beach, to create greater visual interest and soften the overall appearance of the development.

60. The proposal includes large windows, bifold doors, deck and balcony areas that are favourably orientated to the east, which will present with a high level of openness and provide a 'lightweight' appearance to the built form. Variation in materials, architectural treatments and integration of

landscaping are also evident on the Architectural Plans in **Appendix 2**. Overall, the building design reflects the coastal themes evident in the locality and contributes positively to the surrounding area.



Figure 10 Perspective Image – looking east from the southern end of the site (Source: BRD Group 2024)



Figure 11 Perspective Image – looking north-west from the south (Source: BRD Group 2024)



Figure 12 Perspective Image – looking east from the northern end of the site (Source: BRD Group 2024)

4.5 Landscaping

61. The proposed landscape intent is illustrated by the Landscape Design Plans prepared by Bird Landscape Design in **Appendix 3**. The development site is limited in its ability to accommodate deep planted landscapes given the extent of built form and hardstand, which occupies almost the entirety of the proposed lot/lease area. This outcome is reflective of the existing circumstances onsite. Landscape nodes are provided in the form of garden beds adjacent to the entry terrace and a planter on the outdoor deck at ground level. It is also proposed to revegetate the western edge of the dune between the basement and Alexandra Parade and landscape over the reconstructed dune above the northern basement and ground level extension.
62. In addition to the landscaping proposed, the lease area will be surrounded by existing mature vegetation that forms part of the beach foreshore and dune system. Any clearing of trees required for the proposed works within the expanded lease area will be mitigated through the revegetation of the dune. Overall, the proposed development will be established in a landscaped and highly vegetated environment to provide visual amenity for nearby properties.

4.6 Dune Reconstruction

63. As discussed above, the proposed development seeks to extend the building footprint into the adjacent dunal system to the north of the existing building and lease area. Two (2) building levels (basement and ground) will be constructed in this area. It is then proposed to reinstate the dune over the top of the ground level roof and revegetate the land above. Structural Engineering solutions will be used to minimise impacts of the new dune system over the built infrastructure, while ensuring the current natural coastal processes are maintained once the works are complete.
64. Please refer to the Coastal Hazard Assessment in **Appendix 5** and the Landscape Design Plans in **Appendix 3**, which detail the proposal to reconstruct and revegetate the dune upon the completion of building construction.

4.7 Transport, Access and Parking

65. The proposed transport, access and parking outcomes are discussed within the Traffic Impact Assessment prepared by Bitzios Consulting in **Appendix 7**.
66. The proposed development does not provide any formalised car parking onsite. This outcome is in the same outcome as the existing arrangement, in which the adjoining public car park and on-street parking is utilised by members of the public when accessing the beach and MSLSC alike.
67. It is proposed to provide two (2) new driveway crossovers (essentially 1 access point) from the one-way laneway in Alexandra Parade direct to the building (via roller doors). The driveways will provide access to the ground and basement levels watercraft/vehicle storage area and to the service vehicle bay. These access points are limited to a left-in / left-out arrangement by the one-way direction of the laneway. It is also proposed to retain the existing on-street loading bay adjacent to the site for various service vehicle use where appropriate (i.e. van use).
68. To minimise conflicts between pedestrians travelling from the western side of Alexandra Parade to the MSLSC, it is proposed to provide a new pedestrian crossing to complement the existing crossing at the southern end of the site.
69. The enclosed Traffic Impact Assessment (**Appendix 7**) finds that the development will provide non-worsening of traffic vehicle movements and parking demand given that the proposal is a like-for-like redevelopment of the existing clubhouse, with respect to traffic generating activities. Further, the proposal improves the access arrangements to and from the site due to the formalisation of vehicle

access to the building for service vehicles and surf lifesaving vehicles/watercraft. This will help improve existing traffic conditions in the immediate area and mitigate impacts on public pedestrian movement areas adjacent to the foreshore.

4.8 Servicing and Refuse Management

The existing bin store arrangement is depicted in **Figure 13** below. Currently bins are stored in an enclosure at the front of the building (left) or within the loading/service area in view of the street. The bulk bins are serviced at kerbside using the line marked bays adjacent to the loading dock. These loading bays are approximately 2.4 metres wide, which is not sufficient for service vehicle use. As such, trucks are seen extending over into the road reserve during servicing.



Figure 13 Existing bin store area (Source: Google Street View 2024)

70. It is proposed to make improvements to this situation by storing all bulk refuse bins within the building, where they will be serviced onsite in the new service vehicle bay. The bins will therefore be screened from street view when stored and impacts on the use of Alexandra Parade will be minimised. Service vehicle manoeuvring is demonstrated within Appendix B (Swept Path Diagrams) of the Traffic Impact Assessment in **Appendix 7** (excerpt provided in **Figure 14** below).

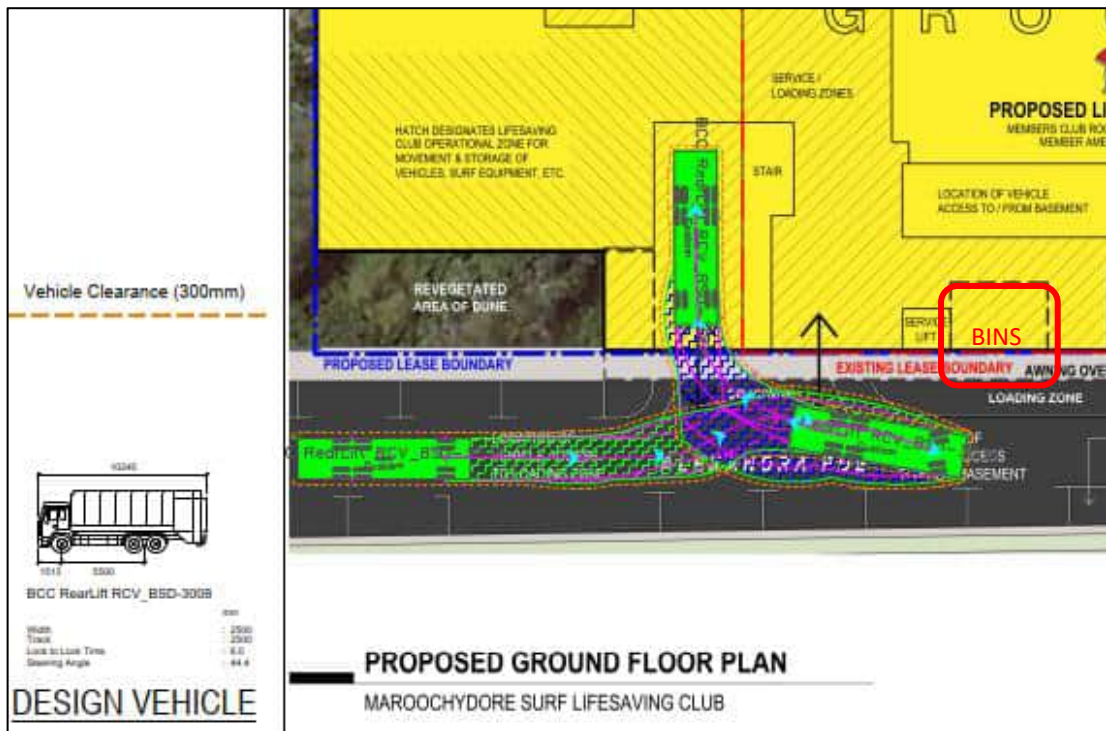


Figure 14 Proposed bin store area and servicing arrangement (Source: Bitzios Consulting 2024)

4.9 Stormwater Management

71. Please refer to the Stormwater Management Plan prepared by Arcos Group in **Appendix 4**. Whilst stormwater quality measures are not required to be provided for the site under the SPP, it is intended to collect and store 100% of the roof water in three (3) 10KL tanks onsite for operational use by the club (i.e. washing down watercraft equipment). The tanks will overflow to a soakwell within the vegetated sand dunes.
72. The site will not provide onsite detention to manage stormwater quantity flows. The development is identified by the Civil Engineer as being exempt from peak flow management requirements, on the basis that the major design storm flows from the development site discharges to the beach/ocean. A portion of the existing site discharges stormwater to the kerb and channel of Alexandra Parade through piped connections to kerb adaptors. The flows to this discharge point are non-worsening. As mentioned above, roof water will be retained in rainwater tanks for reuse onsite.

4.10 Acoustic Amenity and Nuisance

73. The DHLGPPW Pre-Lodgement Written Advice (**Appendix 1**) identifies that the proposed redevelopment of the club may result in noise impacts to nearby residential properties and should therefore be supported by an acoustic report to assess acoustic impacts from uses on the site and recommend mitigation measures. Please refer to the Noise Impact Assessment prepared by MWA Environmental in **Appendix 8**.

5. Compliance with Legislative Requirements (Local and State)

74. This section of the EAR will demonstrate compliance with the local and state legislative requirements, namely:

- *Planning Act 2016*;
- State Planning Policy;
- South-East Queensland Regional Plan 2023; and,
- Sunshine Coast Planning Scheme 2014.

5.1 Planning Act 2016

75. **Chapter 2, Part 5, Section 36** of the *Planning Act 2016* sets out the criteria that a designator must be satisfied is achieved in order to make a designation.

76. **Table 4** below provides comment on the development’s compliance with the relevant criteria contained within **Section 36** of the *Planning Act 2016*.

Table 4 Compliance with Section 36 of the Planning Act

Criteria	Response
<p>(1) To make a designation, a designator must be satisfied that—</p> <p style="margin-left: 20px;">(a) the infrastructure will satisfy statutory requirements, or budgetary commitments, for the supply of the infrastructure; or</p> <p style="margin-left: 20px;">(b) there is or will be a need for the efficient and timely supply of the infrastructure.</p>	<p>The infrastructure project is privately funded by the supporters club (Maroochydore Surf Life Saving Supporters Association Inc) and through private donations. As such, the delivery of the infrastructure will not impact upon government budgetary commitments.</p> <p>The infrastructure will satisfy statutory requirements for the supply of the infrastructure, as demonstrated within this EAR.</p> <p>As discussed in Section 4.2 (Project History), the efficient and timely delivery of the proposed infrastructure is sought in response to the rapid resident population growth and increased visitation to the area by tourists each year, resulting in the need for more lifesavers patrolling Maroochydore beach.</p>
<p>(2) To make or amend a designation, if the designator is the Minister, the Minister must also be satisfied that adequate environmental assessment, including adequate consultation, has been carried out in relation to the development that is the subject of the designation or amendment.</p>	<p>This EAR contains a comprehensive environmental assessment, which addresses all State and local government planning controls and demonstrates that the proposal does not result in any unmitigable or adverse environmental impacts.</p> <p>Consultation will be undertaken in accordance with the requirements listed within Schedule 4, Part 7 of the Ministers Guidelines and Rules.</p>

Criteria	Response
	Refer to Section 7.3 (Proposed Consultation Strategy) for further information.
(3) The Minister may, in guidelines prescribed by regulation, set out the process for the environmental assessment and consultation.	This EAR has been prepared in accordance with Chapter 7 of the Ministers Guidelines and Rules.
(4) The Minister is taken to be satisfied of the matters in subsection (2) if the process in the guidelines is followed.	This EAR has been prepared in accordance with Chapter 7 of the Ministers Guidelines and Rules.
(5) However, the Minister may be satisfied of the matters in another way.	Not Relevant. Refer above.
(6) Sections 10 and 11 apply to the making or amendment of the guidelines as if the guidelines were a State planning policy.	Not Relevant. No guidelines or guideline amendments are proposed.
<p>(7) To make or amend a designation, a designator must have regard to—</p> <ul style="list-style-type: none"> (a) all planning instruments that relate to the premises; and (b) any assessment benchmarks, other than in planning instruments, that relate to the development that is the subject of the designation or amendment; and (c) if the premises are in a State development area under the State Development Act—any approved development scheme for the premises under that Act; and <ul style="list-style-type: none"> (ca) if the premises are in a priority development area under the Economic Development Act 2012—any development scheme for the priority development area under that Act; and (d) any properly made submissions made as part of the consultation carried out under section 37; and (e) the written submissions of any local government. 	<ul style="list-style-type: none"> a) This EAR provides a comprehensive assessment of all relevant planning instruments. b) All known relevant assessment benchmarks and other requirements have been addressed as part of this EAR. c) The premises is not located within a State Development Area. d) Following submission of the MID proposal, consultation undertaken by both the Minister and the entity will occur. In accordance with the MGR, if submissions are received during consultation, it will be demonstrated to the Minister how the submissions have been addressed. e) Refer response to (d) above.

5.2 State Interests

5.2.1 State Planning Policy (SPP)

77. The State Planning Policy (SPP) represents the principal state land use planning instrument. The SPP outlines the states interest in land use planning and development while also providing assessment benchmarks and state wide policies. In accordance with Part B (Application and Operation), the SPP applies where designating premises for infrastructure. As such, the SPP has been addressed as part of this EAR.
78. **Table 5** below details all State Interest Policies contained within Part E of the SPP and identifies the policies relevant to this EAR.

Table 5 State Interest Policies

Sate Interest Policy	Applicability
<i>Liveable Communities and Housing</i>	
Housing Supply and Diversity	Not Applicable
Liveable Communities	Not Applicable
<i>Economic Growth</i>	
Agriculture	Not Applicable
Development and Construction	Not Applicable
Mining and Extractive Resources	Not Applicable
Tourism	Not Applicable
<i>Environment and Heritage</i>	
Biodiversity	Addressed in Section 5.2.1.1 below
Coastal Environment	Addressed in Section 5.2.1.2 below
Cultural Heritage	Not Applicable
Water Quality (Water Resource Catchments)	Not Applicable
<i>Safety Resilience and Hazards</i>	
Emissions and Hazardous Activities	Not Applicable
Natural Hazards, Risk and Resilience (Erosion Prone Area, Medium Storm Tide Inundation Area)	Addressed in Section 5.2.1.3 below
<i>Infrastructure</i>	
Energy and Water Supply	Not Applicable
Infrastructure Integration	Not Applicable
Transport Infrastructure	Not Applicable
Strategic Airports and Aviation Facilities	Addressed in Section 5.2.1.4 below
Strategic Port	Not Applicable

79. Compliance with the relevant State Interest Policies identified in **Table 5** above is discussed in the following sections of this report.
80. Whilst the 'Tourism' and 'Liveable Communities' policy elements are not relevant to the assessment of the application, it is considered that the proposed development advances the intent of these policy elements through providing infrastructure that supports the lifestyle needs of the community, as well as providing appropriate infrastructure to support and strengthen the tourism economy of the Maroochydoore Beach Area.

5.2.1.1 State Interest Policy – Biodiversity

81. This state interest aims to safeguard biodiversity at the national, State and local level, and to build ecological resilience. The current proposal has considered matters of national, State and local environmental significance.

82. As detailed in the Ecological Assessment undertaken by Burchills (**Appendix 6**), the site is mapped as containing Matters of State Environmental Significance. The development will result in the clearing of vegetation that is mapped as 'essential habitat' and 'wildlife habitat' comprising (potentially) 'special least concern animals' and 'endangered or vulnerable' animals.
83. The Ecological Assessment Report provides an assessment of the proposal in relation to Matters of National Environmental Significance (MNES), Matters of State Environmental Significance (MSES) under the SPP as well as Matters of Local Environmental Significance (MLES) in accordance with the *Sunshine Coast Planning Scheme 2014*. The Ecological Assessment Report finds that the vegetation to be cleared predominantly comprises pioneer species and weeds and it is not expected that the clearing will impact on species of conservation significance or other matters of environmental significance provided the works are undertaken in accordance with the recommendations provided within the report.
84. The Ecological Assessment Report in **Appendix 6** suitably addresses the Biodiversity State Interest Policy.

5.2.1.2 State Interest Policy – Coastal Environment

85. The coastal environment is highly dynamic and subject to influence from climate change. As such the state aims to protect the natural processes, landforms and native vegetation that shape the coast.
86. A Coastal Hazard Assessment is enclosed as **Appendix 5**. The report provides an assessment of the potential coastal hazards that may be impacted by the proposed development as a result of erosion, storm tide inundation and the site's location within a Coastal Management District. The assessment determines that the proposed development can be established without:
- Negatively impacting upon coastal processes after the dunes and vegetation have been satisfactorily re-established;
 - Impacting upon the protective function of landforms and vegetation;
 - Significantly impacting the risk or impacts to people or property;
 - Increasing the severity of coastal erosion either on or off site;
 - Impacting negatively upon coastal processes; or
 - Impacting negatively upon Matters of State Ecological Significance.
87. The Coastal Hazard Assessment (**Appendix 5**) further concludes that given the location of MSLSC and the fact that the development is for the redevelopment of an existing building situated (partially) behind an existing sea wall, the proposed development works will not result in changes to the local marine environment directly adjoining the proposed structures or have long term negative impacts upon coastal processes.
88. Given the above, the proposal is seen to comply with the Coastal Environment State Interest Policy.

5.2.1.3 State Interest Policy – Natural Hazards, Risk and Resilience

89. The SPP mapping identifies the subject site as being impacted by the 'Flood hazard area – Local Government flood mapping area'. The SPP prescribes that if a site is identified as being impacted by this mapping layer, the SPP requirements for flood are triggered by the flood mapping contained in that local government's Planning Scheme. Council's overlay mapping does not identify the site as being located with a Flood Hazard area.
90. The SPP also identifies the site is also mapped within an erosion prone area. This is addressed in the Coastal Hazard Assessment in **Appendix 5**, which finds that the proposed development won't have any

negative impacts upon the local marine environment or coastal processes and can appropriately mitigate all coastal hazards.

91. Given the above, the proposal complies with the Natural Risk and Resilience State Interest Policy.

5.2.1.4 State Interest Policy – Strategic Airports and Aviation Facilities

92. As detailed within the policy, airports and aviation facilities play a key role in facilitating economic growth in Queensland, with all economy sectors relying on the safe and efficient movement of people and freight through strategic airports. As such, the State aims to ensure that development does not impact on the safe and efficient operation of these facilities. The subject site is located approximately 5km from the Sunshine Coast Airport.

93. The site is mapped within the obstacle limitation surface area (149.5 metres) and the 8km wildlife hazard buffer zone. The proposed development has a built form height of 12.4 metres from ground level (RL 16.1m AHD) and will not utilise cranes for the construction of the development that would penetrate the obstacle limitation surface limit of more than 149.5 metres in height. Further, the proposed surf lifesaving club:

- Will be constructed using low reflective materials, such that the built form will not include reflective surfaces that could distract or confuse pilots. Further, the development will not comprise excessively bright light sources;
- The use does not generate emissions that might impact air quality or movement; and,
- The use does not fundamentally attract wildlife or increase wildlife hazards in the area.

94. Given the above, the development complies with the Strategic Airports and Aviation Facilities State Interest Policy.

5.2.2 South East Queensland Regional Plan 2023

95. The *South East Queensland Regional Plan 2023* (hereafter SEQRP) is the principal planning document for managing growth and development within the South East Queensland region, with an aim to sustainably accommodate the projected population growth in the region to 2046. The subject site is located within the 'Urban Footprint' designation of the SEQRP.

96. According to the SEQRP, the 'Urban Footprint' incorporates the full range of urban uses including housing, industry, business, infrastructure, community facilities and other integral components of well-planned urban environments, such as local areas for sport and recreation and urban open space.

97. The proposed development satisfies the intent of the Urban Footprint, with the proposed redevelopment of the existing surf lifesaving club on the same site, ensuring that the development is consistent with the desired land use pattern for the local area. The site is also suitably positioned adjacent to the beach foreshore to service the intended community need, being for surf lifesaving and beach patrol activities.

98. It is noted that this EAR does not require assessment against the SEQ Regulatory Provisions on the basis that the development is not located within a Major Development Area.

5.3 State Development Assessment Provisions – Referral Agency

99. A review of the Development Assessment Mapping System (DAMS) confirms the below mapping layers apply to the lease area (including the expansion to the north of the current lease area):

- Coastal Protection - Coastal management district
- Coastal Protection - Coastal area - erosion prone area

- Water resources - Water resource planning area boundaries
- Native Vegetation Clearing - Category A or B area that is a least concern regional ecosystem
- Native Vegetation Clearing - Category X on the regulated vegetation management map
- Native Vegetation Clearing - Essential habitat
- Native Vegetation Clearing - Coastal bioregions and sub-regions

100. Schedule 10 of the *Planning Regulation 2017* confirms that under a standard Development Application process made in accordance with Section 51 of the *Planning Act 2016*, the development application would require referral for the following triggers:

- Schedule 10, Part 17, Division 3, Table 6 – State Code 8: Coastal Development and Tidal Works.

101. **Table 6** below details the referral triggers, applicable state codes, and the applicable specialist reports which addresses the relevant state codes.

Table 6 Referral Trigger Assessment

Referral Trigger	Applicable State Code	Code Response Detail
Schedule 10, Part 17, Division 3, Table 6.	State Code 8: Coastal Development and Tidal Works.	Appendix 5 – Coastal Hazard Assessment prepared by Burchills.

102. The proposed development is suitably located, despite being in the Coastal Management District and Erosion Prone Area when considering that the use constitutes coastal-dependant development. In accordance with the State Development Assessment Provisions (SDAP), '*coastal-dependant development means development that in order to function must be located in tidal waters or be able to access tidal water; and may include, but is not limited to: c. community facilities and sporting facilities which require access to tidal water in order to function, such as surf clubs, marine rescue, rowing and sailing clubs*'. The proposed MSLSC redevelopment is coastal-dependant activity and is suitably located in a coastal area to perform the necessary community surf lifesaving functions.

5.4 Local Government – *Sunshine Coast Planning Scheme 2014*

103. The subject site is located within the Sunshine Coast Council Local Government Area, with the *Sunshine Coast Planning Scheme 2014* forming the local government Planning Scheme, which applies to the site and region. Although the proposed designation will result in the development being Accepted Development, consideration against the Planning Scheme development controls has been undertaken as part of this EAR.

5.4.1 Applicable Planning Scheme Elements

104. **Table 7** below provides a breakdown of the Planning Scheme particulars which relate to the subject site and proposed development.

Table 7 Planning Scheme Particulars

Planning Instrument	<i>Sunshine Coast Planning Scheme 2014</i>
Zone	Sport and Recreation Zone & Open Space Zone
Local Area / Precinct	Maroochydore/Kuluin Local Plan Area

Overlays	<ul style="list-style-type: none"> ▶ Acid Sulfate Soils Overlay <ul style="list-style-type: none"> ○ Area 1: land at or below 5m AHD ○ Area 2: land above 5m AHD and below 20m AHD ▶ Airport Environs Overlay <ul style="list-style-type: none"> ○ Runway Separation Distances ○ Obstacle Limitation Surface (OLS) ▶ Biodiversity, Waterways and Wetlands Overlay <ul style="list-style-type: none"> ○ Native Vegetation Area ▶ Coastal Protection Overlay ▶ Height of Buildings and Structures Overlay <ul style="list-style-type: none"> ○ 8.5 metre height limit
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5.4.2 Use Definition

105. Under the Planning Scheme, the proposed land use is defined as a ‘Club’, which is specifically defined as:

Premises used by persons associated for social, literary, political, sporting, athletic or other similar purposes for social interaction or entertainment. The use may include the ancillary preparation and service of food and drink.

5.4.3 Strategic Framework

106. The Strategic Framework sets the policy direction for the Planning Scheme and forms the basis for ensuring appropriate development occurs within the Planning Scheme area for the life of the Planning Scheme.

107. From a spatial context, the subject site is located within an ‘Urban Area’, with the site being within proximity to the Principal Regional Activity Centre of the region (the Maroochydore CBD), as shown on Strategic Framework Map 1 Land Use Elements (**Figure 15**) below.

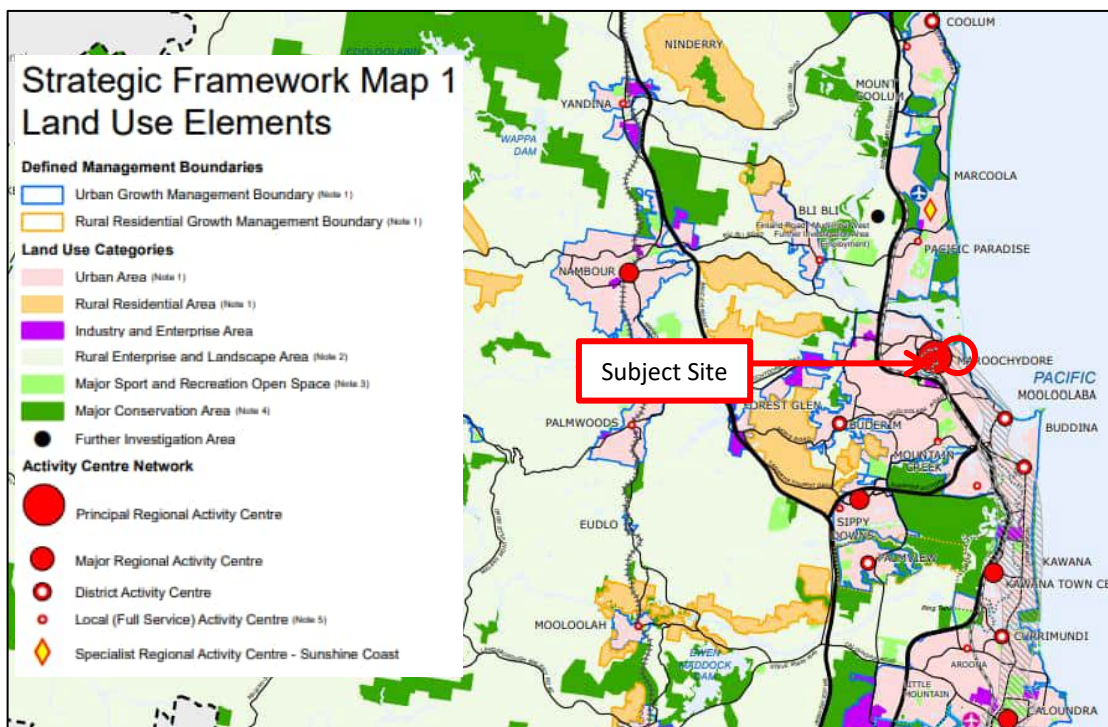


Figure 15 Extract of Strategic Framework Map 1 – Land Use Elements (Source: Sunshine Coast Council)

108. For the purpose of describing the policy direction for the Planning Scheme, the strategic framework comprises the following themes that collectively represent the policy intent of the scheme:
- Settlement pattern
 - Economic development
 - Transport
 - Infrastructure and services
 - Natural environment
 - Community identity, character and social inclusion
 - Natural resources
 - Natural hazards
109. Each theme comprises strategic outcomes, elements that refine and further describe the strategic outcomes and finally, specific outcomes sought for the elements.
110. The policy direction for the Planning Scheme, in the strategic framework, is largely reflected in the purpose and overall outcomes of the:
- Overlay codes;
 - Local plan codes;
 - Zone codes; and,
 - Development codes.
111. An assessment of all relevant overlay codes is provided in **Section 5.4.4** (Overlays), an assessment of the zone codes is provided in **Section 5.4.5** (Zoning) an assessment of the local plan code is provided in **Section 5.4.6** (Maroochydore/Kuluin Local Plan Area), and an assessment of all applicable development codes is provided in **Sections 5.4.7 – 5.4.15**. These sections of the report demonstrate the proposal's compliance with the relevant codes and therefore the proposal's compliance with the policy direction for the Planning Scheme in the strategic framework.
112. In reviewing the Strategic Framework, there are common themes that are reiterated throughout the document in relation to sport and recreation facilities and community facilities, which relate to the proposed surf lifesaving club, with a Strategic Framework seeking:
- The creation of community meeting places that are integrated with community facilities and/or open space and sport and recreation facilities and which encourage the congregation of people and community interaction are established within or near activity centres;
 - The provision of well-located sport and recreation and community facilities that contribute to active, healthy living and community wellbeing;
 - The protection of and future provision of sport and recreation facilities, for use by residents and visitors;
 - The provision of sport and recreation facilities and community facilities with access to the active transport network, including pedestrian and cycle paths that are effectively integrated with other travel modes and connect to activity centres to improve opportunities for active living;
 - New investment and re-investment in high value industries, including sport and tourism;
 - The provision of meeting places, community facilities and sport and recreation opportunities for all abilities;
 - The provision of sport and recreation and community facilities that maintain, protect and enhance the values and attributes of open space and ecologically important areas; and,

- The development of new facilities that maintain and protect the amenity of surrounding areas and land uses.

113. The re-development and expansion of the existing MSLSA advances these common themes, through the provision of an expanded surf lifesaving club facility that:


- Offers increased capacity to service the surf lifesaving/beach-related sporting needs of the community;
- Comprises community meeting spaces;
- Is located on the fringe of the Principal Regional Activity Centre of the Sunshine Coast, with road and pedestrian/cycle connections to the Maroochydore CBD;
- Is well-connected to the wider region via the road network and public transit system;
- Is in a location with access to pedestrian footpaths on both sides of Alexandra Parade and is within proximity to the Priority Public Transport and Cycle Arterial Transport Corridor along Alexandra Parade, 600 metres south of the site (~700 metres walking distance);
- Is a significant privately funded investment into community and sport and recreation facilities in the region;
- Utilises an existing surf lifesaving club site with minimal expansion into the surrounding area to preserve the values and attributes of open space and ecologically important areas in the region’s foreshores; and,
- Maintains and protects the amenity of surrounding areas and land uses, as detailed within the Noise Impact Assessment in **Appendix 8**.

114. Based on the above, the proposed development supports the overall intent of the Strategic Framework.

5.4.4 Overlays

115. **Table 8** below demonstrates the overlays that are relevant to the site under the Planning Scheme, with a response provided in relation to compliance with the assessment criteria.

Table 8 Overlay Code Assessment

Overlay	Response
<p>Acid Sulfate Soils Overlay</p>  <p>■ Land above 5m & below 20m AHD ■ Land at or below 5m AHD</p>	<p>The Acid Sulfate Soils Overlay identifies the site as containing the potential for Acid Sulfate Soils on land at or below 5m AHD and Land above 5m & below 20m AHD.</p> <p>Earthworks are proposed within the overlay area to construct a basement. Prior to commencement of construction, an Acid Sulfate Soils management plan will need to be prepared in order to ensure that potential Acid Sulfate Soils are mitigated. This can be conditioned in the MID Decision Notice. Acid Sulfate Soils aren't typically a significant constraint to development and can be treated with conventional methods in accordance with a management plan.</p> <p>The proposed development can comply with the Acid Sulfate Soils Overlay.</p>

Airport Environs Overlay



The Airport Environs Overlay identifies the site as being within the runway separation distances area (within 6km of the runway) and within the obstacle limitation surface area (110m).

The proposed development has a built form height of 12.4 metres from ground level (RL 16.1m AHD) and will not utilise cranes for the construction of the development that would penetrate the obstacle limitation surface limit of more than 110 metres in height.

Further the proposed infrastructure does not include activities which will result in dust or gaseous plumes, nor will it include activities that will increase potential for bird and bat strike within the operational airspace.

Accordingly, the development would comply with the Airport Environs Overlay Code.

Biodiversity, Waterways and Wetlands Overlay



Native Vegetation Area



The area north of the existing building that will accommodate the lease expansion, and therefore the increased building footprint, is subject to the Biodiversity, Waterways and Wetlands Overlay and is mapped as containing native vegetation. The development will result in the clearing of vegetation in this mapped area, which forms part of the dune system, as outlined in the adjacent image. This clearing is required in order to construct the basement and ground level of the proposed development. It is proposed to reconstruct the dune to structural Engineering standards and re-sand/revegetate this area to blend in with the natural dune system/conceal the basement and ground levels of the built form from external view. Planting of this area will consist of native species to reinstate the vegetation cleared for construction, as shown on the Landscape Plans in **Appendix 3**.

Please refer to the Ecological Assessment Report in **Appendix 6**, which addresses the clearing proposed and provides an assessment of the Biodiversity, Waterways and Wetlands Overlay Code.

The report finds that the area proposed to be cleared comprises species of least significance and weeds and it is not expected that the clearing will impact on species of conservation significance or other matters of environmental significance in the locality. Further, no conservation significant fauna were mapped within the site, with no established

habitats being found in the area. Overall, the report provides recommendations to mitigate the impacts on matters of environmental significance.

Coastal Protection Overlay



Coastal Protection Area

The subject site is identified as being within the Coastal Protection Overlay.

Please refer to the Coastal Hazard Assessment in **Appendix 5**, which includes a full assessment of the Overlay Code demonstrating compliance. The report finds that the proposed development will not result in a significant increase to the risk of people or property and will not increase the severity of coastal erosion either on or off site. Further, the overlay supports coastal-dependent development within erosion prone areas.

In accordance with the State Development Assessment Provisions (SDAP), 'coastal-dependent development means development that in order to function must be located in tidal waters or be able to access tidal water; and may include, but is not limited to: c. community facilities and sporting facilities which require access to tidal water in order to function, such as **surf clubs**, marine rescue, rowing and sailing clubs'. The proposal constitutes coastal-dependent development.

The proposed development complies with the Coastal Processes Overlay Code, as demonstrated by the specialist reporting supplied.

Height of Buildings and Structures Overlay



Maximum Height of Buildings and Structures

- 8.5 metres
- 10 metres
- 12 metres

The subject site is identified by the Height of Buildings and Structures Overlay as having an 8.5 metre height limit from natural ground.

The proposed development has an overall height of 12.4 metres from natural ground level (RL 16.1m AHD). The proposal is a redevelopment of the existing MSLS building. The existing building has a height of 13.3 metres from ground level (RL 17.09m AHD). As such, the proposed built form is lower in height overall than the existing building.

In any case, as the proposed building height exceeds 8.5 metres, the development does not comply with the Acceptable Outcomes of the Overlay Code. An assessment against the Height of Building and Structures Overlay Code is provided in **Section 5.4.4.1** below.

5.4.4.1 Assessment against the Height of Buildings and Structures Overlay Code

Background/Context

116. The site is provided with a maximum building height limit of 8.5 metres from natural ground level under the Height of Building and Structures Overlay. The proposed development results in a maximum building height of 12.4 metres at the greatest point of difference from natural ground level onsite and is therefore required to be assessed against the entirety of the Height of Buildings and Structures Overlay Code.
117. As stated above, the existing building, which has been onsite for several decades, is 13.3 metres in height currently. As such, it is not proposed to increase the overall height of the building (height is reduced by 1 metre). It is, however, proposed to increase the floorplate of the second level, resulting in a greater mass of built form sitting over the height limit for the site. The extent of height exceedance (existing and proposed) is depicted in **Figure 16** below.

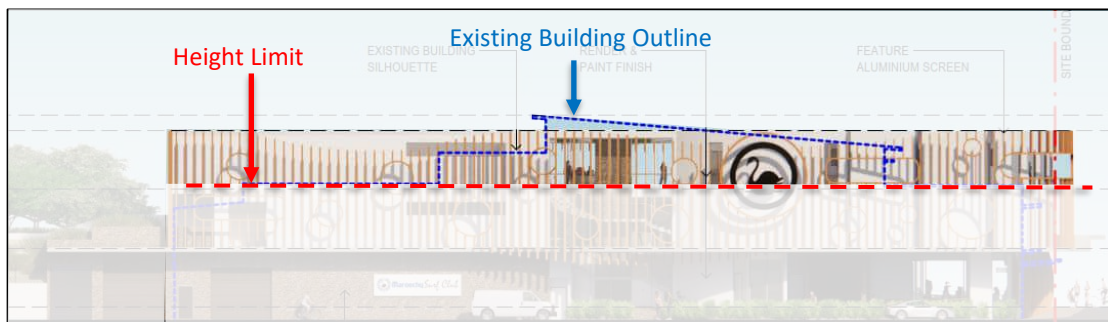


Figure 16 Proposed Building Height – existing versus proposed (Source: BRD Group 2024)

118. For context, the site is located in an area that is surrounded by taller buildings and is the only site with an 8.5 metre height limit, despite the existing building, which pre-dates the Planning Scheme, being greater in height. Land directly adjacent to the site is permitted a 12 metre building height, whilst land further west of the site is permitted a 37.5 metre building height (refer to **Figure 17** below).



Figure 17 Height of Buildings and Structures Overlay Map (Source: SCC Planning Scheme 2014 – MyMaps)

119. The surrounding built forms adjacent to the site are all generally three (3) or four (4) storeys in height, utilising the 12 metre height limit for the full width of those buildings. Further, a number of developed sites that are west of the MSLSC (along Sixth Avenue) are either built to the 37.5 metre height limit or exceeding the height limit by two (2) to four (4) storeys as a result of historic development approvals that occurred prior to the commencement of the current Planning Scheme. **Table 9** below illustrates the scale and bulk of built forms adjacent to and surrounding the site.

Table 9 Surrounding Context – Built Form Scale/Bulk







120. Overall, the prescribed height limit for the site is not consistent with the current and planned development in the immediate surrounding area.

Assessment of Height of Buildings and Structures Overlay Code Provisions – Overall Outcomes

121. Due to the intended height exceedance, the proposal is unable to comply with the Acceptable Outcomes and Performance Outcomes of the code. As such, an assessment against the Purpose and Overall Outcomes of the code is provided below:

(1) The purpose of the Height of buildings and structures overlay code is to protect the distinctive character and amenity of the Sunshine Coast as a place with a predominantly low to medium-rise built form.

122. This outcome is not representative of the strategic intent for Maroochydore as the Principal Activity Centre of the region, which in conjunction with development in the Maroochydore City Centre Priority Development Area, is intended to be the most concentrated urban setting in the region, with the highest residential densities, tallest buildings and greatest yield of commercial and retail floor space. Further, as detailed above, the strategic vision for the locality in which the site is located is medium to high rise built forms, as represented by the surrounding building height allowances which range from 12 metres to 37.5 metres in height (refer to **Figure 17** above).

(a) development provides for the height of buildings and structures to comply with specified height limits except where explicitly provided for in this code;

123. As the proposal is unable to comply with Overall Outcome (a) above, the merit of the proposal must be considered with respect to the unique context of the site. For context, should Council have been the assessment manager for the application, Section 45(5)(b) of the *Planning Act 2016* would be relevant. This section allows an assessment manager to consider ‘other relevant matters’ in the assessment of Impact Assessable development applications, as a tool to inform a decision about a matter that conflicts with the provisions Planning Scheme.
124. The proposed building height of 12.4 metres is appropriate when considering the context of the site, being that it currently comprises a 13.3 metre high building and that the site is surrounded by land with height limits that exceed what is proposed as part of the redevelopment of the MSLSC. Further, the position of the site adjacent to buildings that generally represent the overall building height and general

mass/scale of the proposed development warrants the proposed building height, as it will be in character with the surrounding locality.

(b) development contributes to the retention of the preferred built form character for the Sunshine Coast, and the local plan area in which it occurs;

125. As detailed above, the proposed development retains and contributes to the preferred built form character of the area in which it is located, with the proposed building height (and overall building mass/scale) being reflective of what is permitted on adjacent sites, as well as being already evident in the streetscape. Further, the Maroochydore/Kuluin Local Plan Area generally provides for high-rise buildings that are the tallest buildings in the region. As such, the proposed development will be smaller in scale than the predominant urban fabric of the area.
-

(c) the height of buildings and structures is consistent with the reasonable expectations of the local community;

126. As detailed above, the site is located within an area that provides 12 metre high buildings consisting of three (3) to four (4) storey built forms, as well as high-rise buildings along Sixth Avenue. The part of Alexandra Parade that the site fronts specifically consists of medium-rise buildings approximately 12 metres in height, if not greater where part of a historic development that pre-dates the Planning Scheme. Further, the existing building is 13.3 metres in height. Finally, Maroochydore is known to the local community as the CBD of the Sunshine Coast, where taller buildings are anticipated and therefore consistent with the reasonable expectations of the local community, even where near the beach.
127. The MID will be subject to public consultation, which will provide a platform for members of the community to express their expectations in relation to the height of the development proposal specifically.
-

(d) development on a site within a flooding and inundation area, as identified on a Flood Hazard Overlay Map, is afforded an allowance for additional maximum height so as to minimise the risk to people and property;

128. The site is not mapped as being in a flooding and inundation area.
-

(e) development does not result in a significant loss of amenity for surrounding development, having regard to:

(i) the extent and duration of any overshadowing

129. The subject site does not adjoin any other buildings, nor will it in future, being surrounded entirely by road reserve that consists of a public car park and vegetation open space/the Maroochydore Beach foreshore.
130. The proposed development will not result in worsened overshadowing impacts for the residential properties directly across the road on the basis that the height of the building will not exceed the overall

height of the existing built form onsite, nor the height of those residential premises which are already equal to or greater in height than the proposed development. Further, those buildings are more likely to experience overshadowing impacts from the premises that they adjoin to the west, which have the ability to be redeveloped to a height of 37.5 metres.

(e) development does not result in a significant loss of amenity for surrounding development, having regard to:

(ii) privacy and overlooking impacts

131. The proposed development does not overlook any surrounding development. Further, the primary openings of the built form (balconies/large windows etc) are directed towards the east, away from existing/possible future buildings. The height of the building does not result in worsened impacts with regards to privacy and overlooking.
-

(e) development does not result in a significant loss of amenity for surrounding development, having regard to:

(iii) impacts upon views

132. Significant views are available east of the site towards the ocean. As shown in **Figure 18** below, the part of the building that exceeds the 8.5 metre height limit will be located in the same position onsite as the existing building, with the proposed expansion being located below the height limit. The existing residential developments to the west of the site at 6 Beach Parade and 30 Alexandra Parade are adjacent to this part of the building. Both of these residential buildings are similar to the height of the proposed development currently, having permitted height limits of 12 metres. Further, the views from these properties are already obscured by the existing building.



Figure 18 Context of views from surrounding sites (Source: QLD Globe 2024)

(e) development does not result in a significant loss of amenity for surrounding development, having regard to:

(iv) building character and appearance

(v) building massing and scale relative to its surroundings.

133. As detailed above, the despite the proposed height exceedance, the proposed development is consistent with the scale and character of built form in the surrounding area and will not present with a building mass or scale that unreasonably impacts the amenity of surrounding properties, when considering the context of the site.

Compliance with Strategic Framework

134. As outlined above, the development does not comply with Overall Outcome (a) of the Height of Buildings and Structures Overlay Code, as the development contains a height, which exceeds the height specified by the Height of Buildings and Structures Overlay.
135. In light of this and in order to determine compliance with the Planning Scheme, the development requires assessment against parts of the Strategic Framework, which provides the policy direction for the Planning Scheme. Although it is understood that it is the intent for the Strategic Framework to be read as a whole, the provisions relating to Transport, Infrastructure and Services, Natural Environment, Natural Resources and Natural Hazards are not addressed within this section, as the proposed non-compliance of building height does not impact upon these elements and the development provides an appropriate outcome, with respect to the identified themes.
136. Accordingly, the elements of the Strategic Framework reviewed include: Preliminary, Strategic Intent, Settlement Pattern, Economic Development and Community Identity, Character and Social Inclusion. Overall, there are no specific provisions within the Strategic Framework that restrict the building heights to be limited to that under the Height of Buildings and Structures Overlay, with the only reference to

building height being within *Theme 6 – Community Identity, Character and Social Inclusion*, which include the following statements:

3.8.2 – Element 1 – Landscape Elements and Features

(g) Other views and vistas, including those identified in local plans or which are important in a local context are also protected, particularly from development which exceeds specified building heights.

Response:

137. The proposed development does not impact upon any views or vistas to the beach/ocean on the basis that both the existing building and vegetated dunes to the north of the site prevent views to the east for the adjacent properties to the west of the site currently. The proposed infrastructure will result in a non-worsening outcome in this regard. Therefore, the development complies with Section 3.8.2 of the Strategic Framework.
-

3.8.3 – Element 2- Sub-tropical Character and Locally Responsive Design

(d) The height of buildings and other structures recognizes the distinctive character and amenity of the Sunshine Coast as a place which a predominately low-medium rise built form which is intentionally distinct from other places in metropolitan South East Queensland.

(e) Areas of higher buildings are limited to regional activity centres and nominated areas within the Sunshine Coast Enterprise Corridor which are intended to be the focus for economic activity, tourism and infill residential development.

Response:

138. As detailed earlier, the strategic intent for Maroochydore is for it to be the most concentrated urban setting in the region, with the highest residential densities, tallest buildings and greatest yield of commercial and retail floor space. The strategic vision for the locality in which the site is located is medium to high rise built forms, as represented by the surrounding building height allowances which range from 12 metres to 37.5 metres in height.
139. In any case, the proposed development maintains a medium-rise built form of 12.4 metres that is commensurate with the intended and permitted built form for sites fronting Alexandra Parade. The proposed exceedance to the building height does not fundamentally alter the distinctive built form character of the area.
140. In accordance with the above commentary and through the review of the Strategic Framework, it is confirmed that the development does not result in any areas of non-compliance with the Strategic Framework and therefore remains consistent with the overarching policy direction of the Planning Scheme.

5.4.5 Zoning

141. The subject site (proposed lease area) is located within both the Open Space Zone and the Sport and Recreation Zone, as shown in **Figure 19** below.



Figure 19 Zone mapping (Source: SCC Site Report 2024)

142. In accordance with Table 6.2.13.2.1 (Consistent Uses and Potentially Consistent Uses in the Sport and Recreation Zone) the development of a ‘Club’ is a consistent land use and is preferred to occur in the zone. Under Table 6.2.14.2.1 (Consistent Uses and Potentially Consistent Uses in the Open Space Zone), a ‘Club’ is not identified as being a consistent or potentially consistent land use in the Open Space Zone. This is because the purpose of the Open Space Zone is to provide for Council owned/operated open space and park functions for public use. It is anticipated that, upon inclusion of the Open Space Zoned land into the lease area, the land will subsequently be included in the Sport and Recreation Zone with the remainder of the site via a Planning Scheme amendment.

5.4.5.1 Sport and Recreation Zone Code

143. **Table 10** below will list the Overall Outcomes of the Sport and Recreation Zone Code, with commentary provided in relation to how the proposed redevelopment and expansion of the MSLSC achieves the applicable outcomes.

Table 10 Sport and Recreation Zone – Overall Outcome Assessment

Overall Outcome	Comment
(a) development provides for a range of sport and recreation activities that meet the active recreation needs of residents and visitors including indoor sport and recreation, outdoor sport and recreation and park uses;	<p>Complies</p> <p>The proposed MSLSC redevelopment supports the use of Maroochydore Beach for sport and recreation activities by increasing the capacity of surf lifesavers in their role of patrolling the beach and conducting training programs and sporting events. This is achieved with the expansion and improvement of operational spaces within the club and increase of storage capacity, which will improve surf lifesaving functions and enable the club to increase its nippers training programs to better serve the recreation needs of the community.</p>

Overall Outcome	Comment
	Overall, the proposed redevelopment will assist in solidifying the site and adjacent beach foreshore as a destination for active recreation in the community.
(b) the zone predominantly accommodates formalised recreation activities that support organised team and individual sports and recreation pursuits including sporting fields, golf courses, outdoor courts, indoor sports centres, public swimming pools, equestrian facilities, and active leisure facilities;	Complies The proposed development supports the continued use of Maroochydore Beach for formalised team and individual recreation activities, in the form of nippers training and triathlon/swimming training and competitions.
(c) ancillary uses and facilities that support the predominant recreation activities including caretaker's accommodation, clubs, certain community activities, function facilities, amenities blocks, kiosks, shelters, spectator stands and lighting infrastructure may be established in the zone where they support the ongoing safe, comfortable and efficient operation of sport and recreation activities;	Complies The proposed redevelopment of the existing club supports the ongoing safe, comfortable and efficient operation of sport and recreation activities on Maroochydore Beach.
(d) sport and recreation open space may also be used for temporary or periodic uses, such as markets or outdoor entertainment events, where these uses are of a scale that can reasonably be accommodated by the existing open space facilities and do not unduly impact on the amenity and character of the surrounding area;	Complies It is not currently proposed to hold any temporary or periodic uses on the site.
(e) the co-location and multiple use of sport and recreation fields and facilities by complementary recreation activities is encouraged;	Complies Overall Outcome (e) is not applicable to the proposed infrastructure or MSLSC site.
(f) premises used for showgrounds in Eumundi, Kenilworth, Maleny and Nambour may provide accommodation in the form of a small scale camping ground or caravan park for short-term stays, which remains ancillary to the primary use of the showgrounds for sport and recreation purposes;	Not Applicable Overall Outcome (f) is not applicable to the proposed infrastructure or MSLSC site.
(g) areas used for recreation activities complement, and where practicable, are connected to other parts of the broader regional open space network including land in the Open space zone and the Environmental management and conservation zone;	Complies The site adjoins and includes part of the land in the Open Space Zone to the north, east and west. These areas are associated with Maroochydore Beach and adjoining dune systems. The proposed infrastructure is directly associated with the adjoining Open Space Zone, noting that the purpose of the MSLSC is to support the use of these spaces for outdoor sport and recreation activities.
(h) existing and planned recreation activities are protected from the intrusion of incompatible land uses that may compromise or conflict with the primary use of the sport and recreation open space for organised sport and recreation activities;	Complies The proposed infrastructure delivery aims to retain the existing use of the site, being a sports club. The proposed redevelopment and expansion of the MSLSC seeks to increase parts of the building associated with surf lifesaving functions. The area dedicated to other activities onsite (hospitality, gaming etc.) will be decreased by 31m ² . Overall, the proposed infrastructure seeks to ensure the

Overall Outcome	Comment
	<p>continued use of the adjoining Open Space Zoned land (Maroochydore Beach) for sport and recreational uses. Further, the development does not include incompatible land uses, which may compromise or conflict the use of the site/adjoining land for sports purposes.</p>
<p>(i) development provides a high level of amenity and mitigates the potential for land use conflicts with existing and planned development in the locality;</p>	<p>Complies</p> <p>The proposed development has been architecturally designed such that it delivers a visually appealing built form. Further, the use is not generally considered to be noise generating, with the majority of sports club activities occurring indoors or down on the beach on adjacent land.</p> <p>In terms of land use compatibility, the proposed infrastructure delivery aims to retain the existing use of the site, being a surf lifesaving club. Further, the site adjoins the Maroochydore Beach and associated vegetated dune system. Due to the nature of the use and this surrounding land use pattern, the proposed development does not increase or present additional land use conflicts to that of the existing MSLSC.</p>
<p>(j) the scale, intensity and built form of development is compatible with the existing and intended scale and character of the streetscape and surrounding area;</p>	<p>Complies</p> <p>The proposed redevelopment of the MSLSC is consistent with the overall height of the existing building and does not seek to increase the maximum height of buildings and structures onsite presently. The proposed built form does, however, result in a greater building bulk, with the new building being wider, with a larger third storey floor plate than the existing building. It is also acknowledged that both the existing and proposed buildings result in an exceedance to the prescribed height limit (8.5 metres), with the existing building having a height of 13.3 metres from ground level and the new development having a height of 12.4 metres from ground level. Please refer to Section 5.4.4.1 (Assessment against the Height of Buildings and Structures Overlay Code) above, which addresses the height and scale of the building, with reference to the existing/intended scale and character of the streetscape and surrounding area. Overall, it is demonstrated that the proposed built form of development is compatible with the existing and intended scale and character of the streetscape and surrounding area.</p> <p>The proposed infrastructure presents a land use and intensity of development that is anticipated</p>

Overall Outcome	Comment
	<p>for the site, which currently comprises one of the Sunshine Coast's leading surf lifesaving clubs. The expansion of the existing facility to accommodate greater vehicle storage and surf lifesaving operational areas is compatible with the community's expectations for the use of foreshore land in the area.</p>
<p>(k) sport and recreation activities and other activities established in the zone make a positive contribution to the image of the Sunshine Coast by incorporating a high quality of built form and landscape design;</p>	<p>Complies</p> <p>The proposed redevelopment of the MSLSC presents a high quality architectural form, which positively contributes to the urban fabric of Maroochydore, as well as the Sunshine Coast's image as a coastal region. This includes using wave-like curved external batten treatments to express themes of 'living by the beach'.</p> <p>As shown on the Landscape Design Plans (Appendix 3), a high quality landscaping outcome is proposed. Currently, the site comprises minimal landscaping due to the extent of built form and hardscapes existing on the site. The proposed redevelopment will improve landscaping provision overall.</p>
<p>(l) development is located, designed and operated to be responsive to the Sunshine Coast's sub-tropical climate and minimises the consumption of energy and water;</p>	<p>Complies</p> <p>The design includes natural cooling elements including extended eaves to support shaded outdoor spaces and ample window openings to naturally cool the building with ocean breezes. The building also comprises minimal openings to the western elevation, to avoid the impacts of the harsh western summer sun.</p> <p>It is proposed to collect and store 100% of the roof water in three (3) 10KL tanks onsite for operational use by the club (i.e. washing down watercraft equipment).</p> <p>Overall, the development will be operated in a way that is responsive to the Sunshine Coast's sub-tropical climate and minimise the consumption of energy and water.</p>
<p>(m) development protects and enhances the open space character and amenity of sport and recreation areas;</p>	<p>Complies</p> <p>The redevelopment of the existing MSLSC will not detract from the use of the adjacent Open Space Zone (Maroochydore Beach) for sport and recreation purposes or reduce the character and amenity of this area. It is instead intended to enhance the character and amenity of this area by providing a revitalised surf lifesaving club building with improved operational capabilities and community spaces for use in association with the beach activities.</p>

Overall Outcome	Comment
	<p>The development has been architecturally designed and has progressed through a thorough design process to ensure that the development enhances the open space character of the area, without having a negative impact on the sensitive area.</p>
<p>(n) development avoids as far as practicable, or where avoidance is not practicable, minimises and otherwise mitigates, adverse impacts on ecologically important areas, including creeks, gullies, waterways, wetlands, coastal areas, habitats and vegetation through location, design, operation and management;</p>	<p>Not Applicable The part of the site included in the sport and Recreation Zone does not comprise any ecologically important areas.</p>
<p>(o) development is designed and sited to sensitively respond to the physical characteristics and constraints of land, including flooding, steep land, landslide hazard and bushfire hazard, where applicable;</p>	<p>Not Applicable The part of the site included in the Sport and Recreation Zone is not identified as being subject to flood hazard, steep land landslide hazard or bushfire hazard on either the Council or SPP mapping.</p>
<p>(p) development encourages public and active transport accessibility and use and provides for pedestrian, cycle and vehicular movement networks that maximise connectivity, permeability and ease of movement within and to sport and recreation open space areas;</p>	<p>Complies The site has access to the active transport network, including public pedestrian footpaths that's surround the site on both sides of Alexandra Parade, Beach Parade (adjacent) and along the beach foreshore. A zebra crossing adjacent to the southern end of the street frontage provides access to either side of Alexandra Parade.</p> <p>The site is also located ~700 metres walking distance from the Priority Public Transport and Cycle Arterial Transport Corridor along Alexandra Parade. There are two (2) bus stops in close proximity to the subject site servicing northbound and southbound travellers. The bus stops are a ~200 metre/approx. 2 minute walk from the site.</p> <p>Further, Sixth Avenue, ~200 metres west of the site, is identified by Figure 9.4.8B(ii) of the Transport and Parking Code (2031 Strategic Network of Pedestrian and Cycle Links (On Road Cycleways)) as comprising a future regional 'on road cycleway'. Once delivered, this will provide a regional connection for cyclists to access the MSLSC.</p> <p>Overall, the development is provided with suitable movement networks that maximise connectivity, permeability and ease of movement to the sport and recreation facility and adjoining open space areas. It is not necessary to upgrade</p>

Overall Outcome	Comment
	the existing public and active transport infrastructure surrounding the site.
(q) development provides for infrastructure and services that are commensurate with the location and setting of the sport and recreation open space and the nature and scale of development that is intended to occur in the zone;	Complies The subject site and existing building are connected to reticulated water, sewer, stormwater, telecommunications and electrical infrastructure.
(r) development does not adversely impact on the continued operation, viability and maintenance of existing infrastructure or compromise the future provision of planned infrastructure; and	Not Applicable Under the Local Government Infrastructure Plan (LGIP) there is no identified trunk infrastructure planned for the site.
(s) development provides for the following:- (i) a use listed as a consistent use in column 1 of Table 6.2.13.2.1 (Consistent uses and potentially consistent uses in the Sport and recreation zone) to occur in the Sport and recreation zone; and (ii) a use listed as a potentially consistent use in column 2 of Table 6.2.13.2.1 to occur in the Sport and recreation zone only where further assessment has determined that the use is appropriate in the zone having regard to such matter as its location, nature, scale and intensity.	Complies The development of the site for a 'Club' is a consistent land use within the zone.

5.4.5.2 Open Space Zone Code

144. The proposed lease expansion area is included in the Open Space Zone under the Planning Scheme currently. As mentioned above, it is anticipated that, upon inclusion of the Open Space Zoned land into the lease area, the land will subsequently be included in the Sport and Recreation Zone with the remainder of the site via a Planning Scheme amendment. Regardless, for completeness, **Table 11** below will list the Overall Outcomes of the Open Space Zone Code, with commentary provided in relation to how the proposed redevelopment and expansion of the MSLSC achieves the applicable outcomes.

Table 11 Open Space Zone – Overall Outcome Assessment

Overall Outcome	Comment
(a) development predominantly provides for parks and other small scale and low intensity recreation activities that primarily cater for the informal active recreation needs of residents and visitors;	Complies The proposal to expand the MSLSC building into the adjacent Open Space Zoned land will not result in the loss of parks in the area, with the land in question predominately comprised of densely vegetated dunes, which do not support the active recreation needs of the community currently. The MSLSC supports the use of surrounding Open Space Zoned land, being the Maroochydore Beach, for the informal active recreation needs of residents and visitors by providing essential facilities that enable beach monitoring and surf lifesaving services to be performed in the area. The proposed redevelopment and expansion of the MSLSC increases the capabilities of surf lifesavers to protect swimmers at the beach to ensure the ongoing use of this space for informal

Overall Outcome	Comment
	recreation activities as the resident population and tourist visitation grows.
(b) limited other uses which are ancillary to and support the use and enjoyment of open space may also be established in the zone;	<p>Complies</p> <p>As discussed above, the proposed infrastructure is ancillary to and supports the use and enjoyment of the adjoining open space (Maroochydore Beach).</p>
(c) open space may be also used for temporary or periodic uses, such as markets or outdoor entertainment events, where these uses are of a scale that can be reasonably accommodated by the existing open space facilities and do not unduly impact on the amenity and character of the surrounding area and the recreational capacity of parks;	<p>Complies</p> <p>It is not currently proposed to hold any temporary or periodic uses on the site.</p>
(d) existing and planned open space is protected from the intrusion of incompatible uses that may compromise or conflict with the primary use of the open space for small scale and low intensity recreation activities;	<p>Complies</p> <p>The Open Space Zoned land which will accommodate the expanded lease area/increased building footprint for the MSLSC redevelopment is predominately comprised of densely vegetated dunes, which do not provide recreation activities currently. As such, the proposal will not conflict with the use of any open space in the region for small scale or low intensity recreation activities.</p> <p>As discussed above, the proposed infrastructure supports the ongoing use and enjoyment of the adjoining open space (Maroochydore Beach) for recreation activities.</p>
(e) where practicable, areas of open space are connected to other parts of the broader regional open space network including land in the Sport and recreation zone and the Environmental management and conservation zone;	<p>Complies</p> <p>It is anticipated that the subject Open Space Zoned land, that will form part of the expanded lease area, will be included in the Sport and Recreation Zone in future. The subject site will remain connected to land in the Open Space Zone and will support the ongoing use of land surrounding the site for recreational beach activities.</p>
(f) development provides a high level of amenity and mitigates the potential for land use conflicts with existing and planned development in the locality;	<p>Not Applicable</p> <p>The proposed development has been architecturally designed such that it delivers a visually appealing built form. Further, the use is not generally considered to be noise generating, with the majority of sports club activities occurring indoors or down on the beach on adjacent land.</p> <p>In terms of land use compatibility, the proposed infrastructure delivery aims to retain the existing use of the site, being a surf lifesaving club. Further, the site adjoins the Maroochydore Beach and associated vegetated dune system. Due to the nature of the use and this surrounding land use pattern, the proposed development does not</p>

Overall Outcome	Comment
	increase or present additional land use conflicts to that of the existing MSLSC.
(g) the scale, intensity and built form of development is compatible with the existing and intended scale and character of the streetscape and surrounding area;	<p>Complies</p> <p>The scale, intensity and built form of development is discussed in detail above (see Section 5.4.5.1, Table 10, Overall Outcome [j]). Overall, the proposal is compatible with the existing and intended scale and character of the streetscape and surrounding area.</p>
(h) activities established in the zone make a positive contribution to the image of the Sunshine Coast by incorporating a high quality of built form and landscape design;	<p>Complies</p> <p>The proposed redevelopment of the MSLSC presents a high quality architectural built form and landscape design, which positively contributes to the urban fabric of Maroochydore, as well as the Sunshine Coast's image as a coastal region. This includes using wave-like curved external batten treatments to express themes of 'living by the beach'. Soft landscapes are also increased on the site overall.</p> <p>The part of the building that will occupy the Open Space Zoned land will be constructed below ground level and will be reconstructed as a vegetated dune upon completion of construction. As shown on the Landscape Design Plans (Appendix 3), this will include the planting of native species atop the built form to reinstate the natural landscape character of the area.</p>
(i) development is located, designed and operated to be responsive to the Sunshine Coast's sub-tropical climate and minimises the consumption of energy and water;	<p>Complies</p> <p>The design includes natural cooling elements including extended eaves to support shaded outdoor spaces and ample window openings to naturally cool the building with ocean breezes. The building also comprises minimal openings to the western elevation, to avoid the impacts of the harsh western summer sun.</p> <p>It is proposed to collect and store 100% of the roof water in three (3) 10KL tanks onsite for operational use by the club (i.e. washing down watercraft equipment).</p> <p>Overall, the development will be operated to be responsive to the Sunshine Coast's sub-tropical climate and minimise the consumption of energy and water.</p>
(j) development protects and enhances the informal character and amenity of open space;	<p>Complies</p> <p>The Open Space Zoned land which will accommodate the expanded lease area/increased building footprint for the MSLSC redevelopment is predominately comprised of densely vegetated dunes.</p>

Overall Outcome	Comment
	<p>The part of the building that will occupy the Open Space Zoned land will be constructed below ground level and will be reconstructed as a vegetated dune upon completion of construction. As shown on the Landscape Design Plans (Appendix 3), this will include the planting of native species atop the built form to reinstate the character of the area used for the building expansion.</p>
<p>(k) development avoids any adverse impacts on ecologically important areas, including creeks, gullies, waterways, wetlands, coastal areas, habitats and vegetation through location, design, operation and management;</p>	<p>Complies The Open Space Zoned area north of the existing building that will accommodate the lease expansion, and therefore the increased building footprint, is mapped as containing native vegetation under Council's Biodiversity, Waterways and Wetlands Overlay map. Please refer to the Ecological Assessment Report in Appendix 6, which addresses the clearing proposed and details how the development mitigates adverse impacts on the ecologically important area.</p>
<p>(l) development is designed and sited to sensitively respond to the physical characteristics and constraints of land, including flooding, steep land, landslide hazard and bushfire hazard, where applicable;</p>	<p>Not Applicable The part of the site included in the Open Space Zone is not identified as being subject to flood hazard, steep land landslide hazard or bushfire hazard on either the Council or SPP mapping.</p>
<p>(m) development encourages public transport accessibility and use and provides for pedestrian, cycle and vehicular movement networks that maximise connectivity, permeability and ease of movement within and to open space areas;</p>	<p>Complies As discussed under Section 5.4.5.1, Table 10, Overall Outcome (p) above, the development has access to suitable movement networks that maximise connectivity, permeability and ease of movement to the sport and recreation facility and adjoining open space areas.</p>
<p>(n) development provides for infrastructure and services that are commensurate with the location and setting of the open space and the nature and scale of development that is intended to occur in the zone;</p>	<p>Complies The subject site and existing building are connected to reticulated water, sewer, stormwater, telecommunications and electrical infrastructure. New connections to these services are not required for Open Space Zoned part of the lease expansion area.</p>
<p>(o) development does not adversely impact on the continued operation, viability and maintenance of existing infrastructure or compromise the future provision of planned infrastructure;</p>	<p>Not Applicable Under the Local Government Infrastructure Plan (LGIP) there is no identified trunk infrastructure planned for the site.</p>
<p>(p) development provides for the following:- (i) a use listed as a consistent use in column 1 of Table 6.2.14.2.1 (Consistent uses and potentially consistent uses in the Open space zone) to occur in the Open space zone; and (ii) a use listed as a potentially consistent use in column 2 of Table 6.2.14.2.1 to occur in the Open space zone only where</p>	<p>Alternate Outcome Proposed The development of the site for a 'Club' is not identified as being a consistent land use within the zone. The proposal does not seek to locate a new sports/recreation club facility in an open space</p>

Overall Outcome	Comment
<p>further assessment has determined that the use is appropriate in the zone having regard to such matter as its location, nature, scale and intensity.</p>	<p>parkland, but instead seeks to expand existing essential community infrastructure into the adjoining Open Space Zone area. The proposed expansion of the existing facility into the zone is a logical outcome for the club and surrounding land and does not result in the loss of parks/recreation land or car parking spaces in the area, with the land in question predominately comprised of densely vegetated dunes, which do not support the active recreation needs of the community currently.</p> <p>It is anticipated that, upon inclusion of the Open Space Zoned land into the lease area, the land will subsequently be included in the Sport and Recreation Zone with the remainder of the site via a Planning Scheme amendment.</p>

5.4.6 Maroochydore/Kuluin Local Plan Area

145. The subject site is located within the Maroochydore/Kuluin Local Plan Area. As demonstrated in **Figure 20** below, the Local Plan designates the site as the 'Maroochy SLSC'. Further, the site is located in a greenspace area (for contextual purposes only) and adjoins the coastal pathway to the west and a greenspace link to the east. The infrastructure proposal will not impact the form or function of the coastal pathway to the west and a greenspace link to the east. Overall, these mapping elements do not have any bearing on the development proposal and do not require further consideration as part of this assessment.

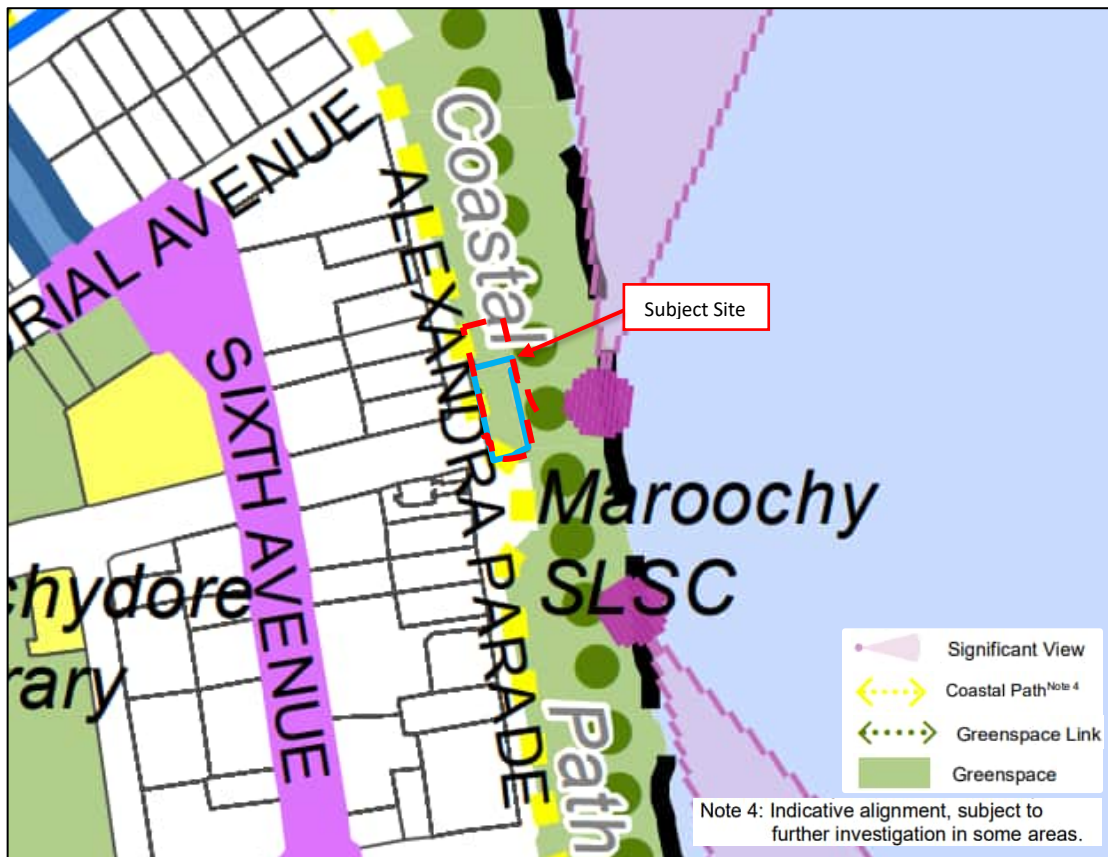


Figure 20 Maroochy/Kuluin Local Plan Elements Figure 7.2.19A (Source: SCC Planning Scheme 2014)

146. **Table 12** below will list the Overall Outcomes of the Maroochy/Kuluin Local Plan Code, with commentary provided in relation to how the proposed redevelopment and expansion of the MSLSC achieves the applicable outcomes.

Table 12 Maroochy/Kuluin Local Plan Code – Overall Outcome Assessment

Overall Outcome	Comment
(a) The Maroochy/Kuluin local plan area is a diverse coastal urban area comprising the Maroochy Principal Regional Activity Centre, a number of urban and suburban residential neighbourhoods, high intensity visitor accommodation areas, business and industry areas and major community and sport and recreation facilities.	Complies The proposed redevelopment and expansion of the MSLSC contributes to the vision of Maroochy, through enhancing the existing sport and recreational facilities provided within the local plan area extent.
(b) Urban development in the Maroochy/Kuluin local plan area is limited to land within the urban growth management boundary so as to protect environmental areas and landscape values.	Alternate Outcome Proposed The current lease area is located within the Urban Growth Management Boundary. The proposal to expand the MSLSC into the adjoining Open Space Zone to the north, east and south will result in urban development extending outside the urban growth management boundary, which borders the current lease area. It is pertinent to highlight that the proposal does not seek to locate a new sports/recreation club facility outside of the urban growth management boundary, but instead seeks to

Overall Outcome	Comment
	<p>expand existing essential community infrastructure into the adjoining land. The proposed expansion of the existing facility outside of the growth management boundary is a logical outcome to ensure the ongoing operation of the club and to increase the capacity of surf lifesavers in their vital role of monitoring the adjacent beach and protecting users of the public open space area.</p> <p>It is anticipated that, upon inclusion of the adjoining land into the lease area, the land will subsequently be included in the urban growth management boundary with the remainder of the site via a Planning Scheme amendment.</p> <p>Please refer to the Ecological Assessment Report in Appendix 6, which addresses the clearing proposed and details how the development mitigates adverse impacts on the ecologically important area.</p> <p>Furthermore, the part of the building that will sit outside the urban growth management boundary will be constructed below ground level and will be reconstructed as a vegetated dune upon completion of construction. As shown on the Landscape Design Plans (Appendix 3), this will include the planting of native species atop the built form to reinstate the character of the area used for the building expansion.</p> <p>Overall, the proposed infrastructure will protect environmental areas and landscape values in the development area.</p>
<p>(c) Cotton Tree and areas adjacent to Maroochydore Beach are cosmopolitan and vibrant places with visitor accommodation and small scale shops, cafés and restaurants at street level that enliven the public realm and enhance the role and image of this area as a tourism focus area.</p>	<p>Complies</p> <p>The proposed infrastructure includes reinstating the existing supporters club facilities, including restaurant and bar premises, to aid in the creation of vibrancy and activation along the street and ground level beachfront public promenade, enhancing the role and image of the area as a tourism focus area.</p> <p>It is noted that the supporters club activities are an essential part of the surf lifesaving club model as it is the source of funding for the non-profit community surf lifesaving services.</p>
<p>(d) Kuluin and Maroochy Waters are established, predominantly low density residential neighbourhoods that offer a quiet, relaxed lifestyle in locations close to the beach</p>	<p>Not Applicable</p> <p>The subject Site is not located within these areas.</p>

Overall Outcome	Comment
and the services offered by the Maroochydore Principal Regional Activity Centre.	
(e) The Specialised centre zone adjacent to Wisers Road, Sugar Road and Maroochydore Road provides for the large floor plate, bulky goods retail activities required to support the core retailing activities accommodated within the Maroochydore Principal Regional Activity Centre.	<p>Not Applicable</p> <p>The subject Site is not located within the Specialised Centre Zone.</p>
(f) Industrial areas at Kuluin and north of Wisers Road provide a range of low to medium impact industry uses.	<p>Not Applicable</p> <p>The subject Site is not located within an industrial area.</p>
(g) Development supports the role and function of Maroochydore as the principal regional activity centre for the Sunshine Coast sub-region.	<p>Complies</p> <p>The proposal supports the role and function of Maroochydore as the principal regional activity centre for the Sunshine Coast sub-region by investing in the building of community sport and recreation infrastructure in Maroochydore. The proposed infrastructure seeks to reinforce MSLSC as one of the Sunshine Coast’s leading surf lifesaving clubs and will support the provision of higher order services available in the area.</p> <p>It is noted that the site is located on the fringe of the Principal Regional Activity Centre in Maroochydore, with road and pedestrian/cycle connections from the site direct to the Maroochydore CBD.</p>
(h) Development in the local plan area recognises and reinforces the natural attributes within and adjoining the local plan area by creating buildings, landscapes, a network of open space and pedestrian/cycle linkages that emphasise the outdoor lifestyle and the strong affinity that residents have with ‘living on or near the coast’ and facilitates the integration of the whole of the Maroochydore Principal Regional Activity Centre.	<p>Complies</p> <p>The proposed MSLSC redevelopment recognises and reinforces the natural attributes in the area and fosters the strong affinity that residents have with ‘living on or near the coast’, by facilitating the ongoing use of Maroochydore Beach for sport and recreation activities. The proposed infrastructure does this by increasing the capacity of surf lifesavers in their role of patrolling the beach and conducting training programs and sporting events that highlight Maroochydore Beach as a key destination for tourism, while also fostering community wellbeing and supporting the outdoor lifestyle of residents.</p> <p>The architectural design of the built form includes curves in the building profile and in the layout of the deck/terrace areas, referencing the movement of water at Maroochydore Beach. The design also uses coastal colour finishes and natural timber-look materials to express the natural attributes of the seaside location.</p>

Overall Outcome	Comment
	<p>As shown on the Landscape Design Plans (Appendix 3), a high quality landscaping outcome is proposed. Currently, the site comprises minimal landscaping due to the extent of built form and hardscapes existing on the site. The proposed redevelopment will improve landscaping provision overall. This will include the planting of native species atop the underground elements of the built form (northern extent of building) to reinstate the landscape character of the area.</p> <p>The site is located on the fringe of the Principal Regional Activity Centre of the Sunshine Coast, with road and pedestrian/cycle connections to the Maroochydore CBD and wider region available directly from the site as separately detailed within this EAR (see Section 3.4.4 [Existing Infrastructure]).</p>
<p>(i) Development provides for the following key elements of the urban open space and pedestrian/cycle network:-</p> <p>(i) a public pedestrian promenade, to be available for public access at all times, along Cornmeal Creek and Maud Canal linking Sunshine Plaza to the proposed transit station and interchange (CAMCOS) and residential areas to the south-west;</p> <p>(ii) a continuous high quality walkable waterfront and greenspace link, available for public access at all times, along the Cotton Tree foreshore, Cornmeal Creek and Maud Canal; and</p> <p>(iii) a continuous high quality public pedestrian and cycle link along the Maroochy River and Maroochydore Beach foreshore, integrating and extending the Coastal Path System.</p>	<p>Complies</p> <p>The proposed development utilises the existing road, pedestrian and cycle network, as well as the public transport networks presently available in the immediate surrounding area. A review of the Local Government Infrastructure Plan confirms that there are no resumptions, road and public transport upgrades required within proximity to the site.</p> <p>The proposed infrastructure will retain and protect the use of the coastal pathway that adjoins the site to the west, as well as the public pedestrian promenade to the east and south of the site (associated with the adjoining Council car park).</p>
<p>(j) Development contributes to the establishment of landscaped boulevards along major transport routes and attractive gateways to enhance the sense of entry to the local plan area and the Maroochydore Principal Regional Activity Centre</p>	<p>Not Applicable</p> <p>The site is not located along a major transport route or near a gateway.</p>
<p>(k) Development provides appropriate landscape buffering to the Sunshine Motorway in order to visually screen built form elements and maintain the visual amenity of the Motorway.</p>	<p>Not Applicable</p> <p>The site is not located near the Sunshine Motorway.</p>
<p>(l) Development provides for community infrastructure and services that meet the needs of residents in the Maroochydore Principal Regional Activity Centre and the Sunshine Coast subregion.</p>	<p>Complies</p> <p>The proposed development enhances the capacity and capabilities of the MSLSC as an important piece of community infrastructure within proximity to the Maroochydore Principal Regional Activity Centre, servicing the needs of residents in the region.</p>
<p>(m) The Principal centre zone in Precinct MAR LPP-1 (City Core) is developed as a mixed use retail core and contains the</p>	<p>Not Applicable</p>

Overall Outcome	Comment
<p>highest order retail uses in conjunction with a range of business uses and a significant quantity of residential dwellings. In conjunction with development in the Maroochydore City Centre Priority Development Area, Precinct MAR LPP-1 (City Core) is intended to be the most concentrated urban setting in the Maroochydore Principal Regional Activity Centre and is to provide the greatest range and diversity of uses.</p>	<p>The subject site is not located in the Principal Centre Zone.</p>
<p>(n) Development in the Principal centre zone in Precinct MAR LPP-1 (City Core) provides for mixed use premises which support a vibrant day time and night time economy. Residents in the precinct, and in the Principal centre zone generally, should expect a reasonable level of ambient noise associated with the benefits of living in a centre.</p>	<p>Not Applicable The subject site is not located in the Principal Centre Zone.</p>
<p>(o) Development in the Principal centre zone in Sub-precinct MAR LPSP-1 (Ocean Street Food and Music Sub-Precinct) provides for a range of business uses and entertainment activities including food and drink outlets, function facilities, bars, hotels and nightclub entertainment facilities that may operate after hours and include live or amplified music which creates a vibrant atmosphere.</p>	<p>Not Applicable The subject site is not located in the Principal Centre Zone.</p>
<p>(p) Development in the Principal centre zone on Key Site 1 (Sunshine Plaza) provides for expansion or redevelopment of the shopping centre and adjacent sites to provide for an integrated, high quality design which addresses and activates key street frontages, enhances connectivity through the site, in particular through the provision of the public pedestrian promenade and identified road links, and presents an attractive interface to surrounding areas through outstanding building, streetscape and landscape design.</p>	<p>Not Applicable The subject site is not located in the Principal Centre Zone.</p>
<p>(q) Development in the Principal centre zone on Key Site 2 (Big Top) provides for an integrated, high quality mixed use development which contributes to the vibrancy of Ocean Street, Cornmeal Creek and Horton Parade, enhances pedestrian connectivity through and around the site and displays an outstanding level of architectural and landscape design befitting of its prominent location.</p>	<p>Not Applicable The subject site is not located in the Principal Centre Zone.</p>
<p>(r) Development in the Principal centre zone in Precinct MAR LPP-2 (Aerodrome Road) and Precinct MAR LPP-3 (Maroochy Boulevard/Dalton Drive) occurs in accordance with Table 7.2.19.4.3 (Maroochydore/Kuluin local plan supplementary table of consistent and inconsistent uses in the Principal centre zone) and in particular ensures that any retail business uses do not detract from or compete with the core retailing functions of Precinct MAR LPP-1 (City Core).</p>	<p>Not Applicable The subject site is not located in the Principal Centre Zone.</p>
<p>(s) Development in the Principal centre zone in Precinct MAR LPP-2 (Aerodrome Road):- (i) predominantly comprises medium intensity residential activities and business activities, including smaller scale showroom uses; (ii) recognises the role of Aerodrome Road as a gateway entry to the Maroochydore Principal Regional Activity Centre and</p>	<p>Not Applicable The subject site is not located in the Principal Centre Zone.</p>

Overall Outcome	Comment
<p>major tourist route and provides for it to be established as a landscaped boulevard with transit and pedestrian priority, limited lot access for vehicles and high quality building presentation;</p> <p>(iii) provides for the establishment of key transit nodes at major intersections along Aerodrome Road; and</p> <p>(iv) provides for bicycle and pedestrian infrastructure which connects major transit stations within the Maroochydore Principal Regional Activity Centre to the Cotton Tree waterfront and the eastern surf beaches.</p>	
<p>(t) Development in the Principal centre zone in Precinct MAR LPP-3 (Maroochy Boulevard/Dalton Drive):-</p> <p>(i) comprises a mix of uses including medium intensity residential activities, business activities (including smaller scale showroom uses) as well as other supporting activities and infrastructure necessary to service the Maroochydore Principal Regional Activity Centre;</p> <p>(ii) provides a built form which reinforces the gateway function of Maroochy Boulevard and contributes to a sense of arrival to the Maroochydore Principal Regional Activity Centre;</p> <p>(iii) provides for Maroochy Boulevard and Dalton Drive to be established as landscaped boulevards incorporating public transport infrastructure, wide pedestrian paths and limited lot access for vehicles; and</p> <p>(iv) reflects a high level of design detail in terms of the architectural quality of buildings, the type and size of signage, and the quality of landscape treatments both within the road reserve and within development sites.</p>	<p>Not Applicable</p> <p>The subject site is not located in the Principal Centre Zone.</p>
<p>(u) Development in the Local centre zone supports the role and function of the local business areas as local (not full service) activity centres servicing the convenience needs of residents and visitors to the local plan area.</p>	<p>Not Applicable</p> <p>The subject site is not located in the Local Centre Zone.</p>
<p>(v) With the exception of the two local business areas situated on the corner of Maroochydore Road and Main Road and Maroochydore Road and Turner Street that are not intended to increase their building footprint or gross floor area, development in the Local centre zone provides for the expansion and enhancement of business uses.</p>	<p>Not Applicable</p> <p>The subject site is not located in the Local Centre Zone.</p>
<p>(w) Development in the Local centre zone provides for small scale uses, active street frontages and other urban elements that create vibrant streets and places.</p>	<p>Not Applicable</p> <p>The subject site is not located in the Local Centre Zone.</p>
<p>(x) Development in the Specialised centre zone provides for the progressive refurbishment of sites along Wisers Road and Sugar Road with buildings, landscaping and integrated signage that improve the visual appearance and the continuity of the streetscape along these major roads</p>	<p>Not Applicable</p> <p>The subject site is not located in the Specialised Centre Zone.</p>
<p>(y) Development in the High density residential zone in Precinct MAR LPP-4 (Wharf Street) provides for predominantly high density residential uses. Limited office uses may be established in the precinct as part of mixed use</p>	<p>Not Applicable</p> <p>The subject site is not located in the High Density Residential Zone.</p>

Overall Outcome	Comment
premises, where the residential amenity of the area is maintained.	
(z) Development in the Low density residential zone in Precinct MAR LPP-5 (Maud Street/Sugar Road) provides for the establishment of business uses (being offices) in existing dwellings in a manner that maintains the amenity of existing residential uses and improves the visual appearance and continuity of the streetscape along these major roads. Whilst the conversion of existing dwelling stock is supported, new custom built offices are not developed in Precinct MAR LPP-5 (Maud Street/Sugar Road).	<p>Not Applicable</p> <p>The subject site is not located in the Low Density Residential Zone.</p>
(aa) Development improves local connectivity and access by providing identified public road links including links between Martins Drive and Fishermans Road, Pikki Street and Primary School Court, Southern Drive and Amaroo Street, Millwell Road East and Southern Drive and required road links into the Maroochydore City Centre Priority Development Area.	<p>Not Applicable</p> <p>The subject site is not located within proximity to the mentioned road links.</p>
(bb) Development in the Emerging community zone provides for the continued development of Sunshine Cove as an integrated residential community, providing a mix of dwelling types and live/work buildings in a waterside setting, supported by large areas of open space, a walkable waterfront and extensive cycle and pedestrian pathway networks connecting the development to the Maroochydore Principal Regional Activity Centre and other adjoining neighbourhoods.	<p>Not Applicable</p> <p>The subject site is not located in the Emerging Community Zone.</p>
(cc) The existing tourist park sites located at Cotton Tree and Maroochydore Beach are maintained as tourist parks to provide short term, affordable visitor accommodation to complement Maroochydore's role as a tourism focus area.	<p>Not Applicable</p> <p>The subject site is not located within proximity to the mentioned tourist parks.</p>
(dd) Development does not compromise or adversely impact upon the operation or functional efficiency of the major transport corridors within or adjoining the local plan area including the Dedicated Public Transport Corridor (CAMCOS) and CoastConnect Priority Public Transport and Bicycle Corridor.	<p>Complies</p> <p>The proposed development utilises the existing road, pedestrian and cycle network, as well as the public transport networks presently available in the immediate surrounding area. A review of the Local Government Infrastructure Plan confirms that there are no resumptions, road and public transport upgrades required within proximity to the site.</p> <p>The proposed infrastructure will retain and protect the use of the coastal pathway that adjoins the site to the west, as well as the public pedestrian promenade to the east and south of the site (associated with the adjoining Council car park).</p> <p>Overall, the development will not compromise or adversely impact upon the operation or functional efficiency of the major transport corridors within or adjoining the local plan area.</p>

147. Further to the response to the Overall Outcomes provided in **Table 12** above, **Table 13** below provides a code assessment against the relevant Assessment Benchmarks contained within Table 7.2.19.4.1 (*Performance outcomes and acceptable outcomes for assessable development in the Maroochydore/Kuluin local plan area generally*) of the Local Plan Code.
148. **Table 13** below only addresses the sections of the code relevant to the assessment of the development, noting Table 7.2.19.4.2 of the Local Plan Code relates to land in the Principal Centre Zone, which is not applicable to the subject site.

Table 13 Maroochydore/Kuluin Code – Code Assessment

Performance Outcomes	Acceptable Outcomes	Response
Development in the Maroochydore/Kuluin Local Plan Area Generally (All Zones)		
<p>PO1 Development supports the role and function of Maroochydore as the principal regional activity centre for the Sunshine Coast by accommodating uses that are complementary to, but do not compete with the intended role of, the retail core (Principal centre zone and priority development area) as the primary focus for business and community activities within the principal regional activity centre</p>	<p>AO1 No acceptable outcome provided.</p>	<p>Complies The site is located on the fringe of the Principal Regional Activity Centre, being the Maroochydore CBD. The proposed redevelopment and expansion of the MSLSC supports the role of Maroochydore as the principal regional activity centre for the Sunshine Coast, through enhancing the existing sport and recreational facilities provided within the local plan area extent. The MSLSC is a regionally significant piece of infrastructure that facilitates a range of surfing, surf lifesaving sporting events each year on Maroochydore Beach that garner state-wide, national and international attention. The proposed development will ensure the ongoing operation of the facility to support the resident and tourism growth incited by the adjacent principal regional activity centre for decades to come.</p>
<p>PO2 Development provides for buildings, structures and landscaping that are consistent with, and reflect the coastal urban character of, the Maroochydore/Kuluin local plan area.</p>	<p>AO2.1 Development for a residential, business or community activity provides for building design which incorporates the following features:- (a) a mix of lightweight and textured external building materials, including timber finishes or masonry construction with variation provided in texture and detailing; (b) articulated, pitched, skillion or curved roof forms; (c) open or transparent balustrades; and (d) landscaping integrated into the building design.</p>	<p>Complies Please refer to the Architectural Plans in Appendix 2. The proposed community infrastructure comprises a high quality architectural design that includes lightweight and textured external building materials including timber-look battens across all building facades and textures masonry external walls. The design incorporates curves in the building profile and in the layout of deck/terrace areas, referencing the movement of water at Maroochydore Beach. The design also uses coastal colour finishes and natural timber-</p>

Performance Outcomes	Acceptable Outcomes	Response
		<p>look materials to express the natural attributes of the seaside location.</p> <p>All levels of the development are provided with covered outdoor /semi-enclosed spaces with ample window glazing, transparent glass balustrades and bi-fold doors to reduce the bulk of the building and provide a sense of openness.</p> <p>As shown on the Landscape Design Plans (Appendix 3), high quality landscaping outcomes are proposed onsite. Currently, the site comprises minimal landscaping due to the extent of built form and hardscapes existing on the site. The proposed redevelopment will improve landscaping provision overall.</p>
	<p>AO2.2 Development uses understated colour schemes and low-reflective roofing and cladding materials.</p>	<p>Complies As shown on the Architectural Plans in Appendix 2, building materials and paint finishes will comprise understated colour schemes and be low-reflective.</p>
<p>PO3 Development provides for the retention and enhancement of key landscape elements including significant views and vistas and existing character vegetation contributing to the setting, character and sense of place of the Maroochydore/Kuluin local plan area.</p>	<p>AO3.1 Development protects and emphasises, and does not intrude upon, important views to the Maroochy River, beaches and other areas where identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements).</p>	<p>Complies The proposed development is 12.4 metres in height and will therefore not exceed the height limit of the existing building (13.3m).</p> <p>Both the existing building and vegetated dunes to the north of the site prevent ocean/beach views to the east for adjacent properties currently. The proposed infrastructure will result in a non-worsening outcome in this regard.</p>
	<p>AO2.2 Development provides for the retention and enhancement of existing mature trees and character vegetation contributing to the setting and character of the local plan area including:- (a) vegetation adjacent to the Maroochy River foreshore and Maroochydore beach foredunes; (b) significant vegetation on the northern side of the Sunshine</p>	<p>Performance Outcome The proposal to expand the building footprint, and thereby extend the lease area, into the adjoining land to the north of the existing building will result in the clearing of mature trees and the construction of a new built form in the Maroochydore beach foreshore dune.</p> <p>This part of the proposed built form will be constructed below ground level</p>

Performance Outcomes	Acceptable Outcomes	Response
	<p>Motorway at the gateway intersection of Maroochy Boulevard; and</p> <p>(c) other character vegetation identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements).</p>	<p>and will be reconstructed as a vegetated dune upon completion of construction. As shown on the Landscape Design Plans (Appendix 3), this will include the planting of native species atop the built form to reinstate the natural setting and landscape character of the area that contribute to the sense of the place.</p>
<p>PO4</p> <p>Development:-</p> <p>(a) provides for the establishment of landscaped boulevards along Maroochy Road, Maroochy Boulevard, Evans Street, Dalton Drive, Bradman Avenue, Duporth Avenue (part), Sixth Avenue, the Esplanade, Aerodrome Road and Alexandra Parade; and</p> <p>(b) contributes to the establishment of attractive and coherent streetscapes and gateways that enhance the sense of arrival to, and coastal urban character of, Maroochydore/Kuluin.</p>	<p>AO4.1</p> <p>Development adjacent to a primary streetscape treatment area, boulevard treatment area or gateway/entry point where identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements):-</p> <p>(a) incorporates a high standard of urban design and architectural and landscape treatments which enhance the sense of arrival to, and the urban beachside character of, the local plan area and emphasise corner locations; and</p> <p>(b) incorporates design elements such as varied roof forms, changes in materials and variations in projected and recessed elements and facades.</p>	<p>Not Applicable</p> <p>The subject site is not adjacent to a primary streetscape treatment area, boulevard treatment area or gateway/entry point.</p>
	<p>AO4.2</p> <p>Development on a site having a landscape setback as specified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements):-</p> <p>(a) provides for a 3 metre wide deep planted (in natural ground) continuous landscaping strip for at least 70% of the length of the site frontage boundary; and</p> <p>(b) has a built form which typically includes courtyard edges and interfaces.</p>	<p>Not Applicable</p> <p>The subject site does not have a landscape setback.</p>
	<p>AO4.3</p> <p>Development provides for streetscape improvements which complement existing or proposed streetscape works in the local area to ensure continuity of streetscapes and landscape design.</p>	<p>Complies</p> <p>As shown on the Architectural Plans (Appendix 2) and Landscape Design Plans (Appendix 3) the proposed development will provide streetscape improvements including, frontage landscapes along Alexandra Parade and around the adjoining pedestrian public promenade, a new public deck</p>

Performance Outcomes	Acceptable Outcomes	Response
		with planters and seating, as well as upgraded public footpaths.
<p>PO5 Development with frontage to Aerodrome Road or Alexandra Parade minimises direct vehicle access and gives priority to pedestrians and the CoastConnect Priority Public Transport and Bicycle Corridor.</p>	<p>AO5 Development on a site with frontage to Aerodrome Road or Alexandra Parade:- (a) provides for no additional vehicle access from these streets; and (b) rationalises existing vehicle access points wherever practicable.</p>	<p>Performance Outcome It is proposed to provide a two (2) new driveways from the one-way laneway in Alexandra Parade direct to the building (via roller doors). This is an appropriate outcome on the basis that there is no vehicle access afforded to the site presently.</p> <p>The current site operations use two (2) line marked loading bays in the one (1) way section of the Alexandra Parade road reserve, adjacent to the existing building. The loading bays are approximately 2.4 metres wide. Trucks currently park partially within the loading bays and partially over the road reserve in order to access the loading dock onsite for loading/unloading functions. This outcome results in a considerable imposition on the movement of traffic along Alexandra Parade, effectively halting vehicle traffic and pedestrian movement while loading/unloading functions are performed in the street.</p> <p>The proposal seeks to rectify this matter, providing access to a new service vehicle bay within the building. Vehicle access to the site is limited to a left-in / left out arrangement by the one-way direction of the laneway. Overall, the proposed new access ensures the safe and efficient operation of Alexandra Parade.</p> <p>Further, the provision of a driveway to the site gives priority to pedestrians, by moving servicing activities away from the street and into the building.</p> <p>Please note that the site does not adjoin the CoastConnect Priority Public Transport and Bicycle Corridor, which occupies the southern end of</p>

Performance Outcomes	Acceptable Outcomes	Response
		Alexandra Parade, approximately 600 metres from the site.
PO6 Development provides a wide, vegetated buffer to the Sunshine Motorway to visually screen and soften built form elements.	AO6 Development provides a 10 metre wide mounded landscaped buffer along the Sunshine Motorway road frontage of a site where identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements).	Not Applicable The site does not adjoin the Sunshine Motorway.
PO7 Development protects and enhances the major open space links offered by the foreshore park and reserve system, Cornmeal Creek, Maud Canal and associated drainage systems.	AO7 Development provides for the retention and enhancement of the greenspace links identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements).	Complies The subject site adjoins a greenspace link that extends along the Maroochydore Beach foreshore, to the east of the lot/lease area. The proposed redevelopment and expansion of the MSLSC will not impact the greenspace link in any way, with all new works occurring to the west of the greenspace link alignment.
PO8 Development on land adjacent to the Maroochy River foreshore, between Cornmeal Creek and Picnic Point Esplanade, provides for a continuous public pedestrian and cycle link along the Maroochy River foreshore as an extension to the coastal walk.	AO8 No acceptable outcome provided.	Not Applicable The site is not adjacent to the Maroochy River foreshore.
PO9 Development ensures the Dalton Lakes Drainage Reserve continues to function as a water management area and buffer to the Sunshine Motorway and Maroochy Boulevard.	AO9 No acceptable outcome provided.	Not Applicable The site is not within proximity to the Dalton Lakes Drainage Reserve.
PO10 Development on land with frontage to Eudlo Creek facilitates the provision of a local ecological linkage as identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements).	AO10 No acceptable outcome provided.	Not Applicable The site is not within proximity to Eudlo Creek.
PO11 Development provides public road links where identified on Figure 7.2.19A (Maroochydore/Kuluin local plan elements) to improve local connectivity, access and servicing arrangements.	AO11 No acceptable outcome provided.	Not Applicable The site is not identified as needing to provide a public road link.
PO12 Development does not compromise the provision and operation of transport networks including:-	AO12 No acceptable outcome provided.	Not Applicable The site does not adjoin the CAMCOS, Sunshine Motorway, CoastConnect Priority Public Transport and Bicycle Corridor, Maroochydore Road,

Performance Outcomes	Acceptable Outcomes	Response
(a) the Dedicated Public Transport Corridor (CAMCOS), linking the North Coast Rail Line at Beerwah to Caloundra, Kawana Waters and Maroochydore; (b) the Sunshine Motorway and any future connection to the Sunshine Motorway in the south eastern part of the local plan area; (c) the CoastConnect Priority Public Transport and Bicycle Corridor along Aerodrome Road and Alexandra Parade; and (d) Maroochydore Road, Maroochy Boulevard, Maud Street/Sugar Road and Bradman Avenue		Maroochy Boulevard, Maud Street/Sugar Road or Bradman Avenue.
Development in the Local Centre Zone Generally - Not applicable to site.		
Development in the Local Centre Zone (King Street, Cotton Tree) - Not applicable to site.		
Development in the Local Centre Zone (Local Business Area along Maroochydore Road) - Not applicable to site.		
Development in the Tourist Accommodation Zone (Cotton Tree Esplanade) - Not applicable to site.		
Development in the High Density Residential Zone in Precinct MAR LPP-4 (Wharf Street) - Not applicable to site.		
Development in the Low Density Residential Zone in Precinct MAR LPP-5 (Maud Street/Sugar Road) - Not applicable to site.		
Development in the Emerging Community Zone (Sunshine Cove) - Not applicable to site.		
Development in the Community Facilities Zone (Tourist Parks) - Not applicable to site.		

5.4.7 Sport and Recreation Uses Code

149. Under the Planning Scheme, the applicable use code for the proposed infrastructure is the Sport and Recreation Uses Code. This section of the EAR provides an assessment against the Overall Outcomes, as well as Table 9.3.19.3.1 (Performance Outcomes and Acceptable Outcomes for Assessable Development). The Overall Outcomes are addressed below:

(2) The purpose of the Sport and recreation uses code will be achieved through the following overall outcomes:-

(a) sport and recreation uses are established in appropriate locations that provide convenient access for users;

Response:

150. The proposed redevelopment and expansion of the MSLSC maintains the position of the existing facility, which offers convenient access via the road network, cycle and pedestrian routes, as well as public transport. Notably, the site is located on the fringe of the principal regional activity centre of the Sunshine Coast region.

(b) sport and recreation uses are located and designed so as to be compatible with the preferred character of the local area;

Response:

151. The subject site is identified in Figure 7.2.19A (Maroochydore/Kuluin Local Plan Elements) as the 'Maroochy SLSC' and forms part of the Greenspace network. It is proposed to redevelop the existing surf club in the same location, in line with the community's expectations and the preferred character of the local area. The proposed redevelopment results in a high quality urban design outcome for the site which will reflect the built form character of surrounding sites. Overall, the development is commensurate with the expected built form and urban design outcomes for a new surf club in an urban environment.
-

(c) sport and recreation uses involving the establishment of major facilities provide high quality buildings, structures and facility design;

Response:

152. The proposed redevelopment of the MSLSC presents a high quality architectural form, which positively contributes to the urban fabric of Maroochydore, as well as the Sunshine Coast's image as a coastal region. The proposed design incorporates the key functional elements required to enable the highest quality surf lifesaving service to be provided by the club for the Maroochydore Beach users.
-

(d) sport and recreation uses do not have an adverse impact upon the amenity of existing or proposed future residential areas or neighbouring premises; and

Response:

153. The proposed redevelopment and expansion of the MSLSC maintains the position of the existing facility, which does not directly adjoin any sensitive land uses in all directions. It is noted that there are existing residential uses on the western side of Alexandra Parade, adjacent to the site.
154. The supporters club facilities, including restaurant, gaming and bar areas, have the potential to create noise impacts. It is proposed to reduce the floor area associated with the supporters club facilities as part of the redevelopment of the MSLSC. As such, this impact/nuisance will be reduced. Further, the proposed redevelopment of the MSLSC does not seek to provide any additional lighting external to the building.
155. Overall, the use of the premises will maintain and protect the amenity of surrounding areas and land uses, as detailed within the Noise Impact Assessment in **Appendix 8**. Refer to **Section 6.2.2** (Acoustic, Lighting and Odour Impacts of this EAR for an assessment of the noise and light impacts associated with the development proposal.
-

(e) sport and recreation uses provide access, car parking, public transport and other services and utilities commensurate with the scale and nature of the use.

Response:

156. A Traffic Impact Assessment (**Appendix 7**) has been provided in support of the application. The Traffic Impact Assessment indicates that there is sufficient public parking surrounding the site to accommodate the anticipated demand generated by the redevelopment of the MSLSC. Further, the report indicates that the existing road and active transport networks are generally adequate to support

the use. **Section 6.3.1** (Transport Network) of the EAR provides further detail in relation to the transport network and parking impacts associated with the development proposal.

157. Further, **Table 14** below provides a code assessment against the relevant Assessment Benchmarks contained within 37 Empire Cres, Chevallum (*Performance outcomes and acceptable outcomes for assessable development*) of the Sport and Recreation Uses Code.

Table 14 Sport and Recreation Uses Code – Code Assessment

Performance Outcomes	Acceptable Outcomes	Response
Location and Facility Design		
<p>PO1</p> <p>The sport and recreation use is located and designed so as to be:-</p> <p>(a) convenient to users; and</p> <p>(b) compatible with the preferred character of the local area.</p>	<p>AO1</p> <p>No acceptable outcome provided.</p>	<p>Complies</p> <p>The proposed redevelopment and expansion of the MSLSC maintains the position of the existing facility, which offers convenient access via the road network, cycle and pedestrian routes, as well as public transport. Notably, the site is located on the fringe of the principal regional activity centre of the Sunshine Coast region, a highly accessible and well-connected urban area.</p> <p>It is proposed to redevelop the existing MSLSC facility with a built form that is consistent with the scale and character of buildings in the local area.</p>
<p>PO2</p> <p>The sport and recreation use:-</p> <p>(a) is effectively designed to meet the needs of users, having regard to the scale and nature of the use;</p> <p>(b) has buildings and structures that are fit for purpose; and</p> <p>(c) in the case of a major sport, recreation and entertainment facility, has buildings and structures that incorporate passive design responses that acknowledge and reflect the region’s sub-tropical climate.</p>	<p>AO2</p> <p>No acceptable outcome provided.</p>	<p>Complies</p> <p>The proposed development has been effectively designed to meet the needs of Surf Lifesaving Queensland by increasing the operational capacity/capabilities of the club to perform beach monitoring and lifesaving functions at Maroochydore Beach. This is achieved with the expansion and improvement of operational spaces within the club and by expanding the storage capacity for watercraft and other lifesaving/training equipment onsite.</p>
<p>PO3</p> <p>The sport and recreation use ensures that mechanical plant and equipment and storage areas associated with the use are designed and screened so as to provide an attractive address to streets and adjoining properties.</p>	<p>AO3</p> <p>No acceptable outcome provided.</p>	<p>Complies</p> <p>Please refer to the Architectural Plans in Appendix 2, which demonstrate that all storage areas and mechanical plant will be contained within the building and therefore these building elements are not visible from street or adjoining premises. It is noted that, currently, watercraft and equipment storage is located outdoors onsite, or</p>

Performance Outcomes	Acceptable Outcomes	Response
		on other properties in the area, visible from street view. It is intended to contain all storage needs within the new basement onsite.
Road System and Public Transport		
<p>PO4</p> <p>The surrounding road system is capable of accommodating the additional traffic generated by the sport and recreation use without adverse impacts.</p>	<p>AO4</p> <p>No acceptable outcome provided.</p>	<p>Complies</p> <p>The subject site is accessed via a part of Alexandra Parade that is a local access street. Alexandra Parade, however, turns into an Arterial Road south of the site.</p> <p>The proposal seeks to replace the existing MSLSC building, with the increased floor area relating solely to new operational, storage and members spaces associated with the surf lifesaving functions undertaken onsite. It is not proposed to increase floor areas associated with the supporters club (bar, restaurant, gaming etc). As such, it is not anticipated that the expansion of the existing facility will result in significantly increased traffic generation for the surrounding road network. Refer to the Traffic Impact Assessment in Appendix 7 which discusses this further and addresses the Transport and Parking Code under the Planning Scheme.</p> <p>Overall, the surrounding road network has sufficient capacity to facilitate the expansion to the MSLSC, given the nature of the expansion.</p>
<p>PO5</p> <p>The sport and recreation use provides for public transport facilities and services, where required, to accommodate the needs of users, having regard to the scale and nature of the use.</p>	<p>AO5</p> <p>No acceptable outcome provided.</p>	<p>Complies</p> <p>The site has sufficient access to public transport infrastructure in the local area, being ~200 metres away from two (2) bus stops on Sixth Avenue. The site is also approximately 700 metres walking distance from the Public Transport Priority Corridor on Alexandra Parade. It is therefore not necessary to provide public transport facilities on the site.</p> <p>Refer to the Traffic Impact Assessment in Appendix 7, which discusses this matter further and addresses the</p>

Performance Outcomes	Acceptable Outcomes	Response
		outcomes sought by the Transport and Parking Code under the Planning Scheme.
Additional Requirements for Outdoor Sport and Recreation and Major Sport, Recreation and Entertainment Facility.		
PO6 Any structure associated with the use does not result in a significant loss of amenity for surrounding development, having regard to:- (a) the extent and duration of lighting and overshadowing; (b) privacy and overlooking impacts; (c) impacts on views and vistas; and (d) the scale of the structure relative to its surroundings.	AO6 No acceptable outcome provided.	Not Applicable The proposal does not relate to a Major Sport, Recreation and Entertainment Facility.

5.4.8 Nuisance Code

158. The Nuisance Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*.
159. **Section 6.2.2** (Acoustic, Lighting and Odour Impacts) of this EAR provides commentary in relation to the impacts associated with the development.
160. In terms of general compliance with the code, the development complies with the Overall Outcomes of the code, as detailed below:

(2) The purpose of the Nuisance Code will be achieved through the following overall outcomes:-

(a) development is located, designed, constructed and operated to maintain appropriate levels of amenity and environmental performance by:-

(i) not imposing unacceptable noise, light, glare, dust or odour emissions on surrounding sensitive land uses; and

(ii) ensuring that proposed sensitive land uses are not subject to unacceptable nuisance emissions generated from surrounding development, having regard to the location and context of the proposed development;

Response:

161. The subject site interfaces residential properties to the west.
162. The proposed development does not seek to provide any additional lighting external to the building, beyond what is already present onsite. The majority of light spill from the property will originate from the internal building areas. The built form comprises minimal window openings facing the west, with the majority of these windows being obscured by batten screening devices.
163. As detailed in **Section 6.2.2** (Acoustic, Lighting and Odour Impacts) of this EAR, it is proposed that the hours of operation for the supporters club (noise generating component) will to be limited to 10am to midnight to mitigate noise impacts to surrounding residential uses. These hours are in line with the hours currently observed by the existing MSLSC. As reiterated throughout this report, it is not proposed

to increase the floor areas associated with the supporters club activities (restaurant, bar, gaming etc) onsite. As such, the activities operating at nighttime/the activities that are noise generating, have not been increased in scale or intensity. It is therefore anticipated that the proposed development will result in a non-worsening outcome for nuisance (light, noise etc) for surrounding residents. Please refer to the Noise Impact Assessment in **Appendix 8** for an assessment of noise impacts associated with the development.

164. The surf lifesaving activities commence onsite from 5.30am in order to begin beach patrols at sunrise. These activities cease at sundown.
165. It is not proposed to establish a new sensitive land use onsite.

(b) development, including development or redevelopment of residential activities and entertainment venues, within and in close proximity to a designated special entertainment precinct, provides appropriate noise attenuation and mitigation to reduce potential impacts from live music and amplified music; and

Response:

166. The proposed development does not include residential activities or an entertainment venue and is not within proximity to a designated special entertainment precinct. Whilst the supporters club activities may involve live entertainment as part of its restaurant and bar activities, it is not proposed to expand the use areas associated with the supporters club. Please refer to the Noise Impact Assessment in **Appendix 8** for an assessment of noise impacts associated with the development.

(c) environmental values are protected by preventing or minimising potential environmental harm or environmental nuisance resulting from the release of contaminants, particularly noise, odour, light, glare, dust and particulates.

Response:

167. The proposed development does not seek to provide any additional lighting external to the building, beyond what is already present onsite. Specifically, it is not proposed to install any flood lights onsite and no external lighting will be directed towards the adjoining vegetated dunes to the north of the site.
168. Please refer to the Ecological Assessment in **Appendix 6**, which establishes that it is unlikely that Turtles will utilise the subject site/immediately adjacent areas as habitat. As such, it is not anticipated that the ambient light of the development will impact these species.
169. As confirmed by the Noise Impact Assessment in **Appendix 8**, the proposed development will not result in environmental harm or nuisance, with regards to acoustic impacts, outside of what is permitted under the *Environmental Protection Act 1994*.
170. The MSLSC is not a use which produces/emits odours, dust or other particulates, beyond what is reasonably anticipated within an urban area (i.e. odours caused by commercial cooking).

171. The proposed development complies with the Assessment Benchmarks contained within Table 9.4.3.3.1 (Performance Outcome and Acceptable Outcomes for Assessable Development) of the Nuisance Code, as follows:

- The supporters club facilities, which are proposed to be reduced in size/scale (by 31m²) as a result of the redevelopment of the MSLSC, may accommodate live entertainment or amplified music from time to time, in line with the existing operations onsite. The proposed expansion of the existing building seeks to increase surf lifesaving operational areas provided onsite, which do not involve live entertainment or amplified music. In any case, the premises is able to comply with the acoustic criteria nominated by the code. The Noise Impact Assessment in **Appendix 8** provides further detail in this regard – **AO1.1-AO1.2**;
- The proposal does not result in the establishment of a sensitive land use onsite – **AO2, PO10**;
- The site is not located in a prescribed mixed use area and does not result in the establishment of a sensitive land use onsite – **AO3**;
- The site is not located in a special entertainment precinct – **AO4-AO8**;
- The development does not involve activities that create odorous air emissions – **AO9.1-AO9.2**;
- The proposed development will be designed (at detailed design stage) to comply with the code requirements relating to the position and angles of external lighting, light spillage from internal building areas and brightness of lighting used. Overall, it is not intended to provide any additional lighting external to the building, beyond what is already present onsite. The majority of light spill from the property will originate from the internal building areas. The built form comprises minimal window openings facing the west, with the majority of these windows being obscured by batten screening devices – **AO11.1**;
- The vehicle access/servicing areas onsite are to be located within the building – **AO11.2**; and,
- The building has been designed using low reflective materials – **AO11.3**.

5.4.9 Safety and Security Code

172. The Safety and Security Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*.

173. In terms of general compliance with the code, the development complies with the Overall Outcomes of the code, as detailed below:

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

(a) development is user friendly;

Response:

174. The proposed development has been designed to be user friendly and accommodate legibility and ease of wayfinding with the general public in mind. The development is generally consistent with the form and layout of many of the newer surf club developments in Queensland. Further, the development will provide equitable access in accordance with the requirements of the national construction code.

(b) development incorporates design elements that reduce vulnerability of people and property to crime;

(c) development increases people's awareness of their environment;

Response:

The development design has considered CPTED principles with regards to the built form layout, external lighting and landscaping provision.

(d) development is located and designed to ensure that users are not exposed to unacceptable levels of contaminants.

Response:

The subject site is not listed on the contaminated land or environmental management registers (refer to **Appendix 14**). Further, the site is not located within proximity to an industrial or manufacturing area.

175. The proposed development complies with the Assessment Benchmarks contained within Table 9.4.5.3.1 (Performance Outcome and Acceptable Outcomes for Assessable Development) of the Safety and Security Code, as follows:

- The building is constructed to the boundaries of the site. Further, the member's deck/terrace and public deck, east of the building, will be provided with landscape treatments and a fence/gate to ensure that there is a clear delineation between public and private space – **AO1**;
- The premises will be provided with street numbering and identifying signage to ensure the premises is easily identifiable – **AO2**;
- The development provides for casual surveillance to be achieved by locating active uses (bar, restaurant) over the upper level with ample window openings and a balcony area with transparent balustrading to enable external areas to be monitored. The ground level will be activated by the member's terrace/deck areas – **PO3**;
- The open space areas onsite (east of the building overlooking the beach) and those associated with the public realm adjoining the site are situated where they are in the line of sight of windows, doors and balconies of the proposed development, where they are unable to be seen from a street – **AO4**;
- The development contains security fencing greater than 1.5 metres in height along the reconstructed dune (northern extent of building). Despite this, the development achieves compliance with Performance Outcome PO5, through the fencing being highly permeable for the majority of its length. Further, the space behind the fence is not intended to be accessible to the public, so casual surveillance would not be achieved from this location in any case. Overall, the building and adjacent residences provide casual surveillance to the public walkways, as well as internally within the site, and therefore the potential for security risk is mitigated as far as practical – **PO5**;
- As detailed within the Landscape Design Plans (**Appendix 3**) the development does not include dense landscaping buffers and zones. As such the pedestrian pathways remain open and do not contain obvious concealment areas – **AO6**;
- The development is able to comply with the requirements of the relevant codes/standards (including AS/NZS 1158 and AS/NZS 4282), including broader CPTED recommendations. Specifically, the development will contain appropriate lighting within potential concealment areas – **AO7.1-AO7.4**;

- The development contains windows and openings, which project towards public spaces along the beachfront and Alexandra Parade – **AO8.1**;
- The development does not result in the delivery of a blank façade fronting a road reserve or public space. The service area facing Alexandra Parade will be provided with roller door openings and signage to deter vandalism – **AO8.2**;
- The development will include appropriate security controls (i.e. toughened glass at ground level) that deter unlawful entry to the facility – **AO8.3**;
- Vandal proof materials and anti-graffiti paint will be used to ensure the protection of the building from vandalism – **AO8.4**;
- The development does not contain publicly accessible concealment areas. All pedestrian control points will be well lit and will contain sufficient directional signage to direct users to the building – **AO8.5**;
- All pedestrian control points will be well lit and contain signage to ensure a high level of legibility, as well as ensuring safe entry and exit of the facility is maintained. The main building entrance provides clear sightlines from the building foyer to the street. Staff will use this entry. – **AO9.1-AO9.2**;
- The development does not result in the delivery of ‘barriers’ adjacent to frontages, with the development being built to the boundary of the site – **AO10.1**;
- It is not proposed to upgrade the surrounding cycle network. Any works to upgrade/repair the adjoining pedestrian movement areas will involve the use of appropriate non-slip materials. The pedestrian movement network will be unchanged in terms of grading and distances – **AO10.2**;
- All pedestrian, cycle and vehicle movement areas are located and integrated in a way which ensures maximum surveillance to these areas is provided whilst maintaining separation for safety. The proposed development will not alter this outcome – **AO10.3**;
- The development will include provide wayfinding signage within pedestrian zones. A detailed signage plan has not been prepared in support of the application material – **AO10.4**;
- The development has been designed to ensure that pedestrians can enter, navigate and leave the site as efficiently as possible. The main pedestrian entry to the site facing Alexandra Parade is positioned within close proximity to public transport facilities – **AO11**;
- The development will not provide any public parking facilities – **AO12.1-AO12.5**;
- The proposed development seeks to enclose the loading dock and service areas within the building (currently this space is publicly accessible). The internal service area will be well lit and will be locked after hours – **AO13**;
- Although not public, the development includes toilet facilities that are well lit and contain appropriate way finding devices – **AO14.1**;
- Bicycle parking facilities are not proposed – **AO14.2**;
- ATMs will not be provided on the outer edge of the building – **AO14.3**;
- The proposal is not fundamentally for an entertainment use, being a sporting club with associated food and drink outlet activities – **AO15**; and,
- The subject site is not listed on the contaminated land or environmental management registers (refer to **Appendix 14**). The site has historically been used for a surf lifesaving club facility and was undeveloped foreshore land prior to this – **AO16**.

5.4.10 Sustainable Design Code

176. The Sustainable Design Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*. The Sustainable Design Code seeks for new development to

achieve the following Overall Outcome, which is reiterated by Performance Outcomes PO1-PO5 of the code:

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

(a) development is located, designed, constructed and operated in accordance with best practice subtropical and sustainable design principles in order to:-

(i) take advantage of local climatic and environmental conditions;

(ii) optimise energy efficiency;

(iii) minimise reliance on non-renewable energy sources; and

(iv) facilitate and promote alternative energy supply through the use of renewable energy sources.

177. In terms of compliance, the development complies with Overall Outcome (a) of the code above, as well as PO1-PO5 of the code, as detailed below:

Response:

178. The proposed development provides a desirable north-east orientation and contains minimal openings to the west to protect the building from the harsh western summer sun. The ample openings to the north and east seek to capture the cooling ocean breezes to take advantage of local climatic and environmental conditions and optimise energy efficiency for cooling. These windows and doors are operable and will comprise tinted glazing to enable building occupants to control the temperature/exposure to breezes and sun where required. Extended roof eaves/awnings over outdoor spaces and the windows/walls of the building further aids the shading, cooling and rain protection of the built form and pedestrian movement areas on and near the site.

179. The development proposes to provide a comprehensive approach to sustainability across the construction and design stages of the development to minimise its environmental impacts, elements proposed include modern plant and water saving technologies, which reduces the overall environmental impact and reduces the overall energy demand (refer to **Section 4.9** [Stormwater Management] above).

180. Whilst the details of renewable energy technologies are not detailed as part of this proposal, it is intended to investigate opportunities to use solar energy as part of the detailed design of the development in due course.

5.4.11 Waste Management Code

181. The Waste Management Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*. The Waste Management Code seeks for new development to achieve the following Overall Outcomes, which are reiterated by Performance Outcomes PO1-PO5 of the code:

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

(a) development provides opportunities to minimise waste generation and increase re-use and recycling;

(b) development provides for waste management facilities which are conducive to the storage of waste in an environmentally acceptable, nuisance free and aesthetically pleasing manner;

(c) waste storage facilities are functionally appropriate for users of the facilities; and

(d) waste collection services are undertaken in a safe, efficient and unobstructed manner.

182. In terms of compliance, the development complies with Overall Outcomes (a)-(d) of the code above, as well as AO1, AO2, PO3, AO4.1 and PO5 of the code, as detailed below:

Response:

183. The development proposes on-site waste storage, collection and servicing, with refuse minimisation strategies, which ensures compliance with the Assessment Benchmarks contained within Table 9.4.10.3.1 (Performance Outcomes and Acceptable Outcome for Assessable Development) of the Waste Management Code.
184. The bins will be stored within the building at ground level and will therefore be screened from street view when stored. It is proposed to maintain the existing bulk bin (general and recycling) capacity used by MSLSC on the basis that the increased floor area largely relates to new storage space, which is not a waste generating activity. The supporters club facilities will be slightly reduced in area and will therefore not result in increased waste generation onsite. Overall, sufficient bin storage capacity is available within the service areas of the building to meet the demand generated by the use.
185. The bins will be serviced onsite in the new service vehicle bay within the building, as detailed within the Traffic Impact Assessment in **Appendix 7**.

5.4.12 Transport and Parking Code

186. The Transport and Parking Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*.
187. The Traffic Impact Assessment (**Appendix 7**) demonstrates compliance with the relevant Assessment Benchmarks contained within Table 9.4.8.3.1 (Requirements for Accepted Development and Performance Outcomes and Acceptable Outcomes for Assessable Development) and Table 9.4.8.3.2 (Performance Outcome and Acceptable Outcomes for Assessable Development) of the Transport and Parking Code.
188. In terms of general compliance with the code, the development complies with the Overall Outcomes of the code, as detailed below:

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

(a) development is consistent with the objectives of the strategic transport network, which are to:-

(i) provide for a highly permeable and integrated movement network;

(ii) improve coordination between land use and transport so as to maximise the potential for walking, cycling and public transport use and reduce reliance on private motor vehicle travel;

(iii) achieve acceptable levels of access, convenience, efficiency and legibility for all transport users, with the needs of pedestrians considered in the first instance, then cyclists, public transport and then motorists;

(iv) preserve the amenity of sensitive land uses;

(v) limit road construction to the minimum necessary to meet the endorsed levels of service for ultimate development of the Sunshine Coast; and

(vi) provide for staging of Council's limited trunk road construction program to maximise sustainability.

Response:

189. As detailed within the **Section 3.4.4** (Existing Infrastructure) of this report and within the Traffic Impact Assessment (**Appendix 7**), the development is located within 200 metres of the nearest bus stops and is approximately 700 metres walking distance to the Public Transport Priority Corridor on Alexandra Parade. Further, existing public pedestrian footpaths surround the site on both sides of Alexandra Parade, Beach Parade (adjacent) and along the beach foreshore. A zebra crossing adjacent to the

southern end of the street frontage provides access to either side of Alexandra Parade. It is noted that no upgrades are required to the existing networks to facilitate the operation of the MSLSC redevelopment.

(b) the environmental, economic and social impacts of transport on the natural and urban environment are minimised;

Response:

190. As detailed within the Traffic Impact Assessment (**Appendix 7**), the development does not require the modification to the exiting transport networks and therefore there will be no further environmental, economic and social impacts as a result of the development.
-

(c) transport infrastructure is designed and constructed to acceptable standards and operates in a safe and efficient manner that meets community expectations, prevents unacceptable off-site impacts and reduces whole of life cycle costs, including reduced ongoing maintenance costs;

Response:

191. As detailed within the Traffic Impact Assessment (**Appendix 7**), the development does not require the modification to the exiting transport networks.
-

(d) development provides for on-site parking, access, circulation and servicing areas that are safe, convenient and meet the reasonable requirements of the development;

Response:

192. It is not proposed to provide new onsite car parking. As detailed within the Traffic Impact Assessment (**Appendix 7**), the development provides for a new vehicle access point and servicing areas that are safe, convenient and meet the reasonable requirements of the development.
-

(e) development provides for parking areas that are shared between many uses rather than separate parking areas attached to each building where peak parking times of the uses occur at different times and where the parking area is sufficient to meet the anticipated demands of all uses;

Response:

As detailed within the Traffic Impact Assessment (**Appendix 7**), the development does not provide a new car parking area onsite on the basis that the adjoining public car park has historically been shared with the MSLSC. This is on the basis that beachgoers and MSLSC patrons/members are often the interchangeable.

(f) development provides appropriate buffering between sensitive receptors and the major road network and rail corridors; and

(g) development provides for major intersections and access points to be designed and constructed to reflect the natural values, character and identity of the Sunshine Coast.

Response:

193. As detailed within the Traffic Impact Assessment (**Appendix 7**), the development does not require the modification to the exiting transport networks.

5.4.13 Landscape Code

194. The Landscape Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*.

195. The Landscape Design Plans in **Appendix 3** demonstrate compliance with the relevant Assessment Benchmarks contained within Table 9.4.2.3.1 (Performance Outcomes and Acceptable Outcomes for Assessable Development) of the Landscape Code.

196. In terms of general compliance with the code, the development complies with the Overall Outcomes of the code, as detailed below:

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

(a) development provides landscapes that retain, as far as practicable, existing vegetation and topographic features for their biodiversity, ecological, wildlife habitat, recreational, aesthetic and cultural values;

Response:

197. Please refer to the Ecological Assessment in **Appendix 6**, which addresses the clearing works required to facilitate the northern building expansion. No conservation significant (threatened) flora or fauna species were observed during the Ecologist's site surveys. The report concludes that the area proposed to be cleared comprises pioneer species and weeds and it is not expected that the clearing will impact on species of conservation significance or other matters of environmental significance in the locality. Further, to maintain the recreational and aesthetic values of the area, it is proposed to reconstruct and revegetate the dune overtop the building expansion, as demonstrated in the Landscape Design Plans (**Appendix 3**).

198. The remainder of the site is entirely developed as the existing MSLSC and does not contain any notable environmental features that are required to be retained.

(b) development provides landscapes that create new landscape environments that coordinate and complement the natural elements of climate, vegetation, drainage, aspect, landform and soils;

Response:

199. As demonstrated in the Landscape Design Plans (**Appendix 3**) the development seeks to coordinate the landscape elements with the built form. All proposed landscape species are low maintenance and are native species, and therefore are suitable for the climate and the environment which they are proposed within.

(c) development provides landscapes that complement the vegetation mix of the original regional ecosystem of the site, where practicable, in order to protect and enhance native flora and fauna and encourage ecological connectivity;

Response:

200. The proposed landscape species are native to the area, and therefore are suitable for the climate and the environment. The reconstructed dune will be revegetated to maintain the existing ecological connectivity with the surrounding area (refer to the Landscape Design Plans in **Appendix 3**).

(d) development provides landscapes that rehabilitate areas of poor environmental quality and provide mechanisms for long term protection of works;

Response:

201. As discussed in the Ecological Assessment in **Appendix 6**, the dune area proposed to be cleared to accommodate the building expansion comprises a total of 16 weed species including Restricted Invasive Plant nominated under the *Biosecurity Act 2014* and other highly invasive species that have the potential to suppress natural regeneration. As shown in the Landscape Design Plans in **Appendix 3**, it is proposed to revegetate/rehabilitate this area with native species that are preferred to occur in the locality, improving the environmental quality of this area.

(e) development provides landscapes that successfully integrate the built form with the local urban landscape character, contribute to the local streetscape, enhance the sub-tropical qualities of the Sunshine Coast and mitigate the impact of increased urbanisation;

Response:

202. Currently, the MSLS built form and pedestrian pathways occupy almost the entirety of the subject site. The proposed development results in an improvement to landscape provision onsite by providing new landscape nodes in the form of garden beds adjacent to the entry terrace and a planter on the outdoor deck at ground level. It is also proposed to revegetate the western edge of the dune between the basement and Alexandra Parade and landscape over the reconstructed dune above the northern basement and ground level extension. Overall, the proposed development contributes to the local streetscape, enhances the sub-tropical qualities of the Sunshine Coast and mitigates the impact of increased urbanisation on the site.

(f) development provides landscapes that minimise the consumption of energy and water, and encourage the use of local native plant species and landscape materials, where practicable;

Response:

203. The Landscape Design Plans (**Appendix 3**) detail an indicative species pallet and demonstrate the use of native species, which will ensure energy and water consumption is minimised. Further, roof water will be detained in rainwater tanks for reuse onsite.

(g) development provides landscapes that enhance personal safety and security;

Response:

204. The landscaping outcome does not inhibit sightlines into or through the development.
-

(h) development provides landscapes that are functional, durable and provide for the efficient use of water and energy; and

(i) development provides landscapes that are practical and low maintenance, with ongoing management considered as an integral part of the overall landscape design.

Response:

205. The Landscape Design Plans (**Appendix 3**) detail an indicative species pallet and demonstrate the use of native species, which will ensure energy and water consumption is minimised and species which are practical and low maintenance.

5.4.14 Works, Services and Infrastructure Code

206. The Works, Services and Infrastructure Code is applicable to the assessment of all infrastructure and Engineering works assessed under the *Sunshine Coast Planning Scheme 2014*.
207. The proposed development will be required to obtain an Operational Works Development Permit for all Civil Engineering work associated with the redevelopment of the MSLSC.
208. Overall, the proposal is able to comply with the Assessment Benchmarks contained within Table 9.4.11.3.1 (Performance Outcome and Acceptable Outcomes for Assessable Development) for the Works, Services and Infrastructure Code and an assessment of this code will be undertaken by a Civil Engineer when an application for Operational Works is submitted to Council.

5.4.15 Stormwater Management Code

209. The Stormwater Management Code is applicable to the assessment of all development assessed under the *Sunshine Coast Planning Scheme 2014*.
210. The Stormwater Management Plan (**Appendix 4**) addresses the relevant Assessment Benchmarks contained within Table 9.4.6.3.1 (Performance Outcome and Acceptable Outcomes for Assessable Development) for the Stormwater Management Code.
211. In terms of general compliance with the code, the development complies with the Overall Outcomes of the code, as detailed below:

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

(a) development is located, designed, constructed and operated to protect and enhance the environmental values and flow regimes of both constructed and natural waterways, wetlands, lakes, ground waters and drainage systems;

(b) development is provided with effective stormwater drainage systems to protect people, property and the environment from the effects of stormwater runoff;

(c) development avoids the provision of new constructed waterbodies, except where a demonstrated overriding need exists;

(d) development provides for suitable treatment, harvesting and re-use systems for urban stormwater runoff; and

(e) stormwater management systems are designed and constructed to enhance biodiversity, landscape and recreational values, and to achieve acceptable maintenance, renewal and adaptation costs.

Response:

212. As detailed in the Stormwater Management Plan (**Appendix 4**), the development will enhance the environmental regimes through the provision of water quality devices, which integrate with Council's stormwater network. Further, the development provides for suitable treatment, harvesting and re-use systems for urban stormwater runoff.

6. Environmental Assessment

6.1 Outline

213. In accordance with the MGR, this section of the report provides an assessment of the Environmental Impacts associated with the proposed infrastructure. In accordance with Schedule 3 of the MGR, the following is required to be addressed:

- Any adverse impacts on surrounding properties and how these impacts are proposed to be managed.
- Any off-site impacts such as traffic, noise, infrastructure capacity and how these impacts are proposed to be managed.
- Any construction impacts and how these impacts are proposed to be managed.

214. The section of the report will also address any Environmental Impacts and relevant Heritage and Native Title matters.

215. Assessment contained within this section is supported by specialist documentation referred to herein and contained within the Appendices of this EAR.

6.2 Impact on Surrounding Properties

216. The below section will detail the potential impacts upon surrounding properties, particularly:

- Visual Impacts;
- Acoustic Impacts;
- Lighting Impacts; and,
- Odour Impacts.

6.2.1 Visual Impacts

217. As demonstrated by the 3D perspectives within the Architectural Plans in **Appendix 2**, the development represents a high-quality architectural design. Ample articulation is achieved through the provision of projected batten screening (with cutouts) to the external walls, ample window glazing, recessed walls, recessed balconies and decks with transparent balustrades, a recessed entry terrace, covered walkways, projected awnings over the ground level terrace, projecting blade walls etc. Further, the design provides curves in the building profile and in the layout of deck/terrace areas, referencing the movement of water at Maroochydore Beach, to create greater visual interest and soften the overall appearance of the development.

218. The proposal includes large windows, bifold doors, deck and balcony areas that are favourably orientated to the east, which will present with a high level of openness and provide a 'lightweight' appearance to the built form. Variation in materials, architectural treatments and integration of landscaping are also evident on the Architectural Plans (**Appendix 2**).

219. As discussed under **Section 5.4.4.1** (Assessment against the Height of Buildings and Structures Overlay Code) of this report, the proposed development results in an increased floorplate over the second level of the built form, effectively increasing the bulk of the building when compared to the existing building. Further, the proposed redevelopment of the MSLS results in an increase to the overall scale of building. The proposed development does not exceed the overall height of the existing building onsite (height is reduced by 1 metre). Further, the proposed built form is similar in height and bulk to the existing buildings surrounding the site to the west, which consist primarily of three (3) and four (4)

storey unit developments along Alexandra Parade that are constructed to a height of 12 metres for their full width, as well as a number of high rises (30m+) along Sixth Avenue. Overall, the built form is in character with the established development in the area and is consistent with the urban fabric of Maroochydore as the CBD of the Sunshine Coast. Further, the scale of the proposed development is consistent with the reasonable expectations of the local community and surrounding residents for development fronting Alexandra Parade, given the size of the existing structure.

220. Given that the proposed building height is less than that of the adjacent buildings to the west and less than the existing building, ocean views (easterly) from these properties will not be worsened by the proposed development. It is understood that the existing building prevents views from these properties in any case.
221. The proposed development will be positioned on the boundary of the lease area adjoining Alexandra Parade. The building will not be located any closer to existing residences/businesses than the existing building. No other setbacks are relevant given the subject site adjoins foreshore areas to the north, a public car park to the south and Maroochydore Beach to the east.
222. The proposed expansion of the premises into the adjoining dune system to the north of the existing building will be constructed below ground level. It is proposed to reconstruct the dune to structural Engineering standards and re-sand/revegetate this area to blend in with the natural dune system/conceal the basement and ground levels of the built form from external view (refer to **Figure 21** below). Planting in this area will consist of native species to reinstate the natural landscape character of the area and streetscape.



Figure 21 Rendered Image Demonstrating Reconstructed Dune (Source: BRD Group 2024)

223. The development site is limited in its ability to accommodate deep planted landscapes given the extent of built form and hardstand, which occupies almost the entirety of the proposed lease area. This outcome is reflective of the existing circumstances onsite. Landscape nodes are provided in the form of garden beds adjacent to the entry terrace and a planter on the outdoor deck at ground level. It is also proposed to revegetate the western edge of the dune between the basement and Alexandra Parade and landscape over the reconstructed dune above the northern basement and ground level extension.
224. The proposed built form will provide a positive contribution to the character of Alexandra Parade and the Maroochydore Beach foreshore and won't result in any visual amenity impacts on surrounding properties or the local area more broadly.

6.2.2 Acoustic, Lighting and Odour Impacts

225. The DHLGPPW Pre-Lodgement Written Advice (**Appendix 1**) identifies that the proposed redevelopment of the club may result in noise impacts to nearby residential properties and should therefore be supported by a Noise Impact Assessment to assess acoustic impacts from uses on the site and recommend mitigation measures. Please refer to the Noise Impact Assessment in **Appendix 8**. The noise assessment demonstrates that the proposed development can comply with the adopted noise criteria at the nearest surrounding residential land uses, noting that the proposed development is similar in nature to the currently operating MSLSC given that the supporters club use areas are not proposed to be increased.
226. The proposed development does not seek to provide any additional lighting external to the building, beyond what is already present onsite. The majority of light spill from the property will originate from the internal building areas. The built form comprises minimal window openings facing the west (towards adjacent residential properties), with the majority of these windows being obscured by batten screening devices.
227. It is proposed that the hours of operation will be limited to the existing arrangement (10am to midnight, Monday to Sunday (for the supporters club to ensure non-worsening of noise impacts to surrounding residential uses. As reiterated throughout this report, it is not proposed to increase the floor areas associated with the supporters club activities (restaurant, bar, gaming etc) onsite. As such, the activities that are noise generating, have not been increased in scale or intensity. It is therefore anticipated that the proposed development will result in a non-worsening outcome for nuisance (light, noise etc) for surrounding residents. The surf lifesaving activities commence onsite from 5.30am in order to begin beach patrols at sunrise and cease at sundown.
228. The proposed land use is not considered an odour causing activity or otherwise an activity that would emit other harmful airborne particles or emissions. Bins will be stored and serviced within the building to avoid adverse amenity / nuisance impacts for surrounding sites.

6.3 Off Site Impacts

229. The below section will detail the potential impacts upon the surrounding infrastructure network, particularly:
- Transport Network – Road Infrastructure, Traffic and Access;
 - Services Network – Stormwater, water and sewer infrastructure; and
 - Services Network – Telecommunications and Electricity Infrastructure.

6.3.1 Transport Network

230. Based on the assessment contained within the Traffic Impact Assessment (**Appendix 7**), it is determined that the proposed redevelopment of the MSLSC will not result in any external traffic impacts. Further, the site is suitably serviced by the existing active and public transport networks that surround the site, as discussed in **Section 3.4.4** (Existing Infrastructure) of this report and it is not required to upgrade these facilities.
231. Vehicular access to the subject site (for service vehicles and club vehicles only) is proposed via two (2) new driveway crossovers on Alexandra Parade. These access points of access are limited to a left-in / left-out arrangement by the one-way direction of the laneway. Currently there is no vehicle access afforded to the site. The proposal results in an improved outcome for servicing, which currently occurs

on the street and impacts the flow of traffic along Alexandra Parade. A service vehicle bay is provided within the building to contain servicing functions wholly within the site.

232. The enclosed Traffic Impact Assessment (**Appendix 7**) finds that the development will provide non-worsening of traffic vehicle movements, when considering that the increased floor area associated with the redevelopment of the MSLSC relates to members areas only, the majority of which is for additional equipment and vehicle storage.
233. No on-site car parking is proposed to be provided. The Traffic Impact Assessment (**Appendix 7**) provides an assessment of the likely car parking demand generated by the proposed redevelopment of the MSLSC, factoring in the proposal to include short-stay athlete accommodation on the second level and the overall reduction of floor area associated with the supporters club (31m² reduction). The report concludes that the redevelopment is not expected to result in car parking impacts significantly greater than those expected in and around popular beach locations, which commonly do not provide onsite car parking and rely on adjoining public car parks. Further, the report highlights that the MSLSC operates a courtesy bus service that covers the local area, greatly reducing the demand for onsite car parking.
234. The Traffic Impact Assessment (**Appendix 7**) assesses the Sixth Avenue / Memorial Avenue intersection and the Sixth Avenue / Beach Parade intersection and concludes that both will operate acceptably for the foreseeable future and the traffic volumes associated with the proposed development will have minimal impacts on intersection operations. Accordingly, no upgrades are warranted to offset redevelopment traffic impacts.

6.3.2 Services Network – Stormwater, Water and Sewer Infrastructure

235. A Stormwater Management Plan is enclosed as **Appendix 4**. The report provides details in relation to the proposed stormwater management strategy for the development. As the lawful point of discharge for major design storm flows directly to the beach, it is not considered necessary to include onsite detention (exempt from peak flow management requirements). A portion of the existing site discharges stormwater to the kerb and channel of Alexandra Parade through piped connections to kerb adaptors. The flows to this discharge point are non-worsening. As per the *State Planning Policy (2017)* assessment benchmarks, water quality treatment is not required for development for Urban Purposes that involves premises of less than 2,500m² (proposed lot/lease area is 2,284m²).
236. It is intended to collect and store 100% of the roof water in three (3) 10KL tanks onsite for operational use by the club (i.e. washing down watercraft equipment). The tanks will overflow to a soakwell within the vegetated sand dunes.
237. The proposed development will re-establish the existing site connections to Unitywater's reticulated water and sewer infrastructure. As site is located in an urban area there is ample capacity in the water and sewage networks to accommodate the demand of the proposed redevelopment despite the increased scale.

6.3.3 Services Network – Telecommunications and Electricity Infrastructure

238. The proposed development will re-connect to the existing NBN telecommunications infrastructure available to the site via the fibre optic network.
239. Overhead electrical infrastructure is located along the property frontage on the opposing side of Alexandra Parade. It is intended to provide an underground electric connection via electrical conduits. The proposed development will be required to obtain an Operational Works Development Permit for

all Civil Engineering (including electrical) work associated with the redevelopment of the MSLSC. Design plans for this work will be prepared when an application for Operational Works is submitted to Council.

6.4 Construction Impacts

240. All construction activities will be undertaken in accordance with the management procedures of a Construction Management Plan developed by the chosen contractor.

6.5 Environmental Impacts

241. The below section of the EAR will detail the potential impacts in relation to:

- Ecology;
- Acid Sulfate Soils; and,
- Coastal Hazard/Erosion.

6.5.1 Ecology

242. The Ecological Assessment Report (**Appendix 6**), provides an assessment of the proposal in relation to Matters of National Environmental Significance (MNES), Matters of state environmental significance (MSES) under the SPP as well as Matters of Local Environmental Significance (MLES) in accordance with the *Sunshine Coast Planning Scheme 2014* Biodiversity, Waterways and Wetlands Overlay Code.

243. As indicated within the Ecological Assessment Report, the area north of the existing building that will accommodate the lease expansion, and therefore the increased building footprint, comprises mapped native vegetation under Council's overlays and MSES mapped vegetation and habitat. The Ecological Assessment Report finds the following in relation to MNES, MSES and MLES:

- Fauna detected during surveys are primarily common and disturbance-tolerant species.
- A number of weed species, including a Restricted Invasive Plant nominated under the *Biosecurity Act 2014* and other highly invasive species that have the potential to suppress natural regeneration were found in the area proposed to be cleared.
- No conservation significant fauna, flora or vegetation communities were mapped within the site.
- Specifically, it is unlikely that Turtles will utilise the subject site/immediately adjacent areas as habitat. As such, it is not anticipated that the ambient light of the development will impact these species.
- The vegetation impact area generally meets the benchmarks of Regional Ecosystem 12.2.14 but is substantially disturbed with reduced canopy cover and high levels of infestation.
- The proposed development provides an opportunity to restore and rehabilitate the dunal vegetation outside of the impact area to improve the local biodiversity and fauna habitat values and mitigate coastal erosion processes. These works will provide a net gain in native vegetation areas as a result of the project ensuring a good conservation outcome.

244. In summary, the proposed development will not result in any significant residual impacts on MNES, MSES or MLES.

6.5.2 Acid Sulfate Soils

245. The subject site is identified as being subject to Council's Acid Sulfate Soils Overlay, with the site being identified as containing the potential for Acid Sulfate Soils on land at or below 5m AHD and Land above 5m / below 20m AHD.
246. Generally speaking, the management of Acid Sulfate Soils does not pose a development constraint that cannot be appropriately managed through conventional methods. As such, it is considered suitable for it to be a condition of the MID Decision Notice for the development to be undertaken in accordance with an Acid Sulfate Soils Management Plan. This will ensure no environmental impacts as a result of Acid Sulfate Soils.

6.5.3 Coastal Erosion

247. The subject site is identified as being within an Erosion Prone Area and in the Coastal Management District on the Queensland Government's Development Assessment Mapping System. Council's overlay mapping also includes the site in a Coastal Protection Area. A Coastal Hazard Assessment is enclosed as **Appendix 5** and includes full assessments of Council's *Coastal Processes Overlay Code* and *State Code 8: Coastal Development and Tidal Works*, demonstrating compliance with the codes. In terms of environmental impacts, the Coastal Hazard Assessment finds that the development will not increase the severity of coastal erosion either on or off site, provided that the dune system surrounding the built form is reinstated and revegetated to pre-development conditions upon the completion of the proposed basement works.
248. On this basis, the assessment determines that the proposed development can be established without:
- Negatively impacting upon coastal processes after the dunes and vegetation have been satisfactorily re-established);
 - Impacting upon the protective function of landforms and vegetation;
 - Significantly impacting the risk or impacts to people or property;
 - Increasing the severity of coastal erosion either on or off site;
 - Impacting negatively upon coastal processes; or
 - Impacting negatively upon Matters of State Ecological Significance.

6.6 Heritage and Native Title

6.6.1 Historical Heritage

249. A review of the National, Queensland and Local Heritage Register confirms that the subject site is not identified on any heritage registers.

6.6.2 Native Title

250. A review of the National Native Title Register determines that no Native Title exists in the area of the proposed development.

6.6.3 Cultural Heritage

251. The *Aboriginal Cultural Heritage Act 2003* (ACHA) requires anyone who carries out a land-use activity to exercise a duty of care to ensure the activity does not harm Aboriginal cultural heritage. Compliance with the gazetted Cultural Heritage Duty of Care Guidelines is considered to have met cultural heritage duty of care. The proposed development will be undertaken in accordance with the guidelines to the extent relevant.

252. Preliminary consultation has been undertaken with the relevant Native Title party (Kabi Kabi) as part of the MID process undertaken to date. Further consultation will be carried out with the Kabi Kabi organisation in accordance with the MGR.
253. A search of the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP) Cultural Heritage Database was conducted on 17 May 2024 for the subject site and surrounds (100m radius) (Reference Number: 143509) (refer to **Appendix 13**). The DSDSATSIP search identified no registered Aboriginal cultural heritage sites on the subject site or within a buffer of 100 metres from the site.

7. Consultation Strategy

254. The MGR requires an infrastructure entity to consult with all affected stakeholders about the proposed designation of infrastructure. The following sections of this report outline the affected stakeholders, the outcome of preliminary engagement activities and the proposed consultation strategy.

7.1 Stakeholders

255. The relevant stakeholders that may have an interest in the proposed Infrastructure Designation are as follows:

- Government Departments
 - Sunshine Coast Council
 - Department of Housing, Local Government, Planning and Public Works
- Elected Representatives
 - Local Councillor: Cr Joe Natoli – Sunshine Coast Council (Division 4)
 - State Member for Maroochydore: Ms Fiona Simpson MP
 - Federal Member for Fairfax: Mr Ted O'Brien MP
- Other Stakeholders
 - Adjoining landowners
 - Surrounding landowners
 - Local operators/businesses
- Native Title Party
 - Kabi Kabi First Nation Traditional Owners Native Title Claim Group

7.2 Preliminary Stakeholder Engagement

256. In accordance with DHLGPPW's Written Advice dated 31 October 2023 (**Appendix 1**), the following Preliminary Stakeholder Engagement activities were required to be undertaken prior to requesting the Endorsement to lodge a MID proposal:

- Consultation with the local Council;
- Consultation with Native Title parties / Traditional Owners;
- Emails sent to local, state and federal elected members;
- Letters posted and emails sent to identified adjoining landowners and affected residents; and,
- Letters posted and emails sent to surrounding business operators.

257. As outlined in **Section 2.2.2** (Preliminary Stakeholder Engagement) of this EAR, Sunshine Coast Council issued preliminary comments (refer **Appendix 10**) during the Preliminary Stakeholder Engagement period. A response to Council's comments has been provided below in **Section 7.2.1** of this report.

258. Additionally, correspondence was received from the office of Mr Ted O'Brien, Federal MP for Fairfax, in support of the proposal (refer **Appendix 11**). Finally, two (2) responses were received from concerned members of the community. These are also provided in **Appendix 11** for viewing.

7.2.1 **Response to Sunshine Coast Council Preliminary Comments**

259. **Table 15** below includes Council's preliminary comments received on 12 March 2024 (**Appendix 10**) as well as a response to each matter raised:

Table 15 Response to Council Preliminary Stakeholder Engagement Comments

Council Comment	Response
<p>Land use</p> <p>The proposed building will expand beyond the Sport and Recreation Zone into the Open Space Zone. A 'club' is an inconsistent use in this zone. Consider the land use conflict, in combination with the height, bulk and scale issues.</p> <p>The proposal would seem to conflict with the with the Strategic Framework, Environmental Management and conservation zone code, Open space zone code, Biodiversity, waterways and wetlands overlay code, Coastal protection overlay code and Height of buildings and structures overlay code.</p> <p><i>NOTE: Council's comments also make reference to the land north of the existing lease where the proposed building/lease expansion will occur being in the Environmental Management and Conservation Zone under the Planning Scheme. This is <u>incorrect</u> information. The land subject to the lease expansion is in the Open Space Zone.</i></p>	<p>A detailed assessment of the Open Space Zone Code under the Planning Scheme is provided in Section 5.4.5.2 of this EAR, demonstrating that the proposal to expand the building into this zone does not conflict with the strategic intent of the Planning Scheme.</p> <p>In brief, the proposal to expand the MSLSC building into the adjacent Open Space Zoned land will not result in the loss of recreational use parks in the region, with the land in question predominately comprised of densely vegetated dunes, which do not support the active recreation needs of the community currently.</p> <p>The proposed development directly supports the use of remaining Open Space Zoned land adjoining the site, being the Maroochydore Beach, for genuine active recreation undertaken by the public by providing essential facilities that enable beach monitoring and surf lifesaving services to be performed in the Open Space Zoned area.</p> <p>An assessment against the Biodiversity, Waterways and Wetlands Overlay Code, Coastal Protection Overlay Code and Height of Buildings and Structures Overlay Code are provided in Section 5.4.4 (Overlays) of this EAR.</p>
<p>Alternative sites</p> <p>Consider alternative options for the expansion, including the existing car park to the south of the site which is already disturbed and contains no coastal dunes or vegetation. Expansion to the west away from the coastal erosion prone area should also be investigated.</p>	<p>Conversations were held with Council's property department at the project's inception regarding the potential to expand the premises into the adjoining public car park. Council's property department were not willing to support this outcome as it would result in the loss of public car parking, which is heavily relied on by beachgoers and surrounding businesses.</p> <p>The premises are unable to be expanded to the west due to location of Alexandra Parade. The built form is proposed to be constructed to the front boundary of the lease area.</p>
<p>Coastal hazards and climate resilience</p>	<p>Please refer to the Coastal Hazard Assessment in Appendix 5 which addresses all matters raised by</p>

Council Comment	Response
<ul style="list-style-type: none"> • Consider and respond to coastal hazards and climate resilience matters. Address erosion. • Consider the intensification of built form in the coastal dune and the ability to achieve integration with coastal management structures and coastal adaptation plans requires careful consideration. • Concern that the proposed extension of the lease area and construction of a basement under a replaced dune could prejudice Council’s coastal protection/adaptation works for the area. • Proposed basement works subject to ground water intrusion and pump outs may be required. Consideration of the increased loads during storm events are required. • Intensification of existing uses would alter the character of the beachfront and would require construction of coastal protection measures i.e. seawall • As per SPP, development is not to occur in an erosion prone area within a coast management district unless development cannot feasibly locate elsewhere and is: coastal dependent development or temporary, readily relocatable or able to be abandoned development or essential community infrastructure or minor redevelopment. The proposal does not achieve the assessment benchmark and therefore is not supported by the SPP. <p><i>NOTE: Council officers had not sighted any technical analysis of coastal impacts prepared by a suitably qualified professional at the time of writing.</i></p>	<p>Council. Further commentary is provided in Section 6.5.3 (Coastal Erosion) of this EAR above.</p> <p>Further, a Stormwater Management Plan is provided in Appendix 4 to address the peak stormwater flows during major storm events.</p>
<p>Biodiversity</p> <ul style="list-style-type: none"> • Expansion of the surf club should avoid any encroachment into the vegetated areas on the dunes. • The adjacent beach and dune systems provide nesting habitat for sea turtles, primarily Loggerhead and Green Turtles, both of which are listed as threatened at the State and Commonwealth level. The adjacent beach and dune system is therefore an ecologically important area. • Provide an assessment of the impact on the dune system and the associated MLES and MSES – native vegetation and habitat mapped by Council and the State. 	<p>Please refer to the Ecological Assessment Report in Appendix 6, which addresses all matters raised by Council relating to ecology and wildlife habitat. Further commentary is provided in Section 6.5.1 (Ecology) of this EAR above.</p> <p>Notably, the Ecological Assessment Report in Appendix 6 states that it is unlikely that Turtles will utilise the subject site/immediately adjacent areas as habitat for reasons outlined in the report. As such, it is not anticipated that the ambient light of the development will impact these species. In any case, the development will ensure compliance with the Sea Turtle Sensitive Area Code (DSDMIP, May 2019), which includes lighting recommendations.</p>

Council Comment	Response
<ul style="list-style-type: none"> The proposal does present an opportunity to improve on the light pollution impacts on turtle nesting habitat and hatchlings associated with the existing facility. It is recommended that the development adopts turtle sensitive lighting and design measures. 	
<p>Building height, bulk and scale</p> <p>The proposed development is larger than the existing facility. Specifically:</p> <ul style="list-style-type: none"> The proposed building exceeds the maximum allowable height for the site (8.5 metres) under the Planning Scheme. The feature aluminium screen is over 15 metres measured from the Alexandra Parade frontage. The proposed roof form is flat. The feature aluminium screen is 2-dimensional and does not constitute an interesting roof form. Provide articulated, pitched, skillion or curved roof forms. While the current building also exceeds this height, the un-articulated design and length of continuous height (as opposed to the articulated roof form and height of the current building) results in a bulkier, larger, and in many places higher, building. Increased overshadowing on the beach and residences to the west created by an enlarged building also requires analysis by a suitably qualified professional. 	<p>Please refer to the Architectural Plans in Appendix 2. In response to Council's comments, and feedback from the surrounding residents, the feature aluminium screen on the front building facade that was sitting at an overall height of 15 metres measured from the Alexandra Parade frontage has been reduced, such that it does not extend beyond the roofline. The overall height of the development is now 12.4 metres at the greatest point of difference from natural ground level, which is lower than the existing building (13.3m).</p> <p>Please refer to Section 5.4.4.1 (Assessment against the Height of Buildings and Structures Overlay Code) of this EAR, which provides a comprehensive assessment of the height, bulk and scale of the proposed built form, and justifies the proposal against the relevant Planning Scheme provisions accordingly.</p> <p>Overall, the development represents a high-quality architectural design with ample articulation of the building facades and roof form being achieved through the provision of projected batten screening that creates curves in the building profile.</p>
<p>Urban design</p> <ul style="list-style-type: none"> The proposed design lacks openness and transparency, particularly the West façade. The ground level does not address/activate Alexandra Pde and the public realm appropriately. The built form has an underdeveloped screen façade design. Incorporate a mix of lightweight and textured external building materials. The solid built form is predominantly square and lacks articulation. A qualified Art Consultant should be engaged to see this proposal through and to achieve an appropriate and meaningful artistic response. The building should respond to climatic impacts with meaningful environmentally sustainable design elements such as appropriate orientation, 	<p>Comments from BRD Group (Architect):</p> <p><i>From Alexandra Parade the proposed building is in keeping with the minimal level of openness of the existing Surf Club and instead designed to maximise the open areas to the East and take advantage of the sweeping ocean views for both the Lifesaving Club and also the Supporters. The East North-East / South-East corners of the building also provide an extensive portion of openable glazing to take full advantage of the beach aspect.</i></p> <p><i>The proposed Western façade provides an extensively aluminium battened screened elevation fronting Alexandra Pde that also incorporates stone cladding finishes and a central 3 storey glass feature zone. The extensive screening to the upper levels wraps the perimeter of the building and is the dominant elevational feature.</i></p>

Council Comment	Response
<p>shade devices, and natural ventilation opportunities.</p>	<p><i>Due to the harsh coastal beachfront environment the building has been designed predominantly with materials such as concrete, stone, aluminium and glass to increase longevity and reduce required maintenance. These low maintenance long-lasting materials are an integral part of the reasoning behind the proposal and high priority of the Surf Club.</i></p> <p>Adams + Sparkes further comments: The built form provides activation along the southern building extent facing Alexandra Parade with the provision of a transparent an inviting building entrance, ample window glazing, as well as improved pedestrian walkway.</p> <p>This part of the building faces the public car parking/seating areas, key pedestrian movement areas in the public realm and the adjacent hospitality businesses. It is therefore practical to prioritise this section of the building elevation over the northern extent. The northern extent of the building provides a necessary service area for the premises and interfaces a one-way laneway. There is no other opportunity onsite to accommodate the required service spaces. Further, given the proximity of residential units to the northern part of the building, there is potential to cause nuisance if this part of the building were to be activated.</p> <p>The development represents a high-quality architectural design with ample articulation of the building facades and roof form being achieved through the provision of projected batten screening that creates soft curves in the building profile (mitigating the perceived square block that lacks articulation).</p> <p>The design includes natural cooling elements including extended eaves to support shaded outdoor spaces and ample window openings to naturally cool the building with ocean breezes. The building also comprises minimal openings to the western elevation, to avoid the impacts of the harsh western summer sun. The building openings are orientated to the north and east primarily.</p>
<p>Landscaping (onsite)</p> <ul style="list-style-type: none"> A Landscape Concept plan will be needed and detailed landscapes for any future operational works application. 	<p>Please refer to the Landscape Design Plans in Appendix 3. The proposed redevelopment of the MSLSC seeks to improve the landscaping provision onsite with the provision of landscape nodes at ground level to soften the built form. It is also proposed to revegetate the western edge of the dune</p>

Council Comment	Response
<ul style="list-style-type: none"> Landscaping integrated into the built form design is encouraged to soften the development and integrate it with the important open landscape surroundings. Planting will need to be selected that consider the future maintenance obligations. A species should be selected with an appropriateness to the locality. 	<p>between the basement and Alexandra Parade and landscape over the reconstructed dune above the northern basement and ground level extension. All proposed landscape species are low maintenance and are native species, and therefore are suitable for the climate and the environment which they are proposed within.</p>
<p>Car parking</p> <p>There is an existing shortfall of parking for the MSLSC (nil provided) and the proposed expansion will further increase car parking demand as well as resulting in a loss of existing on-street parking.</p>	<p>The Traffic Impact Assessment (Appendix 7) provides justification for the proposed car parking outcome.</p>
<p>Traffic safety</p> <p>Assess the impact of service vehicle access across the Coastal Footpath. There is no setback to these entrances/service points/egress point to the pathway.</p>	<p>The Traffic Impact Assessment (Appendix 7) assesses the proposed vehicle access points for safety.</p>
<p>Stormwater management</p> <p>The application would need to demonstrate how the stormwater requirements and landscape requirements are compatible.</p>	<p>A Stormwater Management Plan is provided in Appendix 4.</p>
<p>Streetscape/external works</p> <ul style="list-style-type: none"> Provide a 2.7m wide awing across the entire frontage of the expansion area to provide shelter for pedestrians on the footpath. Street trees will be required as part of the coastal pathway requirements so as to sufficiently shade the pathway. Provide a minimum 3m shared path between the building and Alexandra Parade. Any new footpaths would need to be offset a minimum 1.2m from the back of kerb to facilitate street trees. Street trees are to be located with regard to safe vehicle sightlines and so as to not obstruct access to the fire boosters. Footpaths to be finished so as to match in with Council's design palette for the local area. The redevelopment will inhibit inspections and maintenance of any seawall below the viewing and members deck areas and beach profile. Given the viewing and members deck extensions are within the new proposed lease area, any seawall would be the responsibility of the leaseholder to maintain. The deck area proposed on the seaward side of the club over the public foreshore (beach) should 	<p>As shown on the Architectural Plans (Appendix 2), an awning is provided for the full length of the building over the adjacent pedestrian footpath along Alexandra Parade. The width of the awning is subject to the position of the kerb, however, the design ensures that the maximum width is provided for the full length, as shown in Appendix 2 (min 1.6m up to 5m).</p> <p>Due to the position of the required awning and lack of verge adjoining the existing pedestrian footpath, street trees cannot be provided.</p> <p>It is not proposed to deliver a 3m shared path between the building and Alexandra Parade. The building is intended to be constructed to the boundary of the lease area as per the current arrangement onsite. The proposal results in a non-worsening outcome in this regard. It is noted that the footpath to the north of the building between the kerb and dunes is also not able to be increased to 3 metres wide without encroaching on the dunes or removing parallel car parking.</p> <p>Any upgrades to the existing footpath will be finished so as to match in with Council's design palette for the local area.</p>

Council Comment	Response
<p>not be for the exclusive use of the club and should be within the public domain.</p>	<p>Any part of the seawall within the lease area will be maintained by the MSLSC. It is noted that the proposed deck is in line with the top of the seawall, with access below the deck maintained.</p> <p>The part of the new seaward (eastern) deck that will be included in the expanded lease area will be for MSLSC use at their discretion, in line with the terms of the lease. The club proposes to construct a publicly accessible section of the deck outside the lease area (subject to Council coordination) to enhance the use of the foreshore for community recreation and appreciation of the area's natural values.</p>
<p>Acoustic amenity An acoustic assessment will be required to address Council's Nuisance Code with respect to any proposed onsite activities (i.e. amplified music) on nearby residential premises/sensitive land uses. This assessment should also include that noise generated any fixed plant and equipment.</p>	<p>Please refer to the Noise Impact Assessment provided in Appendix 8.</p>
<p>Waste management Address Council's Waste Management Code.</p>	<p>An assessment of the Waste Management Code under the Planning Scheme is provided in Section 5.4.11 (Waste Management Code) of this EAR.</p>
<p>Lighting amenity Lighting assessment undertaken should include an assessment against Council's Nuisance Code with respect to nearby residential premises.</p>	<p>An assessment of the Nuisance Code under the Planning Scheme is provided in Section 5.4.8 (Nuisance Code) of this EAR. This includes commentary regarding lighting impacts.</p>
<p>Acid sulfate soils An acid sulfate soils investigation must be undertaken.</p>	<p>It is recommended that a condition of the MID Decision Notice be imposed for the development to be undertaken in accordance with an Acid Sulfate Soils Management Plan. This will also be submitted to Council for their assessment as part of an application for Operational Works in due course.</p>
<p>Land management – lease area It would be Land Management's advice that if the expansion of the lease lot is broadly agreed, that Council would consent to a larger lease lot being created by the State of Queensland to allow it to directly lease to the MSLSC. This alleviates the need for a dual leasing arrangement to exist between the State, Council and the Surf Club and would make sense given the existing lease arrangement in place.</p>	<p>Leasing negotiations will be undertaken with the State upon receipt of the MID Decision Notice.</p>

7.2.2 Response to Surrounding Resident Preliminary Comments

260. **Table 16** below includes the preliminary comments received from concerned members of the community, as well as a response to matter raised:

Table 16 Response to Surrounding Resident Preliminary Stakeholder Engagement Comments

Comment	Response
<p>One resident raised concerns in relation to the timeframe made available for preliminary consultation, raising that insufficient time was given for the community to make comment. Further, this resident complained that the catchment of surrounding properties to be notified is insufficient, seeking a 1km catchment for notification. Finally, the resident raised concerns about the provision of notification material to Body Corporates, in lieu of individual unit owners in the area directly.</p>	<p>The preliminary consultation period was undertaken in accordance with the MGR, with 10 business days originally being given for public comment (27 February 2024 to 12 March 2024). In response to this feedback, on day 8 of the consultation period, the consultation timeframe was extended to a total of 20 business days (ending 26 March 2024). All identified stakeholders were notified of the extension.</p> <p>The preliminary consultation period was undertaken in accordance with the MGR, with the surrounding landowners that were notified being as per the affected residents map supplied by DHLGPPW (refer to Appendix 9).</p> <p>DHLGPPW on 21 February 2024 confirmed that, where the identified property is under a Body Corporate Community Titles Scheme, it is acceptable for the notice to be provided to the Body Corporate rather than individual unit owners.</p>
<p>The demolition of the existing building and the construction of the new club will take “at least two (2) years”, this will have an effect on the local community.</p>	<p>All construction activities will be undertaken in accordance with the management procedures of a Construction Management Plan developed in accordance with Council’s Works, Services and Infrastructure Code under the Planning Scheme by the suitably qualified contractor.</p>
<p>Concerns raised regarding the function of Alexandra Parade as a one-way street and lack of car parking along/near Beach Parade.</p>	<p>The Traffic Impact Assessment (Appendix 7) provides an assessment of the proposed car parking outcome and justifies this in the context of the existing MSLSC operations and the nature of the proposed redevelopment being for an expansion of the surf lifesaving activities/use areas only.</p> <p>Further, the proposal improves the access arrangements to and from the site along the one-way section of Alexandra Parade due to the formalisation of vehicle access to the building for service vehicles and surf lifesaving vehicles/watercraft. This will help improve existing traffic conditions and mitigate current impacts on public pedestrian movement areas adjacent to the building.</p>
<p>The Surf Club is trying to obtain 990 sq m of extra land to the north of the club for underground parking and storage but want it for nil consideration when the land is worth millions and is a National Park.</p>	<p>The expansion of the existing lease area is a matter for the Department of Resources to address directly with the Lessee of the land. This matter does not relate to the MID process or assessment of impacts.</p>
<p>The proposal is business operation and not a community driven project.</p>	<p>The commercial/profit generating component of the MSLSC operations relates to the supporters club, with the proceeds of these business endeavors (restaurant, bar, gaming etc.) being used to fund the</p>

Comment	Response
<p>The location is a residential and holiday unit area and not conducive to a huge commercial building operation.</p>	<p>community driven, non-profit surf lifesaving/sporting arm of MSLSC.</p> <p>The redevelopment of the existing club, which has been operating onsite for several decades, will result in an expansion of the surf lifesaving use areas (watercraft/equipment storage and community members spaces). The areas used for the supporters club have been reduced by 31m², resulting in a like-for-like replacement of the existing facilities.</p> <p>Overall, the proposed redevelopment of the MSLSC will offer a community benefit by enhancing the safety of not only the club members, but the public, by improving the standard of surf lifesaving facilities and increasing the capacity of the club to perform beach monitoring and lifesaving functions, whilst also proposing to improve the visual amenity and functionality of the club, so as to create an enhanced experience for the community.</p>
<p>The plans provided during the preliminary consultation stage do not show enough detail about the existing car park as this now appears to be a dune with some vegetation on it.</p> <p>It appears that the public car park with public accessibility to the beach has now been completely removed and this is something that needs more detail to be produced.</p> <p>Are there any details about disabled access to the beach?</p>	<p>The Architectural Plans have since been amended to reflect the proposal to retain the current public car park, south of the site, and existing beach accesses in their current state. No works are proposed to these elements of the public realm.</p> <p>Council are responsible for providing and maintaining suitable beach accesses, including access for disabled persons.</p> <p>Please refer to the Architectural Plans in Appendix 2.</p>
<p>The lookout may have heritage significance. Are any Heritage Impact plans or reports going to be submitted with the application?</p>	<p>Both the State and Council have not identified the site or immediate surrounding area as containing any heritage significance. A Cultural Heritage Register Search is provided in Appendix 13. There are no registered Aboriginal cultural heritage sites on the subject site or within a buffer of 100 metres from the site. Accordingly, DHLGPPW did not seek the submission of a heritage assessment or management plan in their Pre-Lodgement Written Advice (Appendix 1).</p>

7.3 Proposed Consultation Strategy

261. **Tables 17 and 18** below identify the consultation activities that are to be carried out as part of the 20-business day public consultation process for the proposed Infrastructure Designation.

Table 17 Consultation Strategy

Activity	Description	Affected party
Sign on Land	<ul style="list-style-type: none"> • Place sign on the site. • Sign Notice will be in accordance with the template provided by DHLGPPW and will outline: <ul style="list-style-type: none"> - The proposed Ministerial designation. - Land to which the proposed designation applies. - Type of infrastructure for which the land is proposed to be designated. - How the draft EAR can be viewed or accessed. - How to make a submission to the Minister within the 20-business day consultation period. - The day by when submissions may be made to the Minister. 	<ul style="list-style-type: none"> • Maroochydore local community.
Webpage/Social Media	<ul style="list-style-type: none"> • ASTP webpage/social media will outline: <ul style="list-style-type: none"> - The proposed Ministerial designation. - Land to which the proposed designation applies. - Type of infrastructure for which the land is proposed to be designated. - How the draft EAR can be viewed or accessed. - How to make a submission to the Minister within the 20 business day consultation period. - The day by when submissions may be made to the Minister. • Provide links (or upload) EAR for Sunshine Coast Council's and DHLGPPW to upload on their respective websites 	<ul style="list-style-type: none"> • General community
Publish Public Notice	<ul style="list-style-type: none"> • Digitally publish public notice in the local newspaper (e.g. Sunshine Coast Daily). • Public notice will address requirements of Schedule 4, Section 7 of Minister's Guidelines and Rules, will be in accordance with the template provided by DHLGPPW, and will outline: <ul style="list-style-type: none"> - The proposed Ministerial designation. - The land to which the proposed designation applies. - Type of infrastructure for which the land is proposed to be designated. - How the Environmental Assessment Report can be viewed or accessed. - How to make a submission about the proposed Ministerial designation. - The day by when submissions may be made to the minister. 	<ul style="list-style-type: none"> • Sunshine Coast local community
Letter to Stakeholders	<ul style="list-style-type: none"> • Notice to be sent via Registered Mail or publicly available email to the identified stakeholders (refer to Table 18 below). • The Letter will be in accordance with the template provided by DHLGPPW and will outline: <ul style="list-style-type: none"> - proposed Ministerial designation - land to which the proposed designation applies - type of infrastructure for which the land is proposed to be designated - how the draft EAR can be viewed or accessed 	<ul style="list-style-type: none"> • All parties identified in Table 18 below.

Activity	Description	Affected party
	<ul style="list-style-type: none"> - how to make a submission to the Minister within the 20 business day consultation period - the day by when submissions may be made to the Minister 	
Consideration of Submissions	<ul style="list-style-type: none"> • If submissions are received during the consultation period, provide to the Minister evidence of consultation undertaken and any further or amended technical reporting to address matters raised in the submissions. Any State agency comments are also required to be addressed. 	<ul style="list-style-type: none"> • All

Table 18 Stakeholders for Consultation

Stakeholder	Description
Surrounding landholders and affected entities	The plan within Appendix 9 identifies the extent of land holders/entities to be consulted/notified via registered post.
Elected representatives	The following elected representatives will be sent letters via publicly available email or via registered post: <ul style="list-style-type: none"> ○ Local Councillor: Cr Joe Natoli – Sunshine Coast Council (Division 4) ○ State Member for Maroochydore: Ms Fiona Simpson MP ○ Federal Member for Fairfax: Mr Ted O’Brien MP
Native title party/ Traditional owners	The following will be sent letters via publicly available email or via registered post: <ul style="list-style-type: none"> ○ Kabi Kabi First Nation Traditional Owners Native Title Claim Group

262. In addition to the above, the Minister will also undertake consultation by writing to Sunshine Coast Council and landowners inviting submission on the MID. DHLGPPW will also seek comments from the relevant State Agencies.

8. Conclusion and Recommendations

263. The Infrastructure Entity for the proposed Ministerial Infrastructure Designation is the Maroochydore Surf Life Saving Club Inc. This EAR has been prepared by ADAMS + SPARKES Town Planning for and on behalf of the Infrastructure Entity.
264. In accordance with Section 2, Part 5 of the *Planning Act 2016*, Maroochydore Surf Life Saving Club Inc seeks approval from the Minister for the Department of Housing, Local Government, Planning and Public Works to designate Lot 471 on SP142403 and a portion of the adjoining road reserve land, for the purpose of '*community and cultural facilities, including community centres, galleries, libraries and meeting halls*' and '*sporting facilities*'.
265. This EAR has been prepared in accordance with Chapter 7, Part 1, as well as Schedule 3 of the Ministers Guidelines and Rules and contains a detailed response on how the proposed infrastructure complies with:
- *Planning Act 2016* – Section 36 (Criteria for making or amending designations);
 - State Government – State Planning Policy, South East Queensland Regional Plan, State Development Assessment Provisions; and,
 - Local Government – *Sunshine Coast Planning Scheme 2014*.
266. In addition, this EAR details known and anticipated impacts that may occur as a result of the development, with the findings indicating that the redevelopment and expansion of the MSLSC presents a suitable land use outcome. The impacts addressed as part of the Environmental Assessment include:
- Visual impacts;
 - Impacts upon surrounding properties;
 - Impacts on surrounding infrastructure networks;
 - Construction Impacts;
 - Environmental impacts; and,
 - Heritage and Native Title impacts.
267. We look forward to progressing the application through the Infrastructure Designation process contained within Schedule 7, Part 1 of the Ministers Guidelines and Rules.

ADAMS + SPARKES

TOWN PLANNING



Cameron Adams
MANAGING DIRECTOR



Aspen Dunn
SENIOR TOWN PLANNER

Appendix 1

Department of Housing, Local Government, Planning and Public Works Pre-Lodgement Advice

Our reference: MPL-0523-0430



Department of
**State Development, Infrastructure,
Local Government and Planning**

31 October 2023

Cameron Adams
Managing Director
Adams & Sparkes Town Planning
Sent by email: cameron@astpd.com.au

Dear Mr Adams

Pre-lodgement written advice – proposed designation – Maroochydore Surf Life Saving Club

This pre-lodgement record provides a summary of relevant matters based on the supporting information provided in the pre-lodgment request. This record is provided in good faith and provides initial advice regarding likely issues relevant to the proposed request to designate premises for the development of infrastructure (designation).

If the proposal is changed from that which was provided in the pre-lodgement request, you may wish to seek further or amended pre-lodgment advice from Department of State Department, Infrastructure, Local Government and Planning (DSDILGP).

Meeting details

Meeting date: 5 June 2023

Site details

Street address: 34-36 Alexandra Pde, Maroochydore
Real property description: Lot 471 on SP142403
Local government area: Sunshine Coast Regional Council (the council)
Existing use: Maroochydore Surf Life Saving Club

Proposed infrastructure details

Type of infrastructure: Item 3: community and cultural facilities, including community centres, galleries, libraries and meeting halls
Item 17: sporting facilities
Infrastructure description: Maroochydore Surf Life Saving Club

State interests relevant to the assessment:

- Biodiversity – MSES - MSES - Wildlife habitat (endangered or vulnerable), MSES - Wildlife habitat (special least concern animal), and MSES - Regulated vegetation (essential habitat)
- Coastal environment - Coastal management district
- Natural hazards, risk and resilience – flood hazard area (Local government flood mapping area), Erosion prone area
- Strategic airports and aviation facilities - Obstacle limitation surface area, and Wildlife hazard buffer zone (8km)
- Water quality – Climatic regions – stormwater management design objectives

Supporting information

Plan / Report title	Author	Ref no.	Date
Proposal Plans	Maroochydore Surf Life Saving Club		

Written advice

Item	Advice
Overview of MID proposal	
1.	<p>The MID proposal seeks to demolish and reconstruct a surf life saving club on the site, including the following works:</p> <ul style="list-style-type: none"> • A 993m² increase in the lease area to a total of 2284m², including additional areas to the north and east. • A basement level for gym and surf life saving club facilities. • A larger ground floor level including patrol room, club rooms and cafe. • A larger first floor level for restaurant and associated uses (supporters club). • A larger second floor level including function/community spaces, meeting rooms and Life Saving facilities (nipper dorms and offices).
Supporters club/commercial uses	
2.	<p>The department has significant concerns with the scale and expansion of uses on the site outside the functional requirements of surf life saving (supporters club etc).</p> <p>The MID process facilitates the provision of infrastructure identified in Schedule 5 of the Planning Regulation. A surf life saving club could be considered under the following infrastructure items:</p> <ul style="list-style-type: none"> • Item 3: community and cultural facilities, including community centres, galleries, libraries and meeting halls • Item 17: sporting facilities <p>Uses such as a supporter's club and function/community spaces can only be</p>

	<p>considered under a MID where these uses are ancillary or subservient to the life saving operations carried out on the site.</p> <p>In this case, the area of supporter's club and community spaces must be a like for like replacement (or smaller) of the existing use areas. Where a supporters club is proposed, this must be integrated into the life saving club.</p> <p>The inclusion of function spaces predominantly for the hire to third parties are unable to be facilitated through a MID. Alternatively, where these spaces are to be available for community use, they should be proportionate to the lifesaving membership base.</p>
Transport	
3.	<p>A traffic impact assessment should be provided in support of the MID proposal that addresses the following:</p> <ul style="list-style-type: none"> • impacts on the local and state road network and any required upgrades/mitigation works • access arrangements to the site • provision of car parking and on-site manoeuvring for all expected vehicles • public and active transport including cycle parking and the cycle/pedestrian path network.
Biodiversity	
4.	<p>The site is mapped as containing various MSES.</p> <p>The MID proposal must ensure impacts to MSES are minimised. The MID proposal should be supported by an Ecological Assessment that assesses the impacts of and recommends measures that compensate for environmental impacts.</p> <p>In particular, the Ecological Assessment should focus on impacts dune vegetation and wildlife habitat values/corridors. Impacts to dunes should be avoided. Where impacts can't be avoided they should be minimised to the greatest extent possible and mitigation measures provided.</p>
Stormwater	
5.	<p>A site-based stormwater management plan should be provided in support of the MID proposal that addresses the following:</p> <ul style="list-style-type: none"> • stormwater quantity measures to avoid material worsening to adjoining and downstream properties • a lawful point of discharge • stormwater quality measures that meet the relevant stormwater management design objectives.
Amenity	
6.	<p>The proposed extension to the surf life saving club may result in noise impacts to nearby residential properties.</p> <p>The MID proposal should be supported by an acoustic report to assess acoustic impacts from uses on the site and recommends mitigation measures.</p>

Coastal management	
7.	<p>The site is mapped within a Coastal management district.</p> <p>The MID proposal must demonstrate that there will be no impact to natural coastal processes as a result of the proposed development. The assessment should identify measures to minimise impacts to built infrastructure while ensuring natural coastal processes are maintained.</p> <p>Evidence of council feedback on coastal management/adaptation measures should be included as part of any MID proposal.</p>
Airport environs	
8.	<p>The site is located in the Obstacle limitation surface area, and Wildlife hazard buffer zone (8km) of the Sunshine coast airport.</p> <p>An assessment should be provided as part of the MID proposal to address the SPP as it relates to airport facilities.</p>
Recommended technical reporting	
9.	<p>It is recommended that the entity consider the following matters when preparing the infrastructure designation request:</p> <ul style="list-style-type: none"> • traffic impact assessment • ecological assessment • stormwater management plan • coastal hazard assessment • acoustic report • landscape plans • buildings elevations and materials/colour palette • architectural plans identifying demolished, retained and proposed aspects.

General information

Preliminary stakeholder engagement requirements

Preliminary stakeholder engagement should include, but not be limited to, consultation with the council, Native Title and/or traditional owners for the area, letters to local, state and federal members and a letter box drop to surrounding properties identified on the attached plan (as a minimum). Any preliminary stakeholder engagement material should describe and illustrate the proposal and provide 10 business days for comment. Please provide draft material to DSDILGP for review prior to commencing preliminary stakeholder engagement activities.

Endorsement to lodge a MID proposal

Endorsement to lodge a MID proposal can be sought following completion of preliminary stakeholder engagement activities. When seeking endorsement please provide the information contained within Attachment 3.1 of the [MID Operational Guidance](#).

MID proposal

Should the proposal be endorsed, to apply for the designation, submit a MID proposal via the [online portal](#) that includes/addresses:

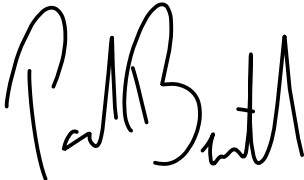
- the required material for making a MID specified in Schedule 3 of the [Minister's Guidelines and Rules](#)
- the matters raised in these pre-lodgement minutes.

Formal consultation stage

Formal consultation will include a 20-business day public consultation period which is to include as a minimum: sign/s on the land, a notice in the paper and letters to surrounding landowners, elected representatives and Native Title and/or Aboriginal or Torres Strait Islander party/parties for the area. Requirements for the formal consultation stage will be determined following endorsement to lodge a MID proposal.

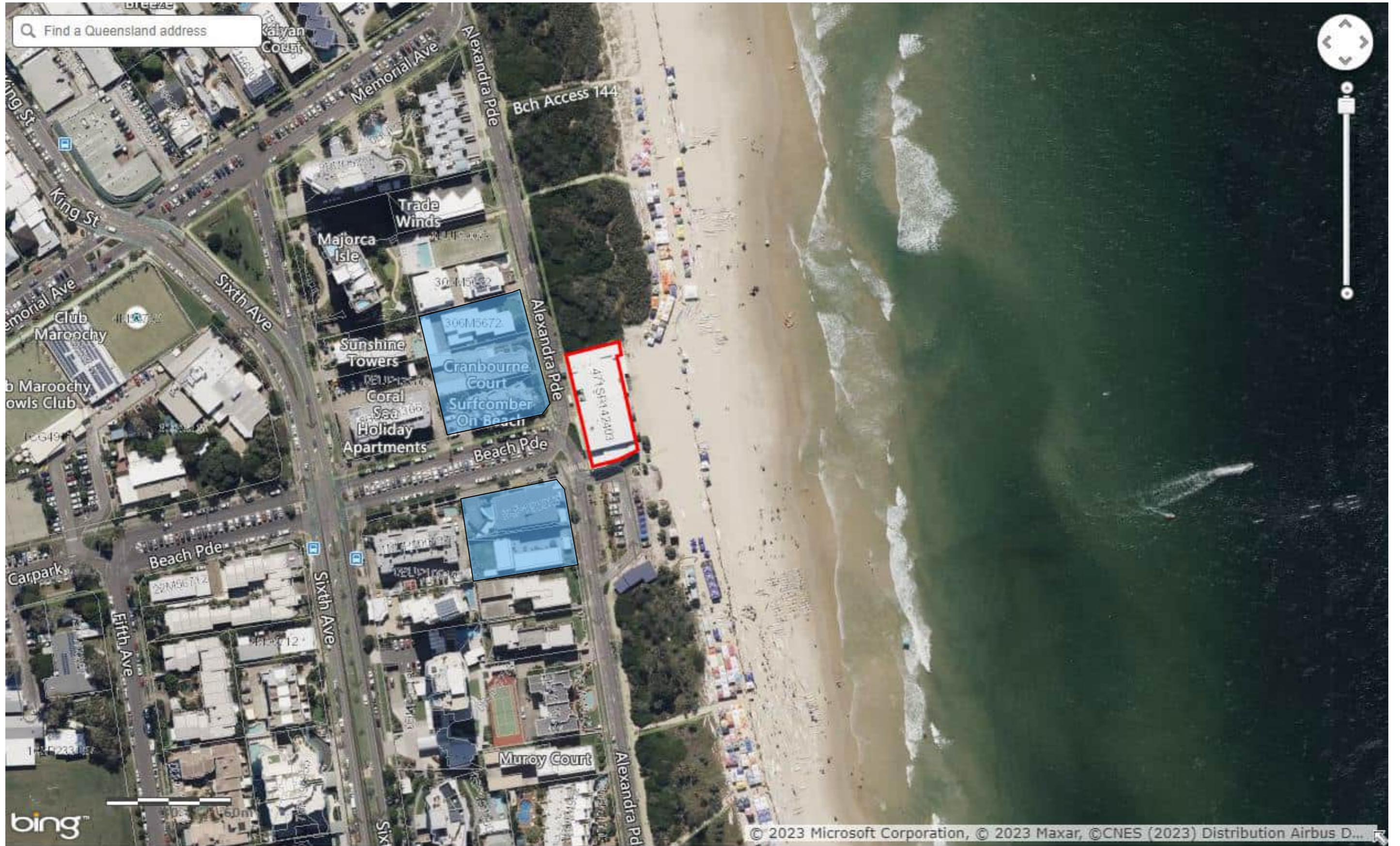
If you require any further information, please contact Alan Houston, Senior Planner on 3452 7627 or alan.houston@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Paul Beutel', written in a cursive style.

Paul Beutel
MANAGER

Attachment 1



Properties to be consulted


Appendix 2
Architectural Plans prepared by BRD Group



**MAROOCHYDORE SURF LIFESAVING CLUB
RE-DEVELOPMENT**
ALEXANDRA PARADE, MAROOCHYDORE

ISSUE	DESCRIPTION	DRAWN	DATE
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024
G	ISSUE FOR APPROVAL	AJM	22.05.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
COVER PAGE

DATE
JUNE 2022

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AJM

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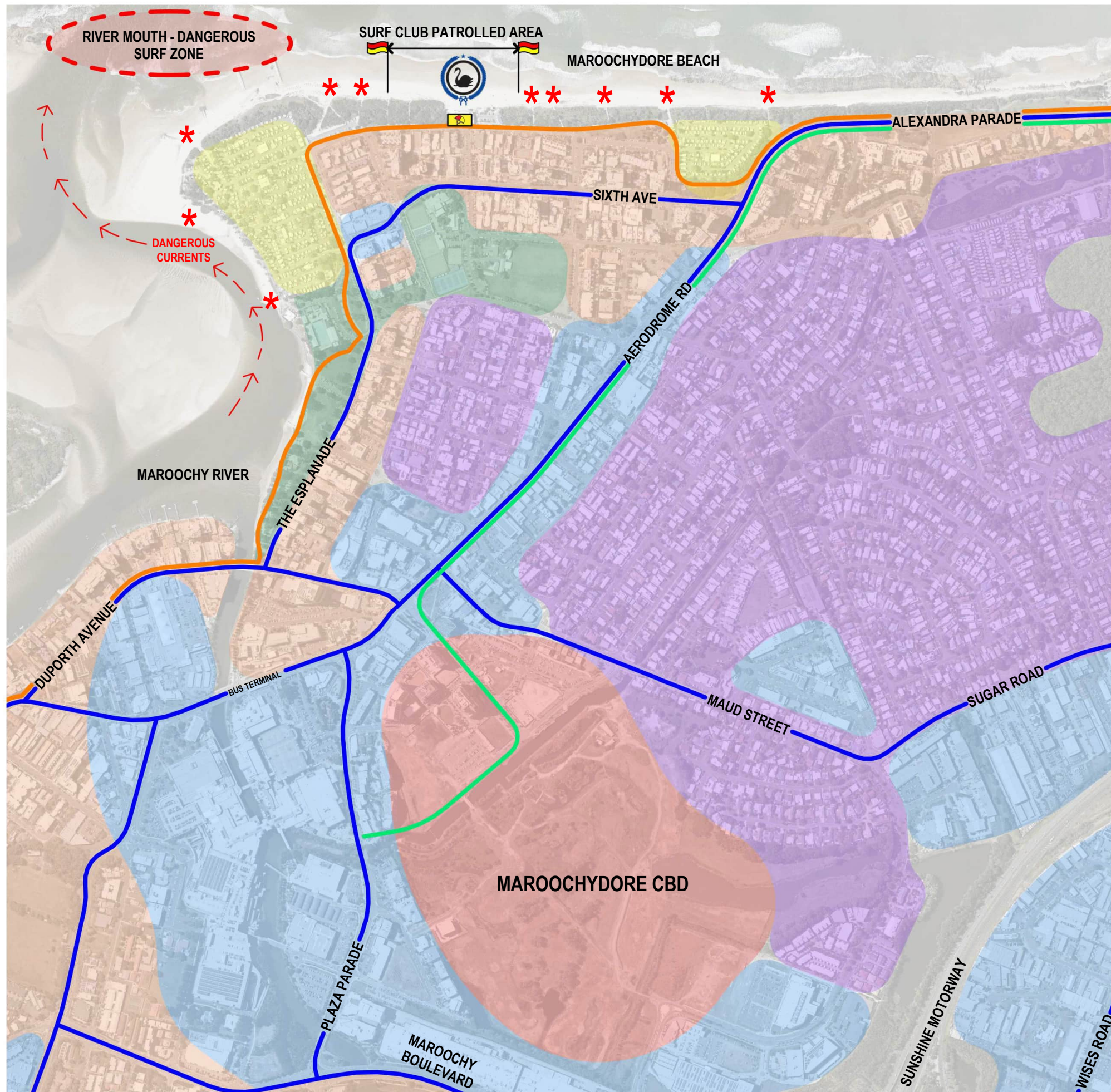
**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST
07 5443 3726

BRISBANE
07 3866 1855

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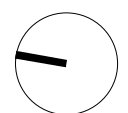
LEGEND

- * BEACH ACCESS TO DANGEROUS UNPATROLLED AREA
- PROPOSED LIGHT RAIL NETWORK
- COASTAL BIKE PATHWAY
- PUBLIC BUS ROUTES
- TOURIST PARK ZONE
- SHOPPING & COMMERCIAL ZONE
- MEDIUM DENSITY ZONE
- HIGH DENSITY RESIDENTIAL / SHORT TERM ACCOM. ZONE

LOCALITY / ZONING PLAN

SURROUNDING

ISSUE	DESCRIPTION	DRAWN	DATE
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G	ISSUE FOR APPROVAL	AJM	22.05.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

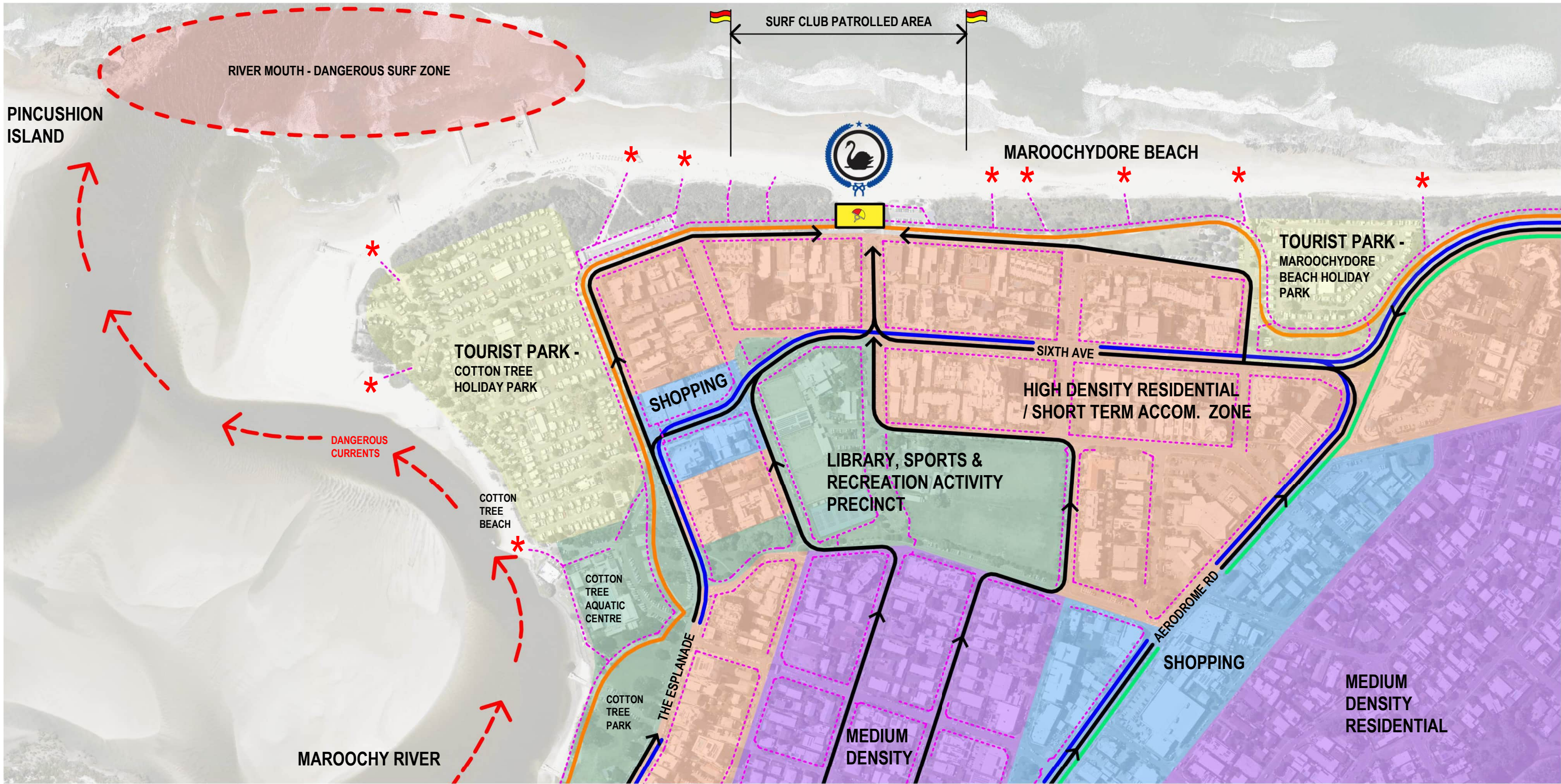
 LOCATION
 ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
LOCALITY / ZONING PLAN - SURROUNDING
 DATE
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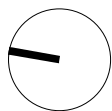
LOCALITY / ZONING PLAN

LOCALISED

LEGEND

- PEDESTRIAN NETWORK
- PRIMARY ROAD NETWORK
- PROPOSED LIGHT RAIL NETWORK
- COASTAL BIKE PATHWAY
- PUBLIC BUS ROUTES
- * BEACH ACCESS TO DANGEROUS UNPATROLLED AREA

ISSUE	DESCRIPTION	DRAWN	DATE
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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT
Maroochy Surf Club
 LOCATION
 ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
LOCALITY / ZONING PLAN - LOCALISED
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EXISTING SITE PLAN

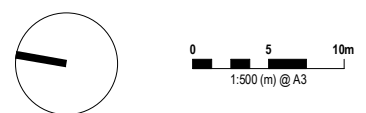
MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

LEASE AREA SCHEDULE			
	EXISTING	PROPOSED	DIFFERENCE
BASEMENT	1291m ²	2284m ²	993m ²
GROUND	1291m ²	2284m ²	993m ²
FIRST	1291m ²	2216m ²	925m ²
SECOND	1291m ²	1556m ²	265m ²

OVERALL AREA SCHEDULE					
	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
FIRST	n/a	1155m ²	306m ²	1155m ²	
SECOND	22m ²	502m ²	1026m ²	502m ²	
TOTAL	1116m ²	1688m ²	4760m ²	1657m ²	
OVERALL TOTALS	2804m ²		6417m ²		

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SITE PLAN

DATE
JUNE 2022

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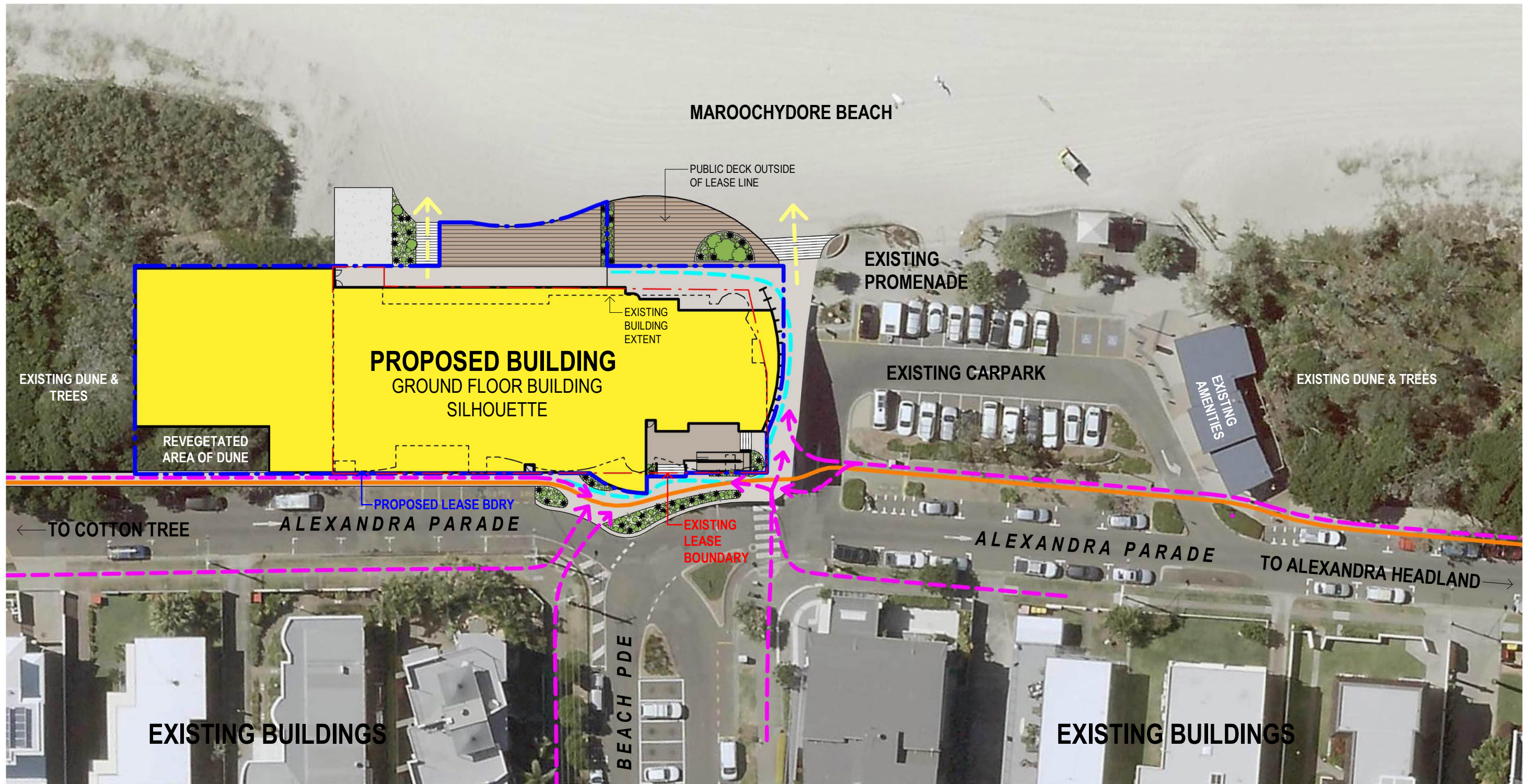
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ACCESS LEGEND

- ACTIVE FRONTAGE
- PEDESTRIAN TRAFFIC
- BEACH ACCESS
- COASTAL BIKE PATHWAY

PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

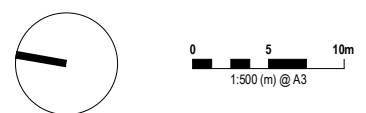
LEASE AREA SCHEDULE

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BASEMENT	1291m ²	2284m ²	993m ²
GROUND	1291m ²	2284m ²	993m ²
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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

DATE
JUNE 2022

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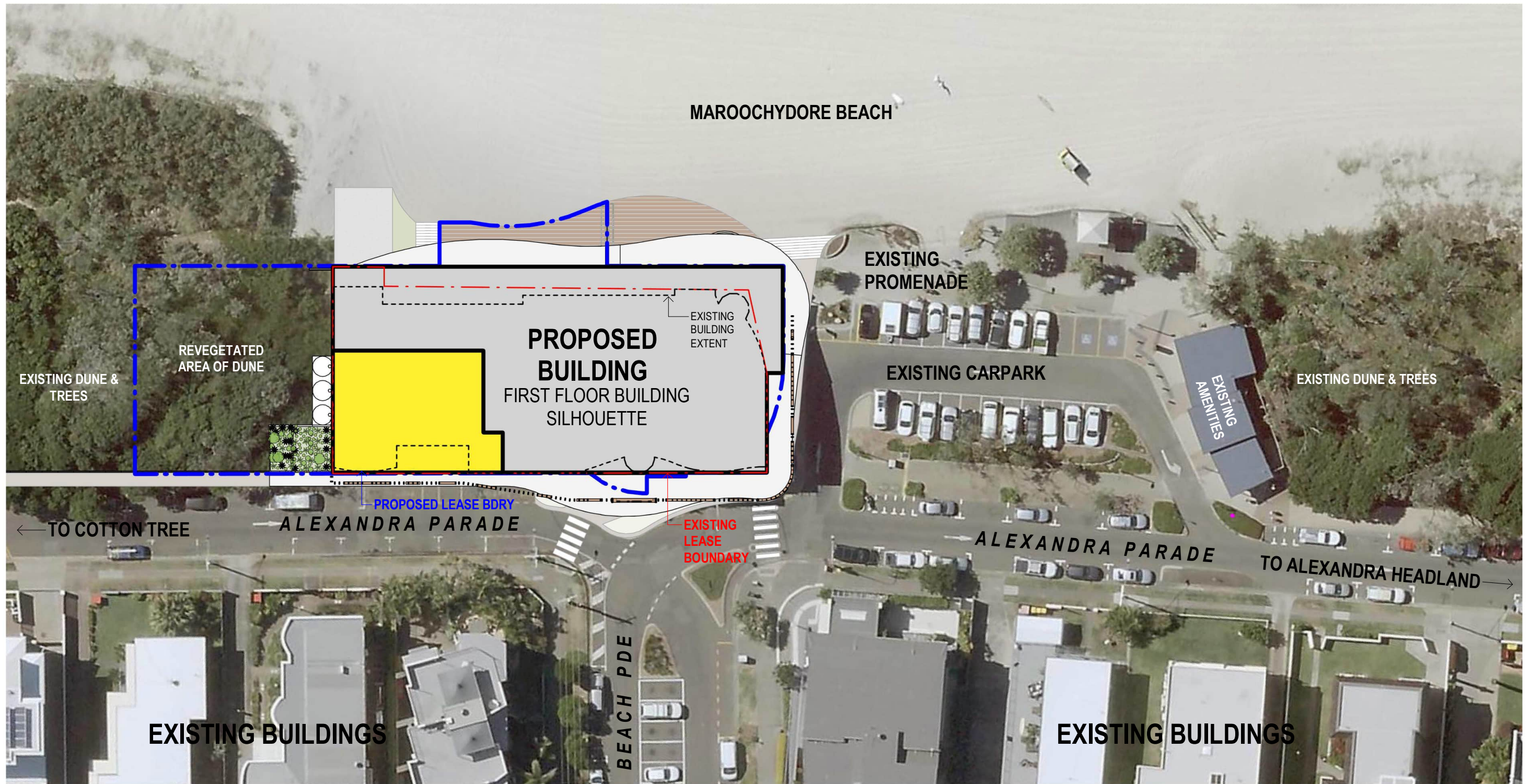
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PROPOSED SITE PLAN (FIRST FLOOR)

MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

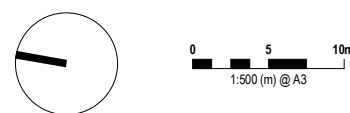
LEASE AREA SCHEDULE

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OVERALL AREA SCHEDULE

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED SITE PLAN (FIRST FLOOR)

DATE
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QBCO: 1160937

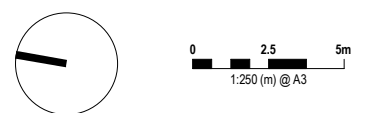


AREA SCHEDULE	
	1094m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	31m ² - SUPPORTERS CLUB FACILITIES
1125m² - TOTAL AREA	

EXISTING GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

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G	ISSUE FOR APPROVAL	AJM	22.05.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING GROUND FLOOR PLAN

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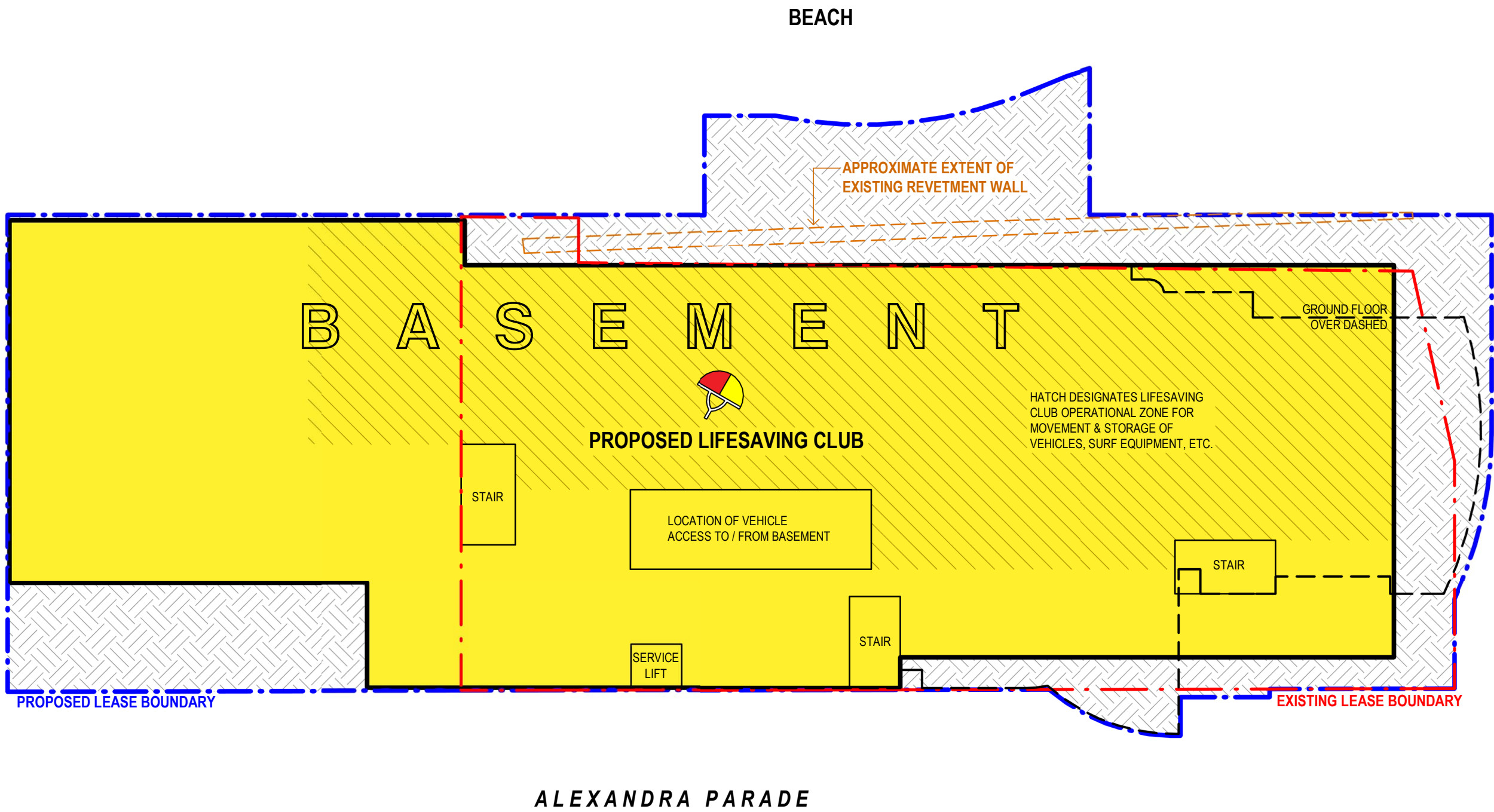
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DESIGN MANAGEMENT**

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ABN: 60 131 465 891
QBCC: 1160937

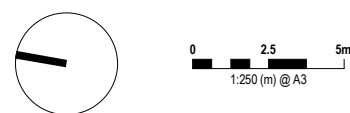


PROPOSED - BASEMENT PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1694m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
1694m² - TOTAL AREA	

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED BASEMENT PLAN

DATE
JUNE 2022

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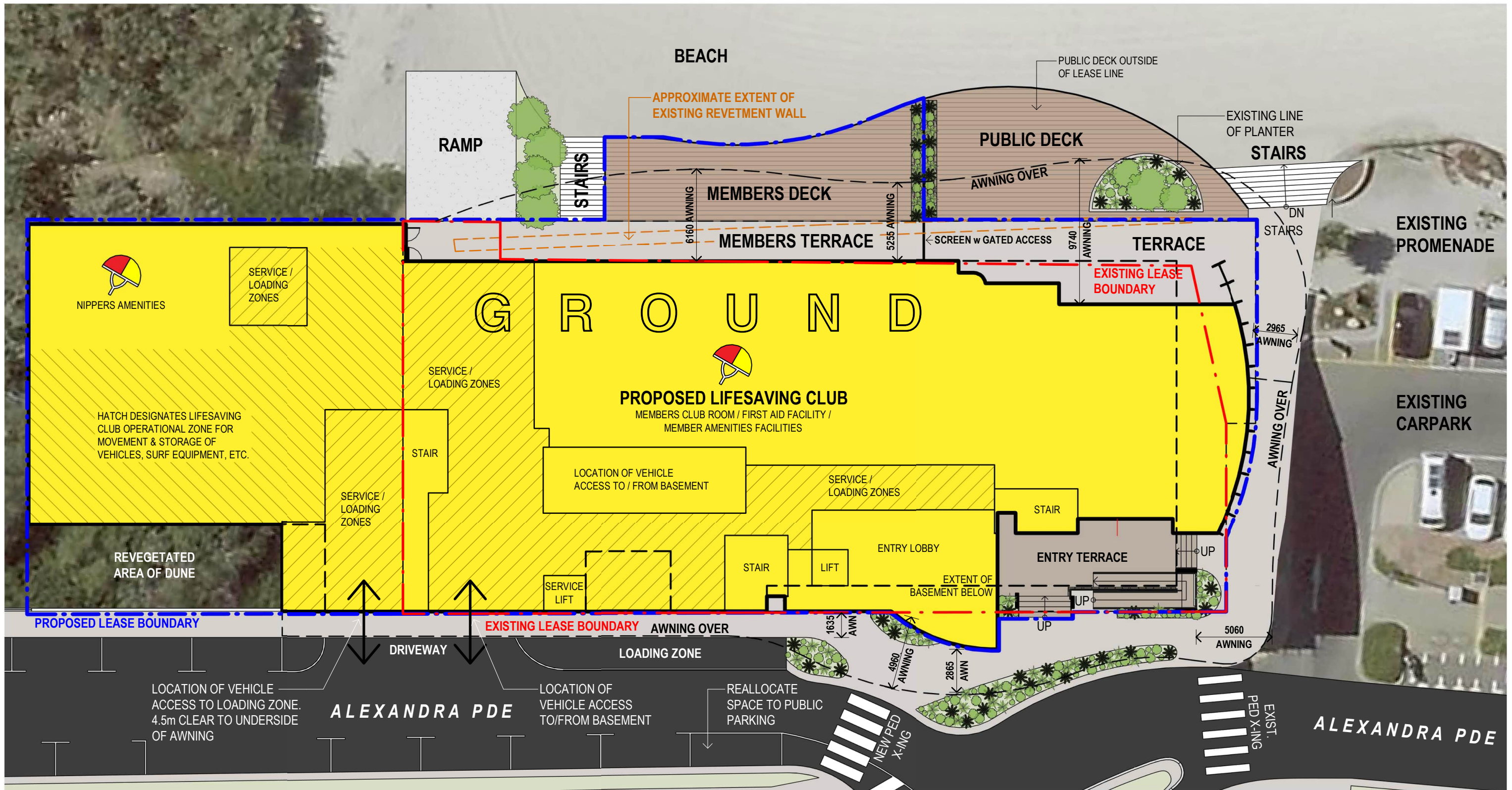
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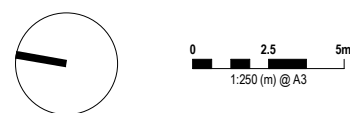


PROPOSED GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1734m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
1734m² - TOTAL AREA	

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
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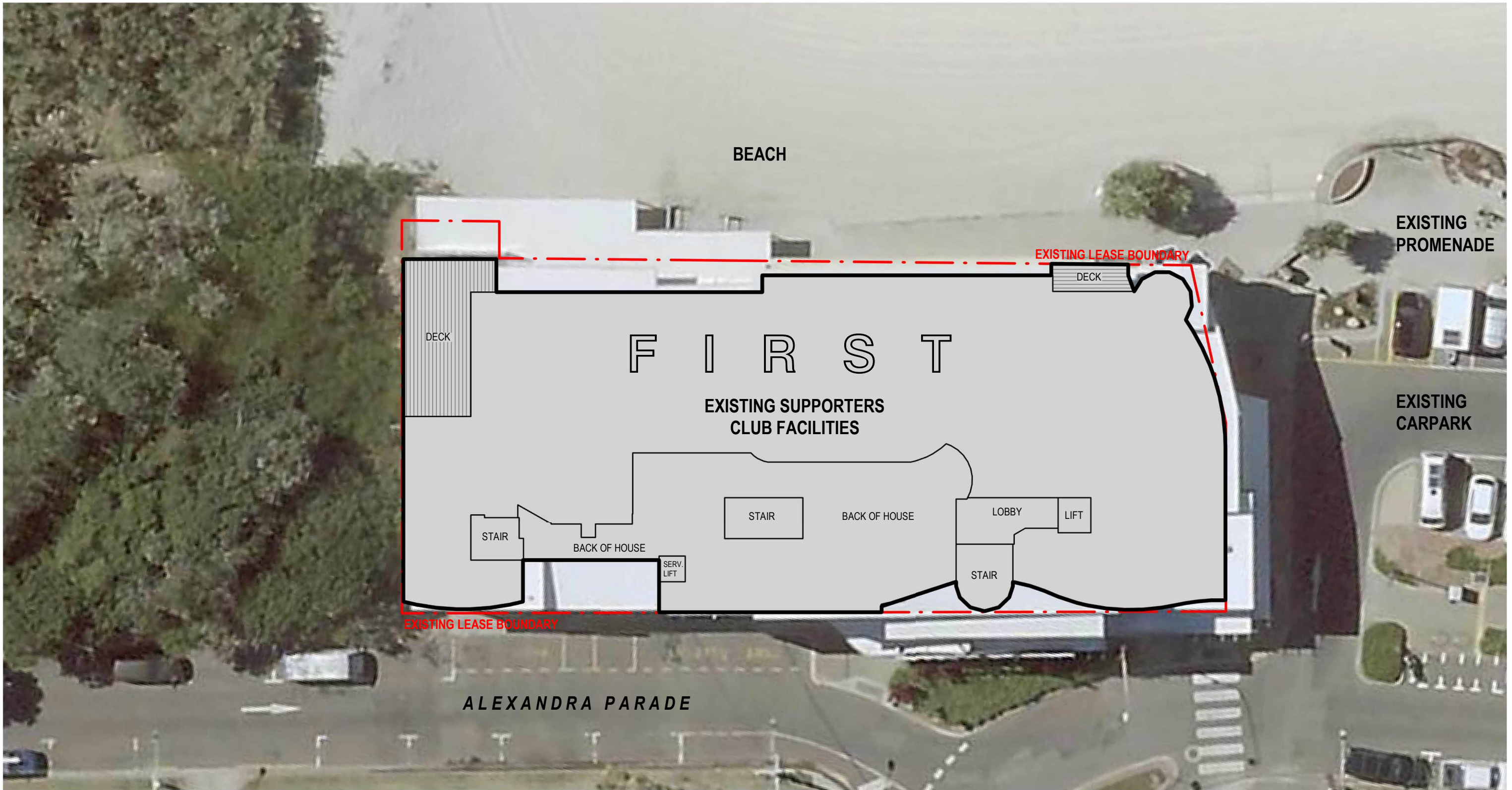
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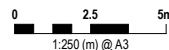
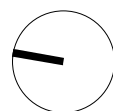


EXISTING FIRST FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1155m ² - SUPPORTERS CLUB FACILITIES
1155m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024
G	ISSUE FOR APPROVAL	AJM	22.05.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING FIRST FLOOR PLAN

DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV108	REVISION G	

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

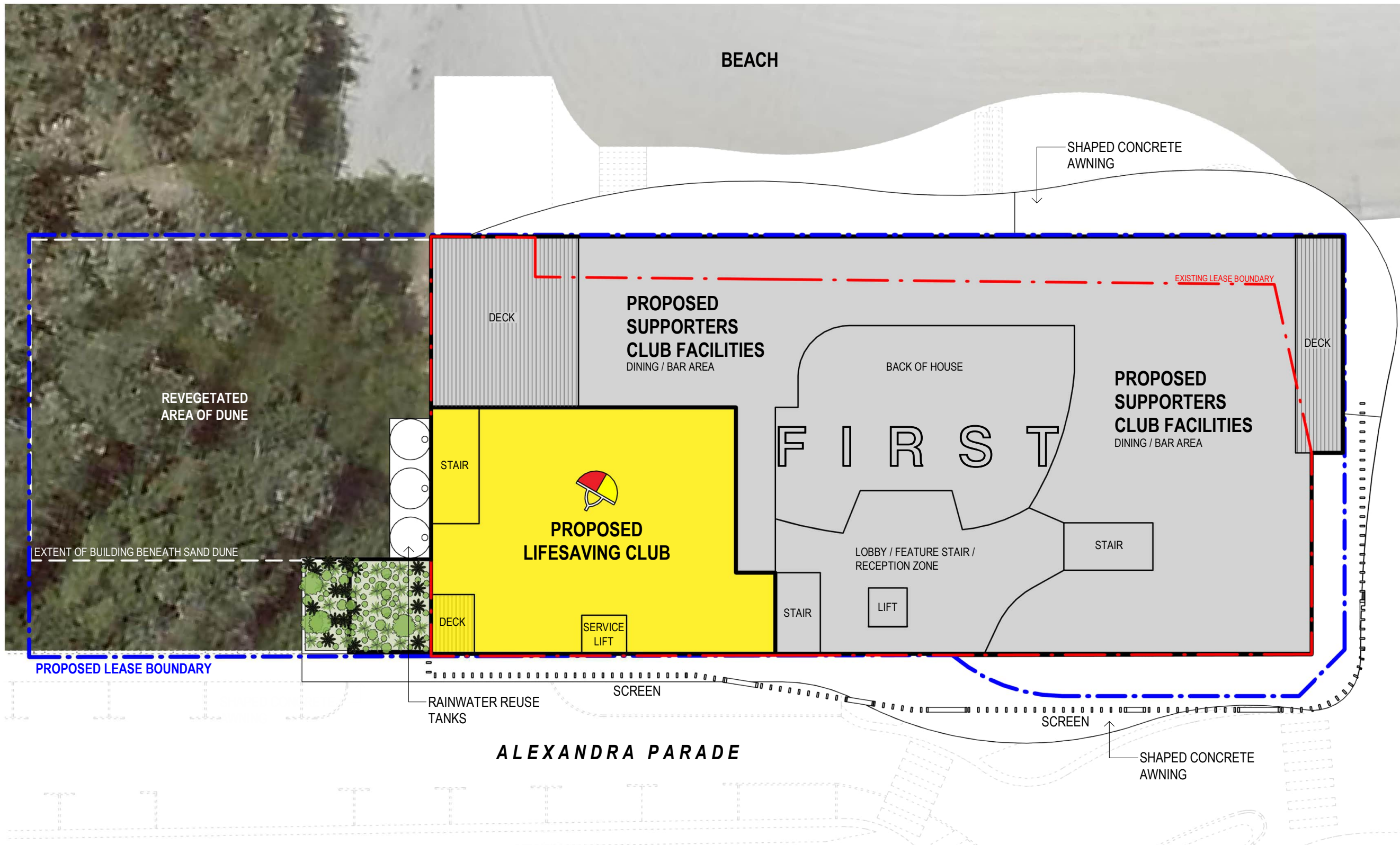
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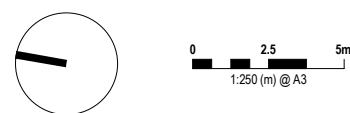


PROPOSED FIRST FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	306m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	1155m ² - SUPPORTERS CLUB FACILITIES
1461m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
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F	ISSUE FOR APPROVAL	AJM	05.04.2024
G	ISSUE FOR APPROVAL	AJM	22.05.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED FIRST FLOOR PLAN

DATE
JUNE 2022

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AJM

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DRAWING NO.
2062 - GOV109

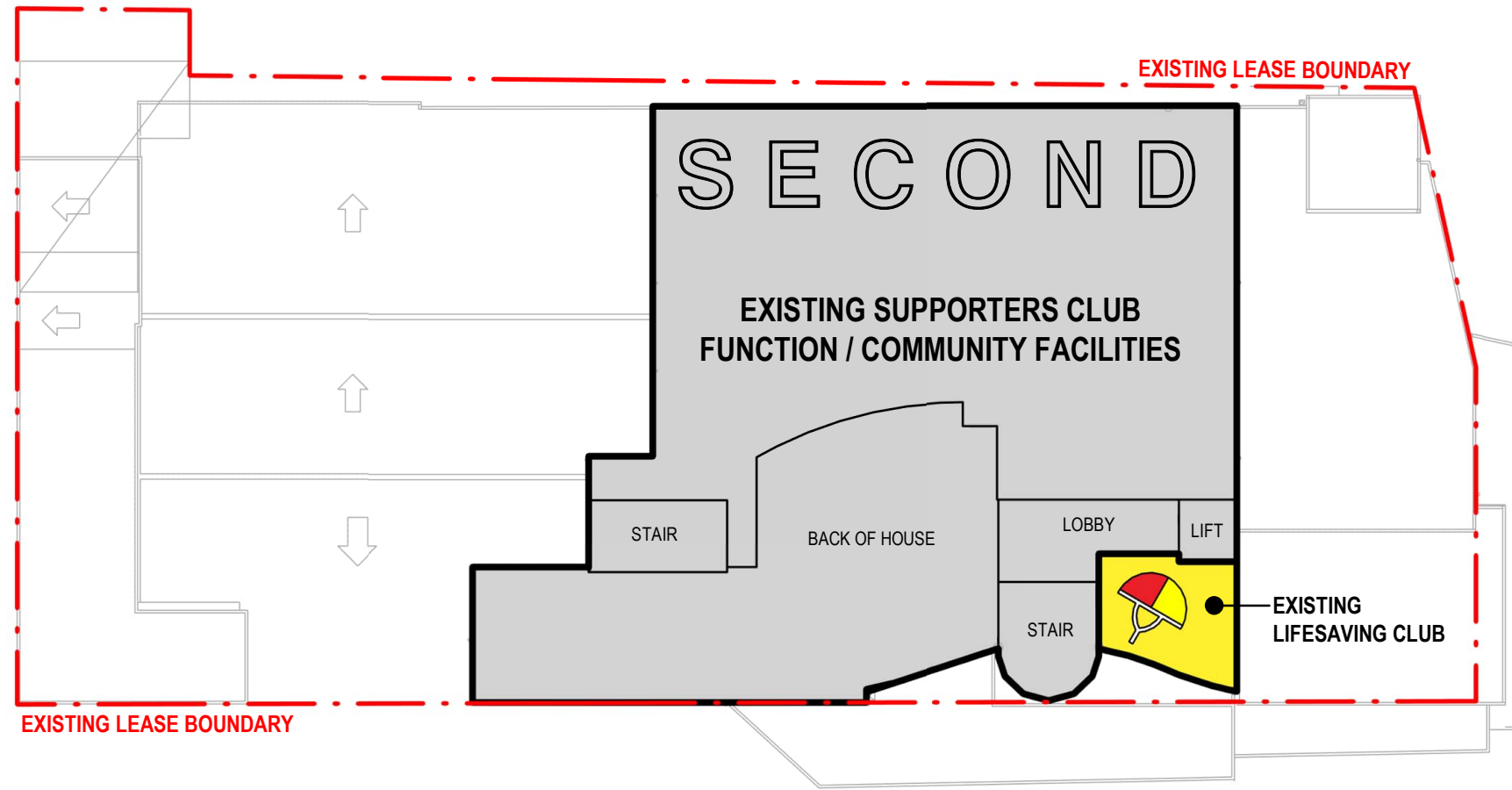
REVISION
G

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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BRISBANE 07 3866 1855
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ABN: 60 131 465 891
QBCC: 1160937

BEACH



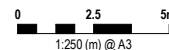
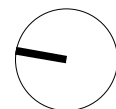
ALEXANDRA PARADE

EXISTING SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	22m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FACILITIES
524m² - TOTAL AREA	

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SECOND FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

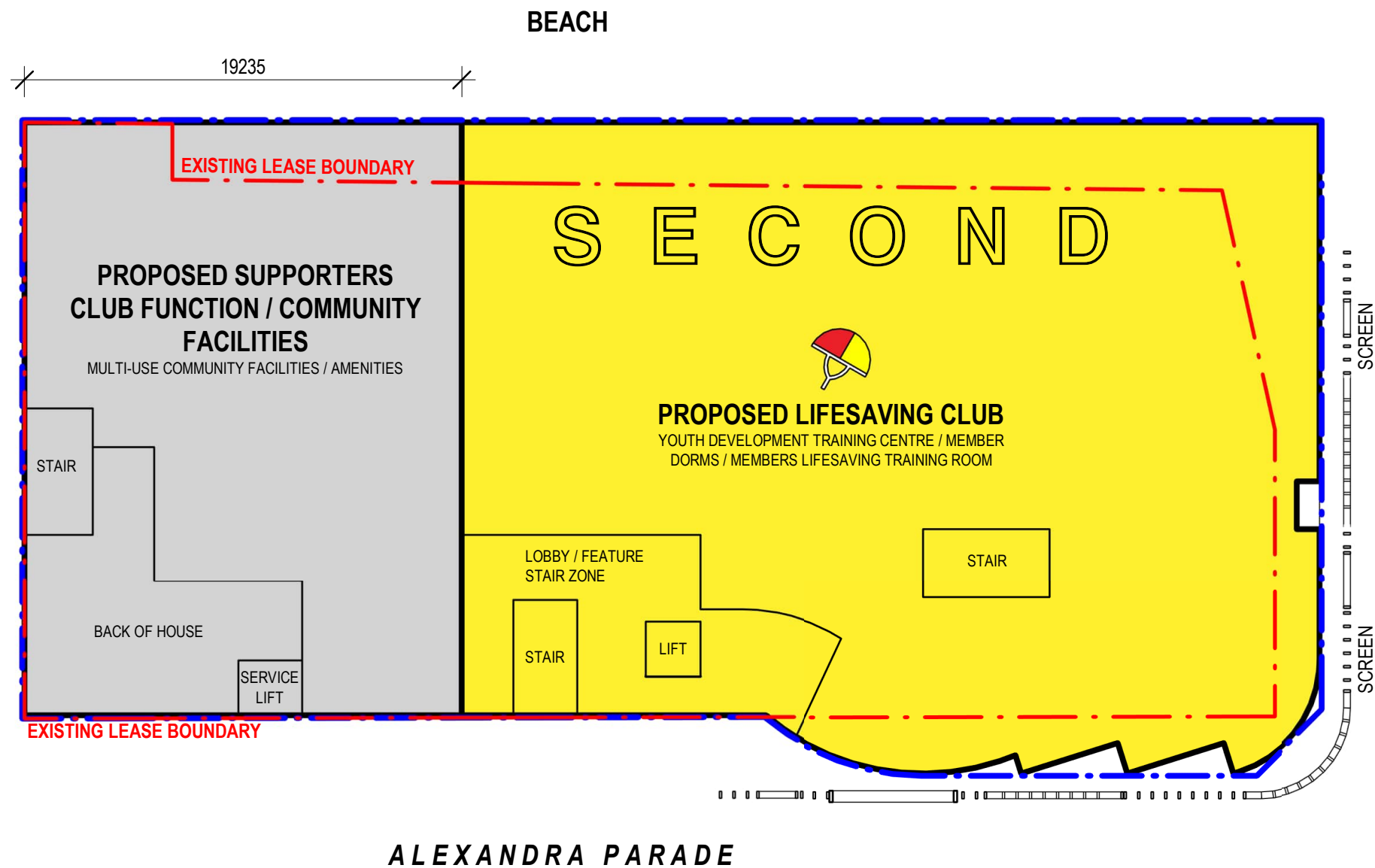
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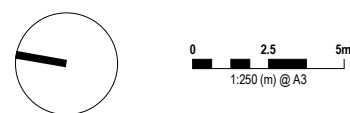


PROPOSED SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1026m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FUNCTION / COMMUNITY FACILITIES
1528m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

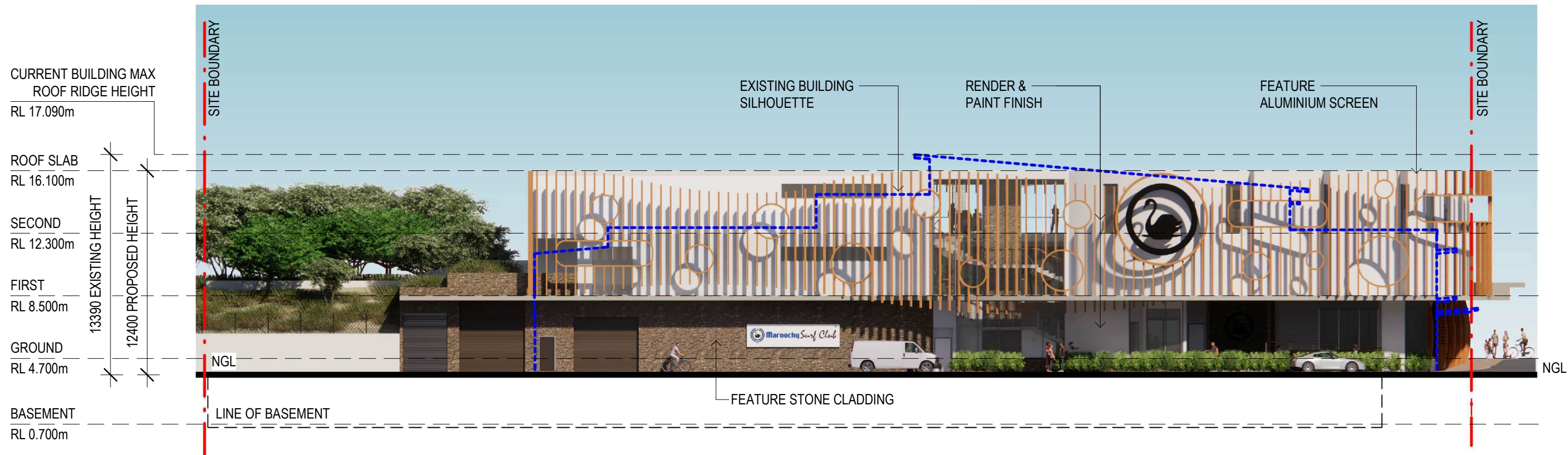
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PROPOSED SECOND FLOOR PLAN

DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV111	REVISION G	

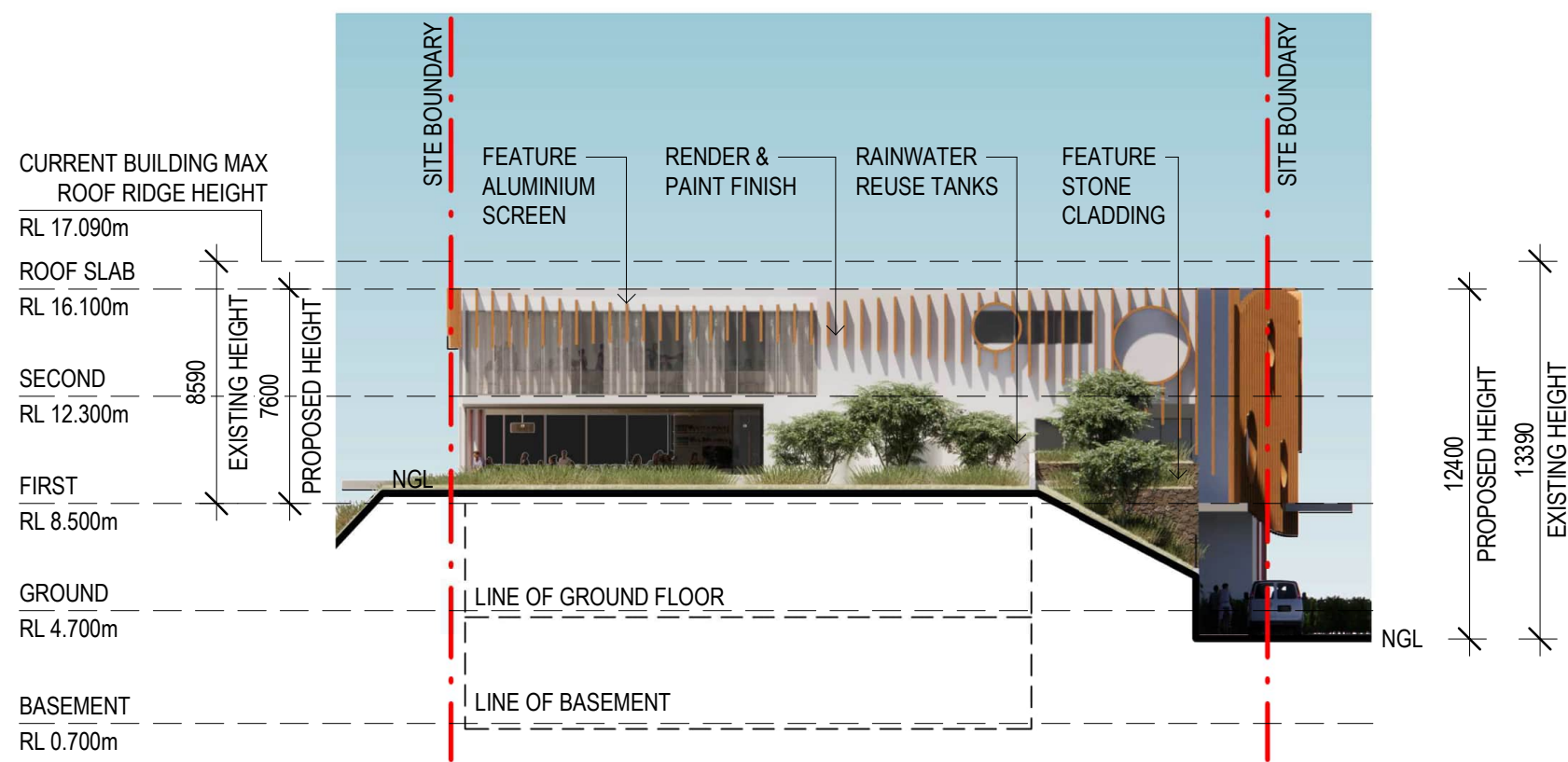
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DESIGN MANAGEMENT**

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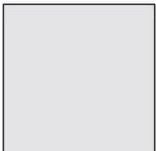


WEST ELEVATION

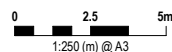


NORTH ELEVATION

MATERIAL PALETTE

-  **FEATURE WALL**
STONE CLADDING
-  **GENERAL WALL**
WHITE RENDER
-  **SUN SHADING/SCREENING**
TIMBER LOOK POWDERCOAT BATTENS
-  **WINDOW FRAME**
POWDERCOAT FINISH

ISSUE	DESCRIPTION	DRAWN	DATE
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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - WEST & NORTH

DATE
JUNE 2022

DRAWN
AJM

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DRAWING NO.
2062 - GOV201

REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

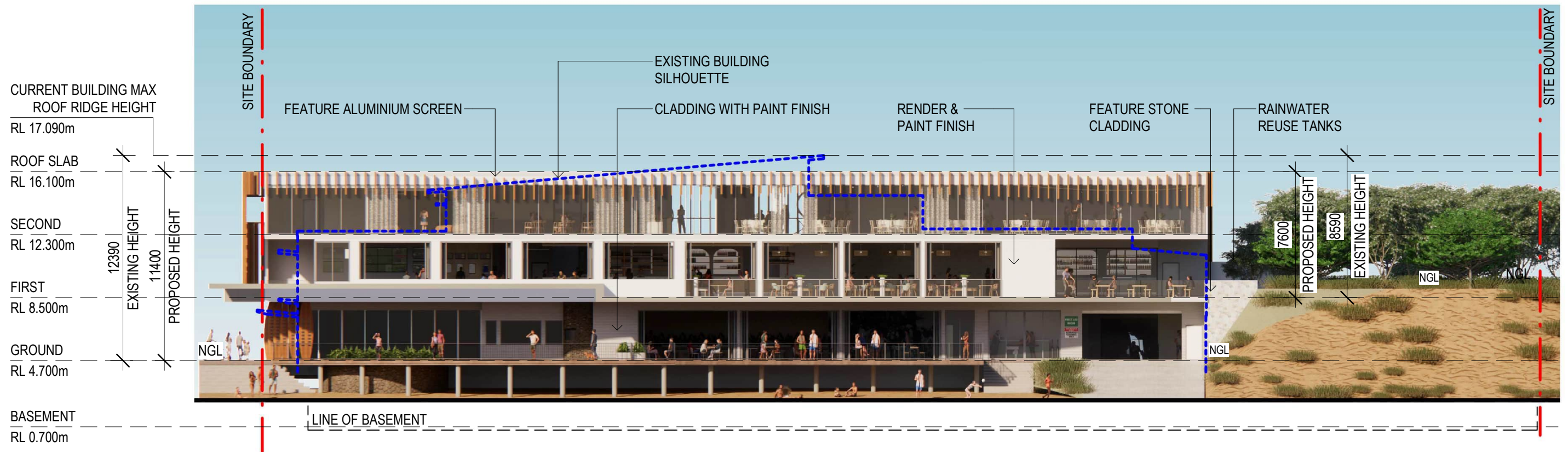


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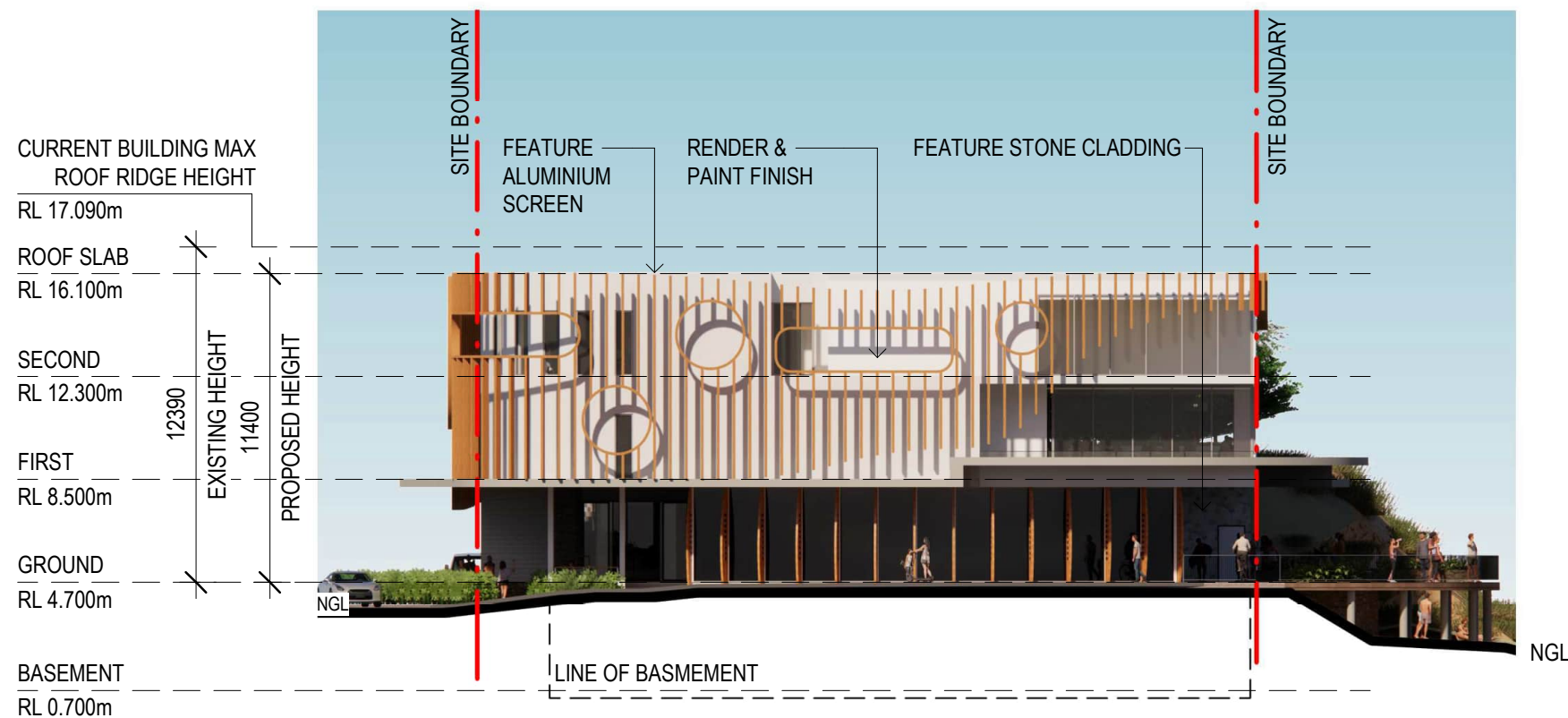
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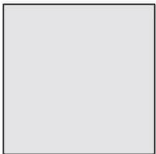
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QBCC: 1160937



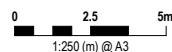
EAST ELEVATION



SOUTH ELEVATION

MATERIAL PALETTE	
	FEATURE WALL STONE CLADDING
	GENERAL WALL WHITE RENDER
	SUN SHADING/SCREENING TIMBER LOOK POWDERCOAT BATTENS
	WINDOW FRAME POWDERCOAT FINISH

ISSUE	DESCRIPTION	DRAWN	DATE
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G	ISSUE FOR APPROVAL	AJM	22.05.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - EAST & SOUTH

DATE
JUNE 2022

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DESIGN MANAGEMENT**

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PERSPECTIVE VIEW 1



PERSPECTIVE VIEW 2




PERSPECTIVE VIEW 3



PERSPECTIVE VIEW 4

ISSUE	DESCRIPTION	DRAWN	DATE
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E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024
G	ISSUE FOR APPROVAL	AJM	22.05.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

 LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS
 DATE
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PERSPECTIVE VIEW 5



PERSPECTIVE VIEW 6




PERSPECTIVE VIEW 7



PERSPECTIVE VIEW 8

ISSUE	DESCRIPTION	DRAWN	DATE
B	ISSUE FOR APPROVAL	BMR	08.11.2023
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E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024
G	ISSUE FOR APPROVAL	AJM	22.05.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

 LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS
 DATE
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 AJM
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 INTERIOR DESIGN
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PERSPECTIVE VIEW 9



PERSPECTIVE VIEW 10

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	28.03.2024
B	ISSUE FOR APPROVAL	AJM	03.04.2024
C	ISSUE FOR APPROVAL	AJM	05.04.2024
D	ISSUE FOR APPROVAL	AJM	22.05.2024

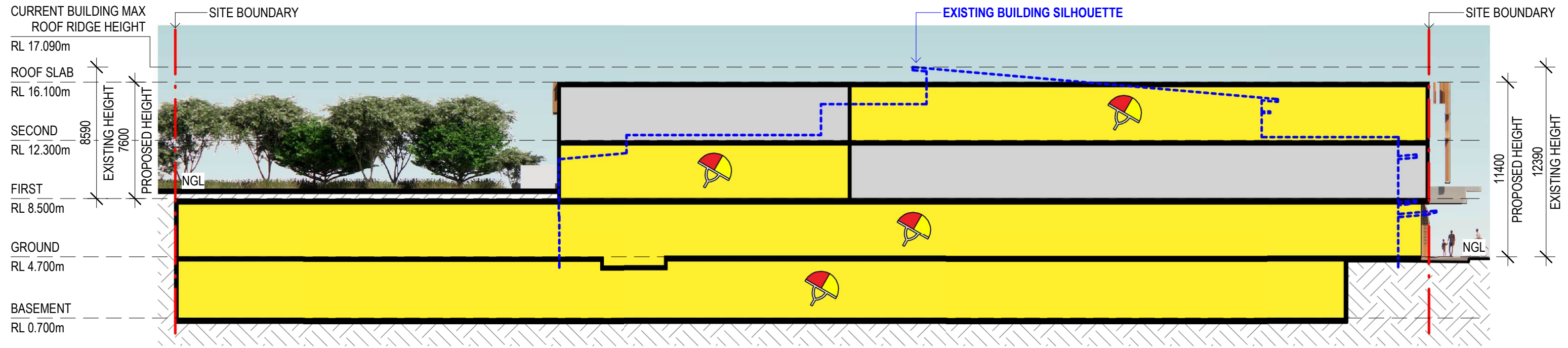
PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

 LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS
 DATE
 JUNE 2022
 DRAWN
 AJM
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2062 - GOV205
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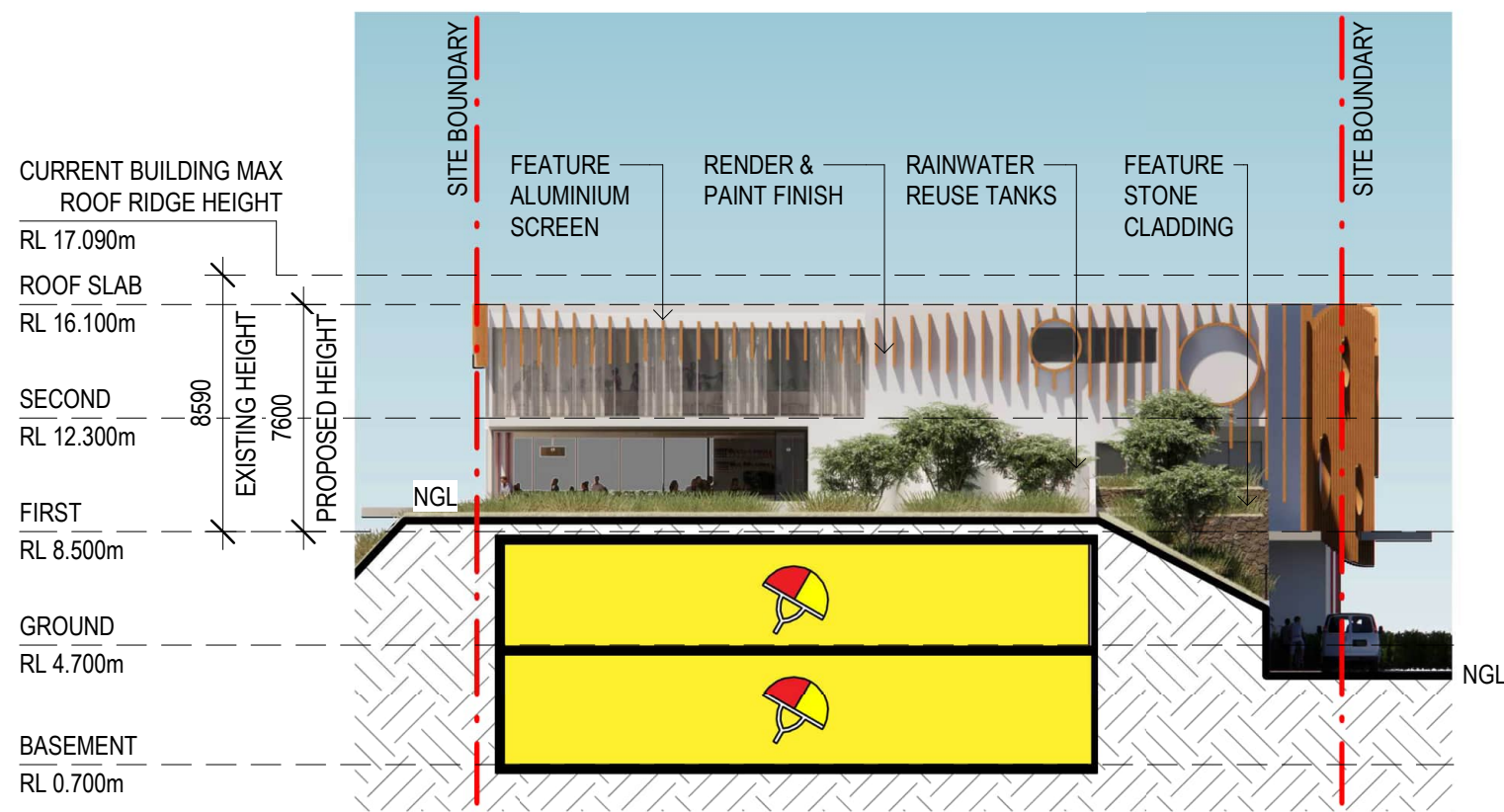
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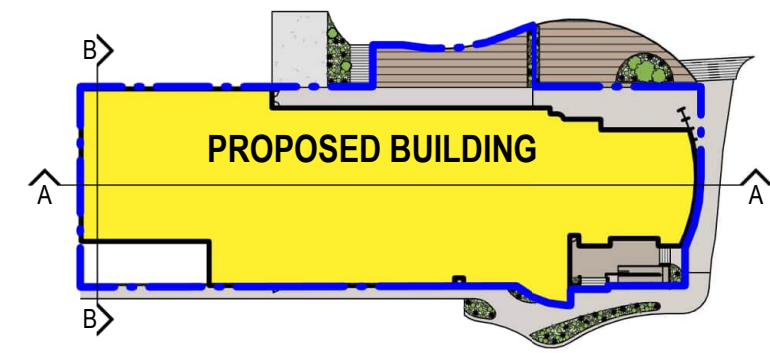
PROPOSED SECTION A

MAROOCHYDORE SURF LIFESAVING CLUB



PROPOSED SECTION B

MAROOCHYDORE SURF LIFESAVING CLUB



KEY PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	22.05.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE		
SECTIONS		
DATE	DRAWN	CHECKED
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**BUILDING DESIGN
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DESIGN MANAGEMENT**

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Appendix 3
Landscape Design Plans prepared by Bird Landscape Design

MAROOCHYDORE SURF LIFE SAVING CLUB - EXTENSION

Lot 471 SP142403, 34-36 Alexandra Parade, Maroochydore, Queensland

Landscape Concept Plan

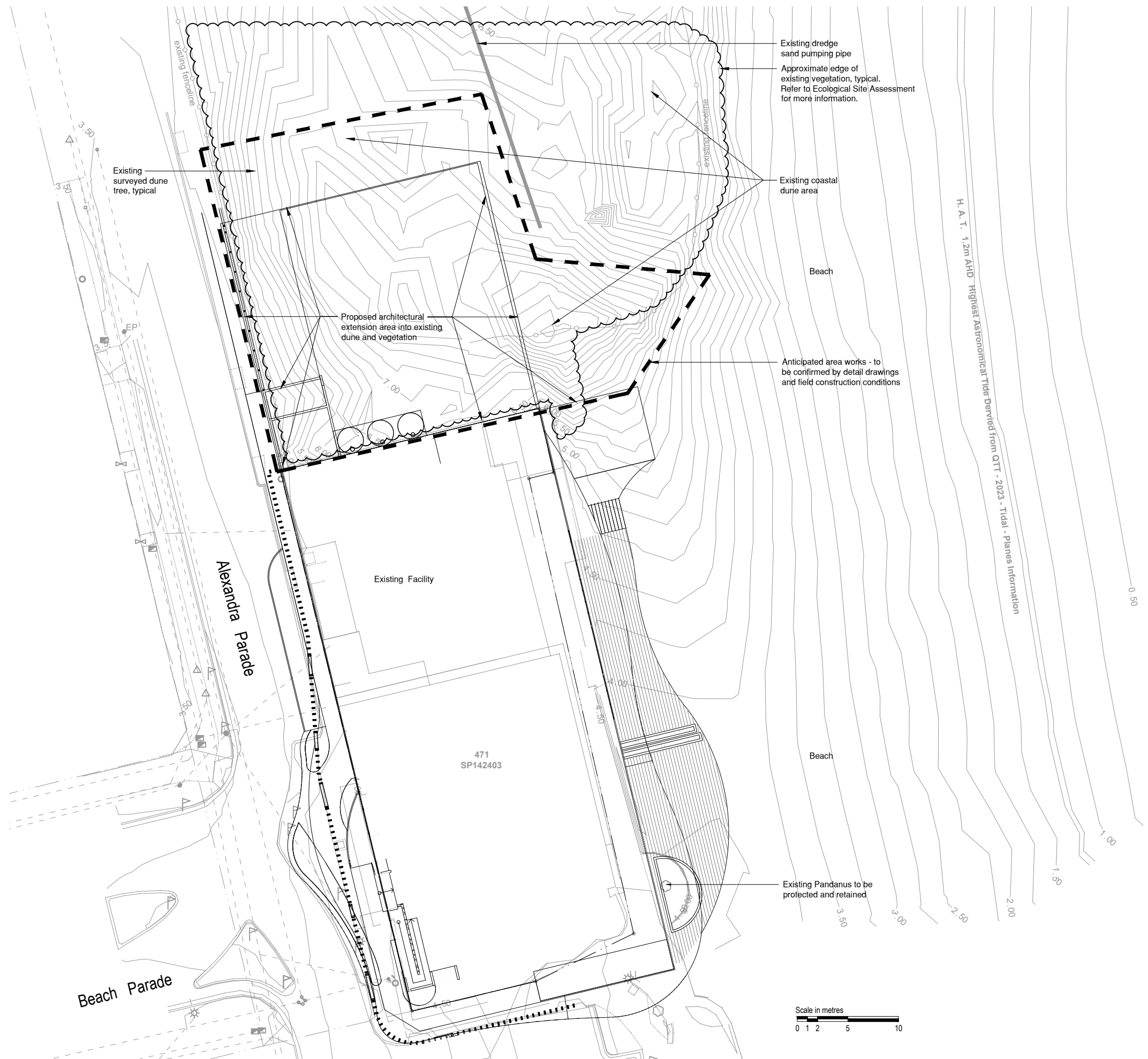
28 May 2024

Sheet Index

LCP1 - Existing Conditions, Proposed Extension

LCP2 - Landscape Concept Plan, Section

LCP3 - Proposed Schedules, Indicative Imagery



DATE	ISSUE	DESCRIPTION	DRAWN	CKD
28.05.24	A	For Application	BB	BB

Scale:
1:200 @ A1
1:400 @ A3

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Landscape Concept Plan Package
Job No: 2426

LCP1 Existing Conditions, Proposed Extension
Sheet Title

Project:
Maroochydore Surf Club Expansion
Lot 471, SP142403, 34-36 Alexandra Parade, Maroochydore, QLD

Client: Maroochydore Surf Lifesaving Club Inc

BIRD LANDSCAPE DESIGN
Landscape Architecture, Urban Design, Land Planning
3 Vector Place, Little Mountain, QLD 4551 Australia
M: +614 7705 5222
E: brian@birdgolfdesign.com
W: birdgolfdesign.com



- Legend**
- Existing Vegetation to be protected and remain
 - Revegetation Trees
 - Shrubs
 - Groundcovers, Vines

LANDSCAPE OBJECTIVES
 This plan has been developed to comply with the current Sunshine Coast Council Planning Scheme Landscaping Code, Environmental Protection and Biodiversity Conservation Act, and Queensland State Planning Policy. It should be ready in conjunction with the Ecological Site Assessment.

LANDSCAPE DESIGN PHILOSOPHY
 The proposed plant palette will provide character, setting, and amenity, fire retardant attributes, revegetation and restoration qualities, and is drought tolerant. New gardens will be mulched organically to limit evaporation and weeds.

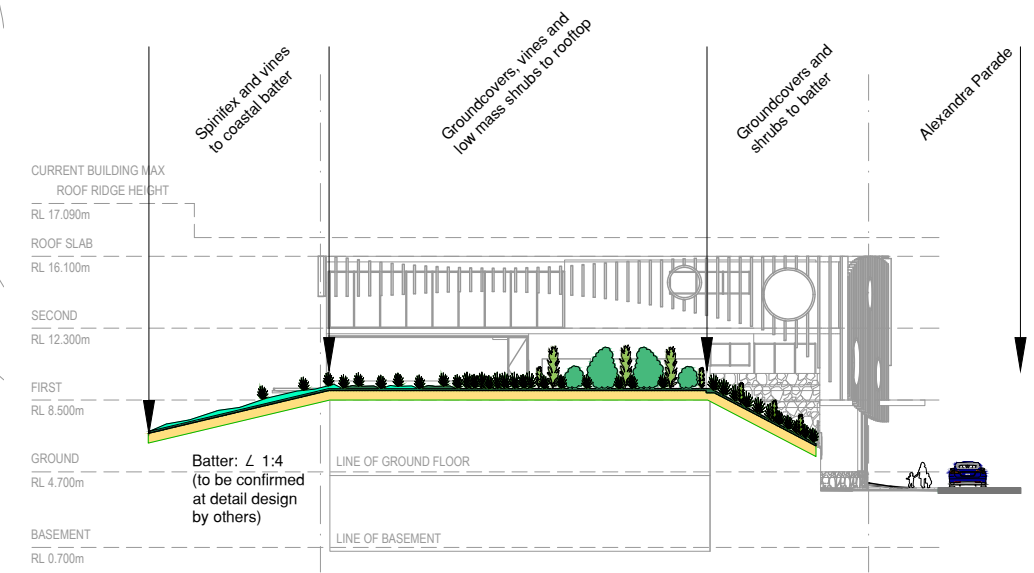
SAFETY
 CPTED principles of landscape design shall be incorporated throughout the landscape development.

MICROCLIMATE DESIGN FEATURES
 New vegetation will also buffer, screen the site, and will reduce glare and heat gain to structures and adjacent vehicles.

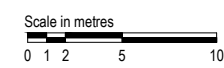
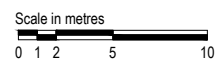
SUSTAINABILITY
 Site topsoils will be stripped, stockpiled, tested and ameliorated as required for site landscape uses. Plant selections will be a native species that are drought tolerant, horticulturally and climatically suitable, fire retardant as practical, low maintenance and have low fertilisation requirements.

ENVIRONMENT
 No environmentally declared weeds will be planted and any existing will be removed and disposed of appropriately.

See Sheet LCP3 for Proposed Plant Schedule.



Section A-A



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Landscape Concept Plan Package
 Job No: 2426

LCP2 Landscape Concept Plan, Section
 Sheet Title Sheet 2 of 3

Project:
Maroochydore Surf Club Expansion
 Lot 471, SP142403, 34-36 Alexandra Parade, Maroochydore, QLD

Client: Maroochydore Surf Lifesaving Club Inc

BIRD LANDSCAPE DESIGN
 Landscape Architecture, Urban Design, Land Planning
 3 Vector Place, Little Mountain, QLD 4551 Australia
 M: +614 7705 5222
 E: brian@birdgolfdesign.com
 W: birdgolfdesign.com

Proposed Planting - Indicative Imagery



ALECTRYON coriaceus - Beach Alectryon



BANKSIA integrifolia - Coastal Banksia



MACARANGA tanarius - Macaranga



ACACIA sophorae - Coastal Wattle



VITEX trifolia - Coastal Vitex



WESTRINGIA 'Wynabbie Gem'



ANIGOZANTHOS species - Kangaroo Paw



CANAVALIA rosea - Coastal Jack Bean



GREVILLEA 'Cooroora Cascade'



IPOMEA pes-caprae - Goat's Foot Morning Glory



SPINIFEX sericeus - Beach Spinifex



SPOROBOLUS virginicus - Sand Couch



VIGNA marina - Dune Bean

Proposed Planting Schedule

GENUS species - Common Name	Notes
Trees	
ACRONYCHIA imperforata - Fraser Island Apple	* Amenity and revegetation
ALECTRYON coriaceus - Beach Alectryon	** Revegetation
BANKSIA integrifolia - Coastal Banksia	** Amenity and revegetation
CUPANIOPSIS anacardioides - Tuckeroo	** Revegetation
MACARANGA tanarius - Macaranga	** Revegetation
Shrubs	
ACACIA leiocalyx - Black Wattle	** Revegetation
ACACIA sophorae - Coastal Wattle	** Revegetation
VITEX trifolia - Coastal Vitex	** Revegetation
WESTRINGIA fruticosa 'Blue Gem'	Amenity
WESTRINGIA fruticosa - Coastal Rosemary	Amenity
WESTRINGIA 'Jervis Gem' - Dwarf Coastal Rosemary	Amenity
WESTRINGIA 'Wynabbie Gem'	Amenity
WESTRINGIA 'Zena' - Dwarf Fruticosa	Amenity
Groundcovers and Vines	
ANIGOZANTHOS species - Kangaroo Paw	Amenity
CANAVALIA rosea - Coastal Jack Bean	** Revegetation
CARPOBROTUS glaucescens - Coastal Noon Flower, Pig Face, Iceplant	** Amenity and revegetation
DIANELLA congesta - Dune Flax Lilly	** Revegetation
FICINIA (Isolepis) nodosa - Knobby Club Rush	** Amenity
GREVILLEA 'Cooroora Cascade'	Amenity
HIBERITA scandens - Twining Guinea Flower	** Revegetation
IMERATA cylindrica - Blady Grass	** Revegetation
IPOMEA pes-caprae - Goat's Foot Morning Glory	** Revegetation
LOMANDRA hystrix - Mat Rush	°
LOMANDRA multi-flora - Many Flowered Mat Rush	°
MYOPORUM ellipticum - Coastal Myoporum	Amenity
MYOPORUM parvifolium - Creeping Boobialla	Amenity
SCAEVOLA calendulacea - Dune Fan Flower	* Amenity
SPAROBOLUS virginicus - Sand Couch	** Revegetation
SPINIFEX sericeus - Beach Spinifex	** Revegetation
VIGNA marina - Dune Bean	** Revegetation
VITEX trifolia - Coastal Vitex	** Revegetation
TURF - ZOYSIA 'Empire'	
	Road reserve areas as needed
*Site's Pre-clear Remnant Ecosystem 12.2.14	
**Existing site vegetation	
° Fire retardant plant	

Proposed Finishes Schedule

Item	Product / Description
Hardscape	
Garden Edge	Steel Garden Edging (where and if applicable)
Softscape	
Topsoil	Ameliorated site topsoil as per soil testing results or import AS 4419 topsoil for garden beds and revegetation.
Organic Mulch	Mulched Gardens - Hoop Pine
Turf	Turf - Zoysia 'Empire'

DATE	ISSUE	DESCRIPTION	DRAWN	CKD
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Landscape Concept Plan Package
 Job No: 2426

LCP3 Proposed Schedules, Indicative Imagery
 Sheet Title Sheet 3 of 3

Project:
Maroochydore Surf Club Expansion
 Lot 471, SP142403, 34-36 Alexandra Parade, Maroochydore, QLD
 Client: Maroochydore Surf Lifesaving Club Inc

BIRD LANDSCAPE DESIGN
 Landscape Architecture, Urban Design, Land Planning
 3 Vector Place, Little Mountain, QLD 4551 Australia
 M: +614 7705 5222
 E: brian@birdgolfdesign.com
 W: birdgolfdesign.com

Appendix 4
Stormwater Management Plan prepared by Arcos Group

Stormwater Management

Maroochy Surf Club
34/36 Alexandra Parade,
Maroochydore, QLD, 4558

Arcos Project: 230965

Attention: Maroochyore Surf Life Saving Club

C/- N/A

By Email

27 May 2024

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Stormwater Management
Maroochy Surf Club
34/36 Alexandra Parade,
Maroochyore, QLD, 4558

Document Control

Version	Date	Details	Prepared	Checked	Approved
0	27/05//24	For Approval	JH	LS	LS

Principal Civil Engineer**Lachlan Swann** B.Eng (Civ) (Hons), CPEng, RPEQ, NER, MIEAust

lachlanswann@arcosgroup.com.au

For and On Behalf of Arcos Group

E admin@arcosgroup.com.au

W arcosgroup.com.au

A 177C Brisbane Road, Mooloolaba QLD 4557

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1 Introduction

This Stormwater Management Plan (SWMP) has been commissioned by Maroochydore Surf Life Saving Club Inc, forming part of a Ministerial Infrastructure Designations (MID) application to the state for a proposed re-development at 34-36 Alexandra Parade, Maroochydore. The subject site is described as Lot 471 on SP142403 and has an area of 1291m².

A site locality plan and aerial are presented in **Figure 1 & Figure 2**.



FIGURE 1: SITE LOCALITY (SOURCE: SCC)

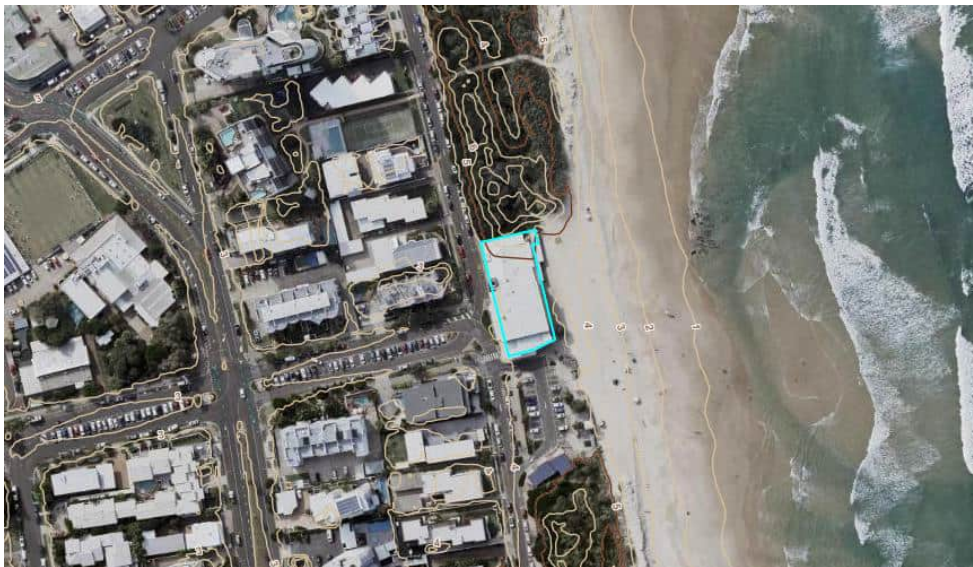


FIGURE 2: SITE AERIAL (SOURCE: SCC)

The proposed development is to demolish and reconstruct the surf club, and to increase the lease area an additional 993m². The development will consist of a basement level with a gym and surf lifesaving facilities, a ground floor level including patrol room, club rooms and café, a first floor level for a restaurant and supporters club, and a second floor including a function space, meeting rooms and lifesaving facilities. The purpose of this report is to outline the requirements for stormwater infrastructure, including water quantity and quality, for the proposed development.

The proposed development is represented in **Figure 3**.



FIGURE 3: DEVELOPMENT RENDERS (SOURCE: BRD GROUP)

1.1 Reference Information

The report should take in consideration the following reference information:

TABLE 1: INFORMATION TO BE READ IN CONJUNCTION

Document Name	Source	Comments	Attached
Maroochydore Surf Life Saving Club Re-development	BRD Group	DA Building Design	No
101130 MSLSC DTM MGA2020 PLANE A1	Murray & Associates Surveyors & Town Planners	Survey	No

2 Existing Case

2.1 General

The existing site contains the current Maroochydore Surf Life Saving Club. The site generally falls east toward Maroochydore Beach.

2.2 Drainage & External Catchments

Runoff within the subject site generally falls east towards the beach. Multiple downpipes can be seen on the western side of the existing building which outlet to the kerb in Alexandra Parade. The carpark to the south has existing drainage which falls west towards the road, not towards the beach as suggested by Sunshine Coast Council (SCC) mapping. No overland flow paths are generated through the site.

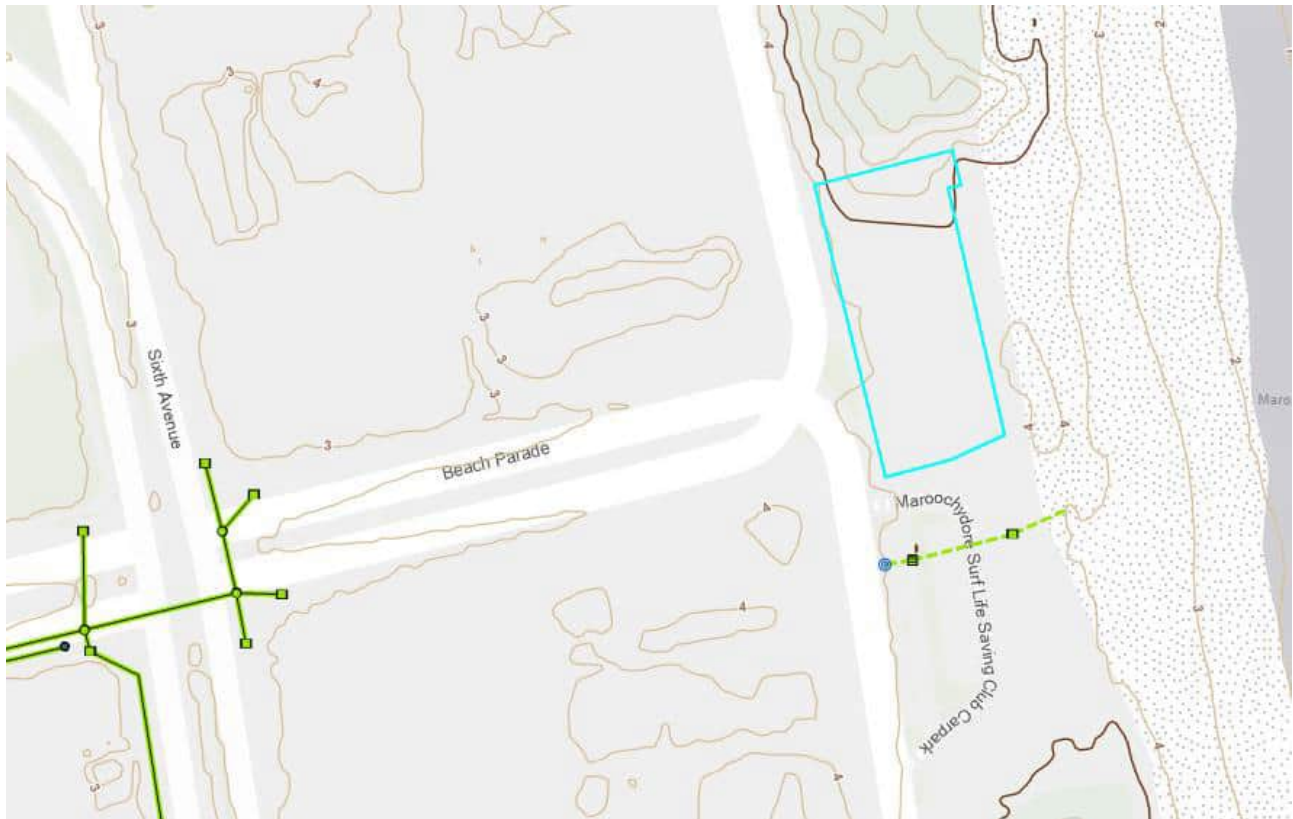


FIGURE 4: EXISTING STORMWATER NETWORK (SOURCE: SCC)

2.3 Flooding

The site is not identified as being impacted by flooding as per SCC Flood Hazard Mapping.

3 Developed Case

3.1 General

The proposed stormwater management identified in this report will generally comply with the requirements of the Queensland Urban Drainage Manual 2017 (QUDM), SCC PSP and other relevant codes and guidelines.

The minor storm event is not defined in Table SC6.14.3A of the SCC PSP for Sport and recreation zone. Arcos have assumed the minor storm event is the 10% (Q10) Annual Exceedance Probability (AEP) event. This storm event within QUDM Table 7.3.1 has a corresponding development category being central business and commercial, and Urban residential high density - both of which make up the majority of the surrounding area.

The minor drainage system is anticipated to consist of the following:

- Piped roof water connections to reuse tanks;
- Soakwell and discharge into the vegetated sand dunes;

The major drainage system will predominately discharge to the beach.

3.2 Lawful Point of Discharge (LPD)

A portion of the existing site discharges stormwater to the kerb and channel of Alexandra Parade through piped connections to kerb adaptors. The remainder of the existing site discharges to the beach and sand dunes where it falls towards the ocean and drains through the sandy soil into the water table below.

Both the road frontage and the beach can be considered the LPD.

The LPD for the site is assessed in accordance with QUDM test criteria and SCC's Flooding & Stormwater Management Guideline objectives. The development proposes to maintain stormwater discharge from the site to the beachfront through a soakwell for the minor event.

It is determined that the proposed development will not alter the sites stormwater discharge characteristics that will substantially damage third party property. It is considered that LPD has been provided in accordance with SCC and QUDM requirements.

4 Stormwater Quality Management

The performance outcomes and objectives for stormwater quality management are outlined in SCC PSP for Development Works. This development complies with the SCC PSP for development works, refer to the attached Stormwater Management Code Checklist for each performance outcome.

The performance outcomes outlined within the State Planning Policy (SPP) do not require water quality management for development footprints with an area less than 2500m². As the surf club site is less than 2500m² no stormwater quality management measures are required to comply with the SPP.

Water quality management has however still been proposed for this re-development for best practice and in line with operational requirements of the Surf Life Saving Club. Water quality management has been proposed, utilising re-use of roof water and storing in tanks for operational use within the site, such as washing down surf club equipment.

Rainwater harvesting tanks are to be connected to a minimum of 100% of the total roof area. It is proposed that the Maroochy Surf Club install three 10kL tanks as the fresh water to use for washing down surf lifesaving equipment.

4.1 Construction Phase

The site's management is important in ensuring water quality standards are achieved during the construction phase. Implementing best practice Erosion and Sediment Control techniques is imperative to managing the runoff quality affected by construction works.

The pollutants that would typically be generated during the construction of the proposed development are outlined in Table 2.

TABLE 2: TYPICAL POLLUTANTS GENERATED DURING CONSTRUCTION

Pollutant	Source
Litter	Paper, construction packaging, food packaging, cement bags, offcuts
Sediment	Unprotected exposed soils and stockpiles during earthworks and building
Hydrocarbons	Fuel and oil spills, leaks from construction equipment
Toxic Materials	Cement slurry, asphalt prime, solvents, cleaning agents, wash waters (e.g. from tile works)
Ph Altering Substances	Acid sulphate soils, cement slurry

Best practice measures shall be utilised during the construction phase to minimise the potential impacts of the pollutants mentioned above. Detailed Erosion and Sediment Control Management Plans should be developed prior to construction works commencing in accordance with the International Erosion Control Association (IECA) - "Best Practice Erosion and Sediment Control (BPESC) document" and overseen by a Certified Professional in Erosion and Sediment Control (CPESC) or Registered Professional Engineer Queensland (RPEQ).

Through the principal contractor, the developer shall be responsible for ensuring that temporary sediment and erosion controls are installed and maintained correctly.

5 Stormwater Quantity Management

5.1 General

The proposed development increases the fraction impervious and coefficient of runoff for the site. This section investigates measures to ensure that non-worsening stormwater discharge is achieved for the site.

The majority of the site catchment is composed of roof area. The roof is proposed as a skillion roof which falls east towards Maroochydore Beach.

5.2 On-site Detention (OSD)

It is proposed that no detention is installed within this development.

This development is considered to be exempt from peak flow management as runoff discharges directly to a watercourse (defined under the Water Act 2000) and tidal waters (defined under the Coastal Protection and Management Act 1995) and the following criteria:

- The site is in the lower third of the waterway catchment; and
- Peak site discharge in the 1%AEP event represents less than 1% of the peak discharge in the receiving waterway in the 39%AEP event; and
- Development site area <1% of the catchment area of receiving waterway at the point of discharge.

As the Maroochydore Surf Club is next to the ocean it complies with all of the above. Therefore, no detention is required for this redevelopment.

5.3 Reuse Tanks & Soakwell

It is proposed to direct the roof water (majority of the catchment) to three 10kL slimline reuse tanks to the north of the building, as shown on the Drawing 401. These tanks will be located on the revegetated roof area above the ground floor.

Due to the nature of the surf club, fresh water is required to be used regularly for washing down surf life saving equipment that has been in the ocean. As a result, it is expected that these reuse tanks will regularly be emptied and will act very similar to a detention system in the higher frequency (smaller) rainfall events.

The reuse tanks will overflow to a soakwell within the vegetated sand dune, refer Appendices for calculations and details. This soakwell has been designed to City of Perth standards and is proposed to be constructed of polypropylene units wrapped in a geofabric cloth. The soakwell is 1.5m wide, 16m long and 0.5m in height.

The soakwell is to be constructed on the vegetated roof to the north east of the lot to remain within the property boundary as per attached drawing.

The soakwell distributing stormwater to the vegetated sand dune will act in similar fashion to a bio basin with a vegetated sand filter media.

The building will require specific structural engineering design for the loading of the stormwater tanks above the basement and ground floors. Final tank arrangement to be confirmed with both the structural engineer and Arcos prior to construction.

6 Conclusion

This stormwater management plan has reviewed the pre-development and post-development scenarios of the site. The report has determined non-worsening flows and measures to satisfy water quality in stormwater runoff.

Based on this assessment, the following conclusions have been made:

- Best practice management of stormwater quality can be achieved through alternative management measures. Alternate measures include a total of 30kL of reuse tanks for roof water. Reuse will be utilised regularly to wash down surf lifesaving equipment.
- The reuse tanks will overflow to a soakwell within the vegetated sand dunes. The soakwell proposed utilised polypropylene units wrapped in a geofabric cloth.
- The major design storm flows from the development site discharges to the beach/ocean.
- The site is unencumbered by regional flooding and overland flow, as shown on SCC online flood hazard mapping service.
- This development complies with the SCC PSP for development works.

In summary, the quality of stormwater leaving the site will satisfy the criteria outlined in Qld State Planning Policy – 2017. The development on the site will result in non-worsening of stormwater runoff quantities to the downstream conditions. All stormwater will be discharged to a Lawful Point of Discharge, and the site is unaffected by flooding.

LIMITATIONS

Arcos Unit Group Pty Ltd (Arcos) has prepared this document for the project described on the title page for the client's exclusive use. The document is specific to this project and for the purposes as described within the document. The document cannot be used for any other project on the same site or other sites or relied upon by a third party. Any party relying upon this document beyond its exclusive use and purpose as stated above, and without the express written consent of Arcos, does so entirely at its own risk and without recourse to Arcos for any loss or damage. Arcos has necessarily relied upon information provided by the client and/or their agents.

The required detailed design for the service infrastructure will be subject to the conditions (if any) attached to the Development Approval provided by Council and any nominated referral agencies.

The advice given in this document is based upon the assumed conditions and data outlined herein. The relevance and accuracy of advice given are directly affected by variations in the information supplied and open source information relied upon.

This document must be kept in its entirety, read in full and understood. Interpretations or conclusions made by others unless supported by an expressed written statement, interpretation, outcome or stated within this document cannot be the responsibility of Arcos.

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Appendix A – Stormwater Calculations

SOAKWELL CALCULATIONS

Address: Maroochy Surf Club
Job Number: 230965
Date: 15/02/2024
Engineer: JH

Calculations based off City of Perth

Catchment area (roof & pavement)	1179 m ²	Note - even though this site is at the beach which would have a very shallow water table, the soakwell is in the sand dune which is well above the water table
water table depth	5 m	

Shallow or Deep water table Deep

Shallow required soakage area rate 31.99 m² per 1000m² catchment (from City of Perth)

Deep required soakage area rate 22.85 m² per 1000m² catchment (from City of Perth)

Required soakage area rate 22.85 m² per 1000m² catchment

Required soakage area 26.9 m²

Soakage area is determined by the base area and 25% of the side wall area (City of Perth)

Width	1.5 m
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Length	16 m
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Height	0.5 m
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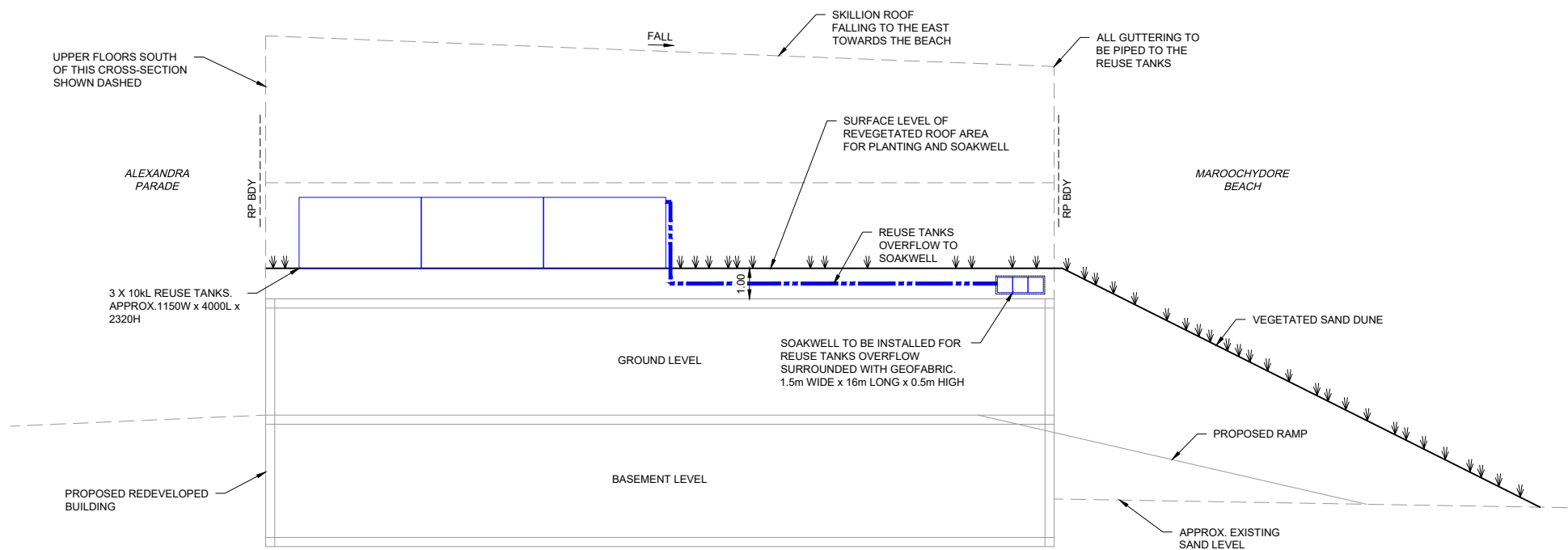
Base soakage area 24 m²

Side wall soakage area 17.5 m²

Allowable soakage area 28.375 m² (with 25% of side wall soakage area)

The soakwell has adequate area

Appendix B – Stormwater Drawings

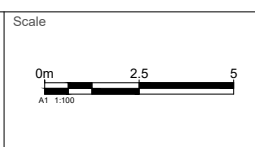


SECTION A
1:100

Last saved by: JACOB@ARCOSGROUP.COM.AU | Last Printed: 2024-04-10
 Project: MAROOCHY SURF LIFESAVING CLUB REDEVELOPMENT - CIVIL | ALEXANDRA PARADE | MAROOCHYDORE, QLD, 4558

Rev	Revision Description	Date	Approved
P2	DESIGN CHANGES	10.04.24	LS
P1	PRELIMINARY	13.02.24	LS

North Point	
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Horiz. Datum LOCAL
Vert. Datum AHD
RL Datum

Client
MAROOCHYDORE SURF CLUB

Consultant

ARCOS

CIVIL | STRUCTURAL | GEOTECHNICAL
SUNSHIRE COAST | BRISBANE | GOLD COAST
www.arcosgroup.com.au | ABN 51 640 311 842

Project
**MAROOCHY SURF LIFESAVING CLUB
REDEVELOPMENT - CIVIL
ALEXANDRA PARADE
MAROOCHYDORE, QLD, 4558**

Drawn	JH
Design	JH
Check	LS

Approved	Approved Date	Signed
LACHLAN SWANN	10.04.2024	
RPEQ 21223		

Drawing
**STORMWATER
DETAILS**

Project No.	Drawing No.	Rev No.
230965	OPW-C-402	P2
Status	PRELIMINARY	Sheet Size
		A1

Appendix C – Stormwater Management Code Checklist

This code checklist is to help you address and respond to the applicable provisions in the Sunshine Coast Planning Scheme 2014 for your proposed development.

Instructions

The intent of this checklist is to specifically report on the exceptions of non-compliance with provisions of the code. For each acceptable outcome select whether you comply, don't comply or if not applicable to your proposed development.

Where non-compliance or no acceptable outcome is identified, provide a detailed justification on how the proposal satisfies the relevant performance outcome. In addition, identify any technical reports or plans required to demonstrate compliance with an acceptable outcome or performance outcome.

When you use any code checklist, it is recommended that it is accompanied by council's general assessment report template, found on council's website.

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? <small>If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application</small>
Development design								
PO1	Development design, including but not limited to layout, scale, intensity and staging, is based on a thorough assessment of: (a) site characteristics (b) potential environmental risks, and (c) the likely effectiveness and limitations of available erosion and sediment control and stormwater drainage measures to achieve protection of the	AO1	No acceptable outcome provided.	Yes	No	N/A	Refer to report & drawings.	Refer AG-230965-RPT-C-01_0_Maroochy Surf Club
				<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Privacy

Council will use any personal information provided for the intended purpose only and for remaining in contact with you. Council is authorised to collect this information in accordance with the *Local Government Act 2009* and other Local Government Acts. Your personal information is only accessed by persons authorised to do so. Your personal information is dealt with in accordance with council's privacy policy.

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application
	<p>environmental values of water and the functioning of stormwater infrastructure, both during and post construction.</p> <p>Editor's note: the planning scheme policy for development works provides guidance for satisfying PO1, including requirements for the preparation of an erosion risk assessment and an erosion hazard evaluation report. Section 9.4.11 (works, services and infrastructure code) sets out additional requirements in relation to erosion and sediment control during construction activities and works.</p>							
Stormwater drainage systems								
PO2	Development is provided with a stormwater drainage system which: (a) incorporates allowance for climate change, and (b) ensures the development is adequately drained, and stormwater is managed and lawfully discharged without altering stormwater drainage characteristics external to the site.	AO2.1	Development is provided with a stormwater drainage system which is designed and constructed in accordance with the standards specified in the planning scheme policy for development works .	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
		AO2.2	The stormwater drainage system connects to a lawful point of discharge in accordance with the planning scheme policy for development works .	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
		AO2.3	Stormwater flows discharged from the development are either within the capacity of the downstream drainage system such that non-worsening occurs, or are mitigated to pre-development characteristics.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application		
		AO2.4	Development provides for the management of stormwater to incorporate appropriate allowance for climate change impacts (including rainfall intensity and sea level rise), in accordance with the planning scheme policy for development works .	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>				
PO3	Development is provided with stormwater conveyance channels which use natural channel design principles to convey external catchment stormwater through development and support landscape, passive recreation and ecological values.	AO3.1	Development is provided with stormwater conveyance channels designed in accordance with the standards specified in the planning scheme policy for development works .	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	No external catchment enters the site & no channels are used. All roof water (majority of the catchment) is captured and piped to reuse tanks. The remainder of the site is graded to fall towards to the sand dunes/beach.	Refer AG-230965-RPT-C-01_0_Maroochy Surf Club		
		AO3.2	Landscape and ecological features (e.g. plant species and habitat types) used in stormwater conveyance channels are complementary to the local context, including natural waterways.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>			As above	As above
		AO3.3	Bank and bed stability and planting densities result in a stable channel over the long term and minimal potential for invasive weed growth.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>			As above	As above
PO4	Stormwater infrastructure is designed to minimise maintenance costs and the requirement for specialised equipment or maintenance techniques.	AO4	Stormwater infrastructure is designed and constructed in accordance with the standards specified in the planning scheme policy for development works .	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>				
PO5	Development avoids stormwater inflow and infiltration to the sewer infrastructure network.	AO5	No acceptable outcome provided.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	Stormwater is captured and directed away from all sewer infrastructure.	Refer AG-230965-RPT-C-01_0_Maroochy Surf Club		

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application
Hydrology and waterway stability								
PO6	Development prevents increased channel bed and bank erosion in waterways by limiting changes in flow rate and flow duration within receiving waters.	AO6	Stormwater discharges are mitigated to achieve the waterway stability objective specified in the planning scheme policy for development works.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	There is no direct discharge to a waterway – this site discharges to the sand dune which infiltrates into the sand.	Refer AG-230965-RPT-C-01_0_Maroochy Surf Club
PO7	Development protects in-stream ecology by maintaining pre-development low flow discharge regimes.	AO7	Frequent stormwater discharges are captured and managed to achieve the frequent flow management objective specified in the planning scheme policy for development works.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	As above	As above
PO8	Development ensures adequate surface and sub-surface water to maintain the environmental values of water dependent ecosystems, including downstream in stream and off stream aquatic, riparian, wetland and terrestrial ecosystems.	AO8	Stormwater harvesting (excluding roof water harvesting) and the location and form of stormwater discharge points do not compromise the pre-development hydrology of receiving waters.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
Stormwater quality								
PO9	Development protects or enhances the environmental values and water quality objectives of receiving waters or buffer areas within or downstream of a site. Editor's note: water quality objectives are prescribed in schedule 1 of the	AO9.1	Stormwater discharges achieve the pollutant load reduction objectives specified in the planning scheme policy for development works.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	The stormwater quality design objectives do not apply due to Table SC6.14.3E	
		AO9.2	Where a development includes or adjoins a constructed waterbody or a buffer to a waterway or wetland, the pollutant load reduction targets are met prior to the discharge entering that buffer or waterbody.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	The stormwater quality design objectives do not apply due to Table SC6.14.3E	

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application
	<i>Environmental Protection (Water) Policy 2009.</i>							
PO10	Treatment systems that use natural processes and materials are integrated into the development, wherever practicable, taking into account the whole of life cycle cost to enhance biodiversity and landscape benefits.	AO10	No acceptable outcome provided.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	SW system discharges into the natural sand dune, which incorporates natural plants and processes.	
PO11	Treatment systems are designed to eliminate or minimise health, safety and aesthetic hazards.	AO11	Risks associated with insect breeding, odour and public safety are minimised by designing treatment systems in accordance with the planning scheme policy for development works.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
PO12	Treatment systems are designed to minimise maintenance, renewal and adaptation costs and the requirement for specialised equipment or maintenance techniques.	AO12	Design achieves acceptable maintenance, renewal and adaptation costs for the project life in accordance with the planning scheme policy for development works. Editor's note: project life is a minimum of 50 years, unless the asset is proposed to be decommissioned in a shorter period.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
Stormwater harvesting and re-use								
PO13	Development provides for stormwater capture, in addition to roof water capture.	AO13	Stormwater harvesting systems are designed in accordance with the standards specified in the planning scheme policy for development works.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>	30,000 litres are provided for surf life saving gear washing and general reuse.	
PO14	Stormwater capture for the purpose of substituting for potable water use	AO14.1	Stormwater harvesting systems are designed in accordance with the	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application
	does not create a health, safety or aesthetic hazard.		standards specified in the planning scheme policy for development works .					
		AO14.2	Water quality treatment is designed, established and monitored to human health standards appropriate for the intended use.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
PO15	Stormwater harvesting systems are designed to minimise maintenance costs and the requirement for specialised equipment or maintenance techniques and are provided with an ongoing funding source.	AO15.1	For systems that are to be dedicated to Council as public assets, there is an overriding community benefit resulting from the stormwater harvesting system.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	No assets are being dedicated to council	
		AO15.2	A detailed operations and maintenance budget is prepared for the project life and financial assurances are in place to operate and maintain the system for the project life.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Not required	
Construction and establishment of stormwater management systems								
PO16	Construction methods and materials minimise environmental impacts and minimise the risk of asset failure.	AO16.1	Construction methods are undertaken in accordance with the standards specified in the planning scheme policy for development works .	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
		AO16.2	Construction timing is co-ordinated with civil and other landscape works to minimise risks to stormwater infrastructure and the environment.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		
PO17	Vegetated stormwater management systems proposed to be dedicated as public assets are established and maintained during the maintenance period to ensure optimal vegetation growth and that	AO17	Establishment and maintenance of stormwater management systems is undertaken in accordance with the standards specified in the planning scheme policy for development works .	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>		

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application
	the functional elements of the system achieve the design function at the end of the maintenance period.							
Constructed waterbodies								
PO18	Constructed waterbodies which are proposed to be dedicated as public assets are avoided, unless there is an overriding need in the public interest.	AO18	Where a constructed waterbody is proposed to be dedicated as a public asset, an overriding need for the waterbody is demonstrated in accordance with the requirements of the planning scheme policy for development works .	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	No constructed waterbodies	
PO19	Constructed waterbodies are designed and constructed to achieve environmental values and water quality objectives which correlate to their intended function, use and receiving waters.	AO19	Constructed waterbodies are designed and constructed in accordance with standards specified in the planning scheme policy for development works .	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	As above	
PO20	Constructed waterbodies are designed, constructed and established to minimise maintenance and decommissioning costs and the requirement for specialised maintenance equipment and techniques, and are provided with an on-going funding source.	AO20	A detailed maintenance and decommissioning costing is prepared for the project life in accordance with the planning scheme policy for development works and financial assurances are in place to provide for maintenance for the project life and, if required, decommissioning.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	As above	
PO21	Constructed waterbodies are not used as stormwater quality treatment devices.	AO21	Stormwater discharges achieve the pollutant load reduction objectives specified in the planning scheme policy for development works , prior to entering the constructed waterbody.	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	As above	
PO22		AO22		Yes	No	N/A		

Performance outcome (PO)		Acceptable outcome (AO)		Assessment (compliant / non-compliant)			Detailed justification assessment	Is a technical report or plan required? If Yes, identify the title of the technical report or plan and confirm that it has been attached as supporting information to the application
	Constructed waterbodies support landscape, passive recreation and ecological values, and do not pose a health, safety or aesthetic risk.		Constructed waterbodies are designed and constructed in accordance with the standards specified in the planning scheme policy for development works .	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No constructed waterbodies	

Appendix 5
Coastal Hazard Assessment prepared by Burchills



The experience **you deserve** 



Maroochydore Surf Lifesaving Club Redevelopment

Coastal Hazard Assessment


Client: Maroochydore Surf Lifesaving Club Inc.


Project No: BE230663

Document No: BE230663-RP-CHA-01

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Prepared by:	Nathan McDonald
Position:	Environmental Planner
Signed:	
Date:	20.05.2024

Approved by:	Philip R Bell
Position:	Principal Engineer
Signed:	
Date:	20.05.2024

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Coote Burchills Engineering Pty Ltd ACN: 166 942 365

Level 2, 26 Marine Parade SOUTHPORT QLD 4215
 PO Box 3766, Australia Fair SOUTHPORT QLD 4215
 Telephone: +61 7 5509 6400

Level 25, 215 Adelaide Street BRISBANE QLD 4000
 PO Box 3766, Australia Fair SOUTHPORT QLD 4215
 Telephone: +61 7 3606 0201

Unit 4, 462 Ruthven Street TOOWOOMBA QLD 4350
 PO Box 1439, TOOWOOMBA QLD 4350
 Telephone: +61 7 4580 4970

Level 1, 12 Byron Street BANGALOW NSW 2479
 PO Box 315 BANGALOW NSW 2479
 Telephone: +61 422 169 163

Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
 PO Box 238, SCARBOROUGH QLD 4020
 Telephone: +61 409 935 884

Level 3, 16 East Street IPSWICH QLD 4305
 Telephone: +61 429 056 347

Email: admin@burchills.com.au
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Executive Summary

Burchills Engineering Solutions (Burchills) were engaged by the Maroochydore Surf Lifesaving Club Inc to prepare Coastal Hazard Assessment to support an application for the proposed extensions to the Maroochydore Surf Club, which is located at 34/36 Alexandra Parade, Maroochydore which is properly described as Lot 471 on RP142403.

The document is required as the proposed redevelopment works will extend to the north of the existing leasehold area, encroaching upon existing sand dunes and is within the coastal district.

This document investigates the potential impacts that coastal hazards may have upon the proposed Surf Club infrastructure and the impacts that the development may have upon the existing coastal environment. The report also assesses the development's compliance with State Code 8: Coastal Development and Tidal Works of the State Development Assessment Provisions to ensure that the project does not:

- Negatively impact upon coastal processes;
- Impact upon the protective function of landforms and retains vegetation;
- Significantly impact the risk or impacts to people or properties;
- Increase the severity of coastal erosion either on or off site; or
- Impact negatively upon Matters of State Ecological Significance.

The report also identifies the potential hazards to which the proposed development may be exposed and measures to mitigate these hazards.

The assessment has determined that the proposed redevelopment works can be undertaken without having a major impact upon coastal processes, complying with the requirements of the State Development Assessment Provisions and the policy intent of the State Planning Policy.

Consideration has also been given to the Sunshine Coast Council's draft Coastal Hazard Adaptation Strategy which is currently being developed.



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Appendix A – Architectural Design Drawings



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Appendix D – Existing Beach Profiles

Appendix E – Code Responses



1. Introduction

Burchills Engineering Solutions (Burchills) were engaged by the Maroochydore Surf Lifesaving Club Inc to prepare Coastal Hazard Assessment to support an application for the proposed redevelopment of the Maroochydore Surf Club located at 34/36 Alexandra Parade, Maroochydore which is properly described as Lot 471 on RP142403.

This document investigates the potential impacts that coastal hazards may have upon the proposed Surf Club redevelopment and the impacts that the development may have upon the existing coastal environment. The report also identifies the potential hazards to which the proposed development may be exposed and measures to mitigate these hazards.

The report also assesses the developments compliance with relevant State and Local Government statutory documents.

1.1 Purpose

The proposal is to expand of the existing Maroochy Surf Life Saving Club building which is situated within the Coastal Zone in a mapped Coastal Management District. Due to the developments location, assessment against the provisions of the State Development Assessment Provisions (SDAP) State Code 8: Coastal Development and Tidal Works is required. The purpose of this code is to ensure that the proposed development is designed and located to:

1. Protect life, buildings and infrastructure from the impacts of coastal erosion
2. Maintain coastal processes
3. Conserve coastal resources
4. Maintain appropriate public use of, and access to and along, state coastal land
5. Account for the projected impacts of climate change; and
6. Avoid impacts on matters of state environmental significance and, where avoidance is not reasonably possible, minimise and mitigate impacts, and provide an offset for significant residual impacts where appropriate.

This assessment therefore focuses upon the potential impacts that development may have upon the coastal processes, the vulnerability of the proposed development to coastal hazards, potential impacts upon natural systems and associated public safety risks.

An assessment against the State Planning Policy 2017 Appendix E – Interim Development Guidelines has been undertaken and is included in Appendix E of this report.

It is noted that the Sunshine Coast Regional Council have been in the process of developing a Coastal Hazard Adaptation Strategy for the local government area and that this document is still in a draft state. Consideration to the merits of this report will be given however, it is noted that the report currently has no statutory power.



1.2 Project Background

The Maroochydore Surf Club was the first established surf club on the Sunshine Coast, being established in 1916 and has patrolled Maroochydore Beach and the Maroochy River Estuary continuously since that time.

The surf club has been in its current location since the 1960s and has undergone a number of changes since that time, growing to meet the areas expanding population. The redevelopment of the surf club being proposed seeks to expand the facility to meet the current and future demands of the Sunshine Coast's growing population.

Maroochydore Beach itself is a dynamic coastal environment which is subject to constant change, with processes of erosion and accretion driven by wind, tidal fluctuation and wave action. The beach profile is shaped by periods of accretion and erosion which is dependent upon the wave environment and the supply of sand by longshore drift.

Due to the location of the proposed redevelopment and its exposure to coastal hazards, it is imperative that the design of the proposed structure incorporate measures which will mitigate the impacts of coastal hazards and reduce risks associated with the infrastructure to an acceptable level.

It is also important to ensure that the design of the Surf Club extensions do not adversely impact upon coastal processes or exacerbate the risk of erosion upon public and private properties in the vicinity of the proposed development.

1.3 Subject Site

The subject site is situated at 34/36 Alexandra Parade, Maroochydore, which is properly described as Lot 471 on RP142403. The property has an area of 1,291m² and is identified by the Sunshine Coast Regional Council Planning Scheme as being located in a Recreation and Sports zone.

The site in its current state has been fully developed and contains the existing Maroochydore Surf Life Saving Club. The current building is a three storey high building which provides storage, training and ancillary facilities (amenities, office facilities etc.) which support the surf clubs core activity of lifesaving. The surf club also provides bistro and bar facilities and includes a small kiosk on the ground floor.

The property is bound to the north by sand dunes located on unallocated state land (USL) and to the east by Maroochydore Beach. To the south the property is bound by a public car park which provides including amenities while to the west the property is bound by Alexandra Parade, which provides access to the Surf Club.

Figure 1.1 below provides a locality plan which identifies the location of the subject site while Figure 1.2 provides an aerial photograph of the site in its current state.



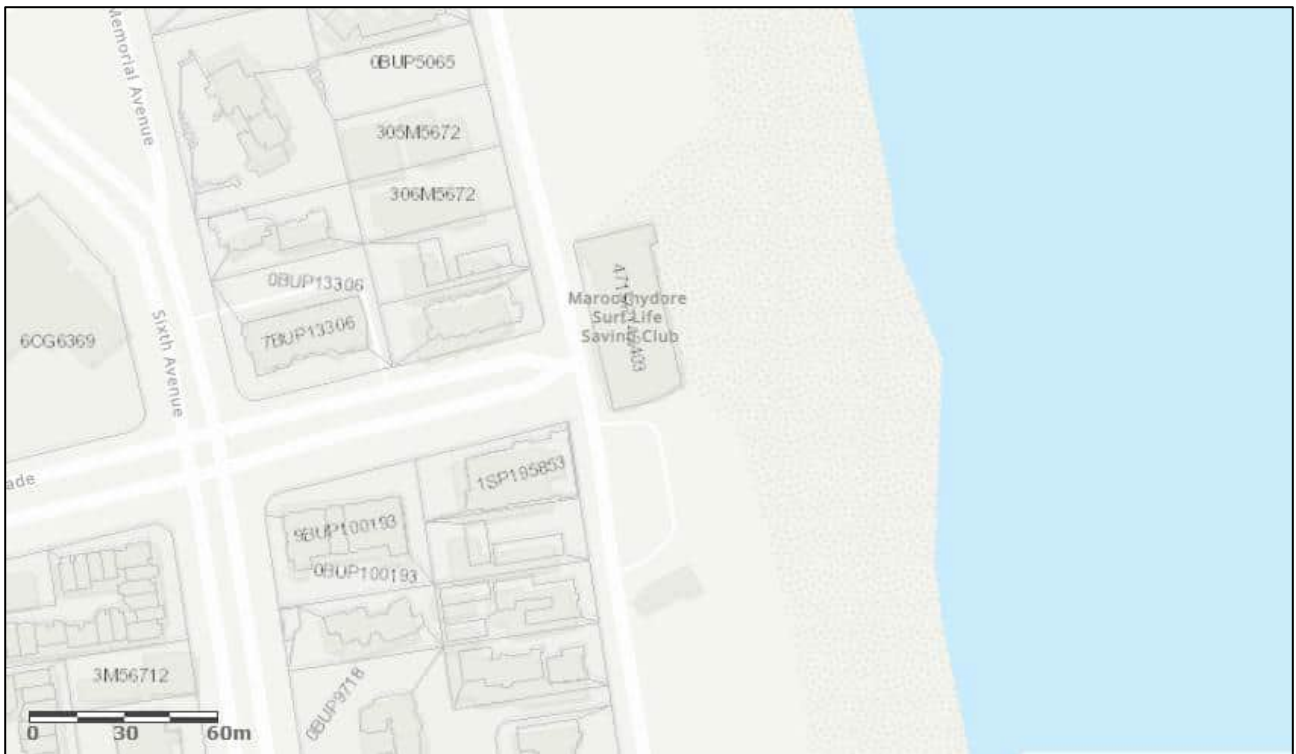


Figure 1.1 Site Locality Plan

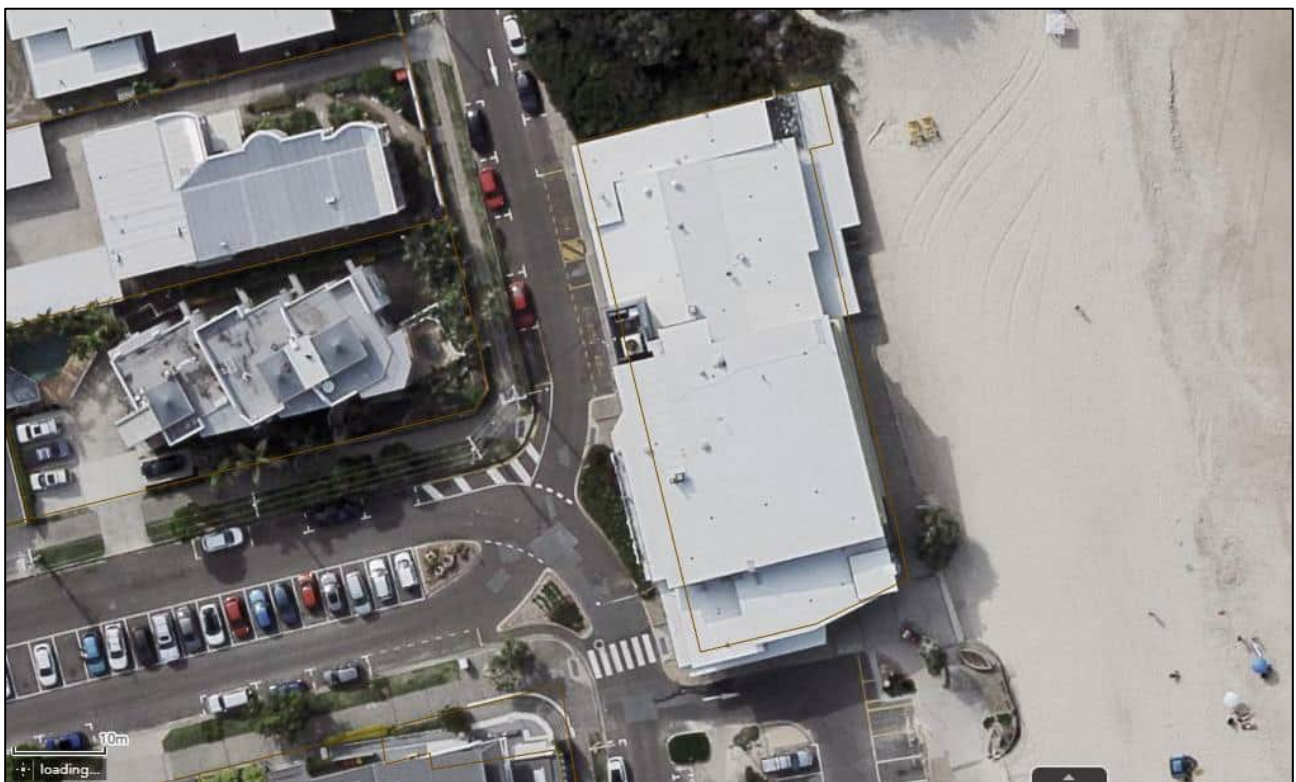


Figure 1.2 Site Aerial Photograph



1.4 Proposed Development

The proposal is for the redevelopment of the Maroochydore Surf Life Saving Club. The redevelopment proposes the extension of the existing lease area to the north into the existing dune system and associated vegetation. The proposal involves extending the lease area to the east to facilitate a new deck and access infrastructure (vehicle ramp) from the beach and will include the construction of a basement level. Table 1.1 below provides a development summary which details the gross floor area of the existing development against the proposed redeveloped surf club.

Level	Existing Surf Club		Proposed Redeveloped Surf Club	
	Life Saving	Supporters	Life Saving	Supporters
Basement	n/a	n/a	1,694m ²	n/a
Ground Floor	1,094m ²	31m ²	1,703m ²	31m ²
First Floor	n/a	1,155m ²	133m ²	1,328m ²
Second Floor	22m ²	502m ²	1,026m ²	502m ²
Total	1,116m²	1,688m²	4,556m²	1,861m²
Overall Totals	2,804m²		6,417m²	

Figure 1.4 below provides an extract of the site plan prepared by BRD Group for the proposed development. For further details, please refer to the architectural design drawing package contained in Appendix A.

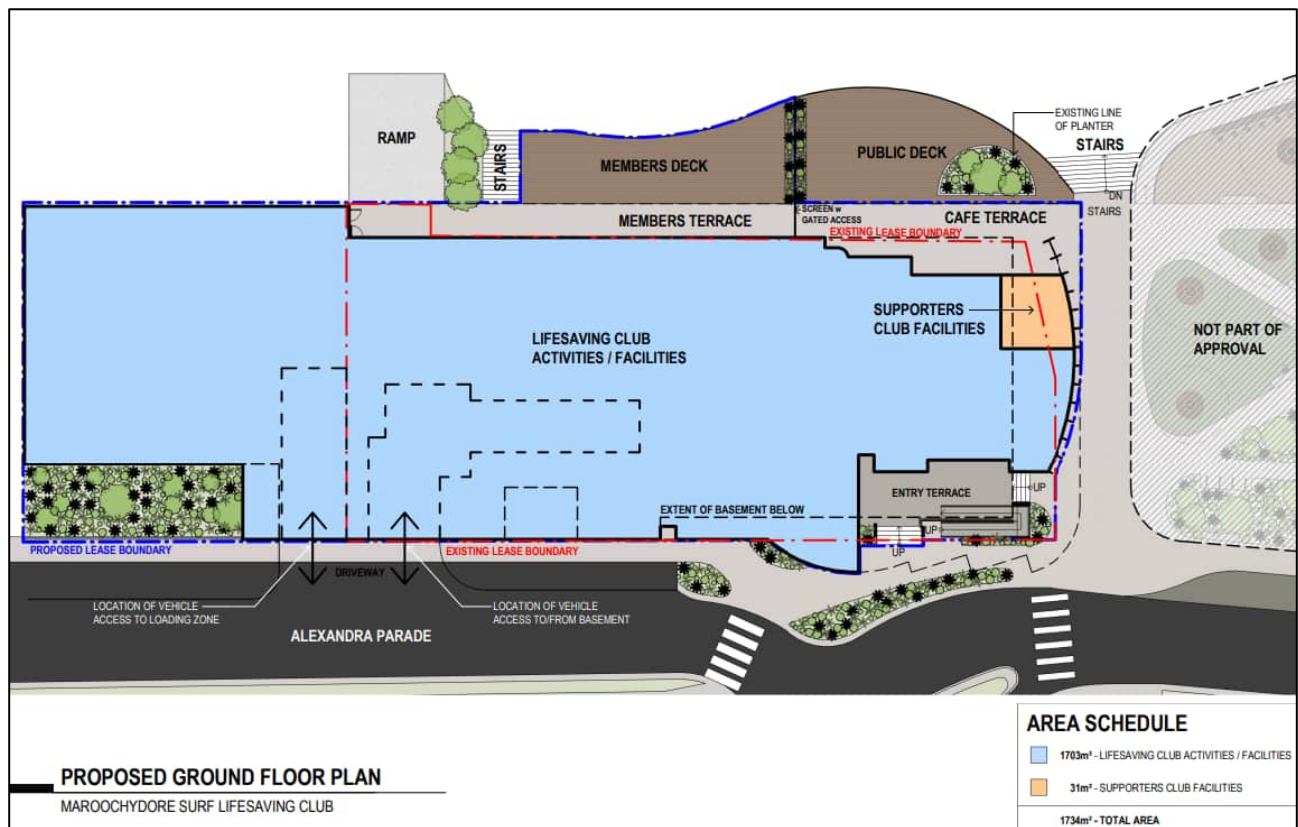


Figure 1.3 Ground Floor Plan of Proposed Surf Club Redevelopment



2. Site Conditions

2.1 Environmental Conditions

The proposed extensions to the Maroochydore Surf Club are situated in an existing sand dune which forms part of an open ocean stretch of sandy beach. This stretch of coastline, as with the remainder of the coast is a dynamic environment which is shaped by coastal processes including fluctuations in the tide and wave action. There is a history of erosion, scarping and sand transport along this section of the ocean beach as a result of extreme weather events. The following sections of this report discuss the environmental conditions experienced at the investigation area, focusing upon the following:

- Wave Climate;
- Astronomical and Storm Tides; and
- Sediment Erosion and Transportation.

2.1.1 Wave Climate

Large swell events which impact the South East Queensland coastline are generally generated by severe weather events off the South East Queensland Coast such as East Coast Low pressure system or Tropical Cyclones, which have been recorded generating wave heights in excess of 7.5m. Generally, damage on exposed beaches occurs when severe weather events cause storm tide conditions which extend wave heights over 4m.

The two severe weather patterns responsible for the generation of large swells occur at opposite times of the year, with wave climate from May to August dominated by the passage of low pressure systems (East Coast Lows) to the south generating moderate to high energy south to south east swells. Tropical cyclones typically occur during the months of November to April, forming in the Coral Sea, either crossing the North Queensland / Central Queensland coastline or moving away from the coast to the south and east (GCSMP, 2008).

Monitoring undertaken by the Department of Environment and Science (DES) identifies that the Sunshine Coast (Mooloolaba) is subject to an average significant wave height of 0.5m – 1.5m (26%) from a predominantly East-South-Easterly direction. Wave heights exceeding 2m in height occur 5% of the time while an annual exceedance of 3m wave height occurs 0.5% of the time. Figure 2.1 below provides an extract from the Queensland Wave Climate annual summary 2018-2019 depicting recorded wave height and direction for Mooloolaba.



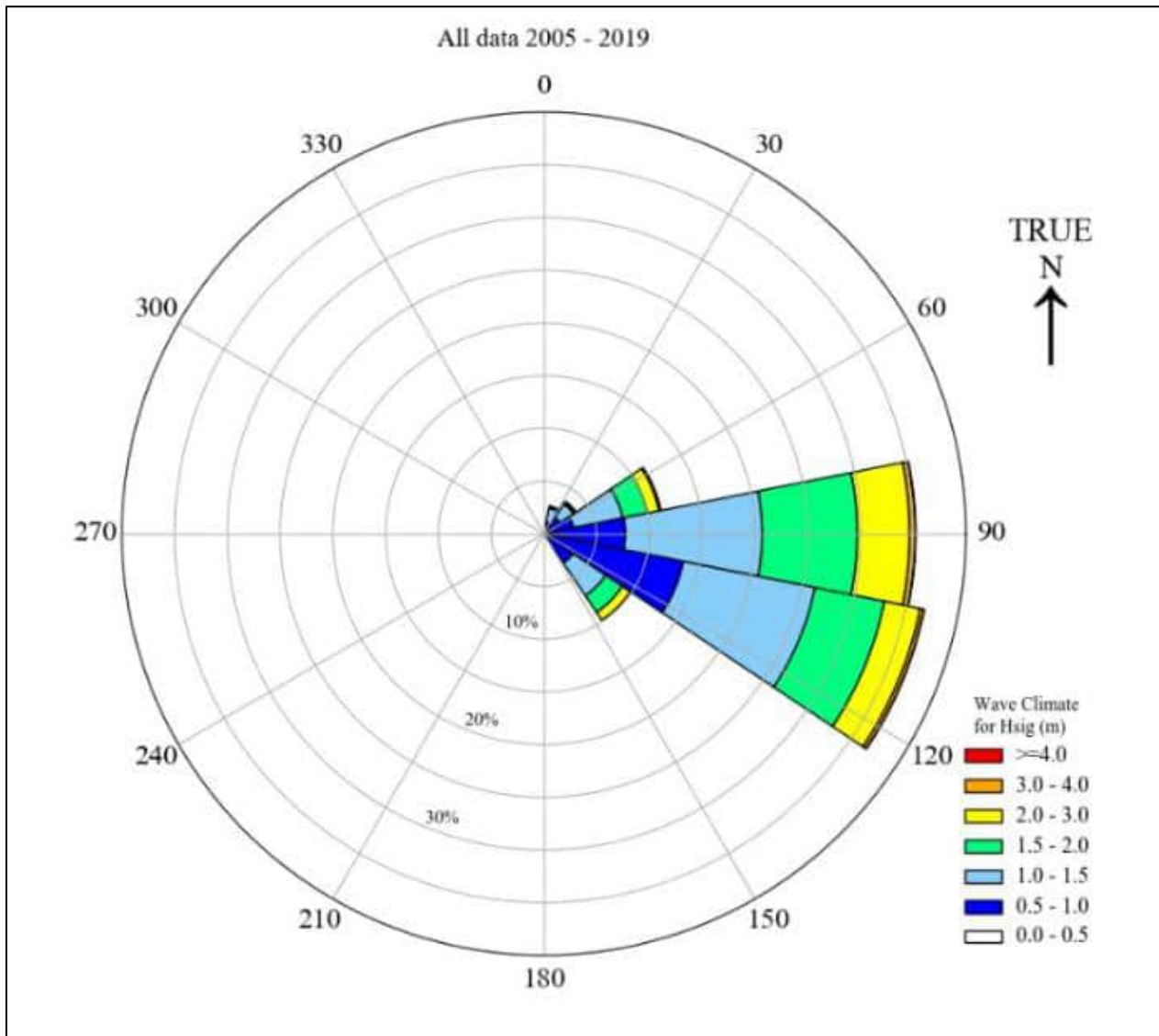


Figure 2.1 Mooloolaba Wave Climate Summary

2.1.2 Astronomical Tides

Sunshine Coast beaches are subject to semi-diurnal tides which have a tidal range of 2.21m. Tidal planes for Maroochydore Beach for 2024 provided by Maritime Safety Queensland have been reproduced below in Table 2.3.

Table 2.1 Semi Diurnal Tides Range for Maroochydore Beach

Tidal Planes	Level (m LAT)	Level (m AHD)
Highest Astronomical	2.21	1.20
Mean High Water Spring	1.70	0.69
Mean High Water Neap	1.38	0.37
Mean Low Water Spring	0.30	-0.71
Mean Low Water Neap	0.63	-0.38
Mean Surface Level	1.01	0.00
Australian Height Datum	1.01	0.00
Lowest Astronomical Tide	0.00	-1.01



2.1.3 Storm Tides

Storm tide inundation coupled with extreme wave conditions are the coastal hazards with the greatest potential for loss or harm to the community and environment. Storm tide inundation becomes a natural disaster when severe disruption occurs to a community (EPA, 2006). Storm tide is a combination of the normal astronomical tide and storm surge which in South East Queensland are caused by severe weather events such as East Coast Lows or Tropical Cyclones as discussed in section 2.1.1.

Storm tide inundation coupled with extreme wave conditions are the coastal hazard with the greatest potential for loss or harm to the community and environment. A storm tide is the combined or total water level which comprises of the following components:

- Astronomical Tide:
- Storm surge, the combined effect of the shore-ward, wind-induced currents generated by severe weather events; and
- Wave set-up, the increase above the still-water level resulting from the presence of breaking waves in the surf zone.

2.1.4 Sediment Transport & Erosion

Sunshine Coast beaches are exposed to a high energy open ocean wave climate with the potential to move large volumes of sand. High energy wave events combined with elevated water levels (storm tide) generated by severe weather systems (East Coast Lows and Tropical Cyclones) which may result in the significant erosion of the shoreline.

Coastal erosion can be classed as either short term or long term, with long term erosion extending over several decades and generally caused by a deficit in the annual sediment budget. Short term erosion refers to erosion that occurs over a period of days and is generally a result of severe storm or cyclone activity. Short-term erosion events alter the beach profile, with sand eroded from the beach transported seaward under wave action. During erosion events, waves erode the toe of the dune creating a steep scarp which advances landward through the dune system. This process can result in significant shoreline recession over a period of several hours to days.

The impact of such short-term erosion events upon adjoining infrastructure or private property is dependent on the volume of sand available seaward within the upper beach and dune system, which acts as a buffer against erosion. On the Sunshine Coast coastline, the limit of severe erosion resulting from extreme weather events is generally limited to areas seaward of the established intact dune systems (where natural replenishment occurs) or where seawall defenses exist.

Figure 2.2 below provides a graphical representation of the impacts that short term erosion events generated by severe weather systems may have upon the coastal environment, with the post storm scenario depicting the advancement landward of the storm escarpment.



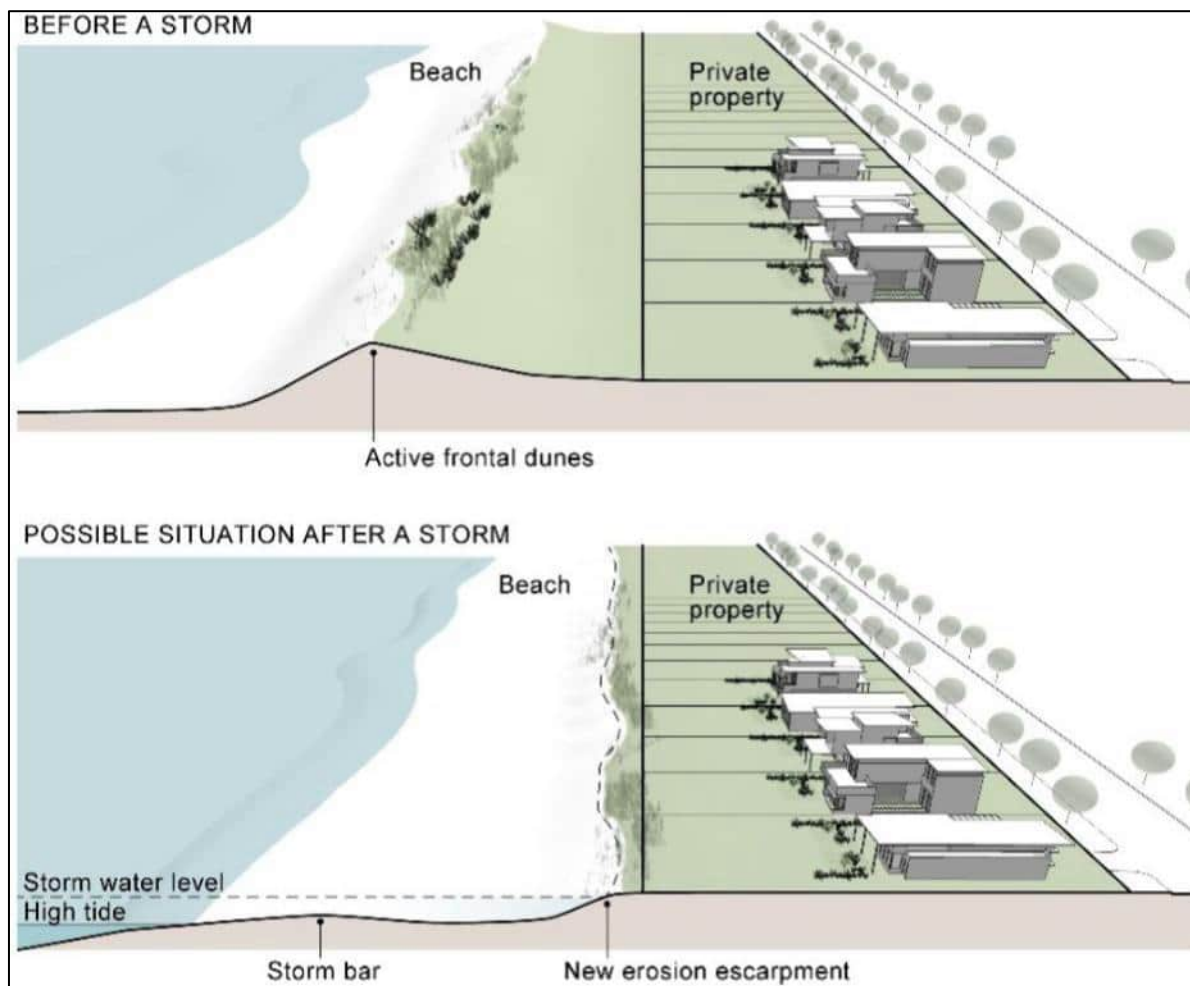


Figure 2.2 Diagram Depicting Pre and Post Short-Term Erosion Event (Courtesy: CoGC)

2.2 Site Features

2.2.1 Foreshore Seawall

The Maroochydore Surf Club has been constructed adjacent to Maroochydore Beach, providing direct access to the beach allowing for surf lifesaving activities to be undertaken. The establishment of the surf club in its current location included the construction of a revetment wall, which remains in its original location.

We understand the seawall was founded on the coffee rock located at approximately 0.0m – 1.0m AHD (refer section 2.2.3) while the top of the wall is situated at approximately 4.0m AHD. Figure 2.3 below provides an extract of the design drawings depicting the alignment of the seawall structure while Figure 2.4 provides a photograph of the seawall in its current state.

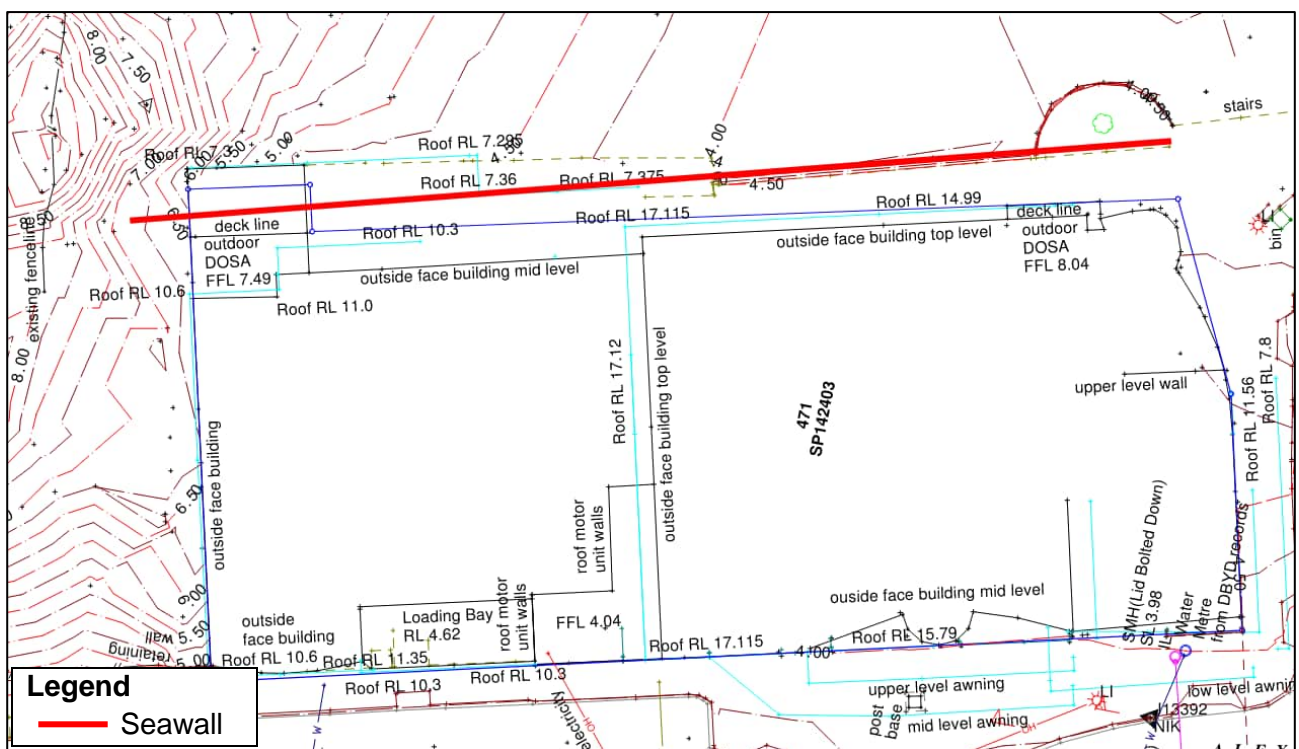


Figure 2.3 Current seawall alignment





Figure 2.4 Photograph of existing seawall infrastructure

2.2.2 Dune Topography

In the location of the proposed development, the sand dunes are relatively stable. The toe of the dune is situated a approximately 3.25m AHD while the crest of the dune is at approximately 8.50m AHD. Gradients across the dune face vary, with the steepest grades located adjacent to the existing surf club (30%) with the grades generally becoming gentler further to the north. The hind dune slopes towards Alexandra Parade at a grade of approximately 29% Figure 2.5 below provides a typical dune profile which has been extracted from detailed survey prepared by Murray and Associates while Figure 2.6 provides a photograph of the dunes in their current state.

As detailed in the Ecological Site Assessment prepared by Burchills Engineering Solutions, the dune system benefits from a well-established vegetative cover which consists of two (2) broad vegetation associations including beach sheoak foredune woodland and foredune spinifex grassland, both of which are Least Concern Regional Ecosystem and are not a Matter of State Environmental Significance.

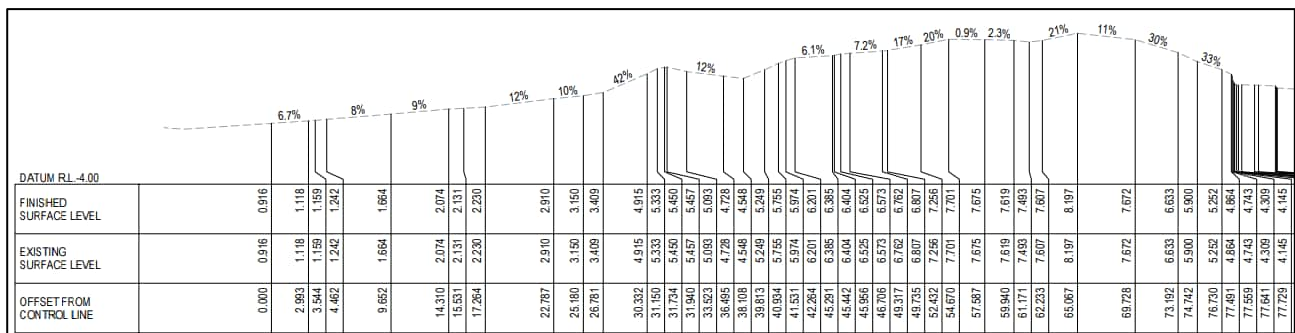


Figure 2.5 Typical Dune Profile within the Works Area





Figure 2.6 Photograph of Existing Maroochyore Beach Dune System

It should be noted that the Sunshine Coast Regional Council has a beach nourishment program which supplies sand to the Maroochyore Beach envelope. The program currently extracts 100,000m³ of material from the Maroochy River system every two years, redistributing the sand across the open beach area which extends from the Maroochyore Surf Club to the Alexandra Heads skate park.

While sand is not directly applied to dunes in the vicinity of the surf club, the dunes do benefit from the redistribution of sand at the toe of the frontal dune, which provides additional buffering, from the impacts of storm events.

2.2.3 Subsurface Geology

The Maroochyore Surf Lifesaving Club is situated adjacent to Maroochyore Beach. The location of the existing surf club is protected by a seawall (refer section 2.2.1). The site and adjacent beach is characterized by is described by Queensland Globes detailed surface geology layer as being a holocene beach deposit consisting of quartz sand.

Periodic storm events generate high energy waves which scour or erode the beach profile. Following erosion events, it is common for coffee rock (indurated sand) within the Maroochyore Beach profile to become exposed. Survey included in the Maroochyore Beach Nourishment Feasibility Report prepared by BMT WBM for the Sunshine Coast Council identifies that the coffee rock layer within the Maroochyore beach profile is generally situated at approximately 0.0m – 1.0m AHD.

Figure 2.7 below provides photograph taken in 2013 which depicts exposed coffee rock within the Maroochyore Beach profile following a series of erosion events (large swells, tides etc.). Note that



significant scouring has occurred in the vicinity of the foundations of the existing public deck structure.



Figure 2.7 Maroochydore Beach Erosion Circa 2013 (Courtesy: Sunshine Coast Daily)

3. Desktop Assessment

This report has been prepared to assess the impact that mapped coastal hazards may have upon the subject site and the proposed development. The report details measures which have been incorporated into the design of the proposed development which specifically address the current and future impacts of Coastal Hazards.

The term 'Coastal Hazards' specifically relates to the natural processes of *coastal erosion* and *storm-tide inundation* which form and re-shape the coastline. Coastal erosion is the wearing away of land or the removal of beach or dune sediments by wave or wind action, tidal currents, wave currents or drainage. Storm tide inundation is the temporary inundation of land caused as a result of abnormally high tides, usually coinciding with tropical low-pressure systems (cyclones).

The present and future extent of both natural processes (coastal erosion and storm tide inundation) has been modelled and mapped by the Queensland State Government.

3.1 State Planning Policy

The State Planning Policy constitutes a key component of Queensland's land use planning system, enabling continued development while protecting the environment and allowing communities to grow and prosper. The SPP provides a comprehensive set of principles which underpin the Queensland planning system, guiding local and the State Government in land use planning and development assessment.

The SPP provides a series of maps which relate specifically to matters of state interests. Interrogation of the SPP interactive mapping system has identified that the subject site is mapped as being impacted by:

- Coastal erosion; and
- Is situated within a Coastal Management District.

Discussion regarding the SPP's mapped state coastal interests is discussed in the following sections.

3.1.1 Coastal Erosion

The subject site is identified as being located within an Erosion Prone Area. The surf club is located upon an elevated parcel of land which has been established behind a rock revetment wall which is exposed to coastal processes (tidal flow, wave action and erosion) during extreme weather events.

Due to the position of the surf club, it is likely that areas to the east of the seawall will be inundated during large storm surge events and will be subject to erosion occurring as a result of scour related to increased wave actions and run-up. This may result in the loss of large quantities of sand during a storm event.

Figure 3.1 below show excerpts of the SPP mapping. Copies of the coastal hazard maps have been provided in Appendix B.



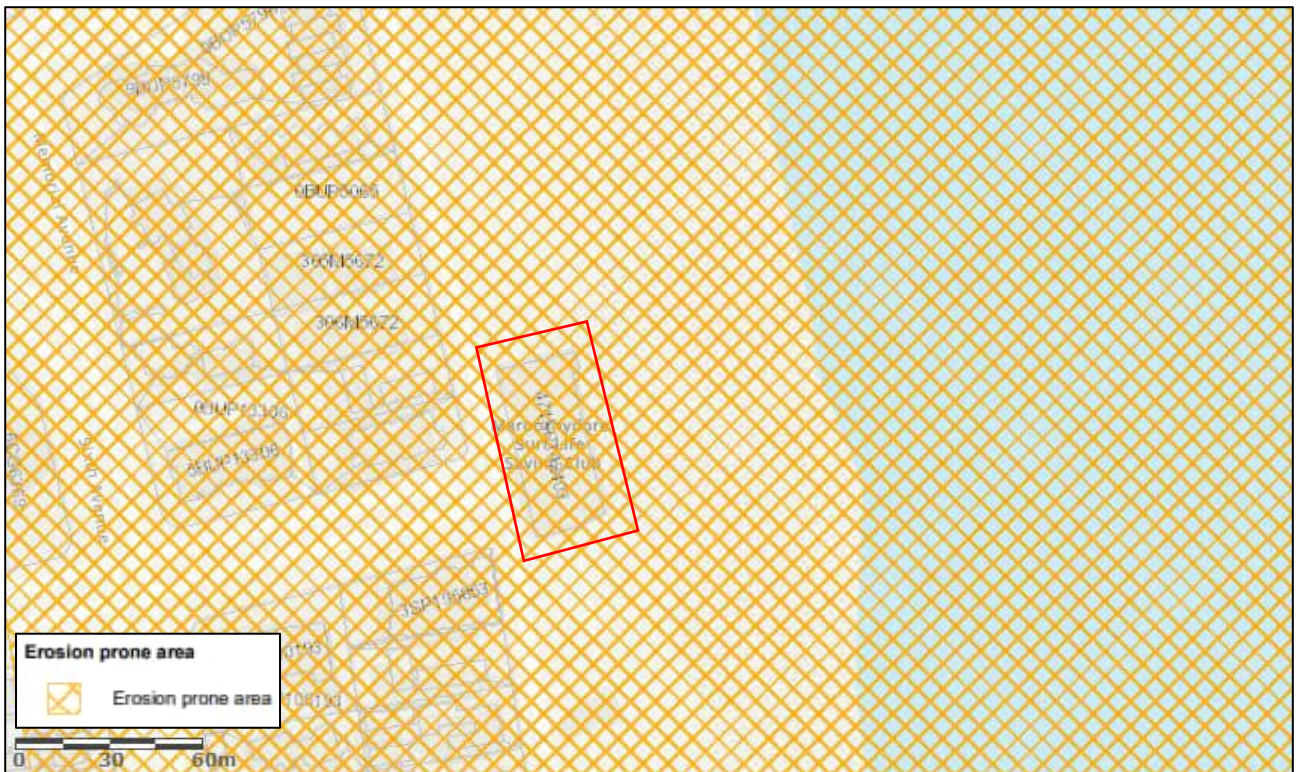


Figure 3.1 Coastal Hazard Area - Erosion Prone Areas (Courtesy: SPP Interactive Mapping)

3.1.2 Storm Tide

The SPP's Coastal Hazard mapping overlay identifies that areas immediately to the east of the surf club (within the beach profile) will be impacted by both high and medium storm tide inundation. It is important to note that the overlay identifies that only areas to the east of the existing building and seawall are mapped as being impacted to the effects of the storm tide layer.

Figure 3.2 below details the extent of the mapped medium and high inundation storm tide overlays in relation to the subject site.



Figure 3.2 High & Medium Storm Tide Inundation Area (Courtesy: SPP Interactive Mapping)

3.1.3 Coastal Management District

The SPP Interactive Mapping System identifies that part of the subject site is located within a mapped Coastal Management District (CMD). As such, future applications for works occurring within this area will be subject to assessment against the provisions of the State Development Assessment Provision's State Code 8 – Coastal Development & Tidal Works (Coastal Management District). An assessment against State Code 8 has been completed as part of this report. Please refer to section 6.1 of this report or Appendix E for further details regarding the merits based assessment.

Figure 3.3 below provides an extract of the SPP mapping which details the location of the development site within the Coastal Management District.





Figure 3.3 Coastal Management District Area (Courtesy: SPP Interactive Mapping)

3.2 Sunshine Coast Planning Scheme 2014

A review of mapping which accompanies the Sunshine Coast Planning Scheme has identified that the subject site is mapped as being impacted by the *Coastal Protection Overlay* and as such, triggers assessment against the provisions of the Planning Scheme's *Coastal Protection Overlay Code*. The purpose of the Coastal Protection Overlay Code is to:

- (a) protect people and property from coastal hazards;
- (b) protect coastal landforms, vegetation and biodiversity, and allow for natural fluctuations of the coast to the greatest extent practicable;
- (c) ensure that decisions about coastal development take appropriate account of the predicted effects of climate change, including sea level rise; and
- (d) maintain or enhance public access to the coast.

An assessment against the provisions of the code has been completed as is contained within Appendix B of this report.

For further details regarding the *Coastal Protection Overlay* in relation to the subject site, please refer Figure 3.4 below.





Figure 3.4 Sunshine Coast Planning Scheme Coastal Protection Overlay Extract (Courtesy: SCC)

3.3 Sunshine Coast Council - Coastal Hazard Adaptation Strategy

Sunshine Coast Council are currently in the process of preparing the Sunshine Coast Coastal Hazard Adaptation Strategy (CHAS). The CHAS has been prepared in accordance with the *Planning Act 2016*, *Coastal Protection and Management Act 1995* and State Planning Policy 2017 guidance material relating to coastal aspects of the natural hazards, risk and resilience state interest.

The document has been prepared by the Sunshine Coast Council to proactively plan for the impacts of climate change and natural hazards to build the resilience of the region. The CHAS primarily seeks to:

- Preserve the natural values and functions of coastal environments.
- Preserve a healthy coast and near-shore marine environment is preserved to sustain our valued coastal lifestyle and economy.
- Ensure coastal hazard risks are know and avoided or otherwise adequately addressed, forming part of long term adaptation planning.
- Ensure that adaptation enables the whole community to build climate and disaster resilience.

The CHAS has been developed in accordance with the State Governments QCoast₂₁₀₀ Minimum Standards and Guideline. The CHAS by the Sunshine Coast Council to:

- identify coastal hazards, including erosion, storm tide and tidal inundation and associated risk
- inform decision making regarding the protection and management of our coast and foreshore



- inform future land use planning
- guide the management and/or location of public utilities and facilities
- guide the management of areas of environmental and cultural significance • foster collaboration and the shared care of our coastal zone and estuarine areas.

The Coastal Hazard Adaptation Strategy identifies that the Maroochy Beach locality (which extends from the Maroochy River Mouth to the start of Alexandra Headlands Beach) is likely to be increasingly susceptible to the impacts of future erosion events. This is in spite of the ongoing beach nourishment activities within the beach profile.

Table 22 of Part A of the Coastal Hazard Adaptation Strategy details the Maroochy Beach Adaptation pathway. The table details coastal management and engineering actions which are to be undertaken within the area locality, these actions are identified as being primary or secondary actions. The nominated primary and secondary actions for the Maroochy Beach locality are detailed in Table 3.1 below.

Table 3.1 Maroochy Beach Adaptation Pathway – Primary & Secondary Actions

	Actions
Primary Action	Undertake dune protection and enhancement
Secondary Actions (if triggered)	Undertake nourishment
	Review hazard lines and success of existing actions.
	Buried seawall and nourishment (Alternative (if triggered))
	Prior to implementing hybrid nourishment-seawall option, review alternatives and design in context of regional surf break study (Alternative (if triggered)).

It should be noted that while the Coastal Hazard Adaptation Strategy is currently in draft form and at present has no statutory weight. While consideration has been given to the document and its contents, no further assessment has been undertaken against this document.



5. Coastal Hazard Assessment

5.1.1 Erosion Vulnerability

An assessment of the surf clubs vulnerability to storm events (Cyclones and East Coast Lows) has been undertaken to fully understand the risk to the proposed infrastructure once constructed. Table 2-1 of the *Maroochydore Beach Nourishment Feasibility Report* prepared by BMT WBM identified the storm demand for the design storm tide event across 32 beach profile cross sections extending from the Alexandra Headlands Surf Club to the Maroochydore Surf Lifesaving Club.

The assessed storm tide event included the following conditions:

- 50 year ARI wave conditions;
- 100yr ARI storm surge conditions.

As part of this assessment, simple probability distribution curves have been plotted using available data contained in past Sunshine Coast Council coastal studies. These curves have been plotted to determine the vulnerability of the beach profile in the vicinity of the surf club site due to storm demand rather than long-term shoreline recession.

Two curves have been plotted for this assessment, one curve is based upon the average storm demand for Maroochydore Beach (Maroochydore Surf Club to Alexandra Heads Skate Park) and the storm demand for profile closest to the surf club (profile 31).

Generally, the results of the storm demand for the 100yr ARI storm tide event vary across the study area, with certain areas impacted more heavily than others. The storm demand in the vicinity of the surf club is at its lowest, while areas immediately to the south of the surf club are more heavily impacted, with greater volumes of sand loss during storm tide events.

This report has considered the site specific demand profile and the Maroochydore Beach Average expected storm demand curves. The Maroochydore Beach average demand curve is more conservative allowing for the loss of greater volumes of sand from the coastline whereas the provided site / profile specific demand curve allows for smaller volumetric losses from the system. Table 3.1 details the cubic metres (m³) of sand per linear metre that are expected to be extracted by corresponding ARI Storm events using both storm demand curves.

Figure 5.1 (Below) identifies the extracted Storm Demand / ARI events, providing two separate storm demand curves (Site Specific (Profile 31) and Maroochydore Beach average storm demand curves).

Table 5.1 below details the cubic metres (m³) of sand per linear metre are expected to be extracted by corresponding ARI Storm events. As detailed, during the 100yr ARI event, it is expected that 97m³ will be lost from the profile adjacent to the surf club while an average loss of 149m³ can be expected from the average Maroochydore Beach profile.

Using the site-specific demand curve, it can be expected that the proposed surf club will be exposed to erosive processes by the 1,000yr ARI storm event with the beach profile losing 145m³ per linear metre. Using the Maroochydore Beach average loss curve it can be expected that the redeveloped



surf club will be exposed to erosive processes by the 100yr ARI storm event with up to 149m³ of sand loss per linear metre from the beach profile.

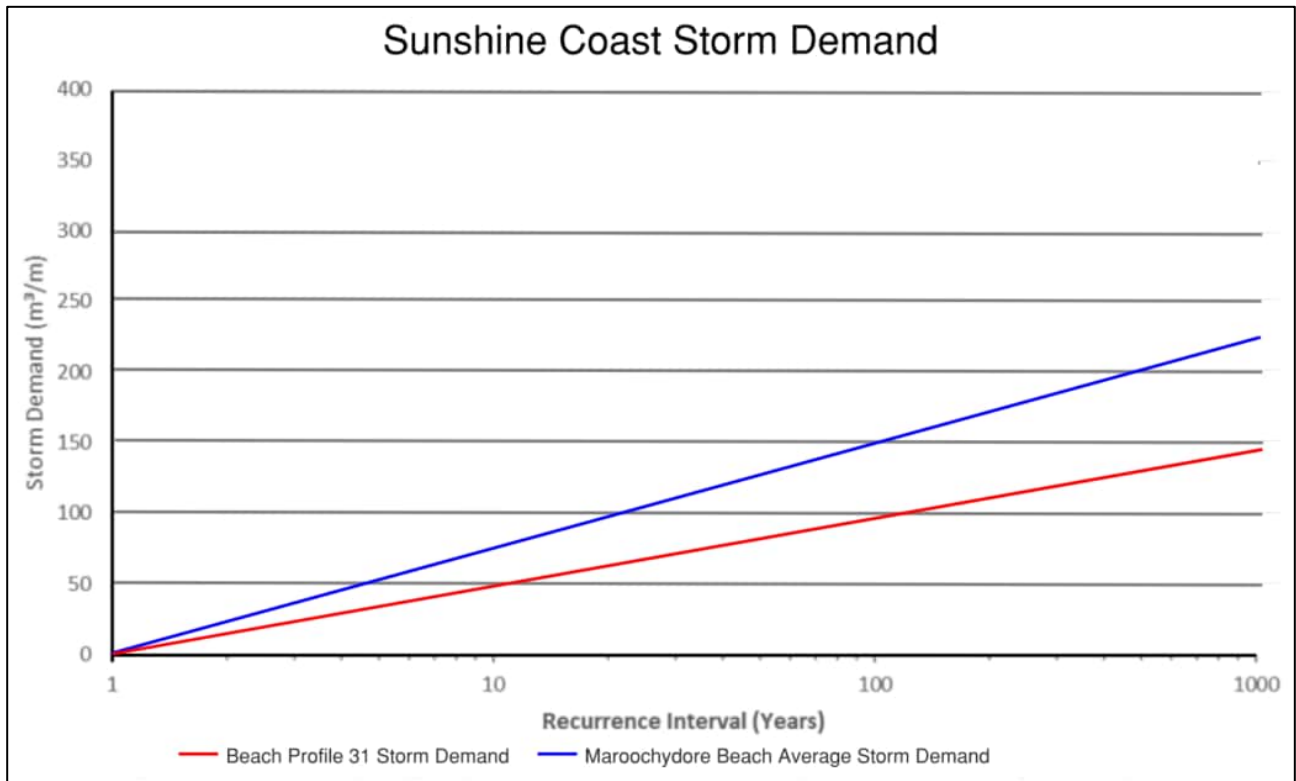


Figure 5.1 Interpolated Storm Demand Graph

Table 5.1 Maroochydore Beach Storm Demand (m³/m)

Annual Return Interval	Section Storm Demand (m ³ /m)	Average Storm Demand (m ³ /m)
20yr	63	96
50yr	81	126
100yr	97	149
500yr	129	199
1,000yr	145	222

A typical section depicting the exposure of an expected storm surge upon the redeveloped surf club is provided below in Figure 5.2 (below). The cross-section accounts for the post developed scenario, where construction works associated with the surf club have been completed and the dune profile reinstated. The assessment was completed using existing survey data prepared by Murray and Associates for cross-section (CH13.291). The section details expected loss during both 100yr ARI storm event for the site-specific demand curve.

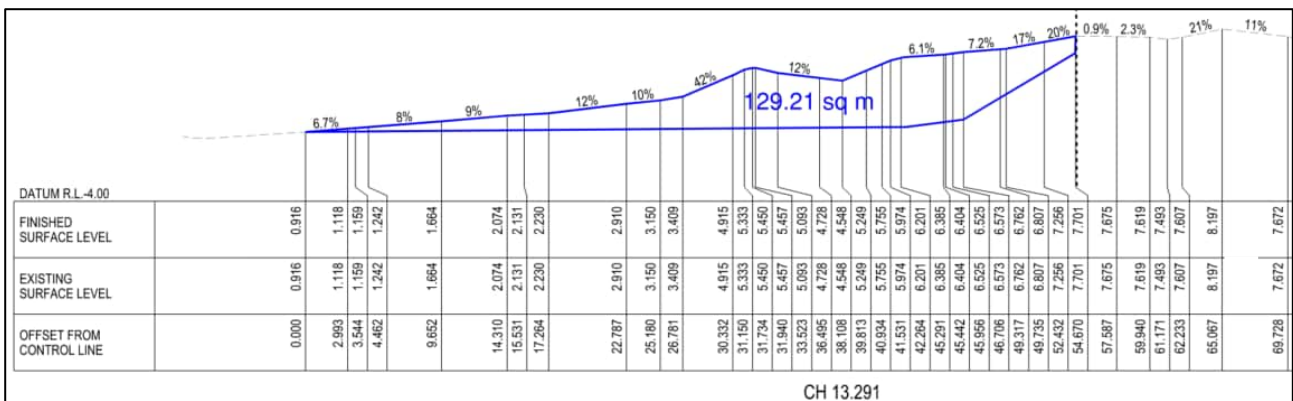


Figure 5.2 Typical Cross Section Depicting Storm Demand for 100yr ARI Event

It should be noted that the exposure of the structure to erosive processes is unlikely to impact upon the structural integrity of the seawall as the structure will be founded in the coffee rock layer which is situated at approximately 0.0m – 1.0m AHD. The coffee rock strata is likely to limit sand loss due to erosion.

5.1.2 Storm Tide Inundation

The proposed Maroochy Surf Club redevelopment is to be established behind a seawall with foundations founded at least 1m into the coffee rock layer. The height of the seawall will be consistent with that of the existing seawall structure which has a surface level of approximately 4m AHD. As detailed within the Sunshine Coast Council Storm Tide Study, storm tide levels for present day and future scenarios (2100) expected for Sunshine Coast beaches (including wave setup) vary between 1.20m and 3.9m AHD (depending upon ARI). With the infrastructure being set above the expected storm tide levels, the chance of inundation during the infrastructures design life is negligible.

5.1.3 Wave Runup

The Sunshine Coast Storm Tide Study (Aurecon, 2013) was prepared to quantify the likelihood of coastal areas within the Sunshine Coast Council local government area (LGA) being inundated by storm tide events generated by extreme weather events (Tropical Cyclones, East Coast Lows), with current and future climate scenarios considered (Aurecon, 2013). Scenarios for a number of Annual Recurrence Periods (ARI's) for each climatic scenario (current climate and year 2100 climate change) were developed. Data contained in Tables 7 & 10 of the Storm Tide Study prepared by Aurecon has been extracted for the Maroochyore Beach location for both scenarios and is summarised in Table 6.2 below.

Table 5.2 Present and Future Climate (Tide plus Surge) Ocean Levels at Maroochyore Beach

Annual Return Interval	Sunshine Coast Storm Tide Study	
	Current Climate	2100yr Climate Change
20yr	2.20m AHD	3.00m AHD
50yr	2.53m AHD	3.33m AHD
100yr	2.79m AHD	3.59m AHD
500yr	3.03m AHD	3.83m AHD
1,000yr	3.10m AHD	3.9m AHD



The assessment concluded that storm tide levels within the Sunshine Coast region are currently dominated by ex-tropical cyclones and the influences of remote tropical cyclones and that the projected influences of climate change do not change this situation, although rising sea level itself remains a significant threat to communities and infrastructure within the coastal margins.

While the inundation of the surf club by storm tide is unlikely, storm tides often occur in conjunction with increased wave heights and energy (as detailed in Section 2.1.3 of this report) generated by the same extreme weather systems. The combination of an elevated water surface level (storm tide) and increased wave heights may generate vertical runup which may cause localised intermittent impacts and erosion at elevations above that of the nominated storm tide level.



6. Design Considerations

6.1 Impacts upon Sand Dunes

The proposed development will result in the extension of the existing surf club footprint into the sand dunes situated to the north of the existing building. Construction works associated with the proposed redevelopment works will result in the temporary removal of existing dune vegetation and sand dune itself. As detailed in section 2.2.2, the crest of the existing dune in the vicinity of the development is 8.5m AHD. The establishment of the proposed boundary would require excavations to a minimum of 0.7m AHD, this would ultimately destabilise the existing dune system and areas of the dune immediately adjacent to the development area.

The proposed works will also result in the removal of the coastal vegetation. The removal of this vegetation will further destabilise the dune, exposing the dune to erosive processes (wind, erosion from runoff etc.), until the dunes are fully restored post building construction.

To minimise the impact of construction works to the dune system, it is recommended construction techniques such as sheet piles be extended at least 1m into the coffee rock layer.

It should be noted that groundwater and sea water may be encountered at low levels in the soil profile creating challenging construction conditions. Specialist geotechnical advice should be sought in relation to this matter in the design phase.

Following the completion of construction works, it is recommended that the dune profile be reinstated (where possible) to pre-developed conditions in the vicinity of the works area. It is recommended that once reinstated, the reinstated sand dunes be revegetated to stabilise the dune.

6.2 Impacts upon Existing Seawall Infrastructure

As detailed in section 2.2.3, the Maroochydore Surf Club is currently protected by a seawall which was constructed in the 1960's. The alignment of the existing wall structure is in close proximity to the wall of the basement proposed as part of the redevelopment works. It is highly likely that excavation works undertaken during the proposed redevelopment to establish building foundations down to 0m AHD to form the proposed new basement at RL0.4m AHD would compromise the structural integrity of the existing seawall.

At this level ground/seawater is likely to pose a threat to the stability of the excavations and special ground support may be required.

The structural engineer shall review the design and in the event that the existing wall cannot be protected then it may need to be demolished and replaced by a structural engineered seawall integrated into the basement wall and foundation design. The new structural seawall shall extend a minimum of 1 metre into the coffee rock.

A specific tie in detail will need to be considered where the new work interfaces with the existing seawall to ensure the integrity of the seawall to the south is not compromised. Geotechnical advice shall be sought as to the appropriate foundation and retention system to minimise damage to the existing infrastructure.



6.3 Proposed Access / Boat Ramp

The proposal will result in the construction of an access / boat ramp which will provide lifesavers with direct access to the beach from the surf club. The boat ramp will be situated lower in the beach profile and will not have the benefit of seawall protection, making it more susceptible to the impacts of coastal processes (scour and wave impact). To ensure that the boat ramp is fit for purpose, it is recommended that the ramp be designed in accordance with the Department of Transport and Main Roads *Manual: Design Criteria for Boat Ramps October 2015* and other relevant Australian Standards / guidelines.

It is also recommended that the boat ramp be founded on piles founded at least 1m into the coffee rock layer, designed by a RPEQ experienced in foundation design.

As detailed, the position of the boat ramp will make it susceptible to the impacts of coastal hazards, meaning that maintenance works will be required on a periodic basis (replenishment of sand) at the toe of the ramp, to ensure that the infrastructure remains functional.



7. Project Compliance Assessment

7.1 State Development Assessment Provisions (State Code 8)

The Maroochydore Surf Club situated within a mapped Coastal Management District and requires assessment against the provisions of the State Development Assessment Provisions (SDAP) State Code 8: Coastal Development and Tidal Works. The purpose of this code is to ensure that development is designed and located to:

1. Protect life, buildings and infrastructure from the impacts of coastal erosion
2. Maintain coastal processes
3. Conserve coastal resources
4. Maintain appropriate public use of, and access to and along, state coastal land
5. Account for the projected impacts of climate change; and
6. Avoid impacts on matters of state environmental significance and, where avoidance is not reasonably possible, minimise and mitigate impacts, and provide an offset for significant residual impacts where appropriate.

An assessment of the merits of the proposed redevelopment against the provisions of State Code 8 have been undertaken as part of this assessment to determine the potential impacts that development works may have upon the coastal processes, the vulnerability of the proposed development to coastal hazards, potential impacts upon natural systems and associated public safety risks. The following section provide detailed responses to matters raised in State Code 8. The full State Code 8 response is contained in Appendix E of this report.

7.1.1 Development in an Erosion Prone Area

The development application is for the redevelopment of the existing Maroochydore Surf Club. The surf club is a land use which constitutes a coastal dependent development, with the activities undertaken by the surf club intrinsically linked to the beach environment. Due to the nature of the surf club, it is not feasible to relocate the surf club to an alternate location. It is also noted that the current surf club is protected by an existing seawall structure, which in the proposed redevelopment will be maintained along its current alignment.

Given the above, it is considered that the proposed redevelopment works are compliant with PO1 of State Code 8.

7.1.2 Coastal Processes and Protective Function of Dunes

The proposed development works will impact upon the existing dune system, with construction works required to established the proposed basement structure and accommodate the new northern projection. The protective functions of the existing dune system will be affected during the construction phase of the development with the integrity of the dune potentially compromised by construction works. The removal of dune vegetation will also destabilise the sand dune during construction. Where possible, construction techniques are to be adopted which will ensure that the integrity of the dunes are not compromised (slumping). Post construction, the dune profile is to be reinstated to pre-developed conditions, with revegetation works undertaken to re-establish vegetation impacted by the proposed redevelopment works.



7.1.3 Erosion Vulnerability and Impacts

The proposal will result in the redevelopment of the existing surf club building. The development will be constructed behind a seawall which is designed to withstand the impacts of coastal erosion and wave impact. The seawall is to be founded in the coffee rock layer which is located at approximately 0.0m – 1.0m AHD. The seawall is to be established at a minimum level of 4.0m AHD, (consistent with the existing sea wall structure) providing immunity to the 1,000yr storm tide event. The design of the seawall will ensure that the impacts of coastal erosion are mitigated.

7.1.4 Erosion Risk to People and Property

The proposed redevelopment will result in the construction of a new basement which extends down to 0.4m AHD. To ensure that the proposed development is protected from the impacts of coastal erosions, it will be necessary to establish a sea wall / basement wall along the seaward side of the development. This structure will be required to be founded at least 1m into the coffee rock layer and will be required to withstand wave impact and scour.

The height of the proposed seawall will be required to be established at a minimum of 4m AHD, which is the same height as the existing seawall. This will ensure that the proposed structure provides protection from the projected storm tide up to and including the 1,000yr storm tide event.

While the proposed development will provide protections which will mitigate the impacts of coastal hazards, it is important to note that the proposed development constitutes a community facility, which can be evacuated during extreme weather events. Further, the extension of existing seawall infrastructure will ensure that buildings landward of the proposed redeveloped surf club are afforded an increased level of protection.

7.1.5 Impacts on Severity of Coastal Erosion

The extension of the building footprint to the north of the existing surf club will extend the building into the established sand dune. The establishment of the proposed building has the potential to destabilise the dune, particularly the establishment of the basement structure which is to be established with a finished surface level of 0.7m AHD. The establishment of which will require excavations down to at least 0m AHD, potentially resulting in the slumping of the dune.

Additionally, the works will result in the removal of dunal vegetation, destabilizing the dune further and making the dune susceptible to the impacts of coastal erosion.

To ensure the impacts of erosion are mitigated during the construction phase, it is recommended that construction techniques which have the smallest disturbance smallest footprint be utilized, to ensure that dune vegetation is maintained and the stability and integrity of the dune system is preserved. The maintenance of the dune in a state as close to current state as possible will ensure that the impacts of coastal erosion are minimized.

Post construction, it is recommended that the dune be rehabilitated to as close to pre-developed levels as possible, with the dune profile reinstated and revegetation works undertaken to stabilize the dune. The re-establishment of the dune system to the pre-developed state will ensure that the coastal processes are mitigated.



7.1.6 Public Use of and Access to State Coastal Land

The proposed redevelopment of the Maroochydore Surf Club will have little or no impact upon the public's ability to access state coastal land. The extension of the existing building footprint to the north will extend the building into an area of unallocated state land which is currently fenced off to the public, while the remainder of the redevelopment will occur on the existing footprint. Access to the beach in the vicinity of the surf club may be impacted during the construction phase of the development. However, this impact will be temporary only and public beach accesses exist to the north and south of the surf club.

7.1.7 Matters of State Environmental Significance

PO16 of State Code 8 requires that any development works occurring within state coastal land:

- Avoids impacts on matters of state environmental significance.
- Minimises and mitigates impacts on matters of state environmental significance after demonstrating that avoidance is not reasonably possible; and
- Provides an offset if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable significant residual impact upon a matter of state environmental significance.

The Ecological Site Assessment prepared by Burchills Engineering Solutions (BE230663-RP-ESA-00) identified two (2) broad vegetation associations in the investigation area which included Beach Sheoak Fore-dune Woodland and Fore-dune Spinifex Grassland, both of which are Least Concern Regional Ecosystem and are not a Matter of State Environmental Significance.

The Ecological Site Assessment further states that the proposed development is designed to protect the site's existing significant ecological values and by doing so protects the biodiversity state interests as identified in the State Planning Policy and avoids impacts on Matters of National, State and Local Environmental Significance.

7.2 State Planning Policy 2019

The Maroochydore Surf Club is identified by the State Planning Policy as being situated within a coastal protection area which is exposed to coastal hazards. Mapping identifies that the site is exposed to the following map layers:

- Erosion prone areas.
- Medium storm tide inundation area.
- High storm tide inundation area.

Due to the location of the surf club, the proposed redevelopment works will be required to be assessed against the state interest policies and assessment benchmarks contained in Part E of the State Planning Policy 2017 for State Interest – natural hazards, risk and resilience.

The merits of the proposed redevelopment works have been assessed against the assessment benchmarks prescribed by the State Planning Policy for Natural hazards, risks and resilience. The assessment is contained in Appendix E of this report.



7.3 Sunshine Coast Planning Scheme – Coastal Protection Overlay Code

As discussed previously, the proposed development is situated in a *Coastal Protection Area*, which triggers assessment against the provisions of the Sunshine Coast Planning Scheme's Coastal Protection Hazard Overlay. An assessment of the merits of the provisions of the code has been undertaken as part of this report. It is noted that the proposed development cannot comply with PO1, of the code.

Discussions regarding the projects non-compliance are detailed further in the full code response contained in Appendix E of this report.



8. Conclusions and Recommendations

This report has assessed the impacts that coastal hazards may have upon the proposed redevelopment of the Maroochydore Surf Lifesaving Club. The report has relied upon data contained in past Sunshine Coast Council technical investigations as a basis for this assessment.

The report has determined that the Maroochydore Surf Club is situated within the coastal environment within an area which is mapped by the State Planning Policy as being in a Coastal Management District and in an Erosion Prone area which may be subject to the impacts of medium and high storm tide inundation.

The assessment has determined that infrastructure designed as part of the Maroochydore Surf Club redevelopment will need to consider:

- Exposure to erosive processes driven by the fluctuation of the tidal prism, sea levels and wave action;
- Scour from wave action during storm events;
- Hydrostatic forces exerted upon infrastructure during storm tide events.

Given the findings of this report, it is recommended that the proposed surf club redevelopment be designed in accordance with the following criteria:

- Any new seawall structures constructed as part of the redevelopment works are to be established with a minimum height of 4.0m AHD, consistent with the existing seawall structure.
- The foundation design of the surf club be founded at least 1m into the coffee rock layer which is located at 0.0m-1.0m AHD. Specific advice from a Geotechnical engineer shall be sought with regard to design parameters;
- Construction methods (such as sheet or contiguous piling) be employed in the vicinity of the existing dune structure to minimising the development footprint and ensure that the slumping of the existing dune is limited. Specific advice from a Geotechnical engineer shall be sought with regard to design parameters.
- The design of boat ramps be developed in accordance with the Department of Transport and Main Roads *Manual: Design Criteria for Boat Ramps October, 2015* and other relevant Australian Standards / guidelines;
- To inform the detailed design phase of the development, comprehensive geotechnical investigations will be required to be undertaken by a geotechnical engineer to determine the subsurface conditions which will be encountered in the development area.
- The foundations of the basement / seawall are to be designed by a qualified structural engineer to withstand coastal processes to which the development may be exposed.
- Post construction, the disturbed sand dune shall be reinstated to match the pre-development profile (where possible).
- Reinstated sand dunes shall be stabilised with the replanting of dune vegetation.



A statutory assessment against the provisions of the State Development Assessment Provisions: State Code 8 and State Planning Policy interim development provisions of the proposed works has been undertaken. The assessment determined that works can be undertaken without:

- Negatively impacting upon coastal processes (after dunes and vegetation have been satisfactorily re-established);
- Impacting upon the protective function of landforms;
- Significantly impacts the risk or impacts to people or properties;
- Increasing the severity of coastal erosion either on or off site;
- Impacting negatively upon coastal processes; or
- Impacting negatively upon Matters of State Ecological Significance.

Given the location of Maroochydore Surf Club and the fact that the development is for the redevelopment of an existing building situated (partially) behind an existing sea wall, it is anticipated that the proposed development works will not result in changes to the local marine environment directly adjoining the proposed structures or have long term negative impacts upon coastal processes.

9. References

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State Planning Policy (July 2017)

Planning Act 2016 (Qld) (Australia)



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Appendix A – Architectural Design Drawings





EXISTING SITE PLAN

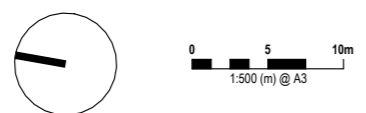
MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
FIRST	n/a	1155m ²	306m ²	1155m ²	
SECOND	22m ²	502m ²	1026m ²	502m ²	
TOTAL	1116m ²	1688m ²	4760m ²	1657m ²	
OVERALL TOTALS	2804m²		6417m²		

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SITE PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV103

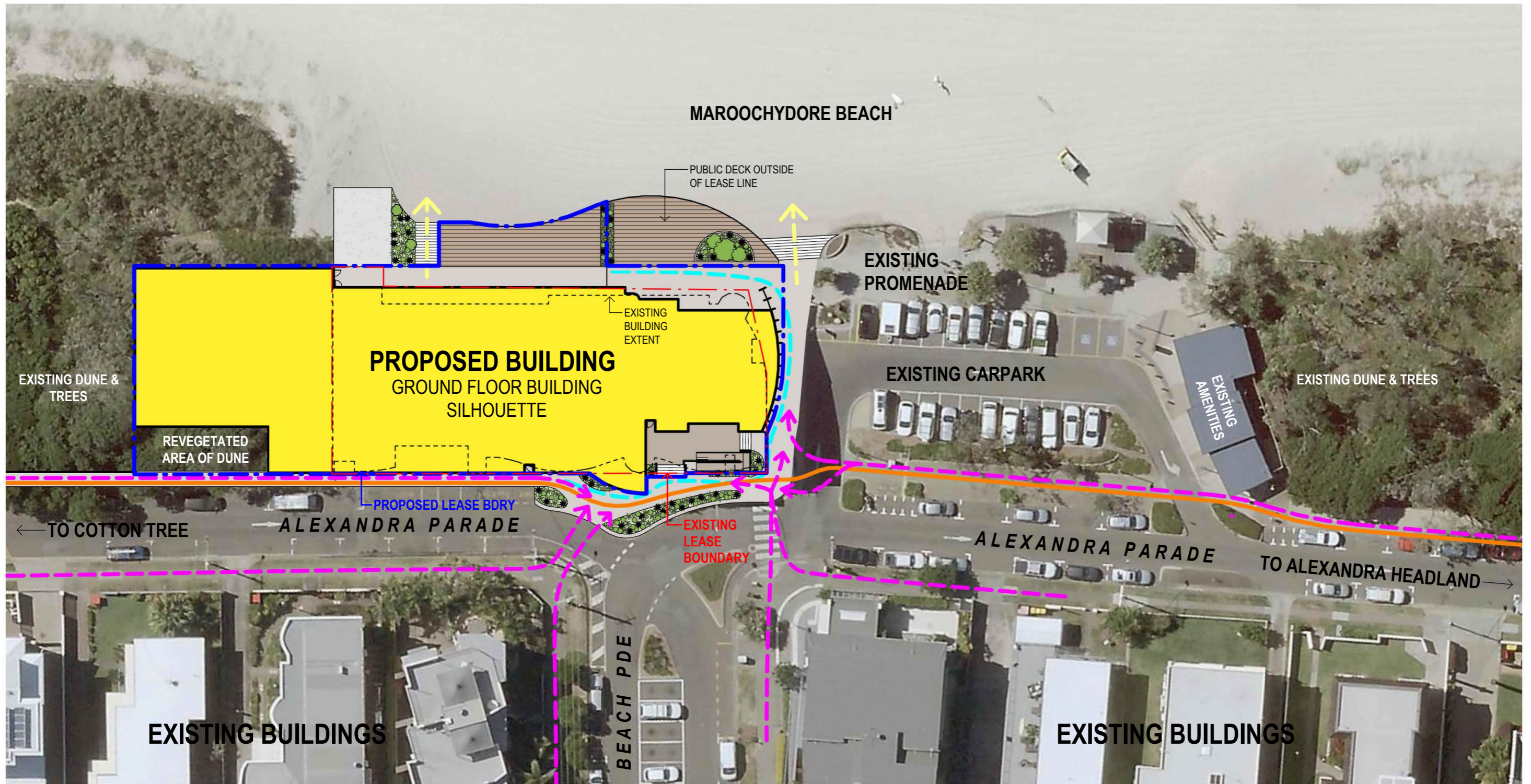
REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST
07 5443 3726

BRISBANE
07 3886 1855

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PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

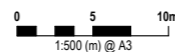
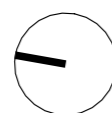
ACCESS LEGEND

- ACTIVE FRONTAGE
- BEACH ACCESS
- PEDESTRIAN TRAFFIC
- COASTAL BIKE PATHWAY

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV104

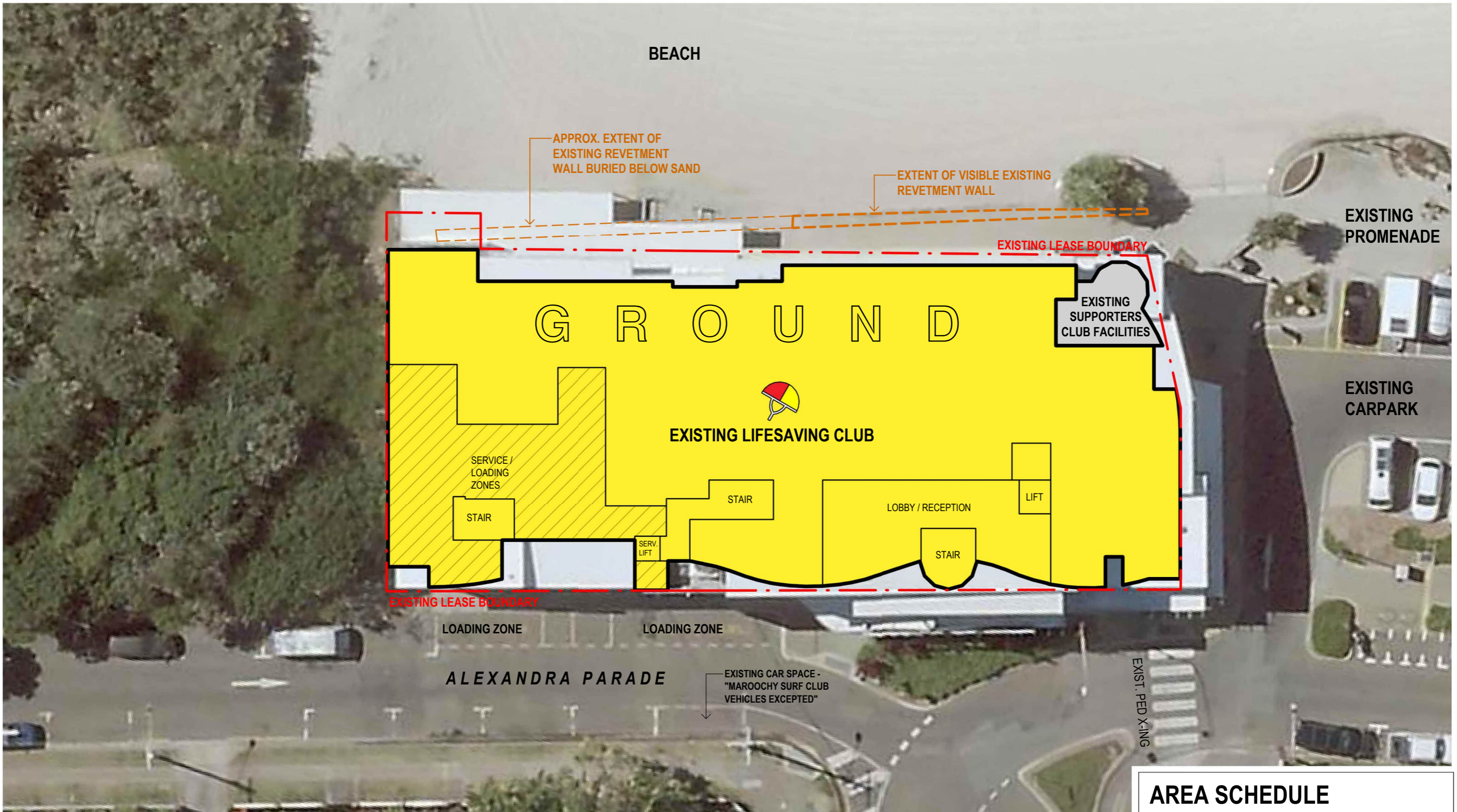
REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST
07 5443 3726

BRISBANE
07 3886 1855

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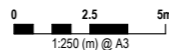
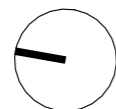


AREA SCHEDULE	
	1094m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	31m ² - SUPPORTERS CLUB FACILITIES
1125m² - TOTAL AREA	

EXISTING GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING GROUND FLOOR PLAN

DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV105	REVISION F	

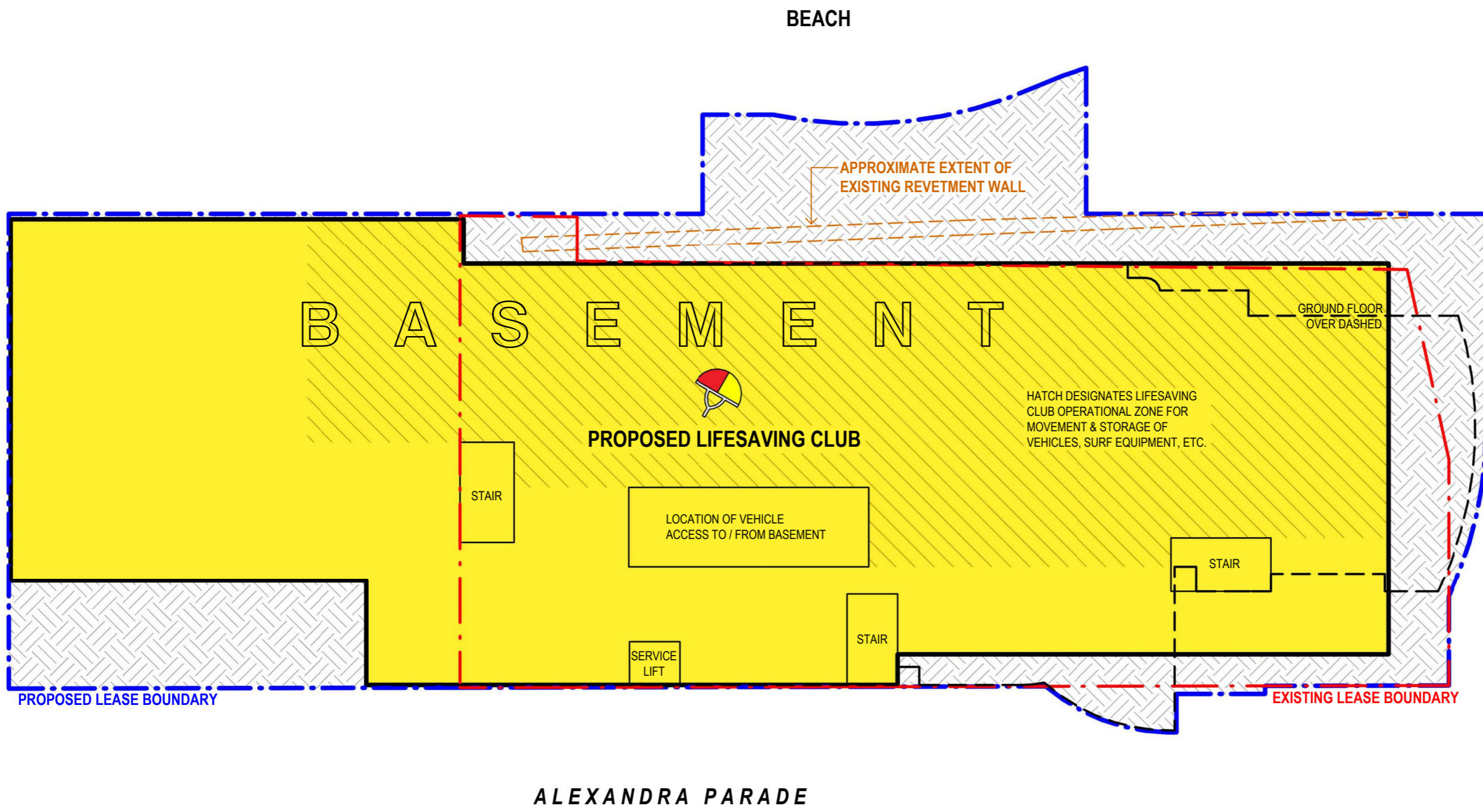
**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST
07 5443 3726

BRISBANE
07 3886 1855

www.brdg.com.au





PROPOSED - BASEMENT PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1694m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
1694m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

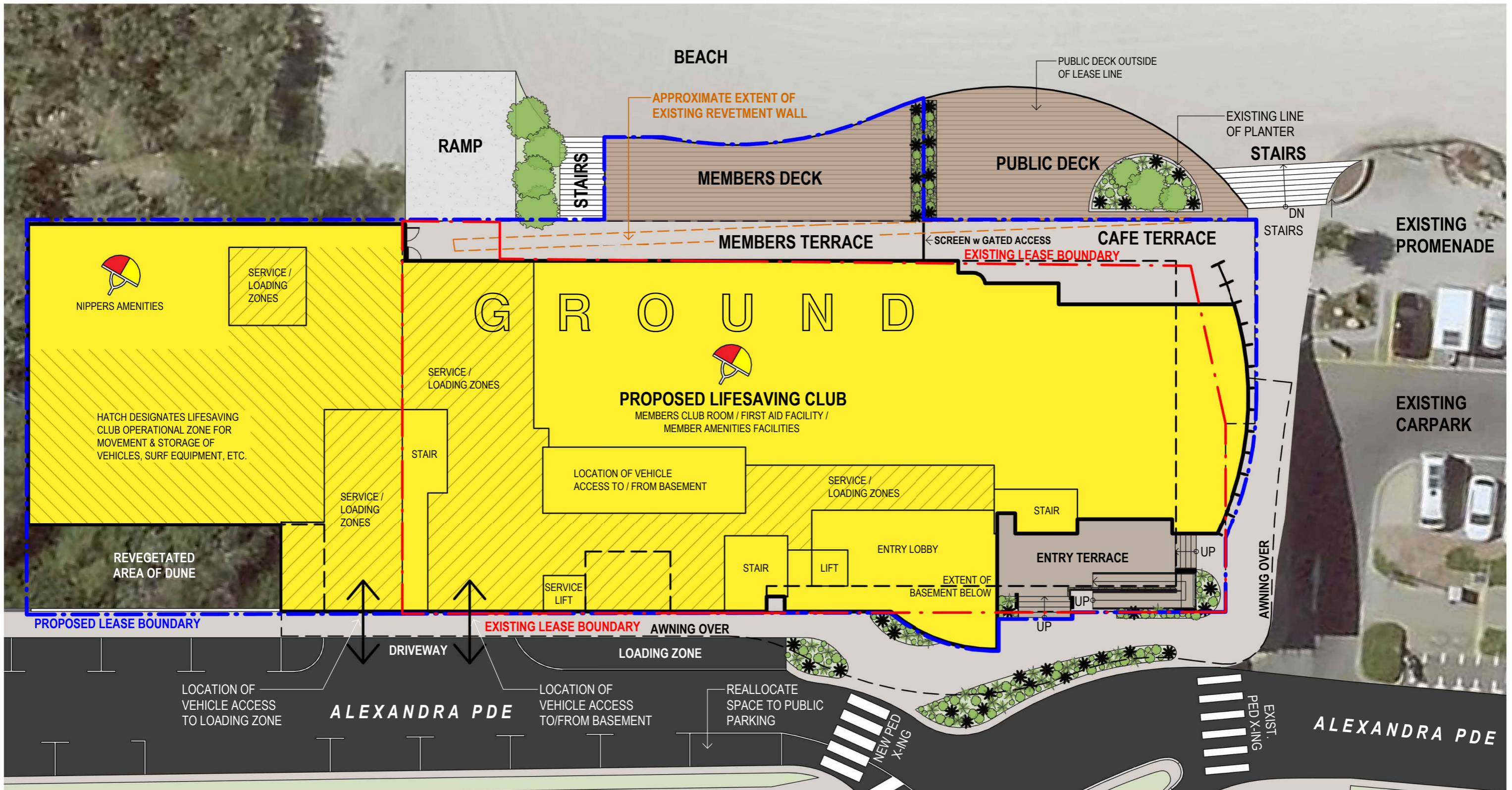
LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED BASEMENT PLAN

DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV106	REVISION F	

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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PROPOSED GROUND FLOOR PLAN

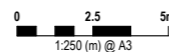
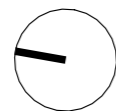
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1734m² - LIFESAVING CLUB ACTIVITIES / FACILITIES

1734m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED GROUND FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV107

REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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EXISTING FIRST FLOOR PLAN

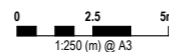
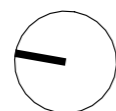
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1155m² - SUPPORTERS CLUB FACILITIES

1155m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING FIRST FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV108

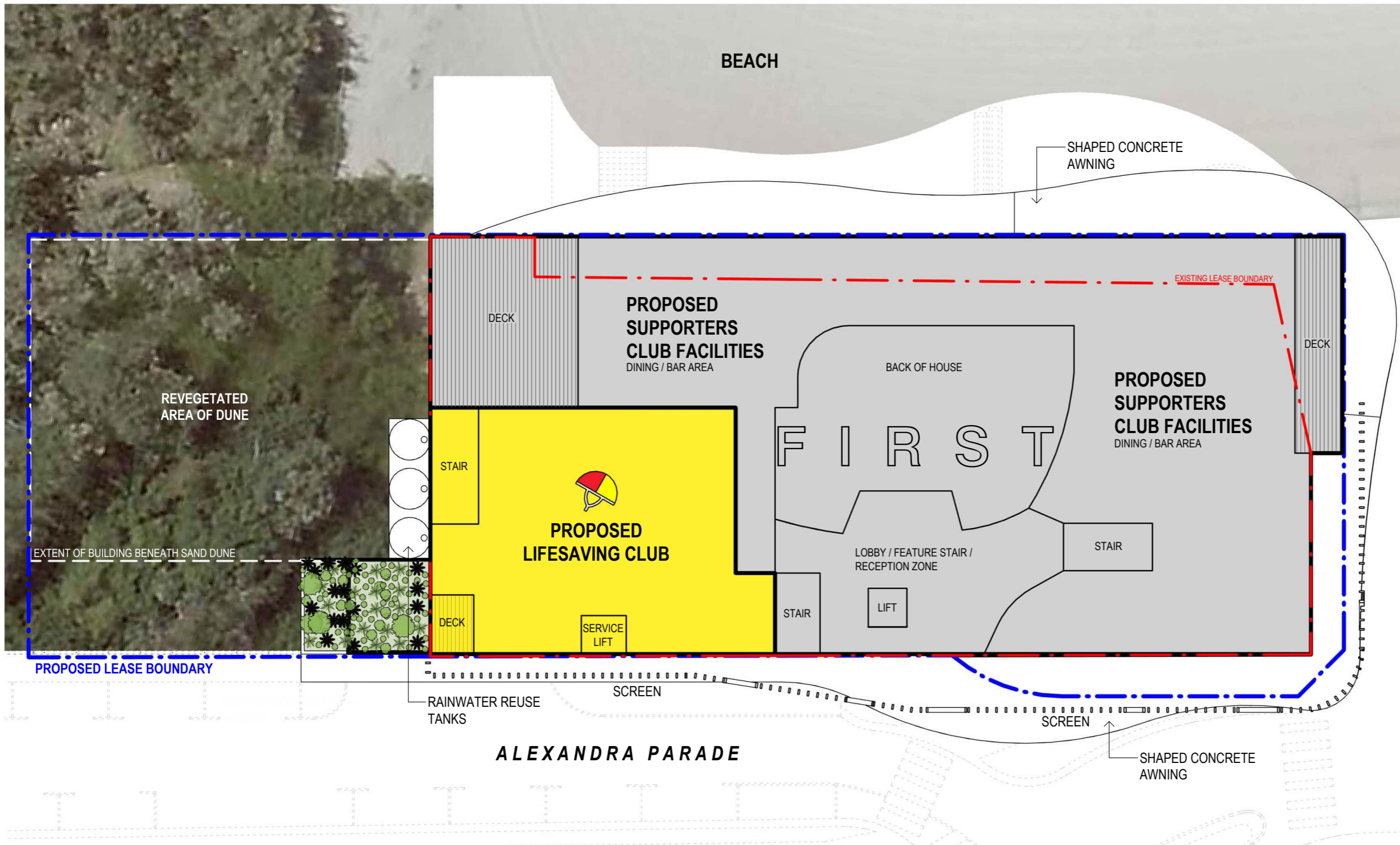
REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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PROPOSED FIRST FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	306m ² - LIFESAVING CLUB ACTIVITES / FACILITIES
	1155m ² - SUPPORTERS CLUB FACILITIES
1461m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	26.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED FIRST FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

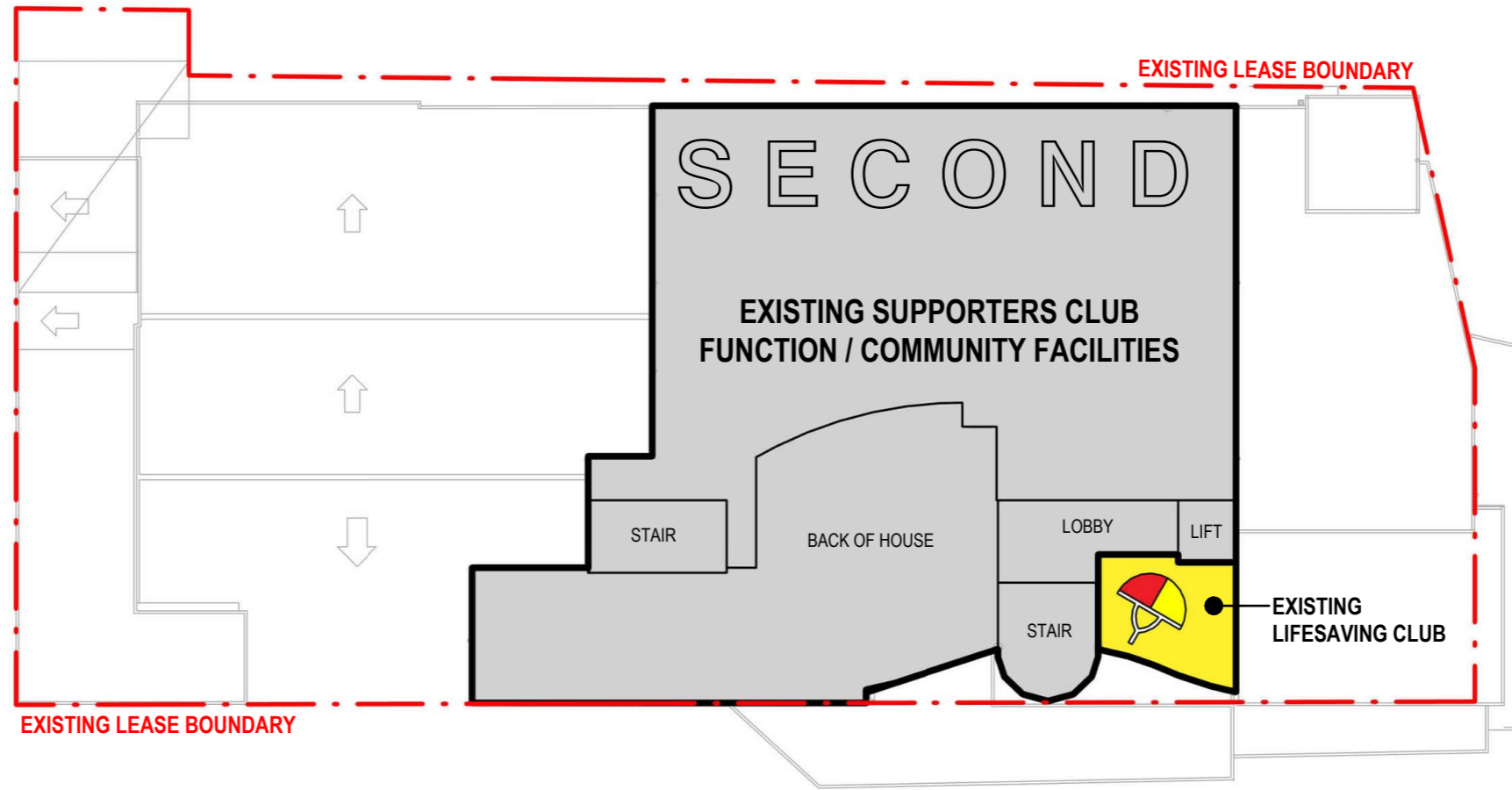
DRAWING NO.
2062 - GOV109

REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
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BEACH



ALEXANDRA PARADE

EXISTING SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	22m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FACILITIES
524m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SECOND FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

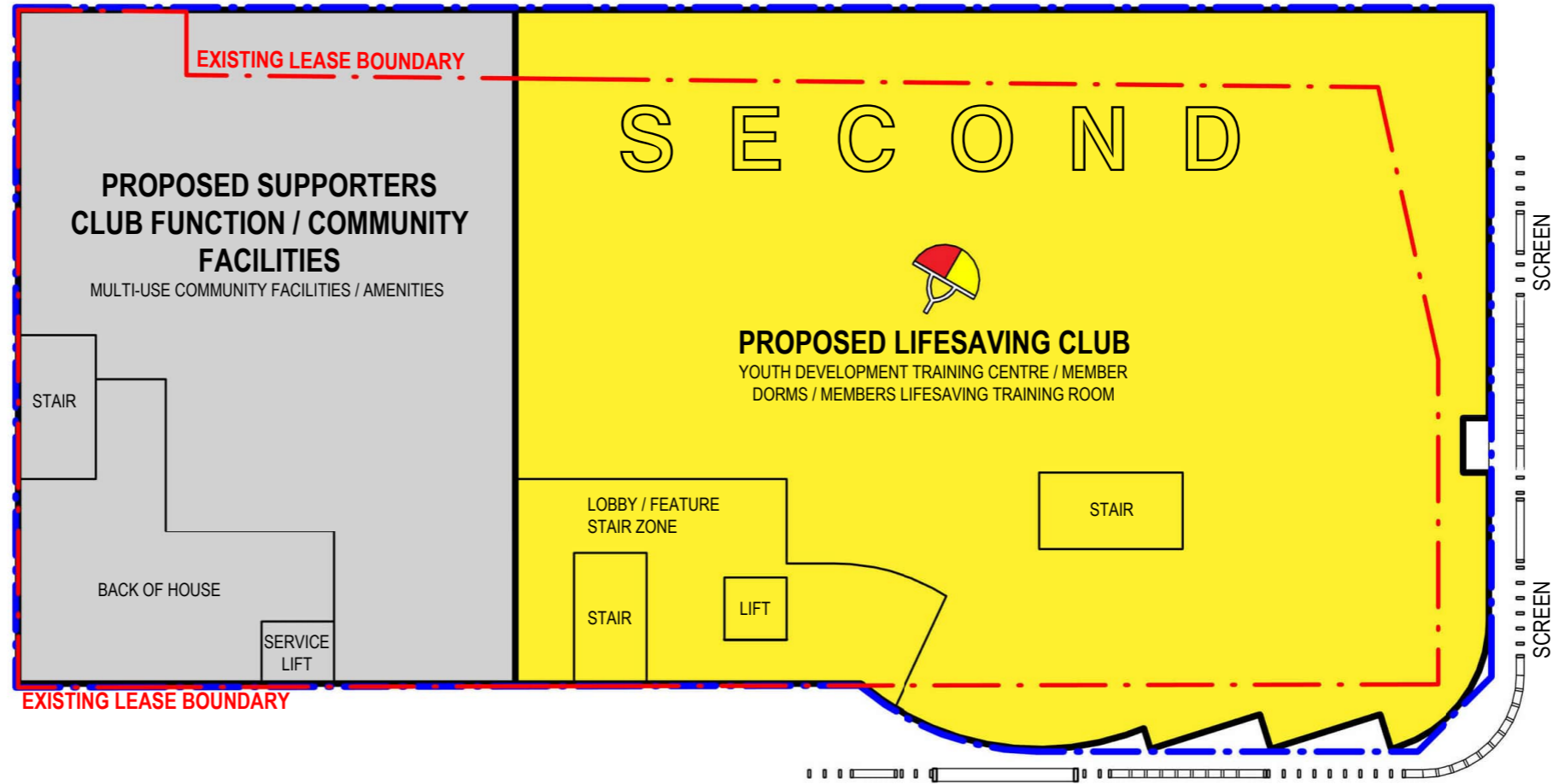
DRAWING NO.
2062 - GOV110

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F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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BEACH



ALEXANDRA PARADE

PROPOSED SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1026m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FUNCTION / COMMUNITY FACILITIES
1528m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

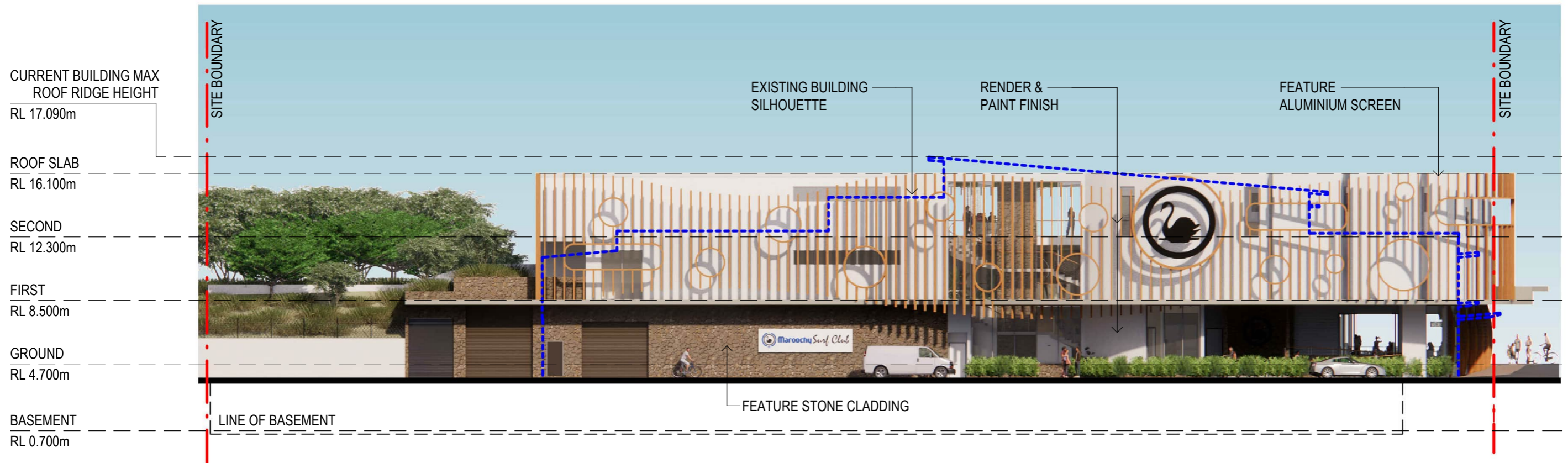
DRAWING TITLE
PROPOSED SECOND FLOOR PLAN

DATE	DRAWN	CHECKED
JUNE 2022	AJM	

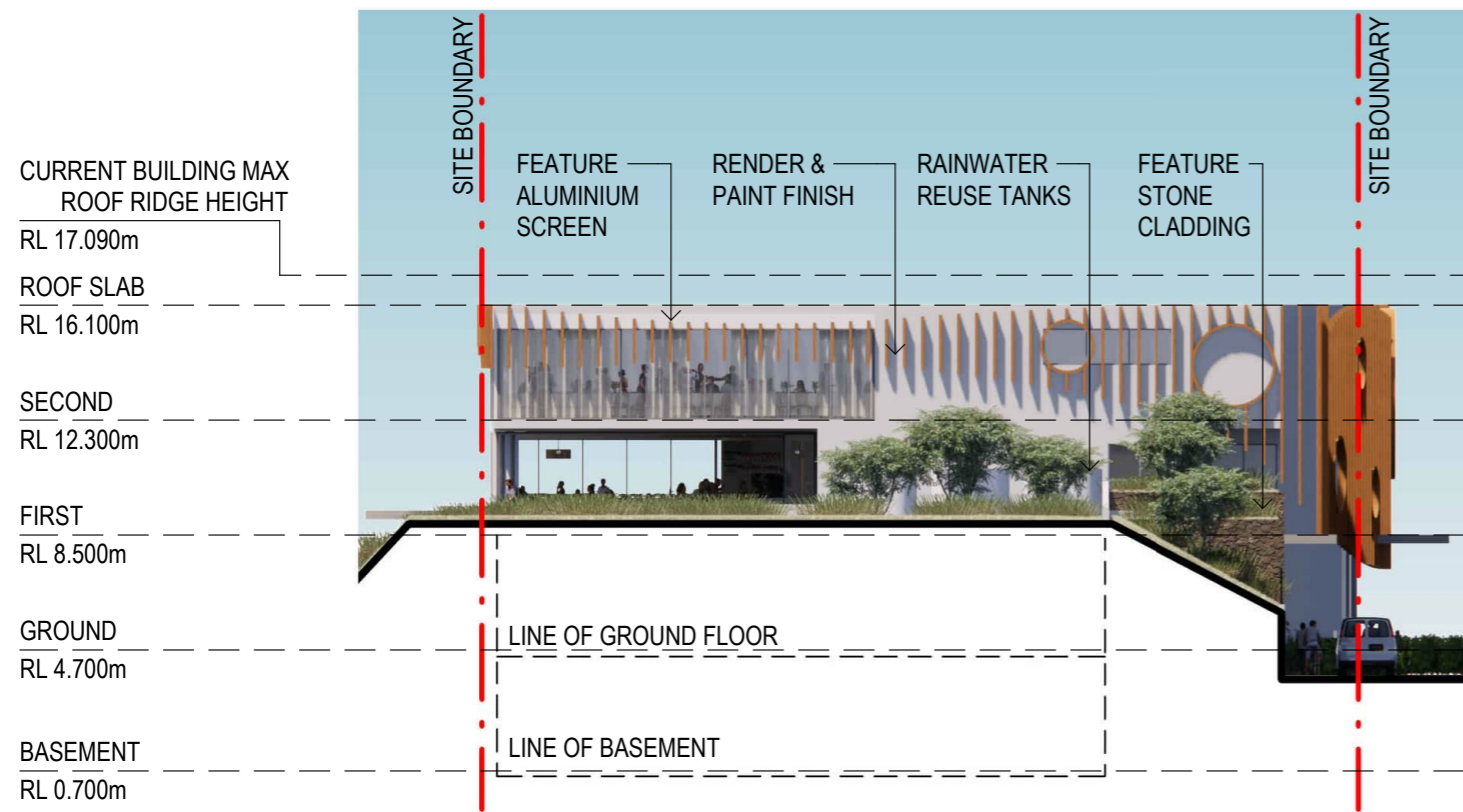
DRAWING NO.	REVISION
2062 - GOV111	F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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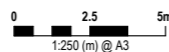


WEST ELEVATION




NORTH ELEVATION

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - WEST & NORTH

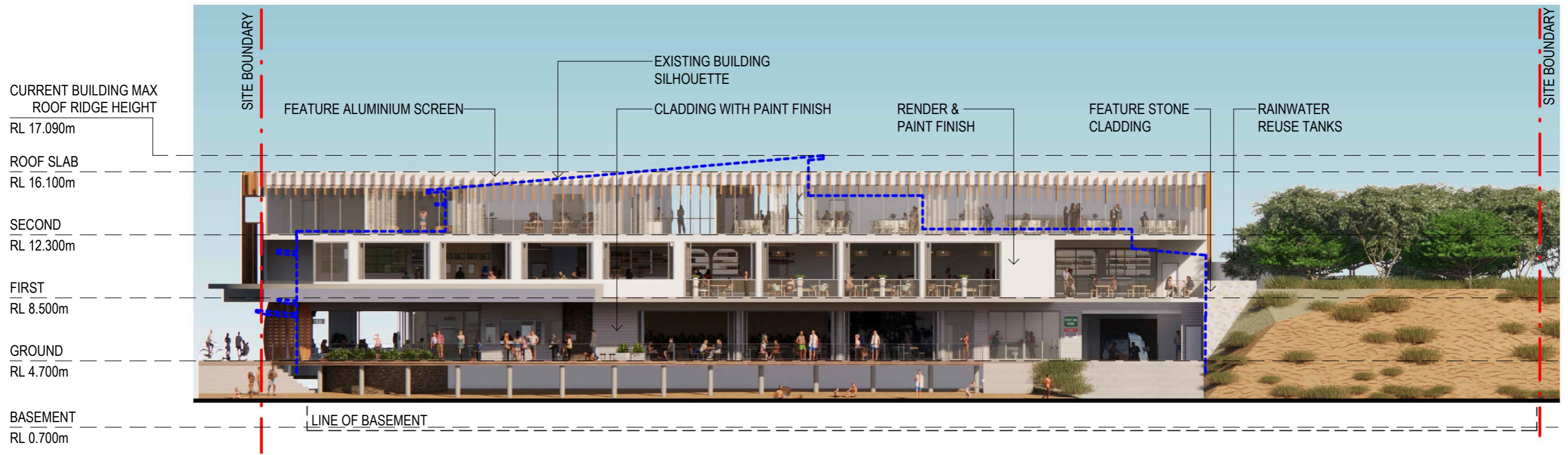
DATE	DRAWN	CHECKED
JUNE 2022	AJM	

DRAWING NO.	REVISION
2062 - GOV201	F

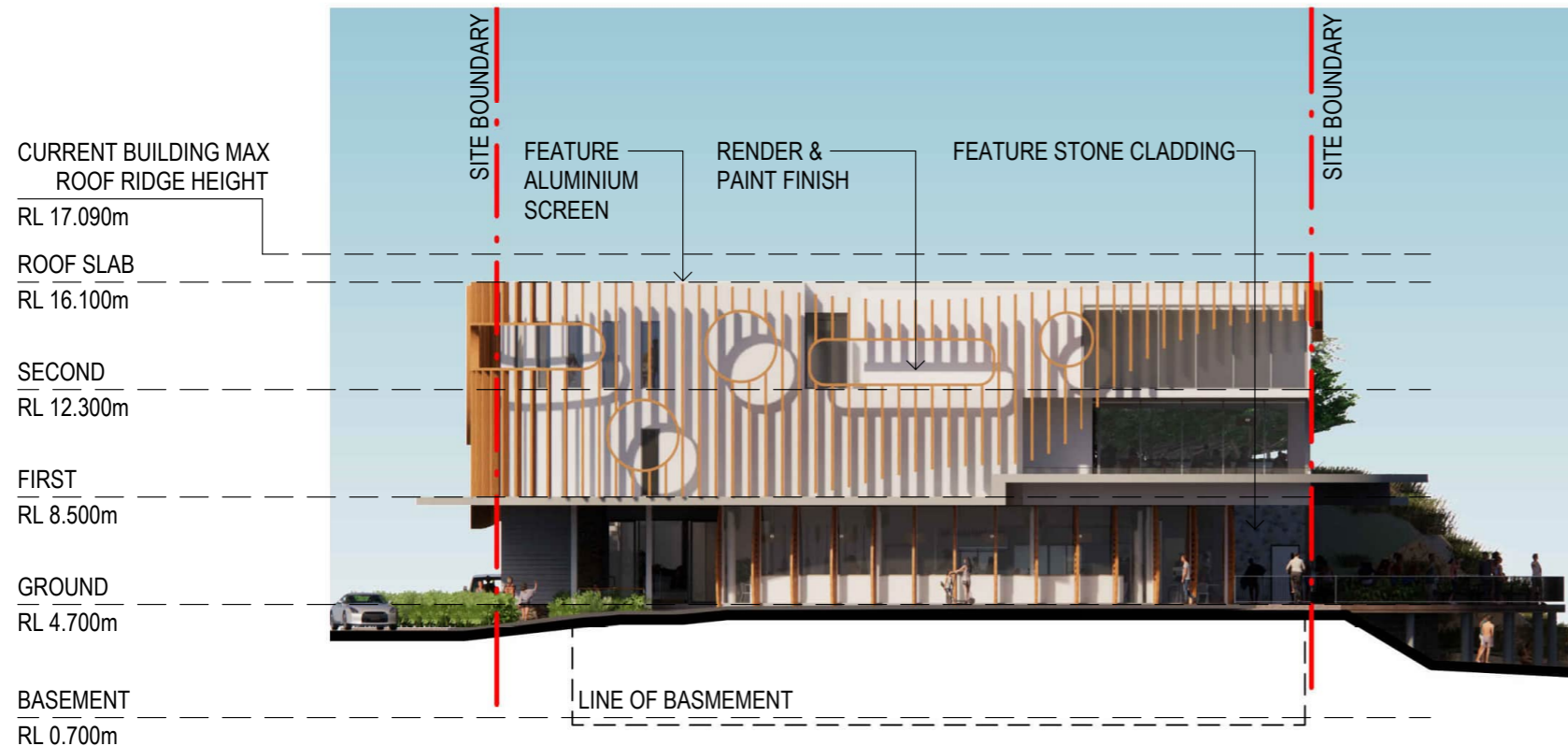
**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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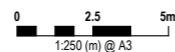


EAST ELEVATION



SOUTH ELEVATION

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - EAST & SOUTH

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV202

REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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BRISBANE
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**brd
GROUP**



PERSPECTIVE VIEW 1



PERSPECTIVE VIEW 2



PERSPECTIVE VIEW 3



PERSPECTIVE VIEW 4

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS

DATE	DRAWN	CHECKED
JUNE 2022	AJM	

DRAWING NO.
2062 - GOV203

REVISION
F

**BUILDING DESIGN
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 DESIGN MANAGEMENT**



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 BRISBANE 07 3886 1855
www.brdg.com.au

ABN: 60 131 465 891
 QBCC: 1160937



PERSPECTIVE VIEW 5



PERSPECTIVE VIEW 6



PERSPECTIVE VIEW 7



PERSPECTIVE VIEW 8

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV204

REVISION
F

**BUILDING DESIGN
 INTERIOR DESIGN
 DESIGN MANAGEMENT**



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 BRISBANE 07 3886 1855
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ABN: 60 131 465 891
 QBCC: 1160937



PERSPECTIVE VIEW 9



PERSPECTIVE VIEW 10

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	28.03.2024
B	ISSUE FOR APPROVAL	AJM	03.04.2024
C	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS

DATE	DRAWN	CHECKED
JUNE 2022	AJM	

DRAWING NO.	REVISION
2062 - GOV205	C

**BUILDING DESIGN
 INTERIOR DESIGN
 DESIGN MANAGEMENT**



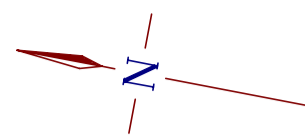
SUNSHINE COAST 07 5443 3726
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www.brdg.com.au

ABN: 60 131 465 891
 QBCC: 1160937

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Appendix B – Site Survey

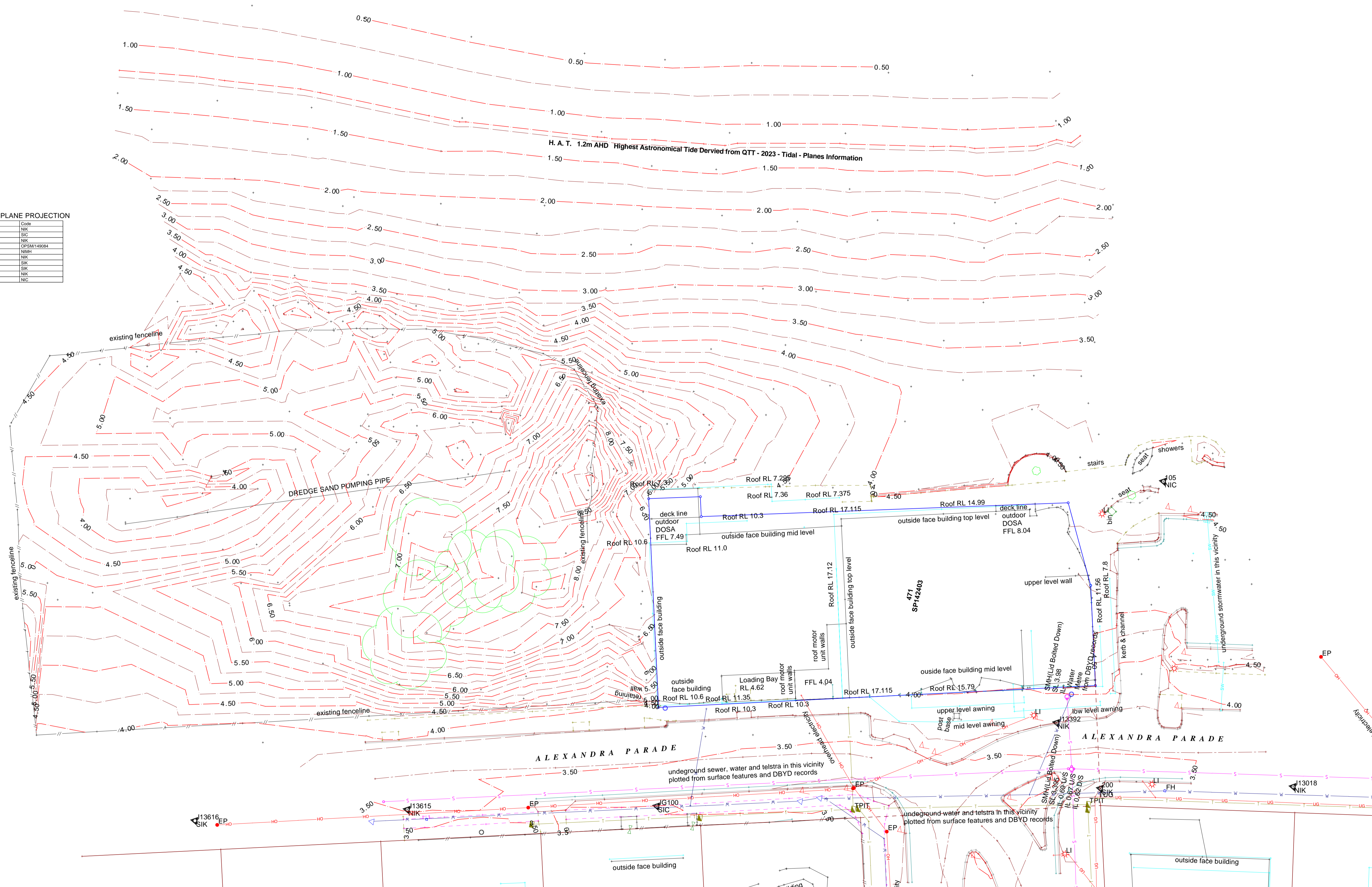




A1 1:250

SURVEY CONTROL MGA2020 ZONE 56 PLANE PROJECTION

Point	Easting	Northing	Elevation	Code
J13018	510298.168	7051616.563	3.567	NK
J20100	510270.772	7051694.638	3.515	SK
J13352	510296.483	7051647.235	3.828	NK
J13556	510226.802	7051632.260	2.910	QPSM149084
J13557	510291.622	7051630.874	3.167	NK
J13615	510264.473	7051725.356	3.508	NK
J13616	510258.096	7051751.300	3.422	SK
J200	510283.409	7051640.306	3.391	SK
J13644	510291.421	7051595.344	3.885	NK
J13645	510295.343	7051596.279	3.932	NK



Murray Building, 15-17 Currie St. Nambour Ph. (07)5441 2188 P.O. Box 246
Branch Offices at Maroochydore Caboolture Chinchilla Roma Gympie & Emerald

AV	Air Valve	PH	Fire Hydrant	T	Tree	TL	Telecommunications Line
BM	Bench Mark	GRATE	Stormwater Grate	TE	Telstra Pit	W	Water Line
CP	Control Point	GATE	Gate	TP	Telstra Pillar	SW	Sewer Line
ELP	Elect. Light Pole	S	Sign	WM	Water Meter	E	Electricity
EMH	Electricity Manhole	GAS	Gas Infrastructure	WV	Water Valve	GL	Gas Line
PP	Power Pole	SM	Sewer Manhole	SWV	Scower Valve	EB	Edge of Bitumen
EP	Electricity Pole	SV	Scower Valve	SWM	Stormwater Manhole	TL	Tree Line
ERT	Electricity Pit					UE	Underground Electricity
						SW	Stormwater
						OH	Overhead Powerline

NO.	DESCRIPTION	DATE	INIT.

PROJECT

**Contour & Detail Survey of
Lot 471 on SP142403
34-36 Alexandra Parade, Maroochydore
L.G.A. Sunshine Coast Regional**

CLIENT MSLSC

Notes: Contour Interval is 0.25 metres. Underground searches have been located from visible surface features only. A 'Dig Before You Dig' search should be performed before the commencement of any excavation work. The property boundaries shown have not fully been investigated for the purpose of this survey. For an accurate determination of the boundaries, an identification survey will be required.

Datum: MGA2020 Zone 56
Plane Projection: MGA2020 PLANE

F.W.	JG	Date	19/12/2023
F.Bk		File	101130 MSLSC MGA2020 PLANE.mxp
Level Bk		Job & Plan No.	101130
Acc. Bk			
Scale	A1 1:250		

Licd. Surveyor **Andrew Campbell**

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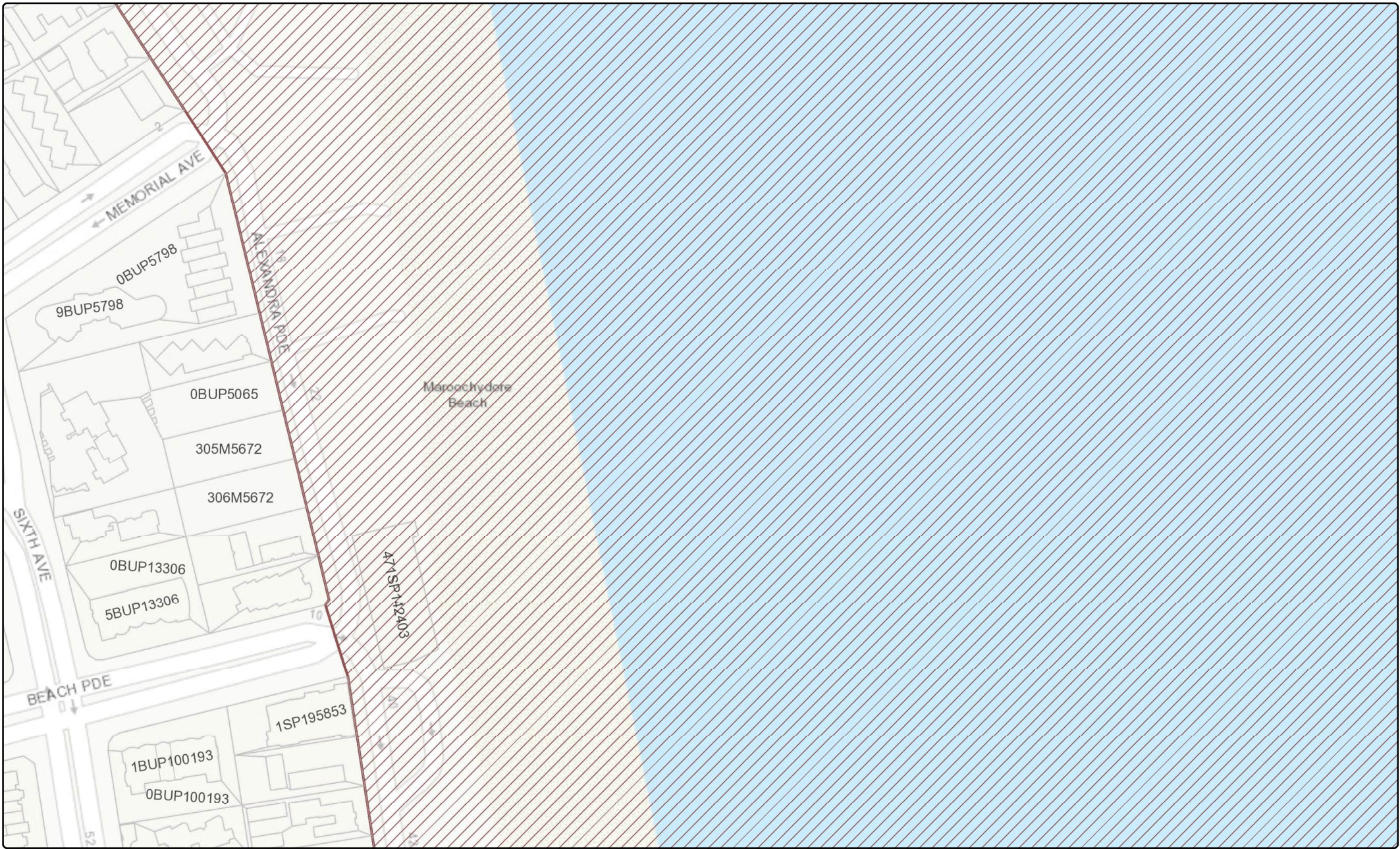
Appendix C – Coastal Hazard Mapping



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Appendix C – Coastal Hazard Mapping



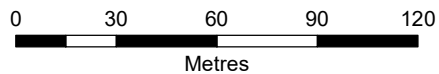


DA Mapping System – Print Screen



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Legend

Cadastral

 Cadastral

Coastal management district

 Coastal management district

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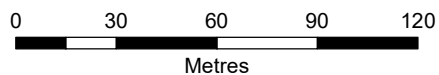


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Legend

Cadastre

 Cadastre

Coastal area - erosion prone area

 Coastal area - erosion prone area

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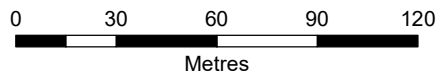


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Legend


Cadastre

 Cadastre

Coastal area - medium storm tide inundation area

 Coastal area - medium storm tide inundation area

Coastal area - high storm tide inundation area

 Coastal area - high storm tide inundation area

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Appendix D – Existing Beach Profiles





MAROOCHYDORE SURF CLUB REDEVELOPMENT

FOR
MSLSC

A1 ORIGINAL SIZE BEFORE REDUCTION

VER.	DESCRIPTION	DATE
A	DRAFT PRELIMINARY DESIGN	16-04-24

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123 Margaret Street Toowoomba 4350
PO Box 1439, Toowoomba, QLD 4350
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
MAROOCHYDORE SURF CLUB REDEVELOPMENT

DRAWING TITLE:
VIEW PLAN

DEVEL. APPLIC. No.:	DATE: 16-04-24
PROJECT LEADER: NATHAN MCDONAL	
DESIGNER: NHUNG NGUYEN	
DRAFTSPERSON: NHUNG NGUYEN	
CHECKED: PHILIP BELL	
APPROVED FOR AND ON BEHALF OF BURCHILLS ENGINEERING SOLUTIONS ABN 76 166 942 365	
RPEQ No.:	
SCALE: AS NOTED	DATUM: AHD FULL SIZE: A1
PROJECT No.: BE230571	DRAWING No.: C100 VERSION: A



VIEW PLAN
SCALE 1:300 (FULL SIZE) (metres)

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MAROOCHYDORE SURF CLUB REDEVELOPMENT

FOR
MSLSC

A1 ORIGINAL SIZE BEFORE REDUCTION

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123 Margaret Street Toowoomba 4350
PO Box 1439, Toowoomba, QLD 4350
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
ABN 76 166 942 365

PROJECT:
MAROOCHYDORE SURF CLUB REDEVELOPMENT

DRAWING TITLE:
CROSS SECTIONS SHEET 3

DEVEL. APPLIC. No.: DATE: 16-04-24

PROJECT LEADER: NATHAN MCDONALD

DESIGNER: NHUNG NGUYEN

DRAFTSPERSON: NHUNG NGUYEN

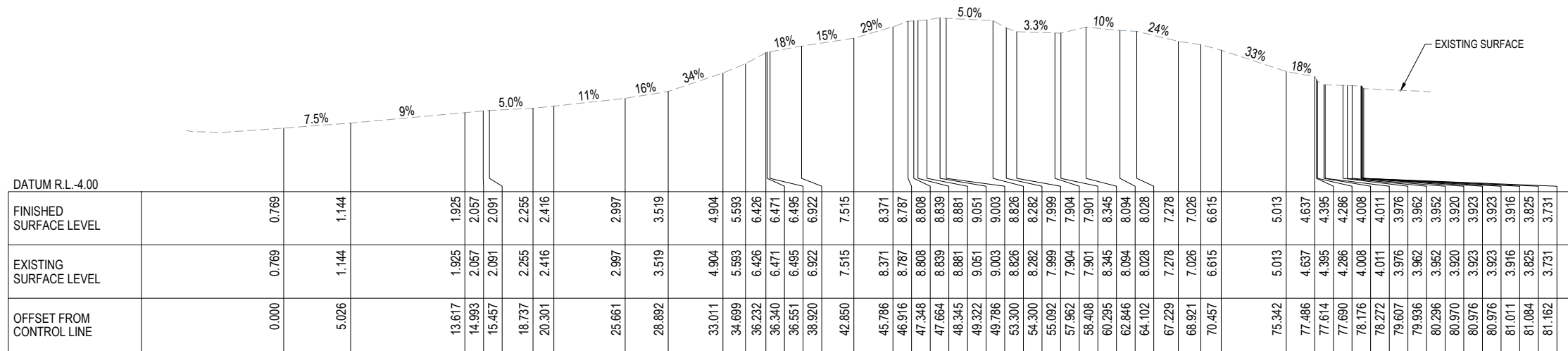
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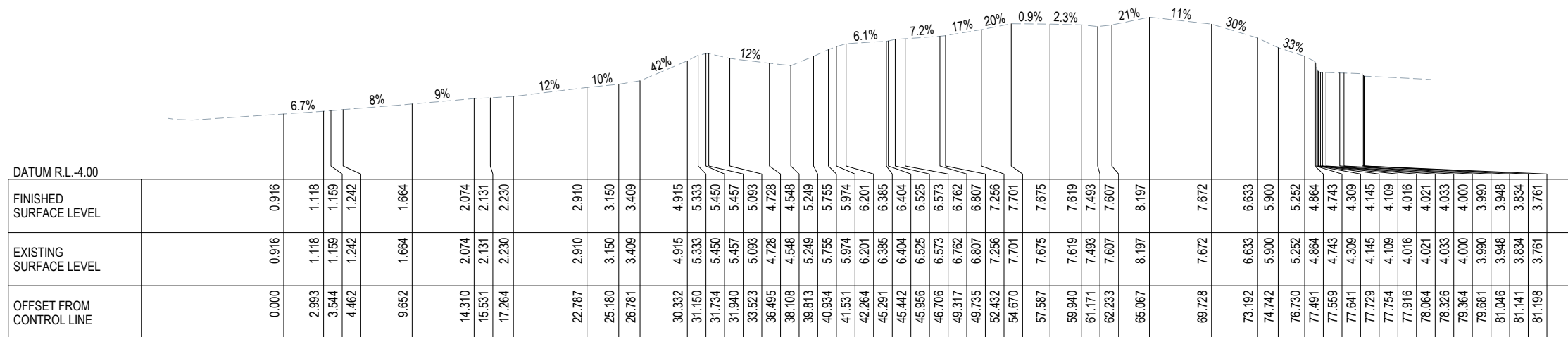
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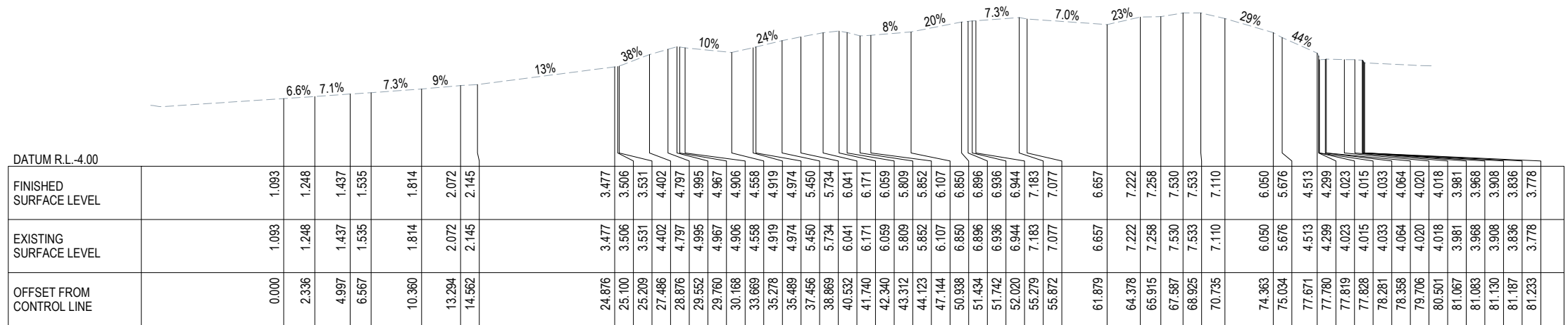
PROJECT No.: BE230571 DRAWING No.: C103 VERSION: A



CH 23.291



CH 13.291



CH 0

CROSS SECTIONS SHEET 1

SCALE 1:200 (FULL SIZE) (metres)

MAROOCHYDORE SURF CLUB REDEVELOPMENT

FOR
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A1 ORIGINAL SIZE BEFORE REDUCTION

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Fax: +61 7 5509 6411
Email: admin@burchills.com.au
Coote Burchills Engineering Pty Ltd
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DRAWING TITLE:
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DEVEL. APPLIC. No.: DATE: 16-04-24

PROJECT LEADER: NATHAN MCDONALD

DESIGNER: NHUNG NGUYEN

DRAFTSPERSON: NHUNG NGUYEN

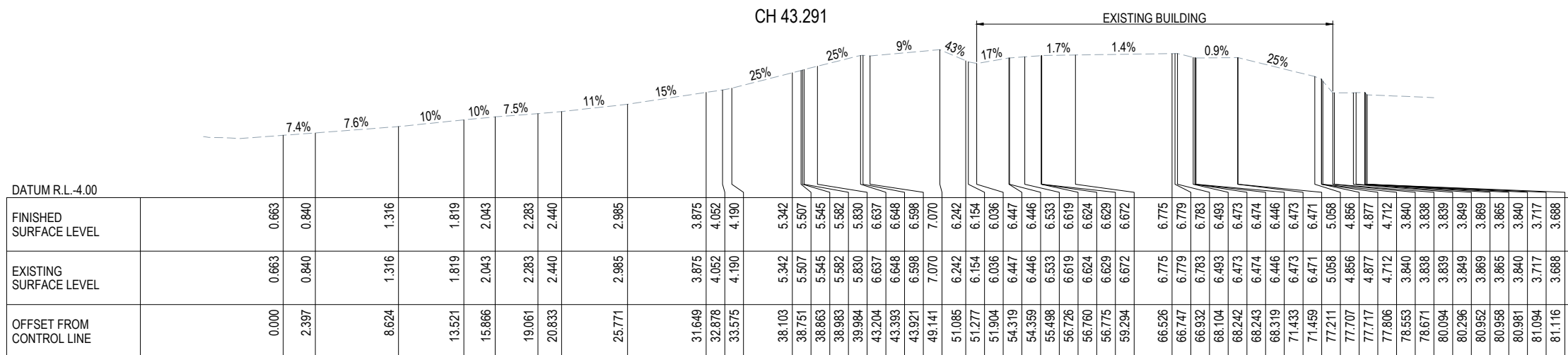
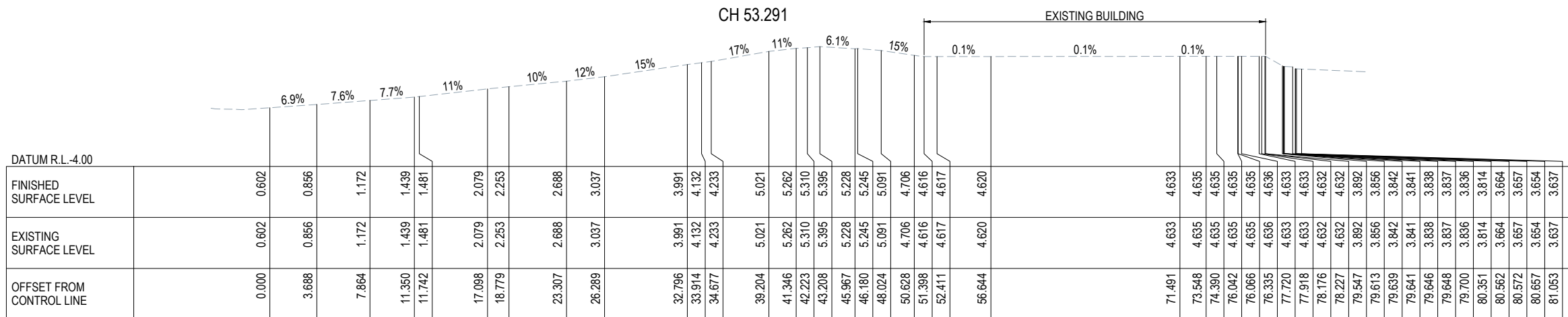
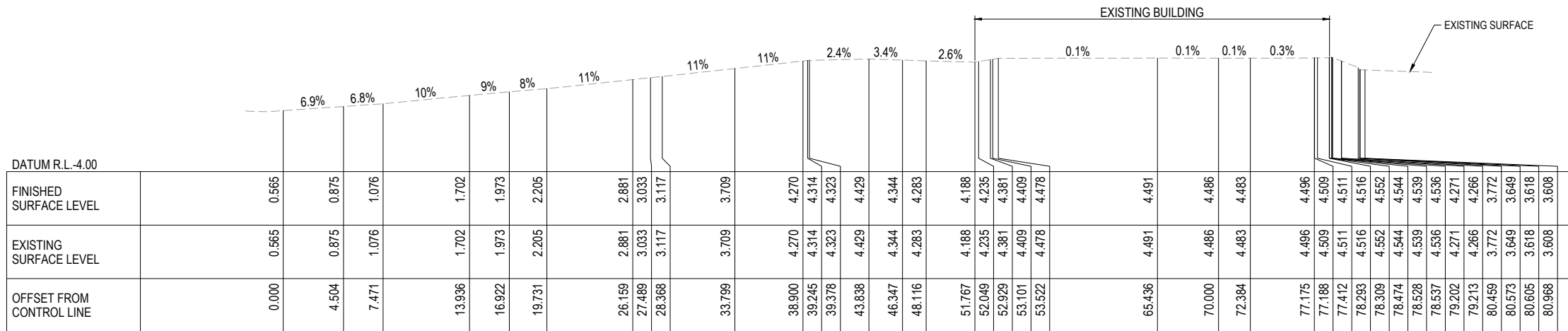
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RPEQ No.:

SCALE: AS NOTED DATUM: AHD FULL SIZE: A1

PROJECT No.: BE230571 DRAWING No.: C103 VERSION: A



CROSS SECTIONS SHEET 2

SCALE 1:200 (FULL SIZE) (metres)

MAROOCHYDORE SURF CLUB REDEVELOPMENT

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A1 ORIGINAL SIZE BEFORE REDUCTION

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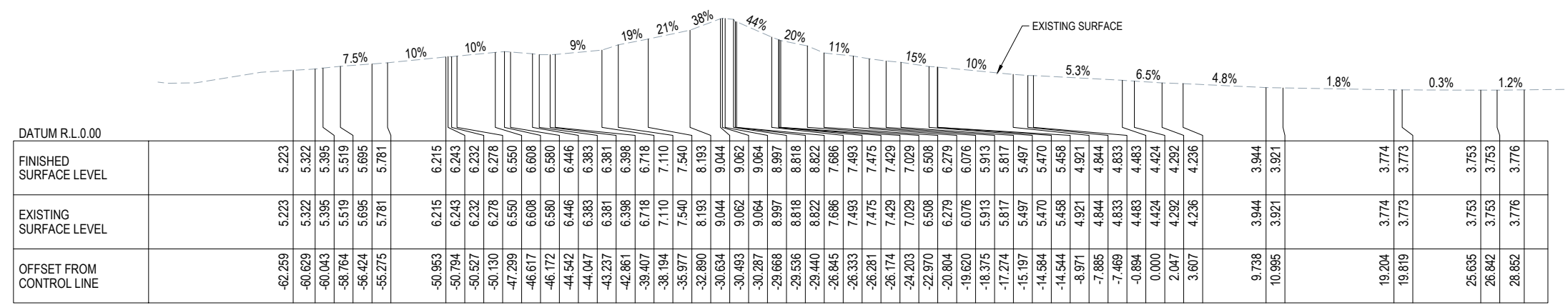
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123 Margaret Street Toowoomba 4350
PO Box 1439, Toowoomba, QLD 4350
Phone: +61 7 5509 6400
Fax: +61 7 5509 6411
Email: admin@burchills.com.au
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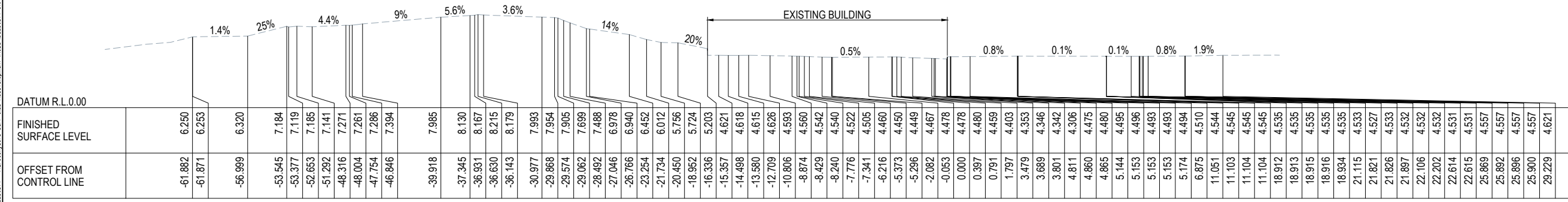
PROJECT:
MAROOCHYDORE SURF CLUB REDEVELOPMENT

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PROJECT No.: BE230571	DRAWING No.: C103
	VERSION: A

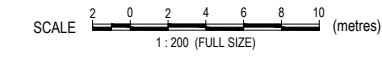


CH 10



CH 0

CROSS SECTIONS SHEET 3



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Appendix E – Code Responses



State code 8: Coastal development and tidal works

State Development Assessment Provisions Guidance Material: State code 8: Coastal Development and tidal works provides direction on how to address this code.

Table 8.1: All development

Performance outcomes	Response
Development in the erosion prone area	
<p>PO1 Development is only permitted in the erosion prone area where it:</p> <ol style="list-style-type: none"> 1. is one of the following types of development: <ol style="list-style-type: none"> a. coastal-dependent development; or b. temporary, readily relocatable or able to be abandoned; or c. essential community infrastructure; or d. redevelopment of an existing permanent building or structure that cannot be relocated or abandoned; and 2. cannot feasibly be located elsewhere; or 3. is located landward of: <ol style="list-style-type: none"> a. a fit for purpose revetment; or b. a proposed revetment that is consistent with: <ol style="list-style-type: none"> i. an agreement with a local government; or ii. the alignment of adjacent lawful revetments; or 4. is on a lot less than 2000m² where a coastal building line is present. 	<p>Complies with PO1</p> <p>The proposed development is a coastal dependent development that cannot be feasibly located elsewhere and is situated behind an existing fit for purpose revetment wall.</p>
<p>PO2 Development (other than coastal protection work) in the erosion prone area:</p> <ol style="list-style-type: none"> 1. does not adversely impact coastal processes; and 2. ensures that the protective function of landforms and vegetation is maintained. <p>Note: In considering reconfiguring a lot applications, the State may require land in the erosion prone area to be surrendered to the State for coastal management purposes under the <i>Coastal Protection and Management Act 1995</i>.</p> <p>Where the planning chief executive receives a copy of a land surrender requirement or proposed land surrender notice under the <i>Coastal Protection and Management Act 1995</i>, this must be considered in assessing the application.</p>	<p>Complies with PO2</p> <p>The proposed redevelopment works will result in the extension of the existing built form north into the dune system. These works will result in the removal of established regrowth vegetation and the rear portion of the dune. Post construction, the dunes and vegetation will be reinstated to stabilise the dunes.</p> <p>It is not anticipated that the proposed development works will adversely impact upon coastal processes in the surrounding area.</p> <p>For further details, please refer to the architectural design drawings prepared by BRD Group.</p>
<p>PO3 Development is sited, designed and constructed to limit the risk of impacts of coastal erosion to an acceptable level by:</p> <ol style="list-style-type: none"> 1. locating development outside the erosion prone area; or 2. mitigating or otherwise accommodating the risks posed by coastal erosion. 	<p>Complies with PO3</p> <p>The proposed redevelopment of the surf club will see the existing building extended to the north into a section of sand dune. The proposed extension will include the construction of a revetment wall that is to be</p>

Performance outcomes	Response
	founded a minimum of 1m into the existing bedrock. The top of the wall itself will be established at a minimum of 4.0m AHD which exceeds the projected year 2011, 1,000yr storm tide level for Maroochydore Beach.
<p>PO4 Development in the erosion prone area does not significantly increase the risk or impacts to people and property from coastal erosion.</p>	<p>Complies with PO4</p> <p>The proposed development will result in the extension of the current built form to the north of the existing surf club. The proposed extensions will be afforded protection by a basement / seawall which will have its foundations established 1m into the existing bedrock layer. Post construction, the impacted dune system is to be reinstated (where possible) to match the pre-developed profile and fully revegetated. The rehabilitation works combined with the proposed seawall structure will ensure that the proposed works do not significantly increase the risk or impacts to people and property from coastal erosion.</p>
<p>PO5 Development (other than coastal protection work) in the erosion prone area does not directly or indirectly increase the severity of coastal erosion either on or off the site.</p>	<p>Complies with PO5</p> <p>The proposed redevelopment works will result in the extension of existing seawall infrastructure. The establishment of the building extensions (while impacting on existing dune infrastructure), is not anticipated to impact upon the severity of coastal erosion either on or off the site, with dunes disturbed by the development works reinstated to pre-developed conditions (where possible).</p>
<p>PO6 In erosion prone areas where a coastal building line is present, building work is located landward of the coastal building line unless coastal protection work has been constructed to protect the development.</p>	<p>Not Applicable</p> <p>Nb. Proposed works are to extended along the existing surf club built form alignment.</p>
<p>Artificial waterways</p>	
<p>PO7 Development of artificial waterways, canals and dry-land marinas conserves coastal resources by:</p> <ol style="list-style-type: none"> 1. ensuring changes to water flows, water levels and sediment movement do not adversely impact the natural waterway to which it is connected; 2. demonstrating appropriate storage, treatment and disposal of dredged material for the life of the development. 	<p>Not Applicable</p>
<p>Coastal protection work</p>	
<p>PO8 Works for beach nourishment minimises adverse impacts on coastal processes.</p>	<p>Not Applicable</p>
<p>PO9 Works for beach nourishment do not increase the severity of erosion on adjacent land.</p>	<p>Not Applicable</p>

Performance outcomes	Response
<p>PO10 Erosion control structures (excluding revetments) are only constructed where there is an imminent threat to significant buildings or infrastructure, and there is no feasible option for either:</p> <ol style="list-style-type: none"> 1. beach nourishment; or 2. relocation or abandonment of structures. 	<p>Not Applicable</p>
<p>PO11 Erosion control structures (revetments only) are only constructed where:</p> <ol style="list-style-type: none"> 1. there is an imminent threat to significant buildings or infrastructure, and there is no feasible option for either: <ol style="list-style-type: none"> a. beach nourishment; or b. relocation or abandonment of structures; or 2. the development: <ol style="list-style-type: none"> a. is in a consistent alignment with adjacent lawful revetments; or b. is consistent with an agreement with a local government that a revetment is appropriate in the proposed location. 	<p>Complies The proposed development will extend the existing lawful revetment wall. It should be noted that Maroochydore beach also currently benefits from a nourishment program which replenishes and maintains the beach profile.</p>
<p>PO12 Erosion control structures minimise interference with coastal processes and reduce the severity of erosion on adjacent land.</p>	<p>Complies The establishment of the building extensions (while impacting on existing dune infrastructure), is not anticipated to impact upon the severity of coastal erosion either on or off the site, with dunes disturbed by the development works reinstated to pre-developed conditions (where possible). It is not anticipated that the proposed works will interfere with coastal processes. The extension of seawall infrastructure will however benefit private properties and infrastructure immediately landward of the development.</p>
<p>Water quality</p>	
<p>PO13 Development:</p> <ol style="list-style-type: none"> 1. maintains or enhances environmental values of receiving waters; 2. achieves the water quality objectives of Queensland waters; 3. avoids the release of prescribed water contaminants to tidal waters. 	<p>Complies The development satisfies the prescribed water quality objectives. For further details, please refer to the Stormwater Management Plan prepared by Arcos Engineering submitted as part of the application package.</p>
<p>Public use of and access to State coastal land</p>	
<p>PO14 Development maintains or enhances public use of and access to and along State coastal land (except where this is contrary to the protection of coastal resources or public safety).</p>	<p>Complies with PO14 The proposed redevelopment will not impact upon the ability of the public to access state coastal land.</p>
<p>PO15 Private marine development does not reduce public use of and access to State coastal land and ensures that works:</p> <ol style="list-style-type: none"> 1. are used for marine access purposes only; 2. minimise the use of State coastal land; 	<p>Not Applicable Proposed development is not for a private marine development.</p>

Performance outcomes	Response
<ul style="list-style-type: none"> 3. are designed to accommodate the berthing of one vessel only per waterfront residence; 4. do not interfere with access between navigable waterways and adjacent properties. 	
<p>PO16 Development does not reduce public use of and access to State coastal land and ensures that erosion control structures, intended to protect a freehold or leasehold (not State land) premises, are wholly located within the lot:</p> <ul style="list-style-type: none"> 1. except where impeded by significant buildings or infrastructure that cannot be removed or relocated; or 2. for revetments the development is: <ul style="list-style-type: none"> a. in a consistent alignment with adjacent lawful revetments; or b. consistent with an agreement with a local government that a revetment is appropriate in the proposed location. 	<p>Complies with PO16</p> <p>The proposed redevelopment works will not reduce public use of and access to state coastal land and will extend existing erosion control structures.</p>
<p>Matters of state environmental significance</p>	
<p>PO17 Development is designed and sited to:</p> <ul style="list-style-type: none"> 1. avoid impacts on matters of state environmental significance; or 2. minimise and mitigate impacts on matters of state environmental significance after demonstrating avoidance is not reasonably possible; and 3. provide an offset if, after demonstrating all reasonable avoidance, minimisation and mitigation measures are undertaken, the development results in an acceptable significant residual impact on a matter of state environmental significance. <p>Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan.</p>	<p>Complies with PO17</p> <p>The Ecological Site Assessment prepared by Burchills Engineering Solutions (BE230663-RP-ESA-00) identified two (2) broad vegetation associations in the investigation area which included Beach Sheoak Foredune Woodland and Foredune Spinifex Grassland, both of which are Least Concern Regional Ecosystem and are not a Matter of State Environmental Significance.</p> <p>The Ecological Site Assessment further states that the proposed development is designed to protect the site's existing significant ecological values and by doing so protects the biodiversity state interests as identified in the State Planning Policy and avoids impacts on Matters of National, State and Local Environmental Significance.</p>

Table 8.2: All operational work

Performance outcomes	Response
Private marine development	
PO18 Private marine development is designed and constructed to maintain existing waterway banks in their natural state and not require: 1. coastal protection work ; 2. shoreline or riverbank hardening; 3. dredging for marine access purposes .	Not Applicable
Disposal of solid waste or dredged material from artificial waterways	
PO19 Solid waste from land and dredged material from artificial waterways is not disposed of in tidal water unless it is for beneficial reuse .	Not Applicable
Disposal of dredged material other than from artificial waterways	
PO20 Dredged material is returned to tidal water where the material is needed to maintain coastal processes and sediment volume.	Not Applicable
PO21 Where the dredged material is not needed to maintain coastal processes and sediment volume, the quantity of dredged material disposed to tidal water is minimised through beneficial reuse or disposal on land.	Not Applicable
All dredging and any disposal of dredged material in tidal water	
PO22 Dredging or disposal of dredged material in tidal waters does not adversely impact on coastal processes and coastal resources .	Not Applicable
Reclamation	
PO23 Development does not involve reclamation of land below tidal water , other than for the purposes of: 1. coastal-dependent development, public marine development or essential community infrastructure ; or 2. strategic ports, priority ports, boat harbours or strategic airports and aviation facilities, in accordance with a statutory land use plan or master plan; or 3. coastal protection work or work necessary to protect coastal resources or coastal processes .	Not Applicable

Table 8.3: Operational work for tidal works which is not assessed by local government

Performance outcomes	Acceptable outcomes	Response
<p>PO24 Tidal works are sited and designed to operate safely during and following a defined storm tide event.</p>	<p>AO24.1 Tidal work is designed and located in accordance with the Guideline: Building and engineering standards for tidal works, Department of Environment and Heritage Protection, 2017.</p>	<p>Not Applicable</p>

State Interest – natural hazards, risk and resilience

The risks associated with natural hazards, including the projected impacts of climate change, are avoided or mitigated to protect people and property and enhance the community's resilience to natural hazards.

A development application for a material change of use, reconfiguration of a lot or operational works on premises in any of the following:

- 1) bushfire prone areas
- 2) flood hazard areas
- 3) landslide hazard areas
- 4) storm tide inundation areas
- 5) erosion prone area.

All of the following requirements are assessment benchmarks for the development:

Performance outcomes	Response
Erosion prone areas within a coastal management district	
1. Development does not occur in an erosion prone area within a coastal management district unless the development cannot feasibly be located elsewhere and is: <ol style="list-style-type: none"> a) coastal-dependent development; or b) temporary, readily relocatable or able to be abandoned development; or c) essential community infrastructure; or d) minor redevelopment of an existing permanent building or structure that cannot be relocated or abandoned. 	Complies The proposal is for the redevelopment of community infrastructure which is a coastal-dependent development.
2. Development permitted in (1) above, mitigates the risks to people and property to an acceptable or tolerable level.	Complies The redevelopment of the Maroochy Surf Club includes the extension of an existing revetment wall which will be mitigate the risks to people and property to acceptable level.
Bushfire, flood, landslide, storm tide inundation, and erosion prone areas outside the coastal management district	
3. Development other than that assessed against (1) above, avoids natural hazard areas, or where it is not possible to avoid the natural hazard area, development mitigates the risks to people and property to an acceptable or tolerable level.	Not Applicable
All natural hazard areas	
4. Development supports and does not hinder disaster management response or recovery capacity and capabilities.	Complies The proposal is for the redevelopment of the existing Maroochy Surf Club. The proposed works will not hinder disaster management responses or recovery capacity and capabilities with the response to

Performance outcomes	Response
	natural hazards remaining consistent in both the pre and post developed scenarios.
5. Development directly, indirectly and cumulatively avoids an increase in the severity of the natural hazard and the potential for damage on the site or to other properties.	<p>Complies</p> <p>The proposed development is for the redevelopment of the existing Maroochydore Surf Lifesaving Club. The proposed development will maintain existing protections (seawall) and where the built form is to be extended, sand dune (post construction) are to be reinstated to pre-developed levels (where possible) and revegetated. The proposed extension will also result in the construction of a new seawall which is to be founded 1m into the bedrock (coffee rock layer), extending the current seawall defences.</p>
6. Risks to public safety and the environment from the location of hazardous materials and the release of these materials as a result of a natural hazard are avoided.	<p>Complies</p> <p>The proposed development will not store commercial quantities of hazardous materials onsite. Risk to public safety and the environment in the event of a natural hazard are considered negligible.</p>
7. The natural processes and the protective function of landforms and the vegetation that can mitigate risks associated with the natural hazard are maintained or enhanced.	<p>Complies</p> <p>The proposed development will extend the existing revetment wall along the current alignment. Post construction, the dune system is to be reinstated in front of the proposed building extension (refer architectural design drawings prepared by BRD Group). It is recommended that the reinstated dune be planted out with coastal species immediately post construction to stabilise the dune.</p>

8.2.5 Coastal erosion hazard overlay code

8.2.5.1 Application

- (1) This code applies to accepted development and assessable development:-
 - (a) subject to the coastal protection overlay shown on the overlay maps contained within Schedule 2 (Mapping); and
 - (b) identified as requiring assessment against the Coastal protection overlay code by the tables of assessment in Part 5 (Tables of assessment).
- (2) The acceptable outcomes in Table 8.2.5.3.1 (Requirements for accepted development) are requirements for applicable accepted development.
- (3) The following provisions of the code are assessment benchmarks for applicable assessable development:-
 - (a) section 8.2.5.2 (Purpose and overall outcomes); and
 - (b) Table 8.2.5.3.2 (Performance outcomes and acceptable outcomes for assessable development).

8.2.5.2 Purpose and Overall Outcomes

- (1) The purpose of the Coastal protection overlay code is to:-
 - (a) protect people and property from coastal hazards;
Note—coastal hazards include coastal erosion and storm tide inundation, or permanent inundation from sea level rise. Storm tide inundation is specifically addressed in the Flood Hazard Overlay Code.
 - (b) protect coastal landforms, vegetation and biodiversity, and allow for natural fluctuations of the coast to the greatest extent practicable;
 - (c) ensure that decisions about coastal development take appropriate account of the predicted effects of climate change, including sea level rise; and
 - (d) maintain or enhance public access to the coast.
- (2) The purpose of the Coastal protection overlay code will be achieved through the following overall outcomes:-
 - (a) development ensures the protection of people and property from coastal hazards, taking into account the predicted effects of climate change;
 - (b) development allows for natural fluctuations of the coast, including as a result of sea level rise, to occur naturally as far as practicable;
 - (c) unless specifically anticipated by the planning scheme through the allocation of zones, development within an erosion prone area avoids:-
 - i. intensification of existing uses;
 - ii. new permanent built structures; and
 - iii. seaward extensions to existing built structures;

Note—the erosion prone area is declared under the Coastal Protection and Management Act 1995 and is administered by the State Department of Environment and Heritage Protection.

- (d) development avoids adverse impacts to coastal landforms and alterations to physical coastal processes and, as far as practicable, avoids the need for coastal protection works;
- (e) development preserves the integrity of the coastal building line as the defined seaward boundary for building work and other development adjacent to the beachfront;
- (f) development maintains public access to the coast, consistent with maintaining public safety and conserving coastal resources;
- (g) development preserves opportunities for coastal-dependent development and maritime development in appropriate locations, particularly maritime development areas;
- (h) development protects water quality, coastal dunes and creeks, vegetation and biodiversity within coastal areas; and
- (i) development adjacent to beachfront areas is located and designed to protect the character of the beachfront when viewed from the beach and integrates with the surrounding natural landscape and skyline vegetation.

8.2.5.3 Performance Outcomes and Acceptable Outcomes

Table 8.2.5.3.2 Performance outcomes and acceptable outcomes 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
Development in the Erosion Prone Area			
<p>PO1 Development, other than redevelopment of an existing urban development site, development for essential community infrastructure, coastal-dependent development and maritime development in a maritime development area:-</p> <p>(a) allows for natural fluctuations of the coast to occur, including appropriate allowance for climate change and sea level rise; and (RPEQ) specialising in civil engineering, and constructed to ensure that they are erosion resistant</p> <p>(b) avoids the need for additional coastal protection works to safe standards.</p>	<p>AO1 Development is situated wholly outside of the erosion prone area.</p> <p>Note—the erosion prone area is declared under the Coastal Protection and Management Act 1995 and is administered by the State Department of Environment and Heritage Protection.</p> <p>OR Development does not increase the scale or intensity of an existing use or create additional lots within the erosion prone area.</p> <p>OR Development is for acceptable temporary or relocatable structures (for safety purposes, recreational purposes or temporary uses) and the structures and use of the site is expendable.</p>	<p>ALTERNATE SOLUTION PROVIDED</p> <p>The development application proposes the redevelopment of the Maroochydore Surf Lifesaving Club which is a coastal-dependent development. While the proposed development will result in an increase in scale of the existing built form, the proposed development will be established behind a seawall which is founded a minimum of 1m in the coffee rock layer, extending the existing seawall infrastructure. Additionally, post construction the disturbed sand dunes are to be reinstated (where possible) to match the pre-developed profile and fully revegetated.</p> <p>It is anticipated that the proposed works will have little impact upon coastal processes.</p>	

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
	<p>Note—acceptable temporary, relocatable or expendable structures for safety or recreational purposes include:-</p> <p>(a) picnic tables, barbeques, coastal trails and bikeways that are considered to be expendable when threatened by erosion; and</p> <p>(b) specially designed portable or demountable towers, equipment sheds, lookouts, shelter sheds, decks and pergolas that are unattached and non-permanent structures capable of being easily and quickly removed when threatened by erosion.</p>		
<p>PO2</p> <p>Redevelopment of an existing urban development site within the erosion prone area mitigates any increase in the risk to people and property from adverse coastal erosion impacts.</p>	<p>AO2</p> <p>Redevelopment that intensifies the use of an existing urban development site in the erosion prone area:-</p> <p>(a) incorporates a layout that minimises the footprint of the development within the erosion prone area and locates permanent structures as far landward as possible;</p> <p>(b) installs and maintains coastal protection works to mitigate adverse impacts to people and property from coastal erosion within the property; and</p> <p>(c) locates, designs and constructs buildings and structures to withstand coastal erosion impacts.</p> <p>Note—the erosion prone area is declared under the Coastal Protection and Management Act 1995 and is administered by the State Department of Environment and Heritage Protection.</p>	<p>COMPLIES WITH PO2</p> <p>The proposed redevelopment will extend the existing surf club built form to the north of the current building footprint. The proposed works will impact upon the existing dune system. The proposed building works will be established behind a seawall, which will be designed and constructed to mitigate any impacts to people and property from adverse coastal erosion impacts. Additionally, post construction the disturbed sand dunes are to be reinstated (where possible) to match the pre-developed profile and fully revegetated.</p>	

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
	Note—mitigation measures should take account of the practicable design life of the development in the context of the future erosion threat.		
<p>PO3</p> <p>Development for essential community infrastructure:-</p> <p>(a) demonstrates that it is not feasible to locate the development outside of the erosion prone area; and</p> <p>(b) provides for built structures to be located landward of the alignment of adjacent habitable buildings; or</p> <p>(c) where the achievement of (b) (above) is not reasonably practicable, provides for built structures to be located as far landward as practicable.</p>	<p>AO3</p> <p>No acceptable outcome provided.</p>	<p>COMPLIES WITH PO3</p> <p>The development application is for the redevelopment of an existing piece of essential community infrastructure. It is not feasible to move the surf club as it is a coastal dependent land use which is intrinsically linked to coastal uses.</p> <p>The proposed extensions to the existing built form will see the building extended into the dune to the north. The proposed extensions will be constructed along the alignment of the existing built form.</p>	
<p>PO4</p> <p>Coastal dunes are protected and managed to minimise human impacts on existing dune vegetation and facilitate restoration and protection of dune systems.</p>	<p>AO4</p> <p>Coastal-dependent development:-</p> <p>(a) installs and maintains coastal protection works to mitigate adverse impacts to people and property from coastal erosion at the location; and</p> <p>(b) locates, designs and constructs relevant buildings and structures to withstand coastal erosion impacts.</p>	<p>COMPLIES WITH AO4</p> <p>(a) The development will include the extension of an existing seawall. The seawall structure will protect the proposed development and provide protection to buildings further landward of the structure.</p> <p>(b) The development will include the extension of an existing seawall. The footings of the seawall structure will be founded at least 1m into the coffee rock layer and will have a finished height of approximately 4.0m.</p>	
<p>PO5</p>	<p>AO5</p> <p>Development within a maritime development area:-</p>	<p>NOT APPLICABLE</p>	

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
<p>Development within a maritime development area mitigates any risk to people or property from adverse coastal erosion impacts.</p>	<p>(a) provides for non-coastal dependent development to be located outside of the erosion prone area; and (b) installs and maintains coastal protection works to mitigate adverse impacts to people and property from coastal erosion at the location. Note—the erosion prone area is declared under the Coastal Protection and Management Act 1995 and is administered by the State Department of Environment and Heritage Protection.</p>		
<p>Coastal Building Lines and Setbacks</p>			
<p>PO6 New development or the intensification of existing development on a site subject to a coastal building line, or located immediately adjacent to the beachfront or a reserve fronting the beachfront, is located and designed to protect people and property from coastal hazards and avoid the need for additional coastal protection works.</p>	<p>AO6 All buildings and permanent structures are setback at least 6 metres landward of the coastal building line for the site. Note—coastal building lines are declared under the Coastal Protection and Management Act 1995 and are administered by the State Department of Environment and Heritage Protection. OR Where a coastal building line does not exist on a lot fronting the beachfront or a reserve adjoining the beachfront, development provides for all buildings and permanent structures to be set back a minimum of 6 metres from the seaward boundary of the lot.</p>	<p>ALTERNATE SOLUTION PROVIDED The proposed redevelopment works are to be established along the alignment of the existing Surf Club building.</p>	

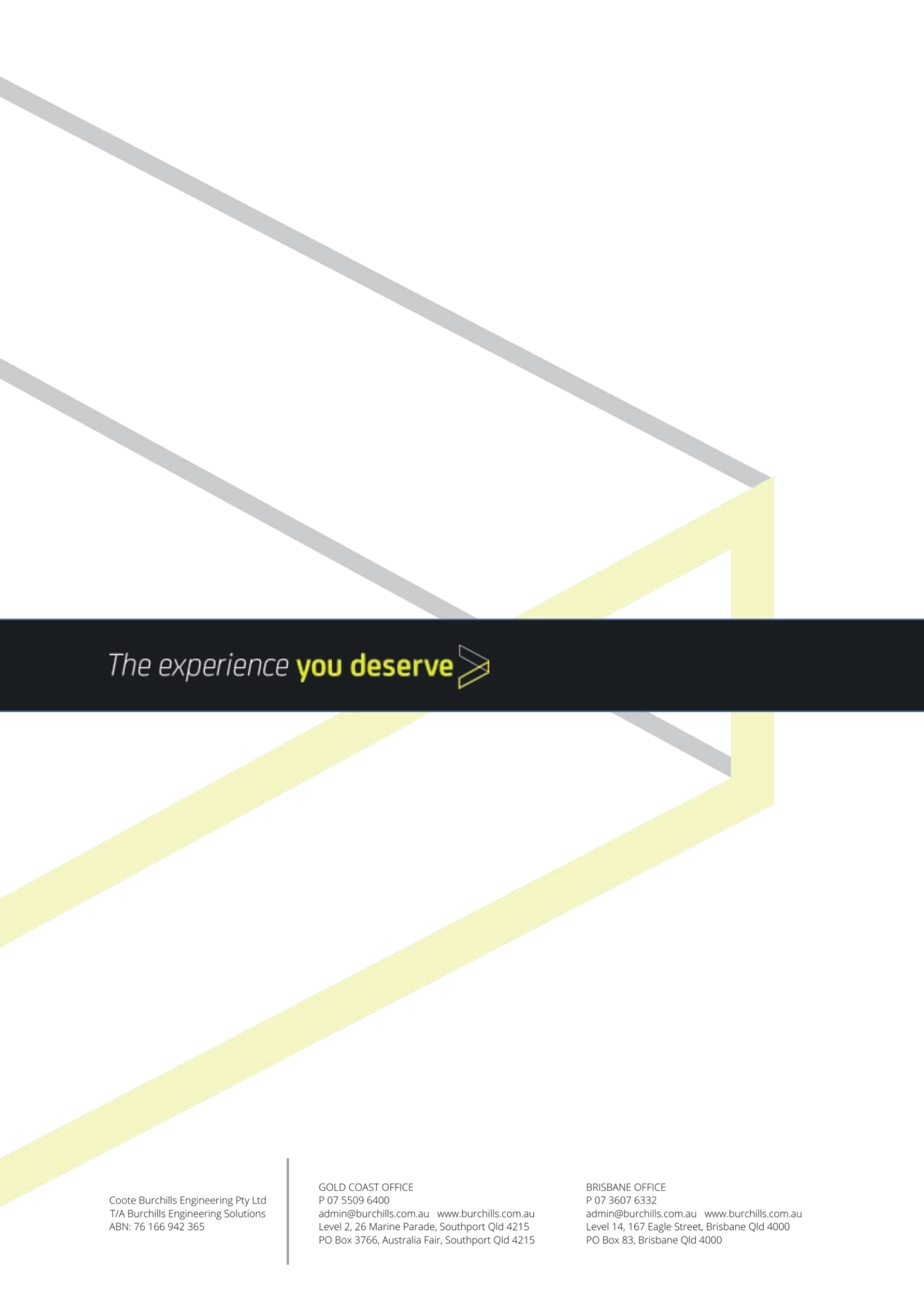
Performance outcomes	Acceptable outcomes	Does the proposal meet the acceptable outcome? If not, justify how the proposal meets <u>either</u> the performance outcome or overall outcome	Internal use
Reconfiguring a Lot Within the Coastal Management District			
<p>PO7 Where land within the coastal management district is proposed to be reconfigured to create additional lots, the erosion prone area is maintained as a development free buffer zone, unless:- (a) there is already substantial development seaward of the development site; or (b) the land is in a maritime development area.</p>	<p>AO7 Where reconfiguring of a lot is proposed within the coastal management district, the erosion prone area within the lot, or land within 40 metres of the foreshore (whichever is the greater), is surrendered to the State for public use. Note—the erosion prone area and coastal management district are declared under the Coastal Protection and Management Act 1995 and are administered by the State Department of Environment and Heritage Protection.</p>	<p>NOT APPLICABLE</p>	
Public Access to Public Coastal Land			
<p>PO8 Development:- (a) does not result in a net loss of public access to public coastal land (including the foreshore) and tidal waters; and (b) where possible, provides enhanced opportunities for public access in a manner consistent with conserving coastal resources.</p>	<p>AO8 Development is located, designed and operated in a manner that retains or enhances existing public access to the coast. OR Where loss of public access cannot practicably be avoided, development provides the same or a greater amount of new access opportunities in, or in close proximity to, the site.</p>	<p>COMPLIES WITH AO8 The proposed development will not restrict or impede public access to the coast.</p>	
Maritime Development and Maritime Development Areas			
<p>PO9 Maritime development is located in a designated maritime development area.</p>	<p>AO9 Maritime development is located within a maritime development area as identified on a Coastal Protection Overlay Map.</p>	<p>NOT APPLICABLE</p>	


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
<p>PO10 Development in a maritime development area:- (a) is predominantly for maritime development; and (b) ensures ancillary and subsidiary development is predominantly of a commercial or public nature. Note—in the event that marine industry and related services cease to operate on Lot 795 RP847247 (Lawrie’s Marina), this performance outcome is not intended to apply to this site, notwithstanding that it is identified as a maritime development area on the applicable Coastal Protection Overlay Map.</p>	<p>AO10.1 Less than half of the non-tidal component of the development site within the maritime development area is allocated for nonmaritime development.</p> <p>AO10.2 Less than a quarter of the non-tidal component of the development site within the maritime development area is allocated for residential development.</p>	<p>NOT APPLICABLE</p>	

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
<p>PO11 Marina development minimises the risk of ship sourced pollution by providing appropriate facilities for the handling and disposal of ship sourced pollutants.</p>	<p>AO11.1 Marina development involving 6 or more berths provides the following:- (a) common user facilities for the handling and disposal of ship-sourced pollutants, including oil, garbage and sewage, are provided at a suitable location at the marina; (b) facilities which are designed and operated to ensure the risk of spillage from operations is minimised; (c) appropriate equipment to contain and remove spillages, which is stored in a convenient position near the facility and is available for immediate use; and (d) boats visiting the marina are able to use the ship sourced pollutants reception facilities.</p> <p>AO11.2 Where practical, the marina pollutant reception facility is connected to sewerage or other waste reception infrastructure. Editor's note—the Australian and New Zealand Environment and Conservation Council (ANZECC) 1997, Best Practice Guidelines for Waste Reception Facilities at Ports, Marinas and Boat Harbours in Australia and New Zealand provide further guidance in relation to AO11.1.</p>	<p>NOT APPLICABLE</p>	

Protection of Sand Dunes and Coastal Creeks

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
<p>PO12 Development:- (a) maintains dune crest heights and minimises and mitigates the risk to development from wave overtopping and storm tide inundation; and (b) maintains or enhances coastal ecosystems and natural features such as coastal creeks, mangroves and coastal wetlands, particularly where these features protect or buffer communities and infrastructure from sea-level rise and coastal inundation impacts.</p>	<p>AO12 No acceptable outcome provided.</p>	<p>COMPLIES WITH PO12 The proposed development will result in the extension of the existing surf club building footprint into sand dunes situated to the north. The proposal will result in the removal of established vegetation and will destabilise the dunes (in the vicinity of the works area) during the construction stage. Post construction the disturbed sand dunes are to be reinstated (where possible) to match the pre-developed profile and fully revegetated. The reinstated dunes will ensure that the protective function of the dunes will not be reduced.</p>	



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Coote Burchills Engineering Pty Ltd
T/A Burchills Engineering Solutions
ABN: 76 166 942 365

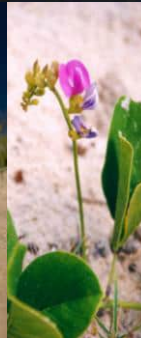
GOLD COAST OFFICE
P 07 5509 6400
admin@burchills.com.au www.burchills.com.au
Level 2, 26 Marine Parade, Southport Qld 4215
PO Box 3766, Australia Fair, Southport Qld 4215

BRISBANE OFFICE
P 07 3607 6332
admin@burchills.com.au www.burchills.com.au
Level 14, 167 Eagle Street, Brisbane Qld 4000
PO Box 83, Brisbane Qld 4000

Appendix 6
Ecological Assessment prepared by Burchills



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Maroochydore SLSC Expansion

Ecological Site Assessment

Project No: BE230663
Document No: BE230663-RP-ESA-01

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Prepared by:	Gabriela Castan Eloise Skinner Caroline Kelly
Position:	Ecologist Snr Ecologist Principal Ecologist
Date:	May 2024

Approved by:	Caroline Kelly
Position:	Principal Ecologist
Date:	May 2024

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Coote Burchills Engineering Pty Ltd ACN: 166 942 365

**Level 2, 26 Marine Parade SOUTHPORT QLD 4215
PO Box 3766, Australia Fair SOUTHPORT QLD 4215
Telephone: +61 7 5509 6400**

**Level 14, 167 Eagle Street BRISBANE QLD 4000
PO Box 83, BRISBANE QLD 4000
Telephone: +61 7 3606 0201**

**Level 1, 91 Landsborough Avenue SCARBOROUGH QLD 4020
PO Box 238, SCARBOROUGH QLD 4020
Telephone: +61 409 935 884**

**Level 3, 16 East Street IPSWICH QLD 4305
Telephone: +61 429 056 347 Telephone: +61 7 5509 6400 Facsimile: +61 7 5509 6411 Email:
admin@burchills.com.au**

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Executive Summary

This Ecological Site Assessment (ESA) was undertaken for a Ministerial Infrastructure Designation (MID) development application for the proposed expansion of the Maroochydore Surf Life Saving Club facility at 34/36 Alexandra Parade, Maroochydore.

Field surveys were undertaken by Burchills Ecologists during February 2024 including targeted surveys for significant species historically detected near the subject site. The flora surveys identified three (3) broad vegetation associations in the investigation area including:

- Vegetation Association A - Beach Alectryon and Beach Sheoak Hind Dune Open Forest (1,513m²);
- Vegetation Association B - Beach Sheoak Fore dune Woodland (2,071m²); and
- Vegetation Association C - Fore dune Spinifex Grassland (490m²).

The structure and floristics of Vegetation Associations A and B represent the 'Least Concern' Regional Ecosystem 12.2.14a - *Casuarina equisetifolia* subsp. *incana* woodland to low open forest, and the structure and floristics of Vegetation Association C represents the 'Least Concern' Regional Ecosystem 12.2.14e - *Spinifex sericeus* open hummock grassland. Being Least concern, this vegetation is not a Matter of State Environmental Significance (MSES) under the State Planning Policy.

A total 16 weeds were recorded during surveys including one (1) identified as a Restricted Invasive Plant under the *Biosecurity Act 2014* - *Asparagus aethiopicus* (ground asparagus). The most prevalent weeds were in the ground stratum and included - *Barleria repens*, *Sorghum halepense* (Johnson grass) and *Asparagus aethiopicus*. All three (3) species are highly invasive and have the potential to suppress natural regeneration.

The fauna surveys identified 22 species of fauna within the subject site including two (2) reptile species, 19 bird species and one (1) mammal species. All fauna detected are primarily common and disturbance-tolerant species.

No conservation significant (threatened) flora or fauna species or vegetation communities were observed during surveys. One (1) migratory seabird species was observed - *Sterna hirundo* (common tern). This non-breeding migrant species has a large range and is common on the eastern coast of Australia in/near coastal waters including ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries.

The proposed development was designed to minimise impacts on significant ecological values and biodiversity state interests as identified in the State Planning Policy including Matters of National, State and Local Environmental Significance. Impacts are limited to removal of some vegetation to facilitate the expansion works. This vegetation is mapped as Least concern Regional Ecosystem 12.2.14 - Strand and fore dune complex comprising *Spinifex sericeus* grassland and *Casuarina equisetifolia* subsp. *incana* low woodland/open forest. The vegetation impact area generally meets the benchmarks of Regional Ecosystem 12.2.14 but is substantially disturbed with reduced canopy cover and high levels of weed infestation. This vegetation is mapped as Essential Habitat for threatened and migratory shorebirds (MSES) however shorebird species were detected in the surveys and the habitat values of this area is not conducive to these species.

The State mapped vegetation is also mapped as supporting Native Vegetation Areas in the *Sunshine Coast Planning Scheme 2014* - a Matter of Local Environmental Significance (MLES). The site surveys verified the extent of native vegetation in and near the project area and determined that the proposal may impact approximately 1,070m² of native vegetation.



The project provides an opportunity to restore the disturbed dunal environment outside of the impact footprint, to improve the local biodiversity and fauna habitat values and mitigate coastal erosion processes. To meet these objectives, the proposal includes restoration of 2,690m² of disturbed dune vegetation immediately north of the project footprint, ensuring no net loss of MSES and MLES (Native Vegetation Areas) and compliance with the *Sunshine Coast Planning Scheme 2014 Biodiversity, Waterways and Wetlands Overlay Code*.

In summary, the project will require clearing of existing native vegetation to facilitate the expansion works. The vegetation to be cleared predominantly comprises pioneer species and weeds and it is not expected that the clearing will impact on species of conservation significance or other matters of environmental significance provided works are undertaken in accordance with the recommendations provided within this report including restoration of the adjoining dune environment.

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Appendices

Appendix A – Desktop Review Search Results

Appendix B – Flora Species Identified On-Site

Appendix C – Conservation Significant Fauna Species Likelihood of Occurrence Assessment

Appendix D – Sunshine Coast Planning Scheme 2014 v27 Part 8 Section 8_2_3 BWVO Code response

1. Introduction

Burchills were engaged by Maroochydore Surf Lifesaving Club Inc to undertake an Ecological Site Assessment (ESA) for a proposed new surf club and revised lease area which extends into a vegetated area immediately north of the existing surf club. This study forms a part of an assessment of impacts to support a Ministerial Infrastructure Designation (MID) application for the proposed expansion of the surf club facilities.

This study assessed the ecological values of the subject site using a survey methodology consistent with the *Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland* (v7.0, Neldner *et al.*, 2023) and the *Terrestrial Vertebrate Fauna Survey Assessment Guidelines for Queensland* (v4.0, Eyre *et al.*, 2022).

1.1 Objectives and Scope

The intent of this assessment is to assess the ecological values of the subject site, identify any potential impacts on these values as a result of proposed development, and recommend strategies to avoid, minimise and mitigate these impacts.

In summary, the objectives of this ESA are to:

- Desktop review to determine potential ecological values;
- Site investigations to verify ecological values including Matters of Environmental Significance (MES);
- Assessment of potential impacts of the development on MES; and
- Provide recommendations to avoid, minimise and mitigate impacts on MES.

1.2 Proposal and Investigation Area

The investigation area for the purpose of this study is the proposed new lease area for the expansion of the Maroochydore Surf Life Saving Club, located within the Sunshine Coast Council local government area. The site locality and proposed design is shown below in Figure 1.1 and Figure 1.2.

The subject site is mostly developed containing a Surf Life Saving Club building and associated facilities. The proposed expansion will extend the lease and building footprint into the vegetated area immediately north of the existing building as shown in Figure 1.1.



Figure 1.1 Proposal (BRD Group, 2024)

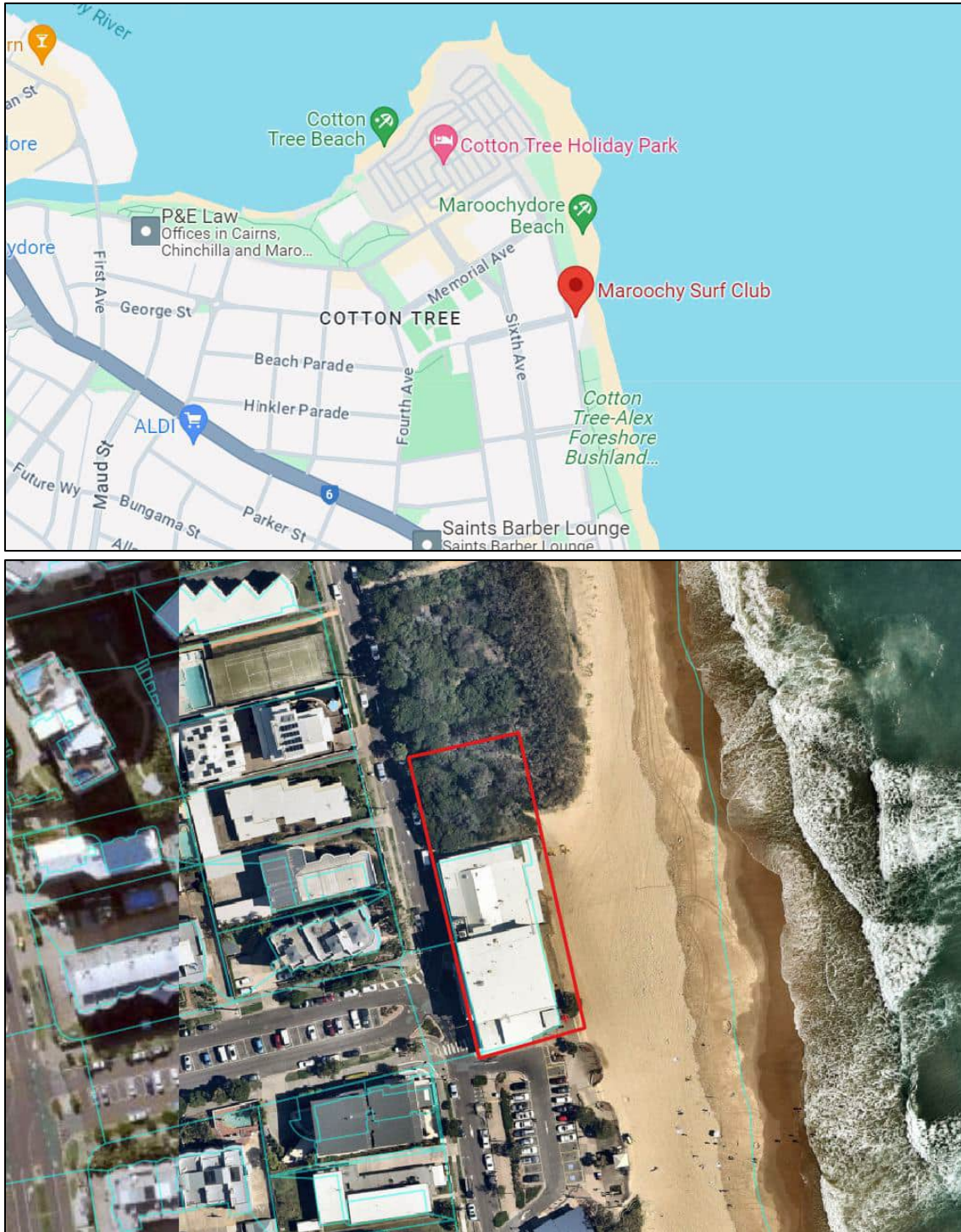


Figure 1.2 Location (above, Google 2024) and aerial imagery (below, Nearthmap, November 2023) of project area showing proposed new lease footprint in red

2. Site Description

2.1 Soils, Geology and Land Zone

The Geological Survey of Queensland mapping indicates that the local surface geology consists of 'Quartz sand and clay: Pleistocene tidal delta deposits and sand dunes'. This geological association aligns with Land Zone 2 under the Qld regional ecosystem framework described as 'Quaternary coastal dunes and beach ridges'.



Figure 2.1 Local land zones (QldGlobe, 2024)

2.2 Topography and Drainage

The site falls within the Maroochy River sub catchment and is relatively flat with the lowest point at 4mAHD on the southeast and the highest in the north at 8mAHD (Figure 2.2).



Figure 2.2 Site Contours (Sunshine Coast Council MyMaps, 2024)

3. Desktop Review

3.1 Matters of National Environmental Significance

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is federal legislation that provides a national framework for the protection and management of nationally and internationally important flora, fauna, ecological communities and heritage places, which are defined in the EPBC Act as Matters of National Environmental Significance (MNES).

If a proposed action is likely to have a significant impact on MNES it must be referred to the Australian Government Minister for the Environment for assessment against the EPBC Act. A significant impact is an impact which is important, notable, or of consequence, having regard to its context or intensity. All of these factors should be considered when determining whether an action is likely to have a significant impact on the environment.

The EPBC Act Protected Matters Search Tool (PMST) enables searches for MNES in a specified area. Results of this database search (using a 2km buffer from the site) identified:

- Five (5) listed threatened ecological communities may occur within the area:
 - Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and Southeast Queensland ecological community;
 - Coastal Swamp Sclerophyll Forest of New South Wales and Southeast Queensland;
 - Lowland Rainforest of Subtropical Australia;
 - Subtropical and Temperate Coastal Saltmarsh; and
 - Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions.
- 101 threatened species may occur within the area, comprising 23 threatened flora species and 78 threatened fauna species; and
- 76 Migratory species may occur within the area.

Results of this search are presented in Appendix A and Table 3.1 shows the threatened terrestrial species identified in this search that may occur in the local area. An assessment of the likelihood of presence of EVNT/SL species based on results of the site surveys is detailed in Section 5 and Appendix C.

Table 3.1 EPBC Act Protected Matters Search Tool Results

Class	Scientific Name	Common Name	Threatened Category
Bird	<i>Actitis hypoleucos</i>	Common Sandpiper	Migratory Wetlands Species
Bird	<i>Anous stolidus</i>	Common Noddy	Migratory Marine Birds
Bird	<i>Anthochaera phrygia</i>	Regent Honeyeater	Critically Endangered
Bird	<i>Apus pacificus</i>	Fork-tailed Swift	Migratory Marine Birds
Bird	<i>Ardenna carneipes</i>	Flesh-footed Shearwater	Migratory Marine Birds
Bird	<i>Ardenna grisea</i>	Sooty Shearwater	Vulnerable, Migratory Marine Birds
Bird	<i>Arenaria interpres</i>	Ruddy Turnstone	Vulnerable, Migratory Wetlands Species
Bird	<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered
Bird	<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Vulnerable, Migratory Wetlands Species
Bird	<i>Calidris alba</i>	Sanderling	Migratory Wetlands Species
Bird	<i>Calidris canutus</i>	Red Knot, Knot	Vulnerable, Migratory Wetlands Species
Bird	<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered, Migratory Wetlands Species

Class	Scientific Name	Common Name	Threatened Category
Bird	<i>Calidris melanotos</i>	Pectoral Sandpiper	Migratory Wetlands Species
Bird	<i>Calidris ruficollis</i>	Red-necked Stint	Migratory Wetlands Species
Bird	<i>Calidris tenuirostris</i>	Great Knot	Vulnerable, Migratory Wetlands Species
Bird	<i>Calonectris leucomelas</i>	Streaked Shearwater	Migratory Marine Birds
Bird	<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo	Vulnerable
Bird	<i>Charadrius bicinctus</i>	Double-banded Plover	Migratory Wetlands Species
Bird	<i>Charadrius leschenaultii</i>	Greater Sand Plover	Vulnerable, Migratory Wetlands Species
Bird	<i>Charadrius mongolus</i>	Lesser Sand Plover	Endangered, Migratory Wetlands Species
Bird	<i>Climacteris picumnus victoriae</i>	Brown Treecreeper	Vulnerable
Bird	<i>Cuculus optatus</i>	Oriental Cuckoo	Migratory Terrestrial Species
Bird	<i>Cyclopsitta diophthalma coxeni</i>	Coxen's Fig-Parrot	Critically Endangered
Bird	<i>Diomedea antipodensis</i>	Antipodean Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Diomedea antipodensis gibsoni</i>	Gibson's Albatross	Vulnerable
Bird	<i>Diomedea exulans</i>	Wandering Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Erythrotriorchis radiatus</i>	Red Goshawk	Endangered
Bird	<i>Falco hypoleucos</i>	Grey Falcon	Vulnerable
Bird	<i>Fregata ariel</i>	Lesser Frigatebird	Migratory Marine Birds
Bird	<i>Fregata minor</i>	Great Frigatebird	Migratory Marine Birds
Bird	<i>Fregetta grallaria grallaria</i>	White-bellied Storm-Petrel (Tasman Sea)	Vulnerable
Bird	<i>Gallinago hardwickii</i>	Latham's Snipe	Vulnerable, Migratory Wetlands Species
Bird	<i>Gallinago megala</i>	Swinhoe's Snipe	Migratory Wetlands Species
Bird	<i>Gallinago stenura</i>	Pin-tailed Snipe	Migratory Wetlands Species
Bird	<i>Hirundapus caudacutus</i>	White-throated Needletail	Vulnerable, Migratory Terrestrial Species
Bird	<i>Lathamus discolor</i>	Swift Parrot	Critically Endangered
Bird	<i>Limicola falcinellus</i>	Broad-billed Sandpiper	Migratory Wetlands Species
Bird	<i>Limnodromus semipalmatus</i>	Asian Dowitcher	Vulnerable, Migratory Wetlands Species
Bird	<i>Limosa lapponica</i>	Bar-tailed Godwit	Migratory Wetlands Species
Bird	<i>Limosa lapponica baueri</i>	Nunivak Bar-tailed Godwit	Endangered
Bird	<i>Limosa limosa</i>	Black-tailed Godwit	Endangered, Migratory Wetlands Species
Bird	<i>Macronectes giganteus</i>	Southern Giant-Petrel	Endangered, Migratory Marine Birds
Bird	<i>Macronectes halli</i>	Northern Giant Petrel	Vulnerable, Migratory Marine Birds
Bird	<i>Monarcha melanopsis</i>	Black-faced Monarch	Migratory Terrestrial Species
Bird	<i>Myiagra cyanoleuca</i>	Satin Flycatcher	Migratory Terrestrial Species
Bird	<i>Numenius madagascariensis</i>	Eastern Curlew	Critically Endangered, Migratory Wetlands Species
Bird	<i>Numenius minutus</i>	Little Curlew	Migratory Wetlands Species



Class	Scientific Name	Common Name	Threatened Category
Bird	<i>Numenius phaeopus</i>	Whimbrel	Migratory Wetlands Species
Bird	<i>Pachyptila turtur subantarctica</i>	Fairy Prion (southern)	Vulnerable
Bird	<i>Pandion haliaetus</i>	Osprey	Migratory Wetlands Species
Bird	<i>Phaethon lepturus</i>	White-tailed Tropicbird	Migratory Marine Birds
Bird	<i>Phoebastria fusca</i>	Sooty Albatross	Vulnerable
Bird	<i>Pluvialis fulva</i>	Pacific Golden Plover	Migratory Wetlands Species
Bird	<i>Pluvialis squatarola</i>	Grey Plover	Vulnerable, Migratory Wetlands Species
Bird	<i>Pterodroma neglecta neglecta</i>	Kermadec Petrel (western)	Vulnerable
Bird	<i>Rhipidura rufifrons</i>	Rufous Fantail	Migratory Terrestrial Species
Bird	<i>Rostratula australis</i>	Australian Painted Snipe	Endangered
Bird	<i>Stagonopleura guttata</i>	Diamond Firetail	Vulnerable
Bird	<i>Sternula albifrons</i>	Little Tern	Migratory Marine Birds
Bird	<i>Sternula nereis nereis</i>	Australian Fairy Tern	Vulnerable
Bird	<i>Symposiachrus trivirgatus</i>	Spectacled Monarch	Migratory Terrestrial Species
Bird	<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Thalassarche cauta</i>	Shy Albatross	Endangered, Migratory Marine Birds
Bird	<i>Thalassarche impavida</i>	Campbell Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Thalassarche melanophris</i>	Black-browed Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Thalassarche salvini</i>	Salvin's Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Thalassarche steadi</i>	White-capped Albatross	Vulnerable, Migratory Marine Birds
Bird	<i>Tringa brevipes</i>	Grey-tailed Tattler	Migratory Wetlands Species
Bird	<i>Tringa incana</i>	Wandering Tattler	Migratory Wetlands Species
Bird	<i>Tringa nebularia</i>	Common Greenshank	Endangered, Migratory Wetlands Species
Bird	<i>Turnix melanogaster</i>	Black-breasted Button-quail	Vulnerable
Bird	<i>Xenus cinereus</i>	Terek Sandpiper	Migratory Wetlands Species
Crustacean	<i>Cherax robustus</i>	Sand Yabby	Vulnerable
Fish	<i>Epinephelus daemeli</i>	Black Rockcod,	Vulnerable
Fish	<i>Hippocampus whitei</i>	White's Seahorse	Endangered
Fish	<i>Mordacia praecox</i>	Non-parasitic Lamprey	Endangered
Fish	<i>Pseudomugil mellis</i>	Honey Blue Eye	Endangered
Fish	<i>Thunnus maccoyii</i>	Southern Bluefin Tuna	Conservation Dependent
Frog	<i>Litoria longburensis</i>	Wallum Sedge Frog	Vulnerable
Frog	<i>Mixophyes fleayi</i>	Fleay's Frog	Endangered
Insect	<i>Argynnis hyperbius inconstans</i>	Australian Fritillary	Critically Endangered
Mammal	<i>Balaenoptera edeni</i>	Bryde's Whale	Migratory Marine Species
Mammal	<i>Balaenoptera musculus</i>	Blue Whale	Endangered, Migratory Marine Species
Mammal	<i>Chalinolobus dwyeri</i>	Large-eared Pied Bat	Endangered
Mammal	<i>Dasyurus hallucatus</i>	Northern Quoll	Endangered



Class	Scientific Name	Common Name	Threatened Category
Mammal	<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Spot-tailed Quoll	Endangered
Mammal	<i>Dugong dugon</i>	Dugong	Migratory Marine Species
Mammal	<i>Eubalaena australis</i>	Southern Right Whale	Endangered, Migratory Marine Species
Mammal	<i>Megaptera novaeangliae</i>	Humpback Whale	Migratory Marine Species
Mammal	<i>Orcaella heinsohni</i>	Australian Snubfin Dolphin	Migratory Marine Species
Mammal	<i>Orcinus orca</i>	Killer Whale, Orca	Migratory Marine Species
Mammal	<i>Petauroides volans</i>	Greater Glider (southern and central)	Endangered
Mammal	<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)	Vulnerable
Mammal	<i>Phascolarctos cinereus</i> (combined populations of Qld, NSW and the ACT)	Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory)	Endangered
Mammal	<i>Potorous tridactylus tridactylus</i>	Long-nosed Potoroo (northern)	Vulnerable
Mammal	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable
Mammal	<i>Sousa sahalensis</i>	Australian Humpback Dolphin	Migratory Marine Species
Mammal	<i>Xeromys myoides</i>	Water Mouse	Vulnerable
Plant	<i>Acacia attenuata</i>	null	Vulnerable
Plant	<i>Acronychia littoralis</i>	Scented Acronychia	Endangered
Plant	<i>Allocasuarina thalassoscopica</i>	null	Endangered
Plant	<i>Arthraxon hispidus</i>	Hairy-joint Grass	Vulnerable
Plant	<i>Baloghia marmorata</i>	Marbled Balogia	Vulnerable
Plant	<i>Bosistoa transversa</i>	Three-leaved Bosistoa	Vulnerable
Plant	<i>Cryptocarya foetida</i>	Stinking Cryptocarya	Vulnerable
Plant	<i>Cryptostylis hunteriana</i>	Leafless Tongue-orchid	Vulnerable
Plant	<i>Eucalyptus conglomerata</i>	Swamp Stringybark	Endangered
Plant	<i>Graptophyllum reticulatum</i>	Veiny Graptophyllum	Endangered
Plant	<i>Macadamia integrifolia</i>	Macadamia Nut	Vulnerable
Plant	<i>Macadamia ternifolia</i>	Small-fruited Queensland Nut	Vulnerable
Plant	<i>Phaius australis</i>	Lesser Swamp-orchid	Endangered
Plant	<i>Planchonella eerwah</i>	Shiny-leaved Condoe	Endangered
Plant	<i>Prasophyllum wallum</i>	Wallum Leek-orchid	Vulnerable
Plant	<i>Rhodamnia rubescens</i>	Scrub Turpentine	Critically Endangered
Plant	<i>Rhodomyrtus psidioides</i>	Native Guava	Critically Endangered
Plant	<i>Samadera bidwillii</i>	Quassia	Vulnerable
Plant	<i>Sophora fraseri</i>	null	Vulnerable
Plant	<i>Syzygium hodgkinsoniae</i>	Smooth-bark Rose Apple	Vulnerable
Plant	<i>Thesium australe</i>	Austral Toadflax	Vulnerable
Plant	<i>Triunia robusta</i>	Glossy Spice Bush	Endangered
Plant	<i>Zieria exsul</i>	Banished Stink Bush	Critically Endangered
Reptile	<i>Caretta caretta</i>	Loggerhead Turtle	Endangered, Migratory Marine Species
Reptile	<i>Chelonia mydas</i>	Green Turtle	Vulnerable, Migratory Marine Species
Reptile	<i>Coeranoscincus reticulatus</i>	Three-toed Snake-tooth Skink	Vulnerable
Reptile	<i>Delma torquata</i>	Adorned Delma,	Vulnerable
Reptile	<i>Dermochelys coriacea</i>	Leatherback Turtle	Endangered, Migratory Marine Species
Reptile	<i>Eretmochelys imbricata</i>	Hawksbill Turtle	Vulnerable, Migratory Marine Species



Class	Scientific Name	Common Name	Threatened Category
Reptile	<i>Furina dunmalli</i>	Dunmall's Snake	Vulnerable
Reptile	<i>Lepidochelys olivacea</i>	Olive Ridley Turtle	Endangered, Migratory Marine Species
Reptile	<i>Natator depressus</i>	Flatback Turtle	Vulnerable, Migratory Marine Species
Shark	<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark	Migratory Marine Species
Shark	<i>Carcharias taurus</i> (east coast population)	Grey Nurse Shark (east coast population)	Critically Endangered
Shark	<i>Carcharodon carcharias</i>	White Shark	Vulnerable, Migratory Marine Species
Shark	<i>Lamna nasus</i>	Porbeagle	Migratory Marine Species
Shark	<i>Mobula alfredi</i>	Reef Manta Ray	Migratory Marine Species
Shark	<i>Mobula birostris</i>	Giant Manta Ray	Migratory Marine Species
Shark	<i>Pristis zijsron</i>	Green Sawfish	Vulnerable, Migratory Marine Species
Shark	<i>Rhincodon typus</i>	Whale Shark	Vulnerable, Migratory Marine Species
Shark	<i>Sphyrna lewini</i>	Scalloped Hammerhead	Conservation Dependent

*As listed under the EPBC: CE = Critically Endangered, E = Endangered, V = Vulnerable, CD = Conservation Dependent, MT = Migratory Terrestrial Species, MW = Migratory Wetland Species, M = Migratory Marine Birds

3.2 Matters of State Environmental Significance

Matters of state environmental significance (MSES) are a component of the biodiversity state interest that is defined under the Qld *State Planning Policy 2017* (SPP) and defined under the Qld *Environmental Offsets Regulation 2014* (Offset Regulation). A summary of MSES that may occur within or close to the subject site based on State MSES mapping is listed in Table 3.2. The results of the ground truthing of MSES including an assessment of the likelihood of occurrence of MSES wildlife based on the habitat surveys is provided in Section 5 and Appendix C.

Table 3.2 MSES and potential presence on subject site based on desktop review

Matter	Mapped on site or NA*
Protected areas under the <i>Nature Conservation Act 1992</i> and <i>Marine Parks Act 2004</i>	No
Fish Habitat Areas declared under the <i>Fisheries Regulation 2008</i>	No
Wetlands mapped under the <i>Environmental Protection Regulation 2019</i>	No
Wetlands and watercourses in high ecological value waters identified in the <i>Environmental Protection (Water) Policy 2009</i> , schedule 1	No
Legally secured offsets as defined under the <i>Environmental Offsets Act 2014</i>	No
Threatened wildlife (Endangered or Vulnerable) under the <i>Nature Conservation Act 1992</i> and Special Least Concern fauna under the <i>Nature Conservation (Animals) Regulation 2020</i>	Yes
Core Koala Habitat Areas, Locally Refined Koala Habitat Areas and / or Koala Priority Areas mapped under the South East Queensland Koala Conservation Strategy 2019-2024.	No
Sea Turtle Nesting Areas	NA
Marine plants under the <i>Fisheries Act 1994</i> (excluding marine plants in an urban area)	NA (site is within the urban footprint)



Matter	Mapped on site or NA*
<p>Regulated Vegetation under the <i>Vegetation Management Act 1999</i> that is:</p> <ul style="list-style-type: none"> a. category B areas on the regulated vegetation management map, that are ‘endangered’ and ‘of concern’ regional ecosystems b. category C areas on the regulated vegetation management map that are ‘endangered’ and ‘of concern’ regional ecosystems c. category R areas on the regulated vegetation management map d. areas of essential habitat on the essential habitat map for an animal that is ‘endangered wildlife’ or ‘vulnerable wildlife’ or a plant that is ‘endangered wildlife’ or ‘vulnerable wildlife’ wildlife prescribed as ‘endangered wildlife’ or ‘vulnerable wildlife’ under the <i>Nature Conservation Act 1992</i> e. category A,B,C,R areas that are located within a defined distance from the defining banks of a relevant watercourse identified on the vegetation management watercourse and drainage feature map f. category A,B,C,R areas that are located within 100 metres from the defining bank of a wetland identified on the vegetation management wetlands map. 	<p>Yes – essential habitat</p>

*NA = Not applicable. Some MSES are not prescribed in urban areas (e.g. marine plants).

3.2.1 Threatened Wildlife and Special Least Concern Fauna

The site is mapped as having potential habitat for Threatened Wildlife and Special Least Concern fauna as listed under the NCA and subordinate regulations (Figure 3.1). Threatened and Special Least Concern wildlife under the *Nature Conservation Act 1992* (NCA) include species listed as Critically Endangered (CR), Endangered (E), or Vulnerable (V) or Special Least concern (‘SL’) under the NCA.

The MSES Threatened Wildlife and SL fauna mapping is based on wildlife habitat suitability models that use the preclearing regional ecosystem mapping and DES WildNet database species records (Figure 3.1 and MSES report in Appendix A).



Figure 3.1 MSES Species Threatened Wildlife and Special Least Concern Fauna (QLD Globe, 2024)



The MSES search report indicates eight (8) threatened and 14 SL species as listed in Table 3.3 have historically been recorded near the subject site. An assessment of the likelihood of presence of these species based on results of the site surveys is detailed in Section 5 and Appendix C.

Table 3.3 NCA Threatened and SL wildlife potentially occurring near the subject site

Scientific name	Common name	NCA status*	EPBC status**	Migratory status
Threatened (endangered or vulnerable) wildlife species records				
<i>Calidris canutus</i>	red knot	E	E	M-C/J/R/B/E
<i>Calidris tenuirostris</i>	great knot	CR	CE	M-C/J/R/B/E
<i>Charadrius leschenaultii</i>	greater sand plover	V	V	M-C/J/R/B/E
<i>Charadrius mongolus</i>	lesser sand plover	E	E	M-C/J/R/B/E
<i>Esacus magnirostris</i>	beach stone-curlew	V	None	None
<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	V	V	M-C/J/R/B/E
<i>Numenius madagascariensis</i>	eastern curlew	E	CE	M-C/J/R/B/E
<i>Petauroides armillatus</i>	central greater glider	E	E	None
Special least concern animal species records				
<i>Arenaria interpres</i>	ruddy turnstone	SL	M	M-C/J/R/B/E
<i>Calidris ruficollis</i>	red-necked stint	SL	M	M-C/J/R/B/E
<i>Charadrius bicinctus</i>	double-banded plover	SL	M	M-B/E
<i>Chlidonias leucopterus</i>	white-winged black tern	SL	M	M-C/J/R/E
<i>Limosa limosa</i>	black-tailed godwit	SL	M	M-C/J/R/B/E
<i>Numenius phaeopus</i>	whimbrel	SL	M	M-C/J/R/B/E
<i>Pandion haliaetus cristatus</i>	eastern osprey	SL	M	M-B/E
<i>Pluvialis fulva</i>	Pacific golden plover	SL	M	M-C/J/R/B/E
<i>Pluvialis squatarola</i>	grey plover	SL	M	M-C/J/R/B/E
<i>Sterna hirundo</i>	common tern	SL	M	M-C/J/R/E
<i>Sternula albifrons</i>	little tern	SL	M	M-C/J/R/B/E
<i>Thalasseus bergii</i>	crested tern	SL	M	M-J/E
<i>Tringa brevipes</i>	grey-tailed tattler	SL	M	M-C/J/R/B/E
<i>Xenus cinereus</i>	terek sandpiper	SL	M	M-C/J/R/B/E

*NCA Status: As listed under the *Queensland Nature Conservation Act 1992*: CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, SL = Special Least Concern. **EPBC Status: As listed under the EPBC: CE = Critically Endangered, E = Endangered, V = Vulnerable, M = Migratory Species. Migratory Status: C = CAMBA

3.2.2 Regulated Vegetation and Essential Habitat

The Vegetation Management Regional Ecosystem Map for the subject site indicates that the vegetation in the northern part of the site is mapped as Least Concern Category B Remnant Vegetation. The balance of the site is mapped as Category X Non-Remnant Vegetation.

The site is not mapped as containing Category B and C Of Concern or Endangered regulated vegetation which are MSES. However, the Least Concern Category B Remnant Vegetation is also identified as Essential Habitat for two (2) threatened species of shorebirds (Endangered *Numenius madagascariensis*, eastern curlew; and Vulnerable *Limosa lapponica baueri*, Western Alaskan bar-tailed godwit). Regulated vegetation that is Essential Habitat for threatened wildlife is MSES.

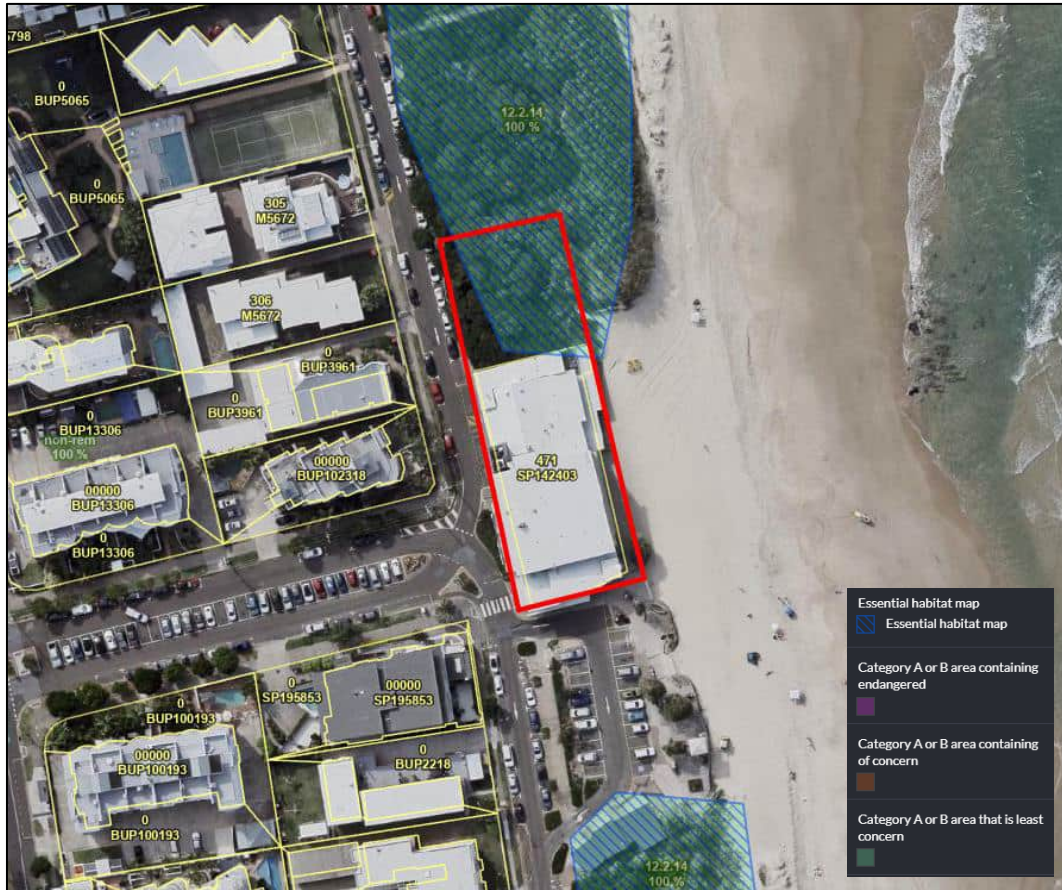


Figure 3.2 MSES Essential Habitat and Least concern Regulated Vegetation (RE 12.2.14) mapped in the northern part of the site (QLD Globe, 2024)

Table 3.4 RVM categories on subject site

Regional Ecosystem	VMA Status	Category	Area (ha)	Short Description	Structure Category
12.2.14	Least Concern	B	Less than 0.01	Foredune complex	Sparse
Non-rem	None	X	0.13	None	None

3.3 Matters of Local Environmental Significance

The *Sunshine Coast Planning Scheme 2014 Biodiversity, Waterways and Wetlands Overlay Code* seeks to ensure the protection and enhancement of Ecologically Important Areas and improve ecological connectivity. The mapping indicates the site supports Native Vegetation Areas (Figure 3.3). These values are identified as Ecologically Important Areas in Schedule 1 of the Planning Scheme. The Biodiversity, Waterways and Wetlands Overlay Code Performance Outcomes for development in areas with mapped native vegetation require protection of native vegetation in mapped areas unless clearing is exempt.



Figure 3.3 SC Planning Scheme 2014 Biodiversity, Waterways and Wetlands Overlay showing Native vegetation area (SCC Planning Scheme 2014)

4. Field Surveys

4.1 Flora Survey Methods

To ground-truth the information obtained through the desktop assessment, Burchills ecologists undertook field surveys within the subject site in February 2024. Where relevant, observations regarding floristic values outside the survey area were also recorded.

The survey methodology was consistent with the Queensland Herbarium's *Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland v.7.0* (Neldner *et al.*, 2023) and consisted of an initial visual audit followed by a quantitative assessment of vegetation associations and communities.

The initial visual audit consisted of a random meander over the site to ground-truth desktop investigations. Survey site locations were determined based on information obtained from the initial visual audit. Quantitative assessments were undertaken by collecting data associated with structural formations (i.e. growth form, stratum intervals, crown cover and height) and floristic associations (i.e. species diversity) for each broad vegetation type.

Unless otherwise noted, all quantitative observations were recorded as follows:

- Single point locations (except tree locations) – positions were estimated based on inferences from survey data, landform elements and / or aerial photography;
- Growth form – determined in accordance with pp 88-93 Hnatiuk *et al.* (2009);
- Stratum intervals – determined by recording the median height of each stratum using a hand-held clinometer. Strata were defined in accordance with Table 4.1 which is summarised from Hnatiuk *et al.* (2009); and
- Stratum cover – determined using a field estimation of crown cover in accordance with Table 4.2, which is reproduced from Hnatiuk *et al.* (2009).

Table 4.1 Criteria for Defining Vegetation Strata*

Stratum	Description
Emergent	Tallest plants in vegetation associations / communities that are so sparsely distributed that they do not form the dominant or most significant layer (e.g. large trees that rise above a distinct canopy layer).
Dominant or Upper Stratum	In most cases the tallest stratum will be the dominant stratum (i.e. except when emergents are present).
Mid-stratum	If present, this stratum is between the dominant (upper) stratum and the ground stratum. There are no pre-conceived height limits for this stratum. Where multiple strata are present between the dominant (upper) stratum and the ground stratum, the mid-stratum can be subdivided in order of decreasing height (i.e. the highest mid-stratum is termed Mid-stratum 1, the next highest mid-stratum is termed Mid-stratum 2 etc).
Ground stratum	Typically consists of herbaceous ferns, forbs and graminoids; although can also include juvenile species from other strata. The ground stratum can also be the dominant stratum (e.g. where grass cover is closed and trees are very sparse). There are no pre-conceived height limits for this stratum; however, it is usually less than 2.0 m tall.

*Table summarised from Hnatiuk *et al.* (2009).

Table 4.2 Crown Cover Classes

Criteria Assessed in Field	Description	Crown Separation Ratio	Crown Cover (%)	Foliage Cover (%)
Crowns touching to overlapping	Closed or Dense	<0*	>80	>70
Crowns touching or slightly separated	Mid Dense	0-0.25	50-80	30-70
Crowns clearly separated	Sparse or Open	0.25-1	20-50	10-30
Crowns well separated	Very Sparse	1-20	0.25-20	0.2-10
Isolated plants (trees approximately 100m apart; shrubs approximately 20m apart)	Isolated Plants	>20	<0.25	<0.20
Isolated clumps of two (2) to many plants approximately 200m apart	Isolated Clumps	>20	<0.25	<0.20
Emergent	Emergents	>3	<5 % total crown cover	<3% of total foliage cover

*Where crown overlap occurs, the crown ratio has a negative value: the larger the negative value, the greater the overlap. Table reproduced from Table 17 in Hnatiuk *et al.* (2009).

4.1.1 Taxonomy and Nomenclature

Application of flora scientific names in this report follows the *Census of the Queensland Flora 2023* (DES, 2023). Use of an asterisk (*) indicates the species is not native to Queensland or the local area.

4.2 Flora Survey Results

A total of 41 species of flora were detected during the surveys including 24 native species and 17 non-native species, one (1) of which is Restricted Invasive Plants under the Qld *Biosecurity Act 2016*.

No EVNT flora species were recorded.

The following three (3) vegetation associations were mapped over the site as shown in Figure 4.1:

- Vegetation Association A - Beach Alectryon and Beach Sheoak Hind Dune Open Forest (1,513m²);
- Vegetation Association B - Beach Sheoak Foredune Woodland (2,071m²); and
- Vegetation Association C - Foredune Spinifex Grassland (490m²).

The structure and floristics of Vegetation Association A represents the 'Least Concern' Regional Ecosystem 12.2.14a - *Casuarina equisetifolia* subsp. *incana* woodland to low open forest, and the structure and floristics of Vegetation Association B represents the 'Least Concern' Regional Ecosystem 12.2.14e - *Spinifex sericeus* open hummock grassland. Being Least concern, this vegetation is not a Matter of State Environmental Significance (MSES) under the State Planning Policy.

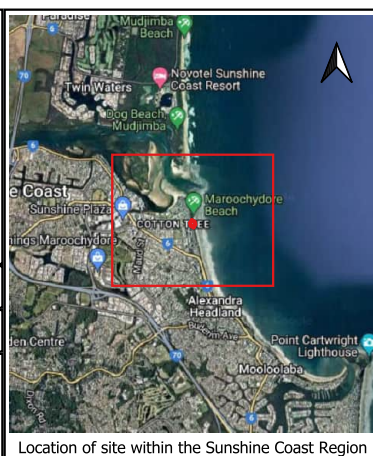
The vegetation impact area generally meets the benchmarks of 'Least Concern' Regional Ecosystem 12.2.14a but is substantially disturbed with reduced canopy cover and high levels of weed infestation.

The following sections describe the vegetation structure and floristics of each of the vegetation map units including structure, floristics, condition, variation and significance.



Ecological Site Assessment – Maroochydore SLSC Expansion
 Figure 4.1 Vegetation Associations and Habitat Features Map

Project: BE230663	Date: 09-05-2024
Scale: 1:500 at A3	Projection: MGA 2020 Zone 56
Data Sources: Cadastre - Qld Department of Resources 2023, Aerial Imagery - Nearmap, December 2023	



Legend

- Site - Proposed new lease area
- Vegetation Association A
- Vegetation Association B
- Vegetation Association C
- Habitat feature - Brush turkey nest



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4.2.1 Vegetation Association A – Beach Alectryon and Beach Sheoak Hind Dune Open Forest

This vegetation association represents a hind dune open to closed forest community, dominated *Alectryon coriaceus* (beach alectryon) and *Casuarina equisetifolia subsp. incana* (beach sheoak) with a dense shrub layer dominated by *Vitex trifolia* (coastal vitex) and *Acacia sophorae* (coastal wattle) (Figure 4.1).

The results of the structural and floristic assessments are summarised in Table 4.5 and Table 4.6 respectively.

Table 4.3 Vegetation Association A Quantitative Assessments

Stratum [†]	Growth Form	Cover (%)	Stratum Height (m)
Upper	Tree	50-80	4-9
Mid	Tree/Shrub	40-50	2-4
Ground	Grass/forbs	20-70	0.4-1.5

[†]Strata that were not present have been omitted.

Table 4.4 Vegetation Association A Floristic Formation

Stratum	Species [†]
Upper	<i>Alectryon coriaceus</i> (beach alectryon), <i>Casuarina equisetifolia</i> (coastal sheoak), <i>Banksia integrifolia subsp. integrifolia</i> (coastal banksia), <i>Cupaniopsis anacardioides</i> (tuckeroo), <i>Macaranga tanarius</i> (macaranga),
Mid	<i>Vitex trifolia</i> (coastal vitex), <i>Acacia sophorae</i> (coastal wattle), <i>Alectryon coriaceus</i> (beach alectryon), <i>Cupaniopsis anacardioides</i> (tuckeroo), <i>Macaranga tanarius</i> (macaranga), <i>Casuarina equisetifolia subsp. incana</i> (beach sheoak), <i>Banksia integrifolia subsp. integrifolia</i> (coastal banksia), <i>Passiflora suberosa</i> * (corky passionflower), <i>Senna pendula var. glabrata</i> * (Easter cassia).
Ground	<i>Barleria repens</i> * (barleria), <i>Sorghum halepense</i> * (Johnson grass), <i>Imperata cylindrica</i> (blady grass), <i>Stephania japonica</i> (tape vine), <i>Gloriosa superba</i> * (glory lily), <i>Asparagus aethiopicus</i> * (ground asparagus), <i>Dianella congesta</i> (blue flax lily), <i>Ipomoea pes-caprae</i> (beach morning glory), <i>Lomandra longifolia</i> * (long leaved matrush).

[†]Species are listed in order of dominance.

*Non-native

The upper stratum is the ecologically dominant layer (EDL) in this vegetation association. Based on the data obtained from the quantitative assessment, the broad floristic subformation (Hnatiuk *et al.*, 2009) of Vegetation Unit A is: Mid-dense *Alectryon coriaceus* (beach alectryon), *Casuarina equisetifolia subsp. incana* upper stratum over *Vitex trifolia* and *Acacia sophorae* shrub layer over sparse to mid-dense forb and graminoid ground-layer.

The EDL structure and floristics of this association represent the same RE type as Vegetation Association A - 'Least Concern' Regional Ecosystem 12.2.14a - *Casuarina equisetifolia subsp. incana* woodland to low open forest.

Weed infestations are low to moderate and limited to forbs and grasses in the ground stratum, mostly along the edges (refer Section 4.2.4). The most prevalent weed was *Barleria repens** (barleria), a cultivation escapee that is smothering and limiting native regeneration in the survey area. *Gloriosa superba** (glory lily), *Asparagus aethiopicus** (ground asparagus) form localised infestations in areas.

No flora species of conservation significance (EVNT) or marine plants as defined under the Fisheries Act were detected in this association.

Complete survey floristics are provided in Appendix B.





Figure 4.2 Vegetation Association A - general composition.



Figure 4.3 Vegetation Association A - adjacent to the road along the western boundary

4.2.2 Vegetation Association B – Beach Sheoak Fore-dune Woodland

This vegetation association represents a disturbed fore-dune woodland community, comprising a sparse canopy of *Casuarina equisetifolia* subsp. *incana* (beach sheoak) and *Macaranga tanarius* (macaranga) and a shrub layer dominated by *Acacia sophorae* (coastal wattle) (Figure 4.1).

The results of the structural and floristic assessments are summarised in Table 4.5 and Table 4.6 respectively.

Table 4.5 Vegetation Association B Quantitative Assessments

Stratum†	Growth Form	Cover (%)	Stratum Height (m)
Upper	Tree	30-60	3-7
Mid	Shrub	40-70	1-3
Ground	Grass/forbs	20-70	0.4-1

†Strata that were not present have been omitted.

Table 4.6 Vegetation Association B Floristic Formation

Stratum	Species†
Upper	<i>Casuarina equisetifolia</i> (coastal sheoak), <i>Alectryon coriaceus</i> (beach alectryon), <i>Banksia integrifolia</i> subsp. <i>integrifolia</i> (coastal banksia), <i>Cupaniopsis anacardioides</i> (tuckeroo), <i>Macaranga tanarius</i> (macaranga),
Mid	<i>Alectryon coriaceus</i> (beach alectryon), <i>Acacia sophorae</i> (coastal wattle), <i>Cupaniopsis anacardioides</i> (tuckeroo), <i>Vitex trifolia</i> (coastal vitex), <i>Macaranga tanarius</i> (macaranga), <i>Casuarina equisetifolia</i> subsp. <i>incana</i> (beach sheoak), <i>Banksia integrifolia</i> subsp. <i>integrifolia</i> (coastal banksia).
Ground	<i>Barleria repens</i> * (barleria), <i>Imperata cylindrica</i> (blady grass), <i>Spinifex sericeus</i> (spinifex), <i>Ipomoea pes-caprae</i> (beach morning glory), <i>Vigna marina</i> (yellow beach bean), <i>Stephania japonica</i> (tape vine). <i>Cynodon dactylon</i> (coastal couch), <i>Hibbertia scandens</i> (snake vine), <i>Carpobrotus glaucescens</i> (pigface), <i>Gloriosa superba</i> * (glory lily), <i>Asparagus aethiopicus</i> * (ground asparagus), <i>Dianella congesta</i> (blue flax lily), <i>Canavalia rosea</i> (beach bean), <i>Lomandra longifolia</i> * (long leaved matrush),

†Species are listed in order of dominance.

*Non-native

The upper stratum is the ecologically dominant layer (EDL) in this vegetation association. Based on the data obtained from the quantitative assessment, the broad floristic subformation (Hnatiuk *et al.*, 2009) of Vegetation Unit A is: Low, sparse *Casuarina equisetifolia* subsp. *incana* upper stratum over mid dense *Acacia sophorae* shrub layer over mid dense graminoid ground-layer.

The EDL structure and floristics of this association represent the 'Least Concern' Regional Ecosystem 12.2.14a - *Casuarina equisetifolia* subsp. *incana* woodland to low open forest.

Weed infestations are low to moderate and limited to forbs and grasses in the ground stratum, mostly along the edges (refer Section 4.2.4). The most prevalent weed was *Barleria repens** (barleria), a cultivation escapee that is smothering and limiting native regeneration in the survey area. *Gloriosa superba** (glory lily), *Asparagus aethiopicus** (ground asparagus) form localised infestations in areas.

No flora species of conservation significance (EVNT) or marine plants as defined under the Fisheries Act were detected in this association.

Complete survey floristics are provided in Appendix B.





Figure 4.4 Vegetation Association B - general composition.



Figure 4.5 Vegetation Association B - adjacent to the SLSC building structure to the north.



Figure 4.6 Vegetation Unit B – *Barleria repens* and environmental weed was prevalent throughout the survey area.

4.2.2 Vegetation Association C – Foredune Spinifex Grassland

This vegetation association occurs seawards of the beach sheoak woodland (Vegetation Association A; Figure 4.7). The structure is predominantly open hummock grassland.

The results of the structural and floristic assessments are summarised in Table 4.7 and Table 4.8 respectively.

Table 4.7 Vegetation Association C Quantitative Assessments

Stratum†	Growth Form	Cover (%)	Stratum Height (m)
Upper	Shrub	1-5	0.5-1.2
Ground	Grass/forbs	30-50	0.2-0.7

†Strata that were not present have been omitted.

Table 4.8 Vegetation Association C Floristic Formation

Stratum	Species†
Upper	<i>Acacia sophorae</i> (coastal wattle), <i>Casuarina equisetifolia</i> (coastal sheoak), <i>Banksia integrifolia</i> subsp. <i>integrifolia</i> (coastal banksia)
Ground	<i>Spinifex sericeus</i> (spinifex), <i>Ipomoea pes-caprae</i> (beach morning glory), <i>Vigna marina</i> (yellow beach bean), <i>Imperata cylindrica</i> (blady grass), <i>Sporobolus virginicus</i> (sand couch), <i>Stephania japonica</i> (tape vine), <i>Hibbertia scandens</i> (snake vine), <i>Canavalia rosea</i> (beach bean), <i>Carpobrotus glaucescens</i> (pigface),

†Species are listed in order of dominance.

*Non-native

The ground stratum is the ecologically dominant layer (EDL) in this community with only a very minor shrub layer present as a sparse emergent stratum. The vegetation floristics of this association resemble the ‘Least Concern’ Regional Ecosystem 12.2.14e - *Spinifex sericeus* open hummock grassland.

This association has very minimal weed infestations. No flora species of conservation significance (EVNT) were recorded.

No marine plants as defined under the Fisheries Act were detected in this unit.

Complete survey floristics are provided in Appendix B.



Figure 4.7 Interface between Vegetation Associations B (background) and C (foreground).



Figure 4.8 Vegetation Unit C – dominant native groundcover species in the foredune area - *Spinifex sericeus* (spinifex), *Canavalia rosea* (beach bean) and *Ipomoea pes-caprae* (beach morning glory).



Figure 4.9 Vegetation Association C in foreground and Johnson grass infestation near clubhouse



Figure 4.10 Vegetation Association C in foreground – Spinifex, and B in background – Beach sheoak

4.2.3 Weed Infestations

For the purposes of this report, a weed has been defined as a species recognised by DES in the WildNet database as an environmental weed and/or listed as invasive under the Qld *Biosecurity Act 2014*. A total 16 weeds recorded during surveys including one (1) identified as a Restricted Invasive Plant - *Asparagus aethiopicus* (ground asparagus) under the *Biosecurity Act 2014* (Table 4.9). The most prevalent weeds were in the ground stratum and included - *Barleria repens*, *Sorghum halepense* (Johnson grass) and *Asparagus aethiopicus*. All three (3) species are highly invasive and have the potential to suppress natural regeneration.

Table 4.9 Weeds Observed On-Site

	Scientific Name	Common Name	Status
Asparagaceae	<i>Asparagus aethiopicus</i>	ground asparagus	RIP
Acanthaceae	<i>Barleria repens</i>	barleria	EW
Asteraceae	<i>Crassocephalum crepidoides</i>	thickhead	EW
Poaceae	<i>Digitaria ciliaris</i>	summer grass	EW
Asteraceae	<i>Emilia sonchifolia</i> var. <i>javanica</i>	Emilia	EW
Asteraceae	<i>Erigeron bonariensis</i>	fleabane	EW
Euphorbiaceae	<i>Euphorbia cyathophora</i>	painted purge	EW
Colchicaceae	<i>Gloriosa superba</i>	glory lily	EW
Asteraceae	<i>Hypochaeris radicata</i>	flatweed	EW
Leguminosae	<i>Macroptilium atropurpureum</i>	siratro	EW
Rutaceae	<i>Murraya paniculata</i>	murraya	EW
Passifloraceae	<i>Passiflora suberosa</i>	corky passionflower	EW
Phyllanthaceae	<i>Phyllanthus tenellus</i>	hen and chicken	EW
Polygonaceae	<i>Rumex crispus</i>	curled dock	EW
Caesalpiniaceae	<i>Senna pendula</i> var. <i>glabrata</i>	easter cassia	EW
Poaceae	<i>Sorghum halepense</i>	Johnson grass	EW

*Qld Status: EW = Environmental Weed per DES WildNet database; RIP = Restricted invasive plants per the *Biosecurity Act 2014*

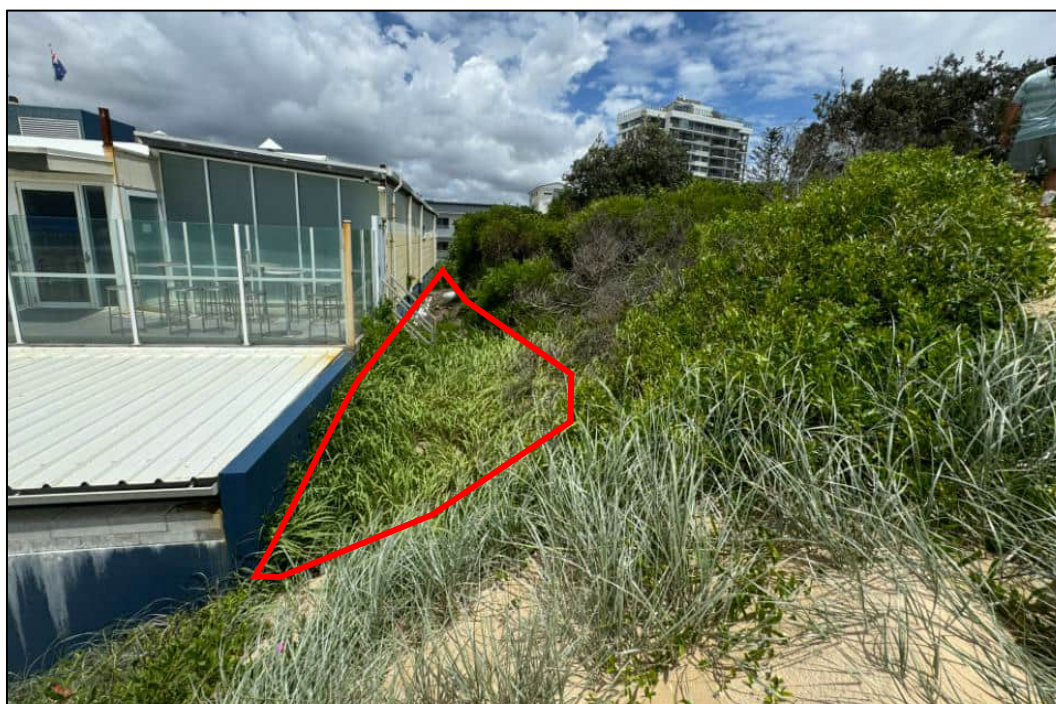


Figure 4.11 Johnson grass infestation on northern side of clubhouse

4.3 Fauna Survey Methods

With consideration given to the information obtained within the desktop assessment Burchills ecologists undertook fauna surveys within the site and adjoining areas in February 2024.

The survey methodology incorporated the following survey techniques:

- Assessment of habitat features and functions;
- Opportunistic records and observations of inferential evidence.
- Diurnal bird surveys;
- Ground dwelling reptile surveys;

4.3.1 Fauna Habitat Features and Functions

The site was surveyed to verify presence of any features and functions of faunal habitat significance. This can include significant features such as hollow-bearing trees, waterways / wetlands and riparian areas and functions such as corridors and buffers. The habitat assessment also targeted conservation significant species identified as potentially occurring on site in the desktop review. Given the desktop review identified shorebirds as potentially occurring within or near the site, an assessment of suitable habitat for these species was undertaken.

4.3.2 Opportunistic Observations and Inferential Evidence

Observations of inferential evidence and opportunistic fauna encounters were recorded throughout the duration of all site surveys. Inferential evidence included observation of scratches, scats, tracks, shed skins, diggings and nests, as well as targeted inspected and searches for potential habitat features such as hollow bearing limbs and trunks, arboreal termite mounds with holes, stick or mud nests and dreys.

4.3.3 Diurnal Bird Surveys

Survey efforts comprised one (1) hour observations by one (1) observer walking slowly and quietly through the site. Surveys were undertaken at mid-morning. Bird species were identified through direct observations (i.e. visual sighting) and / or vocalisations.

4.3.4 Ground Dwelling Reptile Surveys

Active searches can detect many reptile species that trapping rarely does. Active searching primarily focuses on detecting reptiles and amphibians but will also detect small terrestrial mammals and signs of other somewhat cryptic species (e.g. tracks, scats, nests and feeding signs) (Eyre et. al., 2018). Active searching involves scanning for active animals as well as turning rocks and logs, raking through leaf litter, looking under bark and in crevices and other suitable microhabitat for cryptic animals.

4.3.5 Survey Limitations

Failure to detect a species during a single survey does not mean it is absent from the site and the full inventory of fauna species utilising the site may not be detected in one season. Although assessments of habitat and species ecology do provide an additional measure to predict the presence of species (i.e. in lieu of direct observation), it should be noted that there are no methodologies that can be used to predict, with absolute certainty, the absence of a species from marginal or potential habitat.

4.4 Fauna Survey Results

The survey area included the impact area and the habitat upto 100m north of the impact area. Twenty-two (22) species of fauna were observed within the subject site during surveys including two (2) reptile species, 19 bird species and one (1) mammal species. (Table 4.10). Of all species detected on site, one (1) species is introduced and 21 are native.

An active Australian brush-turkey (*Alectura lathamii*) nest was observed north of the impact area (refer Figure 4.1 and Figure 4.12). This nest will not be directly impacted by the work and this species and the balance of species detected during surveys have broad habitat requirements, are generally disturbance tolerant and typically found in the urbanised foreshore environment of the Sunshine Coast region.

No fauna species scheduled as Endangered, Vulnerable or Near Threatened (EVNT) under the Queensland NCA and / or Commonwealth EPBC Act were directly observed within the subject site during surveys.

Though no pest species were detected, domestic dog (*Canis familiaris*) scat and tracks were detected throughout the survey area in particular in and around the campsite.

The site and nearby habitat values do not provide suitable values for the conservation significant species detected in the desktop review, mostly due to high level of threatening processes in the vicinity of the active use beach areas and the clubhouse (eg humans, dogs, noise, lights etc). Though some of the more common, disturbance tolerant shorebird species (eg terns) may utilise the foreshore habitat on a transient basis.

One (1) fauna species observed, *Sterna hirundo* (common tern) is migratory so listed as Special Least Concern (SL) under the NCA. This non-breeding migrant species has an extremely large range and is commonly observed on the eastern coast of Australia in/near coastal waters including ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries.



Figure 4.12 Active Brush turkey nest – approximately 10m north of impact area

Table 4.10 Fauna Species Identified On-Site

Family	Scientific Name	Common Name	Status*	Method**	Location†	Survey Type††
Reptiles						
Agamidae	<i>Pogona barbata</i>	Bearded dragon	C	V	W	OO
Scincidae	<i>Lampropholis delicata</i>	Dark-flecked garden sunskink	C	V	W	OO
Birds						
Accipitridae	<i>Haliastur indus</i>	Brahminy kite	C	V	W	OO
Artamidae	<i>Gymnorhina tibicen</i>	Australian magpie	C	V	W	OO
Artamidae	<i>Cracticus nigrogularis</i>	Pied butcherbird	C	V	W	OO
Cacatuidae	<i>Eolophus roseicapilla</i>	Galah	C	V	W	OO
Columbidae	<i>Ocyphaps lophotes</i>	Crested pigeon	C	V	W	OO
Corvidae	<i>Corvus orru</i>	Torresian crow	C	V	W	OO
Hirundinidae	<i>Hirundo neoxena</i>	Welcome swallow	C	V	W	OO
Laridae	<i>Chroicocephalus novaehollandiae</i>	Silver gull	C	V	W	OO
Laridae	<i>Sterna hirundo</i>	Common tern	SL	V	W	OO
Megapodiidae	<i>Alectura lathamii</i>	Australian brush-turkey	C	V	W	OO
Meliphagidae	<i>Meliphaga lewinii</i>	Lewin's honeyeater	C	V	W	OO
Meliphagidae	<i>Anthochaera chrysoptera</i>	Little wattlebird	C	V	W	OO
Meliphagidae	<i>Manorina melanocephala</i>	Noisy miner	C	V	W	OO
Meliphagidae	<i>Philemon citreogularis</i>	Little friarbird	C	V	W	OO
Monarchidae	<i>Grallina cyanoleuca</i>	Magpie-lark	C	V	W	OO
Pelecanidae	<i>Pelecanus conspicillatus</i>	Australian pelican	C	V	W	OO
Phalacrocoracidae	<i>Phalacrocorax varius</i>	Pied cormorant	C	V	W	OO
Psittaculidae	<i>Trichoglossus moluccanus</i>	Rainbow lorikeet	C	V	W	OO
Threskiornithidae	<i>Threskiornis molucca</i>	Australian white ibis	C	V	W	OO
Mammals						
Canidae	<i>Canis familiaris</i>	Domestic dog	I	S	W	OO

*Status: As listed under the NCA: CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, SL = Special Least Concern, C = Least Concern.

**Primary method of identification: C = hand caught, H = heard, V = visually observed, T = trapped, S = other signs of presence (e.g. scats, traces etc).

†Survey type: DBS = bird survey; GDRS = ground dwelling reptile survey; KSAT = Koala Spot Assessment Technique, OO = opportunistic observation, NS = Nocturnal Survey

††Location: W = species observed within subject property; E = species observed external but close (within 100m) to subject site.



5. Impacts and Recommendations

5.1 Matters of National Environmental Significance

No species listed as threatened (EVNT) under the EPBC were detected during surveys over the subject site. The results of the field investigations indicate that suitable habitat, breeding habitat or significant foraging resources is not present for the EVNT species detected in the desktop surveys. An assessment of likelihood of occurrence for the listed species and known to occur near the study area (based on the desktop review – refer Appendix C) indicates species that may occur near the site on a transient basis have broad habitat requirements and are typically found in the urbanised foreshore environment of Sunshine Coast.

The EPBC Act Protected Matters Search Tool (PMST) identified nesting of Loggerhead Turtle (*Caretta caretta*) as known to occur in the feature area (within the 2km buffer from the site). This species is unlikely to utilise the areas within the subject site (for details refer to Appendix C), however development will adopt recommendations outlined in the *Sea Turtle Sensitive Area Code* (DSDMIP, May 2019; refer Section 5.4.2 below).

An assessment of the likely impacts using the *Significant Impact Guidelines 1.1* (Commonwealth of Australia 2013) has determined that the proposal is unlikely to result in a significant impact on values identified as Matters of national environmental significance (MNES), so referral for a controlled action determination is not required.

5.2 Matters of State Environmental Significance

5.2.1 Threatened Wildlife and Habitat

A review of MSES that may occur within or close to the subject site based on State mapping was undertaken (refer Section 3.2 and Appendix A), and as listed in Table 3.3. Threatened and Special Least Concern (SL) fauna under the NCA are defined as MSES. The results of the desktop review indicate that Threatened and SL fauna may occur on or near the site based on nearby historical records. No Threatened were detected during the surveys. One (1) fauna species observed, *Sterna hirundo* (common tern) is listed as Special Least Concern (SL) under the NCA. This species is commonly observed in near coastal waters, both on ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries with muddy, sandy or rocky shores and has broad habitat requirements. Further details regarding the likelihood of occurrence of species detected in the desktop review are provided in Appendix C.

5.2.2 Regulated Vegetation and Essential Habitat

The proposed works may impact 1,070m² of ground truthed native vegetation mapped as RE 12.2.14 and Essential Habitat as shown in Figure 5.1. The vegetation in the study area generally meets the criteria for the mapped Regional Ecosystem 12.2.14 – Foredune Complex, classified as Least concern under the VMA. This vegetation is mapped as Essential Habitat for shorebirds and therefore identified as MSES, however none of the listed shorebird species were detected in the surveys and the habitat values of the survey area is not conducive to these species.

The vegetation impact area generally meets the benchmarks of RE 12.2.14 but is substantially disturbed with areas of reduced canopy cover and high levels of weed infestation. The proposed development provides an opportunity to restore the dunal vegetation outside of the impact area to improve the local biodiversity and fauna habitat values and mitigate coastal erosion processes. Restoration works will also provide a net gain in native vegetation areas as a result of the project ensuring a good conservation outcome.

5.3 Matters of Local Environmental Significance

The *Sunshine Coast Planning Scheme 2014* mapping indicates the site supports Matters of Local Environmental Significance (MLES) – specifically Native Vegetation Areas (Refer Section 3.3 and Figure 3.3). The areas mapped as Native Vegetation Areas correspond to the mapped Regulated Vegetation described in Section 3.2.3 (Figure 3.2). The proposed works may impact 1,070m² of ground truthed native vegetation shown in Figure 5.1.

The proposal includes restoration of 2,690m² of disturbed dune vegetation immediately north of the project area to mitigate the proposed impacts, ensuring no net loss of Native Vegetation Areas and compliance with the *Sunshine Coast Planning Scheme 2014 Biodiversity, Waterways and Wetlands Overlay Code*. A detailed response to the *Sunshine Coast Planning Scheme 2014 Biodiversity, Waterways and Wetlands Overlay Code* is provided in Appendix D.

The primary restoration objectives should be removal of all weed species from this area, targeting species identified in this report - and increased native vegetation cover in denuded areas. Revegetation where required should utilise species from the preclearing regional ecosystem RE 12.2.14. A Restoration Plan is provided in Figure 5.2 including revegetation species palette.

5.4 Impact Management

The proposed works may require disturbance to some of the foredune vegetation in the project area. No significant flora / fauna species or habitat features will be impacted.

The proposed works will be in accordance with an RPEQ design to ensure the final beach profile provide a stabilising, protective function against coastal erosion. It is however recommended following works, immediate stabilisation and fencing of any disturbed areas (not being used for the project) is undertaken.

Additionally, to mitigate the proposed impacts on foredune vegetation and surrogate habitat values, restoration the disturbed dune area immediately north of the site is recommended as part of the project. The primary restoration objectives should be removal of all weed species from this area and increased native vegetation cover in denuded areas. Revegetation where required should utilise species from the preclearing regional ecosystem RE 12.2.14. These works will effectively offset the proposed impacts and ensure no net loss of foredune vegetation occurs as a result of the project. A Restoration Plan is provided in Figure 5.2 including revegetation species palette.

Other impacts of the proposed development are primarily construction stage impacts on retained vegetation, fauna and habitat values. This section provides recommendations for management of potential impacts during the construction stage.

5.4.1 Vegetation Management

The proposed development may require removal of mature trees within the works footprint. To mitigate potential impacts to retained vegetation to the greatest extent practicable, it is recommended that all clearing be undertaken in accordance with an approved Vegetation Management Plan and the recommendations of an AQF Level 5 Arborist. All works should be in accordance with the Australian Standard Protection of Trees on Development Sites AS 4970-2009 including an arboricultural impact assessment to determine appropriate protection measures such as tree protection fencing and root barriers where required.

To minimise waste from the site, it is recommended that all felled native vegetation be recycled (milled, chipped or mulched) and where possible incorporated into the landscape features, rehabilitation, batter stabilisation techniques or other approved site works.

5.4.2 Fauna Management

To avoid risk of injury and/or death to fauna during construction operations, the site should be assessed by licensed Spotter-Catcher prior to the commencement of any clearing activities and a Fauna Management Plan prepared and approved. A licensed Spotter-Catcher should be present on-site during clearing operations. Recommendations to fauna management during clearing works will be provided in the Vegetation and Fauna Management Plan.

Furthermore, the development will ensure compliance with the Sea Turtle Sensitive Area Code (DSDMIP, May 2019). This includes implementing the following design criteria as part of the project:

- Avoiding direct illumination of the beach, ocean and sky at night, including interior and exterior lightning;
- Minimising the use and intensity of outside lighting required to achieve the light's purpose to avoid reflection from the ground, buildings and other surfaces;
- Minimising reflective glare that contributes to sky glow;
- Providing for landscape buffers that protect the edges of existing native vegetation or any other areas of environmental significance and screen the development to a level where it is not visible from the beach or ocean;
- Avoiding new floodlighting associated with sport and recreation activities;
- Avoiding illuminated signage associated with advertising devices;
- Prohibiting the establishment of new beach access points, unless the beach access is designed to reduce interference on turtle nesting areas and is required to enhance public access to the beach with no increase of beach access points (if beach access is replaced, previous beach access will be fenced off and revegetated);
- Implementing effective measures during the construction and operation of development to avoid impacts from lighting, noise and vibration on the beach.

5.4.3 General Recommendations

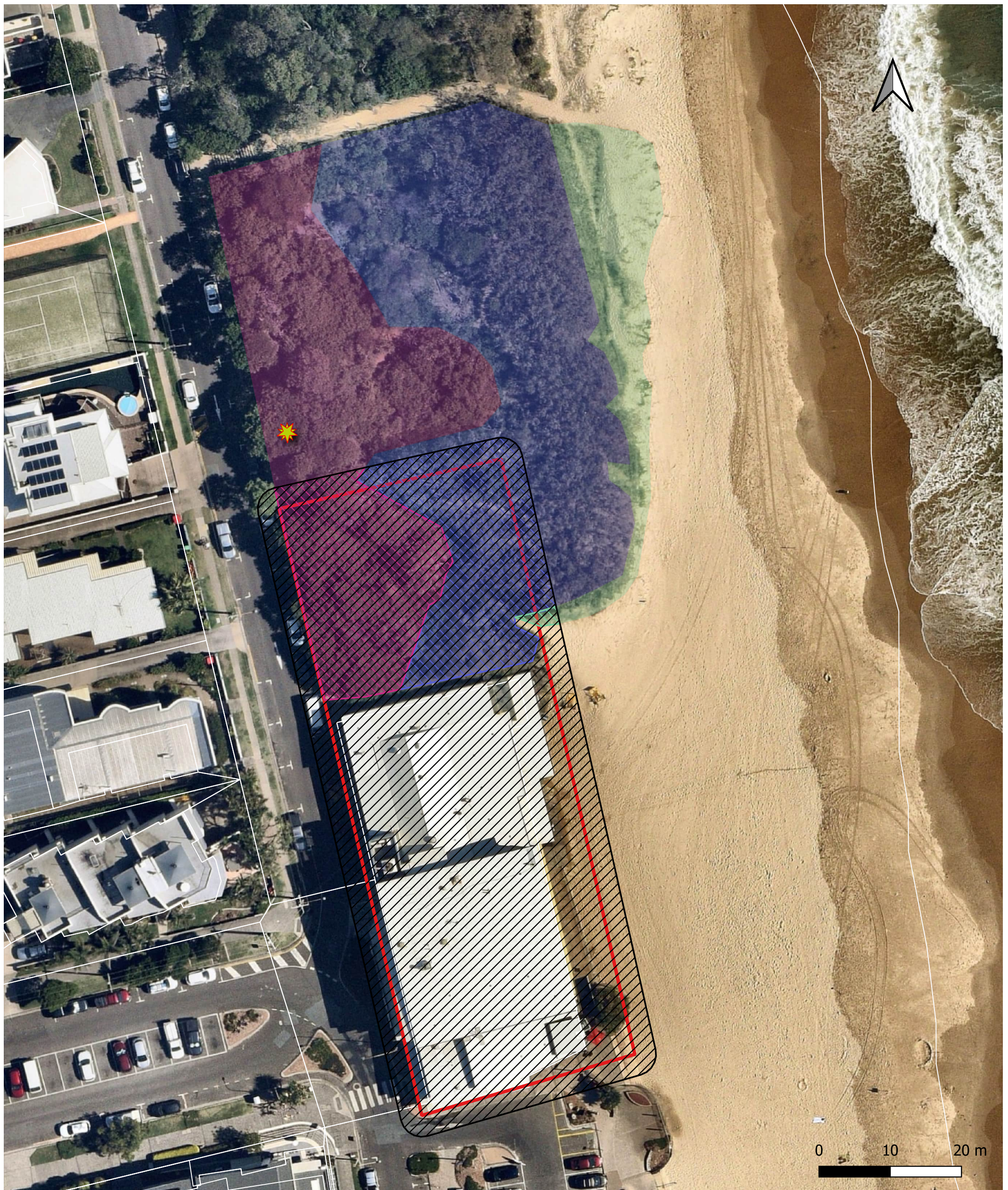
To minimise disturbance to environmental values during clearing and construction, the following general recommendations should be adopted where applicable:

- Contractors with a reputation for sensitive site work or low impact construction should be employed;
- All parties involved in construction works of the site should be aware of:
 - 'No go' areas, such as drainage lines, tree protection zones and areas of vegetation to be retained, where construction vehicles are not permitted; and
 - The importance of the nature conservation values associated with the site.
- Penalty provisions for non-compliant construction contractors should be considered by the development proponent. For example, a damage clause could be incorporated into the contract document such that where any vegetation or habitat values, which are identified as a 'no go' area, are damaged, the contractor will pay to the proponent a specified monetary penalty;
- Appropriate scale machinery should be used;
- Construction methods used should support the retention of important natural values;
- Undergrowth should be retained where possible during construction. In particular, surface grass cover, leaf litter and mulch should be retained to minimise erosion and runoff;
- Machinery used in weed infested areas should be quarantined or thoroughly cleaned before use in areas of little or no weed infestation;
- Site entry/exit points should be limited and clearly identified on the ground (e.g. with star pickets); and
- Vehicle servicing should be conducted off site in a suitable location to avoid the risk of fuel/chemical spillage.



To minimise disturbances to environmental values during the operational phase, the following general recommendations are provided:

- Install and maintain appropriate sediment control devices;
- Treat and retain as much runoff from the site as possible (e.g. install rainwater tanks, grass swales and gross pollutant traps);
- Exposed dirt areas should be regularly watered to reduce dust emissions; and
- Provide adequate rubbish bins to reduced gross pollutants entering neighbouring and water shed areas.



Ecological Site Assessment – Maroochydore SLSC Expansion

Figure 5.1 Project Impacts on Native Vegetation and Habitat

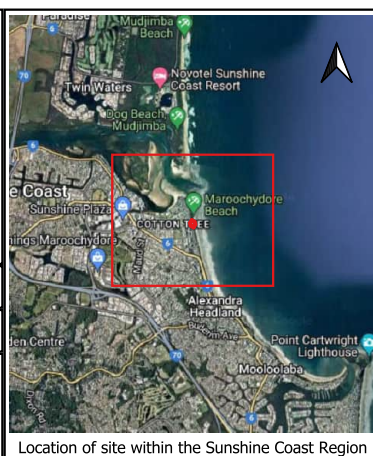
Project: BE230663

Date: 09-05-2024

Scale: 1:500 at A3

Projection: MGA 2020 Zone 56

Data Sources: Cadastre - Qld Department of Resources 2023, Aerial Imagery - Nearmap, December 2023



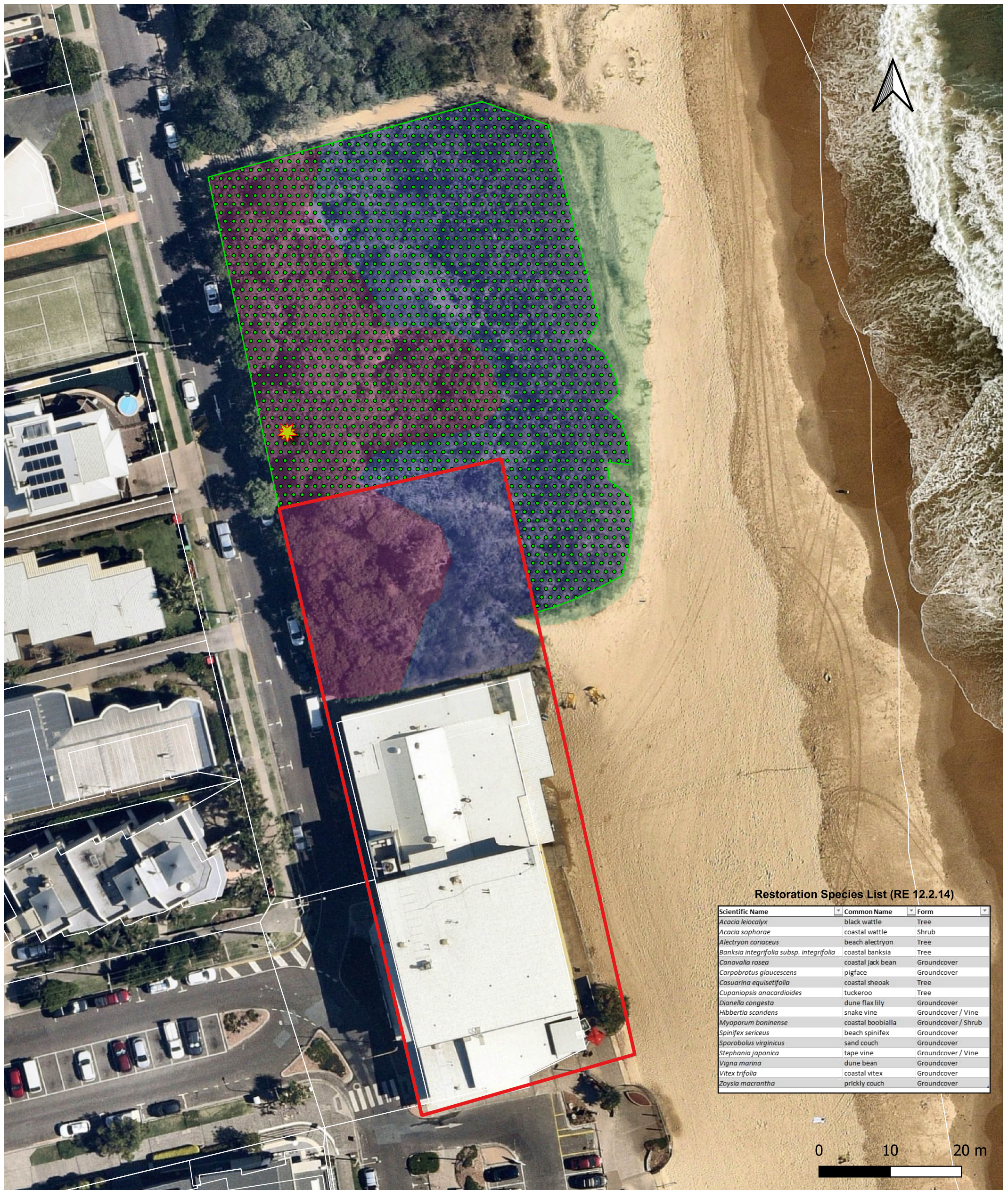
Legend

- Site - Proposed new lease area
- Vegetation Association A 529m2
- Vegetation Association B 532m2
- Vegetation Association C 9m2
- Habitat feature - Brush turkey nest



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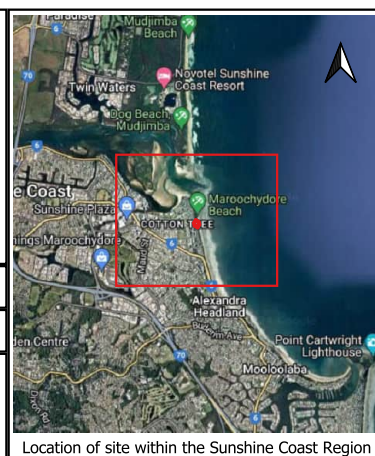
Restoration Species List (RE 12.2.14)

Scientific Name	Common Name	Form
<i>Acacia leiocalyx</i>	black wattle	Tree
<i>Acacia sophorae</i>	coastal wattle	Shrub
<i>Alectryon coriaceus</i>	beach alectryon	Tree
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	coastal banksia	Tree
<i>Canavalia rosea</i>	coastal jack bean	Groundcover
<i>Carpobrotus glaucescens</i>	pigface	Groundcover
<i>Casuarina equisetifolia</i>	coastal sheoak	Tree
<i>Cupaniopsis anacardioides</i>	tuckeroo	Tree
<i>Dianella congesta</i>	dune flax lily	Groundcover
<i>Hibbertia scandens</i>	snake vine	Groundcover / Vine
<i>Myoporum boninense</i>	coastal boobialla	Groundcover / Shrub
<i>Spinifex sericeus</i>	beach spinifex	Groundcover
<i>Sporobolus virginicus</i>	sand couch	Groundcover
<i>Stephania japonica</i>	tape vine	Groundcover / Vine
<i>Vigna marina</i>	dune bean	Groundcover
<i>Vitex trifolia</i>	coastal vitex	Groundcover
<i>Zoysia macrantha</i>	prickly couch	Groundcover

0 10 20 m

Ecological Site Assessment – Maroochydore SLSC Expansion

Figure 5.2 Restoration Plan



Location of site within the Sunshine Coast Region

Legend

- Site - Proposed new lease area
- Restoration Area (2,690m²)
weeding and revegetation to infill denuded areas
- Habitat feature - Brush turkey nest
- Vegetation Association A
- Vegetation Association B
- Vegetation Association C



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6. Conclusions

Field surveys were undertaken by Burchills Ecologists during February 2024. Surveys included general flora and fauna surveys, targeted surveys and habitat assessments for the threatened wildlife and Special Least Concern species detected as possibly present based on the desktop surveys.

The flora surveys identified three (3) broad vegetation associations in the investigation area including:

- Vegetation Association A - Beach Alectryon and Beach Sheoak Hind Dune Open Forest (1,513m²);
- Vegetation Association B - Beach Sheoak Foredune Woodland (2,071m²); and
- Vegetation Association C - Foredune Spinifex Grassland (490m²).

The structure and floristics of Vegetation Associations A and B represent the 'Least Concern' Regional Ecosystem 12.2.14a - *Casuarina equisetifolia* subsp. *incana* woodland to low open forest, and the structure and floristics of Vegetation Association C represents the 'Least Concern' Regional Ecosystem 12.2.14e - *Spinifex sericeus* open hummock grassland. Being Least concern, this vegetation is not a Matter of State Environmental Significance (MSES) under the State Planning Policy.

A total 16 weeds were recorded during surveys including one (1) identified as a Restricted Invasive Plant under the *Biosecurity Act 2014* - *Asparagus aethiopicus* (ground asparagus). The most prevalent weeds were in the ground stratum and included - *Barleria repens*, *Sorghum halepense* (Johnson grass) and *Asparagus aethiopicus*. All three (3) species are highly invasive and have the potential to suppress natural regeneration.

The fauna surveys identified 22 species of fauna within the subject site including two (2) reptile species, 19 bird species and one (1) mammal species. All fauna detected are primarily common and disturbance-tolerant species.

No conservation significant (threatened) flora or fauna species or vegetation communities were observed during surveys. One (1) migratory seabird species was observed - *Sterna hirundo* (common tern). This non-breeding migrant species has a large range and is common on the eastern coast of Australia in/near coastal waters including ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries.

The proposed development was designed to minimise impacts on significant ecological values and biodiversity state interests as identified in the State Planning Policy including Matters of National, State and Local Environmental Significance. Impacts are limited to removal of some vegetation to facilitate the expansion works. This vegetation is mapped as Least concern Regional Ecosystem 12.2.14 - Strand and fore dune complex comprising *Spinifex sericeus* grassland and *Casuarina equisetifolia* subsp. *incana* low woodland/open forest. The vegetation impact area generally meets the benchmarks of Regional Ecosystem 12.2.14 but is substantially disturbed with reduced canopy cover and high levels of weed infestation. This vegetation is mapped as Essential Habitat for threatened and migratory shorebirds (MSES) however shorebird species were detected in the surveys and the habitat values of this area is not conducive to these species.

The State mapped vegetation is also mapped as supporting Native Vegetation Areas in the *Sunshine Coast Planning Scheme 2014* - a Matter of Local Environmental Significance (MLES). The site surveys verified the extent of native vegetation in and near the project area and determined that the proposal may impact approximately 1,070m² of native vegetation.

The project provides an opportunity to restore the disturbed dunal environment outside of the impact footprint, to improve the local biodiversity and fauna habitat values and mitigate coastal erosion processes. To meet these objectives, the proposal includes restoration of 2,690m² of disturbed dune vegetation immediately north of the project footprint, ensuring no net loss of MSES and MLES (Native Vegetation Areas) and compliance with the *Sunshine Coast Planning Scheme 2014 Biodiversity, Waterways and Wetlands Overlay Code*.



In summary, the project will require clearing of existing native vegetation to facilitate the expansion works. The vegetation to be cleared predominantly comprises pioneer species and weeds and it is not expected that the clearing will impact on species of conservation significance or other matters of environmental significance provided works are undertaken in accordance with the recommendations provided within this report including restoration of the adjoining dune environment.

7. Definitions

DAF	Queensland Department of Agriculture and Fisheries
DES	Queensland Department of Environment and Science
EPBC	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
EVNT	Endangered, Vulnerable or Near Threatened
HAT	Highest Astronomical Tide
MES	Matters of Environmental Significance
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NCA	<i>Nature Conservation Act 1992</i>
RE	Regional Ecosystem
RVM	Regulated Vegetation Map
SPP	State Planning Policy
VMA	<i>Vegetation Management Act 1999</i>
VMS Map	Vegetation Management Support Map

8. References

Hnatiuk, R.J., Thackway, R. and Walker, J. (2009). *Vegetation*. In: Australian soil and land survey field handbook (3rd edn). National Committee on Soil and Terrain. CSIRO Publishing, Melbourne.

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Neldner, V.J., Wilson, B.A., Dillewaard, H.A., Ryan, T.S., Butler, D.W., McDonald, W.J.F, Richter, D., Addicott, E.P. and Appelman, C.N. (2023) *Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland*. Version 7.0. Updated December 2023. Queensland Herbarium, Queensland Department of Environment and Science, Brisbane.

Walker, J. and Hopkins, M.S. (1990). *Vegetation*. In: McDonald, R.C., Isbell, R.F., Speight, J.G., Walker J. and Hopkins, M.S. (eds.), Australian Soil and Land Survey – Field Handbook. Inkata Press, Melbourne.

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Appendix A – Desktop Review Search Results





Queensland Government

Department of Environment and Science

Environmental Reports

Matters of State Environmental Significance

For the selected area of interest
Lot: 471 Plan: SP142403

Environmental Reports - General Information

The Environmental Reports portal provides for the assessment of selected matters of interest relevant to a user specified location, or area of interest (AOI). All area and derivative figures are relevant to the extent of matters of interest contained within the AOI unless otherwise stated. Please note, if a user selects an AOI via the "central coordinates" option, the resulting assessment area encompasses an area extending for a 2km radius from the point of interest.

All area and area derived figures included in this report have been calculated via reprojecting relevant spatial features to Albers equal-area conic projection (central meridian = 146, datum Geocentric Datum of Australia 1994). As a result, area figures may differ slightly if calculated for the same features using a different co-ordinate system.

Figures in tables may be affected by rounding.

The matters of interest reported on in this document are based upon available state mapped datasets. Where the report indicates that a matter of interest is not present within the AOI (e.g. where area related calculations are equal to zero, or no values are listed), this may be due either to the fact that state mapping has not been undertaken for the AOI, that state mapping is incomplete for the AOI, or that no values have been identified within the site.

The information presented in this report should be considered as a guide only and field survey may be required to validate values on the ground.

Please direct queries about these reports to: Planning.Support@des.qld.gov.au

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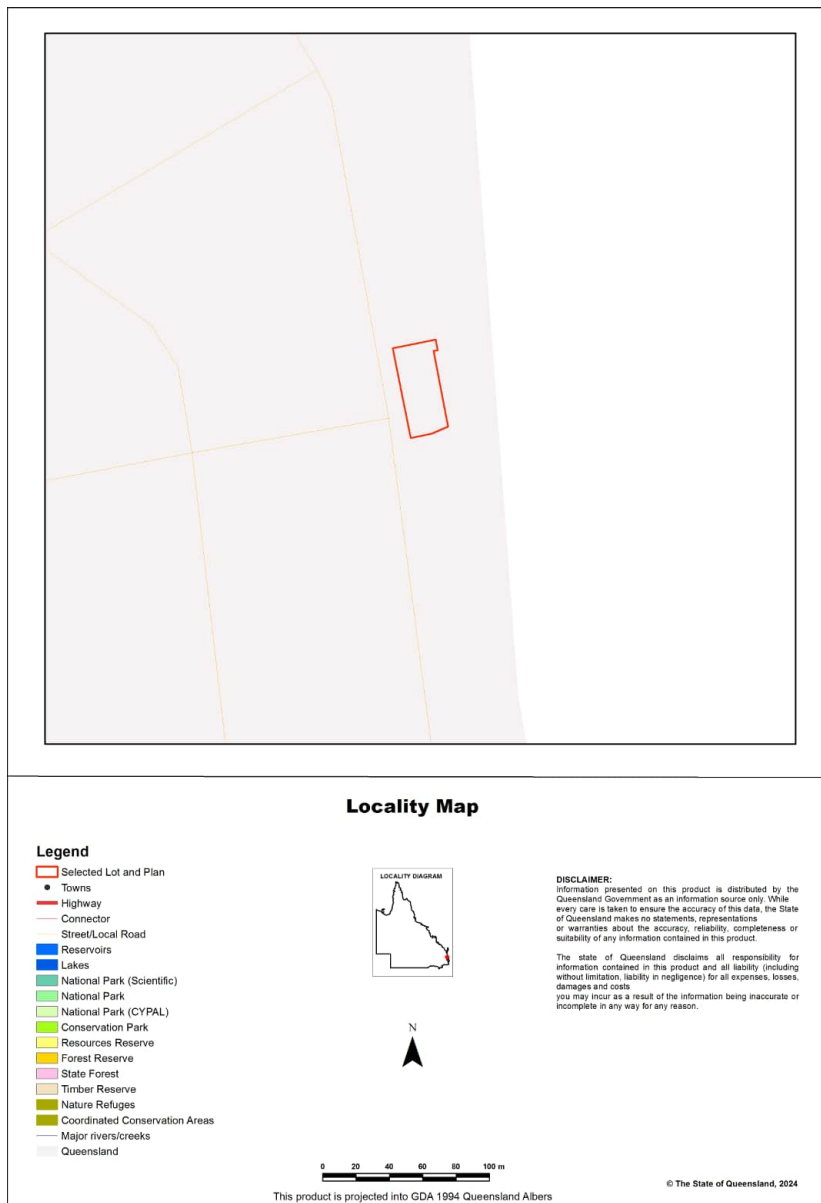
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Assessment Area Details

The following table provides an overview of the area of interest (AOI) with respect to selected topographic and environmental values.

Table 1: Summary table, details for AOI Lot: 471 Plan: SP142403

Size (ha)	0.13
Local Government(s)	Sunshine Coast Regional
Bioregion(s)	Southeast Queensland
Subregion(s)	Sunshine Coast - Gold Coast Lowlands
Catchment(s)	Maroochy



Matters of State Environmental Significance (MSES)

MSES Categories

Queensland's State Planning Policy (SPP) includes a biodiversity State interest that states:

'The sustainable, long-term conservation of biodiversity is supported. Significant impacts on matters of national or state environmental significance are avoided, or where this cannot be reasonably achieved; impacts are minimised and residual impacts offset.'

The MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The SPP defines matters of state environmental significance as:

- Protected areas (including all classes of protected area except coordinated conservation areas) under the *Nature Conservation Act 1992* ;
- Marine parks and land within a 'marine national park', 'conservation park', 'scientific research', 'preservation' or 'buffer' zone under the *Marine Parks Act 2004* ;
- Areas within declared fish habitat areas that are management A areas or management B areas under the Fisheries Regulation 2008;
- Threatened wildlife under the *Nature Conservation Act 1992* and special least concern animals under the Nature Conservation (Wildlife) Regulation 2006;
- Regulated vegetation under the *Vegetation Management Act 1999* that is:
 - Category B areas on the regulated vegetation management map, that are 'endangered' or 'of concern' regional ecosystems;
 - Category C areas on the regulated vegetation management map that are 'endangered' or 'of concern' regional ecosystems;
 - Category R areas on the regulated vegetation management map;
 - Regional ecosystems that intersect with watercourses identified on the vegetation management watercourse and drainage feature map;
 - Regional ecosystems that intersect with wetlands identified on the vegetation management wetlands map;
- Strategic Environmental Areas under the *Regional Planning Interests Act 2014* ;
- Wetlands in a wetland protection area of wetlands of high ecological significance shown on the Map of Queensland Wetland Environmental Values under the Environment Protection Regulation 2019;
- Wetlands and watercourses in high ecological value waters defined in the Environmental Protection (Water) Policy 2009, schedule 2;
- Legally secured offset areas.

MSES Values Present

The MSES values that are present in the area of interest are summarised in the table below:

Table 2: Summary of MSES present within the AOI

1a Protected Areas- estates	0.0 ha	0.0 %
1b Protected Areas- nature refuges	0.0 ha	0.0 %
1c Protected Areas- special wildlife reserves	0.0 ha	0.0 %
2 State Marine Parks- highly protected zones	0.0 ha	0.0 %
3 Fish habitat areas (A and B areas)	0.0 ha	0.0 %
4 Strategic Environmental Areas (SEA)	0.0 ha	0.0 %
5 High Ecological Significance wetlands on the map of Referable Wetlands	0.0 ha	0.0 %
6a High Ecological Value (HEV) wetlands	0.0 ha	0.0 %
6b High Ecological Value (HEV) waterways	0.0 km	Not applicable
7a Threatened (endangered or vulnerable) wildlife	0.0 ha	0.77%
7b Special least concern animals	0.0 ha	0.77%
7c i Koala habitat area - core (SEQ)	0.0 ha	0.0 %
7c ii Koala habitat area - locally refined (SEQ)	0.0 ha	0.0 %
7d Sea turtle nesting areas	0.0 km	Not applicable
8a Regulated Vegetation - Endangered/Of concern in Category B (remnant)	0.0 ha	0.0 %
8b Regulated Vegetation - Endangered/Of concern in Category C (regrowth)	0.0 ha	0.0 %
8c Regulated Vegetation - Category R (GBR riverine regrowth)	0.0 ha	0.0 %
8d Regulated Vegetation - Essential habitat	0.0 ha	0.77%
8e Regulated Vegetation - intersecting a watercourse	0.0 km	Not applicable
8f Regulated Vegetation - within 100m of a Vegetation Management Wetland	0.0 ha	0.0 %
9a Legally secured offset areas- offset register areas	0.0 ha	0.0 %
9b Legally secured offset areas- vegetation offsets through a Property Map of Assessable Vegetation	0.0 ha	0.0 %

Additional Information with Respect to MSES Values Present

MSES - State Conservation Areas

1a. Protected Areas - estates

(no results)

1b. Protected Areas - nature refuges

(no results)

1c. Protected Areas - special wildlife reserves

(no results)

2. State Marine Parks - highly protected zones

(no results)

3. Fish habitat areas (A and B areas)

(no results)

Refer to **Map 1 - MSES - State Conservation Areas** for an overview of the relevant MSES.

MSES - Wetlands and Waterways

4. Strategic Environmental Areas (SEA)

(no results)

5. High Ecological Significance wetlands on the Map of Queensland Wetland Environmental Values

(no results)

6a. Wetlands in High Ecological Value (HEV) waters

(no results)

6b. Waterways in High Ecological Value (HEV) waters

(no results)

Refer to **Map 2 - MSES - Wetlands and Waterways** for an overview of the relevant MSES.

MSES - Species

7a. Threatened (endangered or vulnerable) wildlife

Values are present

7b. Special least concern animals

Values are present

7c i. Koala habitat area - core (SEQ)

Not applicable

7c ii. Koala habitat area - locally refined (SEQ)

Not applicable

7d. Wildlife habitat (sea turtle nesting areas)

Not applicable

Threatened (endangered or vulnerable) wildlife habitat suitability models

Species	Common name	NCA status	Presence
<i>Boronia keysii</i>	Keys boronia	V	None
<i>Calyptorhynchus lathami</i>	Glossy black cockatoo	V	None
<i>Casuarius casuaris johnsonii</i>	Sthn population cassowary	E	None
<i>Crinia tinnula</i>	Wallum froglet	V	None
<i>Denisonia maculata</i>	Ornamental snake	V	None
<i>Euastacus bindal</i>	Mount Elliot crayfish	CR	None
<i>Euastacus binzayedi</i>		CR	None
<i>Euastacus eungella</i>		E	None
<i>Euastacus hystricosus</i>		E	None
<i>Euastacus jagara</i>	Jagara hairy crayfish	CR	None
<i>Euastacus madae</i>		CR	None
<i>Euastacus monteithorum</i>		E	None
<i>Euastacus robertsi</i>		E	None
<i>Litoria freycineti</i>	Wallum rocketfrog	V	None
<i>Litoria olongburensis</i>	Wallum sedgefrog	V	None
<i>Macadamia integrifolia</i>		V	None
<i>Macadamia ternifolia</i>		V	None
<i>Macadamia tetraphylla</i>	bopple nut	V	None
<i>Melaleuca irbyana</i>	swamp tea-tree	E	None
<i>Petaurus gracilis</i>	Mahogany Glider	E	None
<i>Petrogale coenensis</i>	Cape York rock-wallaby	V	None
<i>Petrogale penicillata</i>	brush-tailed rock-wallaby	V	None
<i>Petrogale persephone</i>	Proserpine rock-wallaby	E	None
<i>Petrogale purpleicollis</i>	purple-necked rock-wallaby	V	None
<i>Petrogale sharmani</i>	Sharmans rock-wallaby	V	None

Species	Common name	NCA status	Presence
<i>Petrogale xanthopus celeris</i>	yellow-footed rock-wallaby (Qld subspecies)	V	None
<i>Pezoporus wallicus wallicus</i>	Eastern ground parrot	V	None
<i>Phascolarctos cinereus</i>	Koala - outside SEQ*	E	None
<i>Taudactylus pleione</i>	Kroombit tinkerfrog	E	None
<i>Xeromys myoides</i>	Water Mouse	V	None

*For koala model, this includes areas outside SEQ. Check 7c SEQ koala habitat for presence/absence.

Threatened (endangered or vulnerable) wildlife species records

Scientific name	Common name	NCA status	EPBC status	Migratory status
<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	V	V	M-C/J/R/B/E
<i>Numenius madagascariensis</i>	eastern curlew	E	CE	M-C/J/R/B/E
<i>Charadrius leschenaultii</i>	greater sand plover	V	V	M-C/J/R/B/E
<i>Charadrius mongolus</i>	lesser sand plover	E	E	M-C/J/R/B/E
<i>Calidris canutus</i>	red knot	E	E	M-C/J/R/B/E
<i>Esacus magnirostris</i>	beach stone-curlew	V	None	None
<i>Calidris tenuirostris</i>	great knot	CR	CE	M-C/J/R/B/E
<i>Petauroides armillatus</i>	central greater glider	E	E	None

Special least concern animal species records

Scientific name	Common name	Migratory status
<i>Charadrius bicinctus</i>	double-banded plover	M-B/E
<i>Pluvialis fulva</i>	Pacific golden plover	M-C/J/R/B/E
<i>Thalasseus bergii</i>	crested tern	M-J/E
<i>Sternula albifrons</i>	little tern	M-C/J/R/B/E
<i>Numenius phaeopus</i>	whimbrel	M-C/J/R/B/E
<i>Sterna hirundo</i>	common tern	M-C/J/R/E
<i>Arenaria interpres</i>	ruddy turnstone	M-C/J/R/B/E
<i>Xenus cinereus</i>	terek sandpiper	M-C/J/R/B/E
<i>Chlidonias leucopterus</i>	white-winged black tern	M-C/J/R/E
<i>Calidris ruficollis</i>	red-necked stint	M-C/J/R/B/E
<i>Pandion haliaetus cristatus</i>	eastern osprey	M-B/E
<i>Tringa brevipes</i>	grey-tailed tattler	M-C/J/R/B/E
<i>Pluvialis squatarola</i>	grey plover	M-C/J/R/B/E
<i>Limosa limosa</i>	black-tailed godwit	M-C/J/R/B/E

Shorebird habitat (critically endangered/endangered/vulnerable)

Not applicable

Shorebird habitat (special least concern)

Not applicable

**Nature Conservation Act 1992 (NCA) Status- Endangered (E), Vulnerable (V) or Special Least Concern Animal (SL).
Environment Protection and Biodiversity Conservation Act 1999 (EPBC) status: Critically Endangered (CE) Endangered (E),
Vulnerable (V)*

*Migratory status (M) - China and Australia Migratory Bird Agreement (C), Japan and Australia Migratory Bird Agreement (J),
Republic of Korea and Australia Migratory Bird Agreement (R), Bonn Migratory Convention (B), Eastern Flyway (E)*

To request a species list for an area, or search for a species profile, access Wildlife Online at:

<https://www.qld.gov.au/environment/plants-animals/species-list/>

Refer to **Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals**, **Map 3b - MSES - Species - Koala habitat area (SEQ)** and **Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)** for an overview of the relevant MSES.

MSES - Regulated Vegetation

For further information relating to regional ecosystems in general, go to:

<https://www.qld.gov.au/environment/plants-animals/plants/ecosystems/>

For a more detailed description of a particular regional ecosystem, access the regional ecosystem search page at:

<https://environment.ehp.qld.gov.au/regional-ecosystems/>

8a. Regulated Vegetation - Endangered/Of concern in Category B (remnant)

Not applicable

8b. Regulated Vegetation - Endangered/Of concern in Category C (regrowth)

Not applicable

8c. Regulated Vegetation - Category R (GBR riverine regrowth)

Not applicable

8d. Regulated Vegetation - Essential habitat

Values are present

8e. Regulated Vegetation - intersecting a watercourse**

(no results)

8f. Regulated Vegetation - within 100m of a Vegetation Management wetland

Not applicable

Refer to **Map 4 - MSES - Regulated Vegetation** for an overview of the relevant MSES.

MSES - Offsets

9a. Legally secured offset areas - offset register areas

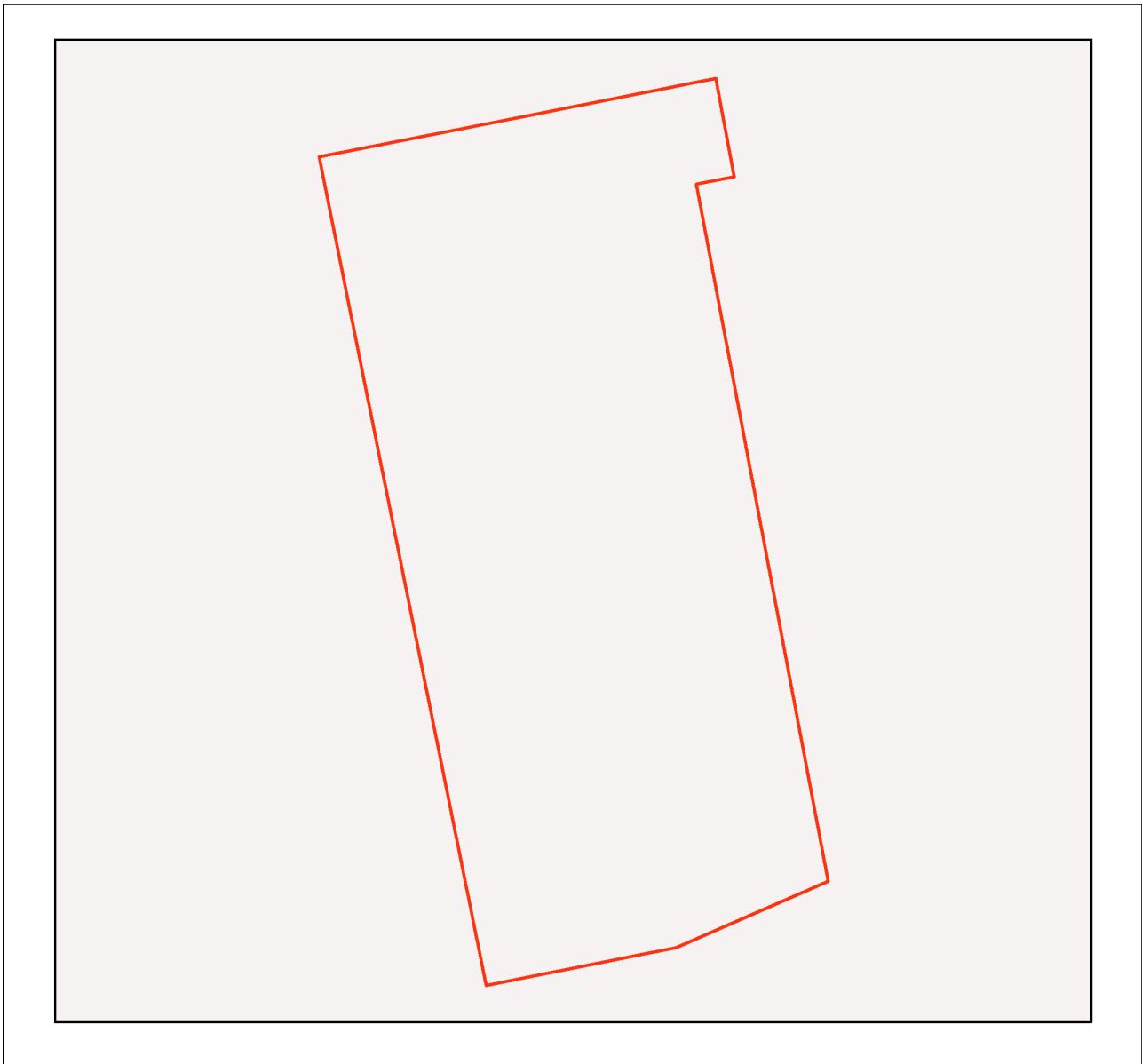
(no results)

9b. Legally secured offset areas - vegetation offsets through a Property Map of Assessable Vegetation

(no results)









Refer to **Map 5 - MSES - Offset Areas** for an overview of the relevant MSES.

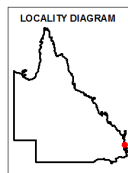
Map 1 - MSES - State Conservation Areas



MSES - State Conservation Areas

Area of Interest

-  Selected Lot and Plan
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Protected area (estates, nature refuges, special wildlife reserves)
-  Declared fish habitat area (A and B areas)
-  Marine park (highly protected)



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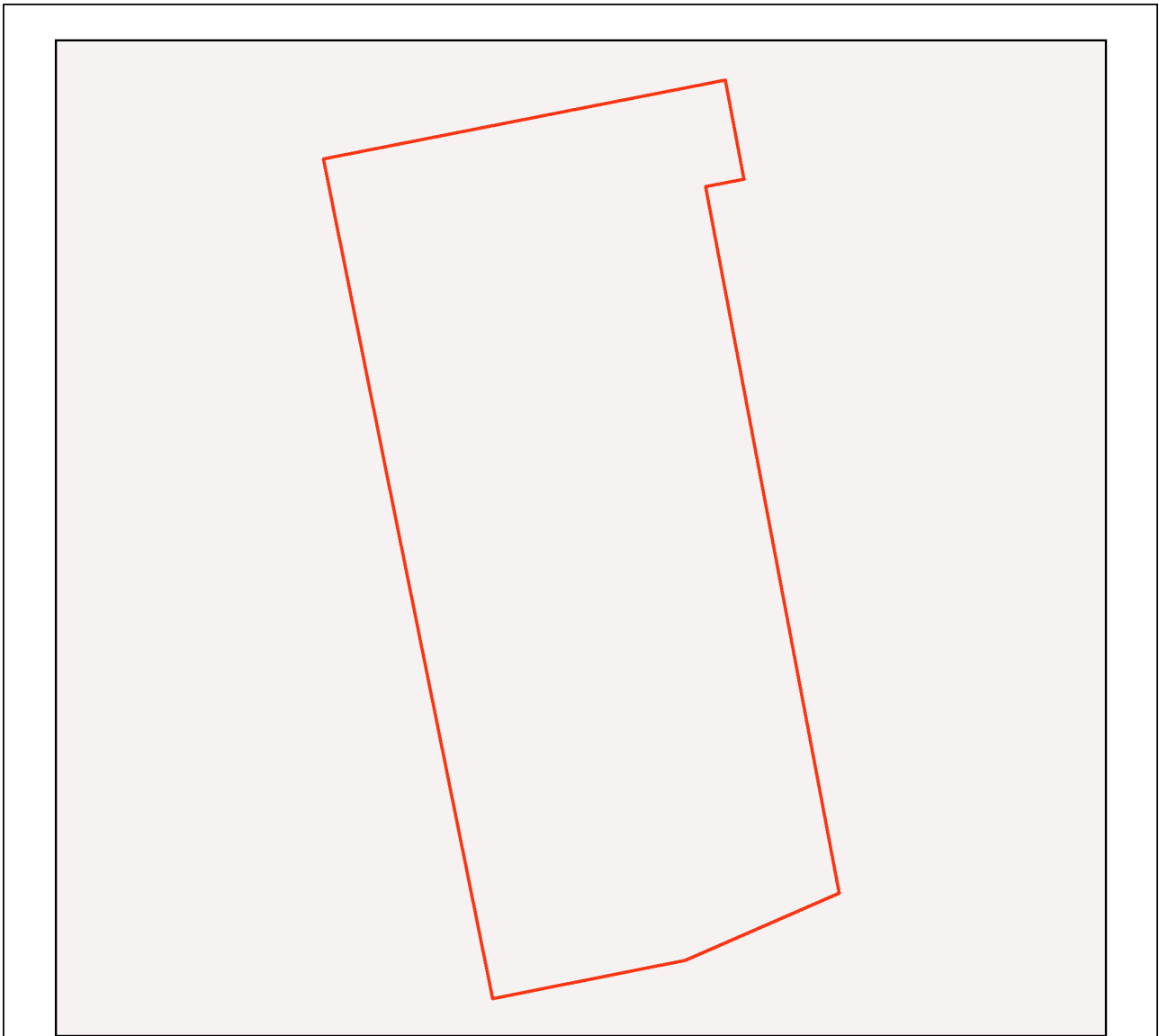
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






This product is projected into GDA 1994 Queensland Albers

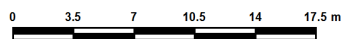
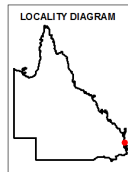
Map 2 - MSES - Wetlands and Waterways



MSES - Wetlands and Waterways

Area of Interest

-  Selected Lot and Plan
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Declared high ecological value waters (watercourse)
-  Strategic environmental area (designated precinct)
-  Declared high ecological value waters (wetland)
-  High ecological significance wetlands



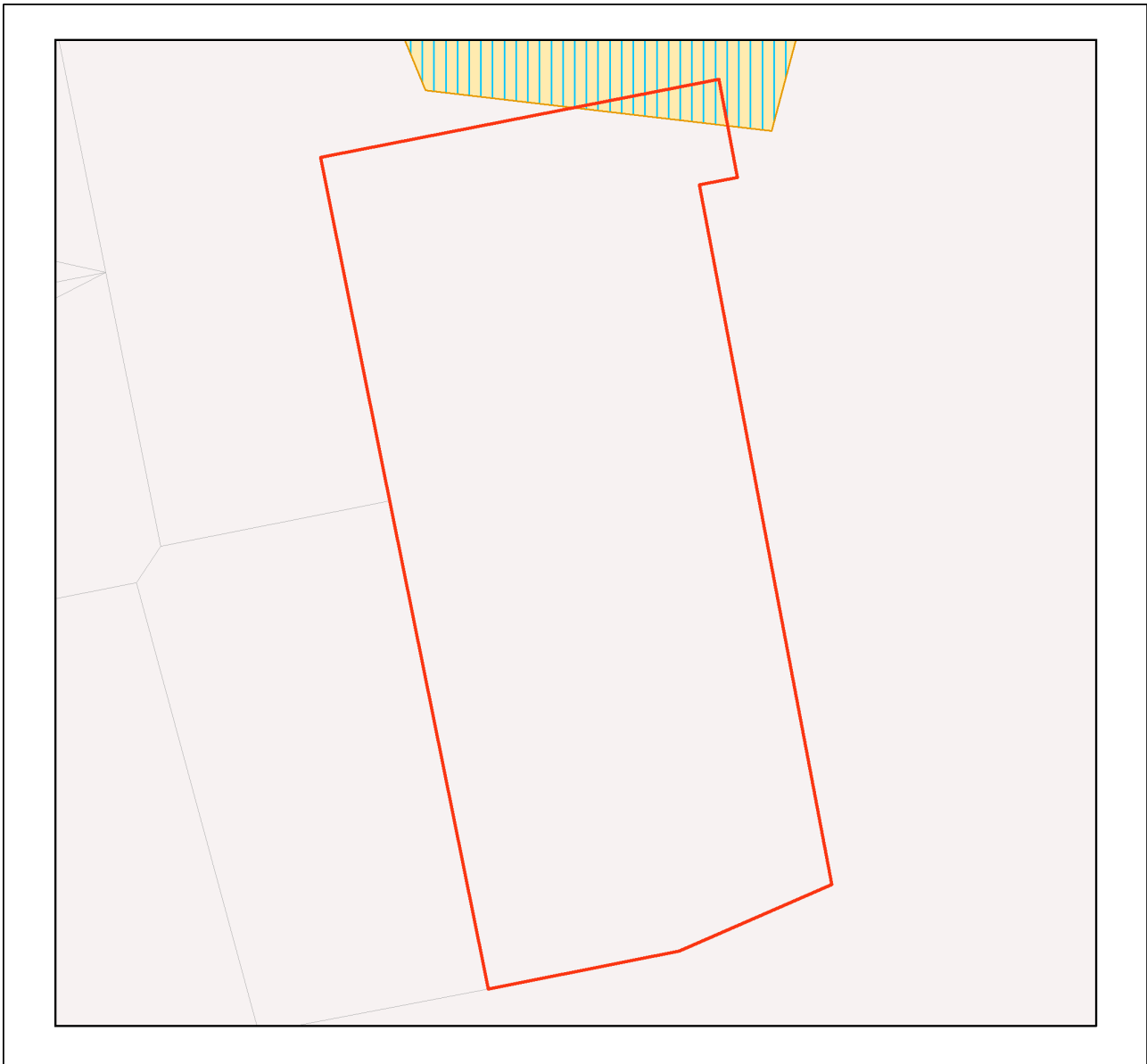
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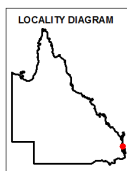
Map 3a - MSES - Species - Threatened (endangered or vulnerable) wildlife and special least concern animals



MSES - Species Threatened (endangered or vulnerable) wildlife and special least concern animals

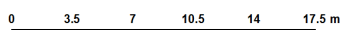
Area of Interest

- Selected Lot and Plan
- ▲ Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (special least concern)
- Wildlife habitat (endangered or vulnerable)



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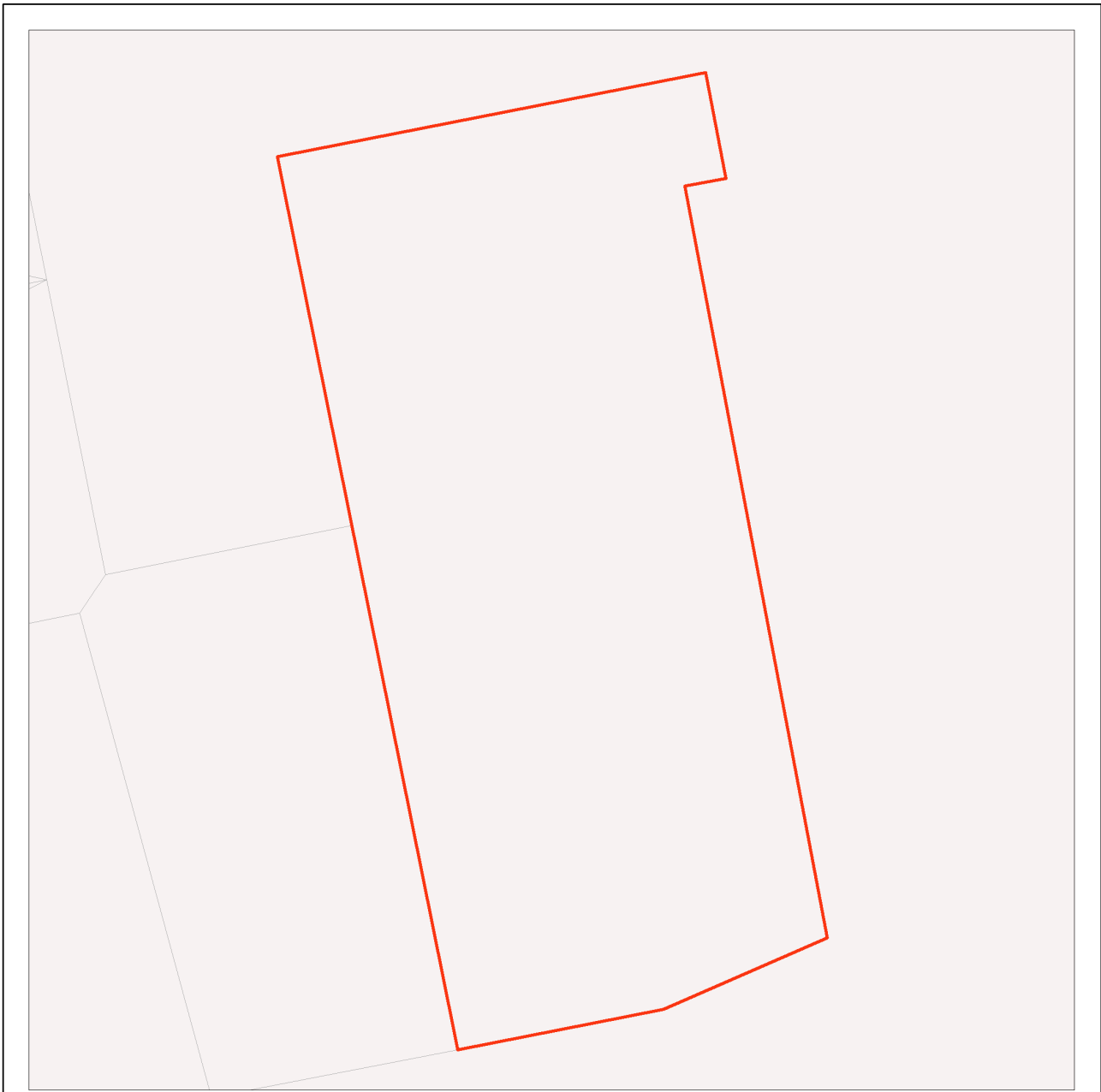
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Map 3b - MSES - Species - Koala habitat area (SEQ)



MSES - Species Koala habitat area (SEQ)

Area of Interest

- Selected Lot and Plan
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Koala habitat area (core)
- Koala habitat area (locally refined)



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The represented layers for SEQ 'koala habitat area-core' and 'koala habitat area- locally refined' in MSES are sourced directly from the regulatory mapping under the Nature Conservation (Koala) Conservation Plan 2017. Whilst every effort is made to ensure the information remains current, there may be delays between updating versions. Please refer to the original mapping for the most recent version. See <https://environment.des.qld.gov.au/wildlife/animals/living-with/koalas/mapping>

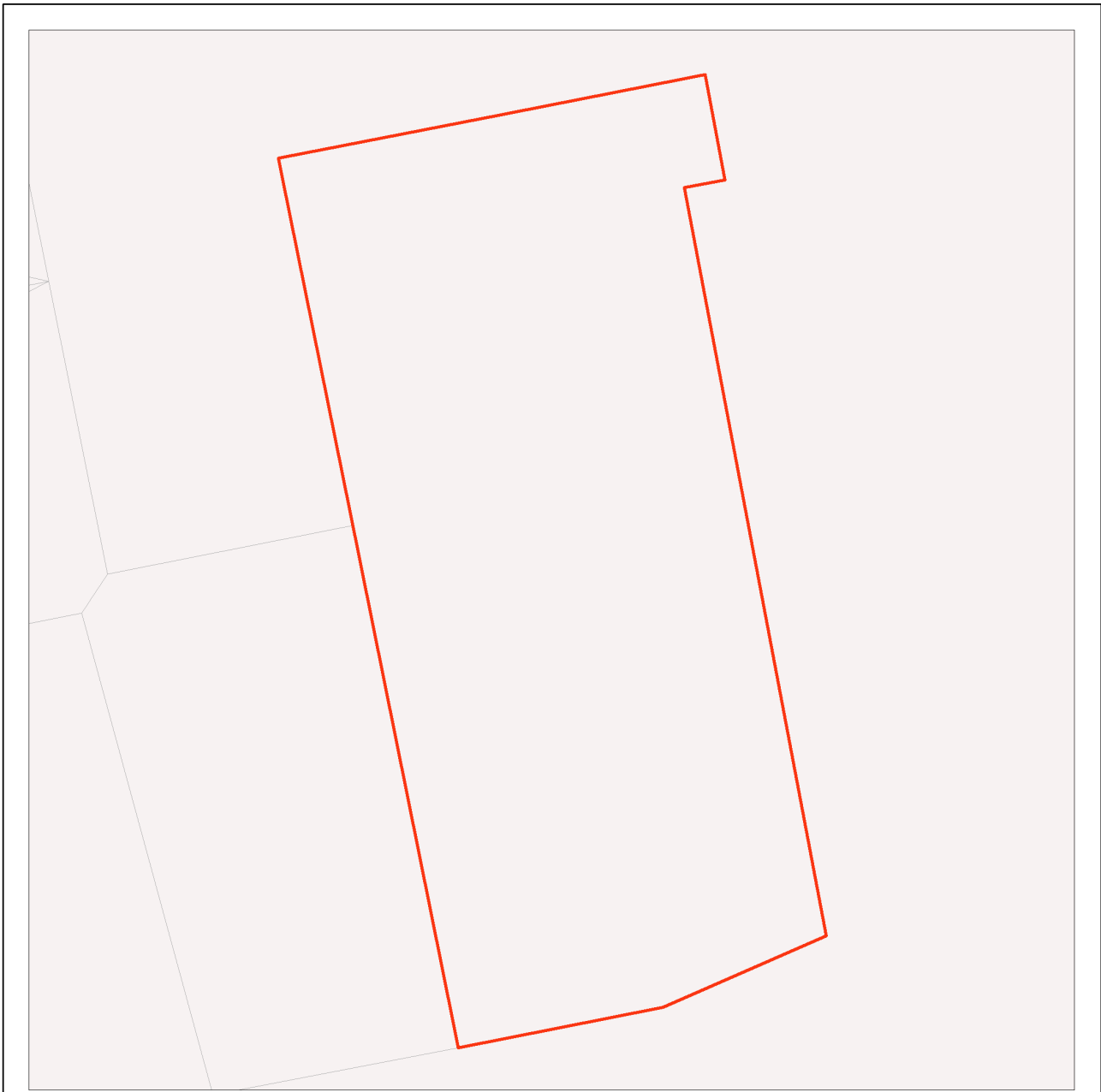
The koala habitat mapping within South East Queensland uses regional ecosystem linework compiled at a scale varying from 1:25,000 to 1:100,000. Linework should be used as a guide only. The positional accuracy of regional ecosystem data mapped at a scale of 1:100,000 is +/- 100 metres.



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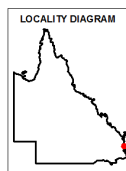
Map 3c - MSES - Wildlife habitat (sea turtle nesting areas)



MSES - Wildlife habitat (sea turtle nesting areas)

Area of Interest

- Selected Lot and Plan
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Wildlife habitat (sea turtle nesting areas)

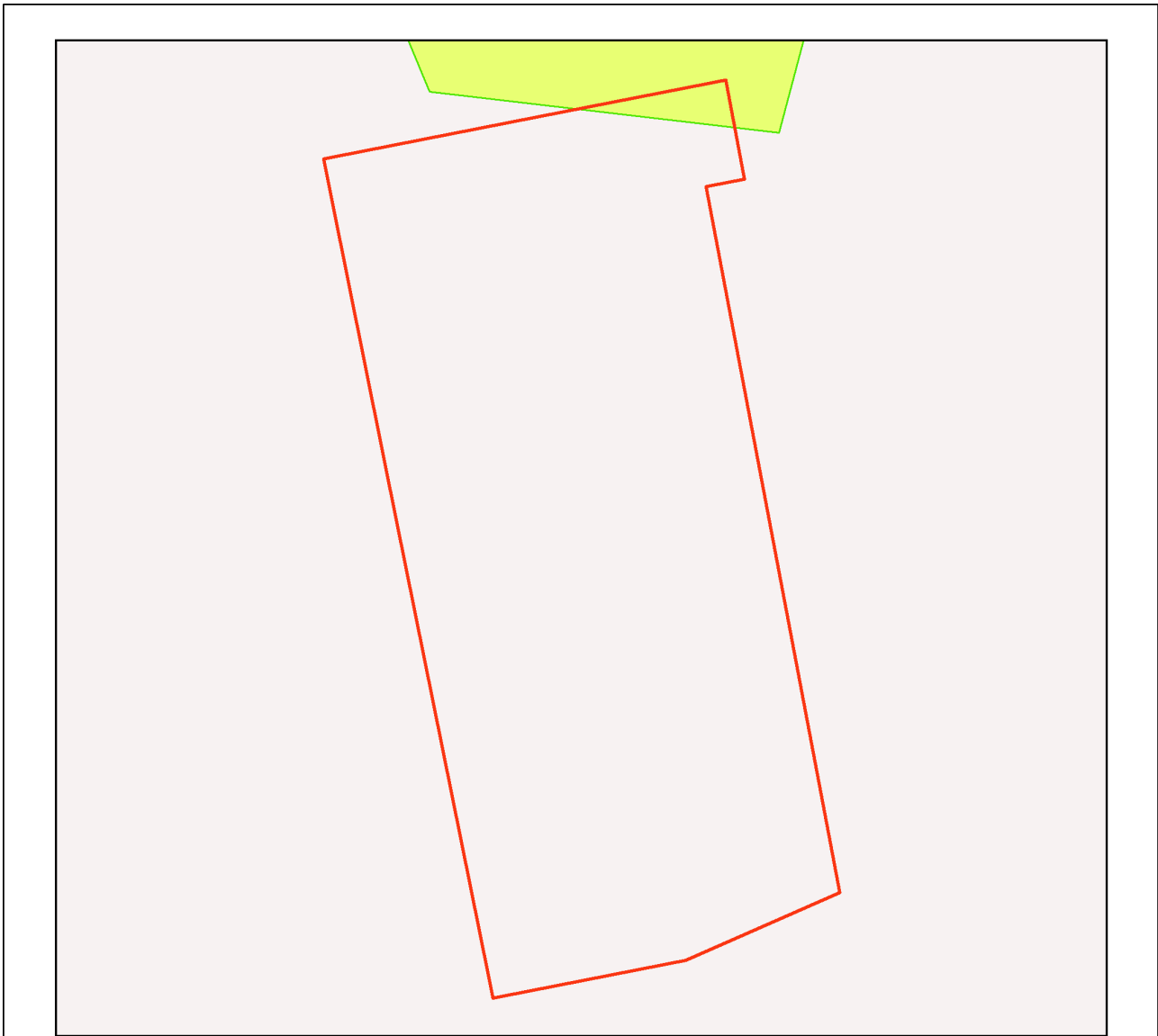


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MSES mapping of sea turtle nesting areas identifies beaches where the recorded number of turtle nests are over 1% of the turtle species or genetic stock. The linework is also deliberately extended along nearby rocky coastlines and headlands to recognise that significant numbers of nesting adults and hatchlings can become disoriented by light pollution from development on rocky coastlines and headlands while navigating offshore from nesting beaches.



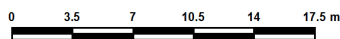
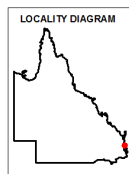
Map 4 - MSES - Regulated Vegetation



MSES - Regulated Vegetation

Area of Interest

- Selected Lot and Plan
- Towns
- Freeways/Highways
- Secondary roads
- Major rivers/creeks
- Regulated vegetation (intersecting a watercourse)
- Regulated vegetation (100m from wetland)
- Regulated vegetation (category B - endangered or of concern)
- Regulated vegetation (category C - endangered or of concern)
- Regulated vegetation (category R - GBR riverine)
- Regulated vegetation (essential habitat)



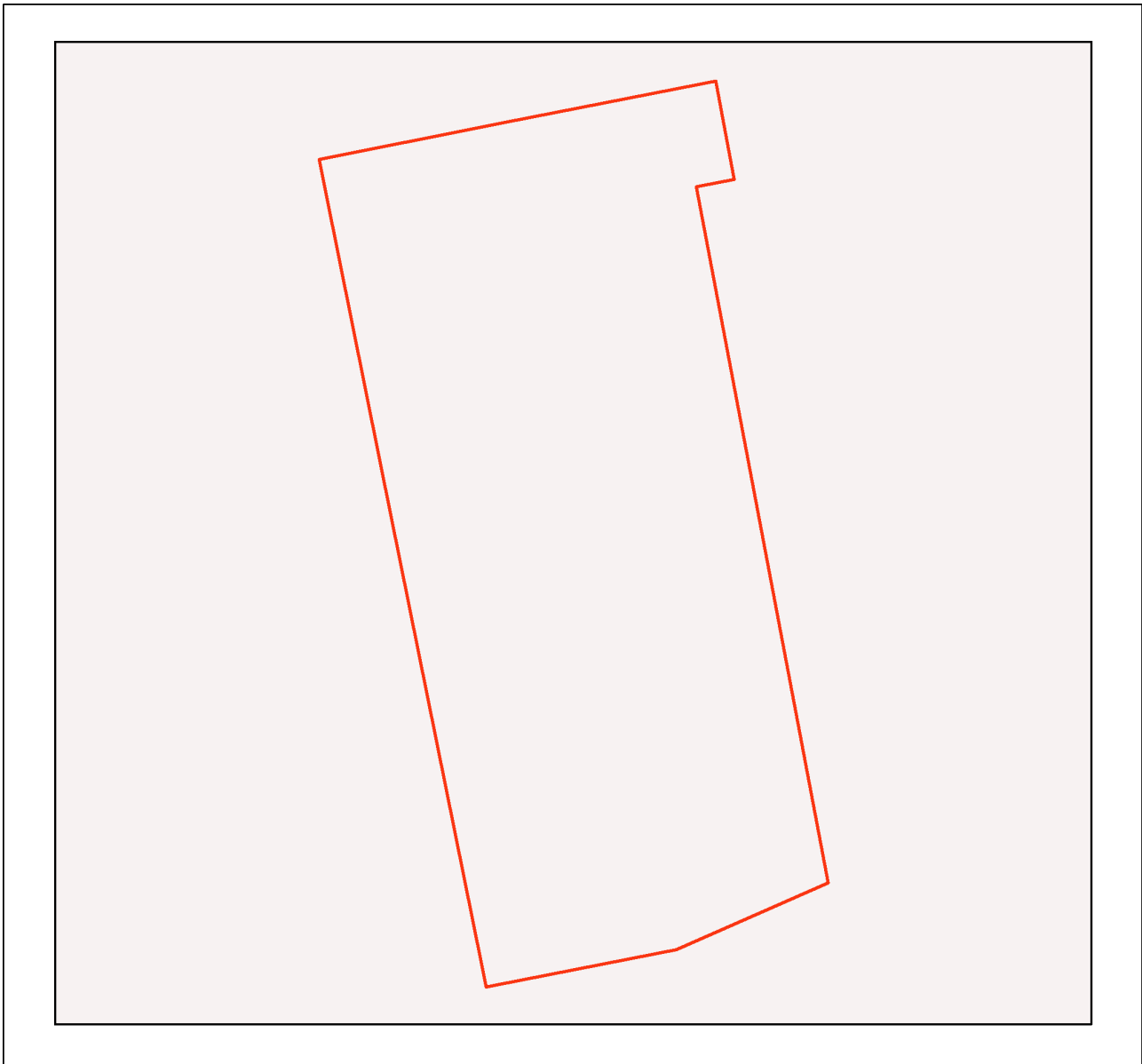
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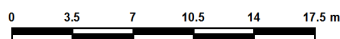
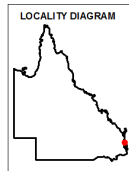
Map 5 - MSES - Offset Areas



MSES - Offsets

Area of Interest

-  Selected Lot and Plan
-  Towns
-  Freeways/Highways
-  Secondary roads
-  Major rivers/creeks
-  Legally secured offset area (offset register)
-  Legally secured offset area (vegetation offsets)



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Appendices

Appendix 1 - Matters of State Environmental Significance (MSES) methodology

MSES mapping is a regional-scale representation of the definition for MSES under the State Planning Policy (SPP). The compiled MSES mapping product is a guide to assist planning and development assessment decision-making. Its primary purpose is to support implementation of the SPP biodiversity policy. While it supports the SPP, the mapping does not replace the regulatory mapping or environmental values specifically called up under other laws or regulations. Similarly, the SPP biodiversity policy does not override or replace specific requirements of other Acts or regulations.

The Queensland Government's "Method for mapping - matters of state environmental significance for use in land use planning and development assessment" can be downloaded from:

<http://www.ehp.qld.gov.au/land/natural-resource/method-mapping-mses.html> .

Appendix 2 - Source Data

The datasets listed below are available on request from:

<http://qldspatial.information.qld.gov.au/catalogue/custom/index.page>

- Matters of State environmental significance

Note: MSES mapping is not based on new or unique data. The primary mapping product draws data from a number of underlying environment databases and geo-referenced information sources. MSES mapping is a versioned product that is updated generally on a twice-yearly basis to incorporate the changes to underlying data sources. Several components of MSES mapping made for the current version may differ from the current underlying data sources. To ensure accuracy, or proper representation of MSES values, it is strongly recommended that users refer to the underlying data sources and review the current definition of MSES in the State Planning Policy, before applying the MSES mapping.

Individual MSES layers can be attributed to the following source data available at QSpatial:

MSES layers	current QSpatial data (http://qspatial.information.qld.gov.au)
Protected Areas-Estates, Nature Refuges, Special Wildlife Reserves	- Protected areas of Queensland - Nature Refuges - Queensland - Special Wildlife Reserves- Queensland
Marine Park-Highly Protected Zones	Moreton Bay marine park zoning 2008
Fish Habitat Areas	Queensland fish habitat areas
Strategic Environmental Areas-designated	Regional Planning Interests Act - Strategic Environmental Areas
HES wetlands	Map of Queensland Wetland Environmental Values
Wetlands in HEV waters	HEV waters: - EPP Water intent for waters Source Wetlands: - Queensland Wetland Mapping (Current version 5) Source Watercourses: - Vegetation management watercourse and drainage feature map (1:100000 and 1:250000)
Wildlife habitat (threatened and special least concern)	- WildNet database species records - habitat suitability models (various) - SEQ koala habitat areas under the Koala Conservation Plan 2019 - Sea Turtle Nesting Areas records
VMA regulated regional ecosystems	Vegetation management regional ecosystem and remnant map
VMA Essential Habitat	Vegetation management - essential habitat map
VMA Wetlands	Vegetation management wetlands map
Legally secured offsets	Vegetation Management Act property maps of assessable vegetation. For offset register data-contact DES
Regulated Vegetation Map	Vegetation management - regulated vegetation management map

Appendix 3 - Acronyms and Abbreviations

AOI	- Area of Interest
DES	- Department of Environment and Science
EP Act	- <i>Environmental Protection Act 1994</i>
EPP	- Environmental Protection Policy
GDA94	- Geocentric Datum of Australia 1994
GEM	- General Environmental Matters
GIS	- Geographic Information System
MSES	- Matters of State Environmental Significance
NCA	- <i>Nature Conservation Act 1992</i>
RE	- Regional Ecosystem
SPP	- State Planning Policy
VMA	- <i>Vegetation Management Act 1999</i>

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 01-Feb-2024

Summary

Details

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

Caveat

Acknowledgements

Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar):	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	101
Listed Migratory Species:	76

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at <https://www.dcceew.gov.au/parks-heritage/heritage>

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	113
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	1

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	2
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	17
Key Ecological Features (Marine):	None
Biologically Important Areas:	5
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [\[Resource Information \]](#)

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text	Buffer Status
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community may occur in feature area within area	
Coastal Swamp Sclerophyll Forest of New South Wales and South East Queensland	Endangered	Community likely to occur within area	In buffer area only
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur in buffer area only within area	
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In buffer area only
Subtropical eucalypt floodplain forest and woodland of the New South Wales North Coast and South East Queensland bioregions	Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [\[Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act. Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia			
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea			
Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Arenaria interpres			
Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
Rotaurus poiciloptilus			
Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris canutus			
Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris tenuirostris			
Great Knot [862]	Vulnerable	Roosting known to occur within area	In buffer area only
Calyptorhynchus lathamii lathamii			
South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii			
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius mongolus			
Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In feature area
Climacteris picumnus victoriae			
Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Cyclopsitta diophthalma coxeni			
Coxen's Fig-Parrot [59714]	Critically Endangered	Species or species habitat may occur within area	In feature area
Diomedea antipodensis			
Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In feature area
Erythrotriorchis radiatus Red Goshawk [942]	Endangered	Species or species habitat likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area	In feature area
Fregatta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area	In feature area
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In feature area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
Turnix melanogaster Black-breasted Button-quail [923]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In buffer area only
CRUSTACEAN			
Cherax robustus Sand Yabby [91922]	Vulnerable	Species or species habitat may occur within area	In feature area
FISH			
Epinephelus daemeli Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area	In feature area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In feature area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area	In buffer area only
Pterodroma neglecta neglecta Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mordacia praecox Non-parasitic Lamprey, Precocious Lamprey [81530]	Endangered	Species or species habitat may occur within area	In buffer area only
Pseudomugil mellis Honey Blue Eye, Honey Blue-eye [26180]	Endangered	Species or species habitat may occur within area	In feature area
Thunnus maccoyii Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area
FROG			
Litoria olongburensis Wallum Sedge Frog [1821]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Mixophyes fleayi Fleay's Frog [25960]	Endangered	Species or species habitat may occur within area	In feature area
INSECT			
Argynnis hyperbius inconstans Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area	In feature area
MAMMAL			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In feature area
Chalinolobus dwyeri Large-eared Pied Bat, Large Pied Bat [183]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus hallucatus Northern Quoll, Digul [Gogo-Yimidi], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat may occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In feature area
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat likely to occur within area	In feature area
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat may occur within area	In feature area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT) Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Endangered	Species or species habitat known to occur within area	In feature area
Potorous tridactylus tridactylus Long-nosed Potoroo (northern) [66645]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Xeromys myoides Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

PLANT

Acacia attenuata [10690]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Acronychia littoralis Scented Acronychia [8582]	Endangered	Species or species habitat likely to occur within area	In feature area
Allocastrum thalassoscopia [21927]	Endangered	Species or species habitat may occur within area	In buffer area only
Arthraxon hispidus Hairy-joint Grass [9338]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
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Rhodamnia rubescens Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Rhodomirtus psidioides Native Guava [19162]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Samadera bidwillii Quassia [29708]	Vulnerable	Species or species habitat may occur within area	In feature area
Sophora fraseri [8836]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Syzygium hodgkinsoniae Smooth-bark Rose Apple, Red Lilly Pilly [3539]	Vulnerable	Species or species habitat may occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Triunia robusta Glossy Spice Bush [14747]	Endangered	Species or species habitat likely to occur within area	In feature area
Zieria exsul Banished Stink Bush [84829]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only

REPTILE

Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area	In feature area
Coeranoscincus reticulatus Three-toed Snake-tooth Skink [59628]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Baloghia marmorata Marbled Baloghia, Jointed Baloghia [8463]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Bosistoia transversa Three-leaved Bosistoia, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Cryptocarya foetida Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat may occur within area	In feature area
Cryptostylis hunteriana Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat may occur within area	In feature area
Eucalyptus conglomerata Swamp Stringybark [3160]	Endangered	Species or species habitat likely to occur within area	In feature area
Graptophyllum reticulatum Veiny Graptophyllum [55459]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Macadamia integrifolia Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Macadamia ternifolia Small-fruited Queensland Nut, Gympie Nut [7214]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Phaius australis Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area	In feature area
Planchonella aenwah Shiny-leaved Condoe, Black Plum, Wild Apple [17340]	Endangered	Species or species habitat may occur within area	In feature area
Prasophyllum wallum Wallum Leek-orchid [55148]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
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Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Furina dunmali Dunmall's Snake [59254]	Vulnerable	Species or species habitat may occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area	In feature area

SHARK

Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area	In feature area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In feature area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Ardenna carneipes Flesh-footed Shearwater, Flesh-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Dugong dugon Dugong [28]		Species or species habitat known to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In feature area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In feature area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In feature area

Migratory Marine Species			
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In feature area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area	In feature area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area	In feature area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In feature area
Sousa sahalensis as Sousa chinensis Australian Humpback Dolphin [87942]		Breeding known to occur within area	In feature area

Migratory Terrestrial Species			
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris alba Sanderling [875]		Roosting known to occur within area	In buffer area only
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area	In feature area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area	In buffer area only
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area	In feature area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area	In buffer area only
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area	In buffer area only
Tringa incana Wandering Tattler [831]		Roosting known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In feature area
Anseranas semipalmata Maggie Goose [978]		Species or species habitat may occur within area overfly marine area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area	In buffer area only
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area	In buffer area only
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area	In buffer area only
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In buffer area only
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area	In buffer area only
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Flesh-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In feature area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In buffer area only
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris alba Sanderling [875]		Roosting known to occur within area	In buffer area only
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area overfly marine area	In feature area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In feature area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area overfly marine area	In buffer area only
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In feature area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area overfly marine area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area	In buffer area only
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Breeding known to occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat may occur within area	In feature area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area	In buffer area only
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area	In buffer area only
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area overfly marine area	In buffer area only
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area overfly marine area	In buffer area only
Limnodromus semipalmatus Asian Dowitcher [843]	Vulnerable	Species or species habitat may occur within area overfly marine area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area overfly marine area	In buffer area only
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area	In feature area
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only
Pterodroma cervicalis White-necked Petrel [59642]		Species or species habitat may occur within area	In feature area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Stercorarius antarcticus as Catharacta skua Brown Skua [85039]		Species or species habitat may occur within area	In buffer area only
Sterna striata White-fronted Tern [799]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Sternula albifrons as Sterna albifrons Little Tern [82849]		Species or species habitat may occur within area	In feature area
Symposiachrus trivirgatus as Monarcha trivirgatus Spectacled Monarch [83946]		Species or species habitat known to occur within area overfly marine area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area	In feature area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting known to occur within area	In buffer area only
Tringa incana as Heteroscelus incanus Wandering Tattler [831]		Roosting known to occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area overfly marine area	In buffer area only

Fish

Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area	In feature area
Campichthys tryoni Tryon's Pipefish [66193]		Species or species habitat may occur within area	In feature area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]	Endangered	Species or species habitat likely to occur within area	In feature area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In feature area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In feature area
Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area	In feature area
Micrognathus brevisrostris thorn-tail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area	In feature area
Microphis manadensis Manado Pipefish, Manado River Pipefish [66258]		Species or species habitat may occur within area	In feature area
Solegnathus dunckeri Duncker's Pipehorse [66271]		Species or species habitat may occur within area	In feature area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In feature area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In feature area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In feature area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area	In feature area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area	In feature area
Fiilcampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In feature area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In feature area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area	In feature area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area	In feature area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In feature area
Hippocampus kelloggi Kellogg's Seahorse, Great Seahorse [66723]		Species or species habitat may occur within area	In feature area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In feature area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In feature area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In feature area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In feature area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In feature area
Yanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In feature area

Mammal

Dugong dugon Dugong [28]		Species or species habitat known to occur within area	In feature area
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Reptile

Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area	In feature area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area	In feature area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area	In feature area
Hydrophis major as Disteira major Olive-headed Sea Snake [93512]		Species or species habitat may occur within area	In feature area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area	In feature area
Hydrophis platurus as Pelamis platurus Yellow-bellied Sea Snake [93517]		Species or species habitat may occur within area	In feature area
Hydrophis stokesii as Astrolia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area	In feature area
Laticauda laticaudata a sea krait [1093]		Species or species habitat may occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area	In feature area

Whales and Other Cetaceans [Resource Information]

Current Scientific Name	Status	Type of Presence	Buffer Status
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Mammal

Current Scientific Name	Status	Type of Presence	Buffer Status
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In feature area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In feature area

Habitat Critical to the Survival of Marine Turtles

Scientific Name	Behaviour	Presence	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur	In feature area

Extra Information

State and Territory Reserves [Resource Information]

Protected Area Name	Reserve Type	State	Buffer Status
Maroochy	Fish Habitat Area (B)	QLD	In buffer area only
Maroochy River	Conservation Park	QLD	In buffer area only

Nationally Important Wetlands [Resource Information]

Wetland Name	State	Buffer Status
Coolool Creek and Lower Maroochy River	QLD	In feature area

EPBC Act Referrals [Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Intersection Upgrades Project	2022/09277		Completed	In buffer area only

Controlled action

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Multi-Modal Transport Corridor - construction of arterial road and railway upg	2008/4361	Controlled Action	Post-Approval	In buffer area only

Not controlled action

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Construction of a new Arts and Tourism Centre	2003/1098	Not Controlled Action	Completed	In feature area
Development of Stage 7 of the North Shore Coastal Village	2004/1907	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area

Current Scientific Name	Status	Type of Presence	Buffer Status
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area	In feature area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area	In feature area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area	In feature area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat may occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat known to occur within area	In feature area
Sousa sahulensis Australian Humpback Dolphin [87942]		Breeding known to occur within area	In feature area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In feature area

Reference

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action				
Japan-Guam-Australia Sunshine Coast Branch Marine Cable Route Survey (JGA) QLD	2018/8373	Not Controlled Action	Completed	In feature area
JGA Submarine Cable, Sunshine Coast, Qld	2019/8502	Not Controlled Action	Completed	In feature area
Lot 135 RP814007 Residential Development & Construction of Artificial Water Body	2003/1160	Not Controlled Action	Completed	In feature area
Maroochydyore Rd Upgrade Bruce Hwy to Kunda Park	2005/2207	Not Controlled Action	Completed	In feature area
MMTC between Caloundra Rd & Creekside Blvd	2004/1918	Not Controlled Action	Completed	In buffer area only
Sunshine Motorway duplication between Kawana Way and Sippy Downs Drive	2004/1908	Not Controlled Action	Completed	In feature area
vegetation clearing /residential development on Lot 5/SP149935 and Lot 39/RP 848	2004/1920	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
Beach nourishment works on coastline	2012/6346	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Behavioural Response of Australian Humpback Whales to Seismic Surveys	2011/6065	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Japan-Guam-Australia (JGA) Fibre Optic Cable project	2016/7795	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Maroochydyore, Cotton Tree Foreshore and parts of Chambers Island Nourishment Works, Qld	2012/6396	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Maroochy River Dredging Event 2016, Sunshine Coast, QLD	2015/7594	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Biologically Important Areas

Scientific Name	Behaviour	Presence	Buffer Status
Dolphins			

Scientific Name	Behaviour	Presence	Buffer Status
Sousa chinensis Indo-Pacific Humpback Dolphin [50]	Breeding	Known to occur	In feature area
Tursiops aduncus Indo-Pacific/Spotted Bottlenose Dolphin [68418]	Breeding	Known to occur	In feature area
Marine Turtles			
Caretta caretta Loggerhead Turtle [1763]	Nesting	Known to occur	In feature area
Sharks			
Carcharias taurus Grey Nurse Shark [64469]	Foraging	Known to occur	In feature area
Whales			
Megaptera novaeangliae Humpback Whale [38]	Migration (north and south)	Known to occur	In feature area

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat, or modelled (MAXENT or BIOTRIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environmental and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- [Natural history museums of Australia](#)
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Geoscience Australia](#)
- [CSIRO](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the [Contact us](#) page.

[Commonwealth of Australia](#)
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

Appendix B – Flora Species Identified On-Site

Family	Scientific Name	Common Name	Status		
			I	Q	Weed
Leguminosae	<i>Acacia leiocalyx</i>	black wattle		C	
Leguminosae	<i>Acacia sophorae</i>	coastal wattle		C	
Sapindaceae	<i>Alectryon coriaceus</i>	beach alectryon		C	
Araucariaceae	<i>Araucaria bidwillii</i>	Bunya pine		C	
Asparagaceae	<i>Asparagus aethiopicus</i>	ground asparagus	Y		x
Proteaceae	<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	coastal banksia		C	
Acanthaceae	<i>Barleria repens</i>	barleria	Y		x
Leguminosae	<i>Canavalia rosea</i>	coastal jack bean		C	
Aizoaceae	<i>Carpobrotus glaucescens</i>	pigface		C	
Asteraceae	<i>Crassocephalum crepidioides</i>	thickhead	Y		x
Casuarinaceae	<i>Casuarina equisetifolia</i>	coastal sheoak		C	
Sapindaceae	<i>Cupaniopsis anacardioides</i>	tuckeroo		C	
Poaceae	<i>Cynodon dactylon</i>	common couch	Y		x
Hemerocallidaceae	<i>Dianella congesta</i>	dune flax lily		C	
Poaceae	<i>Digitaria ciliaris</i>	summer grass	Y		x
Asteraceae	<i>Emilia sonchifolia</i> var. <i>javanica</i>	Emilia	Y		x
Asteraceae	<i>Erigeron bonariensis</i>	fleabane	Y		x
Euphorbiaceae	<i>Euphorbia cyathophora</i>	painted purge	Y		x
Moraceae	<i>Ficus rubiginosa</i>	Port Jackson fig		C	
Colchicaceae	<i>Gloriosa superba</i>	glory lily	Y		x
Dilleniaceae	<i>Hibbertia scandens</i>	snake vine		C	
Asteraceae	<i>Hypochaeris radicata</i>	flatweed	Y		x
Poaceae	<i>Imperata cylindrica</i>	blady grass		C	
Convolvulaceae	<i>Ipomoea pes-caprae</i>	goat's foot morning glory		C	
Laxmanniaceae	<i>Lomandra longifolia</i>	matrush		C	
Euphorbiaceae	<i>Macaranga tanarius</i>	macaranga		C	
Leguminosae	<i>Macroptilium atropurpureum</i>	siratro	Y		x
Rutaceae	<i>Murraya paniculata</i>	murraya	Y		x
Scrophulariaceae	<i>Myoporum boninense</i>	coastal boobialla		C	
Oxalidaceae	<i>Oxalis rubens</i>	oxalis		C	
Passifloraceae	<i>Passiflora suberosa</i>	corky passionflower	Y		x
Phyllanthaceae	<i>Phyllanthus tenellus</i>	hen and chicken	Y		x
Polygonaceae	<i>Rumex crispus</i>	curled dock	Y		x
Caesalpinaceae	<i>Senna pendula</i> var. <i>glabrata</i>	Easter cassia	Y		x
Poaceae	<i>Sorghum halepense</i>	Johnson grass	Y		x
Poaceae	<i>Spinifex sericeus</i>	beach spinifex		C	
Poaceae	<i>Sporobolus virginicus</i>	sand couch		C	
Menispermaceae	<i>Stephania japonica</i>	tape vine		C	
Leguminosae	<i>Vigna marina</i>	dune bean		C	



Family	Scientific Name	Common Name	Status		
			I	Q	Weed
Lamiaceae	<i>Vitex trifolia</i>	coastal vitex		C	
Poaceae	<i>Zoysia macrantha</i>	prickly couch		C	

*Status: Y indicates that the taxon is introduced to Queensland and has naturalised. Q - Indicates the Queensland conservation status of each taxon under the *Nature Conservation Act 1992*. The codes are Extinct (EX), Extinct in the Wild (PE), Critically Endangered (CR), Endangered (E), Vulnerable (V), Near Threatened (NT), Special Least Concern (SL) and Least Concern (C). Weed - Identified as an environmental weed by Qld DESI WildNet database.

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Appendix C – Conservation Significant Fauna Species Likelihood of Occurrence Assessment



Table C1 - Likelihood of Occurrence of EVNT/SL Fauna Species on Site

This table incorporates the results of the desktop assessment and the site survey results to determine whether EVNT/SL species recorded in the desktop survey results are likely to occur on or near the site based on existing habitat and resources available. Species' habitat descriptions are summarised from the Commonwealth DoEE EPBC SPRAT (Species Profile and Threat) Database (<https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>) or for species not listed under the EPBC – the Qld Dept of Environment and Science 'Threatened Species Profiles' <https://environment.des.qld.gov.au/wildlife/threatened-species/> and or the NSW OEH Threatened Species Profiles database <https://www.environment.nsw.gov.au/threatenedspeciesapp/> and/or the [IUCN Red List](#) species profile.

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Actitis hypoleucos</i>	Common sandpiper	SL, MWS	<p>UNLIKELY</p> <p><i>Actitis hypoleucos</i> utilises a wide range of coastal wetlands and inland wetlands, primarily found around muddy margins or rocky shores, estuaries, stream banks, lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties, mangroves, and areas of mud littered with rocks and / or snags. Roosts on rocks or in roots or branches of vegetation, mangroves, posts, jetties, moored boats and other artificial structures. This species forages in shallow water and on bare soft mud at the edges of wetlands, often where obstacles project from substrate and sometimes ventures into grassy areas adjoining wetlands. The common sandpiper feeds on molluscs, crustaceans and insects.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Anous stolidus</i>	Common Noddy	MMB	<p>UNLIKELY</p> <p>The brown noddy is a tropical seabird with a worldwide distribution, In Australia it is found in tropical and sub-tropical seas off the west, north and east coasts of Australia, from the Arohos Islands in WA to the islands of the Great Barrier Reef in Qld, as well as Norfolk and Lord Howe Islands. The species is colonial, usually nesting on elevated situations on cliffs or in short trees or shrubs. It only occasionally nests on the ground.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Anthochaera phrygia</i>	Regent honeyeater	CR, CE#	<p>UNLIKELY</p> <p>The Regent Honeyeater is endemic to south-east Australia, where it is widespread but with an extremely patchy distribution. Its range extends from south-east Queensland to central Victoria. In Queensland, the Regent Honeyeater has been recorded from 15 sites, primarily south Chinchilla and the Sunshine Coast. Regent Honeyeaters mostly occur in dry Box-Ironbark eucalypt woodland and dry sclerophyll forest associations in areas of low to moderate relief, especially along creek flats, or in broad river valleys and foothills.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Apus pacificus</i>	Fork-tailed swift	SL, MWS	<p>POSSIBLE</p> <p><i>Apus pacificus</i> is typically aerial, flying from levels below 1m to 300m plus, above the ground or water. Fork-tailed Swifts occur over inland plains, cliffs, above foothills, coastal areas or over the sea. This species has also been observed over settled areas, including towns, urban areas and cities. However, they prefer dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			<p>The species typically forages aerially, from below 1m to 100m above ground level, above open areas or over water. Often preferring to forage in areas of updraughts, either around cliffs or at the edge of low-pressure systems. As these lift insects, the primary food source, from the ground assisting with catching of prey.</p> <p><i>Apus pacificus</i> is a migratory species that breeds in Siberia between August and September. This species generally arrives in Australia around October, or early September. Within Australia the species is very mobile, typically following low pressure systems across the country whilst searching for food. The Fork-tailed swift departs Australia between March and May, depending on the location.</p> <p>Given the broad habitat requirements of this species it is possible it can be seen flying above the subject site.</p>
<i>Ardenna carneipes</i>	Flesh-footed Shearwater	MB	<p>UNLIKELY</p> <p>Flesh-footed Shearwater is a trans-equatorial migrant. The species is widely distributed across the southern Indian and south-western Pacific Oceans during the breeding season. There are two main breeding areas in the world: one in the South West Pacific includes Lord Howe Island and New Zealand; the other along the coast of Western Australia.</p> <p>The species nests in colonies in burrows under trees or shrubs. On Lord Howe Island it favours the flatter areas in the central lowlands. Most feeding is undertaken offshore over continental shelves where it feeds on fish and squid, mostly caught by pursuit-plunging.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Ardenna grisea</i>	Flesh-footed Shearwater	V, MMB	<p>UNLIKELY</p> <p><i>Ardenna grisea</i> is an abundant shearwater, breeding on islands off New Zealand, Australia and Chile, and the Falkland Islands (Malvinas). In Australia, there are colonies on 17 islands. The species breeds on islands off New South Wales and Tasmania. Birds also occur off the coast of south-east Queensland and the species is a moderately common migrant and visitor to Victoria and South Australia. The species nests on islands and headlands in large colonies.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Ardenna pacifica</i>	Wedge-tailed shearwater	V	<p>UNLIKELY</p> <p>In summer months, the Short-tailed Shearwater is the most common shearwater along the south and south-east coasts of Australia. Their colonies are usually found on headlands and islands covered with tussocks and succulent vegetation such as pigface and iceplant. Headlands allow for easy take-off and landing.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Arenaria interpres</i>	Ruddy Turnstone	V, MWS	<p>UNLIKELY</p> <p>Outside of the breeding season the species is mainly coastal, although on migration it may occur inland along dykes or on lake. During the winter it frequents productive rocky and shingle shores, breakwaters, sandy beaches with storm-wracked seaweed, short-grass saltmarshes, sheltered inlets, estuaries, mangroves swamps, exposed reefs and mudflats with beds of molluscs.</p> <p>During the austral summer non-breeding season, the ruddy turnstone is widespread within Australia. It is found in most coastal regions, with occasional records of inland populations. It strongly prefers rocky shores or beaches where there are large deposits of rotting seaweed.</p> <p>It is unlikely that this species utilises the subject site.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Argynnis hyperbius inconstans</i>	Australian fritillary	E, CE#	UNLIKELY <i>Argynnis hyperbius inconstans</i> predominately occurs around river estuaries or open, swampy coastal areas. The species is restricted to areas where the larval <i>Viola betonicifolia</i> (the arrowhead violet), occurs. Moderate densities are required to support a breeding population. The leaves of the arrowhead violet are food for the caterpillars, while adults forage in swampy areas with arrow head violets feeding on various flowering plants The arrowhead violet typically grows in damp, shaded forest habitats and in association with <i>Lomandra longifolia</i> (long leaved matrush) and <i>Imperata cylindrica</i> (blady grass). The arrowhead violet was not recorded in the investigation area.
<i>Balaenoptera edeni</i>	Bryde's Whale	MS	UNLIKELY Bryde's whales can be found in the Pacific, Indian and Atlantic oceans, but they are most commonly found in tropical and sub-tropical regions. They are coastal and pelagic creatures that usually follow their food sources. It is unlikely that this species utilises waters surrounding the subject site.
<i>Balaenoptera musculus</i>	Blue Whale	E, MS	UNLIKELY Blue whales live in the open ocean are found in all oceans of the world, from the tropics to the drift ice of polar waters. In Australia its distribution is within New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia. It is unlikely that this species utilises waters surrounding the subject site.
<i>Botaurus poiciloptilus</i>	Australasian bittern	E, E#	UNLIKELY <i>Botaurus poiciloptilus</i> prefers permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (<i>Typha</i> spp.) and spikerushes (<i>Eleocharis</i> spp.). Usually the stays hidden during the day amongst dense reeds or rushes, feeding mainly at night on frogs, fish, yabbies, spiders, insects and snails. Feeding platforms may be constructed over deeper water from reeds trampled by the bird; platforms are often littered with prey remains. Breeding occurs in summer from October to January; nests are built in secluded places in densely-vegetated wetlands on a platform of reeds; there are usually six olive-brown eggs to a clutch. Suitable habitat for this species is not present on the subject site.
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	SL, MWS	UNLIKELY <i>Calidris acuminata</i> is a non-breeding spring/summer northern-hemisphere migrant shorebird that inhabits muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. It is unlikely that this species utilises the subject site.
<i>Calidris alba</i>	Sanderling	MWS	UNLIKELY A regular summer migrant from Siberia and other Arctic breeding grounds to most of the Australian coastline. This species is a full long-distance migrant that travels mainly via offshore and coastal routes using a number of favoured stopover sites. On passage the species may occur on inland freshwater or saline lakes but it is largely coastal, inhabiting open sandy beaches exposed to the sea, the outer reaches of estuaries, rocky and muddy shores, mudflats and coral reefs, individuals are rarely recorded in near-coastal wetlands. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Calidris canutus</i>	Red knot	E, V#, MWS	UNLIKELY <i>Calidris canutus</i> is a non-breeding spring/summer northern-hemisphere migrant shorebird that inhabits intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours, and sometimes on sandy ocean beaches or shallow pools or coral reefs. It is unlikely that this species utilises the subject site.
<i>Calidris ferruginea</i>	Curlew sandpiper	CR, CE#, MWS	UNLIKELY <i>Calidris ferruginea</i> is a non-breeding spring/summer northern-hemisphere migrant shorebird that inhabits sheltered inlets, bays, lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores. They sometimes use saltmarsh; ephemeral or permanent shallow wetlands near the coast or inland flooded paddocks / damp grasslands. Suitable habitat for this species is not present on the subject site.
<i>Calidris melanotos</i>	Pectoral sandpiper	SL, MWS	UNLIKELY <i>Calidris melanotos</i> is a non-breeding spring/summer northern-hemisphere migrant shorebird that inhabits sheltered inlets, bays, lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores. They sometimes use saltmarsh; ephemeral or permanent shallow wetlands near the coast or inland flooded paddocks / damp grasslands. Suitable habitat for this species is not present on the subject site.
<i>Calidris ruficollis</i>	Red-necked stint	SL, MWS	UNLIKELY Three species of calidridine wader red-necked stint (<i>Calidris ruficollis</i>), curlew sandpiper (<i>C. ferruginea</i>) and sharp-tailed sandpiper (<i>C. acuminata</i>), make up most (85%) of the c. 90,120 000 waders (Charadriiformes) frequenting coastal Victoria in south-eastern Australia during the austral summer. Large numbers migrate from breeding areas in the Palaearctic to feed in intertidal and shallow freshwater wetlands in coastal Victoria during their nonbreeding period between August and April. Suitable habitat for this species is not present on the subject site. Suitable habitat for this species is not present on the subject site.
<i>Calidris tenuirostris</i>	Great Knot	CR, V#, MWS	UNLIKELY The great knot is the largest of the calidrid shorebirds, it has been recorded around the entirety of the Australian coast during the southern summer, with a few scattered records inland. They inhabit intertidal mudflats and sandflats in sheltered coasts, including bays, harbours and estuaries, foraging on the moist mud, often roosting on beaches or in nearby low vegetation, such as mangroves or dune vegetation. It is unlikely that this species utilises the subject site.
<i>Calonectris leucomelas</i>	Streaked Shearwater	MMB	UNLIKELY This species is found in the western Pacific, breeding on the coast and on offshore islands of Japan, Russia, and on islands off the coasts of China, North Korea and South Korea. It migrates south during winter, being found off the coasts of Vietnam, New Guinea, the Philippines, Australia, southern India and Sri Lanka. This marine species can be found over both pelagic and inshore waters, breeding begins in March in colonies on offshore islands, occupying burrows on forested hills. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Calyptorhynchus lathami lathami</i>	Glossy black-cockatoo	V, V#	UNLIKELY <i>Calyptorhynchus lathami lathami</i> inhabit open forests and woodlands of the coast and the Great Dividing Range preferring drier forests within intact landscapes. They solely feeds on Black Sheoak (<i>Allocasuarina littoralis</i>) and Forest Sheoak (<i>A. torulosa</i>) in SEQ. Glossy Black-Cockatoos are social birds and are typically observed in pairs or family groups and are dependent on large hollow-bearing eucalypts for nest sites. The hollows used by the birds are usually at least 14 cm in diameter. The same hollow may be reused in subsequent years by the same or different females. Breeding occurs from March to August, with laying in autumn and nesting over winter. Suitable habitat for this species is not present on the subject site.
<i>Carcharhinus longimanus</i>	Oceanic Whitetip Shark	MMS	UNLIKELY The oceanic whitetip shark (<i>Carcharhinus longimanus</i>) lives in tropical waters worldwide between north 45° and 43° south latitude. A globally widespread shark, they can be found in the Indian Ocean, the Atlantic Ocean, and the Pacific Ocean. Oceanic Whitetip Sharks live in the pelagic zone of the ocean and rarely come close to land. In Australia, the species occurs mostly in oceanic areas off northern Australia (rare or absent in the Arafura Sea and Gulf of Carpentaria); recorded off South Australia but usually rare off the southern coast. It is unlikely that this species utilises waters surrounding the subject site.
<i>Carcharias taurus</i> (east coast population)	Grey Nurse Shark	CE	UNLIKELY Grey Nurse Sharks tend to live in shallow inshore waters. Their preferred habitats have sandy-bottomed gutters or rocky caves and are close to inshore rocky reefs or islands. They have a broad inshore distribution, primarily in subtropical to cool temperate waters around the main continental land masses. The Australian east coast population is considered to extend from the Capricornia coast (central Queensland) to Narooma in southern New South Wales. It is unlikely that this species utilises waters surrounding the subject site.
<i>Carcharodon carcharias</i>	White Shark	V, MMS	UNLIKELY White sharks are found from inshore waters around rocky reefs, surf beaches and shallow coastal bays, to waters on the outer continental shelf and slope. Their range extends primarily from southern Queensland, around the southern coastline and to the Northwest Cape in Western Australia. It is unlikely that this species utilises waters surrounding the subject site.
<i>Caretta caretta</i>	Loggerhead turtle	E, E#	UNLIKELY <i>Caretta caretta</i> inhabits the tropical and warm temperate waters throughout eastern, northern and western Australia. In eastern Australia, <i>Caretta caretta</i> spends approximately 15 years or more in the open ocean, feeding predominantly at the surface and moving with ocean currents. After this time recruitment within inshore or neritic feeding areas occurs. Habitat for adults and large juveniles (i.e. with a curved carapace length greater than 70 cm) includes waters with both hard and soft substrates, such as rocky and coral reefs, muddy bays, sandflats, estuaries and seagrass meadows. This species is not known to use refuge habitat. Whilst foraging areas for the species are widely distributed, nesting areas are more concentrated, being located in southern Queensland and from Shark Bay to the North West Cape in Western Australia. In Australia, <i>Caretta caretta</i> breeds from November to March with a peak in late December/early January. It nests on open, sandy beaches and requires areas free from light pollution to prevent disorientation, disturbance and to allow nesting females to come ashore. This species shows fidelity to both foraging and breeding areas. It is unlikely that this species utilises areas surrounding the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Chalinolobus dwyeri</i>	Large-eared pied bat	E, E#	UNLIKELY The distribution of the large-eared pied bat is discontinuous and ranges from Shoalwater Bay in Queensland through to Ulladulla in New South Wales. In south-east Queensland <i>Chalinolobus dwyeri</i> predominately inhabits caves, hollows of trees, mine shafts, overhangs and disused Fairy Martin (<i>Hirundo ariel</i>) nests in high altitude, moist eucalypt forest and rainforest. Suitable habitat for this species is not present on the subject site.
<i>Charadrius bicinctus</i>	Double-banded plover	SL, MWS	UNLIKELY <i>Charadrius bicinctus</i> inhabits littoral, estuarine, and fresh or saline wetlands, saltmarsh, grasslands and pasture. Particularly muddy, sandy, shingled or rocky beaches, bays, harbours, lakes, lagoons and swamps, shallow estuaries, coastal lagoons and rivers. It may be found on seagrass beds at low tide, particularly those with <i>Zostera</i> when these remain heavily saturated or have numerous waters filled depressions, or kelp beds. The double-banded plovers' diet consists of molluscs, insects, worms, crustaceans, spiders and occasionally seeds or fruit. This species is partly migratory, as a portion of the population migrates to northern New Zealand or southern parts of Australia. It is unlikely that this species utilises the subject site.
<i>Charadrius leschenaultii</i>	Greater sand plover	V, MWS	UNLIKELY Nominate subspecies <i>C. leschenaultii</i> breeds in the northern parts of the Gobi Desert in Mongolia, in north-western China and southern Siberia, and spends the nonbreeding season in Australasia, south-east Asia and the Indians To untrained observers, greater sand plovers may be difficult to detect in mixed flocks of shorebirds although, when roosting, the greater sand plover tends to roost higher up the beach than other shorebirds and is usually segregated from lesser sand plovers. In the non-breeding grounds in Australasia, the species is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches, large intertidal mudflats, sandbanks, salt-marshes, estuaries, coral reefs, rocky islands rock platforms, tidal lagoons and dunes near the coast. It is unlikely that this species utilises the subject site.
<i>Charadrius mongolus</i>	Lesser Sand Plover	E, E#, MWS	UNLIKELY In Australia the species is found around the entire coast but is most common in the Gulf of Carpentaria, and along the east coast of Queensland and northern NSW. During the non-breeding season, the species is almost strictly coastal, preferring sandy beaches, mudflats of coastal bays and estuaries, sand-flats and dunes near the coast and occasionally frequenting mangrove mudflats in Australia. It mainly feeds on extensive, freshly-exposed areas of intertidal sandflats and mudflats in estuaries or beaches, or in shallow ponds in saltworks, roosting near foraging areas, on beaches, banks, spits and banks of sand or shells and occasionally on rocky spits, islets or reefs. It is unlikely that this species utilises the subject site.
<i>Cherax robustus</i>	Sand Yabby	V	UNLIKELY <i>Cherax robustus</i> is a small crayfish generally found in coastal lowland environments. The species prefer the ephemeral areas that flood and then dry. The permanent waterholes and creeks have crayfish along the periphery, but they seem to avoid the deeper fish filled areas. The distribution of <i>C. robustus</i> also overlaps <i>Tenuibranchiurus glypticus</i> (swamp crayfish) in coastal wallum areas. The distribution of the latter species extends further inland into seasonally inundated, subcoastal areas with clay soils.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			It is unlikely that this species utilises the subject site.
<i>Chelonia mydas</i>	Green turtle	V, M	<p>UNLIKELY</p> <p><i>Chelonia mydas</i> is recorded from tropical northern Australia, typically between the 20°C isotherms, although some records exist of individuals in temperate waters. This species spends its first five (5) to ten (10) years drifting on ocean currents. Once individuals reach a curved carapace length of 30 to 40 cm, they migrate to shallow benthic foraging habitats such as tropical tidal and sub-tidal coral and rocky reef habitat or inshore seagrass beds. These shallows are the primary feeding areas for <i>Chelonia mydas</i>. In Queensland, important foraging grounds and juvenile habitat include the Capricorn and Bunker region of the Great Barrier Reef, the Wellesley Islands, Moreton Bay, Hervey Bay and Sandy Straits, Shoalwater Bay, Cleveland Bay, Princess Charlotte Bay, the inner shelf coral reefs from Howick Reef to Corbett Reef, and the Torres Strait. Adults primarily feed on seagrass and algae, although they have been recorded to eat other items such as mangroves, fish-egg cases, jellyfish and sponges.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Climacteris picumnus victoriae</i>	Brown Treecreeper	V	<p>UNLIKELY</p> <p>The Brown Treecreeper is endemic to eastern Australia and occurs in eucalypt forests and woodlands of inland plains and slopes of the Great Dividing Range. It is less commonly found on coastal plains and ranges. The subspecies mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey, sometimes with one or more shrub species. The subspecies is not usually found in woodlands with a dense shrub layer, and it is absent from heavily degraded woodlands and steep rocky hills.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Coeranoscincus reticulatus</i>	Three-toed snake-tooth skink	C, V#	<p>UNLIKELY</p> <p><i>Coeranoscincus reticulatus</i> typically inhabits loose, well mulched friable soil, in and under rotting logs, in forest litter, under fallen pine bark and under decomposing cane mulch. In Queensland this species has been found in tall layered open eucalypt forest, rainforest, wet sclerophyll forest, closed forest, tall open Blackbutt (<i>Eucalyptus pilularis</i>) forest and closed Brush box (<i>Lophostemon confertus</i>) forest. Records indicate that this species has adaptability to modified environments as a result of clearing and can occur in fragmented habitat and restored riparian vegetation.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Crinia tinnula</i>	Wallum froglet	V	<p>UNLIKELY</p> <p>This species is found along drainage lines in sub-coastal wet heath, in acid Melaleuca swamps, as well as sedge swamps in areas of sandy soil and sandstone. Currently within the scientific literature, there is little information regarding non-breeding habitat requirements, factors limiting distribution or population structure, dynamics and genetics for this species. However, specific habitat attributes that are known requirements for this species include ephemeral to temporary water bodies that are generally shallow (i.e. >1 m), acidic (i.e. pH >6.0) and tannin stained.</p> <p>Suitable habitat for this species is not present on the subject site.</p>

Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Cuculus optatus</i>	Oriental cuckoo, Horsfield's cuckoo	SL, MTS	UNLIKELY <i>Cuculus optatus</i> is a rare non-breeding summer migrant (September to May) to Australia where it is found from the Kimberley Region in Western Australia to north-east and eastern Queensland and eastern NSW to the Shoalhaven River. In SEQ this species typically inhabits rainforest edges, moist gullies, wet sclerophyll forest, riparian forest and mangrove forests. Suitable habitat for this species is not present on the subject site.
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's fig-parrot	CR, CE#	UNLIKELY <i>Cyclopsitta diophthalma coxeni</i> is most commonly found in habitats that occur from sea level to roughly 900m above sea level. This species inhabits dry rainforest, subtropical rainforest, littoral and developing littoral rainforest and vine forest. Within these rainforests <i>Cyclopsitta diophthalma coxeni</i> is likely to favour alluvial areas that support figs and other trees with fleshy fruits. Other habitats this species have been recorded in include corridors of riparian vegetation in woodland; sub-littoral mixed scrub; isolated stands of fig or other trees on urban, agricultural or cleared land; and open woodland or other types of cleared or partially cleared habitat. The diet of <i>Cyclopsitta diophthalma coxeni</i> mainly consists seeds predominantly taken from fig trees, especially <i>Ficus macrophylla</i> and <i>F. watkinsiana</i> . However, it also feeds on nectar and lichens. Suitable habitat for this species is not present on the subject site.
<i>Dasyurus hallucatus</i>	Northern Quoll	E#	UNLIKELY <i>Dasyurus hallucatus</i> populates a varied range of habitats which include eucalypt forest and woodlands, rocky areas, rainforests, shrubland, sandy lowlands and beaches, desert and grasslands. Additionally, this species is also known to occupy lowland habitats such as beachscrub communities. They can also occupy woodland or eucalypt forest due to these habitats having a high structural diversity for denning purposes. In general, <i>Dasyurus hallucatus</i> habitat contains some form of rocky area with surrounding vegetated habitats and are most abundant within 150km of the coast. It is unlikely that this species utilises the subject site.
<i>Dasyurus maculatus</i>	Spot-tailed quoll	E, E#	UNLIKELY <i>Dasyurus maculatus</i> requires large areas of intact vegetation and has a home range of up to 5000 ha. The species generally exhibits a preference for mature wet forest habitat in areas that receive greater than 600 mm rainfall/year. <i>Dasyurus maculatus</i> shelters in den sites made inside hollow trees, hollow logs, caves or rock crevices and is dependent on an areas that support an abundance of prey (e.g. birds and small mammals). Suitable nesting and foraging habitat for this species does not exist within the project area.
<i>Delma torquata</i>	Collared delma	V, V#	UNLIKELY <i>Delma torquata</i> is endemic to Qld where it typically inhabits Poplar Box woodland on alluvial plains, Brigalow open forest on fine-grained sedimentary rocks and Spotted Gum open forest on coarse-grained sedimentary rocks in the Brigalow Belt bioregion (land zones 3,9 and 10). This species has also been recorded in the north-western parts of Brisbane (Mt Crosby and Moggill State Forest). Suitable habitat for this species is not present on the subject site.
<i>Dermochelys coriacea</i>	Leatherback turtle	E, E#	UNLIKELY <i>Dermochelys coriacea</i> occurs in tropical, subtropical and temperate waters throughout the world. It has been recorded in the coastal waters of all Australian States, most commonly from: central eastern Australia (from the Sunshine Coast



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			in southern Queensland to central NSW); south-east Australia (from Tasmania, Victoria and eastern South Australia) and in south-western Western Australia. The current area of occurrence is 6,006,685 km ² . <i>Dermodochelys coriacea</i> is pelagic species that predominantly moves to shore during the nesting season. The adult diet mainly consists of pelagic soft-bodied creatures such as jellyfish, salps, squids, siphonophores and tunicates. These organisms occur in higher concentrations at the surface in areas of upwelling or convergence and serve to influence the distribution of <i>Dermodochelys coriacea</i> , which can feed at all levels of the water column. Suitable habitat for this species is not present on the subject site.
<i>Diomedea antipodensis</i>	Antipodean Albatross	V#, MMB	UNLIKELY A pelagic species, the Antipodean albatross spends much of its life at sea. It returns to land during the breeding season, where it nests on the windswept islands of the subantarctic region. Nests are constructed in the open or, more commonly, among tussock grass and shrubs, avoiding regions with tall vegetation and the highly exposed tops of hills and ridges. This species is endemic to New Zealand but it ranges across the South Pacific from Australia to as far as Chile, from the Tropic of Capricorn south. It is unlikely that this species utilises the subject site.
<i>Diomedea exulans</i>	Wandering albatross	V#, MMB	UNLIKELY <i>Diomedea exulans</i> is marine, pelagic and aerial in habit. It occurs where water surface temperatures range from -2° to 24°C. On breeding islands, the Wandering Albatross nests on coastal or inland ridges, slopes, plateaus and plains, often on marshy ground. The Wandering Albatross eats mainly squid and fish, but also crustaceans and carrion. It is unlikely that this species utilises the subject site.
<i>Dugong dugon</i>	Dugong	V	UNLIKELY Dugong distribution ranges from Cooktown to the Queensland/NSW border, with the most important areas noted around Hinchinbrook Island, Cleveland Bay and Shoalwater Bay in the Great Barrier Reef, and Hervey Bay and Moreton Bay respectively. In Moreton Bay, the eastern Amity Banks, Moreton Banks and adjacent areas, are considered the most critical <i>Dugong dugon</i> habitat areas. Rous Channel and east of South Passage (up to 10 m offshore from Moreton Island) are also important in cooler months. It is unlikely that this species utilises the subject site.
<i>Epinephelus daemeli</i>	Black Rockcod	V	UNLIKELY The species is found in warm temperate and subtropical parts of the south-western Pacific. The Black Rockcod is a territorial species that inhabits caves, gutters and crevices. They are usually found in depths up to 50 m, although individuals have been collected from below 100 m. Juveniles are found inshore, often in coastal rockpools and estuaries. It is unlikely that this species utilises waters surrounding the subject site.
<i>Eretmochelys imbricata</i>	Hawksbill Turtle	V, M	UNLIKELY Hawksbill turtles typically occur in tidal and sub-tidal coral and rocky reef habitats throughout tropical waters, extending into warm temperate areas as far south as northern New South Wales. In Australia the main feeding area extends along the east coast, including the Great Barrier Reef. They are most commonly found in hard-bottomed and reef habitats containing sponges. They also reside in shoals, lagoons of oceanic islands, and continental shelves. In general, they are found in water no deeper than sixty feet (18.3 m). It is unlikely that this species utilises waters surrounding the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Erythrotriorchis radiatus</i>	Red goshawk	E, E#	<p>UNLIKELY</p> <p>The Red Goshawk is endemic to Australia where it is sparsely dispersed across approximately 15% of coastal and sub-coastal Australia, from western Kimberley Division (north of 19°S) to northeastern NSW (north of 33°), and occasionally on continental islands. The Red Goshawk occurs in large bushland remnants of coastal and sub-coastal open forest and rainforest usually near watercourses. Such habitats typically support high bird numbers and biodiversity, especially medium to large bird species which the goshawk requires for prey. The Red Goshawk nests in large trees within 1km of permanent water.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Eubalaena australis</i>	Southern Right Whale	E, MMS	<p>UNLIKELY</p> <p>The species' distribution extends along the southern coast of Australia to the northern areas of Hervey Bay in Queensland and Exmouth/Ningaloo Reef in Western Australia. While avoiding warm equatorial regions, southern right whales remain near continents and island masses.</p> <p>It is unlikely that this species utilises waters surrounding the subject site.</p>
<i>Falco hypoleucos</i>	Grey Falcon	V	<p>UNLIKELY</p> <p>The distribution of this species is restricted largely to areas of the highest annual average temperatures where there is an average annual rainfall of less than 500 mm. It favours lightly timbered and untimbered lowland plains that are crossed by tree-lined watercourses, but frequents other habitats including grassland and sand dune habitats.</p> <p>The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Fregata ariel</i>	Lesser Frigatebird	MMB	<p>UNLIKELY</p> <p>The lesser frigatebird is said to be the most common and widespread frigatebird in Australian seas. It is common in tropical seas, breeding on remote islands, including Christmas Island in the Indian Ocean in recent years. It breeds on small, remote tropical and sub-tropical islands, in mangroves or bushes, and even on bare ground.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Fregatta grallaria grallaria</i>	Squatter Pigeon (southern)	V	<p>UNLIKELY</p> <p>This marine species is highly pelagic and rarely approaches land except when near colonies. It has a wide oceanic distribution in the south Pacific and Atlantic Oceans, ranging into tropical waters from various breeding grounds. Known to breed at various island groups including Lord Howe Island.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Fregata minor</i>	Great Frigatebird	MMB	<p>UNLIKELY</p> <p>Great frigatebirds are found over open, tropical ocean waters and near offshore, oceanic nesting islands. They nest in trees and shrubs, such as beach naupaka (<i>Scaevola sericea</i>), beach heliotrope (<i>Tournefortia argentea</i>), pisonia (<i>Pisonia grandis</i>), and mangroves (<i>Bruguiera</i> and <i>Rhizophora</i> species). Nesting colonies are known from offshore islands throughout the tropical Pacific, western Atlantic, and south Indian oceans.</p> <p>It is unlikely that this species utilises the subject site.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Furina dunmalli</i>	Dunmall's Snake	V	<p>UNLIKELY</p> <p><i>Furina dunmalli</i> prefers a range of different habitats that are between 200 to 500m above sea level. These habitats include forests and woodlands on black alluvial cracking clay and clay loams dominated by native Cypress (<i>Callitris</i> spp.), Brigalow (<i>Acacia harpophylla</i>), other wattles (<i>A. burowii</i>, <i>A. deanii</i>, <i>A. leioclyx</i>) or Bull-oak (<i>Allocasuarina luehmannii</i>). Additionally, this species can also be found in various Blue Spotted Gum (<i>Corymbia citriodora</i>), Ironbark (<i>Eucalyptus crebra</i> and <i>E. melanophloia</i>), White Cypress Pine (<i>Callitris glaucophylla</i>) and Bulloak open forest and woodland associations on sandstone derived soils. Records show that some <i>Furina dunmalli</i> have inhabited the hard ironstone country near Dalby, Queensland. There is insufficient knowledge on the ecological requirements of this species, although some <i>Furina dunmalli</i> have been found taking refuge under fallen timber and ground litter as well as cracks in alluvial clay soil.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Gallinago hardwickii</i>	Latham's snipe	V, MWS	<p>UNLIKELY</p> <p><i>Gallinago hardwickii</i> prefers permanent and ephemeral wetlands up to 2,000 m above sea-level. Usually the species inhabits open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around water bodies). However, they can also occur in modified or artificial habitats, and in habitats located close to humans or human activity. Latham's snipe feeds mostly on seeds, other plant material primarily from Cyperaceae, Poaceae, Juncaceae, Polygonaceae, Ranunculaceae and Fabaceae and insects.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Gallinago megala</i>	Swinhoe's Snipe	MWS	<p>UNLIKELY</p> <p>Records in Australia are mainly from the Top End of the Northern Territory and from north-western Western Australia. Habitat includes shallow freshwater wetlands of various kinds including paddy fields and sewage farms, with bare mud or shallow water for feeding, with nearby vegetation cover.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Gallinago stenura</i>	Pin-tailed Snipe	MWS	<p>UNLIKELY</p> <p>The species is a vagrant to north-western and northern Australia. their non-breeding range use a variety of wetlands, freshwater swamps, marshes, and pastures. They nest in a well-hidden location on the ground.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Gelochelidon nilotica</i>	Gull-billed Tern	SL, M	<p>UNLIKELY</p> <p><i>Gelochelidon nilotica</i> typically inhabits estuaries, salt pans, lagoons and saltmarshes, or inland sites such as large rivers, lakes, rice-fields, sewage ponds, reservoirs, salt pans and irrigation canals. The Gull-billed Tern's diet consists of adult and larval terrestrial and aquatic insects (such as Ephemeroptera, Odonata, Lepidoptera and Coleoptera) as well as spiders, earthworms, small reptiles, frogs, small fish (6-9 cm long), aquatic invertebrates and rarely voles and small birds. This species is migratory; however, it does not breed in Australia.</p> <p>It is unlikely that this species utilises the subject site.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Hippocampus whitei</i>	White's Seahorse	E	UNLIKELY <i>H. whitei</i> inhabits shallow, weedy inshore areas, usually at depths of 1–25 metres. Its natural habitats include <i>Zostera</i> seagrass beds, sponges, kelp holdfasts, macroalgae, and corals, but it can also be found under jetties and on other anthropogenic structures, such as shark nets. It is considered endemic to NSW, but despite its very limited distribution known to occur in 8 estuaries from Forster to Lake Illawarra, distribution maps also includes Southeast Queensland areas. It is unlikely that this species utilises waters surrounding the subject site.
<i>Hirundapus caudacutus</i>	White-throated needletail	V, V#, MTS	UNLIKELY <i>Hirundapus caudacutus</i> migrates to Australia in Summer where it is recorded in all coastal regions of Queensland and NSW, extending inland to the western slopes of the Great Divide and occasionally onto the adjacent inland plains. This species is almost exclusively aerial, most often seen at heights of less than 1 m up to more than 1000 m above the ground. Foraging in flight above a wide variety of more often wooded habitats but including, farmland, heathland, mudflats, open habitats, recently disturbed areas, updraughts near ridges or cliffs or sand-dunes. This species roosts in tree hollows or the canopy of open forests and woodlands. It is unlikely that this species utilises the subject site.
<i>Hydroprogne caspia</i>	Caspian tern	SL	UNLIKELY This species has a cosmopolitan but scattered distribution. Their breeding habitat is large lakes and ocean coasts in North America, Europe, Asia, Africa, and Australasia (Australia and New Zealand). It frequents sheltered sea coasts, estuaries, inlets, bays, harbours, coastal lagoons, saltmarshes and salt pans, also occurring inland on fresh or saline wetlands including large lakes, inland seas, large rivers, creeks, floodlands, reservoirs and sewage ponds. It is unlikely that this species utilises the subject site.
<i>Lamna nasus</i>	Porbeagle	MMS	UNLIKELY Porbeagles, a species of mackerel shark, are primarily found in the pelagic and littoral zones and prefer cold, offshore fishing banks. Its distribution includes the states of New South Wales, Queensland, South Australia, Tasmania and Western Australia. It is unlikely that this species utilises waters surrounding the subject site.
<i>Lathamus discolor</i>	Swift parrot	CE#	UNLIKELY <i>Lathamus discolor</i> breeds in Tasmania on the east and south-east coasts during summer. Their breeding range mirrors the distribution of blue gum (<i>Eucalyptus globulus</i>) in Tasmania. The entire population migrates to mainland Australia for winter, foraging on flowers and <i>psyllid</i> lerps in <i>Eucalyptus</i> species, primarily in Victoria and New South Wales. Small numbers are observed in south-eastern Queensland on a regular basis. The swift parrot prefers dry forests and woodlands of the box-ironbark region and White box-yellow gum-Blakely's red gum woodland, however during drought the species may concentrate in coastal drought refuge habitats in New South Wales. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Lepidochelys olivacea</i>	Olive Ridley Turtle	E, M	UNLIKELY Olive ridleys are globally distributed in the tropical regions of the Atlantic, Pacific, and Indian oceans. They typically occur in shallow soft-bottomed habitats of protected waters. In Australia, they occur along the coast from southern Queensland and the Great Barrier Reef, northwards to Torres Strait, and across to the Joseph Bonaparte Gulf in Western Australia. It is unlikely that this species utilises waters surrounding the subject site.
<i>Limicola falcinellus</i>	Broad-billed Sandpiper	MWS	UNLIKELY In Australia, Broad-billed Sandpipers overwinter on the northern coast, particularly in the north-west, with birds located occasionally on the southern coast and very occasionally inland. The species favour sheltered parts of the coast such as estuarine sandflats and mudflats, harbours, embayments, lagoons, saltmarshes and reefs as feeding and roosting habitat. It is unlikely that this species utilises the subject site.
<i>Limnodromus semipalmatus</i>	Asian Dowitcher	V, MWS	UNLIKELY <i>The species</i> breeds in extensive freshwater wetlands in the steppe and forest steppe zones. Suitable habitats include lake shores, river deltas, flooded meadows and grassy bogs along rivers with short grass and sedge vegetation and areas of bare mud. It is also found on the boggy shores of alkaline ponds and has been observed in rice fields. <i>Non-breeding</i> During the non-breeding season it occurs in sheltered coastal environments, primarily estuarine and intertidal mudflats, lagoons, creeks and saltworks. It will also roost on sandy beaches or in shallow lagoons during this season. Human modified landscape features such as salt-pans have also been shown to be important overwintering habitat. It is unlikely that this species utilises the subject site.
<i>Limosa lapponica baueri</i>	Western Alaskan bar-tailed godwit	V, E#	UNLIKELY <i>Limosa lapponica baueri</i> is a large migratory shorebird which breeds in the northern hemisphere during the boreal summer, and whose distribution during non-breeding period mainly occurs along the north and east coasts of Australia. The bar-tailed godwit (western Alaskan) occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, salt lakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms and coral reef-flats. This species usually forages near the edge of water or in shallow water, mainly in tidal estuaries and harbours. They prefer exposed sandy or soft mud substrates on intertidal flats, banks and beaches. On Heron Island, Qld they have been seen feeding on insect larvae among the roots of Casuarinas. It is unlikely that this species utilises the subject site.
<i>Limosa limosa</i>	Black-tailed godwit	SL	UNLIKELY The Black-tailed Godwit is a migratory wading bird that breeds in Mongolia and Eastern Siberia and flies to Australia for the southern summer, arriving in August and leaving in March. It is primarily a coastal species usually found in sheltered bays, estuaries and lagoons with large intertidal mudflats and/or sandflats. Further inland, it can also be found on mudflats and in water less than 10 cm deep, around muddy lakes and swamps. It is unlikely that this species utilises the subject site.
<i>Litoria olongburensis</i>	Wallum Sedge Frog	V	UNLIKELY



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			<p><i>Litoria olongburensis</i> is found in ephemeral and semi-permanent swamps in undisturbed coastal wallum vegetation. The species is associated with emergent reeds, ferns and / or sedges in suitable habitat. This species is most commonly associated with swamps and ephemeral water bodies but is also found around creeks and freshwater lakes in coastal wallum.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Macronectes giganteus</i>	Southern Giant-Petrel	E	<p>UNLIKELY</p> <p>Over summer, <i>Macronectes giganteus</i> nests in small colonies amongst open vegetation on Antarctic and subantarctic islands, including Macquarie and Heard Islands and in Australian Antarctic territory. It typically nests in loose colonies on grassy or bare ground. Its distribution map extends till Southeast Queensland.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Macronectes halli</i>	Northern Giant Petrel	V, MMB	<p>UNLIKELY</p> <p>Within Australia the Northern Giant Petrel is limited to a breeding colony on Macquarie Is. Outside Australia, the species has breeding colonies on islands south of the Pacific and Indian Oceans.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Megaptera novaeangliae</i>	Humpback Whale	MMS	<p>UNLIKELY</p> <p>Humpback whales live along the coasts of all oceans, occasionally swimming close to shore, even into harbours and rivers. The humpback migrates annually off the west and east coasts of Australia.</p> <p>It is unlikely that this species utilises waters surrounding the subject site.</p>
<i>Mixophyes fleayi</i>	Fleay's frog	E, E [#]	<p>UNLIKELY</p> <p><i>Mixophyes fleayi</i> inhabits stream habitats from first to third order streams and is not found in ponds or ephemeral pools. The majority of <i>Mixophyes fleayi</i> inhabit areas at altitudes above 400m, however it is known to inhabit lowland forest at altitudes of 200m, 150m and 90m. This species occurs in montane rainforest, open forest communities adjoining rainforest, rainforest and adjoining wet sclerophyll forests and marginal habitat where riparian habitat has been replaced by weeds.</p> <p>Suitable habitat for this species does not occur on the subject site.</p>
<i>Mobula alfredi</i> as <i>Manta alfredi</i>	Reef Manta Ray	MMS	<p>UNLIKELY</p> <p>Known on Australian waters from about Perth, Western Australia, around the tropical north to at least Sydney, New South Wales. They are often seen inshore around coral and rocky reefs in tropical and subtropical waters, and also occur around offshore reefs and seamounts. Reef Mantas, prefer shallow waters, generally between 0-300m.</p> <p>It is unlikely that this species utilises waters surrounding the subject site.</p>
<i>Mobula birostris</i> as <i>Manta birostris</i>	Giant Manta Ray	MMS	<p>UNLIKELY</p> <p>Widespread, although relatively uncommon in Australian waters; also Cocos (Keeling) Islands and Christmas Island in the eastern Indian Ocean. Elsewhere the species is circumglobal - Although Manta Rays are often seen inshore around coral and rocky reefs in tropical and subtropical waters, they also occur around offshore reefs and seamounts.</p> <p>It is unlikely that this species utilises waters surrounding the subject site.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Monarcha melanopsis</i>	Black-faced monarch	SL, MTS	<p>UNLIKELY</p> <p><i>Monarcha melanopsis</i> (Black-faced Monarch) is a widespread and common summer breeding migrant from PNG found in eastern Australia from September to March where it inhabits rainforest, eucalypt forest and woodlands. The Black-faced Monarch builds a deep cup nest of casuarina needles, bark, roots, moss and spider web in the fork of a tree, about 3 m to 6 m above the ground.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Myiagra cyanoleuca</i>	Satin flycatcher	SL, MTS	<p>UNLIKELY</p> <p><i>Myiagra cyanoleuca</i> are widespread in eastern Australia and are migratory, moving north in autumn to spend winter in northern Australia and New Guinea. Satin Flycatchers inhabit heavily vegetated gullies in eucalypt-dominated forests and taller woodlands, and on migration, occur in coastal forests, woodlands, mangroves and drier woodlands and open forests.</p> <p>Suitable habitat for this species is not present on the subject site.</p>
<i>Natator depressus</i>	Flatback turtle	V#	<p>UNLIKELY</p> <p><i>Natator depressus</i> occurs in the tropical waters of Papua New Guinea, Irian Jaya and northern Australia. Unlike other species of sea turtles, hatchling <i>Natator depressus</i> do not have an oceanic phase. Instead, they remain in the surface waters of the continental shelf, feeding on macroplankton. Once this life stage is complete, the turtles transition to sub-tidal soft bottomed habitats. The diet of <i>Natator depressus</i> is poorly understood, although juveniles are known to eat gastropod molluscs, squid and siphonophores. Nesting for <i>Natator depressus</i> has only been recorded on Australian beaches, from the Pilbara region in Western Australia, to Mon Repos in southern Queensland. In the Torres Strait and north-west Gulf of Carpentaria the major breeding rookeries include Crab, Deliverance and Kerr Islands and the mainland. The species requires sandy beaches in the tropics and subtropics with sand temperatures between 25 °C and 33°C at nest depth.</p> <p>It is unlikely that this species utilises areas surrounding the subject site.</p>
<i>Numenius madagascariensis</i>	Eastern curlew	E, V#, MWS	<p>UNLIKELY</p> <p><i>Numenius madagascariensis</i> is Australia's largest shorebird. The eastern curlew is a non-breeding spring/summer northern-hemisphere migratory shorebird that usually inhabits sheltered coasts (including, bays, harbours, inlets), especially estuaries and coastal lagoons, with large intertidal mudflats or sandflats, often with seagrass beds. The species is less frequently encountered on ocean beaches, and coral reefs, rock platforms, or fresh or brackish lakes, and bare grasslands near water.</p> <p><i>Numenius madagascariensis</i> predominantly forages on sheltered intertidal sandflats or mudflats and roosts on sandy spits and dry beaches, as well as within coastal vegetation.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Numenius minutus</i>	Little Curlew	MWS	<p>UNLIKELY</p> <p>Within Australia, the Eastern Curlew has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. They may gather in large flocks on coastal and inland grasslands and black soil plains in northern Australia, near swamps and flooded areas. They also feed on playing fields, paddocks and urban lawns.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			It is unlikely that this species utilises the subject site.
<i>Numenius phaeopus</i>	Whimbrel	MWS	UNLIKELY Within Australia, the Eastern Curlew has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. They may gather in large flocks on coastal and inland grasslands and black soil plains in northern Australia, near swamps and flooded areas. They also feed on playing fields, paddocks and urban lawns. It is unlikely that this species utilises the subject site.
<i>Orcinus orca</i>	Killer Whale	MS	UNLIKELY Although they prefer cold water, orcas can live in all the world's oceans from the Antarctic to the tropics. killer whales occur in a wide range of habitats, in both open seas and coastal waters. It is unlikely that this species utilises waters surrounding the subject site.
<i>Orcaella heinsohni</i>	Australian Snubfin Dolphin	MMS	UNLIKELY Australian snubfin dolphins inhabit shallow coastal waters up to 30 m deep and 23 km from the coast. They are rarely seen in waters deeper than 20 m. Groups of Australian snubfin dolphins are often found adjacent to river and creek mouths. They exhibit preferential habitat selection for shallow areas with seagrass, over dredged channels, and areas with coral reefs. In Australia, the species primary range stretches from Roebuck Bay, Western Australia, northeast through the Northern Territory and south along the Queensland coast to the Fitzroy River region, Central Queensland. Extralimital records extend south as far as Brisbane, Queensland. It is unlikely that this species utilises waters surrounding the subject site.
<i>Pachyptila turtur subantarctica</i>	Fairy prion	V#	UNLIKELY The southern subspecies (subantarctica) of the fairy prion was first recorded on Macquarie Island in 1956, with breeding confirmed in 1978. Breeding is currently known from only from two rock stacks off Macquarie Island, one near Langdon Point, the other near Davis Point with a second location on Bishop and Clerk Islands nearby. It has been estimated that the population of fairy prion (southern) is a little over 50 pairs, though it may have been larger before rats (<i>Rattus rattus</i>), arrived on Macquarie Island. The global population is estimated at 80 000 birds. Fairy prions regularly feed in large flocks, sometimes with other seabirds. It is unlikely that this species utilises the subject site.
<i>Pandion cristatus</i>	Eastern osprey	SL	UNLIKELY The Osprey has a global distribution with four subspecies previously recognised throughout its range. However, recent studies have identified that there are two species of Osprey - the Western Osprey (<i>P. halietus</i>) with three subspecies occurring in Europe, Asia and the Americas and the Eastern Osprey (<i>P. cristatus</i>) occurring between Sulawesi (in Indonesia), Australia and New Caledonia. Eastern Ospreys are found right around the Australian coast line, except for Victoria and Tasmania. They are common around the northern coast, especially on rocky shorelines, islands and reefs. The species is uncommon to rare or absent from closely settled parts of south-eastern Australia. There are a handful of records from inland areas. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Pandion haliaetus</i>	Osprey	SL, MWS	POSSIBLE <i>Pandion haliaetus</i> occurs in littoral and coastal habitats and terrestrial wetlands. They are predominately found in coastal areas however, travel inland along major rivers. Osprey require extensive areas of fresh, brackish or saline water for foraging. This species typically feeds on fish, but may also feed on molluscs, crustaceans, insects, reptiles, birds and mammals and is reasonably tolerant of urbanised environments.
<i>Petauroides volans</i>	Greater glider	V, E [#]	UNLIKELY <i>Petauroides volans</i> is found in a variety of eucalypt forest and woodlands preferring taller, montane, moist eucalypt forests with relatively old trees and abundant hollows. This species is nocturnal, sheltering in tree hollows during the day, and requires areas of undisturbed and unfragmented native forest of at least 160km ² to maintain viable populations. Suitable habitat for this species is not present on the subject site.
<i>Petaurus australis</i>	Yellow-bellied glider	V, V [#]	UNLIKELY <i>Petaurus australis</i> is found in a variety of eucalypt forest and woodlands preferring taller, montane, moist eucalypt forests with relatively old trees and abundant hollows. This species is nocturnal, sheltering in tree hollows during the day, and requires areas of undisturbed and unfragmented native forest of at least 160km ² to maintain viable populations. Suitable habitat for this species is not present on the subject site.
<i>Phaethon lepturus</i>	White-tailed Tropicbird	MMB	UNLIKELY The White-tailed Tropicbird (Christmas Island) is endemic to Christmas Island. The species nests over the whole island and feeds in warm waters off the coast. The Tropicbird is able to utilise a broad range of nest-sites, from trees in closed-canopy rainforest to bare sandy ground, to rugged rocky terrain in cliffs and quarries. It nests in deep, completely shaded hollows or crevices, and very occasionally on the ground. It is able to utilise a range of nest-sites, including hollows in rainforest trees and crevices on rock faces, cliffs and quarries. It is unlikely that this species utilises the subject site.
<i>Phascolarctos cinereus</i>	Koala	E, E [#]	UNLIKELY <i>Phascolarctos cinereus</i> inhabits dry open sclerophyll forests and woodlands occurring on fertile soils. Communities containing denser vegetation and larger trees are generally preferred; however, <i>Phascolarctos cinereus</i> can also inhabit less optimal habitat such as young forests, highly fragmented vegetation communities, and small remnants. This species prefers to forage on leaves of <i>Eucalyptus</i> species but will also feed leaves of <i>Corymbia</i> , <i>Angophora</i> , <i>Lophostemon</i> and <i>Melaleuca</i> species. Suitable habitat for this species is not present on the subject site.
<i>Pluvialis fulva</i>	Pacific Golden Plover	MWS	UNLIKELY The Pacific Golden Plover winters in South America and islands of the Pacific Ocean to India, Indonesia and Australia. In Australia it is widespread along the coastline. It is found on muddy, rocky and sandy wetlands, rocky reefs, shores, paddocks, saltmarsh, coastal golf courses, estuaries, lagoons and urban areas. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Pluvialis squatarola</i>	Grey Plover	V, MWS	UNLIKELY The grey plover is a regular summer migrant to Australia, mostly to the west and south coasts. It is generally sparse but not uncommon in some areas. It is occasionally found inland. The species frequents intertidal mudflats, saltmarshes, sandflats and beaches of oceanic coastlines, bays and estuaries. During migration it may also be found inland on lakes, pools or grasslands. It is unlikely that this species utilises the subject site.
<i>Potorous tridactylus</i>	Long-nosed potoroo	V, V#	UNLIKELY <i>Potorous tridactylus</i> is sparsely distributed along the coast and Great Dividing Range of south-east Queensland through NSW. There is limited information about the species habitat in Queensland and NSW but it can be found in wet eucalypt forests to coastal heaths and scrubs. The main factors appear to be access to dense vegetation for shelter and the presence of an abundant supply of fungi for food. Like all Potoroos, fungi are the major component of the diet however this species also consumes plants and invertebrates. <i>Potorous tridactylus</i> is threatened by predation by feral animals (foxes and cats) and loss of habitat to residential development. It is unlikely that this species utilises the subject site.
<i>Pristis zijsron</i>	Green Sawfish	V, M	UNLIKELY Green Sawfish are bottom dwelling rays, commonly found in near-shore coastal environments including estuaries, river mouths, embankments and along sandy and muddy beaches. It has been found in very shallow water less than 1 metre deep to offshore trawl grounds over 70 metres deep. The species is currently known from northern Australian waters, from Broome in WA across northern Australia to Cairns in Queensland. It is unlikely that this species utilises waters surrounding the subject site.
<i>Pseudomugil mellis</i>	Honey Blue Eye	E, V#	UNLIKELY A very small blue eye with a very limited distribution between Brisbane and Fraser Island, Queensland. Inhabits slow-flowing, tannin-stained freshwater creeks and coastal dune lakes with sandy or muddy bottoms. Often found amongst aquatic vegetation along grassy banks. It is unlikely that this species utilises waters surrounding the subject site.
<i>Pterodroma neglecta neglecta</i>	Kermadec Petrel (western)	V	UNLIKELY Vagrant birds occur in coastal waters, particularly after storm events. Ranges over subtropical and tropical waters of the South Pacific. Balls Pyramid (near Lord Howe Island) and Phillip Island (near Norfolk Island) are the only known breeding sites in Australian waters. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Pteropus poliocephalus</i>	Grey-headed flying-fox	C, V#	<p>UNLIKELY</p> <p>The grey-headed flying-fox occurs in the coastal belt from Rockhampton to Melbourne. It requires foraging resources (typically flowering gums and paperbark) and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, <i>Melaleuca</i> swamps and <i>Banksia</i> woodlands. None of the vegetation communities used by the Grey-headed Flying-fox produce continuous foraging resources throughout the year, so the species selectively forages where food is available. As a result, patterns of occurrence and relative abundance within its distribution vary widely between seasons and between years. At a local scale, the species is generally present intermittently and irregularly. The Grey-headed Flying-fox roosts in camps – often mixed species (black and little red flying foxes) and of various sizes. They most frequently travel around 15km from a roost site to feed although are capable of traveling up to 50km as food resources change. It is unlikely that this species utilises the subject site.</p>
<i>Rhincodon typus</i>	Whale Shark	V, MMS	<p>UNLIKELY</p> <p>Whale sharks have global distribution in tropical and warm temperate waters. In Australia, whale sharks occur mainly off the Northern Territory, Queensland, and northern Western Australia. Although Whale Sharks usually inhabit epipelagic waters (= above 200m), tagging studies have shown that they can dive to at least 1928 m - possibly to feed on mesopelagic and bathypelagic prey. It is unlikely that this species utilises waters surrounding the subject site.</p>
<i>Rhipidura rufifrons</i>	Rufous fantail	SL, MTS	<p>UNLIKELY</p> <p><i>Rhipidura rufifrons</i> is a north south migrant (and possibly altitudinal), inhabiting the dense undergrowth of rainforests, wet sclerophyll forests, swamp woodlands and mangroves. This species was not observed on-site and it is unlikely that this species utilises the subject site.</p>
<i>Rostratula australis</i>	Australian painted snipe	E, E#	<p>UNLIKELY</p> <p><i>Rostratula australis</i> is a cryptic species that is generally encountered singly or in pairs, and less frequently in small groups. This species is most common in eastern Australia where it is usually found in shallow inland permanent or temporary wetlands. This species is piscivorous and nests on sheltered beaches above the high tide mark. It is unlikely that this species utilises the subject site.</p>
<i>Sousa sahalensis</i> as <i>Sousa chinensis</i>	Australian Humpback Dolphin	MMS	<p>UNLIKELY</p> <p>Humpback dolphins live close to the coast within the tropical waters of Australia and Papua New Guinea. They typically are found in small groups near estuaries, deep channels, rocky reefs, in sheltered bays, open ocean and occasionally in surf zones. Feeding may occur in a variety of habitats (mangroves, sandy-bottom estuaries, seagrass meadows, and inshore coral reefs) and involve animals dispersed over wide areas or tight groups targeting localized prey. It is unlikely that this species utilises waters surrounding the subject site.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Sphyrna lewini</i>	Scalloped Hammerhead	CD	<p>UNLIKELY</p> <p>The Scalloped Hammerhead Shark is a coastal pelagic species with a circumglobal distribution in warm temperate and tropical coastal areas. Known in Australian waters from about Geographe Bay, Western Australia, around the tropical north, to Sydney, New South Wales. Elsewhere, widespread in tropical and warm temperate seas. Adult Scalloped Hammerheads inhabit deep waters adjacent to continental shelves, in water depths ranging from the surface to at least 275m in depth, while juveniles are found close to shore in nursery habitats. Adult females are thought to occupy deeper water and move into shallower waters to mate and give birth.</p> <p>It is unlikely that this species utilises waters surrounding the subject site.</p>
<i>Stagonopleura guttata</i>	Diamond Firetail	V	<p>UNLIKELY</p> <p>The Diamond Firetail is endemic to south-eastern Australia, extending from central Queensland to the Eyre Peninsula in South Australia. The bird is mostly sedentary and lives in open grassy eucalypt forest and woodland, heath, mallee country, farmland and grassland with scattered trees. It is also often found in riparian areas (rivers and creeks).</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Sternula albifrons</i>	Little tern	SL, MMB	<p>POSSIBLE</p> <p><i>Sternula albifrons</i> is an almost exclusively coastal species that prefers sheltered environments. <i>Sternula albifrons</i> nests on the ground and in the open on sand-spits, sand islands or beaches within or adjacent to the estuaries of rivers, creeks and coastal lakes and occasionally on open beaches. <i>Sternula albifrons</i> is carnivorous, feeding preferentially on small fish; but is also known to feed on crustaceans, insects and molluscs. The species feeds in shallow, predominantly estuarine, waters.</p>
<i>Sterna hirundo</i>	Common tern	SL	<p>OBSERVED</p> <p><i>Sterna hirundo</i> inhabits marine, pelagic and coastal areas. They are commonly observed in near coastal waters, both on ocean beaches, platforms and headlands and in sheltered waters, such as bays, harbours and estuaries with muddy, sandy or rocky shores. It is occasionally recorded in coastal and near-coastal wetlands, either saline or freshwater, including lagoons, rivers, lakes, swamps and saltworks. The Common Tern typically feeds on diet small fish (greater than or equal to 15 cm in length), crustaceans or insects, and occasionally squid. This species is migratory. It breeds in the northern hemisphere in the boreal spring-summer and migrates south to wintering areas in the Northern and Southern Hemispheres. In eastern Australia and Queensland, Common Terns typically move south along the coast, residing here beginning in September.</p>
<i>Sternula nereis nereis</i>	Australian fairy tern	V	<p>UNLIKELY</p> <p><i>Sternula nereis nereis</i> nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation. This species has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline and roosts on beaches at night.</p> <p>This seabird species is unlikely to utilise the subject site.</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Symposiachrus trivirgatus</i>	Spectacled monarch	SL, MTS	UNLIKELY <i>Symposiachrus trivirgatus</i> is found in coastal north-eastern and eastern Australia, including coastal islands, from Cape York, Queensland to Port Stephens, New South Wales. Though migratory further south, this species is mostly resident in Qld where it typically inhabits thick understorey in rainforests, wet gullies, riparian vegetation and sometimes mangroves. Suitable habitat for this species is not present on the subject site.
<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	V, MMB	UNLIKELY It breeds on Amsterdam, Crozet Islands, Kerguelen Islands, and St Paul Islands (French Southern Territories) and on Prince Edward Island (South Africa) on slopes or cliffs, typically in bare, rocky areas but sometimes in tussock-grass and ferns. Outside the breeding season, the species disperses throughout the southern Indian Ocean between 30-50 degrees South, and birds are frequently observed off southern Africa and south-western Australia, extending east to the Tasman Sea and north-eastern New Zealand. It's distribution in Australia is within New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia. It is unlikely that this species utilises the subject site.
<i>Thalassarche cauta</i>	Shy Albatross	E, MMB	UNLIKELY Shy Albatross <i>Thalassarche cauta</i> is an endemic breeder in Australia, with colonies on three islands off Tasmania. The species inhabits coastlines, large bays and open seas within New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia. It is unlikely that this species utilises the subject site.
<i>Thalassarche impavida</i>	Campbell Albatross	V, MMB	UNLIKELY <i>Thalassarche impavida</i> breeds only on the northern and western coastline of Campbell Island (111 km ²) and the tiny offshore islet, Jeanette Marie, New Zealand. During winter, Black-browed Albatrosses migrate northwards for foraging. The majority of birds migrate from breeding colonies to continental shelf waters off Australia, New Zealand, South Africa and South America. It is unlikely that this species utilises the subject site.
<i>Thalassarche melanophris</i>	Black-browed Albatross	V, MMB	UNLIKELY The Black-browed Albatross has a circumpolar range over the southern oceans. As mature individuals from the Australian breeding population are thought to forage in southern Australian waters over winter. The Australian population of non-breeding visitors inhabits the coastal waters off southern Australia, extending as far north as 28°S along the west coast (north of Perth) and to 24°S along the east coast (north of Brisbane). It is unlikely that this species utilises the subject site.
<i>Thalassarche salvini</i>	Salvin's Albatross	V, MMB	UNLIKELY Salvin's Albatross range includes the Indian Ocean and Pacific Ocean: Bounty Islands, West Snares Islands. <i>Thalassarche salvini</i> breeds on the Bounty Islands (nine islands and islets), Western Chain islets (Snares Islands), and The Pyramid and The Forty-Fours (Chatham Islands), New Zealand and has bred at least once on Ile des Pingouins (Crozet Islands, French Southern Territories). At sea they range from South Africa across to Australia and as far east as the coast of South America. It is unlikely that this species utilises the subject site.



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
<i>Thalassarche steadi</i>	White-capped Albatross	V, MMB	<p>UNLIKELY</p> <p>The species mostly observed in inshore and offshore waters over the continental shelf and less frequently in pelagic waters off the shelf break and may occasionally enter larger bays. <i>Thalassarche steadi</i> is endemic to offshore islands of New Zealand. Tracking studies, bird band recoveries and DNA-based identification of bycatch specimens have confirmed that this species forages in Tasmania and Southern Africa/Namibia, and immature birds are thought to occur regularly throughout the South Atlantic and south-west Indian Ocean with distribution of species between the states of New South Wales, South Australia, Tasmania and Victoria. It is also known or predicted to occur on Southeast Queensland.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Thalasseus bergii</i>	Crested tern	SL	<p>POSSIBLE</p> <p>Its five subspecies breed in the area from South Africa around the Indian Ocean to the central Pacific and Australia, all populations dispersing widely from the breeding range after nesting. The species inhabits tropical and subtropical coastlines, foraging in the shallow waters of lagoons, coral reefs, estuaries bays, harbours and inlets, along sandy, rocky, coral or muddy shores, on rocky outcrops in open sea, in mangrove swamps and also far out to sea on open water.</p>
<i>Thunnus maccoyii</i>	Southern Bluefin Tuna	CD	<p>UNLIKELY</p> <p>Southern Bluefin Tuna are found in oceanic waters normally on the seaward side of the continental shelf. Recorded from every Australian state, but absent from the coasts of the Northern Territory and northern Queensland, and very rare in central and western Bass Strait along the south coast.</p> <p>It is unlikely that this species utilises waters surrounding the subject site.</p>
<i>Tringa brevipes</i>	Grey-tailed Tattler	MWS, SL	<p>UNLIKELY</p> <p>Grey-tailed Tattlers breed in Siberia and on passage are seen along the East Asian-Australasian Flyway (the migration route to Australia). When non-breeding they are found in China, Philippines, Taiwan, Vietnam, Malay Peninsula, Indonesia, New Guinea, Micronesia, Fiji, New Zealand and Australia. They are more commonly seen in the north of Australia. In the non-breeding season it is found on sheltered coasts with reefs and rock platforms or with intertidal mudflats, as well as shorelines with rocks, shingle, gravel or shells, often roosting in mangroves. On migration, it is predominantly coastal, but may occur at inland wetlands such as paddyfields.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Tringa incana</i>	Wandering tattler	SL, MWS	<p>UNLIKELY</p> <p>The name 'Wandering' refers to the wide distribution of this species: In summer, the wandering tattler is found in far-eastern Russia, Alaska, portions of the California coast and northwestern Canada. They nest in rocky areas along mountain streams. At other times, they are found on rocky islands in the southwest Pacific and on rocky Pacific coasts from California to South America and as far as Australia.</p> <p>It is unlikely that this species utilises the subject site.</p>
<i>Tringa nebularia</i>	Common Greenshank	E, MWS	<p>UNLIKELY</p> <p><i>Tringa nebularia</i> occurs in all types of wetlands including inland wetlands (e.g. swamps, lakes, dams, rivers, creeks, inundated floodplains) and sheltered coastal habitats of varying salinity (e.g. tidal pools, harbours, river estuaries, lagoons). The species prefer wetlands with mud or clay edges with bare, emergent or fringing vegetation including short sedges and saltmarsh, mangroves, thickets of rushes and dead or live trees. The Common Greenshank does not breed in Australia, however a population of 18,000–19,000 spend the non-breeding season in Australia. It is typically seen</p>



Scientific Name	Common Name	Status*	Likelihood of Occurrence on Site
			singly or in small to large flocks, foraging at the edges of wetland, mudflats, channels or among mangrove pneumatophores, occasionally feeding on exposed seagrass beds. Its diet consists of molluscs, crustaceans, insects and occasionally fish and frogs. It is unlikely that this species utilises the subject site.
<i>Turnix melanogaster</i>	Black-breasted button-quail	V, V#	UNLIKELY <i>Turnix melanogaster</i> is restricted to rainforests and forests, mostly in areas with 770-1200 mm rainfall per annum. This species prefers semi-evergreen vine thicket, low microphyll vine forest, araucarian microphyll vine forest and araucarian notophyll vine forest. It also occurs in dense acacia thickets and, littoral area, lantana which is used for diurnal foraging and nocturnal roosting and pasture grass adjacent to habitat areas. Extensive leaf-litter is required for foraging, fallen logs and a dense, heterogeneously distributed shrub layers are also considered to be important habitat characteristics for shelter and breeding. Suitable habitat for this species is not present on the subject site.
<i>Xenus cinereus</i>	Terek Sandpiper	MWS, SL	UNLIKELY Terek Sandpipers are found on the coast in mangrove swamps, tidal mudflats and the seashore. A rare migrant to the eastern and southern Australian coasts, being most common in northern Australia, and extending its distribution south to the NSW coast in the east. This species is unlikely to utilise the subject site.
<i>Xeromys myoides</i>	False water rat	V, V#	UNLIKELY <i>Xeromys myoides</i> inhabit mangroves and the associated saltmarsh, sedgeland, clay pans, heathlands and freshwater wetlands. In south-east Queensland the upper tidal areas on the shoreward side of the mangrove zone often support saltmarsh adjoining terrestrial communities including freshwater wetland, coastal woodland or wet heathland. These communities are all utilised by the water mouse for foraging and nesting. Essential Habitat for the water mouse includes the Regional Ecosystems 12.1.1, 12.1.2, 12.1.3, 12.2.5, 12.2.7, 12.2.11, 12.2.12 and 12.2.14. This species' diet typically includes a variety of crustaceans, marine polychaetes, marine pulmonates, mud lobster <i>Laomedea healyi</i> , mottled shore crab <i>Peragrapsis laevis</i> and marine bivalves. This species is unlikely to utilise the subject site.

*Status: As listed under the Queensland Nature Conservation Act 1992: CR = Critically Endangered, E = Endangered, V = Vulnerable, NT = Near Threatened, SL = Special Least Concern, C = Least Concern. As listed under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999: CE# = Critically Endangered, E# = Endangered, V# = Vulnerable, CD# = Conservation Dependent, MTS = Migratory Terrestrial Species, MWS = Migratory Wetland Species, M = Marine, MMS = Migratory Marine Species



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**Appendix D – Sunshine Coast Planning Scheme 2014 v27 Part 8
Section 8_2_3 BWWO Code response**



Table 8.2.3.3.2 Performance outcomes and acceptable outcomes for assessable development

Performance Outcomes		Acceptable Outcomes	
Protection of Ecologically Important Areas			
PO1	Development protects the physical and ecological integrity and biodiversity of <i>ecologically important areas</i> through protection and retention of:- (a) existing terrestrial habitat areas; and (b) existing riparian, <i>waterway</i> and <i>wetland</i> habitat areas.	AO1.1	<i>Ecologically important areas</i> are retained insitu and are conserved or rehabilitated to ensure their ongoing contribution to:- (a) the natural resources and biological diversity of the Sunshine Coast; and (b) the achievement of the water quality objectives for the applicable natural water catchment ¹ .
		AO1.2	Development within an <i>ecologically important area</i> does not increase the dimensions of the existing <i>development footprint</i> or the existing level of intensity of the development.
Management of Impacts on Ecologically Important Areas			
PO2	Development on or adjacent to land containing an <i>ecologically important area</i> is designed and constructed to:- (a) prevent any direct or indirect impacts on the ecologically important area; (b) enhance and restore the ecologically important area; (c) retain, enhance and restore known populations and supporting habitat of significant flora and fauna species; and (d) minimise the impacts of construction and ongoing use on native fauna.	AO2.1	Any building, structure or works is set back from a native <i>vegetation</i> area identified on a Biodiversity, Waterways and Wetlands Overlay Map, a minimum of:- (a) 50 metres where the native <i>vegetation</i> area forms part of the <i>protected estate</i> (e.g. National Park or Conservation Park) or is <i>Council Environmental Reserve</i> ; or (b) a distance equivalent to the height of the native <i>vegetation</i> area where not otherwise specified. Note—a greater setback distance may be required where the native <i>vegetation</i> area is also identified as a <i>waterway</i> or <i>wetland</i> on a Biodiversity, Waterways and Wetlands Overlay Map. Setback requirements for <i>waterways</i> and <i>wetlands</i> are addressed in Performance Outcome PO9. Note—where land is subject to the Bushfire Hazard Overlay, a greater setback distance may be required in order to achieve compliance with the Bushfire hazard overlay code .
		AO2.2	The design and layout of development minimises adverse impacts on <i>ecologically important areas</i> by:- (a) clustering lots and building envelopes into cleared areas and protecting habitat in consolidated areas so as to maximise the ecological connectivity of native <i>vegetation</i> and minimise edge effects; (b) aligning new property boundaries such that they do not traverse ecologically important areas; (c) ensuring that alterations to natural landforms, hydrology and drainage patterns on the development site do not negatively affect ecologically important areas; (d) ensuring that significant fauna habitat, including nesting tree hollows, ground nesting and breeding sites, and significant fauna feeding habitat, including individual fauna feeding sites, trees, shrubs and understorey, are protected in their environmental context; (e) incorporating measures that avoid or minimise disruption to threatened wildlife and their habitat and allow for their safe movement through the <i>site</i> ; (f) implementing effective measures to anticipate and prevent disturbance or predation of native fauna from domestic and pest species, such as night curfews and exclusion areas; (g) implementing effective measures to anticipate and prevent the entry or spread of pest plants in <i>ecologically important areas</i> ; and (h) minimising potential changes in fire regimes and the need for fire breaks in areas outside building envelopes.
		AO2.3	<i>Infrastructure</i> , including roads, driveways, fences, dams, sewer lines, fire breaks, stormwater treatment devices and the like does not traverse <i>ecologically important areas</i> .
		The Ecological Site Assessment (Burchills, 2024) provide recommendations for avoiding, minimising and mitigating impacts on the adjoining dunal area. Additionally, the project includes restoration works that will enhance the existing condition and habitat values of the adjoining <i>Ecologically important areas</i> .	

¹ Editor's note—water quality objectives are prescribed in Schedule 1 of the *Environmental Protection (Water) Policy 2009*.

Performance Outcomes		Acceptable Outcomes	
			Note—as far as reasonably practicable, <i>infrastructure</i> and services should be co-located and situated in existing cleared areas.
PO3	Where the clearing of native <i>vegetation</i> cannot practicably be avoided, development:- (a) minimises adverse impacts on ecological values to the greatest extent practicable; and (b) provides a biodiversity offset for the area that is adversely affected by the development that:- (i) results in a net environmental benefit within a short timeframe; (ii) is located on the development <i>site</i> , another <i>site</i> that has a nexus with the development <i>site</i> or a <i>site</i> that is within a rehabilitation focus area; (iii) is supported by appropriate management and funding arrangements to ensure the ongoing viability of the offset; and (iv) is not used for material or commercial gain.	AO3	Where the clearing of native <i>vegetation</i> cannot practicably be avoided, the development:- (a) limits the loss of native <i>vegetation</i> to the smallest possible area; (b) incorporates siting and design measures to protect and retain ecological values and underlying ecosystem processes within or adjacent to the development <i>site</i> , to the greatest extent practicable; and (c) provides a biodiversity offset in accordance with:- (i) the requirements for a biodiversity offset specified in Table 9.4.9.3.2 (Biodiversity offset requirements) of Section 9.4.9 (Vegetation management code) ; and (ii) the Planning scheme policy for biodiversity offsets . Note—a biodiversity offset will not be required for development where subject to a master development approval granted prior to the commencement of the planning scheme in which matters related to <i>vegetation</i> retention and protection have already been addressed.
PO4	Effective measures are implemented during the construction and operation of developments on or adjacent to land containing an <i>ecologically important area</i> , to protect fauna that is sensitive to disturbance from noise, vibration, dust or light.	AO4.1	Any noise, vibration or dust generated during the construction and operational phases of development is managed to ensure it does not have an adverse impact on fauna within an <i>ecologically important area</i> .
		AO4.2	Lighting associated with development:- (a) does not contribute to an unacceptable level of illuminance (greater than 1 lux) for light-sensitive species within or at the boundary of an <i>ecologically important area</i> ; and (b) does not contribute to an unacceptable level of illuminance on landward horizons along coastal areas and known sea turtle nesting beaches.
Koala Conservation			
PO5	Development in koala habitat areas protects and provides for a net gain in mature and actively regenerating koala habitat.	AO5	Development avoids clearing <i>non-juvenile koala habitat trees</i> .
PO6	Development in koala habitat areas provides for safe and appropriate koala movement and mitigates any potential threats or risks to koalas.	AO6.1	Development provides safe koala movement opportunities as appropriate to the development type, and the potential for habitat connectivity on the <i>site</i> , in accordance with the criteria for determining habitat connectivity for koala movement set out in the Planning scheme policy for the biodiversity, waterways and wetlands overlay code .
		AO6.2	Development design complies with the Koala Sensitive Design Guideline: A guide to koala sensitive design measures for planning and development activities, Queensland Government (Department of Environment and Heritage) 2012.
		AO6.3	Development provides that during construction phases:- (a) measures are incorporated into construction practices to not increase the risk of death or injury to koalas; (b) native <i>vegetation</i> that is cleared in an area intended to be retained for safe koala movement opportunities is progressively restored and rehabilitated; and (c) public accessways are located and designed to avoid disturbance of koala habitat through measures such as exclusion fencing and devices, signage and designated access points.
		AO6.4	Development incorporates landscapes that provide food, shelter and movement opportunities for koalas, consistent with the site layout and development design.
			The clearing of native vegetation to facilitate the proposal is limited to 1,070m ² . This clearing, which cannot be practically avoided to facilitate the design, will be mitigated by the proposed restoration of the adjoining disturbed dunal environment. The restoration will deliver a net environmental benefit for the local coastal environment.
			All construction works will adhere with the recommendations of the Ecological Site Assessment (Burchills, 2024) and conditions of approval which provide recommendations for avoiding, minimising and mitigating impacts on the adjoining dunal area.
			NA – project not within mapped Core Koala Habitat Areas under the South East Queensland Koala Conservation Strategy 2019-2024.
			NA – project not within mapped Core Koala Habitat Areas under the South East Queensland Koala Conservation Strategy 2019-2024.

Performance Outcomes		Acceptable Outcomes	
Linking of Ecologically Important Areas through Ecological Linkages			
PO7	Ecological linkages are protected and enhanced and have dimensions and characteristics that:- (a) effectively link <i>ecologically important areas</i> on and/or adjacent to the <i>site</i> ; and (b) facilitate unimpeded, safe and effective movement of terrestrial and aquatic fauna traversing the corridor or accessing and/or using the <i>site</i> as habitat	AO7.1 AO7.2 AO7.3	Where located in an ecological linkage, as identified on Strategic Framework Map SFM5 (Natural Environment Elements) , or a local ecological linkage as identified on a local plan elements figure, development is sited and designed to maximise the ecological connectivity of <i>vegetation</i> within the <i>site</i> and to adjacent <i>sites</i> . Where located within an ecological linkage, as identified on Strategic Framework Map SFM5 (Natural Environment Elements) or a local ecological linkage, as identified on a local plan elements figure, development provides for native <i>vegetation</i> to be retained, regenerated, and rehabilitated in such a way as to:- (a) ensure protection of wildlife refuges; (b) maintain <i>vegetation</i> in patches of the greatest possible size and with the smallest possible edge-to-area ratio; (c) maximise the ecological connectivity of <i>vegetation</i> located on the subject <i>site</i> and on adjacent properties; and (d) facilitate the dispersal or movement of native wildlife known to occur in the area. Development provides for unimpeded movement of fauna within an ecological linkage, or local ecological linkage, to be facilitated by:- (a) ensuring that development, both during construction and operation, does not create physical barriers and safety hazards (such as roads, pedestrian access and in-stream structures) to the movement of fauna along or within the ecological linkage; (b) providing wildlife movement <i>infrastructure</i> where necessary and directing fauna to locations where wildlife movement <i>infrastructure</i> has been provided to enable fauna to safely negotiate a development area; (c) separating fauna from potential hazards (e.g. through fauna exclusion and directional fencing and fauna overpasses and underpasses); and providing mitigating measures such as traffic calming devices, signage and lighting.
The proposed impacts do not fragment existing vegetation or habitat being located on the edge of mapped native vegetation areas and therefore do not pose a threat to strategic linkages including ecological connectivity and faunal movement corridors.			
Rehabilitation of Ecologically Important Areas			

Performance Outcomes		Acceptable Outcomes		
PO8	Development provides for <i>ecologically important areas</i> to be restored and enhanced so as to contribute towards a functional and connected network of viable habitat areas.	AO8.1 AO8.2 AO8.3	Development provides for cleared, degraded or disturbed <i>ecologically important areas</i> to be rehabilitated or allowed to regenerate naturally. Development provides for locally native plant species to be predominantly used in the revegetation and landscape planting on the <i>site</i> . Development provides for revegetation and landscape planting that does not use declared or environmental weeds as specified in the Planning scheme policy for development works . Editor's note— Section 9.4.2 (Landscape code) sets out requirements for revegetation and habitat restoration works.	The project proposal includes restoration of 2,690m ² of disturbed dune vegetation immediately north of the project footprint, ensuring no net loss of <i>Ecologically important areas</i> . The restoration will utilise local provenance stock and reflect the existing regional ecosystems mapped in the project area. Additionally the project's landscaping species have been selected to include native dune flora and avoids declared or environmental weeds. Refer to the project's landscape plans for further details.
Buffers to Natural Waterways and Wetlands				
PO9	Development provides and maintains adequate vegetated <i>buffers</i> and setbacks to protect and enhance the environmental values ² and integrity of natural <i>waterways</i> and <i>wetlands</i> , having particular regard to:- (a) fauna habitats; (b) wildlife corridors and connectivity; (c) adjacent land use impacts; (d) stream integrity; (e) water quality; (f) sediment trapping; (g) resilience to flood and storm tide inundation events and consequent erosion, including the safety of people and risk of damage to property on the site; (h) overland and groundwater flows; and (i) recreational amenity.	AO9.1 AO9.2	Development and the clearing of native <i>vegetation</i> do not occur within:- (a) a riparian protection area, as identified on a Biodiversity, Waterways and Wetlands Overlay Map; or (b) 10 metres of each high bank of a waterway identified on a Biodiversity, Waterways and Wetlands Overlay Map otherwise. Development provides for the rehabilitation of land within:- (c) a riparian protection area, as identified on a Biodiversity, Waterways and Wetlands Overlay Map; or (d) 10 metres of each high bank of a <i>waterway</i> identified on a Biodiversity, Waterways and Wetlands Overlay Map otherwise.	NA – not mapped
Management of Public Access and Edge Effects				
PO10	Development on land adjacent to a <i>waterway</i> or <i>wetland</i> maintains an appropriate extent of public access to <i>waterways</i> and <i>wetlands</i> and minimises edge effects.	AO10	Development adjacent to a <i>waterway</i> or <i>wetland</i> provides that:- (a) no new lots directly access the riparian area; and (b) new public roads are located between the riparian <i>buffer</i> and the proposed development areas.	NA – not mapped
Hydrologic Regimes				
PO11	Development ensures that the natural surface water and groundwater hydrologic regimes of <i>waterways</i> , <i>wetlands</i> and associated <i>buffers</i> are maintained to the greatest extent possible.	AO11	Development does not change the natural surface water or groundwater hydrologic regime of a <i>waterway</i> or <i>wetland</i> , including through channelisation, redirection or interruption of flow. OR Where development changes the natural surface water or hydrologic regime of a <i>waterway</i> or <i>wetland</i> , the extent of change is minimised to ensure that the <i>waterway</i> or <i>wetland</i> is protected such that:- (a) there is no change to the reference duration high flow and low flow duration frequency curves, low flow spells frequency curve and mean annual flow to and from the <i>waterway</i> or <i>wetland</i> ; (b) stream flows into the <i>waterway</i> or <i>wetland</i> comply with all relevant water quality objectives for the catchment; (c) where development would increase the velocity or volume of stormwater flows into the <i>waterway</i> or <i>wetland</i> , the collection and reuse of stormwater occurs in accordance with (a) and (b) above; (d) development avoids groundwater abstraction; (e) development maintains groundwater recharge and discharge processes; and (f) development does not result in the ingress of saline water into freshwater aquifers	NA – not mapped
Groundwater and Surface Water Quality				

² Editor's note—environmental values of waters are prescribed in Schedule 1 of the *Environmental Protection (Water) Policy 2009*.

Performance Outcomes		Acceptable Outcomes	
PO12	Development maintains or enhances the quality of groundwater and surface water within or downstream of the <i>site</i> .	AO12	Development maintains the water quality of onsite and adjacent <i>waterways</i> and <i>wetlands</i> by:- (a) avoiding or minimising and mitigating the release of contaminated water and wastewater by treating the contaminated water or wastewater to achieve all relevant water quality objectives ³ prior to discharge into receiving waters on site or prior to discharge from the <i>site</i> ; (b) avoiding the increased conveyance of stormwater and sediment to adjacent <i>waterways</i> and <i>wetlands</i> ; (c) establishing appropriate vegetation <i>buffers</i> and setbacks from a <i>waterway</i> or <i>wetland</i> in accordance with the other relevant acceptable outcomes of this code; and (d) avoiding or minimising and managing the disturbance of potential or actual <i>acid sulfate soils</i> .
			NA – not mapped

³ Editor's note—water quality objectives are prescribed in Schedule 1 of the *Environmental Protection (Water) Policy 2009*.

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GOLD COAST OFFICE

P 07 5509 6400

Level 2, 26 Marine Parade, Southport Qld 4215

PO Box 3766, Australia Fair, Southport Qld 4215

BRISBANE OFFICE

P 07 3607 6332

Level 14, 167 Eagle Street, Brisbane Qld 4000

PO Box 83, Brisbane Qld 4000

Appendix 7
Traffic Impact Assessment prepared by Bitzios Consulting



Maroochydore SLSC Redevelopment

Traffic Impact Assessment

Maroochydore SLSC

14th May 2024

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

E: admin@bitziosconsulting.com.au

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1. INTRODUCTION

1.1 Overview

Bitzios Consulting (Bitzios) has been engaged by Maroochydore Surf Life Saving Club Incorporated (Maroochydore SLSC / the Club) to prepare a traffic impact assessment (TIA) for the proposed redevelopment of the Maroochydore SLSC.

The Maroochydore SLSC is located at 34/36 Alexandra Parade, Maroochydore (subject site). The subject site is formally described as Lot 471 on SP142403 and is located within the Sunshine Coast Regional Council (Council) local government area (LGA).

The subject site is shown in Figure 1.1



Source: Nearmap

Figure 1.1: Subject Site

1.2 Proposed Development

The proposed redevelopment will see the overall floor plan expand to the north, increasing the Club’s overall gross floor area (GFA).

Table 1.1 identifies existing and proposed land uses and yields assumed for the purposes of this assessment. It is noted that the Supporters / Community Club Facilities yield is reducing as part of the redevelopment.

Table 1.1: Existing and Proposed Land Uses and Yields

Land Use	Existing Yield	Proposed Yield
Life Saving Club Activities / Facilities	1,116m ² GFA	4,760m ² GFA plus 30 dormitory beds*
Supporters / Community Club Facilities	1,688m ² GFA	1,657m ² GFA
Total	2,804m² GFA	6,417m² GFA

*These beds are located within the identified GFA area. However, have been considered “additional” yield herein. Our assessment is therefore considered conservative.

Other key redevelopment details relevant to traffic and transport are summarised below:

- **Car Parking:** No spaces onsite. However, there 23 spaces including two (2) person with disability (PWD) spaces in an adjacent off-street car park to the south, and 86 on-street car parking spaces within ~100m walking distance of the subject site
- **Vehicular Access:** Via Alexandra Parade (service / club vehicles only)
- **Servicing:** General servicing by Medium Rigid Vehicles (MRVs) or smaller vehicles. Refuse collection by rear loading refuse collection vehicles (RCVs).

A copy of the development plans is included at **Appendix A**.

1.3 Scope

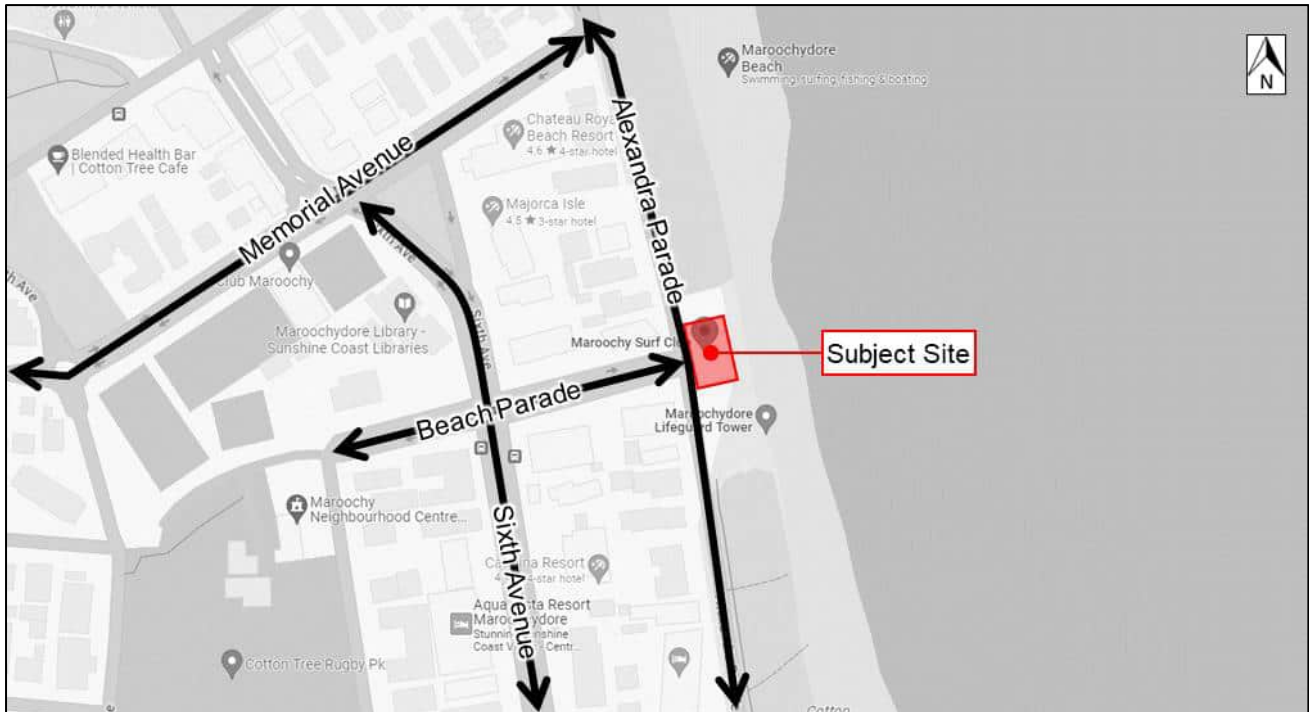
The scope of works for assessment included:

- Reviewing the proposed vehicular access arrangements against Council's Transport and Parking Code
- Reviewing the car parking provisions against Council's Transport and Parking Code
- Reviewing revised car park configuration arrangements against Council's Transport and Parking Code and / or AS2890
- Reviewing the servicing arrangements against Council's Transport and Parking Code and / or AS2890, including the preparation of swept path diagrams
- Estimating potential peak hour traffic demands generated by the development and undertaking a qualitative assessment of potential development related traffic impacts.

2. EXISTING TRANSPORT NETWORKS

2.1 Road Network

Figure 2.1 identifies key elements of the existing road network in proximity to the subject site.



Source: Google Maps

Figure 2.1: Surrounding Road Network

Details of the road network surrounding the subject site are shown in Table 2.1.

Table 2.1: Surrounding Road Network

Road Name	Jurisdiction	Hierarchy	Cross-Section	Speed Limit
Alexandra Parade	Council	Local Street	2 lanes undivided	50km/h
Beach Parade	Council	Local Street	2 lanes divided	50km/h
Sixth Avenue	Council	District Collector	2 lanes divided	50km/h
King Street	Council	District Collector	2 lanes divided	50km/h
Memorial Avenue	Council	Local Street	2 lanes divided	50km/h

The surrounding key intersections are outlined in Table 2.2.

Table 2.2: Key Intersections

Intersection Name	Jurisdiction	Type
Sixth Avenue & King Street / Memorial Avenue	Council	Priority-Controlled
Sixth Avenue / Beach Parade	Council	Priority-Controlled

2.2 Public Transport

The subject site is located within 200m of nearest bus stop pair. Figure 2.2 shows the location of the bus stops near the subject site and the route pedestrians are most likely to take to walk between the subject site and the bus stops.



Source: Nearmap

Figure 2.2: Public Transport Connectivity

Table 2.3 summarises the bus routes which service the stops and their frequencies during peak periods.

Table 2.3: Existing Bus Routes

Bus Route No.	Route Description	Peak Frequency
600	Maroochydore to Caloundra	15 minutes

In summary, the subject site is reasonably well serviced by public transport. No changes to existing public transport services / infrastructure are required to support the proposed redevelopment.

3. TRAFFIC LAYOUT REVIEW

3.1 Site Access

Vehicular access to the subject site (for service vehicles and club vehicles only) is proposed via two (2) new driveway crossovers on Alexandra Parade. Figure 3.1 identifies the proposed access locations.



Source: Nearmap

Figure 3.1: Proposed Site Access Locations

Table 3.1 summarises our review of sight distances at the driveways against AS2890 requirements. It is important to note that Alexandra Parade is one-way (southbound) near the subject site. Accordingly, only sight distances north of the driveways have been reviewed.

Table 3.1: Driveway Sight Distances Review

Driveway	Speed Environment	Direction	Required Sight Distance		Available Sight Distance	Compliant
			Desirable	Minimum		
Two (2) on Alexandra Parade	50km/h	North	69m	45m	>50m	Yes

As outlined above, sight distances at the proposed interim driveways are expected to comply with AS2890 requirements.

3.2 Car Parking Provision

No on-site car parking is proposed to be provided. Accordingly, it does not comply with Council's Planning Scheme requirements.

However, there are 23 spaces including two (2) person with disability (PWD) spaces in an adjacent off-street car park to the south of the subject site. Further, there are 86 on-street car parking spaces within ~100m walking distance of the subject site. The location of this car parking is shown in Figure 3.2.



Source: Nearmap

Figure 3.2: Public Car Parking Near the Subject Site

Further, it is noted that:

- The Club operates a courtesy bus service which covers the local area. It operates 7-days a week and can be used by visitors, members and their guests to travel to and from the subject site
- Council and the Department of Transport and Main Roads (TMR) are investigating opportunities to improve public transport on the Sunshine Coast. Further, Maroochydore City Centre Priority Development Area (PDA) is also located relatively close to the site. Considering these factors, public transport availability near the subject site is expected to significantly improve in the coming years
- There is a large crossover between use of Maroochydore Beach and the Club (particularly the Life Saving Club Activities / Facilities). That is, a large number of those visiting the Club / using Club facilities are likely to have travelled to Maroochydore Beach regardless of the Club
- The Supporters / Community Club Facilities use yield is proposed to reduce slightly as a result of the redevelopment. Accordingly, no additional car parking is necessary to support this use
- A review of the car parking provided at other surf life saving clubs across the Sunshine Coast has been undertaken. As identified in Table 3.2, this review indicates that limited car parking is provided at many clubs.

Table 3.2: Car Parking Provisions – Other Sunshine Coast Surf Life Saving Clubs

Surf Life Saving Club	Car Parking Provision
Alexandra Heads	18 spaces
Coolum Beach	12 spaces immediately adjacent (0 spaces on the club land parcel)
Mooloolaba	16 spaces (0 spaces on the club land parcel)
Mudjimba Beach	13 spaces (0 spaces on the club land parcel)

In summary, the redevelopment is not expected to result in car parking impacts significantly greater than those expected in and around popular beach locations.

3.3 Servicing

As part of the redevelopment, provision is to be made for general servicing MRVs or smaller vehicles, and refuse collection by rear loading RCVs.

Table 3.3 summarises our review of the proposed servicing arrangement against Council's Planning Scheme.

Table 3.3: Servicing Review

Land Use	Required	Proposed	Compliant
Club	MRV	MRV	See Below

Swept path diagrams have been prepared which demonstrate that MRVs and rear loading RCVs can reverse onto the subject site and exit the subject site in a forward gear. A copy of the diagrams is included at **Appendix B**.

However, it does not appear that 4.5m height clearance will be achieved in the proposed development servicing areas as required by AS2890.2 for MRVs. Accordingly, access to the servicing areas will need to be restricted subject to the height clearance ultimately achieved. Noting that a large proportion of MRVs are 4m high or less, it is recommended that at least 4m height clearance is provided.

In summary, swept path diagrams indicate that the proposed redevelopment servicing areas will be accessible by MRVs and rear loading RCVs, subject to suitable height clearance being provided. It is recommended that at least 4m clearance is provided in the servicing areas.

4. TRAFFIC ASSESSMENT

4.1 Overview

Operational (SIDRA) analysis has been undertaken at the Sixth Avenue / Memorial Avenue and Sixth Avenue / Beach Parade intersections (study intersections) to assess the potential redevelopment traffic impacts.

4.2 Background Traffic Volumes

4.2.1 Traffic Survey Data

Traffic surveys were undertaken at the study intersections during the following periods:

- Thursday 1st February 2024: 3:30pm to 6:30pm
- Saturday 3rd February 2024: 11:00am to 3:00pm.

A copy of the traffic survey data is included at **Appendix C**.

The following peak periods have been identified for each intersection based on the survey results:

- Intersection 1: Sixth Avenue / Memorial Parade
 - Weekday PM Peak Period: 3:45pm to 4:45pm.
 - Weekend AM Peak Period: 11:00am to 12:00pm.
- Intersection 2: Sixth Avenue / Beach Parade
 - Weekday PM Peak Period: 4:00pm to 5:00pm.
 - Weekend AM Peak Period: 11:00am to 12:00pm.

In lieu of assessing a network peak, individual study intersection peak hour trips were used in the assessment. This approach is considered conservative as it is expected to result in 'worst-case' impacts at each intersection being identified.

4.2.2 Traffic Growth Rate

For the purposes of the analysis detailed herein, a linear background traffic growth rate of 2.0%p.a. has been applied to Sixth Avenue volumes. A lower 1.0%p.a. rate has been applied to other roads as they are expected to carry a greater proportion of local development traffic, and development in the local area is mature.

4.3 Development Traffic

4.3.1 Overview

A review of likely development traffic impacts has been undertaken. It is noted this assessment only reviews the additional traffic impacts generated by the proposed development. It has been assumed that the 'Supporters Club Facilities' does not generate additional traffic as the yield is proposed to be reduced. Therefore, only traffic expected to be generated by the 'Lifesaving Club' and the assumed dormitory beds has been assessed.

As of currently there are no explicit or comparative traffic generation rates for a 'Lifesaving Club' land use. The rates for a 'Motel' and 'Office' land use have been adopted for this assessment as we expect they reflect the intended use of the proposed development.

It has been assumed that each dormitory bed equates to a single motel unit which is considered conservative noting in some cases multiple people staying in the dormitory beds will travel in a single vehicle.

Traffic demands for the 'Office' land use have been estimated based on the total increase in yield / area proposed as part of the redevelopment. However, some of area is expected to be used for storage etc. and therefore not generate traffic, whilst other areas are expected to be occupied by dormitory beds which have also been assumed to generate traffic (Motel land use).

In summary, the following yields have been assessed:

- Motel – 30 units
- Office - 3,644m² GFA.

4.3.2 Development Traffic Generation

Table 4.1 provides a summary of the adopted trip generation rates.

Table 4.1: Trip Generation Rates

Land Use	Weekday PM Peak	Weekend AM Peak	Unit	Source
Motel	0.40		Trips / Unit	TfNSW Guide to Traffic Generating Developments (2002)
Office	2.00		Trips/100m ² GFA	

Table 4.2 provides a summary of the adopted traffic directional distribution splits.

Table 4.2: Traffic Directional Splits

Land Use	Weekday PM Peak		Weekend AM Peak	
	In	Out	In	Out
Motel	50%	50%	50%	50%
Office	20%	80%	50%	50%

Table 4.3 provides a summary of the traffic demands expected to be generated by the development.

Table 4.3: Estimated Peak Hour Traffic Demands

Land Use	Scenario	Yield	In (Trips)	Out (Trips)	Total (Trips)
Motel	Weekday PM Peak	30 units	6	6	12
Office		3,644m ² GFA	15	58	73
Total (Weekday AM Trips)			21	64	85
Motel	Weekend AM Peak	30 units	6	6	12
Office		3,644m ² GFA	36	37	73
Total (Weekend AM Trips)			42	43	85

In summary, we estimate that the proposed development may generate in the order of 85 peak hour trips.

4.4 Assessed Traffic Volume Scenarios

For the purposes of the traffic assessment, we have assumed the following:

- Redevelopment year of opening: 2026
- 10-years post-redevelopment opening: 2036.

Traffic volumes have been derived and assessed for the following scenarios:

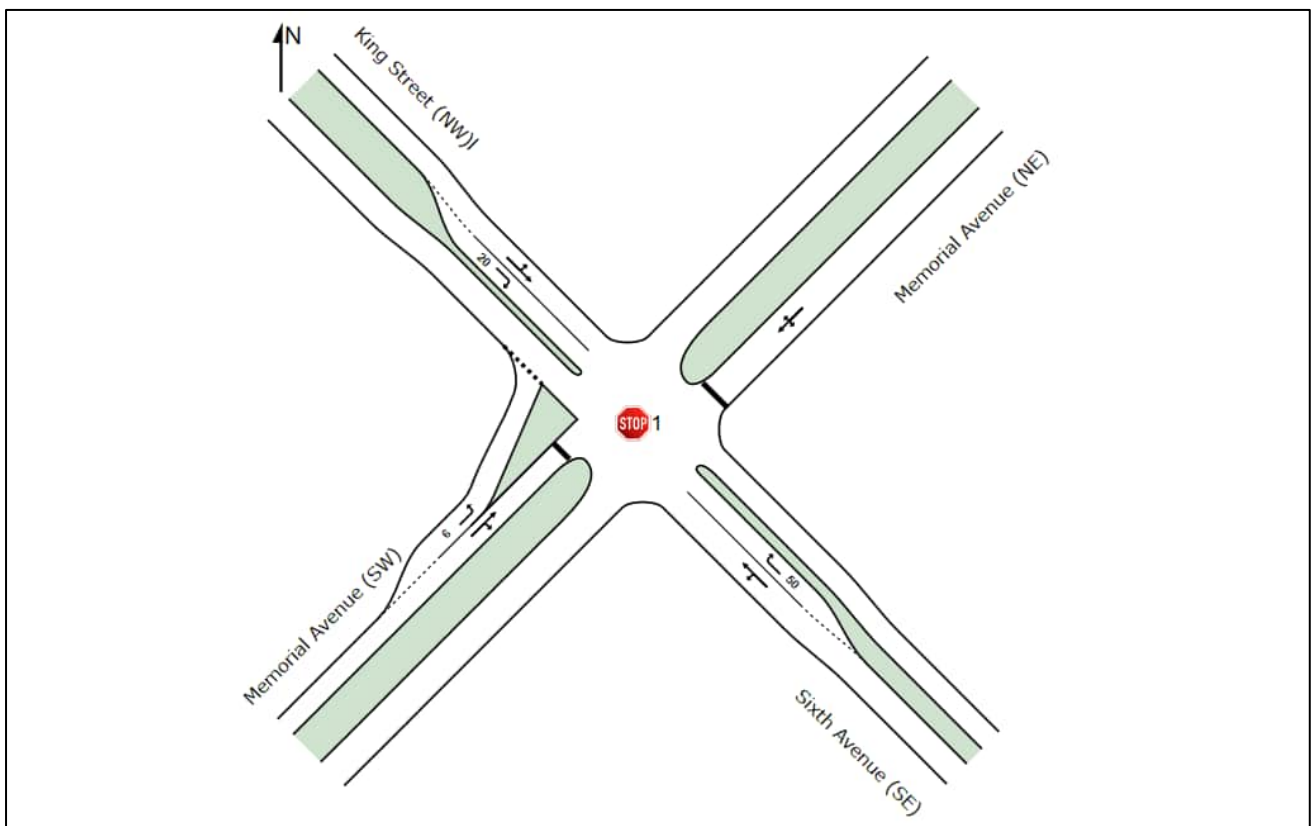
- **2026 Background (BG):** 2024 survey volumes factored up by 1.0%p.a. or 2.0%p.a. through to 2026
- **2026 Background + Development (BG+DEV):** 2026 background volumes + redevelopment traffic volumes
- **2036 Background (BG):** 2024 survey volumes factored up by 1.0%p.a. or 2.0%p.a. through to 2036
- **2036 With Development (BG+DEV):** 2036 background volumes + redevelopment traffic volumes.

Figures identifying traffic volume calculations and assessed traffic volumes are included in **Appendix D**.

4.5 Study Intersection Assessment Results

4.5.1 Sixth Avenue / Memorial Avenue

Figure 4.1 illustrates the Sixth Avenue / Memorial Avenue intersection configuration assessed in SIDRA.



Source: SIDRA

Figure 4.1: Sixth Avenue / Memorial Avenue – SIDRA Layout

The analysis results are summarised in Table 4.4 with detailed outputs included at **Appendix E**.

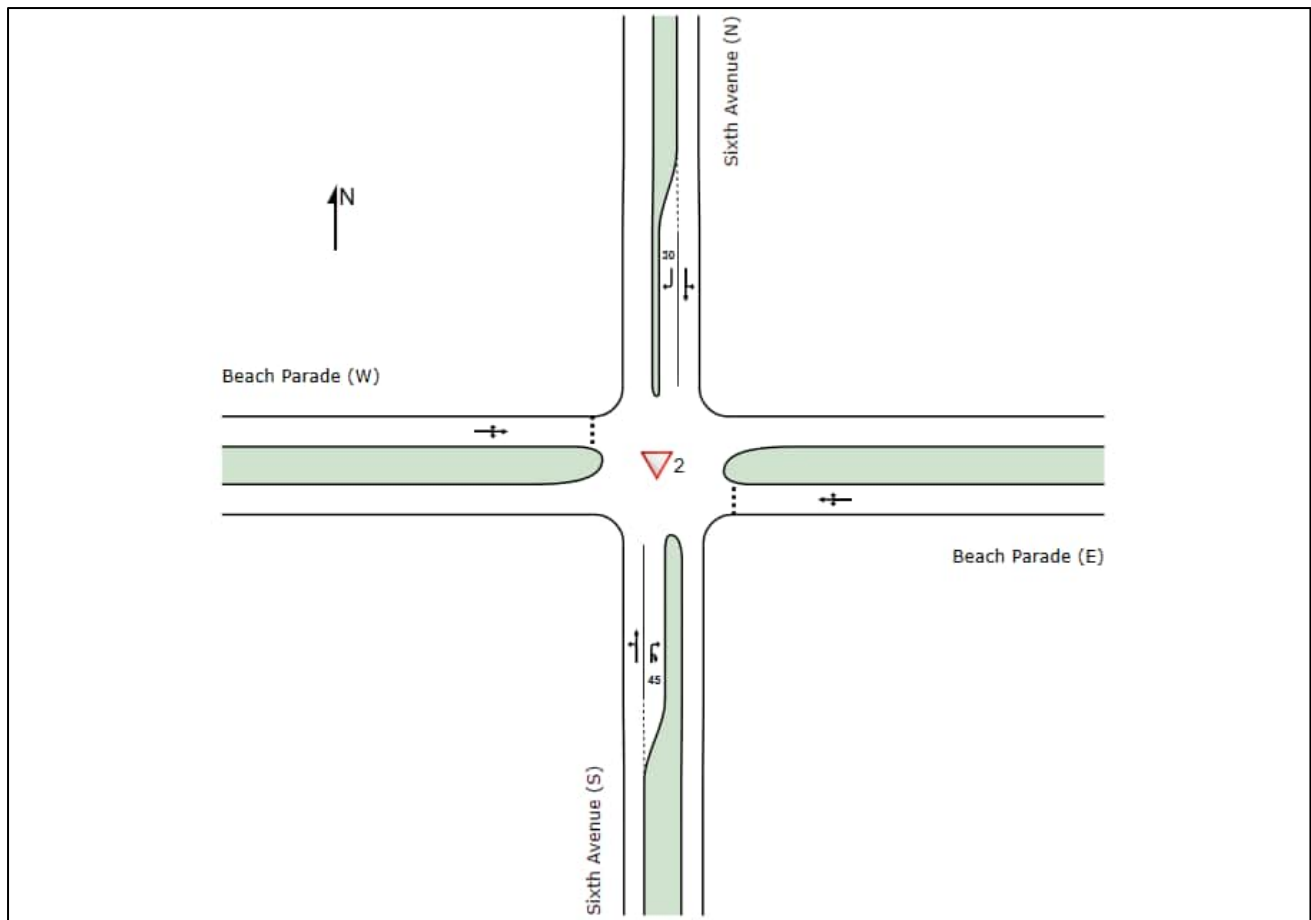
Table 4.4: Sixth Avenue / Memorial Avenue – SIDRA Results Summary

Year	Peak	Scenario	Total Vehicles	Degree of Saturation (DOS)	Average Delay (s)	Critical Delay (s)	95 th %ile Queue (m)
2026	Weekday PM	BG	751	0.15	3	16	4
	Weekend AM		948	0.33	5	23	10
	Weekday PM	BG+DEV	801	0.16	3	17	4
	Weekend AM		999	0.37	5	25	11
2036	Weekday PM	BG	862	0.19	3	19	5
	Weekend AM		1,088	0.46	6	30	15
	Weekday PM	BG+DEV	913	0.20	3	20	5
	Weekend AM		1,139	0.51	6	34	17

The results for each scenario indicate that the Sixth Avenue / Memorial Avenue intersection will perform well within typically adopted performance thresholds for a priority-controlled intersection (i.e. DOS < 0.80 and critical delay < 57 seconds). Redevelopment traffic volumes will have negligible impacts on intersection performance. Accordingly, no upgrades are warranted to offset redevelopment traffic impacts.

4.5.2 Sixth Avenue / Beach Parade

Figure 4.2 illustrates the Sixth Avenue / Beach Parade intersection configuration assessed in SIDRA.



Source: SIDRA

Figure 4.2: Sixth Avenue / Beach Parade – SIDRA Layout

The analysis results are summarised in Table 4.5 with detailed outputs included at **Appendix E**.

Table 4.5: Sixth Avenue / Beach Parade – SIDRA Results Summary

Year	Peak	Scenario	Total Vehicles	Degree of Saturation (DOS)	Average Delay (s)	Critical Delay (s)	95 th %ile Queue (m)
2026	Weekday PM	BG	761	0.17	3	14	5
	Saturday AM		977	0.25	3	19	7
	Weekday PM	BG+DEV	848	0.22	4	16	6
	Saturday AM		1,061	0.26	4	20	8
2036	Weekday PM	BG	882	0.21	3	18	6
	Saturday AM		1,126	0.34	3	25	11
	Weekday PM	BG+DEV	969	0.27	4	20	8
	Saturday AM		1,219	0.36	4	28	11

The results for each scenario indicate that the Sixth Avenue / Beach Parade intersection will perform well within typically adopted performance thresholds for a priority-controlled intersection (i.e. DOS < 0.80 and critical delay < 57 seconds). Redevelopment traffic volumes will have negligible impacts on intersection performance. Accordingly, no upgrades are warranted to offset redevelopment traffic impacts.

5. SUMMARY

Key findings are summarised below:

- The subject site is reasonably well serviced by public transport. No changes to existing public transport services / infrastructure are required to support the proposed redevelopment
- Vehicular access to the subject site (for service vehicles and club vehicles only) is proposed via two (2) new driveway crossovers on Alexandra Parade. Sight distances at the proposed interim driveways are expected to comply with AS2890 requirements
- The redevelopment is not expected to result in car parking impacts significantly greater than those expected in and around popular beach locations
- Swept path diagrams indicate that the proposed redevelopment servicing areas will be accessible by MRVs and rear loading RCVs, subject to suitable height clearance being provided. It is recommended that at least 4m clearance is provided in the servicing areas
- The results of SIDRA analysis undertaken at the Sixth Avenue / Memorial Avenue intersection and the Sixth Avenue / Beach Parade intersection indicates that both will operate acceptably for the foreseeable future. Redevelopment traffic volumes are expected to have minimal impacts on intersection operations. Accordingly, no upgrades are warranted to offset redevelopment traffic impacts.

Based on the findings of this report, we are of the view that there are no traffic engineering related matters to preclude approval of this development application subject to reasonable and relevant conditions.


Appendix A: Redevelopment Plans



**MAROOCHYDORE SURF LIFESAVING CLUB
RE-DEVELOPMENT**
ALEXANDRA PARADE, MAROOCHYDORE

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 **Maroochy Surf Club**

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

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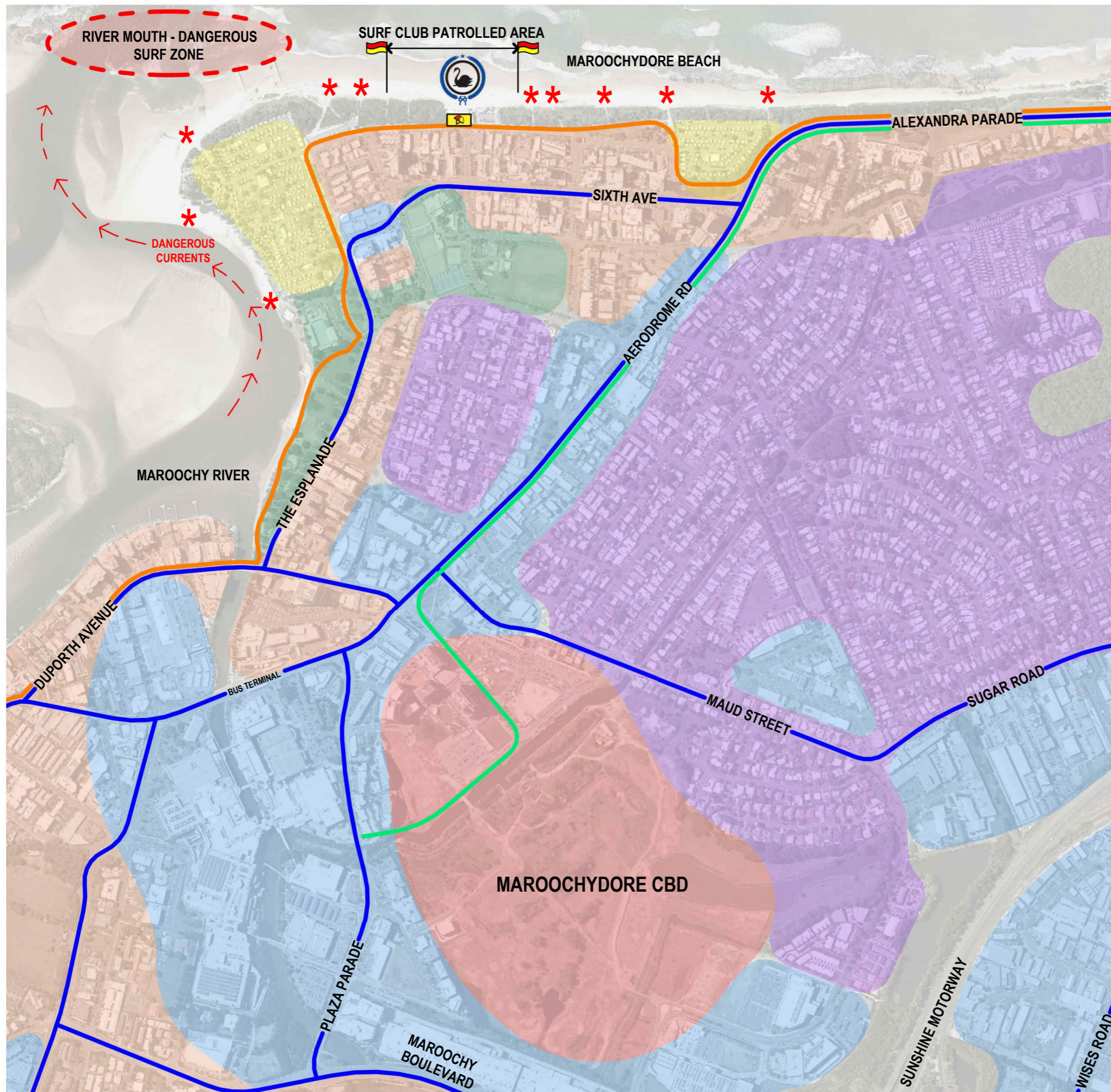
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INTERIOR DESIGN
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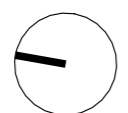
LEGEND

- * BEACH ACCESS TO DANGEROUS UNPATROLLED AREA
- PROPOSED LIGHT RAIL NETWORK
- COASTAL BIKE PATHWAY
- PUBLIC BUS ROUTES
- TOURIST PARK ZONE
- SHOPPING & COMMERCIAL ZONE
- MEDIUM DENSITY ZONE
- HIGH DENSITY RESIDENTIAL / SHORT TERM ACCOM. ZONE

LOCALITY / ZONING PLAN

SURROUNDING

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
Maroochy Surf Club

LOCATION
 ALEXANDRA PDE, MAROOCHYDORE

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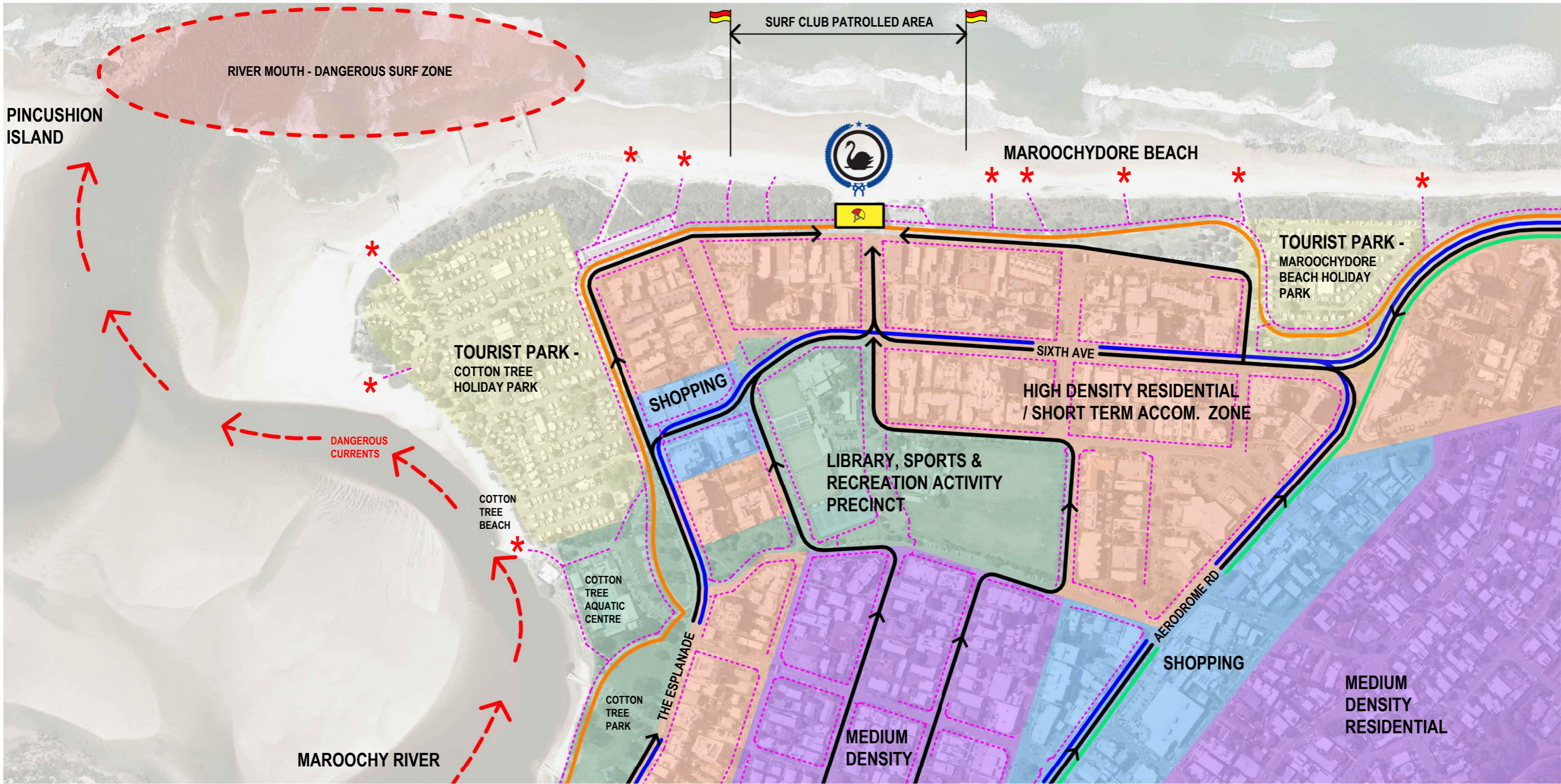
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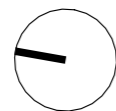
LOCALITY / ZONING PLAN

LOCALISED

LEGEND

- PEDESTRIAN NETWORK
- PRIMARY ROAD NETWORK
- PROPOSED LIGHT RAIL NETWORK
- COASTAL BIKE PATHWAY
- PUBLIC BUS ROUTES
- * BEACH ACCESS TO DANGEROUS UNPATROLLED AREA

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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT
Maroochy Surf Club
 LOCATION
 ALEXANDRA PDE, MAROOCHYDORE

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EXISTING SITE PLAN

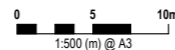
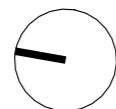
MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
FIRST	n/a	1155m ²	306m ²	1155m ²	
SECOND	22m ²	502m ²	1026m ²	502m ²	
TOTAL	1116m ²	1688m ²	4760m ²	1657m ²	
OVERALL TOTALS	2804m²		6417m²		

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

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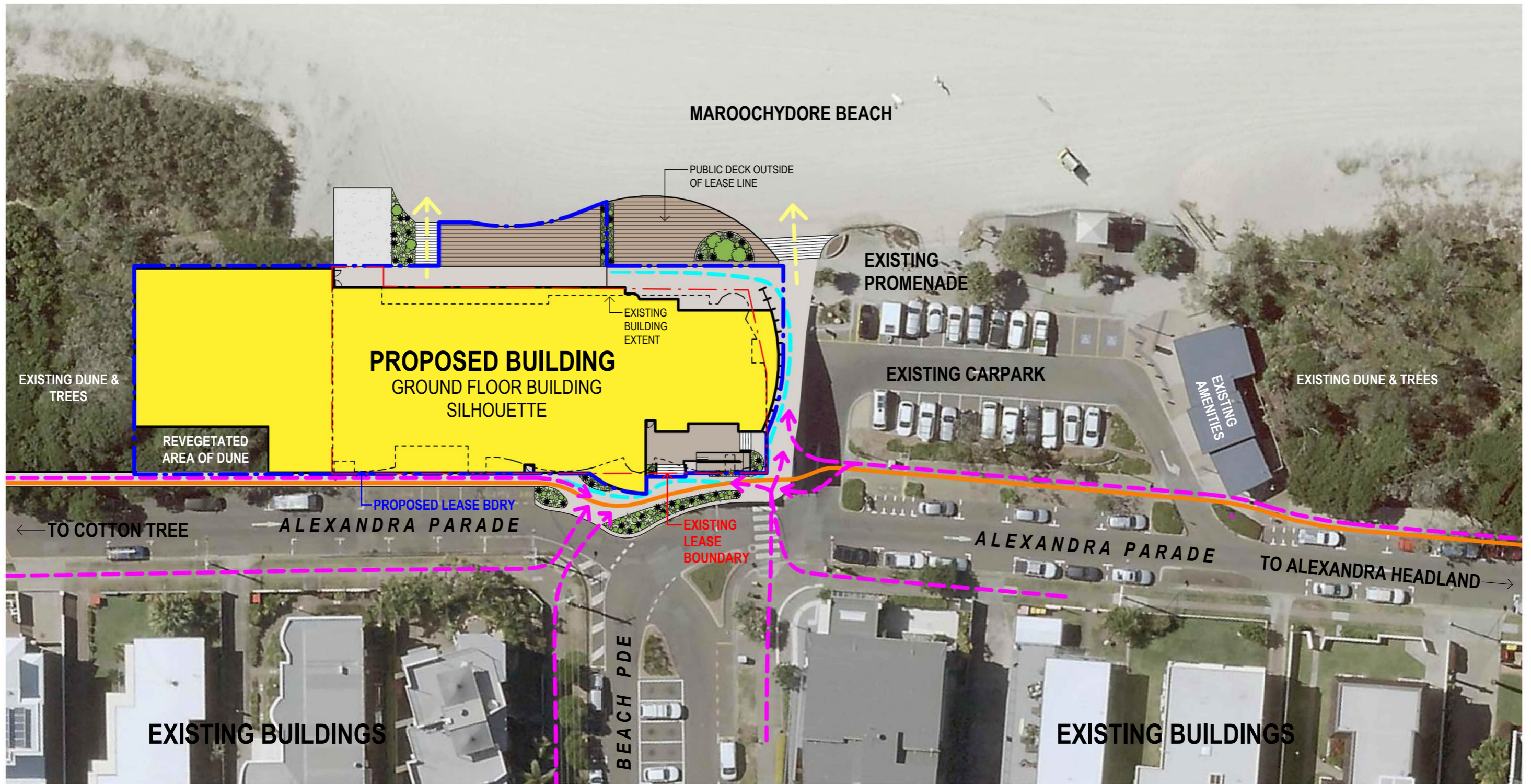
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PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

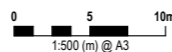
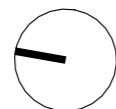
ACCESS LEGEND

- ACTIVE FRONTAGE
- BEACH ACCESS
- PEDESTRIAN TRAFFIC
- COASTAL BIKE PATHWAY

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
FIRST	n/a	1155m ²	306m ²	1155m ²	
SECOND	22m ²	502m ²	1026m ²	502m ²	
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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

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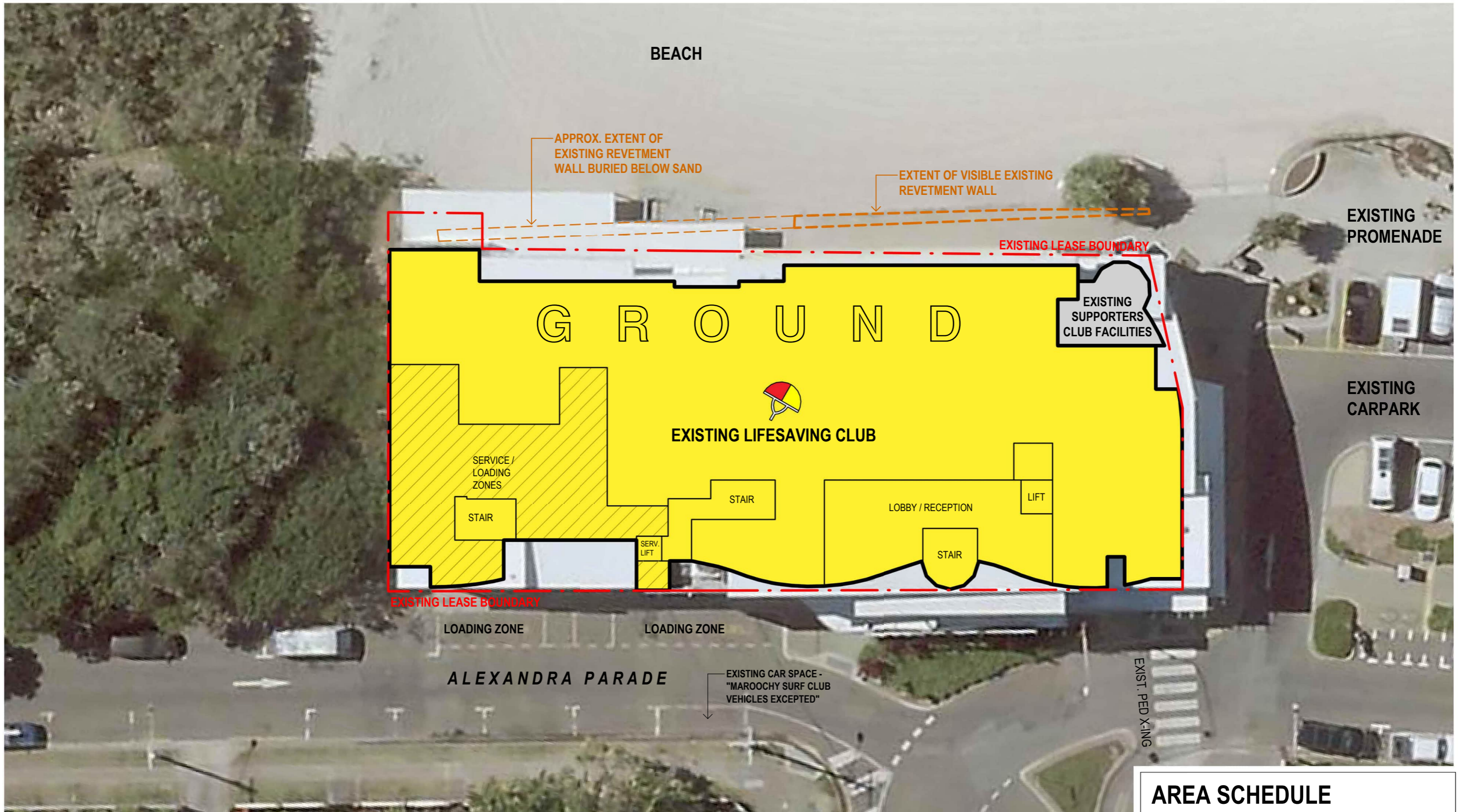
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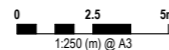
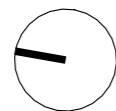


AREA SCHEDULE	
	1094m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	31m ² - SUPPORTERS CLUB FACILITIES
1125m² - TOTAL AREA	

EXISTING GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

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PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

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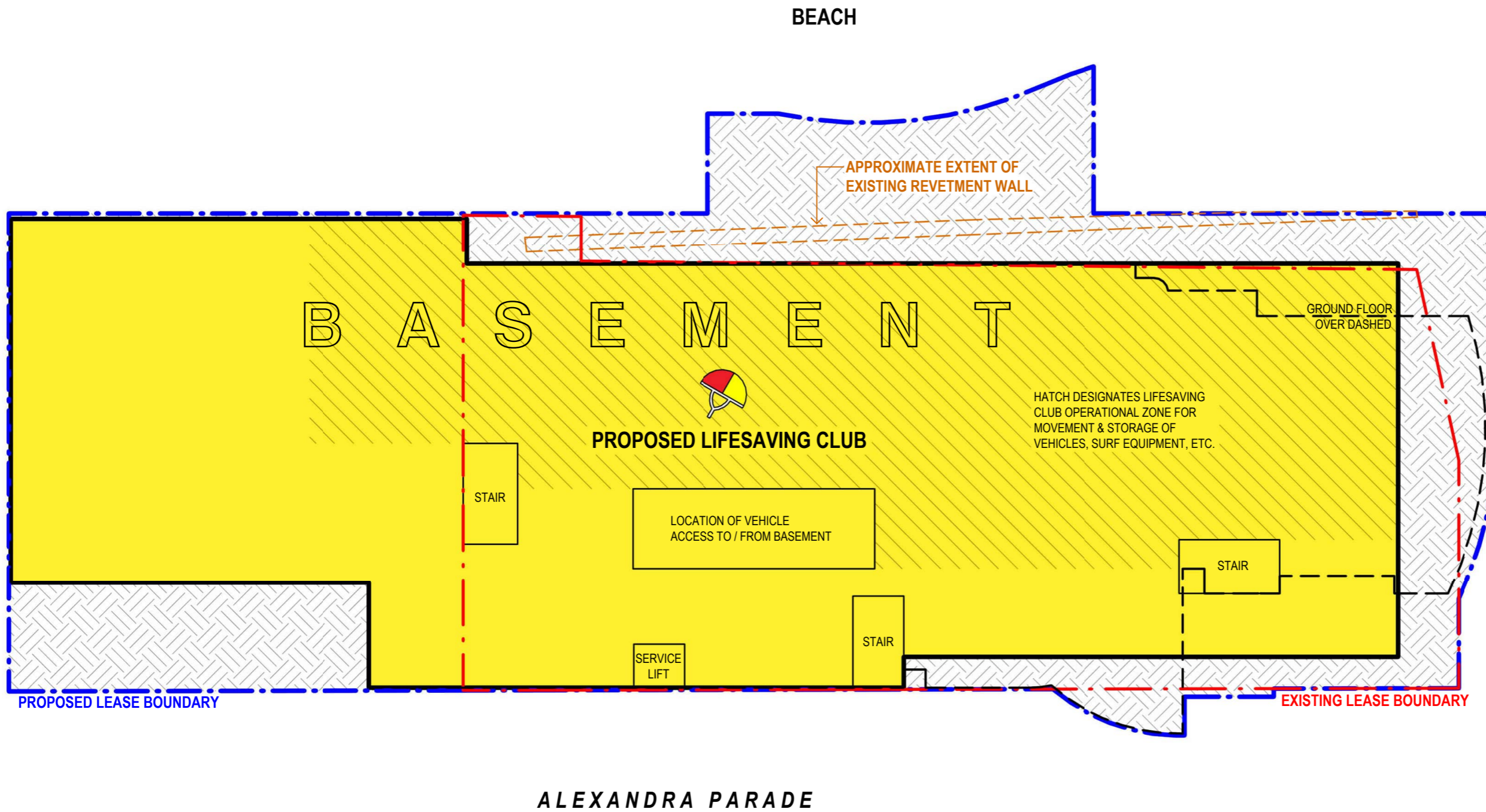
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PROPOSED - BASEMENT PLAN

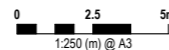
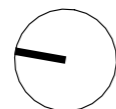
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1694m² - LIFESAVING CLUB ACTIVITIES / FACILITIES

1694m² - TOTAL AREA

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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED BASEMENT PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

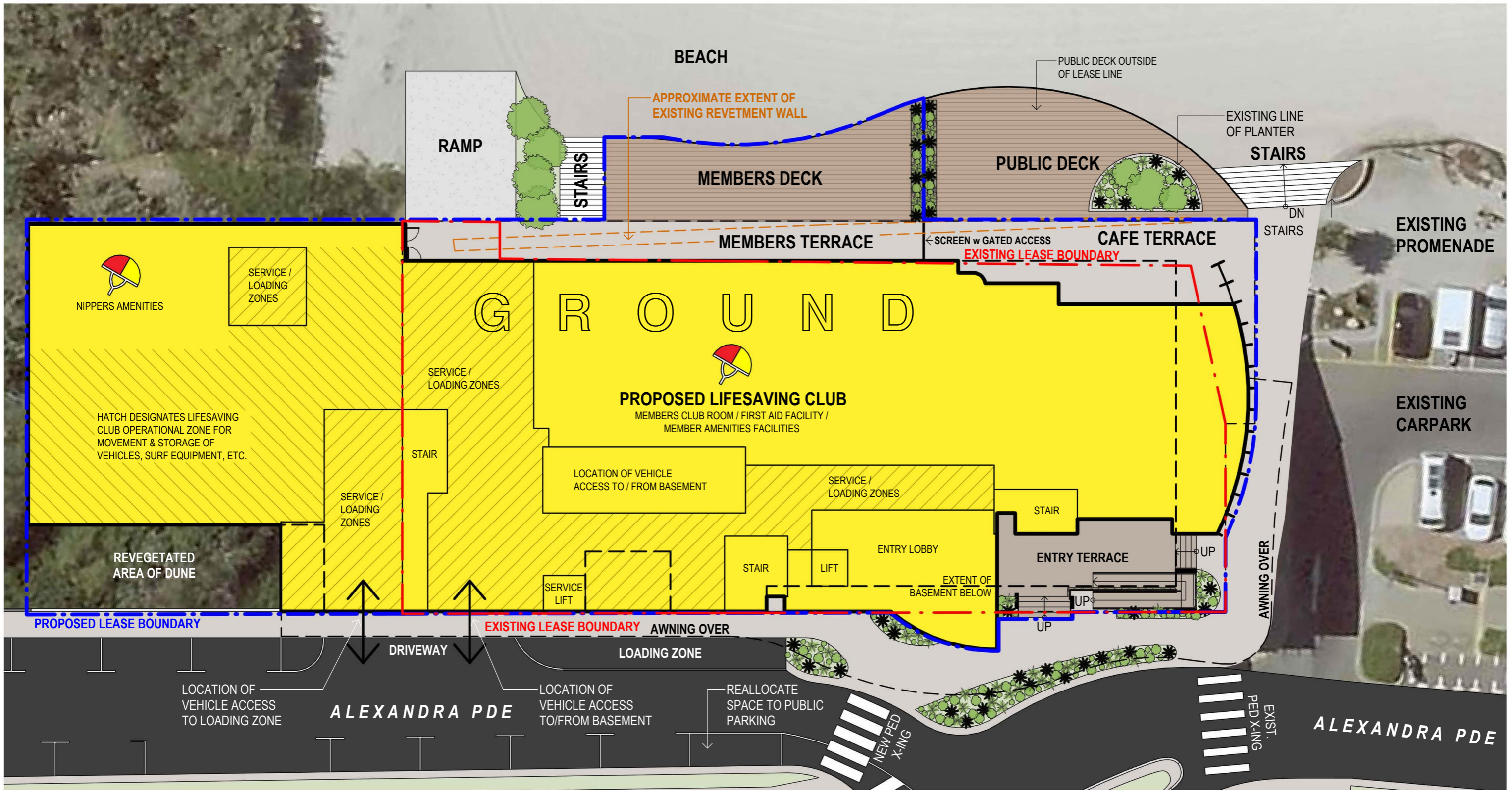
DRAWING NO.
2062 - GOV106

REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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PROPOSED GROUND FLOOR PLAN

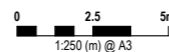
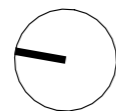
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1734m² - LIFESAVING CLUB ACTIVITIES / FACILITIES

1734m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED GROUND FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV107

REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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EXISTING FIRST FLOOR PLAN

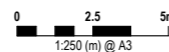
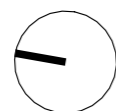
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1155m² - SUPPORTERS CLUB FACILITIES

1155m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING FIRST FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV108

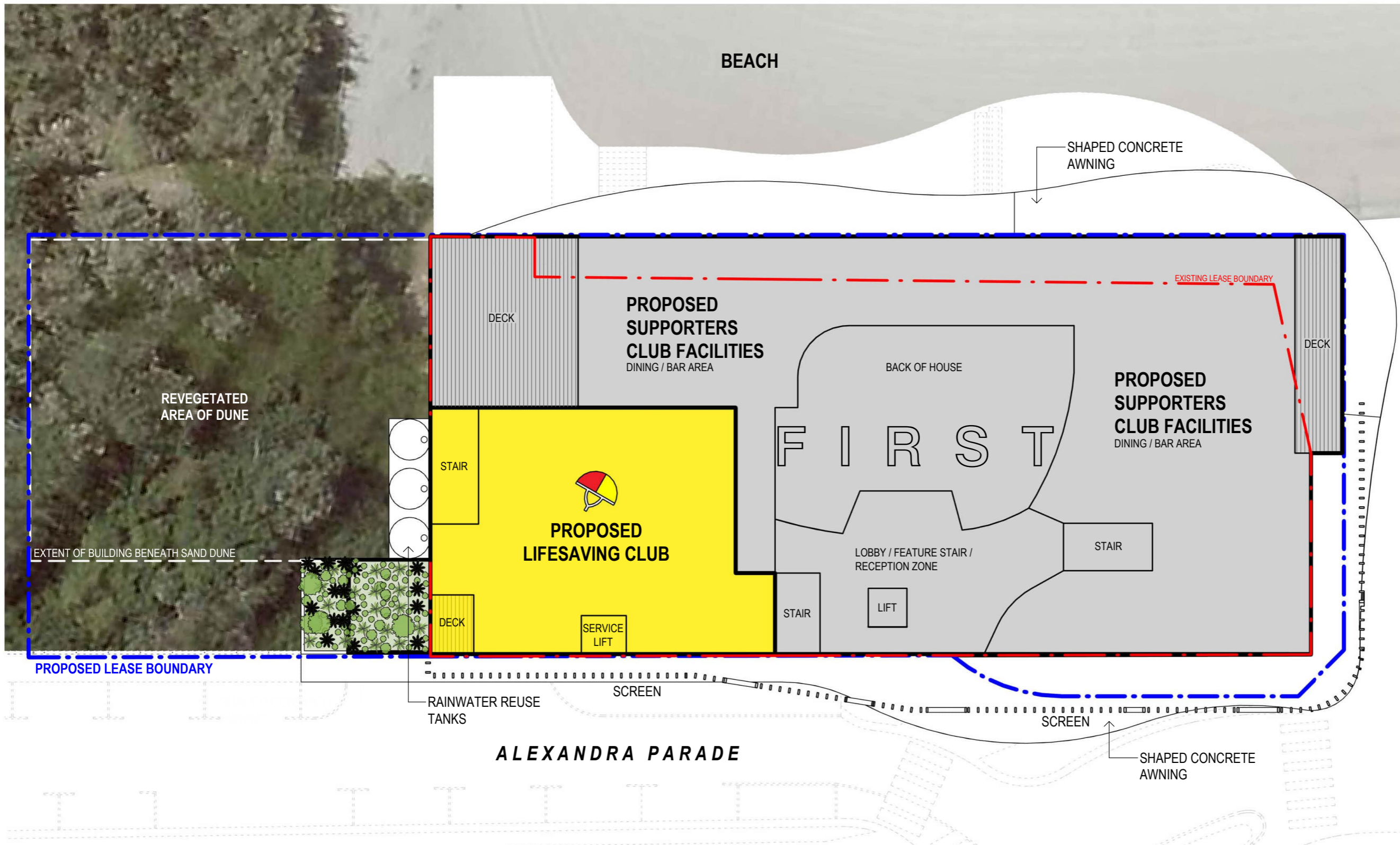
REVISION
F

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INTERIOR DESIGN
DESIGN MANAGEMENT**

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07 5443 3726

BRISBANE
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PROPOSED FIRST FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	306m ² - LIFESAVING CLUB ACTIVITES / FACILITIES
	1155m ² - SUPPORTERS CLUB FACILITIES
1461m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
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C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED FIRST FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

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DRAWING NO.
2062 - GOV109

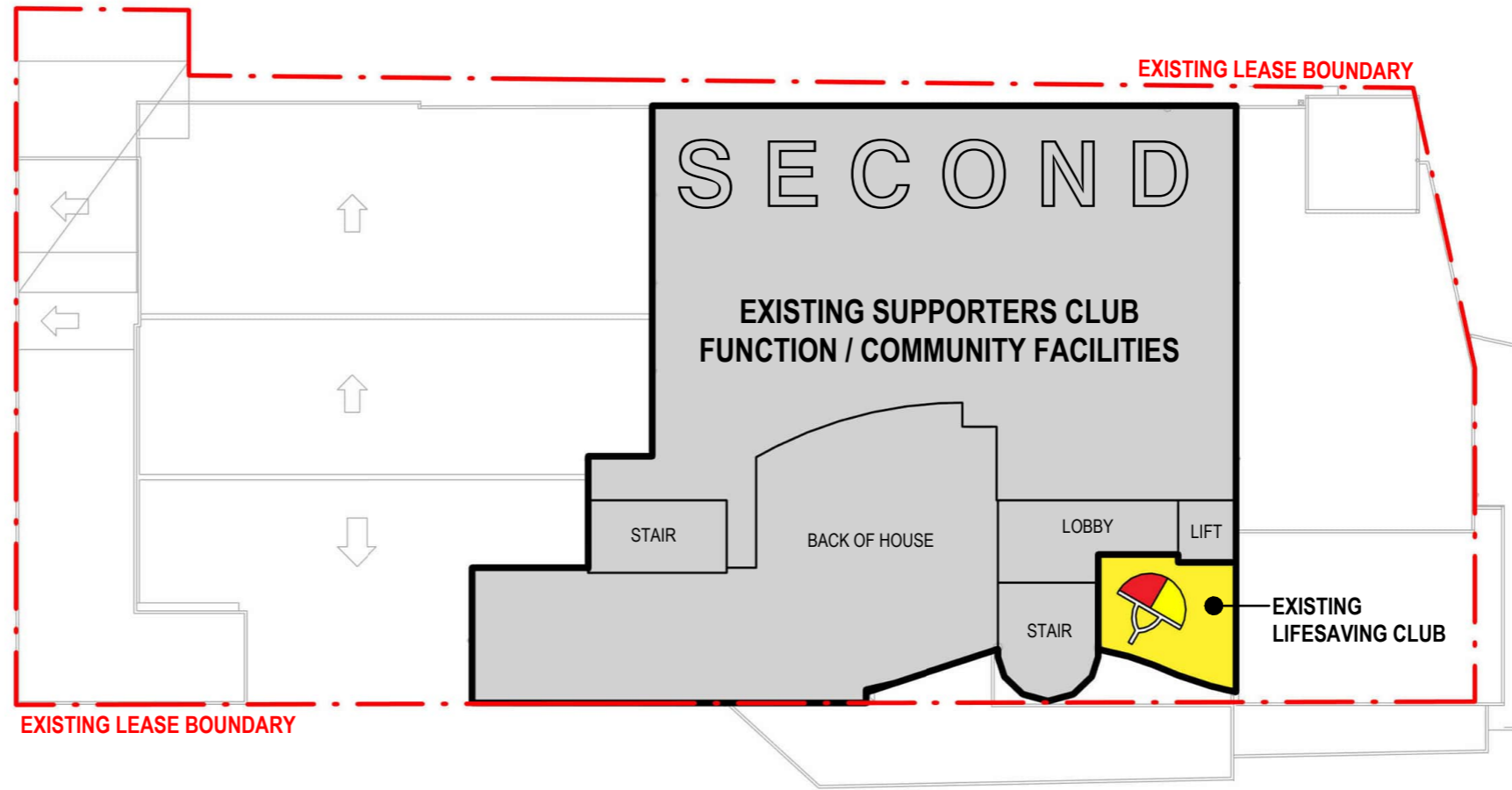
REVISION
F

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DESIGN MANAGEMENT**

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ABN: 60 131 465 891
QBCC: 1160937

BEACH



ALEXANDRA PARADE

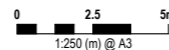
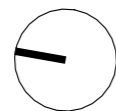
EXISTING SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

	22m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FACILITIES
524m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SECOND FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

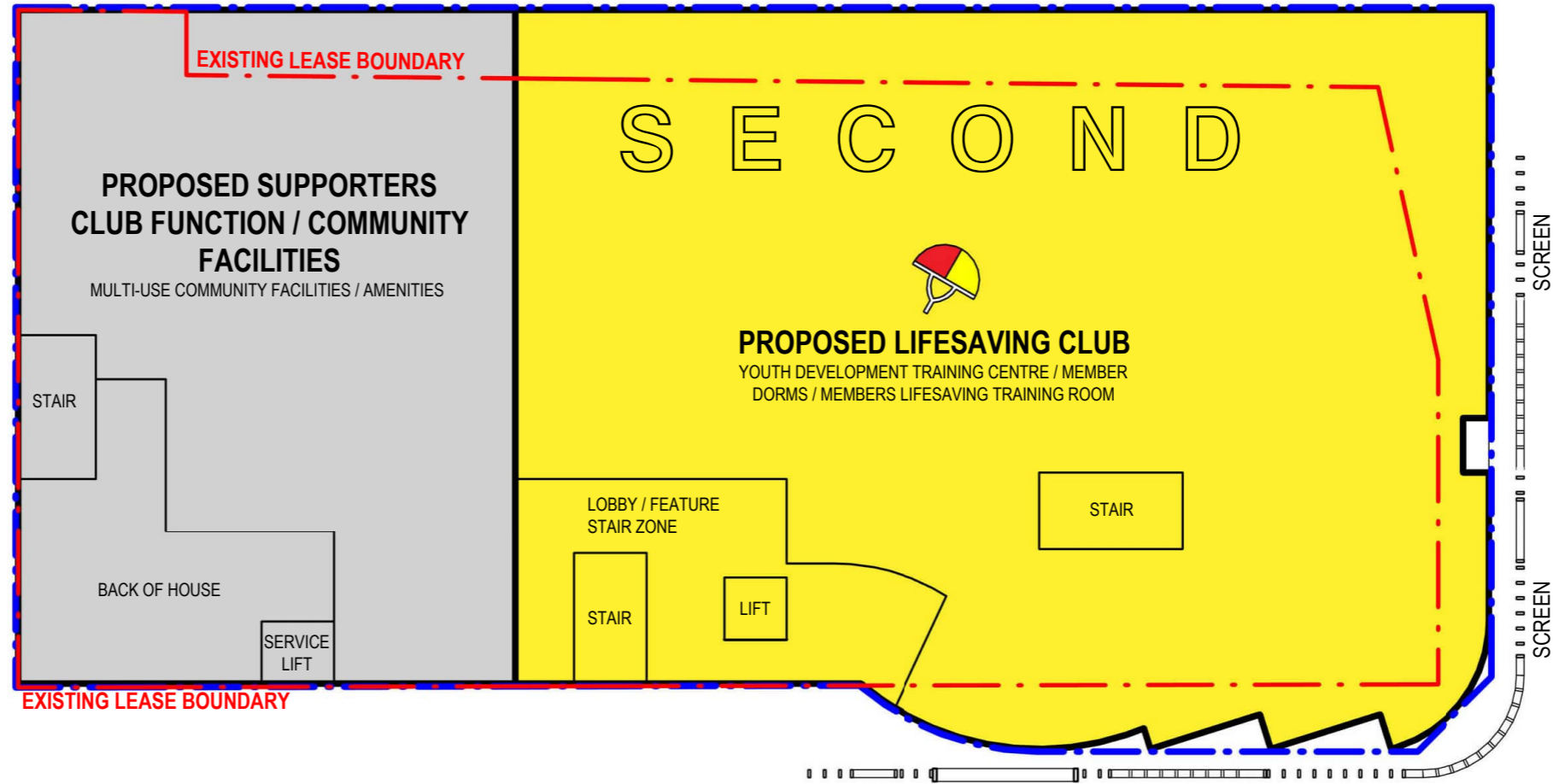
DRAWING NO.
2062 - GOV110

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BEACH



ALEXANDRA PARADE

PROPOSED SECOND FLOOR PLAN


MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1026m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FUNCTION / COMMUNITY FACILITIES
1528m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
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C	ISSUE FOR APPROVAL	AJM	20.02.2024
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED SECOND FLOOR PLAN

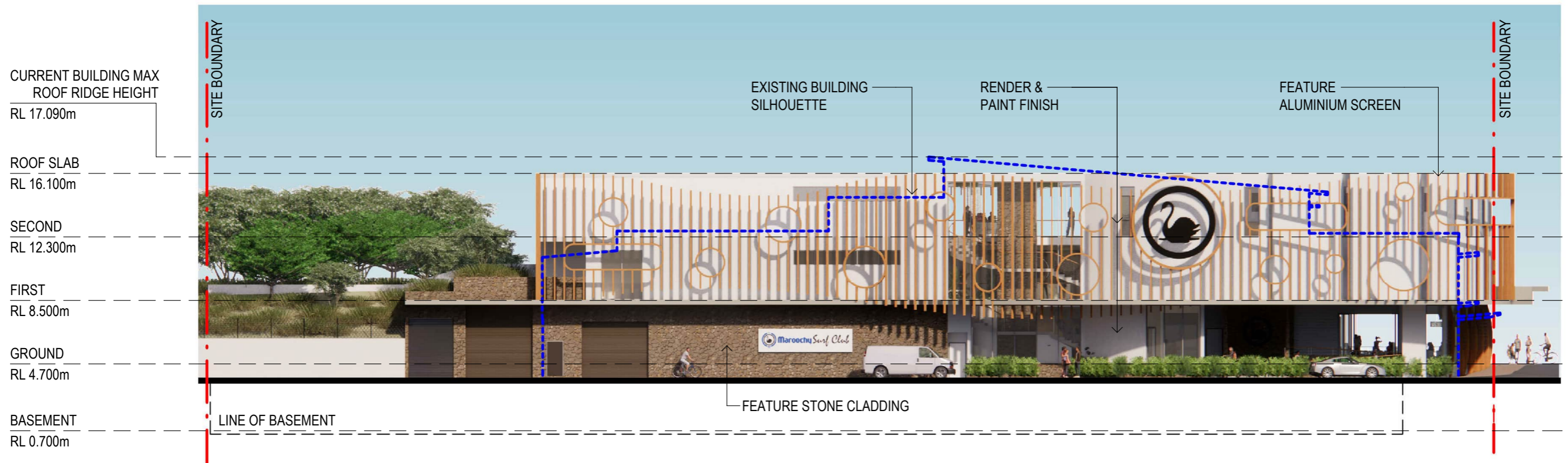
DATE	DRAWN	CHECKED
JUNE 2022	AJM	

DRAWING NO.	REVISION
2062 - GOV111	F

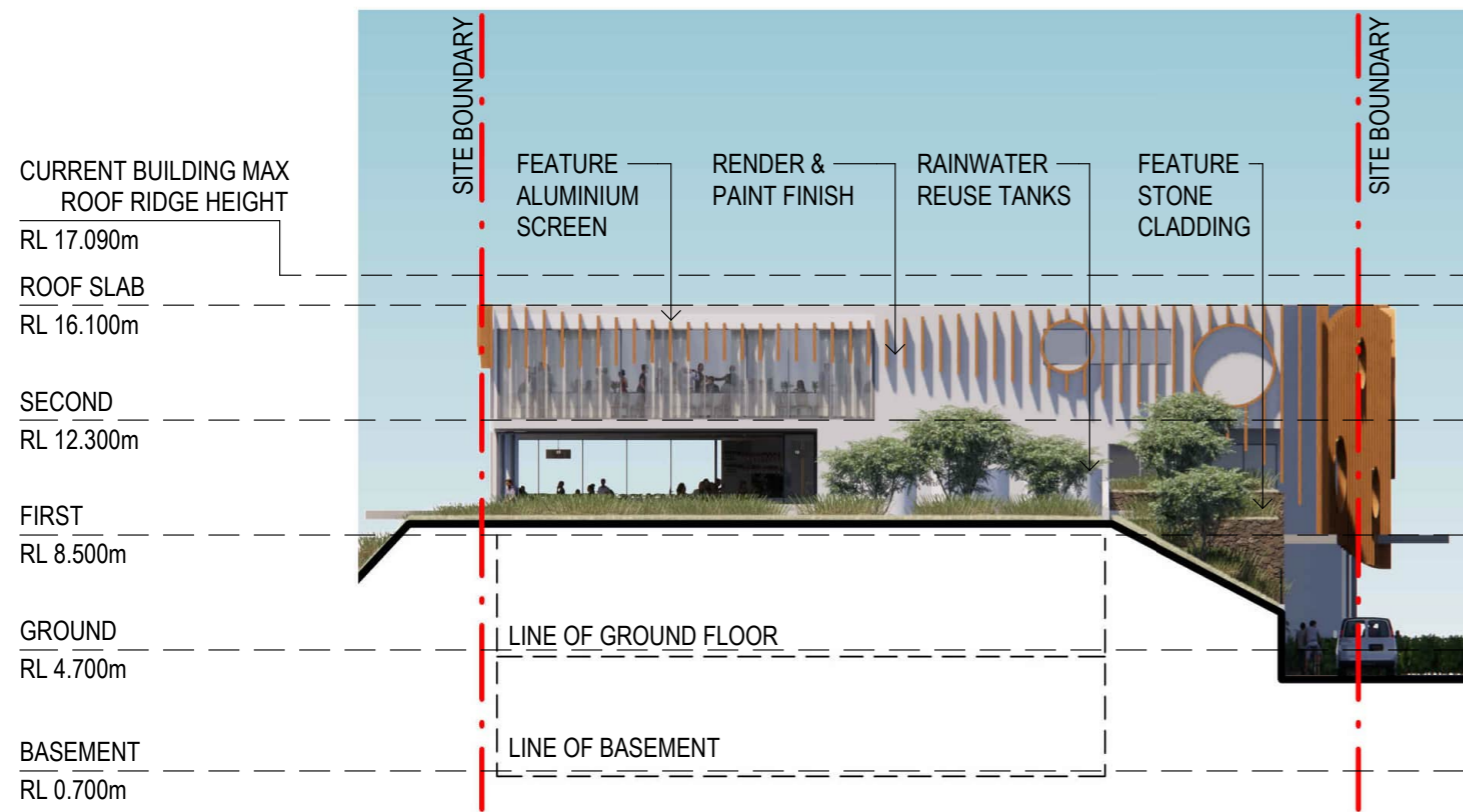
**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**



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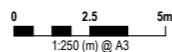


WEST ELEVATION



NORTH ELEVATION

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - WEST & NORTH

DATE	DRAWN	CHECKED
JUNE 2022	AJM	

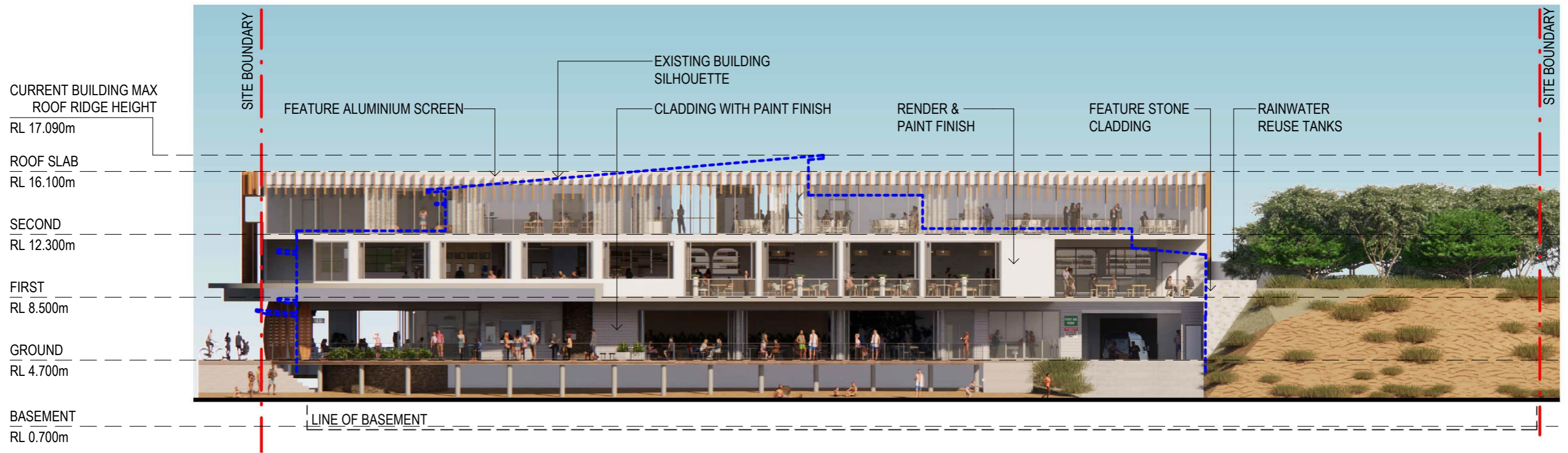
DRAWING NO.	REVISION
2062 - GOV201	F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

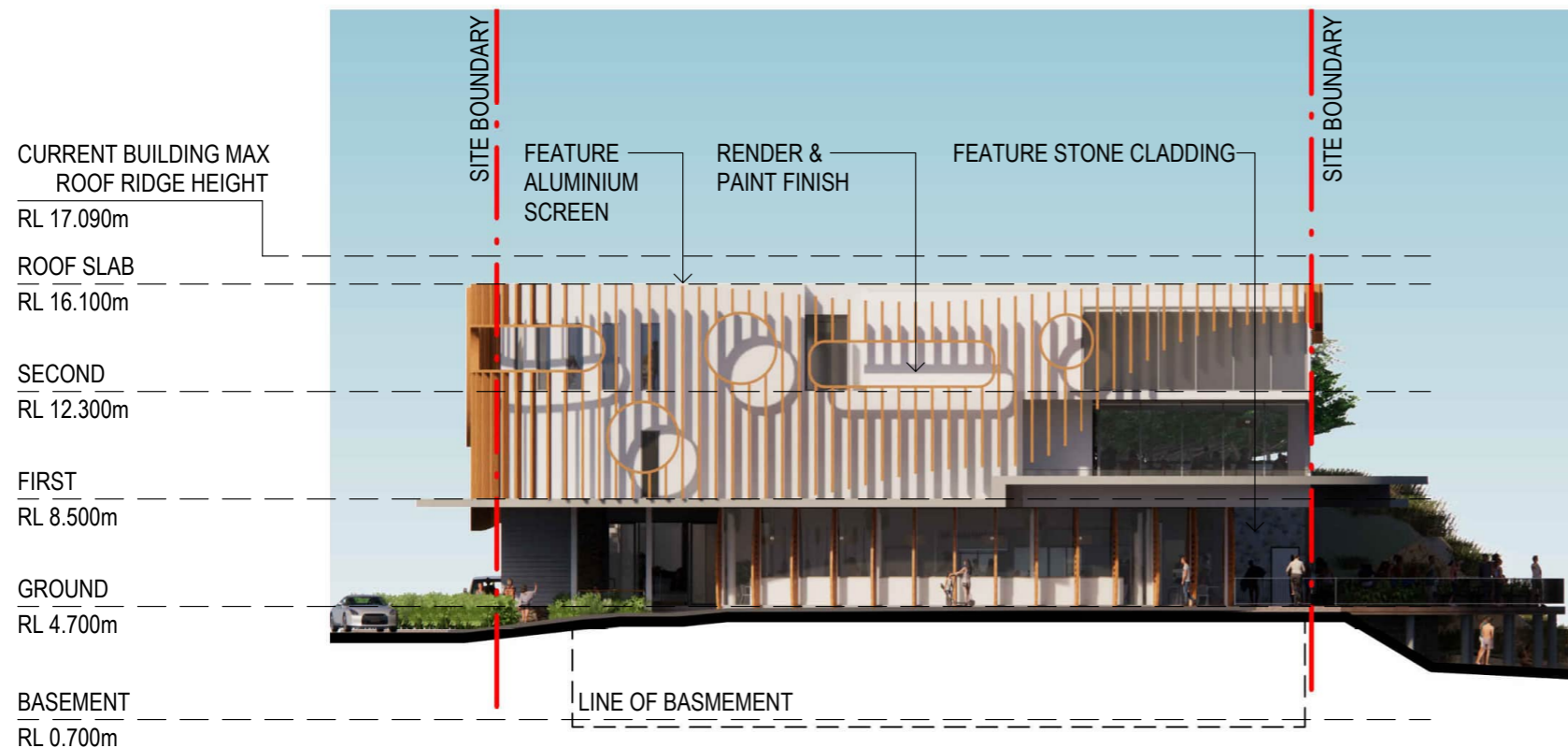


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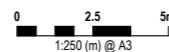


EAST ELEVATION



SOUTH ELEVATION

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - EAST & SOUTH

DATE	DRAWN	CHECKED
JUNE 2022	AJM	

DRAWING NO.	REVISION
2062 - GOV202	F

**BUILDING DESIGN
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DESIGN MANAGEMENT**



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PERSPECTIVE VIEW 1



PERSPECTIVE VIEW 2



PERSPECTIVE VIEW 3



PERSPECTIVE VIEW 4

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS

DATE	DRAWN	CHECKED
JUNE 2022	AJM	
DRAWING NO.	REVISION	
2062 - GOV203	F	

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 QBCC: 1160937



PERSPECTIVE VIEW 5



PERSPECTIVE VIEW 6



PERSPECTIVE VIEW 7



PERSPECTIVE VIEW 8

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS

DATE: JUNE 2022 DRAWN: AJM CHECKED:

DRAWING NO.
2062 - GOV204 REVISION: **F**

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ABN: 60 131 465 891 QBCC: 1160937



PERSPECTIVE VIEW 9



PERSPECTIVE VIEW 10

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	28.03.2024
B	ISSUE FOR APPROVAL	AJM	03.04.2024
C	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT



LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS

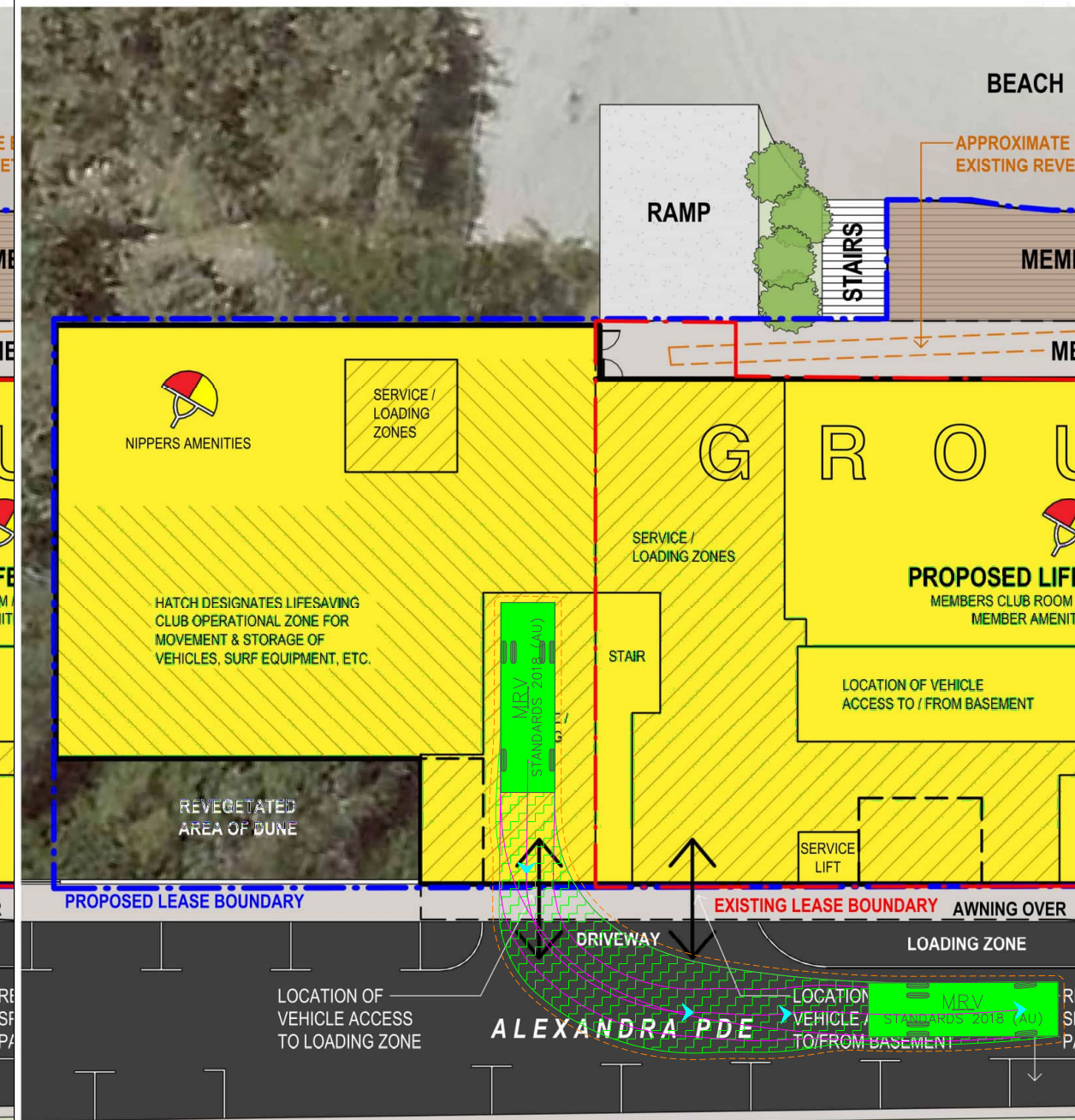
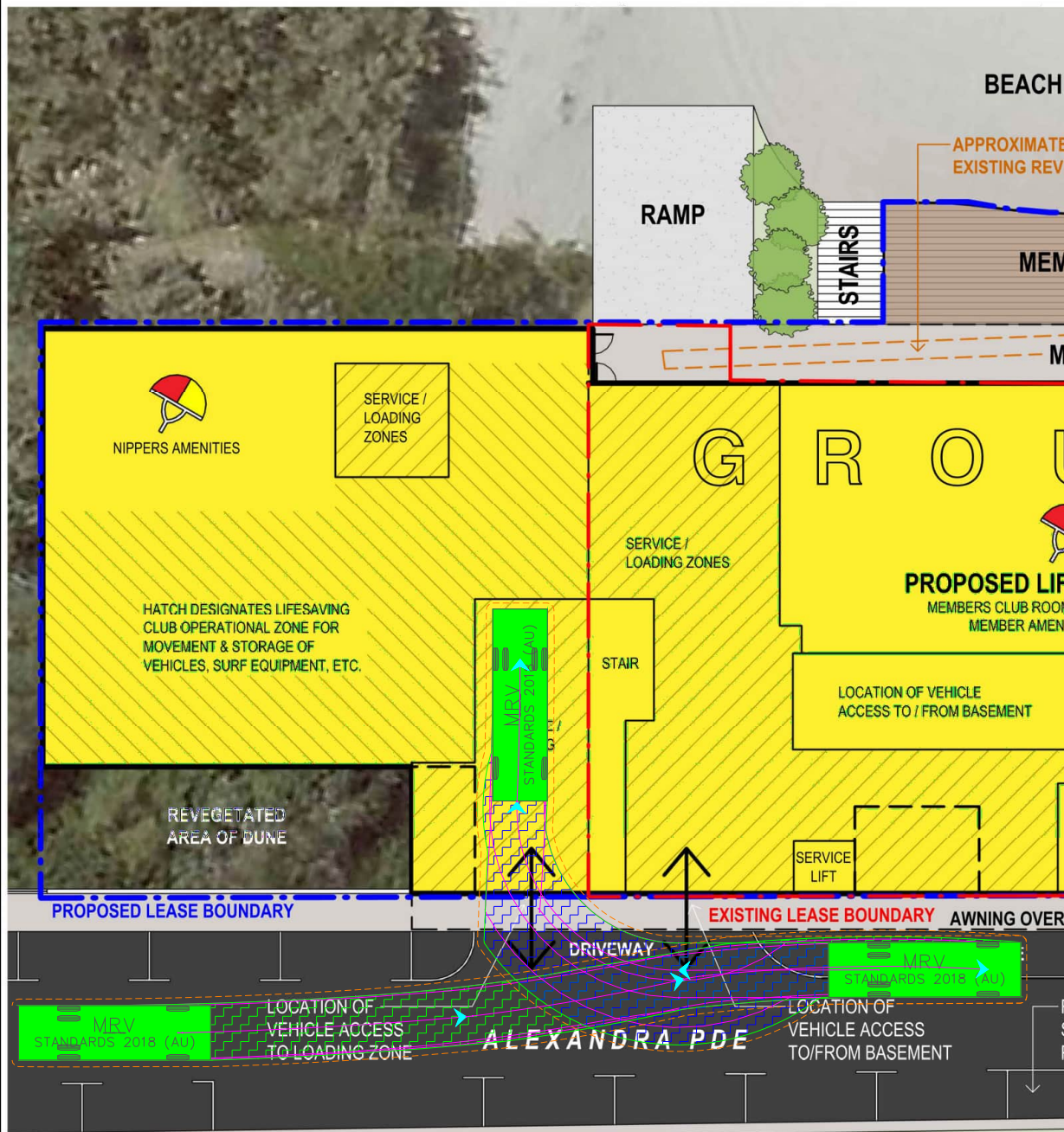
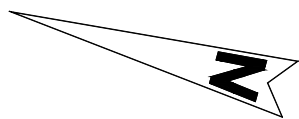
DATE	DRAWN	CHECKED
JUNE 2022	AJM	
DRAWING NO.	REVISION	
2062 - GOV205	C	

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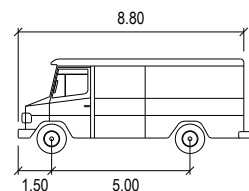
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Appendix B: Swept Path Diagrams



Vehicle Clearance (300mm)



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

DESIGN VEHICLE

PROPOSED GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

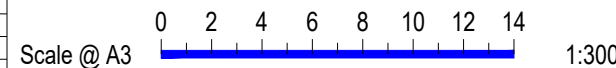
PROPOSED GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

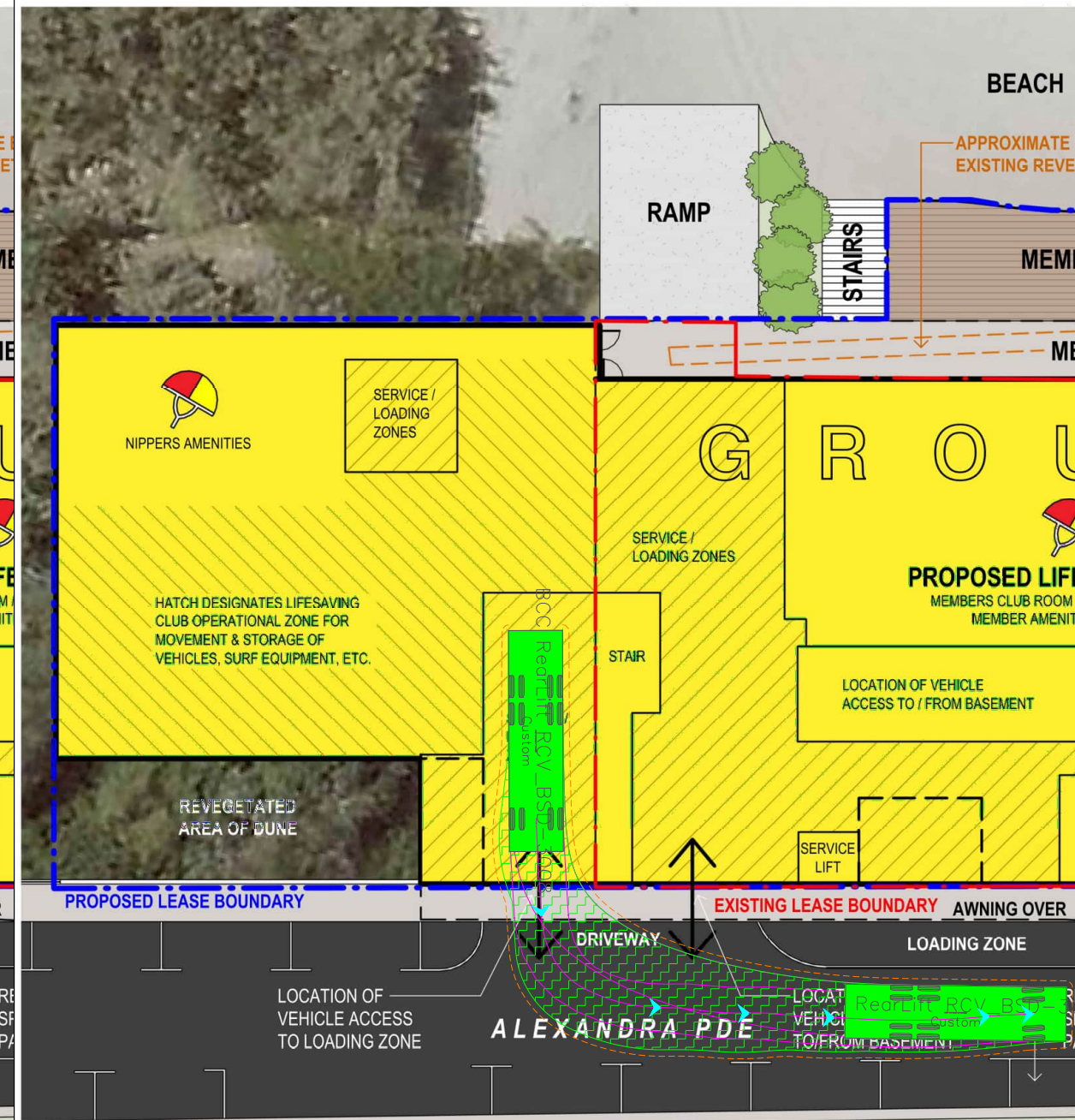
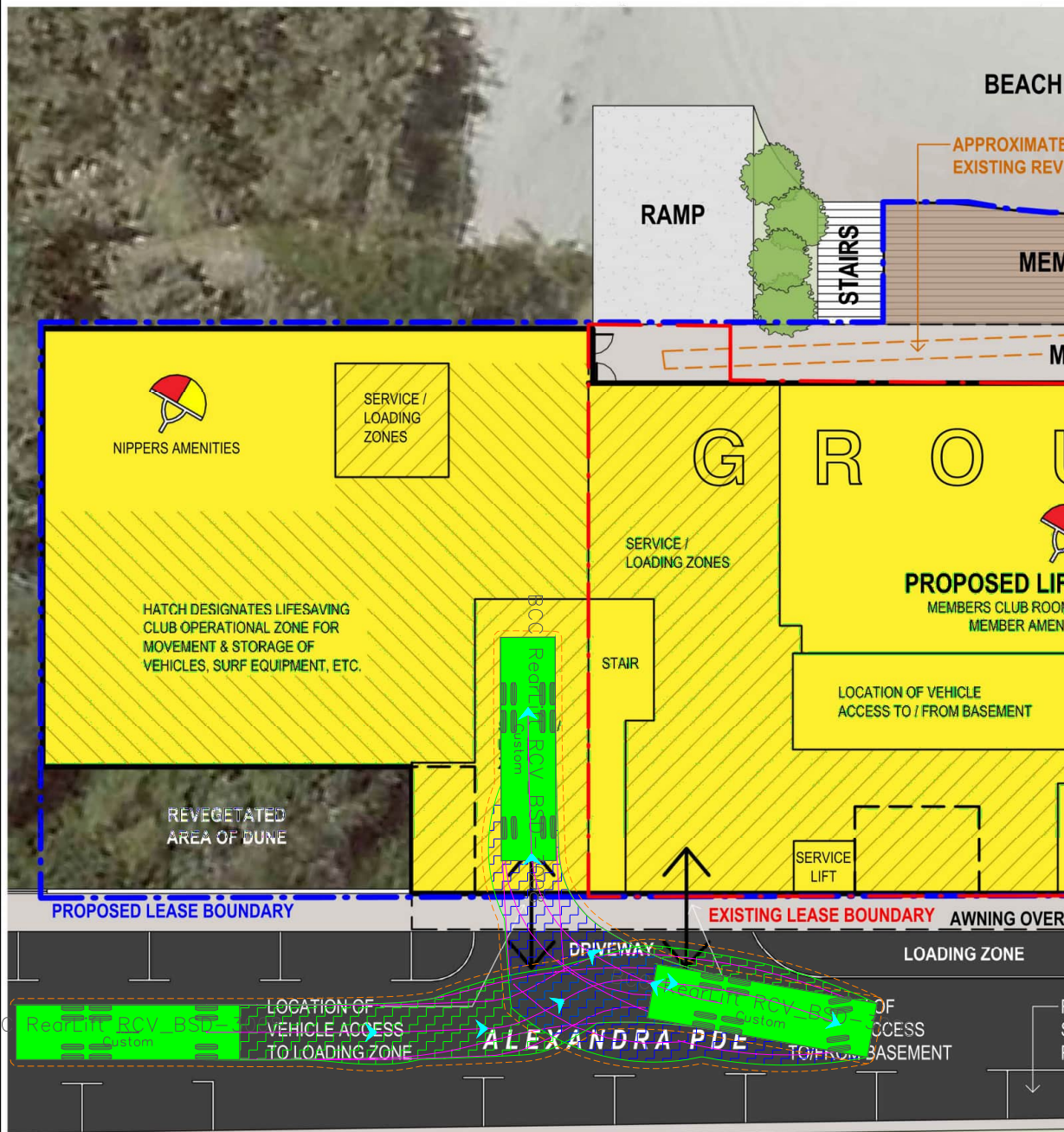
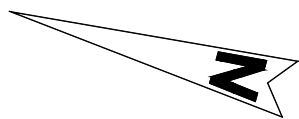


Gold Coast
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
Level 2, 428 Upper Edward Street, Spring Hill 4000
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
Sydney
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

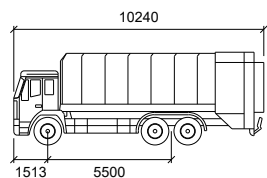
REVISIONS		Drawn	Date
Issue	Revisions/Descriptions		
001	Swept Path Assessment	R.TU	09.05.2024



Project	Maroochydore SLSC TIA	Design	R.TU	Drawn	R.TU	Checked	N.E
Title	Ground Floor Northern Servicing Area - MRV Manoeuvring	CONCEPT ONLY		Date	09.05.2024		
Project Number	P6331	Sheet Number	1		Issue	001	



Vehicle Clearance (300mm)



BCC RearLift RCV_BSD-3008

mm
 Width : 2500
 Track : 2500
 Lock to Lock Time : 6.0
 Steering Angle : 44.4

DESIGN VEHICLE

PROPOSED GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

PROPOSED GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

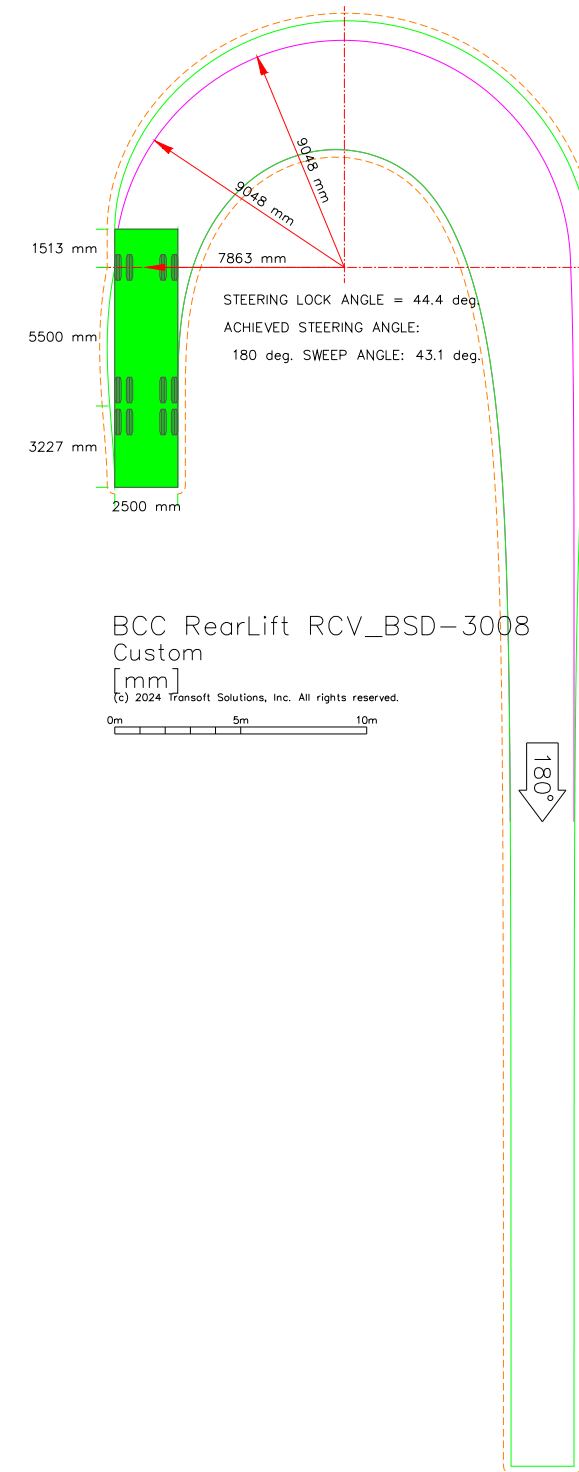
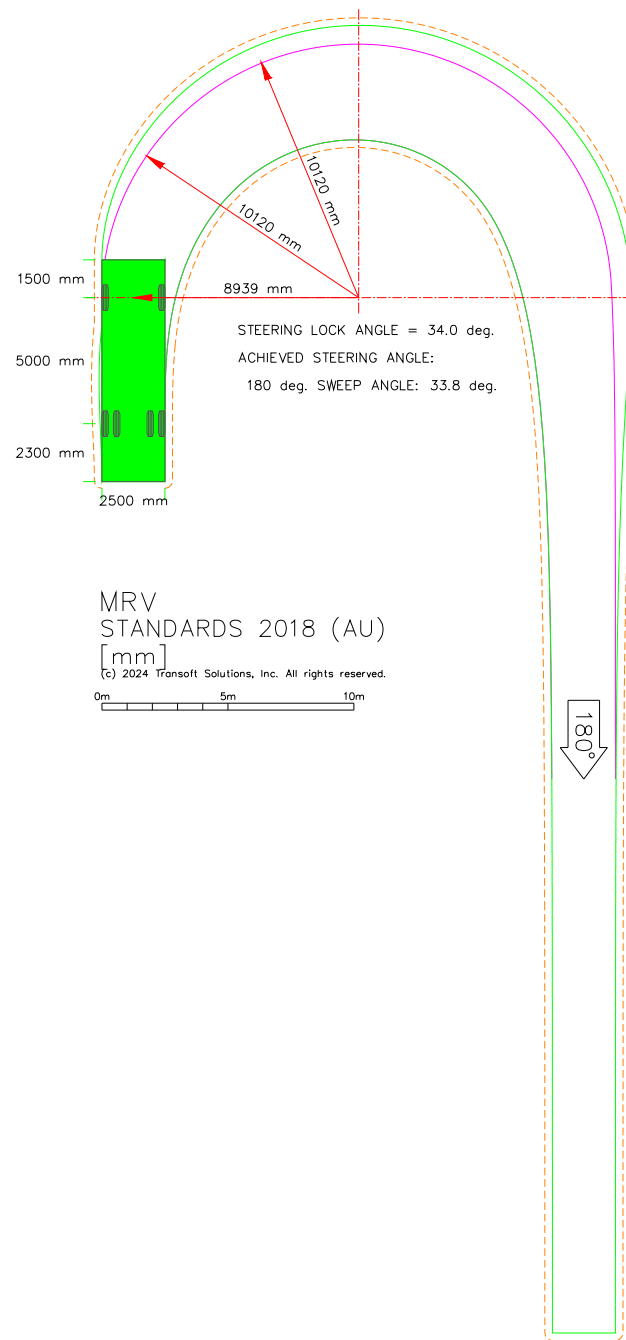
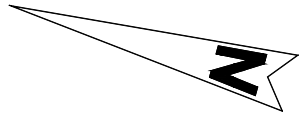


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 Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
 P: (07) 5562-5377
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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	R.TU	09.05.2024

Scale @ A3 1:300

Project Maroochydore SLSC TIA	Design R.TU	Drawn R.TU	Checked N.E
	CONCEPT ONLY		
Title Ground Floor Northern Servicing Area - RCV Manoeuvring	Project Number P6331	Sheet Number 2	Date 09.05.2024
	Issue 001		



Vehicle Clearance (300mm)

DESIGN VEHICLE



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Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
Brisbane
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P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	R.TU	09.05.2024

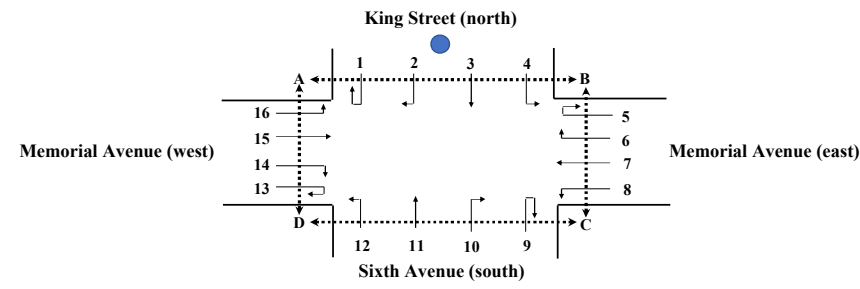
Scale @ A3 1:300

Project	Maroochydore SLSC TIA	Design	R.TU	Drawn	R.TU	Checked	N.E
Title	Vehicle Turn Templates	CONCEPT ONLY			Date	09.05.2024	
		Project Number	P6331	Sheet Number	3	Issue	001

Appendix C: Traffic Survey Data

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 1 Weather: Fine
 Location: Sixth Avenue/Memorial Avenue, Maroochydore
 Day/Date: Thursday, 1 February 2024
 PM Peak: Hour ending - 4:45 PM



TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
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4:00 PM	1	0	1	0	9	0	9	0	45	2	47	2	13	0	13	0	0	0	0	0	4	0	4	0	0	0	0	1	0	1	0	
4:15 PM	0	0	0	0	6	0	6	0	53	3	56	0	9	0	9	0	0	0	0	0	3	0	3	0	6	0	6	0	3	1	4	0
4:30 PM	0	0	0	0	12	0	12	0	51	1	52	1	8	0	8	0	0	0	0	0	4	0	4	0	4	0	4	0	6	0	6	0
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5:45 PM	1	0	1	0	4	0	4	0	44	0	44	0	7	0	7	0	0	0	0	0	1	0	1	0	2	0	2	0	1	0	1	0
6:00 PM	0	0	0	0	9	0	9	0	44	2	46	2	3	0	3	0	0	0	0	0	1	0	1	0	8	0	8	0	2	0	2	0
6:15 PM	0	0	0	0	8	0	8	0	26	1	27	0	2	0	2	0	0	0	0	0	3	0	3	0	4	0	4	0	2	0	2	0
6:30 PM	0	0	0	0	4	0	4	0	35	0	35	0	1	0	1	0	0	0	0	0	1	0	1	0	2	0	2	0	0	0	0	0
3 hr Total	2	0	2	0	83	0	83	1	564	15	579	12	59	0	59	1	0	0	0	0	24	0	24	0	36	0	36	2	35	1	36	0
PM Peak	1	0	1	0	32	0	32	0	208	8	216	4	36	0	36	0	0	0	0	0	13	0	13	0	13	0	13	0	13	1	14	0

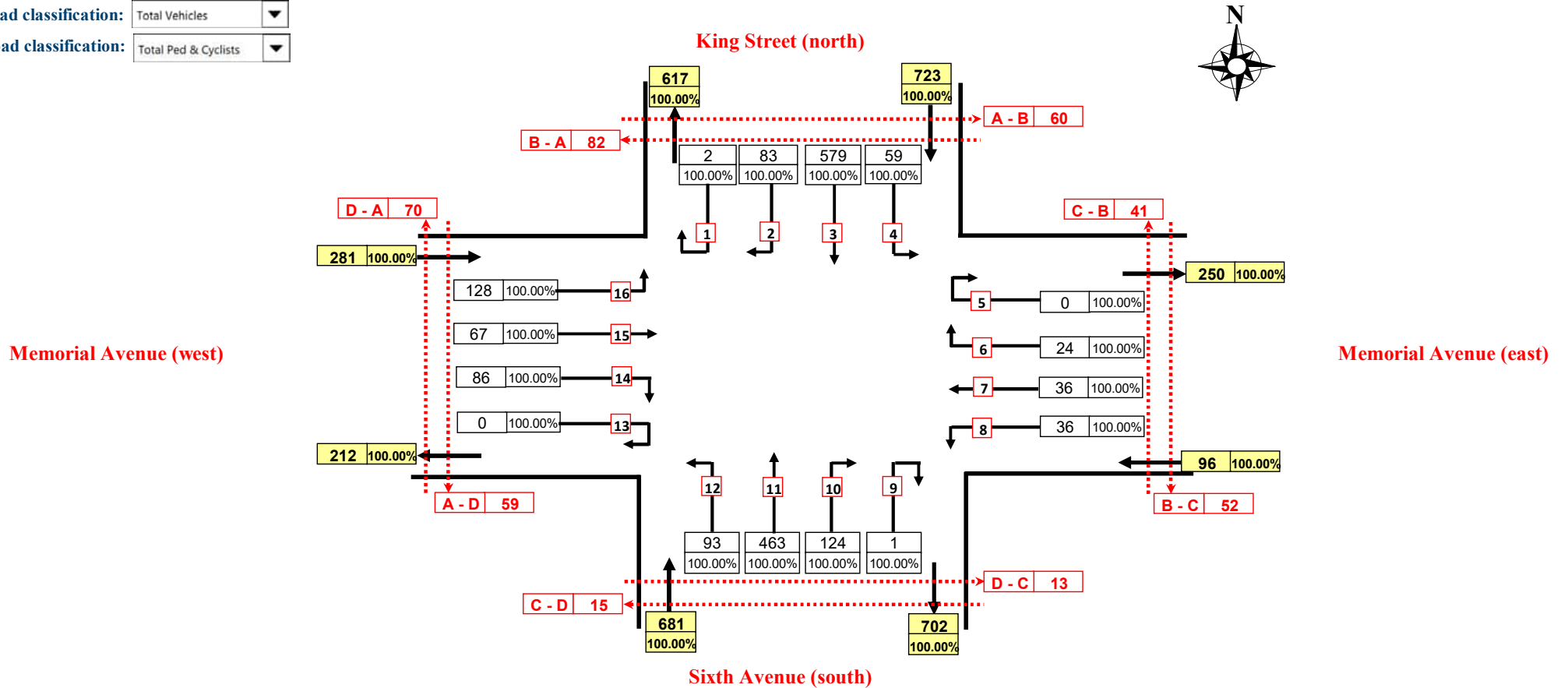
TIME (1/4 hr end)	Movement 9				Movement 10				Movement 11				Movement 12				Movement 13				Movement 14				Movement 15				Movement 16				Pedestrian Movements													
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	A - B	B - A	B - C	C - B	C - D	D - C	D - A	A - D										
3:45 PM	0	0	0	0	14	0	14	0	43	1	44	0	9	0	9	0	0	0	0	0	8	0	8	0	7	0	7	0	8	0	8	0	2	0	0	0	4	0	5	0						
4:00 PM	0	0	0	0	16	0	16	0	40	2	42	1	9	0	9	0	0	0	0	0	5	0	5	0	5	0	5	0	10	0	10	0	2	0	0	0	2	0	4	0	5	0				
4:15 PM	0	0	0	0	14	1	15	0	37	1	38	0	5	0	5	0	0	0	0	0	8	0	8	0	5	0	5	1	24	0	24	0	3	0	4	0	5	0	3	0						
4:30 PM	0	0	0	0	8	0	8	0	31	2	33	1	9	0	9	0	0	0	0	0	10	0	10	0	6	0	6	0	18	0	18	2	5	0	7	1	2	0	3	0	6	1				
4:45 PM	1	0	1	0	12	0	12	0	53	1	54	1	8	0	8	0	0	0	0	0	7	0	7	0	4	0	4	0	9	1	10	0	6	0	1	0	0	0	4	0	5	0				
5:00 PM	0	0	0	0	7	0	7	0	40	1	41	0	5	0	5	0	0	0	0	0	9	0	9	0	5	0	5	0	8	0	8	1	5	0	7	0	1	0	4	1	7	1				
5:15 PM	0	0	0	0	12	0	12	0	34	1	35	2	7	0	7	0	0	0	0	0	6	0	6	0	4	0	4	1	4	0	4	0	9	0	9	3	3	0	1	1	0	5	2			
5:30 PM	0	0	0	0	12	0	12	2	33	1	34	0	8	0	8	0	0	0	0	0	3	0	3	1	8	0	8	0	15	0	15	0	7	0	4	0	9	0	1	0	7	0				
5:45 PM	0	0	0	0	8	0	8	0	34	2	36	1	7	0	7	0	0	0	0	0	7	0	7	0	6	0	6	0	16	0	16	0	4	0	3	0	3	2	5	0	1	0	7	1		
6:00 PM	0	0	0	0	10	0	10	0	31	0	31	2	8	0	8	0	0	0	0	0	10	0	10	0	5	0	5	0	4	0	4	0	5	0	6	0	1	0	1	0	14	1	2	0		
6:15 PM	0	0	0	0	4	0	4	0	44	2	46	0	10	0	10	0	0	0	0	0	8	0	8	0	5	0	5	0	7	0	7	0	7	0	5	0	6	0	6	1	4	1				
6:30 PM	0	0	0	0	6	0	6	0	28	1	29	1	8	0	8	0	0	0	0	0	5	0	5	0	7	0	7	0	4	0	4	0	6	0	9	0	2	0	7	0	4	0	3	0		
3 hr Total	1	0	1	0	123	1	124	2	448	15	463	9	93	0	93	0	0	0	0	0	86	0	86	1	67	0	67	2	127	1	128	3	60	0	78	4	50	2	15	0	13	0	67	3	53	6
PM Peak	1	0	1	0	50	1	51	0	161	6	167	3	31	0	31	0	0	0	0	0	30	0	30	0	20	0	20	1	61	1	62	2	16	0	24	1	15	0	5	0	4	0	20	0	19	1

AUSTRAFFIC VIDEO INTERSECTION COUNT



Site No.: 1 **Weather:** Fine
Location: Sixth Avenue/Memorial Avenue, Maroochydore
Day/Date: Thursday, 1 February 2024
Summary: PM Peak : Hour ending - 4:45 PM

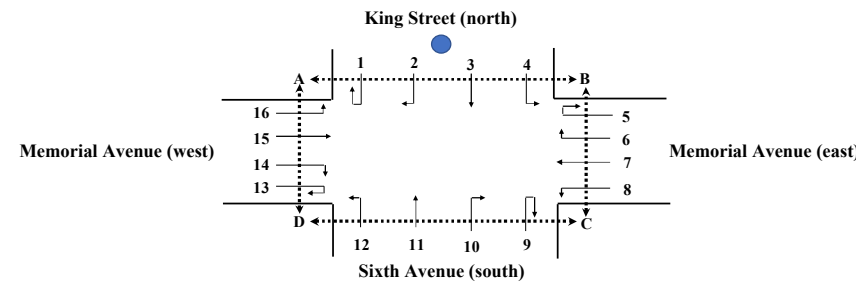
Hour Ending:
On-road classification:
Off-road classification:



Note: = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRALIA VIDEO INTERSECTION COUNT

Site No.: 1 Weather: Fine
 Location: Sixth Avenue/Memorial Avenue, Maroochydore
 Day/Date: Saturday, 3 February 2024
 Peak: Hour ending - 12:00 PM



TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
11:15 AM	0	0	0	0	9	0	9	0	62	1	63	2	9	0	9	0	4	0	4	0	1	0	1	0	11	0	11	0				
11:30 AM	0	0	0	0	5	0	5	0	46	1	47	1	12	0	12	1	0	0	0	0	7	0	7	0	8	0	8	0				
11:45 AM	0	0	0	0	6	0	6	0	51	1	52	1	14	0	14	0	0	0	0	0	2	0	2	0	19	0	19	0				
12:00 PM	0	0	0	0	6	0	6	0	68	1	69	0	8	0	8	0	0	0	0	0	7	0	7	0	3	0	3	0				
12:15 PM	0	0	0	0	14	0	14	1	49	2	51	0	8	0	8	0	0	0	0	0	2	0	2	0	4	0	4	0				
12:30 PM	0	0	0	0	7	0	7	1	58	0	58	0	7	0	7	0	0	0	0	0	3	0	3	0	3	0	3	0				
12:45 PM	0	0	0	0	10	0	10	0	39	2	41	2	8	0	8	0	0	0	0	0	3	0	3	0	9	0	9	0				
1:00 PM	0	0	0	0	6	0	6	0	66	0	66	0	6	0	6	0	1	0	1	0	5	0	5	0	5	0	5	0				
1:15 PM	0	0	0	0	13	0	13	0	36	2	38	0	8	0	8	0	0	0	0	0	4	0	4	0	10	0	10	0				
1:30 PM	2	0	2	0	4	0	4	1	41	1	42	0	9	0	9	0	0	0	0	0	3	0	3	0	2	0	2	0				
1:45 PM	3	0	3	0	7	0	7	0	37	0	37	1	8	0	8	1	0	0	0	0	3	0	3	0	3	0	3	0				
2:00 PM	0	0	0	0	3	0	3	0	57	0	57	1	11	1	12	0	0	0	0	0	3	0	3	0	3	0	3	0				
2:15 PM	0	0	0	0	5	0	5	0	50	1	51	0	6	0	6	0	0	0	0	0	7	0	7	0	8	0	8	0				
2:30 PM	0	0	0	0	5	0	5	0	41	1	42	0	10	0	10	1	0	0	0	0	5	0	5	0	6	0	6	0				
2:45 PM	0	0	0	0	9	0	9	0	38	2	40	0	3	0	3	0	0	0	0	0	1	0	1	0	2	0	2	0				
3:00 PM	1	0	1	0	11	0	11	0	37	1	38	0	7	0	7	0	0	0	0	0	5	0	5	0	5	0	5	0				
4 hr Total	6	0	6	0	120	0	120	3	776	4	780	8	134	1	135	3	1	0	0	0	64	0	64	0	91	0	91	0				
Peak	0	0	0	0	26	0	26	0	227	4	231	4	43	0	43	1	0	0	0	0	20	0	20	0	31	0	31	0				

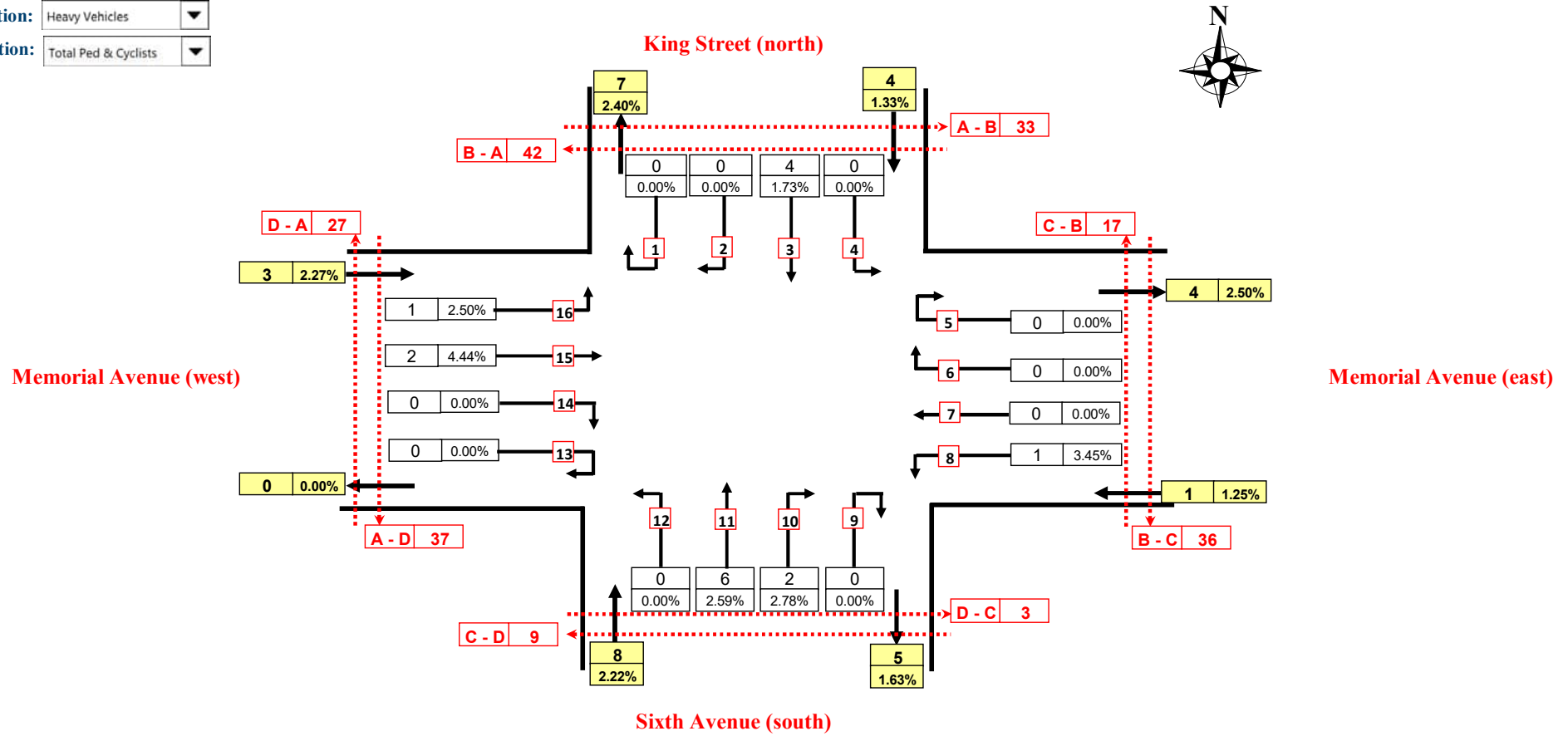
TIME (1/4 hr end)	Movement 9				Movement 10				Movement 11				Movement 12				Movement 13				Movement 14				Movement 15				Movement 16				Pedestrian Movements											
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	A - B	B - A	B - C	C - B	C - D	D - C	D - A	A - D								
11:15 AM	0	0	0	0	12	0	12	0	55	2	57	0	18	0	18	0	0	0	0	0	14	0	14	0	14	0	13	1	14	0	10	1	8	0	8	0	3	0	0	0	3	0	4	0
11:30 AM	0	0	0	0	17	0	17	0	66	2	68	1	15	0	15	0	0	0	0	0	16	0	16	0	7	1	8	0	12	0	3	0	6	0	6	0	3	0	0	0	3	1	8	0
11:45 AM	0	0	0	0	19	1	20	0	48	1	49	0	11	0	11	0	0	0	0	0	7	0	7	0	14	1	15	0	8	0	10	0	4	0	5	0	0	0	16	0	9	0		
12:00 PM	0	0	0	0	22	1	23	0	57	1	58	3	12	0	12	0	0	0	0	0	10	0	10	0	8	0	8	0	6	0	11	0	18	0	10	1	4	0	3	0	2	0	4	0
12:15 PM	0	0	0	0	20	0	20	0	45	1	46	0	19	0	19	0	0	0	0	0	10	0	10	0	8	0	8	0	14	0	8	0	8	0	7	0	2	1	3	0	5	1	9	0
12:30 PM	0	0	0	0	17	0	17	0	56	1	57	1	13	0	13	0	0	0	0	0	10	0	10	0	11	0	11	0	6	0	5	0	8	0	2	0	4	0	0	0	7	0		
12:45 PM	1	0	1	0	16	0	16	1	45	1	46	1	7	0	7	0	0	0	0	0	12	0	12	0	10	0	10	0	15	0	5	0	6	0	9	0	0	0	7	0	9	0		
1:00 PM	0	0	0	0	13	0	13	0	44	0	44	0	16	0	16	0	0	0	0	0	16	0	16	0	13	0	13	0	11	0	14	0	10	0	4	0	1	2	0	0	2	11	0	
1:15 PM	1	0	1	0	14	0	14	0	53	2	55	0	8	0	8	0	0	0	0	0	4	0	4	0	9	0	9	0	14	0	3	0	4	1	3	0	1	1	2	0	0	1	0	
1:30 PM	0	0	0	0	12	0	12	0	47	0	47	0	12	0	12	0	0	0	0	0	6	0	6	0	14	0	14	0	9	0	3	0	4	0	2	0	3	0	2	0	9	0		
1:45 PM	1	0	1	0	4	0	4	0	39	2	41	0	11	0	11	0	0	0	0	0	11	0	11	0	8	0	8	0	9	0	6	1	6	0	4	0	1	0	1	0	11	1		
2:00 PM	0	0	0	0	6	0	6	0	42	1	43	0	11	0	11	0	0	0	0	0	8	0	8	0	6	0	6	0	13	0	5	0	2	1	1	0	2	0	0	0	4	0		
2:15 PM	2	0	2	0	7	0	7	0	37	1	38	0	5	0	5	0	0	0	0	0	6	0	6	0	5	0	5	0	7	0	7	0	8	0	3	0	0	0	2	0	6	0		
2:30 PM	0	0	0	0	5	0	5	0	37	1	38	0	9	0	9	0	0	0	0	0	10	0	10	0	8	0	8	0	10	0	5	0	7	0	5	0	1	0	2	0	9	1		
2:45 PM	0	0	0	0	9	0	9	0	37	0	37	0	11	0	11	0	0	0	0	0	10	0	10	0	7	0	7	0	9	0	4	0	2	0	1	0	1	0	1	0	1	0		
3:00 PM	0	0	0	0	7	0	7	0	50	2	52	0	10	0	10	0	0	0	0	0	9	0	9	0	7	0	7	0	10	0	0	0	5	0	2	0	1	0	1	0	5	0		
4 hr Total	5	0	5	0	200	2	202	1	758	6	764	6	188	0	188	0	0	0	0	0	159	0	159	0	149	2	151	0	165	1	112	2	78	1	43	4	21	0	1	12	4	106	3	
Peak	0	0	0	0	70	2	72	0	226	6	232	4	56	0	56	0	0	0	0	0	47	0	47	0	43	2	45	0	39	1	42	0	35	1	17	0	9	0	3	0	26	1		

AUSTRAFFIC VIDEO INTERSECTION COUNT



Site No.: 1 **Weather:** Fine
Location: Sixth Avenue/Memorial Avenue, Maroochydore
Day/Date: Saturday, 3 February 2024
Summary: Peak : Hour ending - 12:00 PM

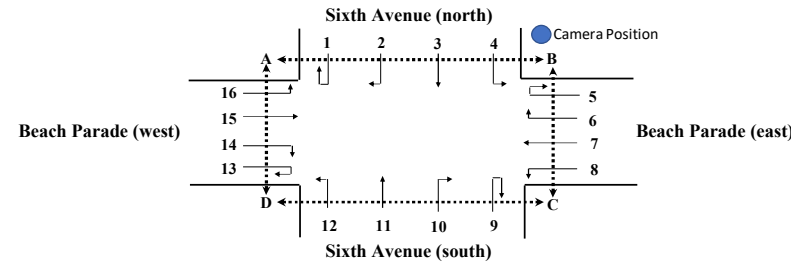
Hour Ending:
On-road classification:
Off-road classification:



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRAFFIC VIDEO INTERSECTION COUNT

Site No.: 2 Weather: Fine
 Location: Sixth Avenue/Beach Parade, Maroochydore
 Day/Date: Thursday, 1 February 2024
 PM Peak: Hour ending - 5:00 PM



TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
3:45 PM	1	0	1	0	5	0	5	0	69	1	70	3	6	0	6	0	0	0	0	0	2	0	2	0	1	0	1	0	8	0	8	0
4:00 PM	0	0	0	0	10	0	10	0	43	2	45	3	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	5	0	5	0	
4:15 PM	0	0	0	0	8	0	8	0	58	3	61	0	11	0	11	0	0	0	0	0	4	0	4	0	0	0	1	0	1	0	0	
4:30 PM	0	0	0	0	8	0	8	0	59	2	61	1	9	0	9	0	0	0	0	0	1	1	2	0	0	0	5	0	5	0	0	
4:45 PM	2	0	2	0	1	0	1	0	68	2	70	1	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	0	5	0	5	0	75	1	76	2	9	0	9	0	0	0	0	0	6	0	6	0	0	0	4	0	4	0	0	
5:15 PM	0	0	0	0	5	0	5	0	52	0	52	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	6	0	6	0	0	
5:30 PM	1	0	1	0	2	0	2	0	53	2	55	1	4	0	4	0	0	0	0	0	0	0	0	0	1	0	1	0	4	0	4	0
5:45 PM	0	0	0	0	5	0	5	0	44	0	44	2	5	0	5	0	0	0	0	0	4	0	4	0	0	0	7	0	7	0	0	
6:00 PM	0	0	0	0	6	0	6	1	52	1	53	0	3	0	3	0	0	0	0	0	9	0	9	0	2	0	2	0	6	0	6	0
6:15 PM	1	0	1	0	6	0	6	0	34	1	35	1	4	0	4	0	0	0	0	0	3	0	3	0	0	0	5	0	5	0	0	
6:30 PM	1	0	1	0	6	0	6	0	41	1	42	1	4	0	4	0	0	0	0	0	3	0	3	0	0	0	6	0	6	0	0	
3 hr Total	6	0	6	0	62	0	62	1	648	16	664	15	67	0	67	0	0	0	0	0	35	1	36	0	4	0	4	1	57	0	57	0
PM Peak	2	0	2	0	22	0	22	0	260	8	268	4	33	0	33	0	0	0	0	0	12	1	13	0	0	0	0	0	10	0	10	0

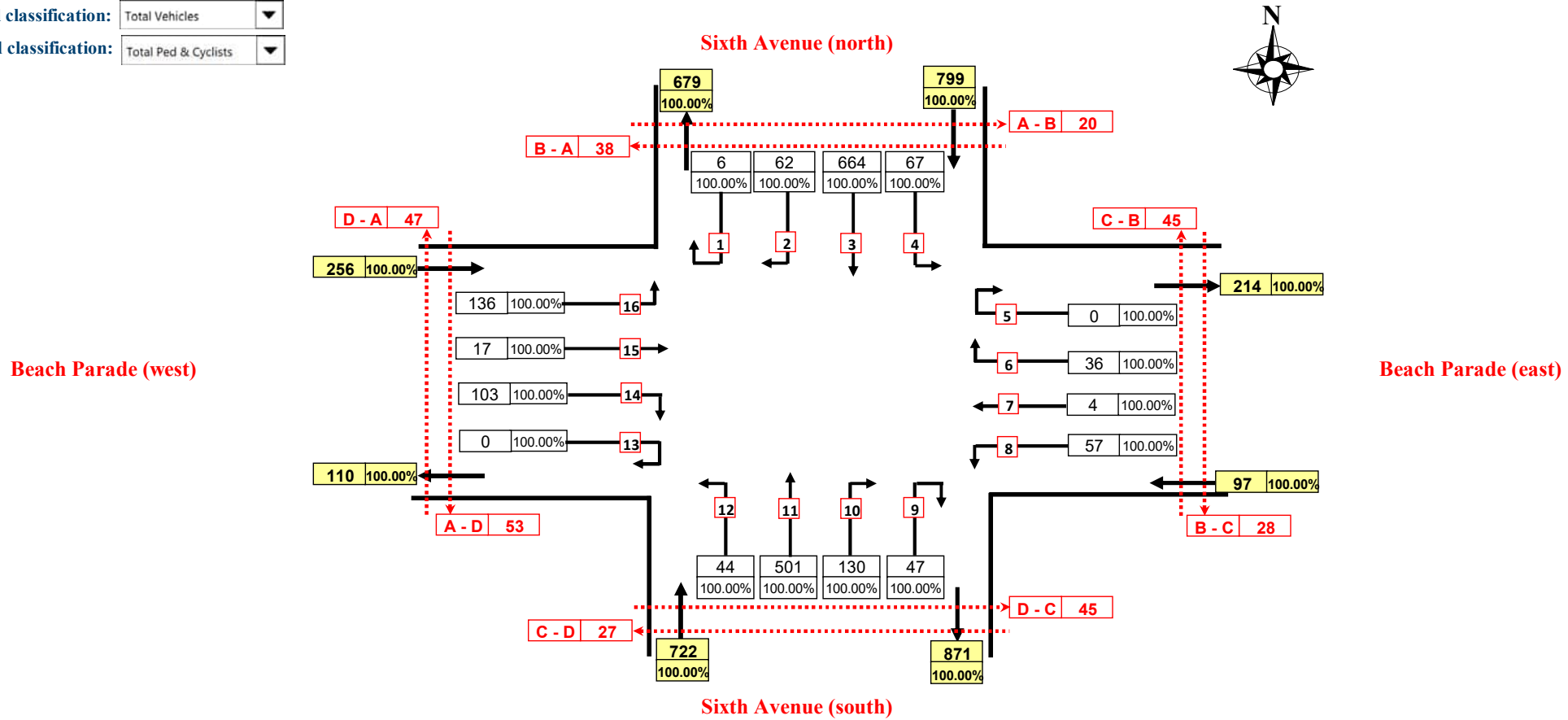
TIME (1/4 hr end)	Movement 9				Movement 10				Movement 11				Movement 12				Movement 13				Movement 14				Movement 15				Movement 16				Pedestrian Movements											
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	A - B	B - A	B - C	C - B	C - D	D - C	D - A	A - D				
3:45 PM	6	0	6	0	10	0	10	0	48	1	49	0	2	0	2	0	0	0	0	0	3	0	3	0	1	0	1	0	13	0	13	0	0	0	0	0	0	0	5	0	7	1	5	0
4:00 PM	0	0	0	0	9	0	9	1	54	2	56	1	6	0	6	0	0	0	0	0	5	0	5	0	1	0	1	0	11	0	11	0	1	0	1	0	2	0	1	0	3	0	4	0
4:15 PM	1	0	1	0	15	0	15	0	47	2	49	0	5	0	5	0	0	0	0	0	6	0	6	0	2	0	2	0	8	0	8	1	1	0	6	0	2	0	1	0	2	0	1	0
4:30 PM	10	0	10	0	14	0	14	0	37	1	38	0	4	0	4	0	0	0	0	0	12	0	12	0	2	0	2	0	9	0	9	0	4	0	4	1	2	0	0	0	1	0	5	0
4:45 PM	3	0	3	0	6	0	6	0	53	2	55	0	5	0	5	0	0	0	0	0	9	0	9	1	6	0	6	0	18	0	18	1	1	0	0	0	5	2	2	0	3	0	1	0
5:00 PM	5	0	5	0	10	0	10	0	36	0	36	0	2	1	3	0	0	0	0	0	7	0	7	1	1	0	1	0	8	0	8	0	0	0	5	0	3	0	7	0	5	0		
5:15 PM	4	0	4	0	8	0	8	0	34	2	36	2	3	0	3	0	0	0	0	0	20	0	20	0	1	1	2	0	14	0	14	0	3	0	2	1	2	0	3	0	0	0		
5:30 PM	2	0	2	0	25	0	25	0	42	0	42	1	5	0	5	0	0	0	0	0	6	0	6	0	2	0	2	0	10	0	10	1	0	0	0	3	0	3	0	2	1	3	0	
5:45 PM	1	0	1	0	15	0	15	0	37	2	39	1	3	0	3	0	0	0	0	0	10	0	10	0	0	0	0	0	9	0	9	0	4	0	10	0	1	0	13	0	5	0		
6:00 PM	5	0	5	0	9	0	9	0	33	0	33	1	2	0	2	0	0	0	0	0	12	0	12	0	0	0	0	0	10	0	10	0	2	0	6	0	2	0	2	0	5	0		
6:15 PM	4	0	4	0	5	0	5	0	38	2	40	0	5	0	5	0	0	0	0	0	6	0	6	0	0	0	0	0	14	0	14	0	4	0	1	0	2	0	2	0	4	0		
6:30 PM	6	0	6	0	4	0	4	0	27	1	28	1	1	0	1	0	0	0	0	0	7	0	7	0	0	0	0	0	12	0	12	0	0	0	1	0	3	0	3	0	1	0		
3 hr Total	47	0	47	0	130	0	130	1	486	15	501	7	43	1	44	0	0	0	0	0	103	0	103	2	16	1	17	0	136	0	136	3	6	0	37	1	28	0	41	4	26	1	44	1
PM Peak	19	0	19	0	45	0	45	0	173	5	178	0	16	1	17	0	0	0	0	0	34	0	34	2	11	0	11	0	43	0	43	2	6	0	15	1	9	0	7	2	12	0	12	1

AUSTRAFFIC VIDEO INTERSECTION COUNT



Site No.: 2 **Weather:** Fine
Location: Sixth Avenue/Beach Parade, Maroochydore
Day/Date: Thursday, 1 February 2024
Summary: PM Peak : Hour ending - 5:00 PM

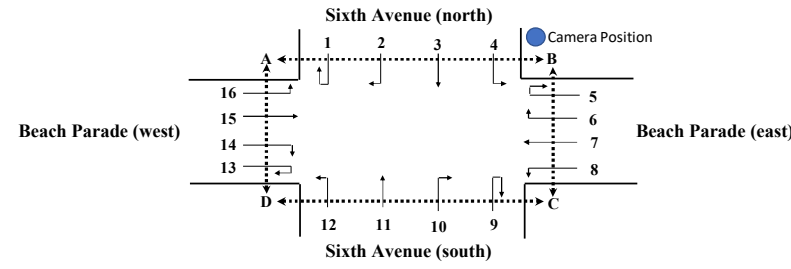
Hour Ending: PM Total Time
On-road classification: Total Vehicles
Off-road classification: Total Ped & Cyclists



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

AUSTRALIA VIDEO INTERSECTION COUNT

Site No.: 2 Weather: Fine
 Location: Sixth Avenue/Beach Parade, Maroochydore
 Day/Date: Saturday, 3 February 2024
 Peak: Hour ending - 12:00 PM



TIME (1/4 hr end)	Movement 1				Movement 2				Movement 3				Movement 4				Movement 5				Movement 6				Movement 7				Movement 8			
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists				
11:15 AM	1	0	1	0	7	0	7	0	87	1	88	2	4	0	4	0	0	0	0	0	2	0	2	0	1	0	1	0	10	0	10	0
11:30 AM	1	0	1	0	4	0	4	0	72	2	74	1	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	0	4	0	4	0
11:45 AM	0	0	0	0	6	0	6	0	61	1	62	1	5	0	5	0	2	0	2	0	6	0	6	0	1	0	1	0	6	0	6	0
12:00 PM	0	0	0	0	8	0	8	0	85	1	86	1	8	0	8	0	0	0	0	0	2	0	2	0	0	0	0	3	0	3	0	
12:15 PM	2	0	2	0	7	0	7	0	60	2	62	0	5	0	5	0	0	0	0	0	7	0	7	0	1	0	1	0	9	1	10	0
12:30 PM	0	0	0	0	4	0	4	1	71	0	71	0	8	0	8	0	1	0	1	0	2	0	2	0	1	0	1	0	6	0	6	0
12:45 PM	0	0	0	0	8	0	8	0	62	2	64	2	5	0	5	0	0	0	0	0	6	0	6	0	1	0	1	0	7	0	7	0
1:00 PM	0	0	0	0	5	0	5	0	82	0	82	0	6	0	6	0	0	0	0	0	5	0	5	0	5	0	5	0	4	0	4	0
1:15 PM	0	0	0	0	9	0	9	0	52	2	54	0	1	0	1	0	0	0	0	0	3	0	3	0	1	0	1	0	13	0	13	0
1:30 PM	0	0	0	0	4	0	4	0	46	1	47	0	6	0	6	0	0	0	0	0	4	0	4	0	1	0	1	0	4	0	4	0
1:45 PM	2	0	2	0	5	0	5	0	62	0	62	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	4	0	4	0	
2:00 PM	2	0	2	0	9	0	9	0	62	0	62	0	5	0	5	1	1	0	1	0	2	0	2	0	0	0	0	9	0	9	0	
2:15 PM	1	0	1	0	6	0	6	0	65	1	66	0	2	0	2	0	2	0	2	0	3	0	3	0	2	0	2	0	4	0	4	0
2:30 PM	1	0	1	0	3	0	3	0	55	1	56	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	4	0	4	0	
2:45 PM	1	0	1	0	3	0	3	0	59	1	60	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	3	0	3	0	
3:00 PM	2	0	2	0	2	0	2	0	51	1	52	0	4	0	4	0	0	0	0	0	7	0	7	0	0	0	0	5	0	5	0	
4 hr Total	13	0	13	0	90	0	90	1	1032	5	1037	7	76	0	76	1	6	0	6	0	65	0	65	0	14	0	14	0	95	1	96	0
Peak	2	0	2	0	25	0	25	0	305	5	310	5	22	0	22	0	2	0	2	0	15	0	15	0	2	0	2	0	23	0	23	0

TIME (1/4 hr end)	Movement 9				Movement 10				Movement 11				Movement 12				Movement 13				Movement 14				Movement 15				Movement 16				Pedestrian Movements															
	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	Light Vehicles	Heavy Vehicles	Total	Cyclists	A - B	B - A	B - C	C - B	C - D	D - C	D - A	A - D												
11:15 AM	1	0	1	0	11	0	11	0	63	1	64	0	8	0	8	0	1	0	1	0	17	0	17	0	1	0	1	0	19	0	19	0	2	0	2	0	6	0	6	0	3	1	1	0				
11:30 AM	4	0	4	0	10	0	10	0	77	2	79	0	6	0	6	1	1	0	1	0	3	0	3	0	3	0	3	0	14	0	14	0	6	1	6	0	2	0	2	0	1	3	6	2				
11:45 AM	4	0	4	0	18	0	18	0	57	2	59	0	8	0	8	0	1	0	1	0	10	0	10	0	2	0	2	0	15	0	15	0	1	0	3	0	5	0	7	0	4	0	5	0	6	0		
12:00 PM	7	0	7	0	20	0	20	0	74	2	76	3	9	0	9	0	0	0	0	0	9	0	9	0	2	0	2	0	14	0	14	0	1	0	0	0	8	1	1	0	2	0	4	0	1	0	8	0
12:15 PM	5	0	5	0	15	0	15	0	59	1	60	0	7	0	7	0	0	0	0	0	5	0	5	0	0	0	0	0	16	0	16	1	0	0	1	0	2	1	0	0	0	0	9	1	0	0		
12:30 PM	5	0	5	0	9	0	9	0	64	1	65	1	10	0	10	0	1	0	1	0	6	0	6	0	0	0	0	0	18	0	18	0	1	0	1	2	3	0	1	1	0	4	0	2	0	1	0	
12:45 PM	2	0	2	0	7	0	7	0	60	1	61	2	7	0	7	0	0	0	0	0	8	0	8	0	2	0	2	0	8	0	8	0	2	0	4	0	6	0	3	0	7	0	3	0	4	0		
1:00 PM	5	0	5	0	9	0	9	0	58	0	58	0	2	0	2	0	0	0	0	0	8	0	8	0	2	0	2	0	11	0	11	0	5	0	2	0	1	1	1	2	5	0	0	1	6	0	5	0
1:15 PM	0	0	0	0	12	0	12	0	60	2	62	0	4	0	4	0	0	0	0	0	9	0	9	0	1	0	1	0	10	0	10	0	2	0	1	0	5	0	1	0	1	0	2	0	1	0		
1:30 PM	2	0	2	0	4	0	4	0	56	0	56	0	9	0	9	0	0	0	0	0	6	0	6	1	1	0	1	0	11	0	11	0	0	0	3	0	4	0	4	0	2	0	7	0	1	0		
1:45 PM	5	0	5	0	10	0	10	0	42	2	44	0	3	0	3	0	0	0	0	0	7	0	7	0	1	0	1	0	7	0	7	0	2	0	4	0	7	0	6	0	1	0	2	0	5	0	0	0
2:00 PM	3	0	3	0	5	0	5	0	42	1	43	0	7	0	7	0	1	0	1	0	4	0	4	0	2	0	2	0	11	0	11	0	0	0	1	0	2	0	0	0	0	0	0	0	3	0	0	0
2:15 PM	5	0	5	0	9	0	9	0	41	1	42	0	2	0	2	0	0	0	0	0	12	0	12	0	3	0	3	0	6	0	6	0	2	1	0	0	3	0	1	0	2	0	3	0	1	0		
2:30 PM	2	0	2	0	10	0	10	0	40	1	41	0	4	0	4	0	0	0	0	0	6	0	6	0	1	0	1	0	3	0	3	0	6	0	6	0	2	0	1	0	0	0	1	1	3	0		
2:45 PM	3	0	3	0	9	0	9	0	45	0	45	0	4	0	4	0	0	0	0	0	4	0	4	0	2	0	2	0	8	0	8	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0
3:00 PM	2	0	2	0	9	0	9	0	50	2	52	0	2	0	2	0	0	0	0	0	6	0	6	0	0	0	0	0	8	0	8	0	1	1	0	0	3	0	1	0	0	0	4	0	3	1		
4 hr Total	55	0	55	0	167	0	167	0	888	7	895	6	92	0	92	1	5	0	5	0	120	0	120	1	8	0	8	0	171	0	171	0	31	3	34	2	57	1	42	5	14	0	33	1	10	4	21	2
Peak	16	0	16	0	59	0	59	0	271	7	278	3	31	0	31	1	3	0	3	0	39	0	39	0	8	0	8	0	62	0	62	0	10	1	11	0	20	0	14	0	10	0	10	4	21	2		

AUSTRAFFIC VIDEO INTERSECTION COUNT



Site No.: 2 **Weather:** Fine
Location: Sixth Avenue/Beach Parade, Maroochydore
Day/Date: Saturday, 3 February 2024
Summary: Peak : Hour ending - 12:00 PM

Hour Ending:

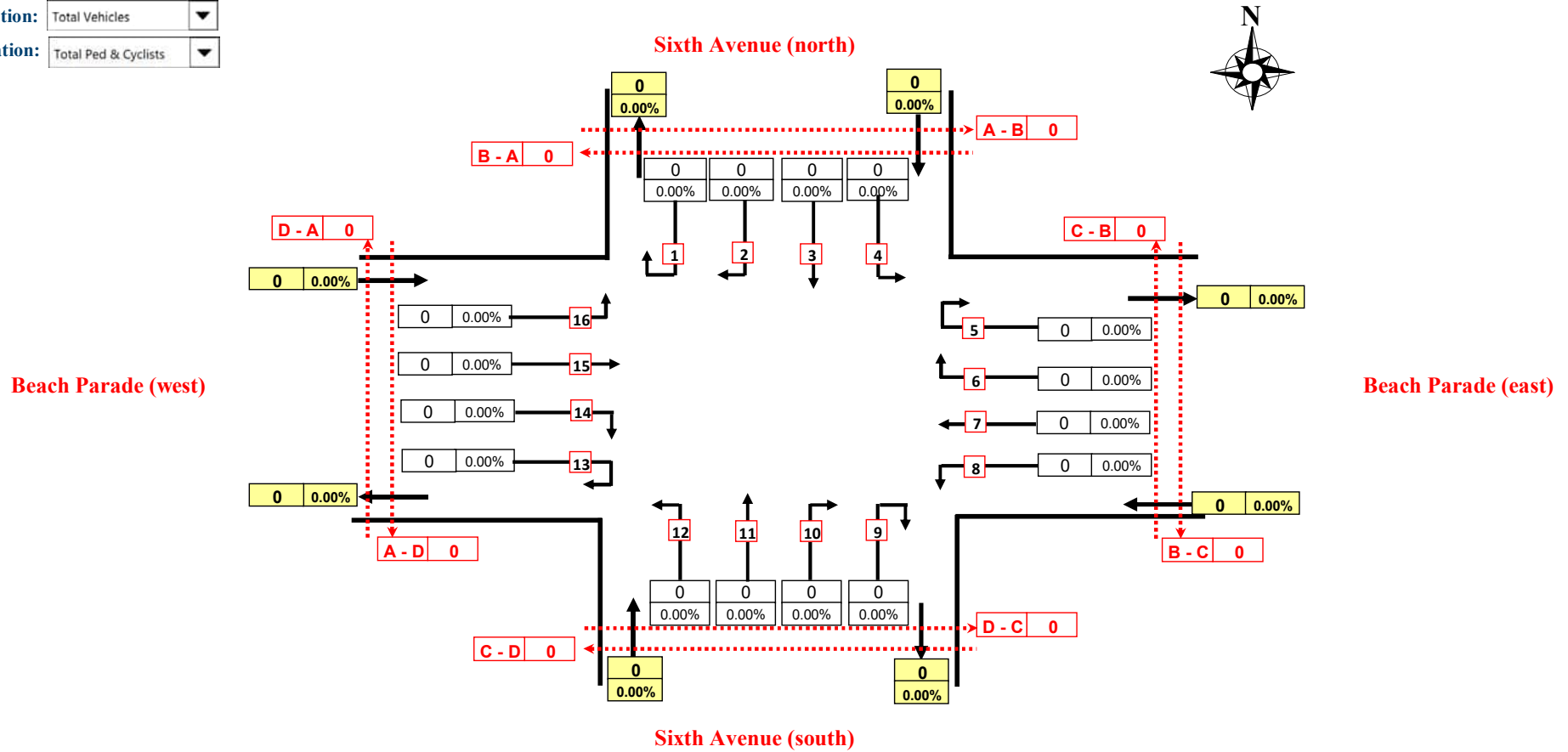
Total Time	▼
------------	---

On-road classification:

Total Vehicles	▼
----------------	---

Off-road classification:

Total Ped & Cyclists	▼
----------------------	---



Note: 3.28% = proportion of selected vehicle classification as a percentage of total vehicles

Appendix D: Traffic Generation Calculations & Assessed Traffic Volumes

CALCULATIONS

Proposed Development Generation

Table 1: Development Yields

Land Use	Yield	Unit
Motel	30	Units
Office	3,644	m ² GFA

Table 2: Peak Period Traffic Generation Rates

Land Use	Trip Rate	Total Trips	Source
	PM/SAT	PM/SAT	
Motel	0.40	12	RMS Guide to Traffic Generating Developments (2002)
Office	0.02	73	RMS Guide to Traffic Generating Developments (2002)

Table 3: Directional Traffic Distribution

Land Use	Weekday PM Peak		Weekend AM Peak	
	IN	OUT	IN	OUT
Motel	50%	50%	50%	50%
Office	20%	80%	50%	50%

Table 4: Traffic Generation

Land Use	PM Peak			SAT Peak		
	IN	OUT	TOTAL	IN	OUT	TOTAL
Motel	6	6	12	6	6	12
Office	15	59	74	37	37	74
Total	21	65	86	43	43	86

Table 5: Background Traffic Growth Rates

Road	%
Sixth Avenue	2.0%
All Other Roads	1.0%

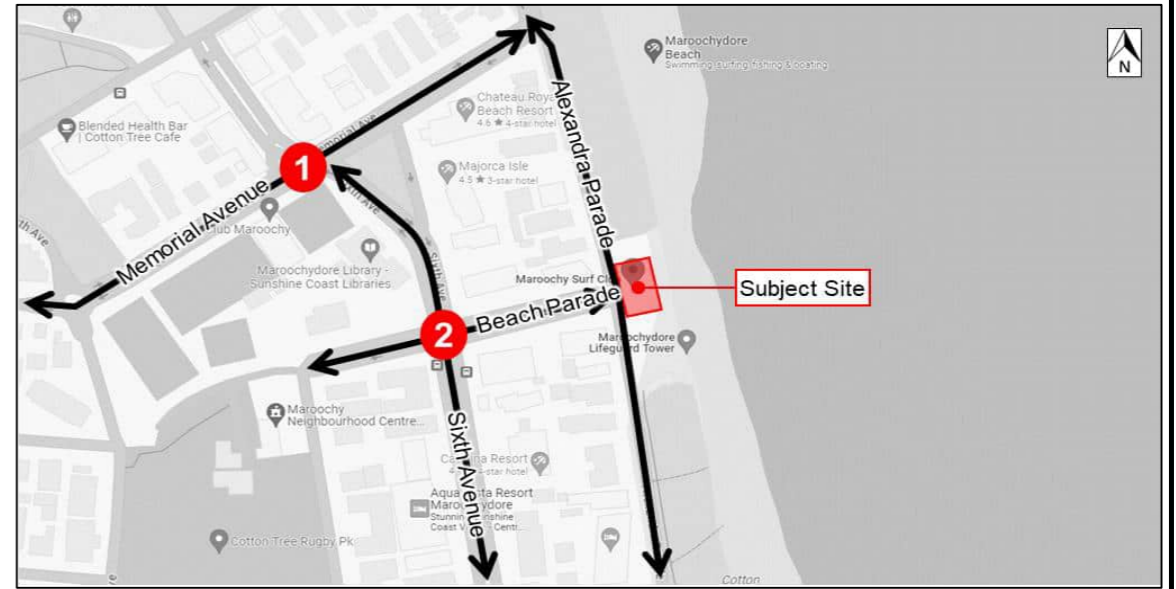
Table 5: External Traffic Distribution

Direction	%
North	55.0%
South	45.0%
West	0.0%
Total	100.0%

TRAFFIC GENERATION

LOCALITY PLAN

Survey - Total



		Sixth Avenue					
Memorial Avenue		40	62	L	26	228	43
		45	20	T	32	216	36
		47	30	R	R	T	L
		L	T	R	R	13	20
		31	167	51	T	13	31
		56	232	72	L	14	29
		Sixth Avenue					
Beach Parade		62	43	L	25	310	22
		8	11	T	22	268	33
		39	34	R	R	T	L
		L	T	R	U	13	15
		17	178	45	19	0	2
		31	278	59	16	10	23
		Sixth Avenue					

INTERSECTION VOLUMES

		#1	#2
Survey (Total)	PM	685	674
	SAT	(869)	(874)

DETAILS

DOCUMENT CONTROL

Job Number: P6311
Prepared By: RTU
Reviewed By: NE
Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
Reviewed Date: 14/05/2024
File Path: \\bitzios-fs1\Projects\P6331 Maroochydore SLSC TIA\Technical\Stick Diagram\

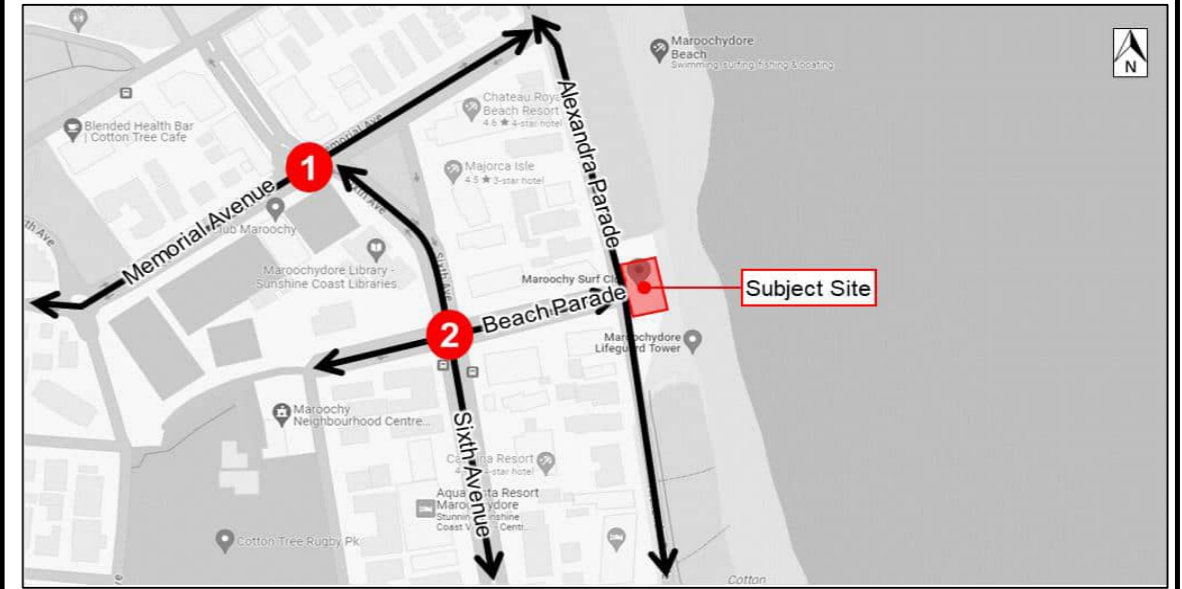
LEGEND

 PM Peak Period	L Left Turn Movement
 SAT Peak Period	T Through Turn Movement
1 Intersection ID	R Right Turn Movement
	U U-Turn Movement

TRAFFIC GENERATION

LOCALITY PLAN

2026 BACKGROUND



		Sixth Avenue						Sixth Avenue				
Memorial Avenue		41	64	L	27	238	44					
		46	21	T	33	225	37					
		48	31	R	R	T	L					
		L	T	R	R	14	21					
		32	174	53	T	14	32					
		58	242	74	L	15	30					
		Sixth Avenue						Sixth Avenue				
Beach Parade		64	44	L	26	323	23					
		9	12	T	23	279	34					
		40	35	R	R	T	L					
		L	T	R	U	R	14	16				
		18	186	46	20	T	0	3				
		32	290	61	17	L	11	24				

INTERSECTION VOLUMES

		#1	#2
2025BG	PM	713	702
	SAT	(901)	(911)

DETAILS

Base Year	2024	Sixth Ave Growth Rate	2.0%
Scenario Year	2026	Other Roads Growth Rate	1.0%

DOCUMENT CONTROL

Job Number: P6311
Prepared By: RTU
Reviewed By: NE
Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
Reviewed Date: 14/05/2024
File Path: \\bitzios-fs1\Projects\P6331 Maroochydore SLSC TIA\Technical\Stick Diagram\

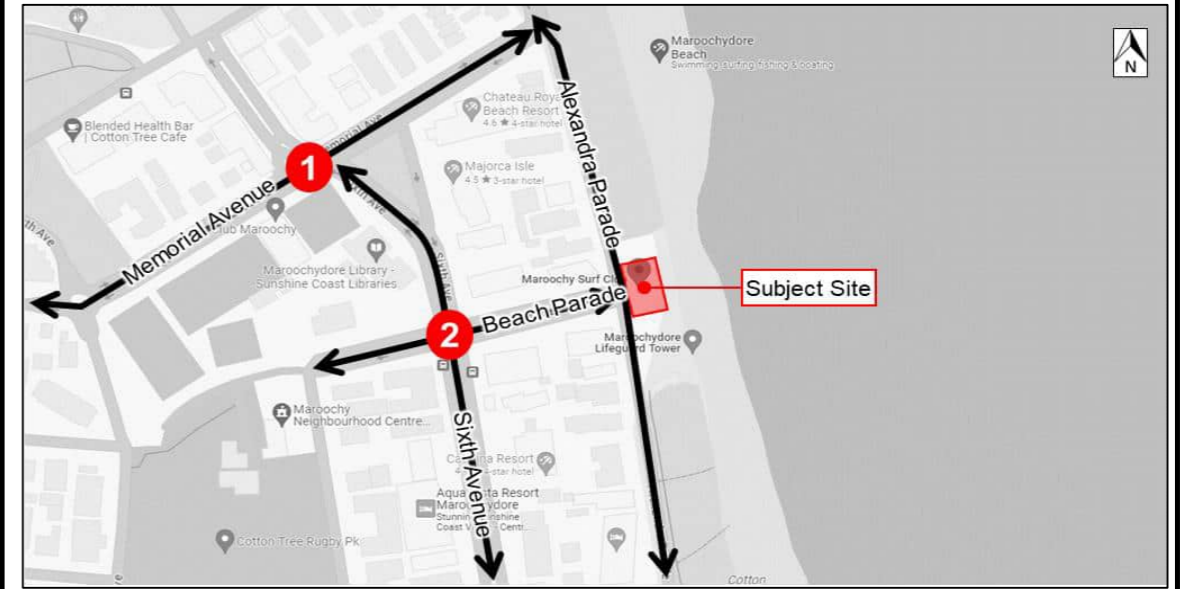
LEGEND

	PM Peak Period	L	Left Turn Movement
	SAT Peak Period	T	Through Turn Movement
1	Intersection ID	R	Right Turn Movement
		U	U-Turn Movement

TRAFFIC GENERATION

LOCALITY PLAN

2036 BACKGROUND



		Sixth Avenue				
Memorial Avenue	L	70	R	30	283	49
	T	23	T	36	268	41
	R	34	R	15	23	
	U	35	208	58	15	35
		63	288	81	16	33
		Sixth Avenue				
Beach Parade	L	49	R	28	385	25
	T	13	T	25	333	37
	R	39	R	15	17	
	U	20	221	51	0	3
		35	345	67	12	26
		Sixth Avenue				

INTERSECTION VOLUMES

		#1	#2
2035BG	PM	819	815
	SAT	(1034)	(1054)

DETAILS

Base Year	2024	Sixth Ave Growth Rate	2.0%
Scenario Year	2036	Other Roads Growth Rate	1.0%

DOCUMENT CONTROL

Job Number: P6311
Prepared By: RTU
Reviewed By: NE
Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
Reviewed Date: 14/05/2024
File Path: \\bitzios-fs1\Projects\P6331 Maroochydore SLSC TIA\Technical\Stick Diagram\

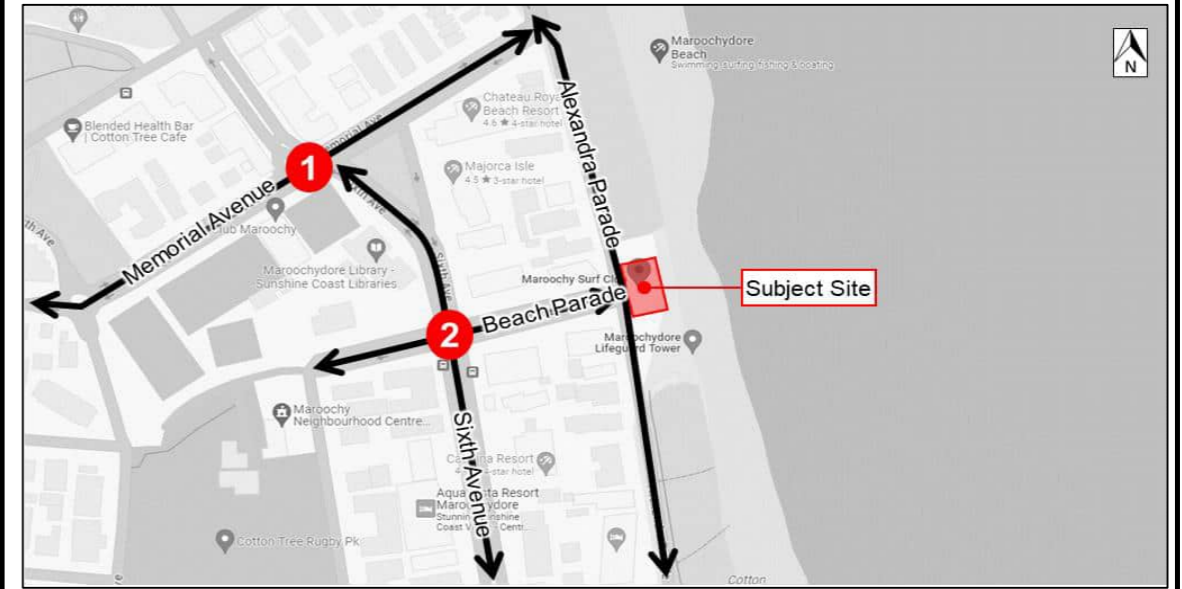
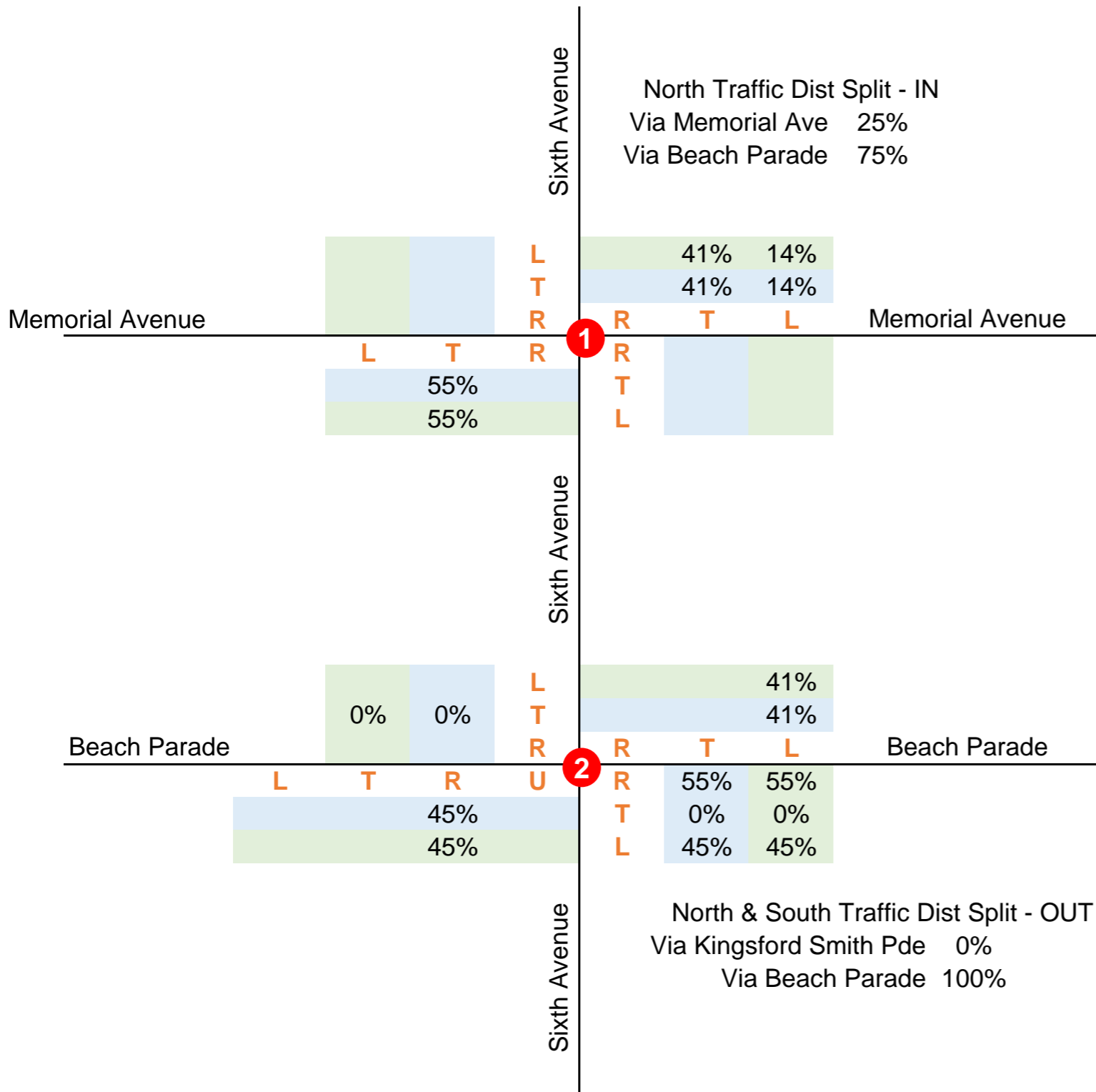
LEGEND

	PM Peak Period	L	Left Turn Movement
	SAT Peak Period	T	Through Turn Movement
1	Intersection ID	R	Right Turn Movement
		U	U-Turn Movement

TRAFFIC GENERATION

LOCALITY PLAN

TRIP DISTRIBUTION



INTERSECTION VOLUMES

DETAILS

DOCUMENT CONTROL

Job Number: P6311
Prepared By: RTU
Reviewed By: NE
Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
Reviewed Date: 14/05/2024
File Path: \\bitzios-fs1\Projects\IP6331 Maroochydore SLSC TIA\Technical\Stick Diagram\

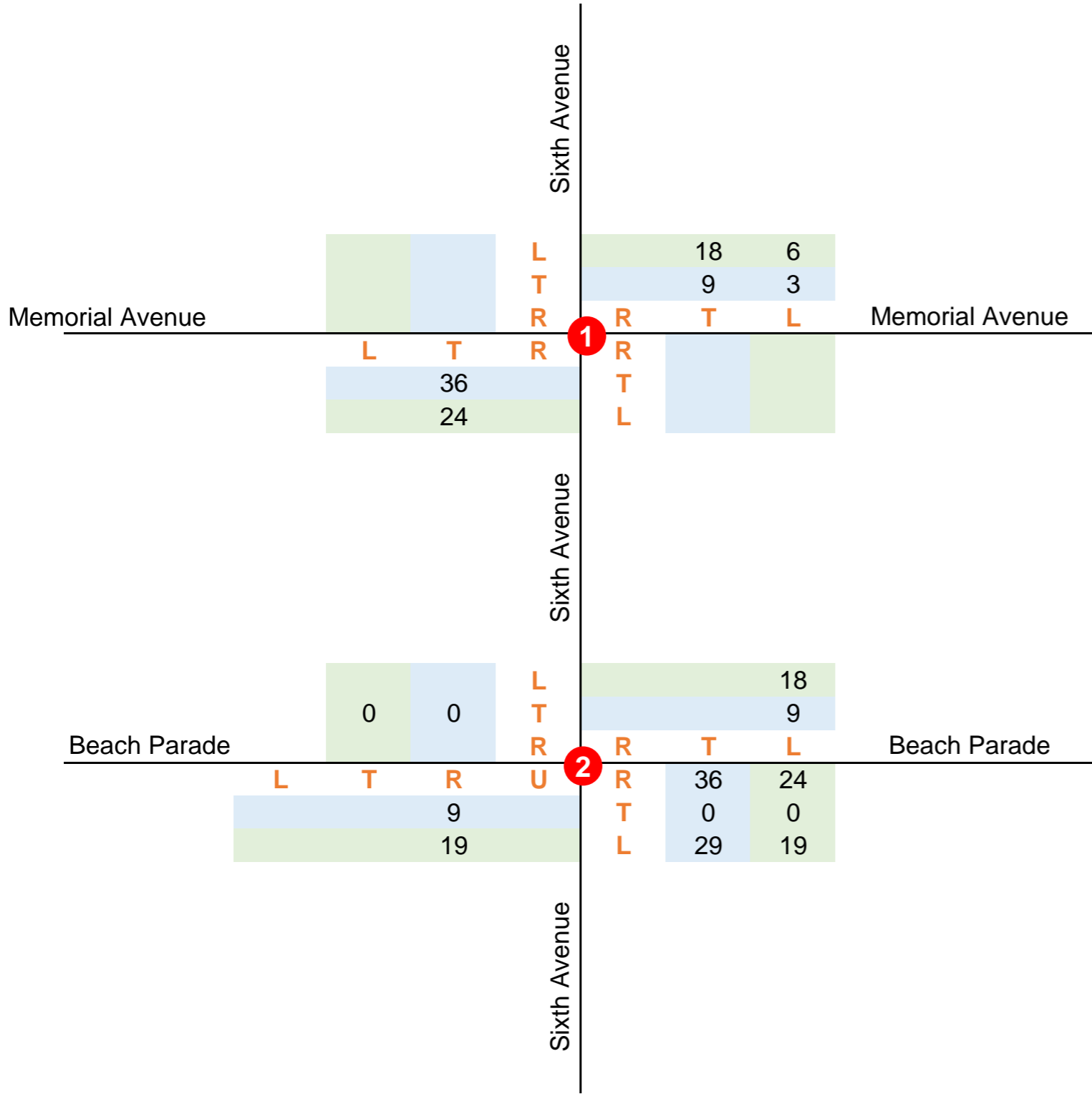
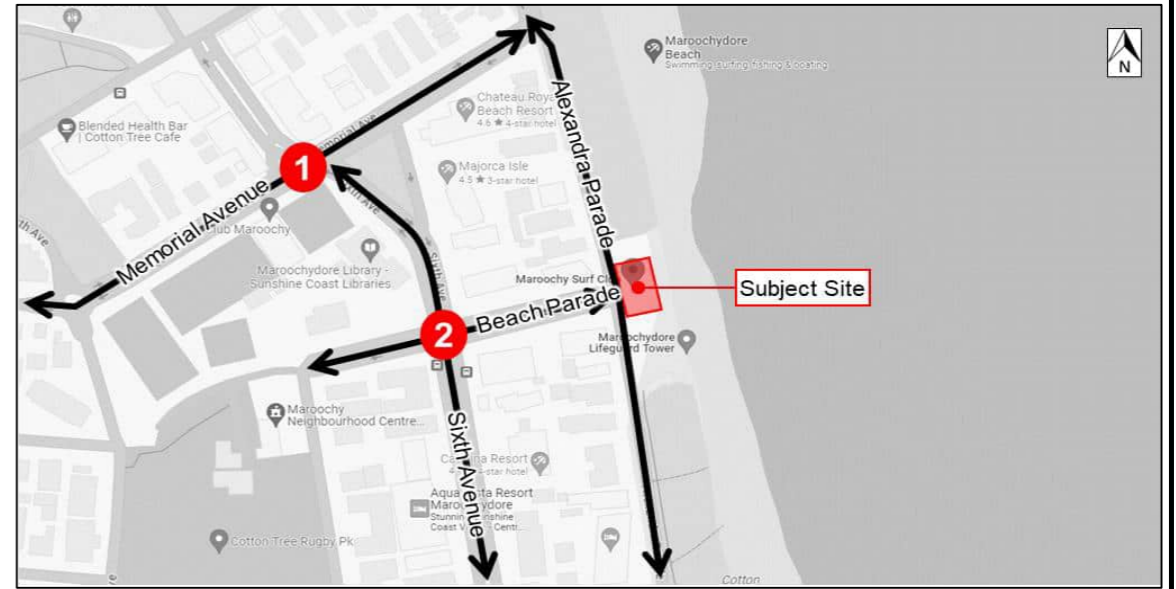
LEGEND

- PM Peak Period
- SAT Peak Period
- Intersection ID
- Left Turn Movement
- Through Turn Movement
- Right Turn Movement
- U-Turn Movement

TRAFFIC GENERATION

LOCALITY PLAN

DEVELOPMENT TRIPS



INTERSECTION VOLUMES

		#1	#2
DEV	PM	47	83
	SAT	(47)	(80)

DETAILS

Base Year	2024	Growth Rate	1.9%
Scenario Year	2024		

DOCUMENT CONTROL

Job Number: P6311
Prepared By: RTU
Reviewed By: NE
Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
Reviewed Date: 14/05/2024
File Path: \\bitzios-fs1\Projects\P6331 Maroochydore SLSC TIA\Technical\Stick Diagram\

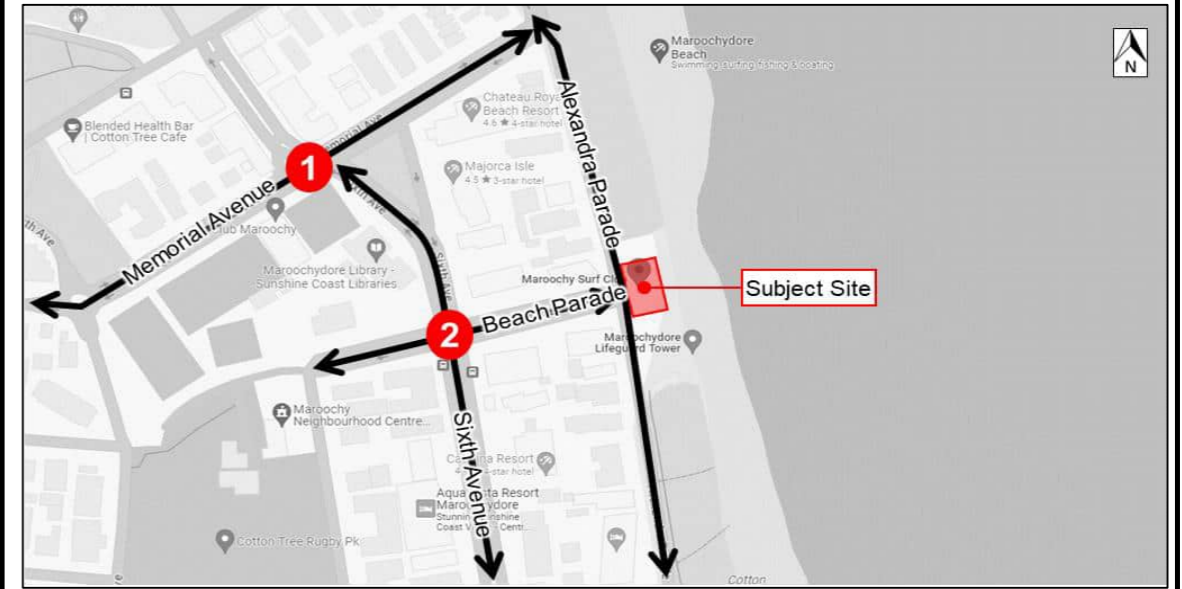
LEGEND

	PM Peak Period		Left Turn Movement
	SAT Peak Period		Through Turn Movement
	Intersection ID		Right Turn Movement
			U-Turn Movement

TRAFFIC GENERATION

LOCALITY PLAN

2026 DESIGN



		Sixth Avenue				
Memorial Avenue	L	64	R	27	256	50
	T	21	T	33	234	40
	R	31	R	14	14	21
	U	32	210	53	14	32
		58	266	74	15	30
		Sixth Avenue				
Beach Parade	L	64	R	26	323	41
	T	44	T	23	279	43
	R	12	R	50	40	40
	U	9	35	0	3	3
		18	186	55	20	3
		32	290	80	17	43
		Sixth Avenue				

INTERSECTION VOLUMES

		#1	#2
2025DES	PM	760	785
	SAT	(948)	(991)

DETAILS

DOCUMENT CONTROL

Job Number: P6311
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Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
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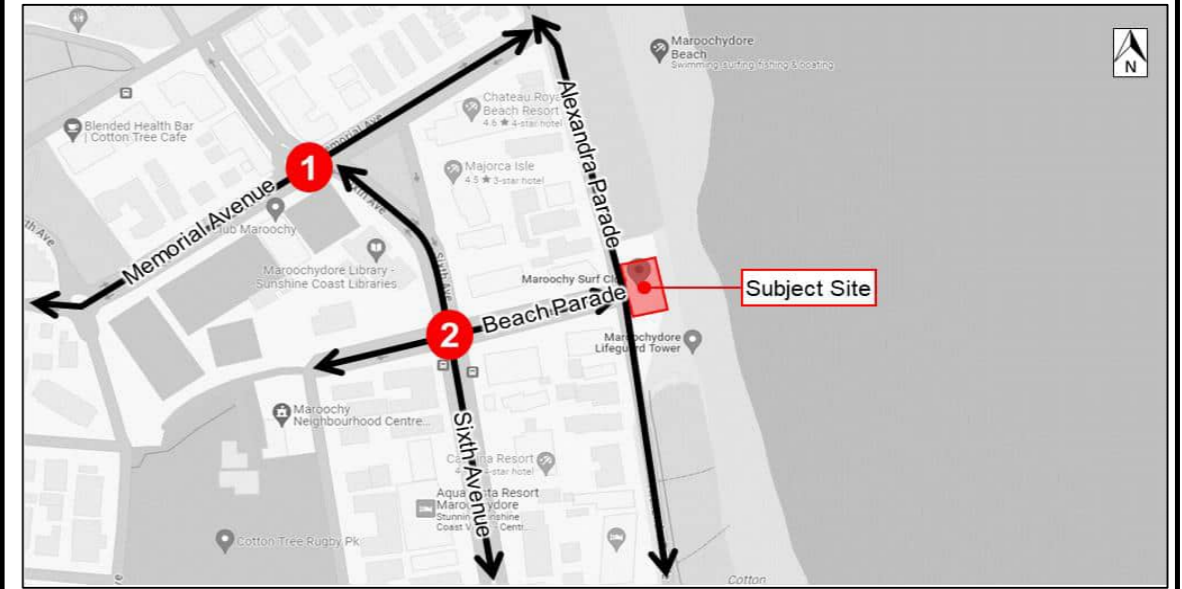
LEGEND

	PM Peak Period	L	Left Turn Movement
	SAT Peak Period	T	Through Turn Movement
1	Intersection ID	R	Right Turn Movement
		U	U-Turn Movement

TRAFFIC GENERATION

LOCALITY PLAN

2036 DESIGN



		Sixth Avenue				
Memorial Avenue	L	70	R	30	301	55
	T	23	T	36	277	44
	R	34	R	15	23	
	U	35	244	T	15	35
		63	312	81	L	16
		Sixth Avenue				
Beach Parade	L	70	R	28	385	43
	T	49	T	25	333	46
	R	13	R	51	41	
	U	9	39	T	0	3
		44	39	R	41	45
		20	221	60	22	
		35	345	86	18	
		Sixth Avenue				

INTERSECTION VOLUMES

		#1	#2
2035DES	PM	866	898
	SAT	(1081)	(1134)

DETAILS

DOCUMENT CONTROL

Job Number: P6311
Prepared By: RTU
Reviewed By: NE
Job Name: Maroochydore SLSC TIA
Prepared Date: 14/05/2024
Reviewed Date: 14/05/2024
File Path: \\bitzios-fs1\Projects\P6331 Maroochydore SLSC TIA\Technical\Stick Diagram\

LEGEND

	PM Peak Period	L	Left Turn Movement
	SAT Peak Period	T	Through Turn Movement
1	Intersection ID	R	Right Turn Movement
		U	U-Turn Movement

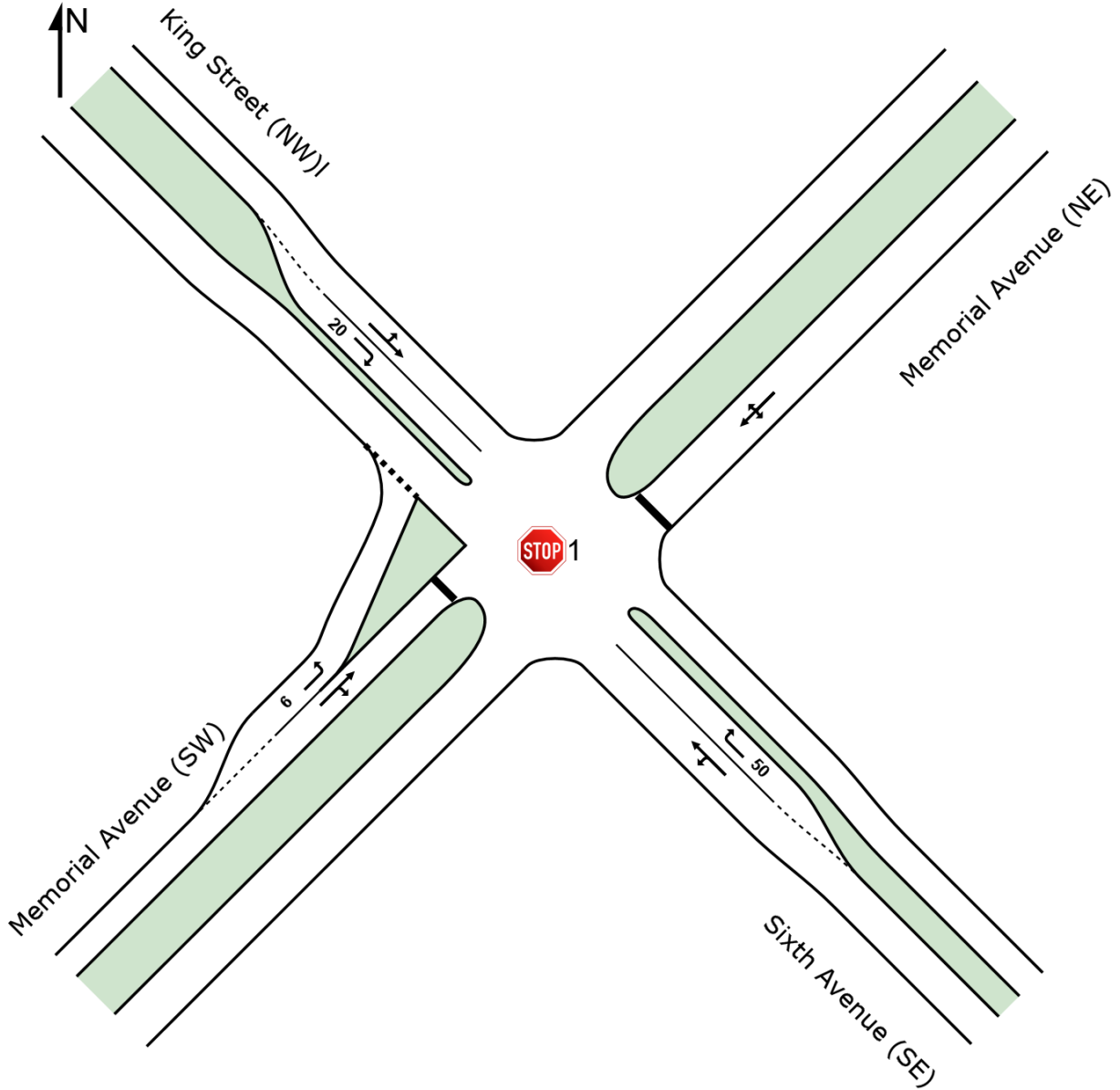
Appendix E: SIDRA Outputs

SITE LAYOUT


 Site: 1 [2024_Thurs PM_Survey (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Project No.: P6331
Project Name: Maroochydore SLSC TIA
Intersection: King Street / Memorial Avenue / Sixth Avenue
Site Category: (None)
Stop (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

 Site: 1 [2026BG Weekday PM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	34	0.0	34	0.0	0.110	3.4	LOS A	0.0	0.0	0.00	0.07	0.00	39.0
22	T1	All MCs	183	3.7	183	3.7	0.110	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
23	R2	All MCs	56	2.0	56	2.0	0.041	4.2	LOS A	0.2	1.3	0.37	0.49	0.37	37.7
Approach			273	2.9	273	2.9	0.110	1.3	NA	0.2	1.3	0.08	0.16	0.08	39.3
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	16	7.7	16	7.7	0.093	9.1	LOS A	0.3	2.5	0.55	0.92	0.55	34.6
25	T1	All MCs	15	0.0	15	0.0	0.093	14.2	LOS B	0.3	2.5	0.55	0.92	0.55	32.8
26	R2	All MCs	15	0.0	15	0.0	0.093	15.7	LOS C	0.3	2.5	0.55	0.92	0.55	34.7
Approach			45	2.7	45	2.7	0.093	12.9	LOS B	0.3	2.5	0.55	0.92	0.55	34.2
NorthWest: King Street (NW)															
27	L2	All MCs	39	0.0	39	0.0	0.146	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	39.0
28	T1	All MCs	237	3.8	237	3.8	0.146	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
29	R2	All MCs	35	0.0	35	0.0	0.024	3.9	LOS A	0.1	0.7	0.32	0.44	0.32	38.2
Approach			311	2.9	311	2.9	0.146	0.9	NA	0.1	0.7	0.04	0.11	0.04	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	67	1.6	67	1.6	0.062	5.3	LOS A	0.2	1.6	0.29	0.52	0.29	38.2
31	T1	All MCs	22	0.0	22	0.0	0.142	14.4	LOS B	0.5	3.7	0.63	1.00	0.63	31.0
32	R2	All MCs	33	0.0	33	0.0	0.142	16.0	LOS C	0.5	3.7	0.63	1.00	0.63	33.9
Approach			122	0.9	122	0.9	0.142	9.8	LOS A	0.5	3.7	0.44	0.74	0.44	36.0
All Vehicles			751	2.6	751	2.6	0.146	3.2	NA	0.5	3.7	0.15	0.28	0.15	38.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 1 [2026BG Weekend AM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh.] veh	[Dist] m				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	61	0.0	61	0.0	0.160	3.5	LOS A	0.0	0.0	0.00	0.09	0.00	38.9
22	T1	All MCs	255	2.7	255	2.7	0.160	0.1	LOS A	0.0	0.0	0.00	0.09	0.00	39.7
23	R2	All MCs	78	2.9	78	2.9	0.058	4.4	LOS A	0.3	1.8	0.38	0.50	0.38	37.6
Approach			394	2.3	394	2.3	0.160	1.4	NA	0.3	1.8	0.08	0.17	0.08	39.3
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	32	3.6	32	3.6	0.210	9.1	LOS A	0.8	5.7	0.64	0.94	0.64	33.6
25	T1	All MCs	34	0.0	34	0.0	0.210	17.7	LOS C	0.8	5.7	0.64	0.94	0.64	31.1
26	R2	All MCs	22	0.0	22	0.0	0.210	19.8	LOS C	0.8	5.7	0.64	0.94	0.64	33.7
Approach			87	1.3	87	1.3	0.210	15.1	LOS C	0.8	5.7	0.64	0.94	0.64	33.0
NorthWest: King Street (NW)															
27	L2	All MCs	46	0.0	46	0.0	0.155	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	38.9
28	T1	All MCs	251	0.4	251	0.4	0.155	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
29	R2	All MCs	28	0.0	28	0.0	0.021	4.3	LOS A	0.1	0.6	0.39	0.48	0.39	38.0
Approach			325	0.3	325	0.3	0.155	0.9	NA	0.1	0.6	0.03	0.11	0.03	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	43	2.6	43	2.6	0.043	5.7	LOS A	0.2	1.1	0.35	0.55	0.35	38.1
31	T1	All MCs	48	4.7	48	4.7	0.333	20.4	LOS C	1.4	10.3	0.76	1.06	0.95	27.2
32	R2	All MCs	51	0.0	51	0.0	0.333	22.5	LOS C	1.4	10.3	0.76	1.06	0.95	31.5
Approach			142	2.4	142	2.4	0.333	16.7	LOS C	1.4	10.3	0.64	0.91	0.76	32.5
All Vehicles			948	1.5	948	1.5	0.333	4.8	NA	1.4	10.3	0.20	0.33	0.22	38.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1 [2036BG Weekday PM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydhore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist]				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	37	0.0	37	0.0	0.130	3.4	LOS A	0.0	0.0	0.00	0.07	0.00	39.0
22	T1	All MCs	219	3.7	219	3.7	0.130	0.0	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
23	R2	All MCs	61	2.0	61	2.0	0.047	4.5	LOS A	0.2	1.4	0.40	0.51	0.40	37.6
Approach			317	2.9	317	2.9	0.130	1.3	NA	0.2	1.4	0.08	0.15	0.08	39.4
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	17	7.7	17	7.7	0.116	9.5	LOS A	0.4	3.0	0.61	0.96	0.61	33.8
25	T1	All MCs	16	0.0	16	0.0	0.116	16.3	LOS C	0.4	3.0	0.61	0.96	0.61	31.6
26	R2	All MCs	16	0.0	16	0.0	0.116	18.3	LOS C	0.4	3.0	0.61	0.96	0.61	34.0
Approach			48	2.7	48	2.7	0.116	14.6	LOS B	0.4	3.0	0.61	0.96	0.61	33.4
NorthWest: King Street (NW)															
27	L2	All MCs	43	0.0	43	0.0	0.172	3.5	LOS A	0.0	0.0	0.00	0.06	0.00	39.0
28	T1	All MCs	282	3.8	282	3.8	0.172	0.1	LOS A	0.0	0.0	0.00	0.06	0.00	39.7
29	R2	All MCs	38	0.0	38	0.0	0.027	4.0	LOS A	0.1	0.8	0.35	0.46	0.35	38.1
Approach			363	3.0	363	3.0	0.172	0.9	NA	0.1	0.8	0.04	0.10	0.04	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	74	1.6	74	1.6	0.070	5.5	LOS A	0.3	1.8	0.32	0.54	0.32	38.1
31	T1	All MCs	24	0.0	24	0.0	0.186	16.6	LOS C	0.7	4.8	0.70	1.00	0.70	29.4
32	R2	All MCs	36	0.0	36	0.0	0.186	18.6	LOS C	0.7	4.8	0.70	1.00	0.70	32.9
Approach			134	0.9	134	0.9	0.186	11.0	LOS B	0.7	4.8	0.49	0.75	0.49	35.4
All Vehicles			862	2.6	862	2.6	0.186	3.4	NA	0.7	4.8	0.15	0.27	0.15	38.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 1 [2036BG Weekend AM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh.] veh	[Dist] m				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	66	0.0	66	0.0	0.187	3.5	LOS A	0.0	0.0	0.00	0.08	0.00	38.9
22	T1	All MCs	303	2.7	303	2.7	0.187	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	39.7
23	R2	All MCs	85	2.9	85	2.9	0.068	4.6	LOS A	0.3	2.1	0.42	0.53	0.42	37.5
Approach			455	2.3	455	2.3	0.187	1.4	NA	0.3	2.1	0.08	0.17	0.08	39.3
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	35	3.6	35	3.6	0.280	10.3	LOS B	1.2	8.3	0.70	1.02	0.81	32.1
25	T1	All MCs	37	0.0	37	0.0	0.280	22.1	LOS C	1.2	8.3	0.70	1.02	0.81	28.8
26	R2	All MCs	24	0.0	24	0.0	0.280	25.1	LOS D	1.2	8.3	0.70	1.02	0.81	32.2
Approach			96	1.3	96	1.3	0.280	18.6	LOS C	1.2	8.3	0.70	1.02	0.81	31.2
NorthWest: King Street (NW)															
27	L2	All MCs	52	0.0	52	0.0	0.182	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	38.9
28	T1	All MCs	298	0.4	298	0.4	0.182	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
29	R2	All MCs	32	0.0	32	0.0	0.025	4.5	LOS A	0.1	0.7	0.42	0.51	0.42	37.9
Approach			381	0.3	381	0.3	0.182	0.9	NA	0.1	0.7	0.04	0.11	0.04	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	47	2.6	47	2.6	0.051	6.0	LOS A	0.2	1.3	0.38	0.58	0.38	38.0
31	T1	All MCs	54	4.7	54	4.7	0.464	27.2	LOS D	2.1	15.1	0.85	1.11	1.20	23.6
32	R2	All MCs	56	0.0	56	0.0	0.464	30.1	LOS D	2.1	15.1	0.85	1.11	1.20	28.9
Approach			157	2.4	157	2.4	0.464	21.8	LOS C	2.1	15.1	0.71	0.95	0.95	30.1
All Vehicles			1088	1.5	1088	1.5	0.464	5.7	NA	2.1	15.1	0.21	0.33	0.25	37.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1 [2026DES Weekday PM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh.] veh	[Dist] m				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	34	0.0	34	0.0	0.130	3.4	LOS A	0.0	0.0	0.00	0.06	0.00	39.0
22	T1	All MCs	221	3.7	221	3.7	0.130	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	39.8
23	R2	All MCs	56	2.0	56	2.0	0.041	4.3	LOS A	0.2	1.3	0.38	0.49	0.38	37.7
Approach			311	3.0	311	3.0	0.130	1.2	NA	0.2	1.3	0.07	0.14	0.07	39.4
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	16	7.7	16	7.7	0.100	9.2	LOS A	0.4	2.6	0.58	0.93	0.58	34.2
25	T1	All MCs	15	0.0	15	0.0	0.100	15.2	LOS C	0.4	2.6	0.58	0.93	0.58	32.2
26	R2	All MCs	15	0.0	15	0.0	0.100	16.9	LOS C	0.4	2.6	0.58	0.93	0.58	34.4
Approach			45	2.7	45	2.7	0.100	13.7	LOS B	0.4	2.6	0.58	0.93	0.58	33.9
NorthWest: King Street (NW)															
27	L2	All MCs	42	0.0	42	0.0	0.153	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	38.9
28	T1	All MCs	246	3.8	246	3.8	0.153	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
29	R2	All MCs	35	0.0	35	0.0	0.024	4.0	LOS A	0.1	0.7	0.35	0.46	0.35	38.1
Approach			323	2.9	323	2.9	0.153	0.9	NA	0.1	0.7	0.04	0.11	0.04	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	67	1.6	67	1.6	0.064	5.5	LOS A	0.2	1.6	0.32	0.54	0.32	38.1
31	T1	All MCs	22	0.0	22	0.0	0.155	15.4	LOS C	0.6	4.0	0.67	1.00	0.67	30.3
32	R2	All MCs	33	0.0	33	0.0	0.155	17.1	LOS C	0.6	4.0	0.67	1.00	0.67	33.5
Approach			122	0.9	122	0.9	0.155	10.4	LOS B	0.6	4.0	0.48	0.75	0.48	35.7
All Vehicles			801	2.6	801	2.6	0.155	3.2	NA	0.6	4.0	0.15	0.26	0.15	38.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1 [2026DES Weekend AM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh.] veh	[Dist] m				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	61	0.0	61	0.0	0.173	3.5	LOS A	0.0	0.0	0.00	0.08	0.00	38.9
22	T1	All MCs	280	2.7	280	2.7	0.173	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	39.7
23	R2	All MCs	78	2.9	78	2.9	0.060	4.5	LOS A	0.3	1.9	0.40	0.52	0.40	37.6
Approach			419	2.3	419	2.3	0.173	1.4	NA	0.3	1.9	0.07	0.16	0.07	39.3
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	32	3.6	32	3.6	0.227	9.4	LOS A	0.9	6.3	0.66	0.96	0.69	33.1
25	T1	All MCs	34	0.0	34	0.0	0.227	19.2	LOS C	0.9	6.3	0.66	0.96	0.69	30.3
26	R2	All MCs	22	0.0	22	0.0	0.227	21.6	LOS C	0.9	6.3	0.66	0.96	0.69	33.2
Approach			87	1.3	87	1.3	0.227	16.3	LOS C	0.9	6.3	0.66	0.96	0.69	32.4
NorthWest: King Street (NW)															
27	L2	All MCs	53	0.0	53	0.0	0.168	3.5	LOS A	0.0	0.0	0.00	0.08	0.00	38.9
28	T1	All MCs	269	0.4	269	0.4	0.168	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	39.7
29	R2	All MCs	28	0.0	28	0.0	0.022	4.4	LOS A	0.1	0.6	0.40	0.49	0.40	38.0
Approach			351	0.3	351	0.3	0.168	0.9	NA	0.1	0.6	0.03	0.11	0.03	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	43	2.6	43	2.6	0.045	5.9	LOS A	0.2	1.1	0.37	0.56	0.37	38.0
31	T1	All MCs	48	4.7	48	4.7	0.366	22.6	LOS C	1.6	11.3	0.79	1.07	1.02	25.9
32	R2	All MCs	51	0.0	51	0.0	0.366	24.8	LOS C	1.6	11.3	0.79	1.07	1.02	30.6
Approach			142	2.4	142	2.4	0.366	18.3	LOS C	1.6	11.3	0.66	0.92	0.82	31.7
All Vehicles			999	1.5	999	1.5	0.366	4.9	NA	1.6	11.3	0.20	0.32	0.22	38.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1 [2036DES Weekday PM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh.] veh	[Dist] m				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	37	0.0	37	0.0	0.149	3.5	LOS A	0.0	0.0	0.00	0.06	0.00	39.0
22	T1	All MCs	257	3.7	257	3.7	0.149	0.0	LOS A	0.0	0.0	0.00	0.06	0.00	39.8
23	R2	All MCs	61	2.0	61	2.0	0.048	4.5	LOS A	0.2	1.5	0.41	0.52	0.41	37.6
Approach			355	3.0	355	3.0	0.149	1.2	NA	0.2	1.5	0.07	0.14	0.07	39.4
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	17	7.7	17	7.7	0.125	9.5	LOS A	0.5	3.2	0.63	0.97	0.63	33.4
25	T1	All MCs	16	0.0	16	0.0	0.125	17.5	LOS C	0.5	3.2	0.63	0.97	0.63	30.9
26	R2	All MCs	16	0.0	16	0.0	0.125	19.7	LOS C	0.5	3.2	0.63	0.97	0.63	33.6
Approach			48	2.7	48	2.7	0.125	15.4	LOS C	0.5	3.2	0.63	0.97	0.63	32.9
NorthWest: King Street (NW)															
27	L2	All MCs	46	0.0	46	0.0	0.179	3.5	LOS A	0.0	0.0	0.00	0.06	0.00	39.0
28	T1	All MCs	292	3.8	292	3.8	0.179	0.1	LOS A	0.0	0.0	0.00	0.06	0.00	39.7
29	R2	All MCs	38	0.0	38	0.0	0.028	4.2	LOS A	0.1	0.8	0.38	0.48	0.38	38.0
Approach			376	2.9	376	2.9	0.179	0.9	NA	0.1	0.8	0.04	0.11	0.04	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	74	1.6	74	1.6	0.073	5.7	LOS A	0.3	1.9	0.35	0.56	0.35	38.1
31	T1	All MCs	24	0.0	24	0.0	0.203	18.0	LOS C	0.8	5.3	0.74	1.01	0.76	28.4
32	R2	All MCs	36	0.0	36	0.0	0.203	20.2	LOS C	0.8	5.3	0.74	1.01	0.76	32.3
Approach			134	0.9	134	0.9	0.203	11.8	LOS B	0.8	5.3	0.52	0.76	0.54	35.0
All Vehicles			913	2.7	913	2.7	0.203	3.4	NA	0.8	5.3	0.15	0.26	0.15	38.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 1 [2036DES Weekend AM (Site Folder: 1_Sixth Avenue / Memorial Avenue)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: King Street / Memorial Avenue / Sixth Avenue
 Site Category: (None)
 Stop (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh.] veh	[Dist] m				
SouthEast: Sixth Avenue (SE)															
21	L2	All MCs	66	0.0	66	0.0	0.200	3.5	LOS A	0.0	0.0	0.00	0.08	0.00	38.9
22	T1	All MCs	328	2.7	328	2.7	0.200	0.1	LOS A	0.0	0.0	0.00	0.08	0.00	39.7
23	R2	All MCs	85	2.9	85	2.9	0.070	4.7	LOS A	0.3	2.2	0.44	0.55	0.44	37.5
Approach			480	2.4	480	2.4	0.200	1.4	NA	0.3	2.2	0.08	0.16	0.08	39.3
NorthEast: Memorial Avenue (NE)															
24	L2	All MCs	35	3.6	35	3.6	0.305	10.8	LOS B	1.3	9.2	0.72	1.04	0.87	31.4
25	T1	All MCs	37	0.0	37	0.0	0.305	24.3	LOS C	1.3	9.2	0.72	1.04	0.87	27.8
26	R2	All MCs	24	0.0	24	0.0	0.305	27.6	LOS D	1.3	9.2	0.72	1.04	0.87	31.5
Approach			96	1.3	96	1.3	0.305	20.3	LOS C	1.3	9.2	0.72	1.04	0.87	30.5
NorthWest: King Street (NW)															
27	L2	All MCs	58	0.0	58	0.0	0.195	3.5	LOS A	0.0	0.0	0.00	0.07	0.00	38.9
28	T1	All MCs	317	0.4	317	0.4	0.195	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	39.7
29	R2	All MCs	32	0.0	32	0.0	0.026	4.6	LOS A	0.1	0.8	0.44	0.52	0.44	37.9
Approach			406	0.3	406	0.3	0.195	0.9	NA	0.1	0.8	0.03	0.11	0.03	39.5
SouthWest: Memorial Avenue (SW)															
30	L2	All MCs	47	2.6	47	2.6	0.052	6.2	LOS A	0.2	1.3	0.40	0.59	0.40	37.9
31	T1	All MCs	54	4.7	54	4.7	0.513	31.0	LOS D	2.4	16.9	0.87	1.13	1.30	22.1
32	R2	All MCs	56	0.0	56	0.0	0.513	33.9	LOS D	2.4	16.9	0.87	1.13	1.30	27.7
Approach			157	2.4	157	2.4	0.513	24.5	LOS C	2.4	16.9	0.73	0.97	1.03	29.0
All Vehicles			1139	1.5	1139	1.5	0.513	6.0	NA	2.4	16.9	0.21	0.33	0.26	37.5

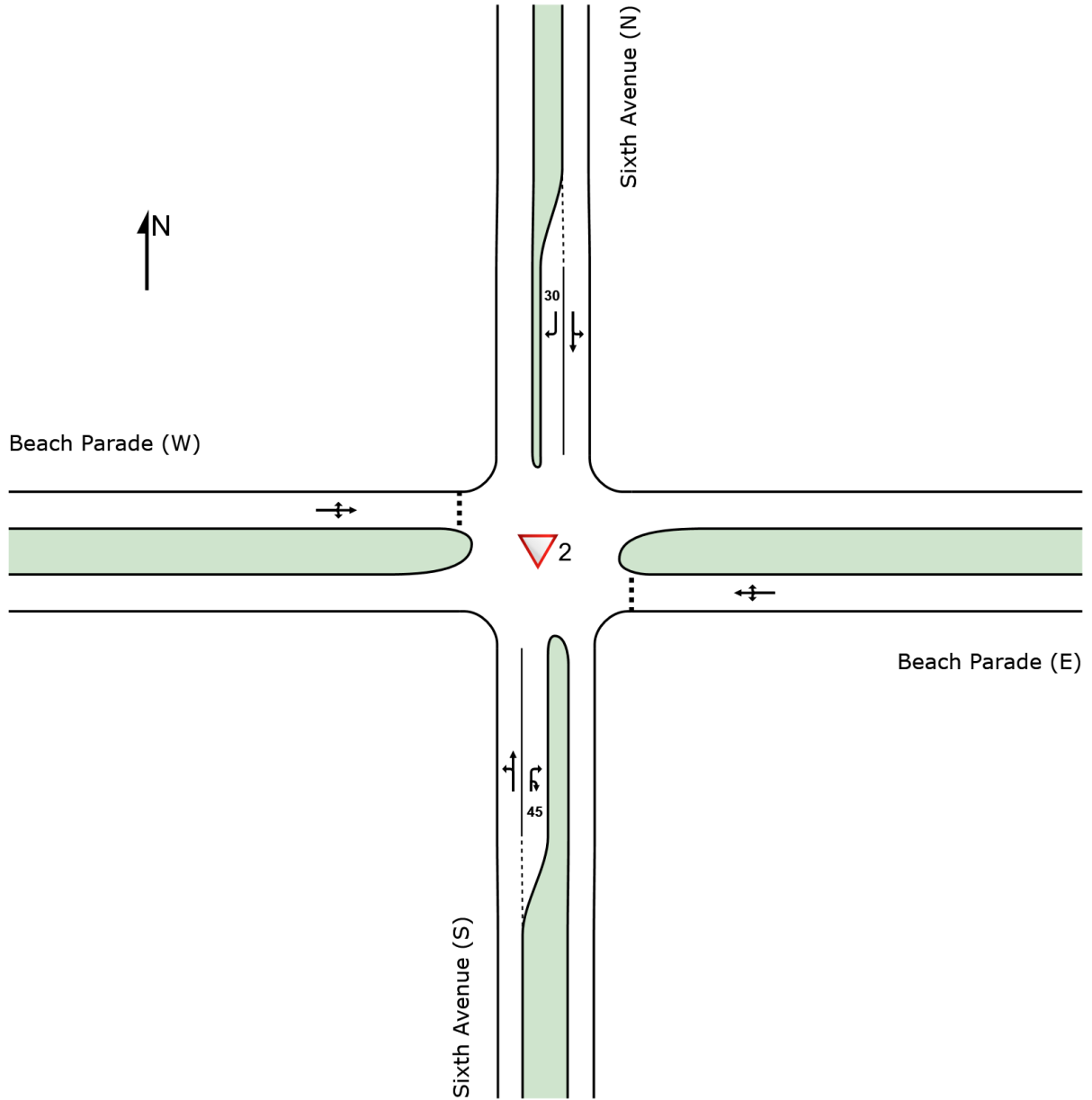
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

SITE LAYOUT

▽ Site: 2 [2026BG Weekday PM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Project No.: P6331
Project Name: Maroochydore SLSC TIA
Intersection: Sixth Avenue / Beach Parade
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: 2 [2026BG Weekday PM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec			veh	m			km/h
South: Sixth Avenue (S)															
1	L2	All MCs	19	6.3	19	6.3	0.115	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	196	2.9	196	2.9	0.115	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	49.7
3	R2	All MCs	48	0.0	48	0.0	0.062	5.7	LOS A	0.3	1.8	0.42	0.61	0.42	43.4
3u	U	All MCs	21	0.0	21	0.0	0.062	8.7	LOS A	0.3	1.8	0.42	0.61	0.42	48.5
Approach			284	2.4	284	2.4	0.115	1.9	NA	0.3	1.8	0.10	0.19	0.10	48.7
East: Beach Parade (E)															
4	L2	All MCs	12	0.0	12	0.0	0.060	5.9	LOS A	0.2	1.5	0.57	0.70	0.57	39.2
5	T1	All MCs	1	0.0	1	0.0	0.060	9.6	LOS A	0.2	1.5	0.57	0.70	0.57	39.5
6	R2	All MCs	15	8.3	15	8.3	0.060	14.1	LOS B	0.2	1.5	0.57	0.70	0.57	39.2
Approach			27	4.5	27	4.5	0.060	10.5	LOS B	0.2	1.5	0.57	0.70	0.57	39.2
North: Sixth Avenue (N)															
7	L2	All MCs	36	0.0	36	0.0	0.174	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	47.4
8	T1	All MCs	294	3.1	294	3.1	0.174	0.1	LOS A	0.0	0.0	0.00	0.06	0.00	49.6
9	R2	All MCs	24	0.0	24	0.0	0.016	5.2	LOS A	0.1	0.5	0.31	0.50	0.31	45.3
Approach			354	2.6	354	2.6	0.174	0.9	NA	0.1	0.5	0.02	0.09	0.02	49.1
West: Beach Parade (W)															
10	L2	All MCs	46	0.0	46	0.0	0.165	5.4	LOS A	0.6	4.5	0.53	0.65	0.53	43.6
11	T1	All MCs	13	0.0	13	0.0	0.165	10.4	LOS B	0.6	4.5	0.53	0.65	0.53	40.6
12	R2	All MCs	37	0.0	37	0.0	0.165	12.8	LOS B	0.6	4.5	0.53	0.65	0.53	43.7
Approach			96	0.0	96	0.0	0.165	8.9	LOS A	0.6	4.5	0.53	0.65	0.53	43.4
All Vehicles			761	2.3	761	2.3	0.174	2.6	NA	0.6	4.5	0.14	0.22	0.14	47.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2026BG Weekend AM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Sixth Avenue (S)															
1	L2	All MCs	34	0.0	34	0.0	0.180	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	305	2.6	305	2.6	0.180	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
3	R2	All MCs	64	0.0	64	0.0	0.073	5.8	LOS A	0.3	2.2	0.44	0.62	0.44	43.0
3u	U	All MCs	18	0.0	18	0.0	0.073	9.1	LOS A	0.3	2.2	0.44	0.62	0.44	48.2
Approach			421	1.9	421	1.9	0.180	1.7	NA	0.3	2.2	0.09	0.16	0.09	48.7
East: Beach Parade (E)															
4	L2	All MCs	25	0.0	25	0.0	0.102	6.2	LOS A	0.4	2.5	0.61	0.75	0.61	38.8
5	T1	All MCs	3	0.0	3	0.0	0.102	13.1	LOS B	0.4	2.5	0.61	0.75	0.61	39.2
6	R2	All MCs	17	0.0	17	0.0	0.102	17.7	LOS C	0.4	2.5	0.61	0.75	0.61	39.0
Approach			45	0.0	45	0.0	0.102	11.0	LOS B	0.4	2.5	0.61	0.75	0.61	38.9
North: Sixth Avenue (N)															
7	L2	All MCs	24	0.0	24	0.0	0.190	4.6	LOS A	0.0	0.0	0.00	0.04	0.00	47.6
8	T1	All MCs	340	1.6	340	1.6	0.190	0.1	LOS A	0.0	0.0	0.00	0.04	0.00	49.7
9	R2	All MCs	27	0.0	27	0.0	0.021	5.7	LOS A	0.1	0.6	0.40	0.54	0.40	45.1
Approach			392	1.4	392	1.4	0.190	0.7	NA	0.1	0.6	0.03	0.07	0.03	49.3
West: Beach Parade (W)															
10	L2	All MCs	67	0.0	67	0.0	0.250	6.3	LOS A	1.0	7.0	0.63	0.76	0.67	42.4
11	T1	All MCs	9	0.0	9	0.0	0.250	14.4	LOS B	1.0	7.0	0.63	0.76	0.67	38.9
12	R2	All MCs	42	0.0	42	0.0	0.250	18.5	LOS C	1.0	7.0	0.63	0.76	0.67	42.5
Approach			119	0.0	119	0.0	0.250	11.3	LOS B	1.0	7.0	0.63	0.76	0.67	42.3
All Vehicles			977	1.4	977	1.4	0.250	2.9	NA	1.0	7.0	0.15	0.23	0.16	47.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2036BG Weekday PM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec			veh	m			km/h
South: Sixth Avenue (S)															
1	L2	All MCs	21	6.3	21	6.3	0.136	4.7	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	233	2.9	233	2.9	0.136	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	49.7
3	R2	All MCs	54	0.0	54	0.0	0.074	6.0	LOS A	0.3	2.2	0.46	0.64	0.46	43.2
3u	U	All MCs	23	0.0	23	0.0	0.074	9.3	LOS A	0.3	2.2	0.46	0.64	0.46	48.4
Approach			331	2.4	331	2.4	0.136	1.9	NA	0.3	2.2	0.11	0.18	0.11	48.7
East: Beach Parade (E)															
4	L2	All MCs	13	0.0	13	0.0	0.079	6.3	LOS A	0.3	1.9	0.62	0.77	0.62	37.8
5	T1	All MCs	1	0.0	1	0.0	0.079	11.5	LOS B	0.3	1.9	0.62	0.77	0.62	38.2
6	R2	All MCs	16	8.3	16	8.3	0.079	17.6	LOS C	0.3	1.9	0.62	0.77	0.62	37.9
Approach			29	4.4	29	4.4	0.079	12.5	LOS B	0.3	1.9	0.62	0.77	0.62	37.9
North: Sixth Avenue (N)															
7	L2	All MCs	39	0.0	39	0.0	0.205	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	47.5
8	T1	All MCs	351	3.1	351	3.1	0.205	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
9	R2	All MCs	26	0.0	26	0.0	0.019	5.3	LOS A	0.1	0.6	0.34	0.51	0.34	45.3
Approach			416	2.6	416	2.6	0.205	0.8	NA	0.1	0.6	0.02	0.08	0.02	49.2
West: Beach Parade (W)															
10	L2	All MCs	52	0.0	52	0.0	0.213	5.6	LOS A	0.8	5.8	0.60	0.70	0.60	42.8
11	T1	All MCs	14	0.0	14	0.0	0.213	12.8	LOS B	0.8	5.8	0.60	0.70	0.60	39.5
12	R2	All MCs	41	0.0	41	0.0	0.213	15.7	LOS C	0.8	5.8	0.60	0.70	0.60	42.9
Approach			106	0.0	106	0.0	0.213	10.5	LOS B	0.8	5.8	0.60	0.70	0.60	42.6
All Vehicles			882	2.3	882	2.3	0.213	2.8	NA	0.8	5.8	0.14	0.22	0.14	47.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2036BG Weekend AM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				
South: Sixth Avenue (S)															
1	L2	All MCs	37	0.0	37	0.0	0.213	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	363	2.6	363	2.6	0.213	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
3	R2	All MCs	71	0.0	71	0.0	0.087	6.2	LOS A	0.4	2.6	0.49	0.66	0.49	42.8
3u	U	All MCs	19	0.0	19	0.0	0.087	9.8	LOS A	0.4	2.6	0.49	0.66	0.49	48.0
Approach			489	1.9	489	1.9	0.213	1.7	NA	0.4	2.6	0.09	0.16	0.09	48.7
East: Beach Parade (E)															
4	L2	All MCs	27	0.0	27	0.0	0.135	6.6	LOS A	0.5	3.2	0.67	0.82	0.67	37.2
5	T1	All MCs	3	0.0	3	0.0	0.135	16.7	LOS C	0.5	3.2	0.67	0.82	0.67	37.6
6	R2	All MCs	18	0.0	18	0.0	0.135	23.1	LOS C	0.5	3.2	0.67	0.82	0.67	37.4
Approach			48	0.0	48	0.0	0.135	13.4	LOS B	0.5	3.2	0.67	0.82	0.67	37.3
North: Sixth Avenue (N)															
7	L2	All MCs	26	0.0	26	0.0	0.225	4.6	LOS A	0.0	0.0	0.00	0.03	0.00	47.6
8	T1	All MCs	405	1.6	405	1.6	0.225	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	49.7
9	R2	All MCs	29	0.0	29	0.0	0.024	5.9	LOS A	0.1	0.7	0.44	0.57	0.44	45.0
Approach			461	1.4	461	1.4	0.225	0.7	NA	0.1	0.7	0.03	0.07	0.03	49.3
West: Beach Parade (W)															
10	L2	All MCs	74	0.0	74	0.0	0.337	7.7	LOS A	1.5	10.5	0.71	0.89	0.90	40.7
11	T1	All MCs	9	0.0	9	0.0	0.337	19.8	LOS C	1.5	10.5	0.71	0.89	0.90	36.6
12	R2	All MCs	46	0.0	46	0.0	0.337	25.4	LOS D	1.5	10.5	0.71	0.89	0.90	40.8
Approach			129	0.0	129	0.0	0.337	14.9	LOS B	1.5	10.5	0.71	0.89	0.90	40.5
All Vehicles			1128	1.4	1128	1.4	0.337	3.3	NA	1.5	10.5	0.16	0.23	0.18	47.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2026DES Weekday PM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Sixth Avenue (S)															
1	L2	All MCs	19	6.3	19	6.3	0.115	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	196	2.9	196	2.9	0.115	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	49.7
3	R2	All MCs	58	0.0	58	0.0	0.069	5.7	LOS A	0.3	2.1	0.42	0.61	0.42	43.3
3u	U	All MCs	21	0.0	21	0.0	0.069	8.7	LOS A	0.3	2.1	0.42	0.61	0.42	48.4
Approach			294	2.3	294	2.3	0.115	2.1	NA	0.3	2.1	0.11	0.20	0.11	48.6
East: Beach Parade (E)															
4	L2	All MCs	42	0.0	42	0.0	0.216	6.1	LOS A	0.8	5.8	0.62	0.76	0.62	38.5
5	T1	All MCs	1	0.0	1	0.0	0.216	10.5	LOS B	0.8	5.8	0.62	0.76	0.62	38.9
6	R2	All MCs	53	8.3	53	8.3	0.216	15.7	LOS C	0.8	5.8	0.62	0.76	0.62	38.6
Approach			96	4.6	96	4.6	0.216	11.4	LOS B	0.8	5.8	0.62	0.76	0.62	38.6
North: Sixth Avenue (N)															
7	L2	All MCs	45	0.0	45	0.0	0.179	4.6	LOS A	0.0	0.0	0.00	0.07	0.00	47.3
8	T1	All MCs	294	3.1	294	3.1	0.179	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	49.5
9	R2	All MCs	24	0.0	24	0.0	0.016	5.2	LOS A	0.1	0.5	0.31	0.50	0.31	45.3
Approach			363	2.5	363	2.5	0.179	1.0	NA	0.1	0.5	0.02	0.10	0.02	49.0
West: Beach Parade (W)															
10	L2	All MCs	46	0.0	46	0.0	0.173	5.4	LOS A	0.7	4.7	0.55	0.66	0.55	43.4
11	T1	All MCs	13	0.0	13	0.0	0.173	10.8	LOS B	0.7	4.7	0.55	0.66	0.55	40.3
12	R2	All MCs	37	0.0	37	0.0	0.173	13.7	LOS B	0.7	4.7	0.55	0.66	0.55	43.5
Approach			96	0.0	96	0.0	0.173	9.3	LOS A	0.7	4.7	0.55	0.66	0.55	43.2
All Vehicles			848	2.4	848	2.4	0.216	3.5	NA	0.8	5.8	0.18	0.27	0.18	47.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2026DES Weekend AM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Sixth Avenue (S)															
1	L2	All MCs	34	0.0	34	0.0	0.180	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	305	2.6	305	2.6	0.180	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
3	R2	All MCs	84	0.0	84	0.0	0.091	6.0	LOS A	0.4	2.7	0.45	0.63	0.45	42.8
3u	U	All MCs	18	0.0	18	0.0	0.091	9.2	LOS A	0.4	2.7	0.45	0.63	0.45	48.1
Approach			441	1.8	441	1.8	0.180	1.9	NA	0.4	2.7	0.11	0.19	0.11	48.5
East: Beach Parade (E)															
4	L2	All MCs	45	0.0	45	0.0	0.231	6.6	LOS A	0.9	6.2	0.67	0.82	0.71	37.4
5	T1	All MCs	3	0.0	3	0.0	0.231	14.8	LOS B	0.9	6.2	0.67	0.82	0.71	37.7
6	R2	All MCs	42	0.0	42	0.0	0.231	20.1	LOS C	0.9	6.2	0.67	0.82	0.71	37.5
Approach			91	0.0	91	0.0	0.231	13.1	LOS B	0.9	6.2	0.67	0.82	0.71	37.5
North: Sixth Avenue (N)															
7	L2	All MCs	43	0.0	43	0.0	0.200	4.6	LOS A	0.0	0.0	0.00	0.06	0.00	47.4
8	T1	All MCs	340	1.6	340	1.6	0.200	0.1	LOS A	0.0	0.0	0.00	0.06	0.00	49.6
9	R2	All MCs	27	0.0	27	0.0	0.021	5.7	LOS A	0.1	0.6	0.40	0.54	0.40	45.1
Approach			411	1.3	411	1.3	0.200	0.9	NA	0.1	0.6	0.03	0.09	0.03	49.1
West: Beach Parade (W)															
10	L2	All MCs	67	0.0	67	0.0	0.263	6.4	LOS A	1.1	7.6	0.65	0.78	0.72	42.1
11	T1	All MCs	9	0.0	9	0.0	0.263	15.6	LOS C	1.1	7.6	0.65	0.78	0.72	38.5
12	R2	All MCs	42	0.0	42	0.0	0.263	20.1	LOS C	1.1	7.6	0.65	0.78	0.72	42.2
Approach			119	0.0	119	0.0	0.263	12.0	LOS B	1.1	7.6	0.65	0.78	0.72	41.9
All Vehicles			1061	1.3	1061	1.3	0.263	3.6	NA	1.1	7.6	0.18	0.27	0.20	47.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2036DES Weekday PM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Sixth Avenue (S)															
1	L2	All MCs	21	6.3	21	6.3	0.136	4.7	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	233	2.9	233	2.9	0.136	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	49.7
3	R2	All MCs	63	0.0	63	0.0	0.082	6.0	LOS A	0.3	2.4	0.47	0.64	0.47	43.1
3u	U	All MCs	23	0.0	23	0.0	0.082	9.3	LOS A	0.3	2.4	0.47	0.64	0.47	48.3
Approach			340	2.4	340	2.4	0.136	2.1	NA	0.3	2.4	0.12	0.20	0.12	48.6
East: Beach Parade (E)															
4	L2	All MCs	43	0.0	43	0.0	0.269	7.1	LOS A	1.0	7.6	0.68	0.86	0.78	36.6
5	T1	All MCs	1	0.0	1	0.0	0.269	13.4	LOS B	1.0	7.6	0.68	0.86	0.78	36.9
6	R2	All MCs	54	8.3	54	8.3	0.269	20.4	LOS C	1.0	7.6	0.68	0.86	0.78	36.6
Approach			98	4.6	98	4.6	0.269	14.5	LOS B	1.0	7.6	0.68	0.86	0.78	36.6
North: Sixth Avenue (N)															
7	L2	All MCs	48	0.0	48	0.0	0.211	4.6	LOS A	0.0	0.0	0.00	0.07	0.00	47.3
8	T1	All MCs	351	3.1	351	3.1	0.211	0.1	LOS A	0.0	0.0	0.00	0.07	0.00	49.5
9	R2	All MCs	26	0.0	26	0.0	0.019	5.3	LOS A	0.1	0.6	0.34	0.51	0.34	45.3
Approach			425	2.6	425	2.6	0.211	0.9	NA	0.1	0.6	0.02	0.09	0.02	49.1
West: Beach Parade (W)															
10	L2	All MCs	52	0.0	52	0.0	0.224	5.6	LOS A	0.9	6.1	0.62	0.71	0.62	42.6
11	T1	All MCs	14	0.0	14	0.0	0.224	13.3	LOS B	0.9	6.1	0.62	0.71	0.62	39.2
12	R2	All MCs	41	0.0	41	0.0	0.224	16.9	LOS C	0.9	6.1	0.62	0.71	0.62	42.7
Approach			106	0.0	106	0.0	0.224	11.0	LOS B	0.9	6.1	0.62	0.71	0.62	42.3
All Vehicles			969	2.4	969	2.4	0.269	3.8	NA	1.0	7.6	0.19	0.28	0.20	47.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 2 [2036DES Weekend AM (Site Folder: 2_Sixth Avenue / Beach Parade)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Project No.: P6331
 Project Name: Maroochydore SLSC TIA
 Intersection: Sixth Avenue / Beach Parade
 Site Category: (None)
 Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: Sixth Avenue (S)															
1	L2	All MCs	37	0.0	37	0.0	0.213	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	48.4
2	T1	All MCs	363	2.6	363	2.6	0.213	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
3	R2	All MCs	91	0.0	91	0.0	0.106	6.3	LOS A	0.4	3.1	0.50	0.67	0.50	42.6
3u	U	All MCs	19	0.0	19	0.0	0.106	9.9	LOS A	0.4	3.1	0.50	0.67	0.50	47.9
Approach			509	1.9	509	1.9	0.213	1.9	NA	0.4	3.1	0.11	0.18	0.11	48.5
East: Beach Parade (E)															
4	L2	All MCs	43	0.0	43	0.0	0.356	8.9	LOS A	1.5	10.4	0.77	0.97	0.99	33.7
5	T1	All MCs	3	0.0	3	0.0	0.356	20.9	LOS C	1.5	10.4	0.77	0.97	0.99	34.0
6	R2	All MCs	54	0.0	54	0.0	0.356	28.3	LOS D	1.5	10.4	0.77	0.97	0.99	33.8
Approach			100	0.0	100	0.0	0.356	19.7	LOS C	1.5	10.4	0.77	0.97	0.99	33.8
North: Sixth Avenue (N)															
7	L2	All MCs	45	0.0	45	0.0	0.236	4.6	LOS A	0.0	0.0	0.00	0.05	0.00	47.4
8	T1	All MCs	405	1.6	405	1.6	0.236	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
9	R2	All MCs	29	0.0	29	0.0	0.024	5.9	LOS A	0.1	0.7	0.44	0.57	0.44	45.0
Approach			480	1.4	480	1.4	0.236	0.9	NA	0.1	0.7	0.03	0.09	0.03	49.1
West: Beach Parade (W)															
10	L2	All MCs	74	0.0	74	0.0	0.355	8.0	LOS A	1.6	11.2	0.73	0.91	0.95	40.3
11	T1	All MCs	9	0.0	9	0.0	0.355	21.4	LOS C	1.6	11.2	0.73	0.91	0.95	36.0
12	R2	All MCs	46	0.0	46	0.0	0.355	27.3	LOS D	1.6	11.2	0.73	0.91	0.95	40.4
Approach			129	0.0	129	0.0	0.355	15.9	LOS C	1.6	11.2	0.73	0.91	0.95	40.1
All Vehicles			1219	1.3	1219	1.3	0.356	4.4	NA	1.6	11.2	0.20	0.29	0.24	46.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Minor Road Approach LOS values are based on average delay for all vehicle movements.
 NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
 Two-Way Sign Control Capacity Model: SIDRA Standard.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Appendix 8
Noise Impact Assessment prepared by MWA Environmental



NOISE IMPACT ASSESSMENT

PROPOSED MINISTERIAL INFRASTRUCTURE DESIGNATION

MAROOCHYDORE SURF LIFE SAVING CLUB

Prepared for:
Maroochydore Surf Life Saving Club
Inc

Prepared by:
MWA Environmental

21 May 2024

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FIGURES

ATTACHMENTS

1.0 INTRODUCTION

1.1 STUDY BRIEF

MWA Environmental has been engaged to prepare a Noise Impact Assessment for a proposed ministerial infrastructure designation of the Maroochydore Surf Life Saving Club. The proposal involves the reconstruction and extensions of the Maroochydore Surf Life Saving Club with the ultimate development being similar in nature to the currently operating Club.

This report considers potential noise amenity impacts at surrounding residential land uses from plant and equipment noise, service vehicle and loading noise, amplified entertainment noise and patron noise from the proposed development.

The assessment is based on ambient noise monitoring conducted in the vicinity of the site, noise measurements previously conducted on typical sources associated with the proposed uses and detailed noise propagation modelling.

1.2 SITE DESCRIPTION

The subject site is located at Alexandra Parade, Maroochydore and currently operates as the existing Maroochydore Surf Life Saving Club. The development includes the reconstruction and extension of the Maroochydore Surf Life Saving Club with the existing car parking area to the south of the Club building to remain.

Adjoining land to the north and south is zoned Open Space with Maroochydore Beach located to the east. Alexandra Parade adjoins the site to the west with existing two or three storey multiple dwelling residential uses beyond.

The site location and surrounding land uses are shown on the aerial photo included as **Figure 1** with land use zoning shown on **Figure 2**.

1.3 PROPOSED DEVELOPMENT

It is proposed to reconstruct and extend the existing Maroochydore Surf Life Saving Club building. The proposal will extend the ground level of the building to the north. The reconstructed Maroochydore Surf Life Saving Club building will consist of:

- Ground level:
 - Services and loading zone areas accessed via driveways from Alexandra Parade.
 - Lifesaving club operation zones for storage of vehicles, equipment, etc.
 - Members club room, first aid facility and members amenities facilities.
 - Entry lobby.
 - Café and café terrace on the eastern part of the building.
 - Members deck and public deck areas to the east of the building.

- First floor level:
 - Lifesaving club area.
 - Lobby and reception zone.
 - Supporters club dining / bar area including two external deck areas.
- Second floor level:
 - Supporters club function room / community facilities.
 - Lifesaving club area for youth development and training

It is considered that the proposed reconstructed and extended Maroochydore Surf Life Saving Club will be similar in nature to the existing currently operating Club and therefore noise emissions are expected to be similar to what currently occurs. It is noted that the Club currently operates without any known recent complaints or issue regarding noise emissions. The proposed development is suitably designed to contain noise of internal and external areas such that no adverse noise impacts will result at surrounding residential uses.

The development will utilise existing carparking located to the south of the Club building.

It is considered that noise from servicing / loading, club operational areas and major mechanical plant located within the enclosed ground level building spaces will be acoustically screened to surrounding residential uses from the proposed building structure. Similarly, it is considered that patron noise from the ground level members deck, public deck and café terrace will be shielded by the Club building to residential areas located to the west.

The proposed development plans are included as **Attachment 1**.

The Maroochydore Surf Life Saving Club currently operates under Liquor License 83363 (January 2009) with details as follows:

- Licensed area operating hours are 10am to 12midnight Monday to Sunday.
- Entertainment noise limit for the First floor (supporters club dining / bar area) must not exceed 98 dB(C), fast response, when measured approximately 3 metres from the source of the noise.
- Entertainment noise limit for the Second floor (supporters club function room) must not exceed 103 dB(C), fast response, when measured approximately 3 metres from the source of the noise.

It is advised that the Club currently operates to 500pax capacity with approximately 300pax capacity on the first floor (supporters club dining / bar area) and approximately 200pax capacity on the second floor (supporters club function room).

The above existing operations for the Maroochydore Surf Life Saving Club, including operating hours, entertainment noise limits and capacity, will be maintained for the proposed reconstruction development.

2.0 EXISTING NOISE ENVIRONMENT

MWA Environmental conducted noise measurements to obtain information about the existing acoustic environment at the site and surrounding land uses. Site inspections and noise measurements demonstrate that the dominant existing noise influence on the site and immediate surrounds is surf / wind noise in this coastal location and traffic noise on surrounding roadways.

Noise measurements were conducted using a noise datalogger which was placed at a level 2 balcony of a residence opposite the existing Maroochydore Surf Life Saving Club as indicated on **Figure 3**. The noise datalogger used was a Norsonic NOR-139 noise datalogger, programmed to provide statistical analysis results based on 15-minute sampling periods from 17 to 23 April 2024. Heavy rainfall occurred on 22 April 2024 and thus only the recorded noise data up to 21 April 2024 has been used for this assessment. The datalogger was pre-calibrated to 94 dB at 1kHz using a Bruel & Kjaer Sound Level Calibrator, Type 4231, and displayed a deviation of less than ± 0.5 dB from this level at post-calibration.

The recorded noise levels are presented as statistical components, which are described as:

- L_{max} : Maximum noise level exceeded for the measurement period, referred to as the maximum sound pressure level.
- L_{10} : Noise level exceeded for 10 percent of the measurement period, referred to as the averaged maximum sound pressure level.
- L_{90} : Noise level exceeded for 90 percent of the measurement period. AS1055-2018 ¹ notes that the L_{90} is described as the background sound pressure level.
- L_{eq} : An “average” measurement, and as per AS1055-2018 defined as the value of the sound pressure level of a continuous steady sound state, that within a measurement period, has the same mean square sound pressure as a sound under consideration whose level varies with time.

Table 1 below provides the minimum, maximum and average statistical noise levels recorded by the noise datalogger.

¹ Australian Standard AS 1055-2018 *Acoustics – Description and measurement of environmental noise, Part 1: General procedures*

**Table 1: Ranges of Site Recorded Noise Levels
17 to 21 April 2024**

PARAMETER	PERIOD	RECORDED NOISE LEVELS - dB(A)		
		MINIMUM	MAXIMUM	AVERAGE
L_{max}	Daytime (7am-6pm)	69.5	96.8	77.9
	Evening (6pm-10pm)	60.4	96.8	73.7
	Nighttime (10pm-7am)	60.6	90.7	66.8
L₁₀	Daytime (7am-6pm)	60.4	74.1	67.8
	Evening (6pm-10pm)	58.2	66.8	61.8
	Nighttime (10pm-7am)	57.4	67.8	60.4
L₉₀	Daytime (7am-6pm)	56.7	67.4	61.3
	Evening (6pm-10pm)	56.0	62.0	58.5
	Nighttime (10pm-7am)	54.2	61.6	57.1
L_{eq}	Daytime (7am-6pm)	58.9	71.2	65.4
	Evening (6pm-10pm)	57.2	68.7	60.7
	Nighttime (10pm-7am)	56.4	64.0	59.0

The datalogger recorded noise levels are included as graphical traces of noise level versus time for the statistical noise level descriptors L_{max}, L₁₀, L₉₀ and L_{eq} as **Attachment 2**.

Key statistical noise level parameters recorded by the noise datalogger included:

Recorded Rating Background Level – Daytime	=	60 dB(A)
Recorded Rating Background Level – Evening	=	57 dB(A)
Recorded Rating Background Level – Night	=	56 dB(A)

It is considered that the recorded rating background levels were affected by noisier wind and surf conditions than what may be the case during other periods (i.e. during quieter conditions, lower rating background noise levels may result). As such, based on our experience in conducting noise assessments for developments in coastal locations, we have conservatively adopted the following lower rating background noise levels for the purposes of this assessment:

Adopted Rating Background Level – Daytime	=	55 dB(A)
Adopted Rating Background Level – Evening	=	50 dB(A)
Adopted Rating Background Level – Night	=	45 dB(A)

3.0 NOISE CRITERIA

The Sunshine Coast Planning Scheme 2014, Schedule 6 requires noise assessment to be undertaken in accordance with Performance Outcome PO1 and PO2 Table 9.4.3.3.1 (Performance outcomes and acceptable outcomes for assessable development) of the Nuisance code. However, no specific noise limits are present in the Performance Code. Furthermore, Schedule 6, SC6.15.4 provides the following assessment requirements.

SC6.15.4 Advice for preventing or minimising nuisance emissions and imissions associated with noise and/or vibration

The following is advice for achieving Performance Outcomes PO1 and PO2 of **Table 9.4.3.3.1 (Performance outcomes and acceptable outcomes for assessable development)** of the **Nuisance code** where there is potential for noise and/or vibration emissions or imissions to cause environmental harm or nuisance at a sensitive land use:-

- (a) compliance with Performance Outcomes PO1 and PO2 of **Table 9.4.3.3.1 (Performance outcomes and acceptable outcomes for assessable development)** of the **Nuisance code** may be demonstrated in part or aided by the submission of a noise impact assessment report prepared by a competent person, which properly addresses, describes or includes the following:-
 - (i) a location plan identifying the subject site and sensitive land uses or the nearest potentially sensitive land uses to the subject site and any significant features such as topographic variation, barriers and intervening buildings;
 - (ii) the results of measurements of background LA90 noise levels using an appropriate methodology at a location representative of the nearest potentially affected sensitive land uses to the subject site in the absence of noise emissions from the subject site, with:-
 - (A) the background noise levels to include time periods that are most likely to be sensitive from a noise perspective (generally at night); and
 - (B) the background noise monitoring to be completed for a sufficient period of time to establish 'the average minimum background noise levels' for the locality;
 - (iii) comparison of the background noise level with predicted source noise levels using an appropriately recognised methodology and criteria, from the proposed activity at the nearest potentially affected sensitive land uses to determine compliance with criteria as defined in Schedule 1 of the *Environmental Protection (Noise) Policy 2008*; and
 - (iv) specification of appropriate control and mitigation measures as necessary;

Considering the above, the *Environmental Protection (Noise) Policy 2008* is considered relevant in assessing the development. The Policy specifies noise limits for sensitive receptors to enhance or protect acoustic amenity.

3.1 ACOUSTIC QUALITY OBJECTIVES

The *Environmental Protection (Noise) Policy 2008* specifies Acoustic Quality Objectives for sensitive receptors to enhance or protect acoustic amenity. The applicable Acoustic Quality Objectives from Schedule 1 of the policy are presented below in **Table 2**.

Table 2: Acoustic Quality Objectives

SENSITIVE RECEPTOR	PERIOD	ACOUSTIC QUALITY OBJECTIVES DB(A)			ENVIRONMENTAL VALUE
		($L_{Aeq,adj,1-hour}$)	($LA_{10,adj,1-hour}$)	($LA_{1,adj,1-hour}$)	
Dwelling (for outdoors)	7am to 10pm	50	55	65	Health and wellbeing
Dwelling (for indoors)	7am to 10pm	35	40	45	Health and wellbeing
	10pm to 7am	30	35	40	Health and wellbeing, in relation to the ability to sleep

Previous experience with noise measurements conducted at similar developments demonstrates that the most stringent of the Acoustic Quality Objective parameter for dwellings are the L_{Aeq} levels for each period of the day.

A 7 dBA reduction by the building envelope with windows open, is considered to derive the representative external noise criteria from the respective indoors noise limits².

Comparison of the Acoustic Quality Objectives and the measured existing noise levels at the subject site, as presented in **Table 1**, demonstrates that the Acoustic Quality Objectives are currently exceeded in this locality. Therefore, Acoustic Quality Objectives are not considered the appropriate basis for determination of project noise emission criteria to protect the environmental values of the nearby sensitive receptors.

The 'Controlling Background Creep' criteria specified in the *Environmental Protection (Noise) Policy 2008* are applied for this assessment as per **Section 3.2** to assess the development impact on the environmental values of the receiving environment.

3.2 CONTROLLING BACKGROUND CREEP

Part 4, Section 10 of the *Environmental Protection (Noise) Policy (2008)* provides 'controlling background creep' noise criteria for the assessment of amenity impacts for an activity involving noise.

² AS3671 states approximate 10 dB(A) noise reduction through a façade with 10% open area. Thus approximately 7 dB(A) noise reduction through a façade with 20% open area. A large 1200x1800 sliding window relates to approximately 10% open area. A large 2100x2300 sliding glass door represents approximately 20% open area. Thus, 7dB(A) noise reduction is conservatively adopted based upon a large sliding glass door in the affected façade. Openings larger than 20% open area are unlikely to be necessary for ventilation during the night period.

Considering the nature of mechanical plant noise emissions, the relevant 'controlling background creep' criteria are specified as 'continuous noise', while all other noise sources associated with the development, including patron noise and amplified entertainment noise, are considered as 'noise that varies over time', as per the following:

10 Controlling Background Creep

(1) This section states the management intent for an activity involving noise.

Note—

See section 51 of the Environmental Protection Regulation 2008.

(2) To the extent that it is reasonable to do so, noise from an activity must not be—

- (a) for noise that is continuous noise measured by $L_{A90,T}$ – more than nil dB(A) greater than the existing acoustic environment measured by $L_{A90,T}$;
- (b) for noise that varies over time measured by $L_{Aeq,adj,T}$ – more than 5 dB(A) greater than the existing acoustic environment measured by $L_{A90,T}$

As such, the adopted noise criteria for this assessment of noise impacts from the proposed development are that:

- the noise from **mechanical plant** (continuous steady-state noise) measured as the $L_{A90,adj,T}$ does not exceed the otherwise prevailing $L_{A90,T}$; and
- the **overall noise** from the use measured as the $L_{Aeq,adj,T}$ (noise that varies over time) does not exceed the otherwise prevailing $L_{A90,T}$ by more than 5 dB(A).

The applicable criteria are presented in **Table 3**, conservatively based upon the lower adopted Rating Background Level statistical parameters (refer **Section 2.0**).

Table 3: Adopted Background Creep Noise Criteria

Period	Background Noise Level (L_{A90}) – dB(A)	Mechanical Plant Noise Criteria (L_{A90}) – dB(A)	Overall Noise Criteria (L_{Aeq}) – dB(A)
Daytime (7am to 6pm)	55	55	60
Evening (6pm to 10pm)	50	50	55
Night (10pm to 7am)	45	45	50

3.3 SLEEP DISTURBANCE

As the development will generate some noise during the night period (10pm to 7am) it is appropriate to consider the potential for sleep disturbance at nearby sensitive receptors. Queensland *Ecoaccess Guideline: Noise - Planning for Noise Control* (2015) indicates that unreasonable sleep disturbance impacts can occur when short duration noise peaks in the range 45 to 50 dB(A) within a bedroom occur more than 10 to 15 times per night.

Consideration of potential sleep disturbance noise criteria should also give regard to the ambient noise environment i.e. whether noise from vehicles on public roads or the surrounding environment results in noise levels above the default planning criteria.

Given the existing noise levels at the coastal locality during the night period, the higher range sleep disturbance noise criterion of 50 dB(A) L_{Amax} within a surrounding bedroom has been adopted for assessment of noise peaks from the development during the night period. Adopting a typical 7³ dB(A) noise reduction through an open window relates to a **sleep disturbance criterion of L_{Amax} 57 dB(A) external to a surrounding bedroom window.**

³ AS3671 states approximate 10 dB(A) noise reduction through a façade with 10% open area. Thus approximately 7 dB(A) noise reduction through a façade with 20% open area. A large 1200x1800 sliding window relates to approximately 10% open area. A large 2100x2300 sliding glass door represents approximately 20% open area. Thus, 7dB(A) noise reduction is conservatively adopted based upon a large sliding glass door in the affected façade. Openings larger than 20% open area are unlikely to be necessary for ventilation during the night period.

4.0 NOISE IMPACT ASSESSMENT

4.1 NEAREST NOISE SENSITIVE RECEPTORS

The six (6) nearest surrounding sensitive uses that have been identified and considered as noise sensitive uses for the purposes of this assessment are the following residential uses:

- R1: 26 Alexandra Parade – 3 storey multiple dwelling residential units to the north west of the site.
- R2: 28 Alexandra Parade – 2 storey multiple dwelling residential units to the north west of the site.
- R3: 30 Alexandra Parade – 3 storey multiple dwelling residential units to the west of the site.
- R4: 6 Beach Parade – 3 storey multiple dwelling residential units to the west of the site.
- R5: 1 Beach Parade – 3 storey multiple dwelling residential units to the southwest of the site.
- R6: 40 Alexandra Parade – 2 storey multiple dwelling residential units to the southwest of the site.

4.2 NOISE MODELLING

Noise modelling using the SoundPLAN 9.0 software has been undertaken to assess the noise impact of the proposed reconstruction development at the identified nearest surrounding residential receptors. The SoundPLAN model was established to represent the noise from operations at the internal licensed areas located on the first and second floor levels and considering maximum capacity, operating hours and entertainment noise limits as per the current operations and existing Liquor License 83363 (January 2009). Noise from patrons at the external deck areas and noise from ground level deck and terrace areas have also been considered.

It is considered that the noise of ground level servicing and surf lifesaving club operations will be contained by the proposed enclosed ground level building structure with no significant potential to impact upon surrounding residential amenity.

No detailed specification for external mechanical plant associated with the development is available at this stage. However, mechanical plant is likely to include package air-conditioning units, minor refrigeration units and exhaust fans. Plant and equipment will likely be located within the enclosed ground level area in a dedicated screened plant room / area. Exhaust fans would likely be roof mounted. Review of mechanical plant selections and locations should be undertaken at the detailed design stage of the project to ensure compliance with the relevant noise criteria in accordance with standard development approval conditions.

The Sound Transmission Loss (STL) through the walls and glazing of the Club building have been adopted as per **Table 4** below.

Table 4: Modelled Building Component Sound Transmission Loss For Proposed Reconstructed Club Building

CONSTRUCTION ELEMENT	SOUND TRANSMISSION LOSS - dB(A)								Rw
	FREQUENCY BAND (Hz)								
	63	125	250	500	1	2	4	8	
	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	
Commercial Glazing	11	17	24	29	33	34	22	19	32
Rendered Concrete Wall and Roof	23	37	37	42	52	60	66	66	48
Open door to first floor deck areas / Eastern façade glazing of Level 1 area ⁴	0	0	0	0	0	0	0	0	0

The Club internal licensed areas include the supporters club facilities dining and bar area on the first floor and the supporters club function room on the second floor. Two outdoor deck areas are proposed on the southern and eastern facades of the first floor level.

The operating hours for licensed Club areas are as per the current Liquor License which are 10am to 12midnight Monday to Sunday.

The noise model has represented the following noise sources based upon the existing operations for the Club and based on monitoring previously conducted by MWA Environmental and others for similar developments:

Patron Noise⁵ at ground level deck and terrace areas to the east of the Club building:

L_{Aeq} 85 dB(A) SWL

L_{Amax} 96 dB(A) SWL

⁴ Doors to deck areas and the first floor eastern façade glazing have been conservatively modelled as being open at all times.

⁵ Based upon 25 people at the ground level deck and terrace areas to the east of the Club building using the noise emission relationship derived in Prediction of Noise from Small to Medium Sized Crowds (Hayne, MJ et. al., Paper Number 133, Proceedings of ACOUSTICS 2011). It is considered that these areas will be predominantly used during the early morning and day periods.

Patron Noise⁶ at first floor level supporters club dining / bar area:

L_{Aeq} 101 dB(A) SWL

L_{Amax} 107 dB(A) SWL internal

L_{Amax} 96 dB(A) SWL external decks

Amplified Music at first floor level supporters club dining / bar area:

98 dB(C) at 3m per speaker⁷

Patron Noise⁸ at second floor level supporters club function room:

L_{Aeq} 99 dB(A) SWL

L_{Amax} 106 dB(A) SWL internal

Amplified Music at second level supporters club function room:

103 dB(C) at 3m per speaker⁹

Noise emissions from amplified music have been represented as point sources and patrons/people have been represented as area sources in the SoundPLAN model. The SoundPLAN industrial building module was used to predict noise emissions from the internal Club noise sources.

The noise predictions are considered a conservative assessment in that maximum capacity and entertainment noise limits have been modelled within the Club licensed areas. In reality, noise emissions will be substantially lower for the vast majority of the time.

The predicted overall noise levels from the proposed Maroochydore Surf Life Saving Club reconstruction development for assessment against the adopted noise criteria at the nearest surrounding residential land uses are presented in **Table 5** below. The highest noise level predicted at each receiver floor level is displayed.

⁶ Based upon the maximum capacity of 300 patrons at the first floor licensed areas using the noise emission relationship derived in Prediction of Noise from Small to Medium Sized Crowds (Hayne, MJ et. al., Paper Number 133, Proceedings of ACOUSTICS 2011). 250 patrons have been distributed at the internal first floor licensed areas with a total 50 patrons considered at the outdoor deck areas on the southern and eastern building facades. Conservatively, doors to the deck areas and glazing on the eastern façade have been modelled as open.

⁷ The noise model considered 4 speakers within the first floor licensed areas with the noise limit as per the existing Maroochydore Surf Life Saving Club Liquor License.

⁸ Based upon the maximum capacity of 200 patrons at the second floor licensed areas using the noise emission relationship derived in Prediction of Noise from Small to Medium Sized Crowds (Hayne, MJ et. al., Paper Number 133, Proceedings of ACOUSTICS 2011).

⁹ The noise model considered 4 speakers within the second floor licensed area with the noise limit as per the existing Maroochydore Surf Life Saving Club Liquor License.

Table 5: Predicted Resultant Noise Levels at Surrounding Sensitive Uses

RECEPTOR	PREDICTED NOISE LEVEL – dB(A)			
	L _{Aeq,adj,1hr} Day	L _{Aeq,adj,1hr} Evening	L _{Aeq,adj,1hr} Night 10am to 12midnight	L _{Amax} Night
R1 (26 Alexandra Parade)	43	43	43	49
R2 (28 Alexandra Parade)	43	43	43	51
R3 (30 Alexandra Parade)	44	44	44	52
R4 (6 Beach Parade)	41	41	41	41
R5 (1 Beach Parade)	45	45	45	55
R6 (40 Alexandra Parade)	45	45	45	52
Noise Criteria	60 dB(A)	55 dB(A)	50 dB(A)	57 dB(A)
Compliance	Yes	Yes	Yes	Yes

The predicted resultant noise levels satisfy the relevant noise criteria at all surrounding residential uses during all periods of the day. It is noted that operations during the critical evening and night periods satisfy the noise criteria considering Club operations to 12midnight. It is also noted that for early morning café operation, which is proposed to open from 5:30am, the relevant noise limits are comfortably satisfied at all surrounding residential land uses.

It is considered that resultant noise levels from the proposed development will be well below the noise level predictions as presented in **Table 5** for the vast majority of the time. Based on the noise modelling results, noise emissions from the proposed development are well below the recorded noise levels in the locality and the conservative adopted noise limits and therefore will not cause an adverse noise amenity impact upon surrounding residential uses.

The L_{Aeq} noise predictions are also displayed as grid noise maps included as **Attachment 3**.

5.0 CONCLUSIONS

MWA Environmental has been engaged to prepare a Noise Impact Assessment for a proposed ministerial infrastructure designation of the Maroochydore Surf Life Saving Club. The proposal involves the reconstruction and extensions of the Maroochydore Surf Life Saving Club with the ultimate development being similar in nature to the currently operating Club.

This report considers potential noise amenity impacts at surrounding residential land uses from plant and equipment noise, service vehicle and loading noise, amplified entertainment noise and patron noise from the proposed development.

The assessment is based on ambient noise monitoring conducted in the vicinity of the site, noise measurements previously conducted on typical sources associated with the proposed uses and detailed noise propagation modelling.

The Maroochydore Surf Life Saving Club currently operates under Liquor License 83363 (January 2009) with the existing operations, including operating hours, entertainment noise limits and capacity, to be maintained for the proposed reconstruction development.

The noise assessment demonstrates that the proposed reconstruction development can readily comply with the adopted noise criteria at the nearest surrounding residential land uses.

Mechanical plant should be acoustically screened to surrounding residential uses. Review of mechanical plant selections and locations should be undertaken at the detailed design stage of the project to ensure compliance with the relevant noise criteria in accordance with standard development approval conditions.

It is recommended that the development be approved with reasonable and relevant conditions.

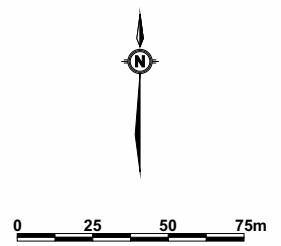
MWA Environmental
21 May 2024

FIGURES



LEGEND
 SITE LOCATION

DRAWING REFERENCE
 © THE STATE OF QUEENSLAND
 (DEPARTMENT OF RESOURCES)
 QLDGLOBE.



CLIENT
MAROOCHYDORE SURF LIFE SAVING CLUB INC

PROJECT
NOISE IMPACT ASSESSMENT
 PROPOSED MINISTERIAL INFRASTRUCTURE DESIGNATION
 34-36 ALEXANDRA PARADE
 MAROOCHYDORE QLD

TITLE
SITE LOCATION AND SURROUNDING LAND USES

JOB	MAROOCHYDORE	FIGURE 1
JOB NO.	23193	
DATE	20/05/24	DWG NUMBER
SCALE	1:2500 (A4)	23193-1
REV.		



Max Winders & Associates Pty Ltd t/as MWA Environmental
 Level 7, 241 Adelaide St, Brisbane, QLD 4001
 P 07 3002 5500 E mail@mwaenviro.com.au
 W www.mwaenviro.com.au
 ABN 94 010 833 084




LEGEND


— SITE LOCATION

SUNSHINE COAST PLANNING SCHEME 2014 ZONES

- SPORT AND RECREATION
- OPEN SPACE
- HIGH DENSITY RESIDENTIAL
- LOCAL CENTRE
- COMMUNITY FACILITIES

DRAWING REFERENCE
 SUNSHINE COAST COUNCIL MYMAPS,
 SC PLANNING SCHEME 2014, ZONES.





CLIENT
**MAROOCHYDORE SURF
 LIFE SAVING CLUB INC**

PROJECT
**NOISE IMPACT
 ASSESSMENT**
 PROPOSED MINISTERIAL
 INFRASTRUCTURE DESIGNATION
 34-36 ALEXANDRA PARADE
 MAROOCHYDORE QLD

TITLE
ZONING MAP

JOB	MAROOCHYDORE	FIGURE 2
JOB NO.	23193	
DATE	20/05/24	DWG NUMBER
SCALE	1:2500 (A4)	23193-2
REV.		

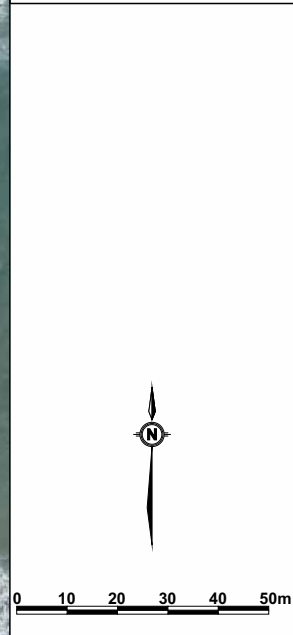


Max Winders & Associates Pty Ltd t/as MWA Environmental
 Level 7, 241 Adelaide St, Brisbane, QLD 4001
 P 07 3002 5500 E mail@mwaenviro.com.au
 W www.mwaenviro.com.au
 ABN 94 010 833 084



LEGEND
 — SITE LOCATION
 ● NOISE DATALOGGER LOCATION (LEVEL 2 BALCONY)

DRAWING REFERENCE
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 QLDGLOBE.



CLIENT
**MAROOCHYDORE SURF
 LIFE SAVING CLUB INC**

PROJECT
**NOISE IMPACT
 ASSESSMENT**
 PROPOSED MINISTERIAL
 INFRASTRUCTURE DESIGNATION
 34-36 ALEXANDRA PARADE
 MAROOCHYDORE QLD

TITLE
**NOISE MONITORING
 LOCATION**

JOB	MAROOCHYDORE	FIGURE 3
JOB NO.	23193	
DATE	20/05/24	DWG NUMBER
SCALE	1:1500 (A4)	23193-3
REV.		

Max Winders & Associates Pty Ltd t/as MWA Environmental
 Level 7, 241 Adelaide St, Brisbane, GPO BOX 3137, Brisbane Qld 4001
 P 07 3002 5500 E mail@mwaenviro.com.au
 W www.mwaenviro.com.au
 ABN 94 010 833 084

Attachment 1
Development Design Drawings



EXISTING SITE PLAN

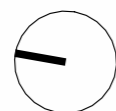
MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
FIRST	n/a	1155m ²	306m ²	1155m ²	
SECOND	22m ²	502m ²	1026m ²	502m ²	
TOTAL	1116m ²	1688m ²	4760m ²	1657m ²	
OVERALL TOTALS	2804m²		6417m²		

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SITE PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV103

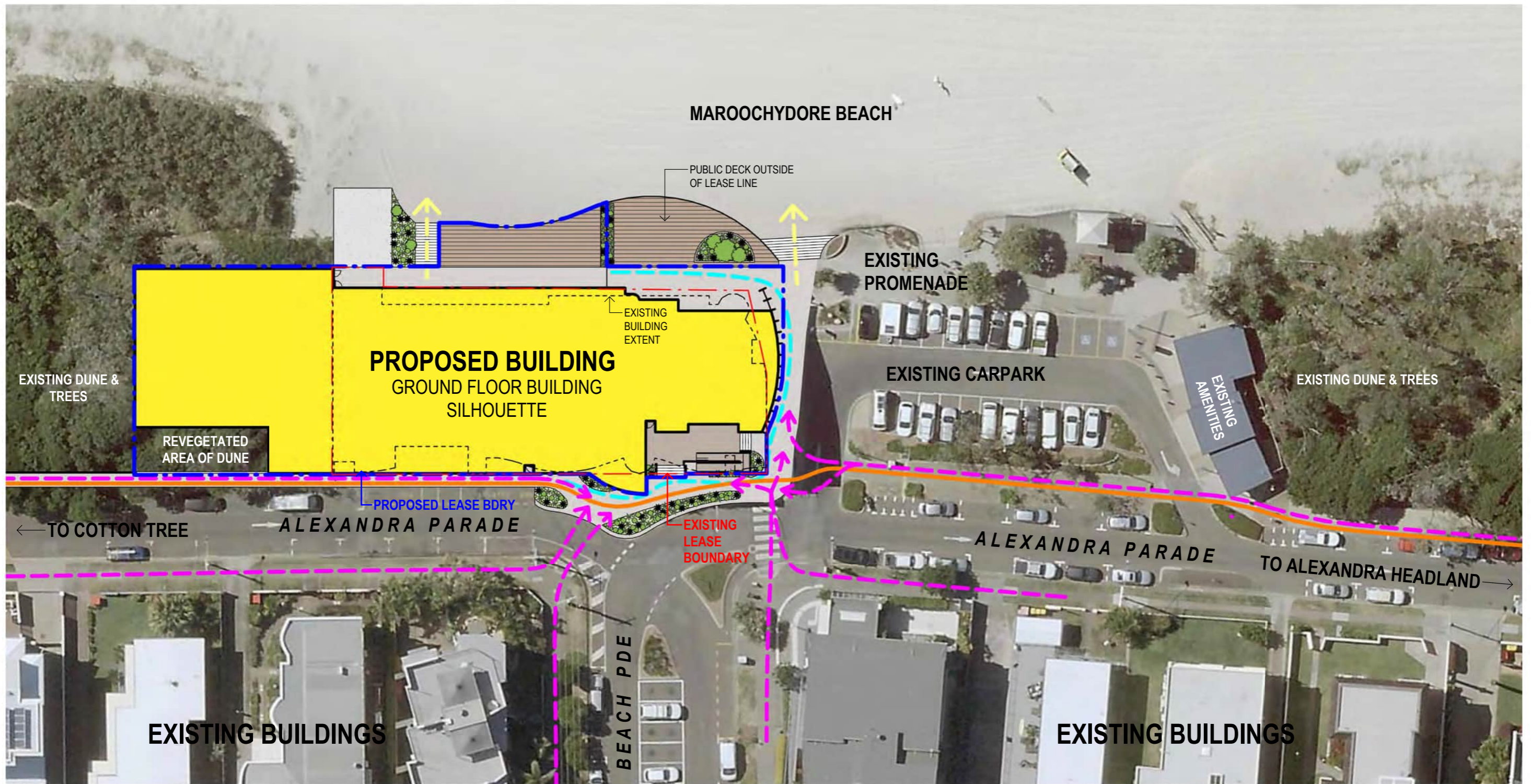
REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST
07 5443 3226

BRISBANE
07 8866 1855

www.brd.com.au



PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

MAROOCHYDORE SURF LIFESAVING CLUB

1 : 500

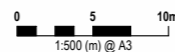
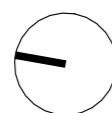
ACCESS LEGEND

- ACTIVE FRONTAGE
- BEACH ACCESS
- - - PEDESTRIAN TRAFFIC
- COASTAL BIKE PATHWAY

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS	NOTE: NO INCREASE TO SUPPORTERS AREA
BASEMENT	n/a	n/a	1694m ²	n/a	
GROUND	1094m ²	31m ²	1734m ²	0m ²	
FIRST	n/a	1155m ²	306m ²	1155m ²	
SECOND	22m ²	502m ²	1026m ²	502m ²	
TOTAL	1116m ²	1688m ²	4760m ²	1657m ²	
OVERALL TOTALS	2804m²		6417m²		

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED SITE PLAN (GROUND) / SITE ANALYSIS

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV104

REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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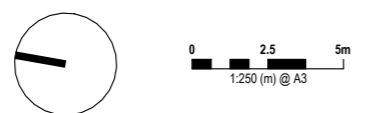


EXISTING GROUND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1094m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	31m ² - SUPPORTERS CLUB FACILITIES
1125m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING GROUND FLOOR PLAN

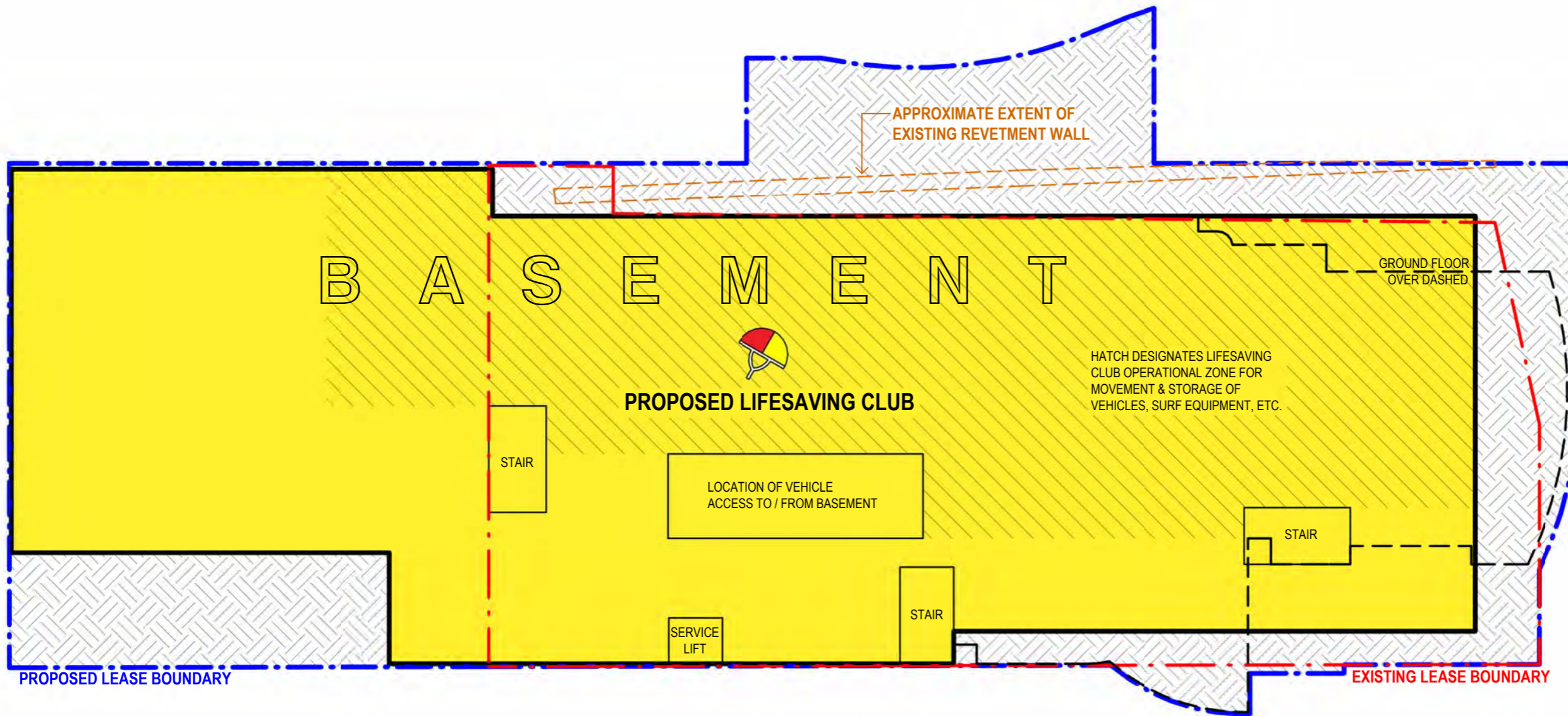
DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV105	REVISION F	

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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ABN: 60 131 465 891 QBCC: 1160937

BEACH



ALEXANDRA PARADE

PROPOSED - BASEMENT PLAN

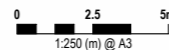
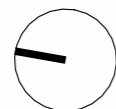
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1694m² - LIFESAVING CLUB ACTIVITIES / FACILITIES

1694m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED BASEMENT PLAN

DATE
JUNE 2022

DRAWN
AJM

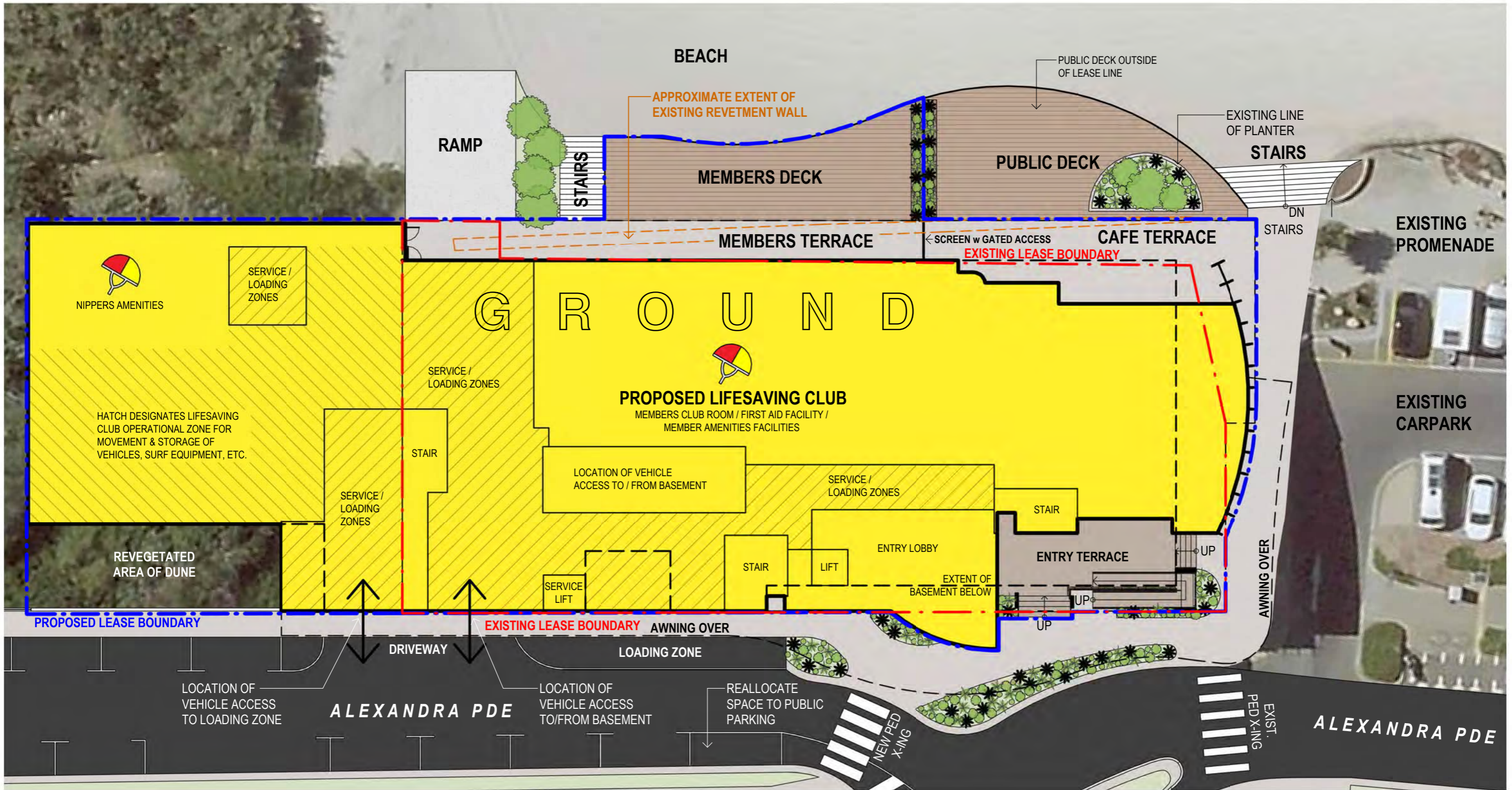
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DRAWING NO.
2062 - GOV106

REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST 07 5443 3224
BRISBANE 07 3886 1855
www.brd.com.au



PROPOSED GROUND FLOOR PLAN

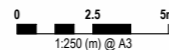
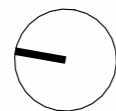
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1734m² - LIFESAVING CLUB ACTIVITIES / FACILITIES

1734m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED GROUND FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV107

REVISION
F

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

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EXISTING FIRST FLOOR PLAN

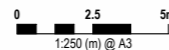
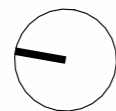
MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

1155m² - SUPPORTERS CLUB FACILITIES

1155m² - TOTAL AREA

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING FIRST FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV108

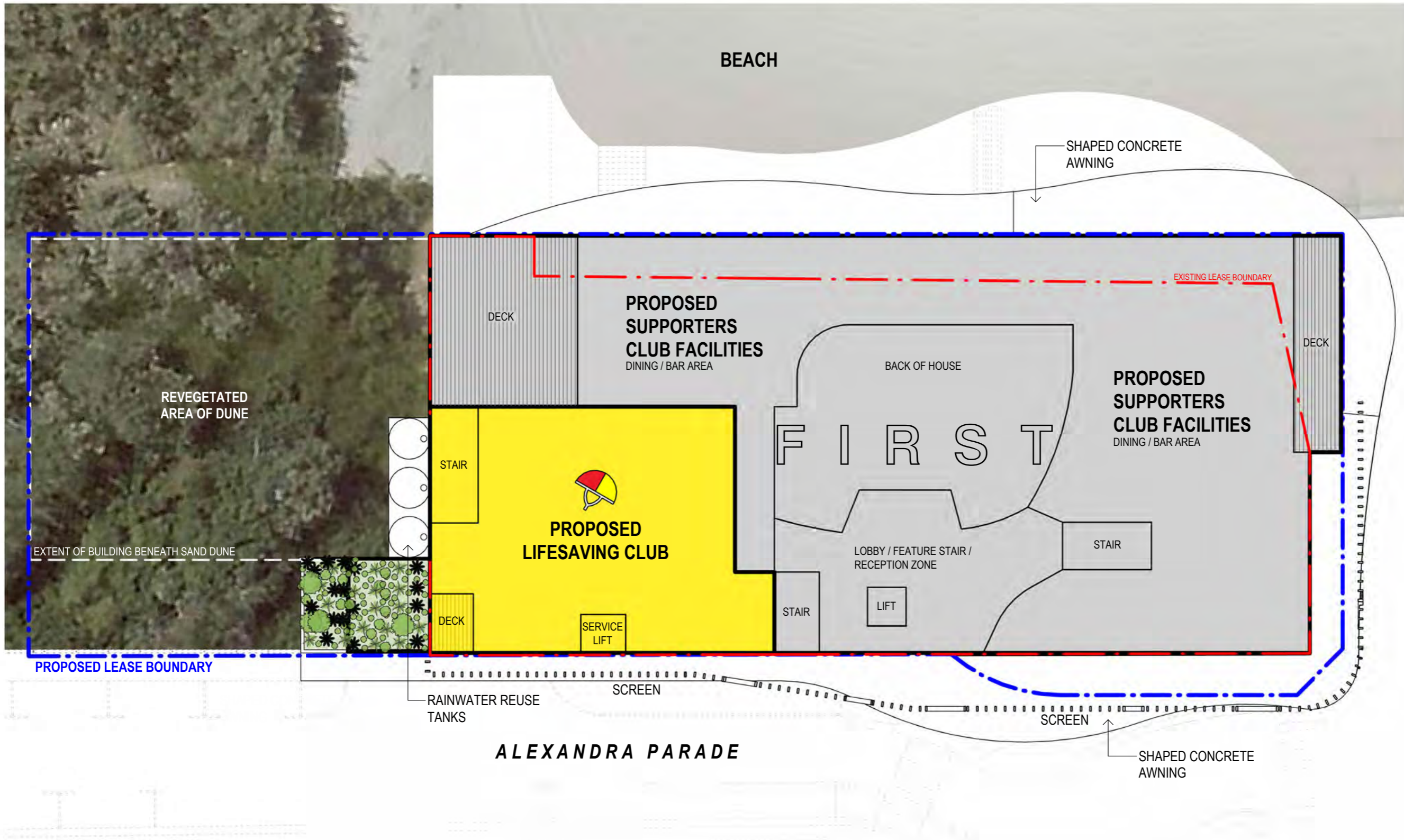
REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST
07 5443 3226

BRISBANE
07 8866 1855

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PROPOSED FIRST FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	306m ² - LIFESAVING CLUB ACTIVITES / FACILITIES
	1155m ² - SUPPORTERS CLUB FACILITIES
1461m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
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F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED FIRST FLOOR PLAN

DATE
JUNE 2022

DRAWN
AJM

CHECKED

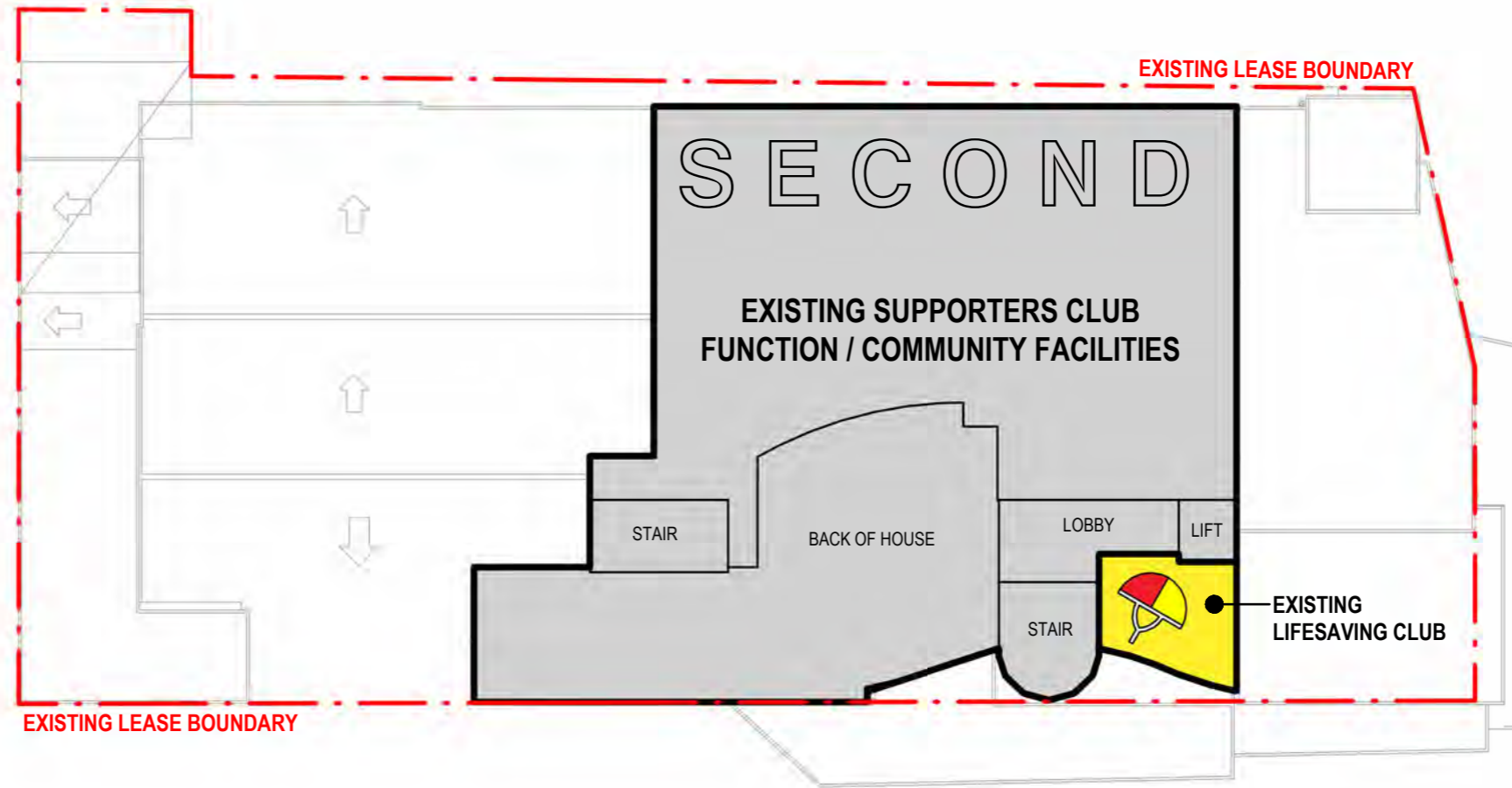
DRAWING NO.
2062 - GOV109

REVISION
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**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST 07 5443 3226 BRISBANE 07 5866 1855 www.brddesign.com.au

BEACH



ALEXANDRA PARADE

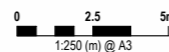
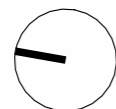
EXISTING SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE

	22m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FACILITIES
524m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
EXISTING SECOND FLOOR PLAN

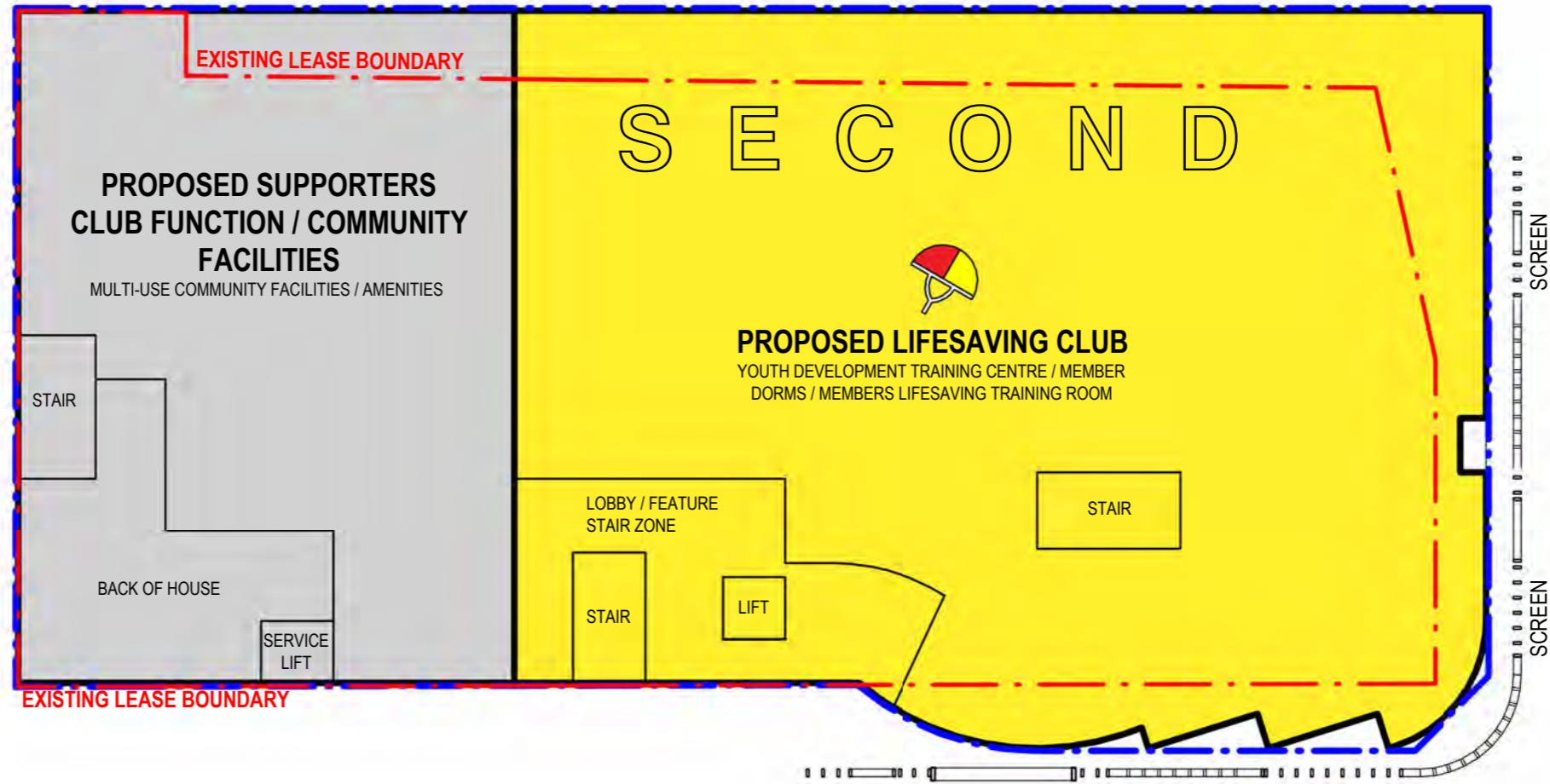
DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV110	REVISION F	

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**



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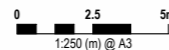
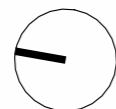
ALEXANDRA PARADE

PROPOSED SECOND FLOOR PLAN

MAROOCHYDORE SURF LIFESAVING CLUB

AREA SCHEDULE	
	1026m ² - LIFESAVING CLUB ACTIVITIES / FACILITIES
	502m ² - SUPPORTERS CLUB FUNCTION / COMMUNITY FACILITIES
1528m² - TOTAL AREA	

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT
 Maroochy Surf Club

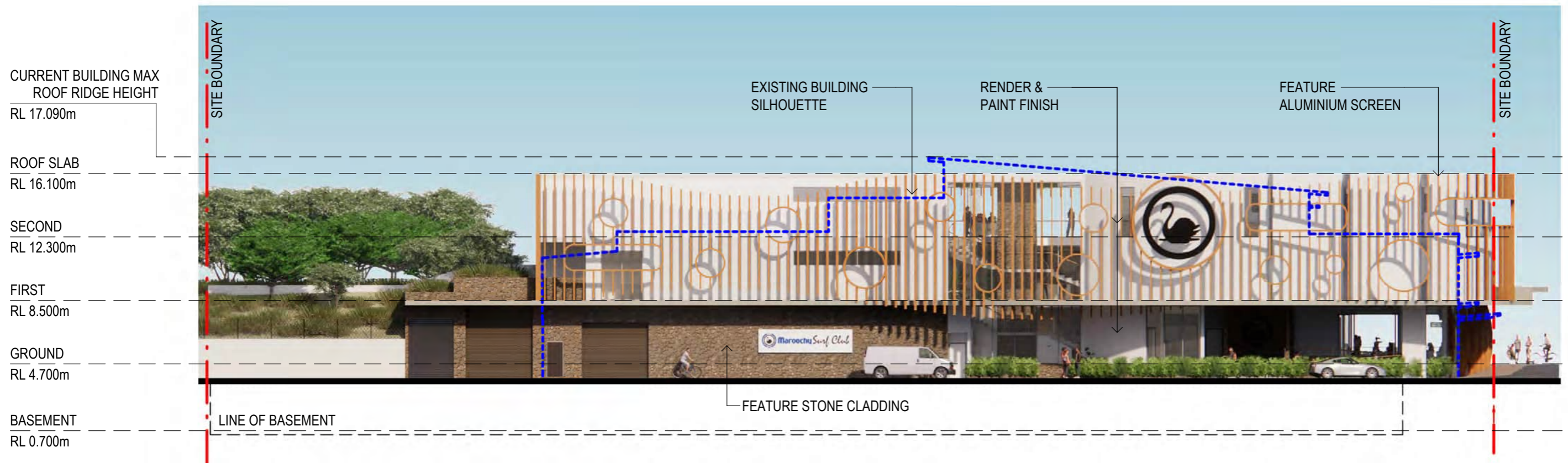
LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PROPOSED SECOND FLOOR PLAN

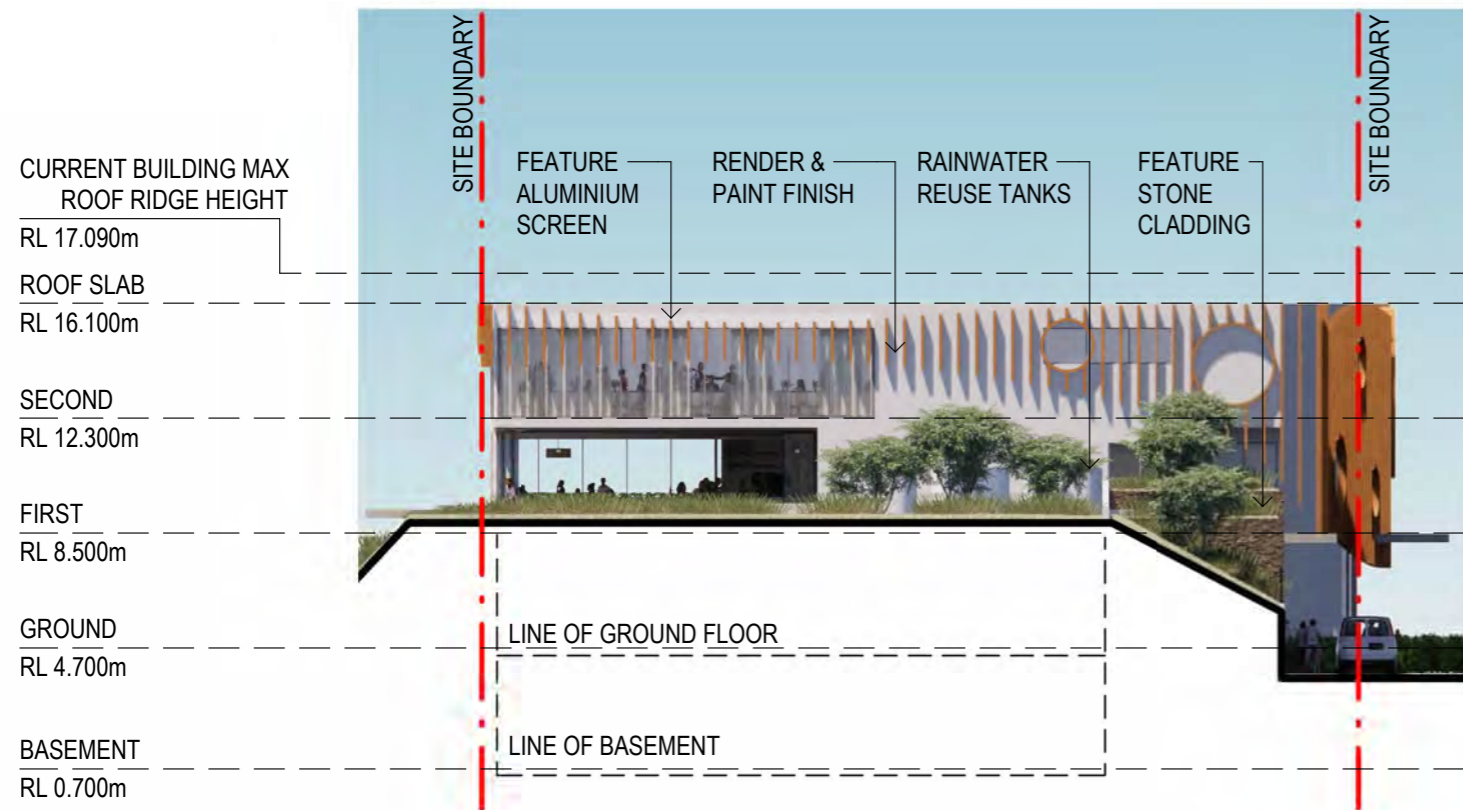
DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV111	REVISION F	

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**

SUNSHINE COAST 07 5443 3224 BRISBANE 07 3866 1855 www.brd.com.au

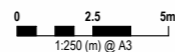


WEST ELEVATION



NORTH ELEVATION

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
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D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - WEST & NORTH

DATE
JUNE 2022

DRAWN
AJM

CHECKED

DRAWING NO.
2062 - GOV201

REVISION
F

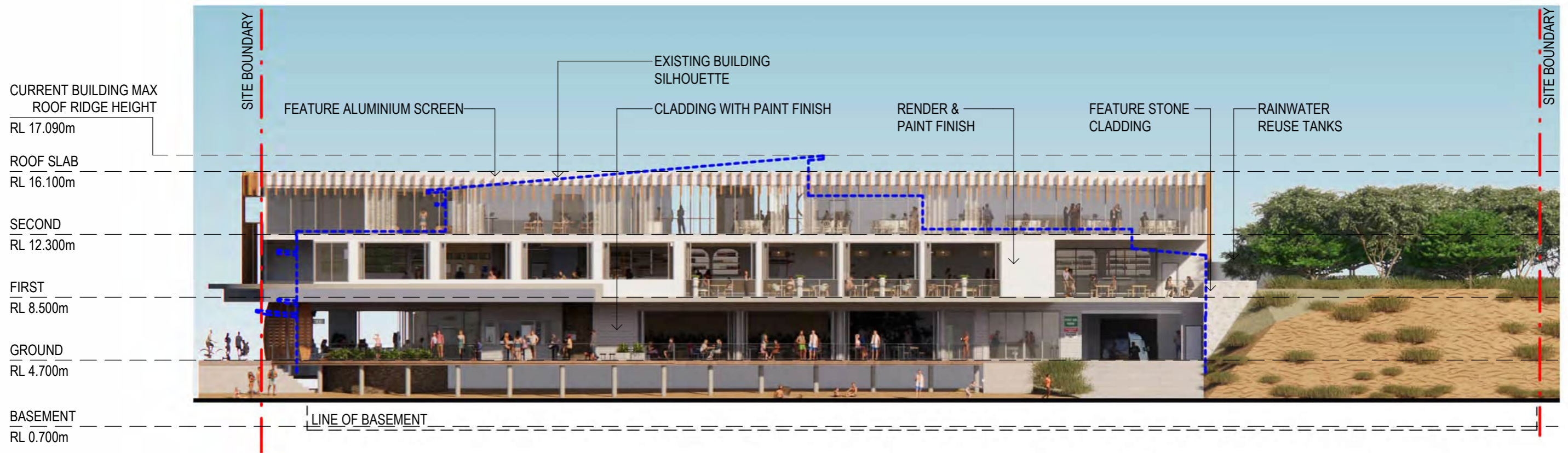
**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**



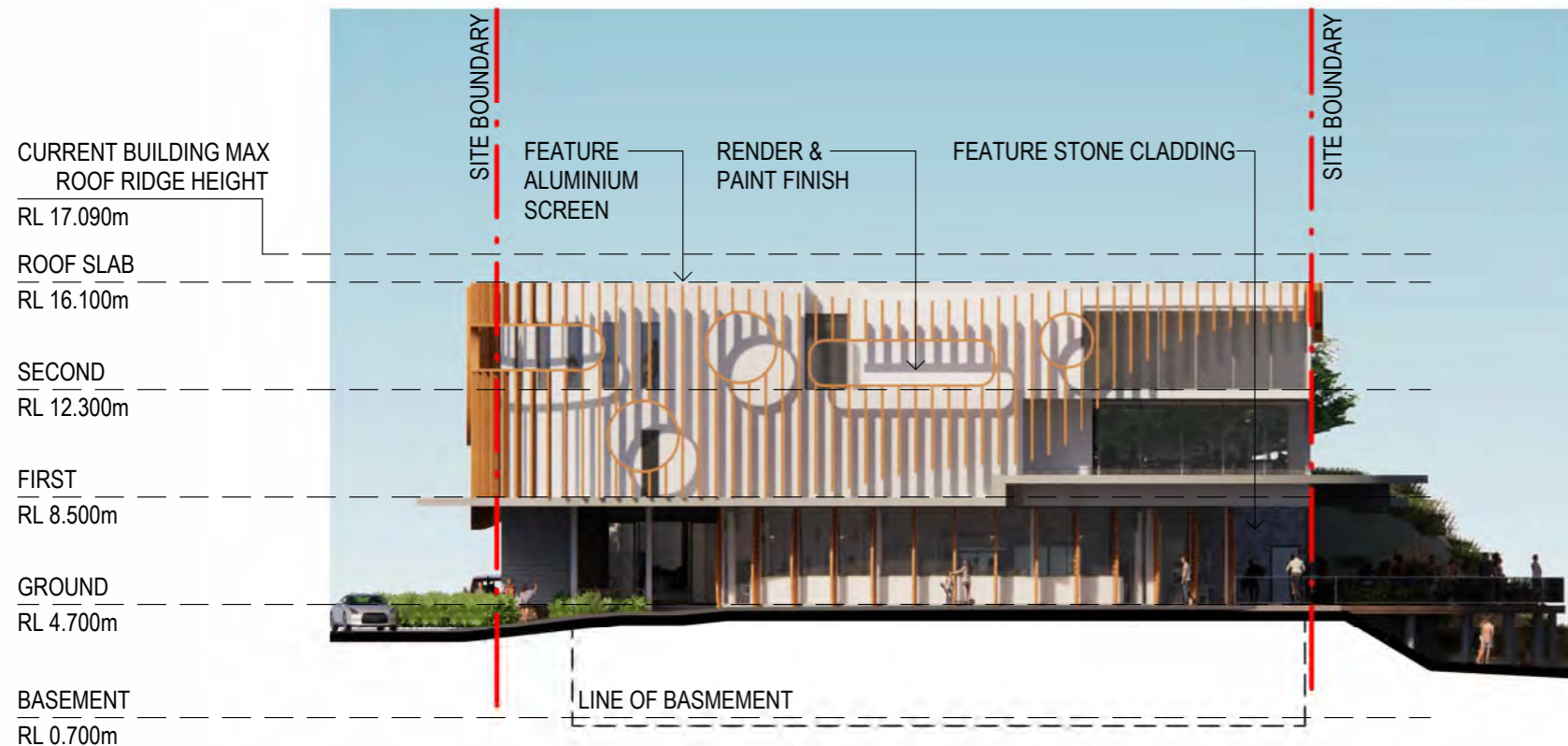
SUNSHINE COAST
07 5443 3226

BRISBANE
07 5866 1855

www.brd.com.au

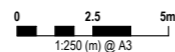


EAST ELEVATION



SOUTH ELEVATION

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024



PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT

CLIENT


LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
ELEVATIONS - EAST & SOUTH

DATE JUNE 2022	DRAWN AJM	CHECKED
DRAWING NO. 2062 - GOV202	REVISION F	

**BUILDING DESIGN
INTERIOR DESIGN
DESIGN MANAGEMENT**



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ABN: 60 131 465 891 QBCC: 1160937



PERSPECTIVE VIEW 1



PERSPECTIVE VIEW 2



PERSPECTIVE VIEW 3



PERSPECTIVE VIEW 4

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

 LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS
 DATE
 JUNE 2022
 DRAWN
 AJM
 CHECKED

 DRAWING NO.
2062 - GOV203
 REVISION
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**BUILDING DESIGN
 INTERIOR DESIGN
 DESIGN MANAGEMENT**

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 BRISBANE 07 5866 1855
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 ABN: 60 131 465 891
 QBCC: 1160937



PERSPECTIVE VIEW 5



PERSPECTIVE VIEW 6



PERSPECTIVE VIEW 7



PERSPECTIVE VIEW 8

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	25.08.2023
B	ISSUE FOR APPROVAL	BMR	08.11.2023
C	ISSUE FOR APPROVAL	AJM	20.02.2024
D	ISSUE FOR APPROVAL	AJM	28.03.2024
E	ISSUE FOR APPROVAL	AJM	03.04.2024
F	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

 LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS
 DATE
 JUNE 2022
 DRAWN
 AJM
 CHECKED

 DRAWING NO.
2062 - GOV204
 REVISION
F

**BUILDING DESIGN
 INTERIOR DESIGN
 DESIGN MANAGEMENT**

 SUNSHINE COAST 07 8443 3226 BRISBANE 07 8866 1855
 www.brdgroup.com.au
 ABN: 60 131 465 891 QBCC: 1160937



PERSPECTIVE VIEW 9



PERSPECTIVE VIEW 10

ISSUE	DESCRIPTION	DRAWN	DATE
A	ISSUE FOR APPROVAL	AJM	28.03.2024
B	ISSUE FOR APPROVAL	AJM	03.04.2024
C	ISSUE FOR APPROVAL	AJM	05.04.2024

PROJECT
MAROOCHYDORE SURF LIFESAVING CLUB RE-DEVELOPMENT
 CLIENT

 LOCATION
ALEXANDRA PDE, MAROOCHYDORE

DRAWING TITLE
PERSPECTIVE VIEWS
 DATE
 JUNE 2022
 DRAWN
 AJM
 CHECKED

 DRAWING NO.
2062 - GOV205
 REVISION
C

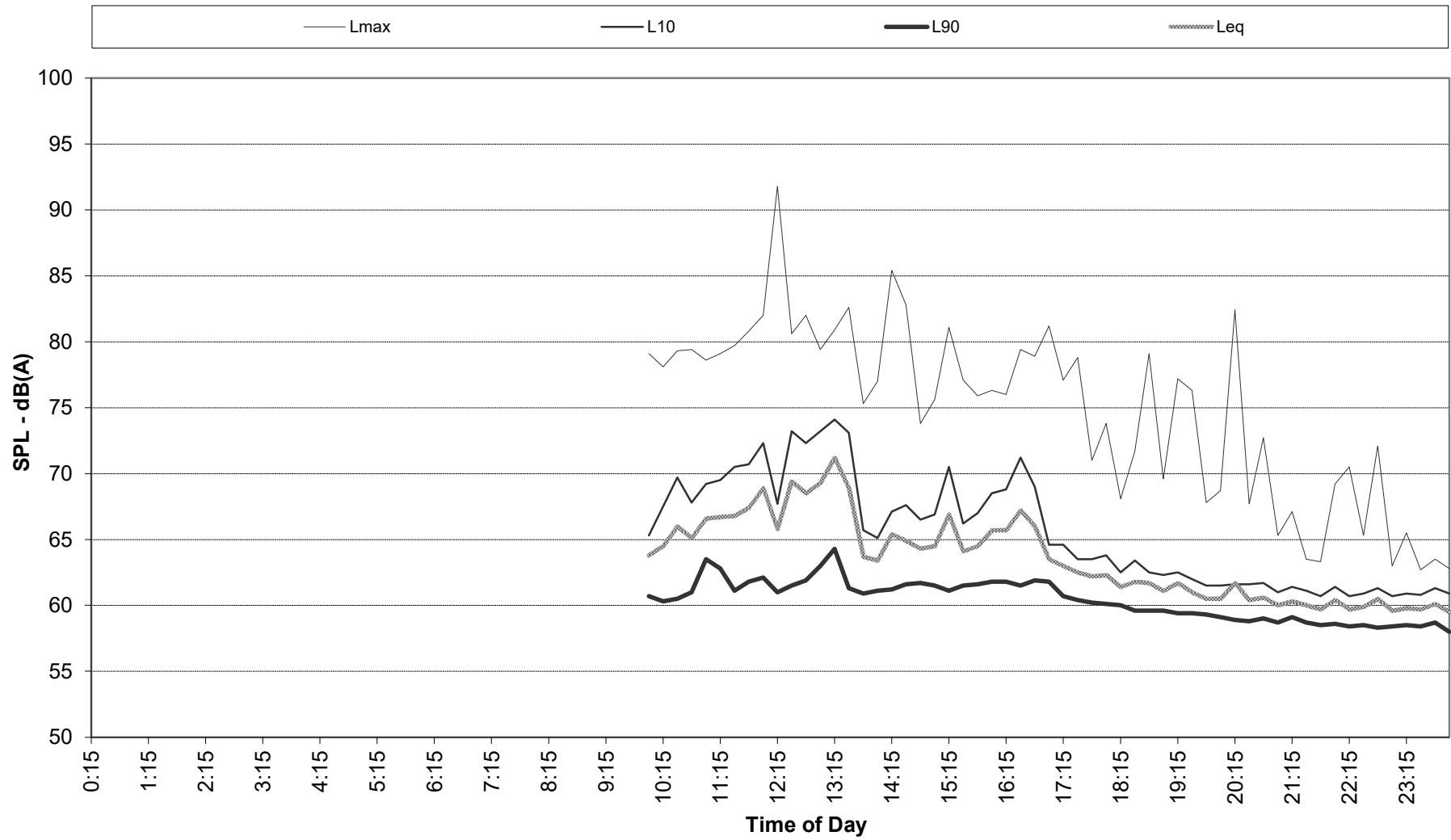
**BUILDING DESIGN
 INTERIOR DESIGN
 DESIGN MANAGEMENT**

 SUNSHINE COAST 07 5441 1224
 BRISBANE 07 5866 1855
 www.brd.com.au
 ABN: 60 131 465 891
 QBCC: 1160937

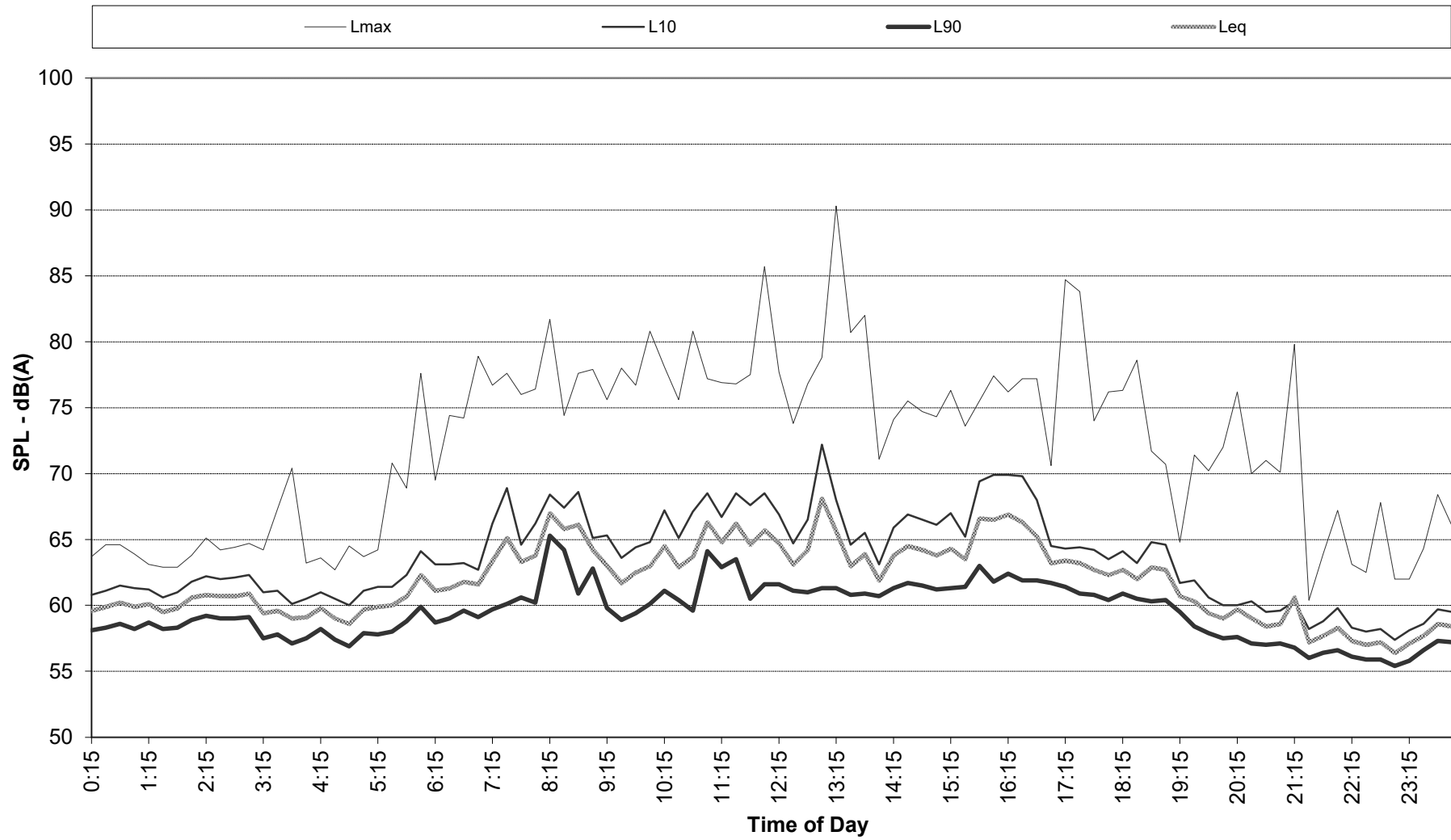
Attachment 2

Noise Datalogger Traces

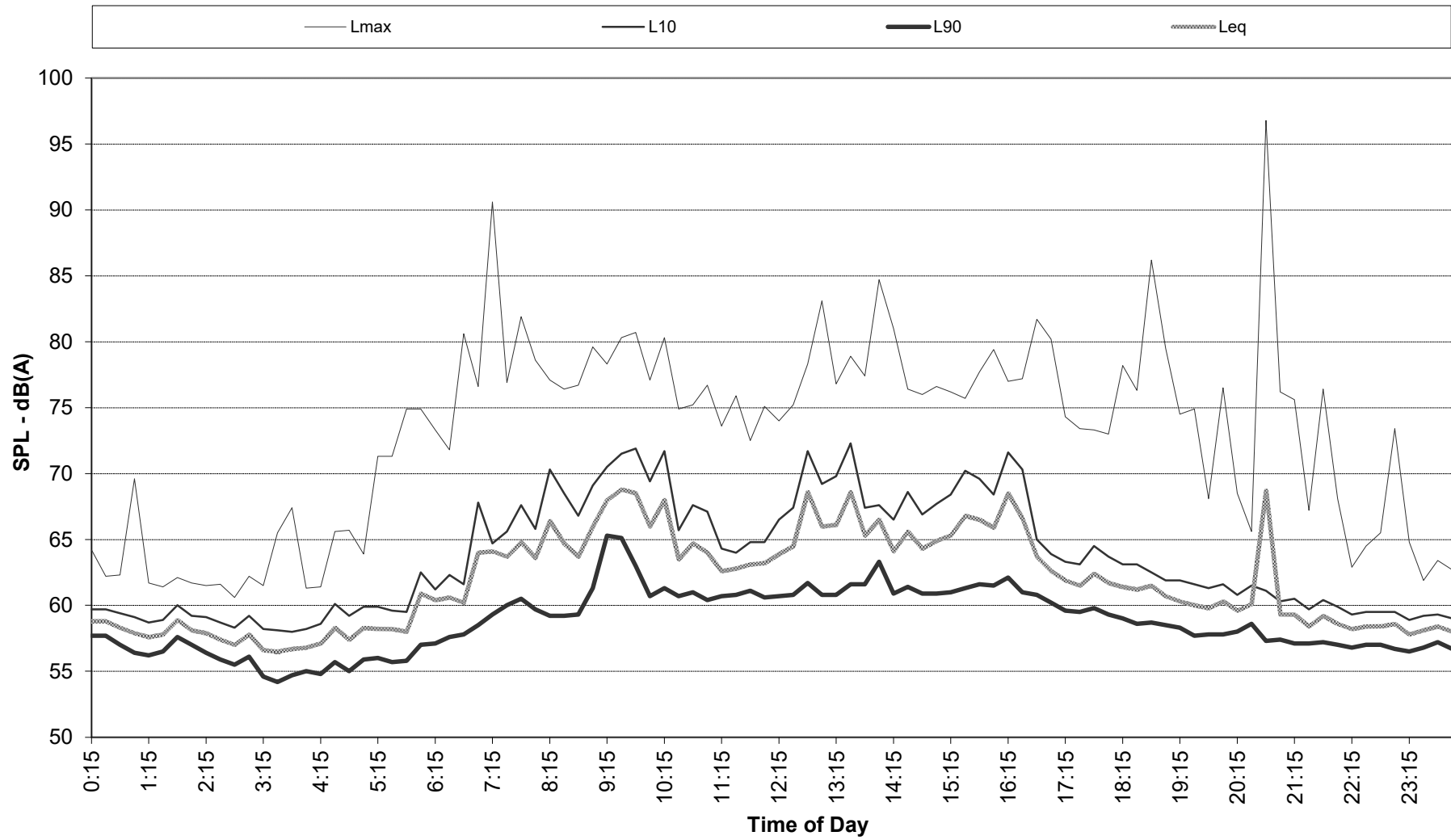
Recorded Statistical Noise Levels for Maroochydore 23193 - - 17-Apr-2024 - Wednesday



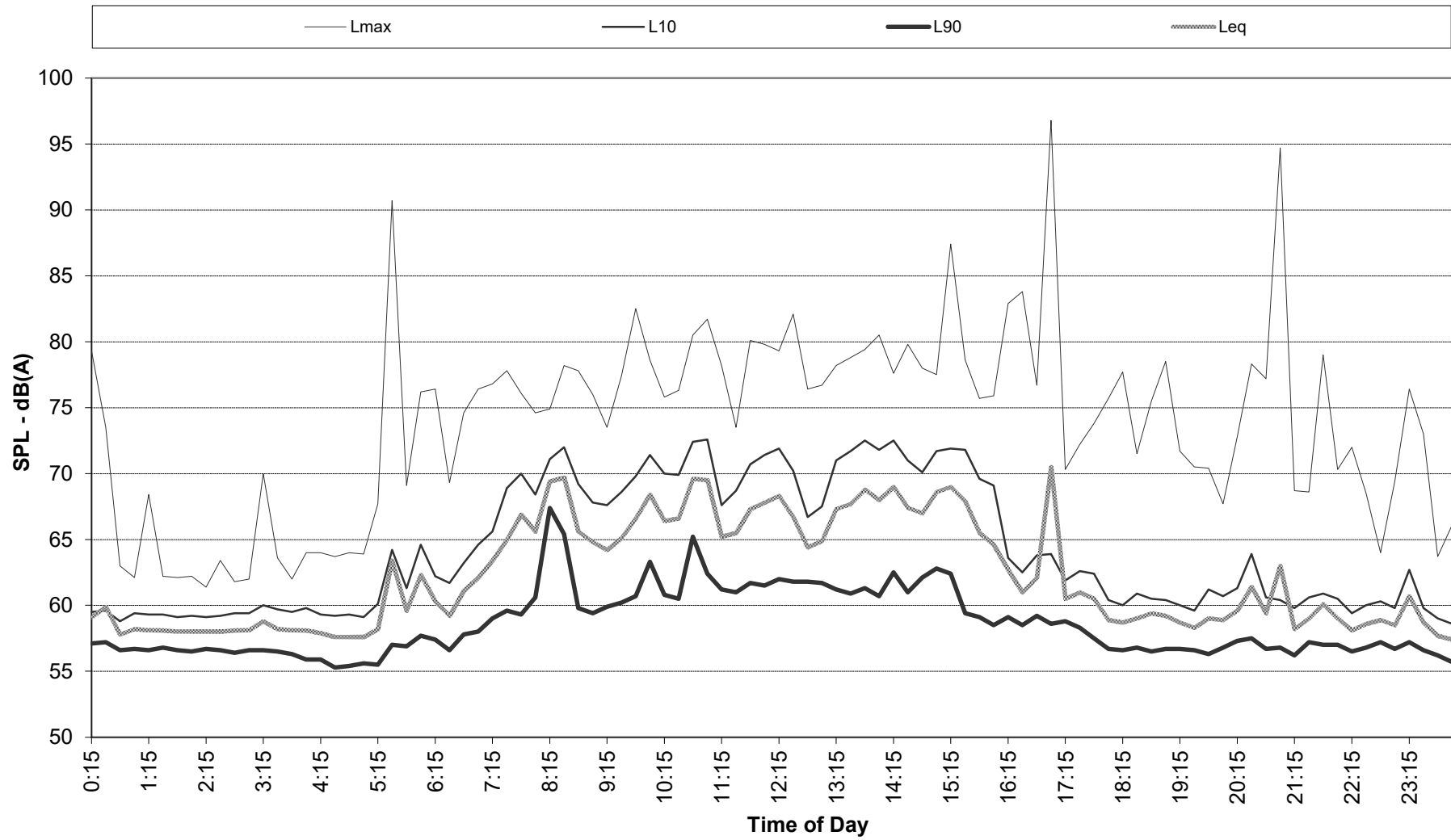
Recorded Statistical Noise Levels for Maroochydore 23193 - - 18-Apr-2024 - Thursday



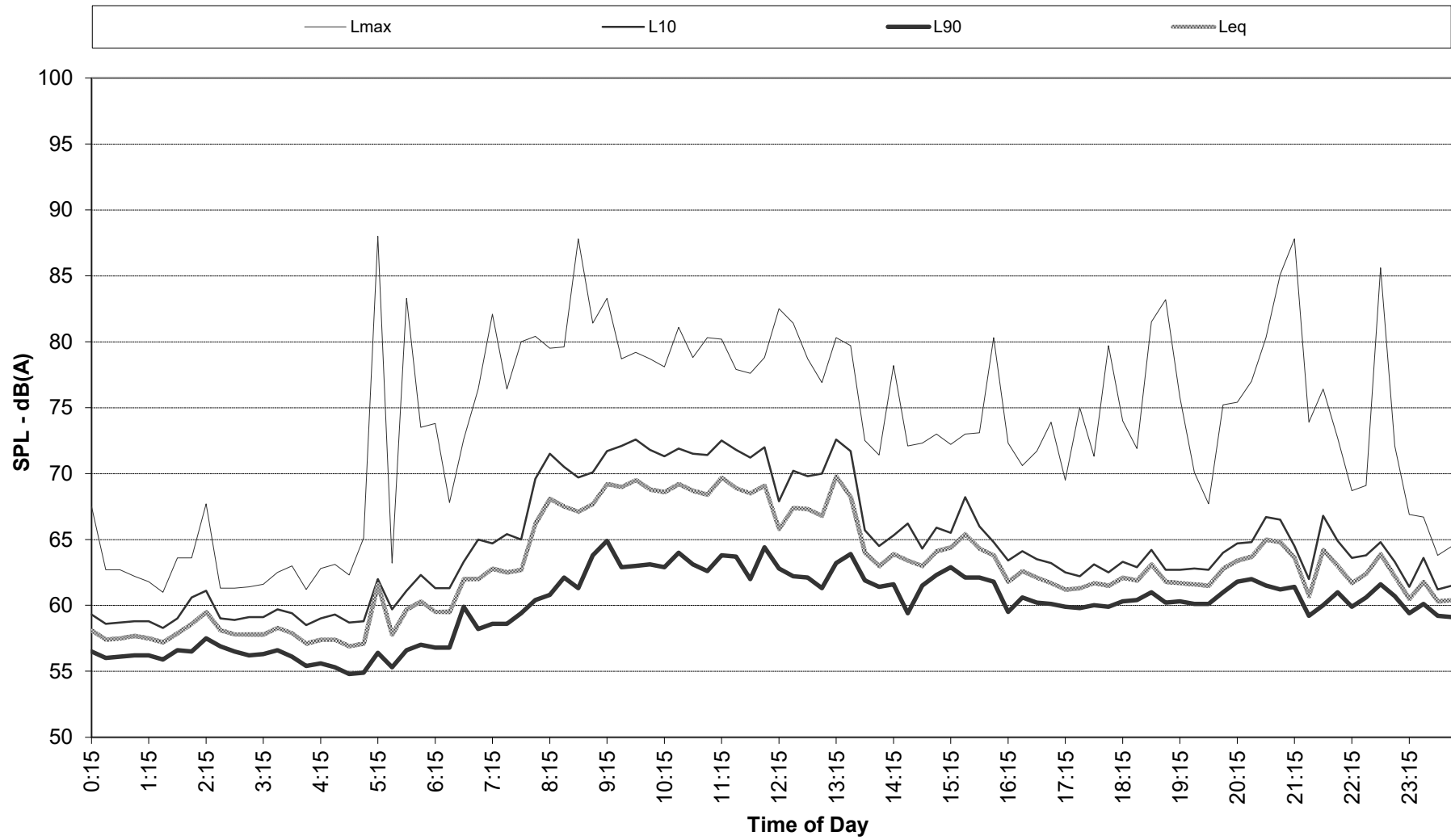
Recorded Statistical Noise Levels for Maroochydore 23193 - - 19-Apr-2024 - Friday



Recorded Statistical Noise Levels for Maroochydore 23193 - - 20-Apr-2024 - Saturday

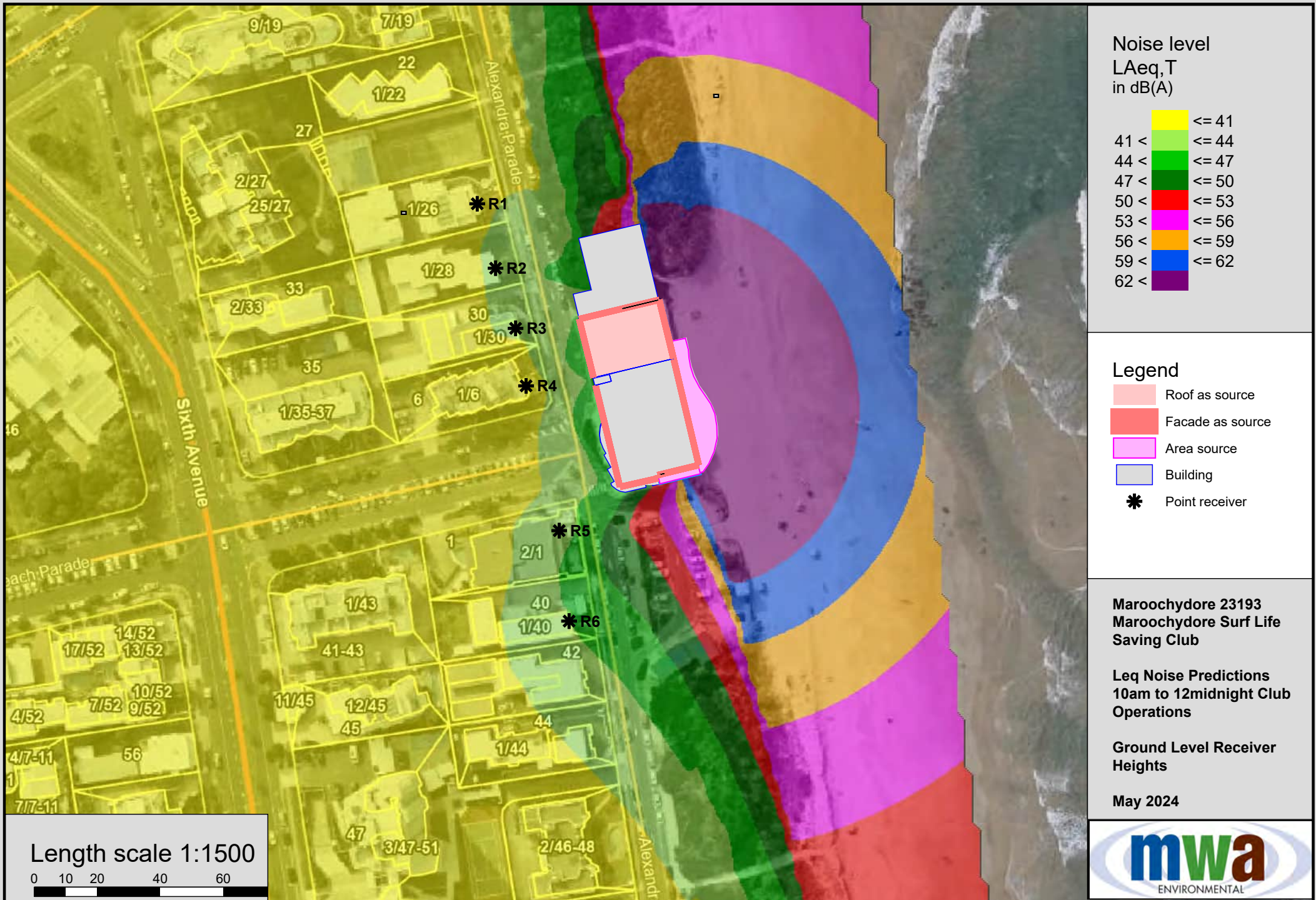


Recorded Statistical Noise Levels for Maroochydore 23193 - - 21-Apr-2024 - Sunday



Attachment 3

SoundPLAN Noise Modelling Results



Noise level
LAeq,T
in dB(A)

<= 41
41 < <= 44
44 < <= 47
47 < <= 50
50 < <= 53
53 < <= 56
56 < <= 59
59 < <= 62
> 62

Legend

- Roof as source
- Facade as source
- Area source
- Building
- Point receiver

**Maroochydore 23193
Maroochydore Surf Life
Saving Club**

**Leq Noise Predictions
10am to 12midnight Club
Operations**

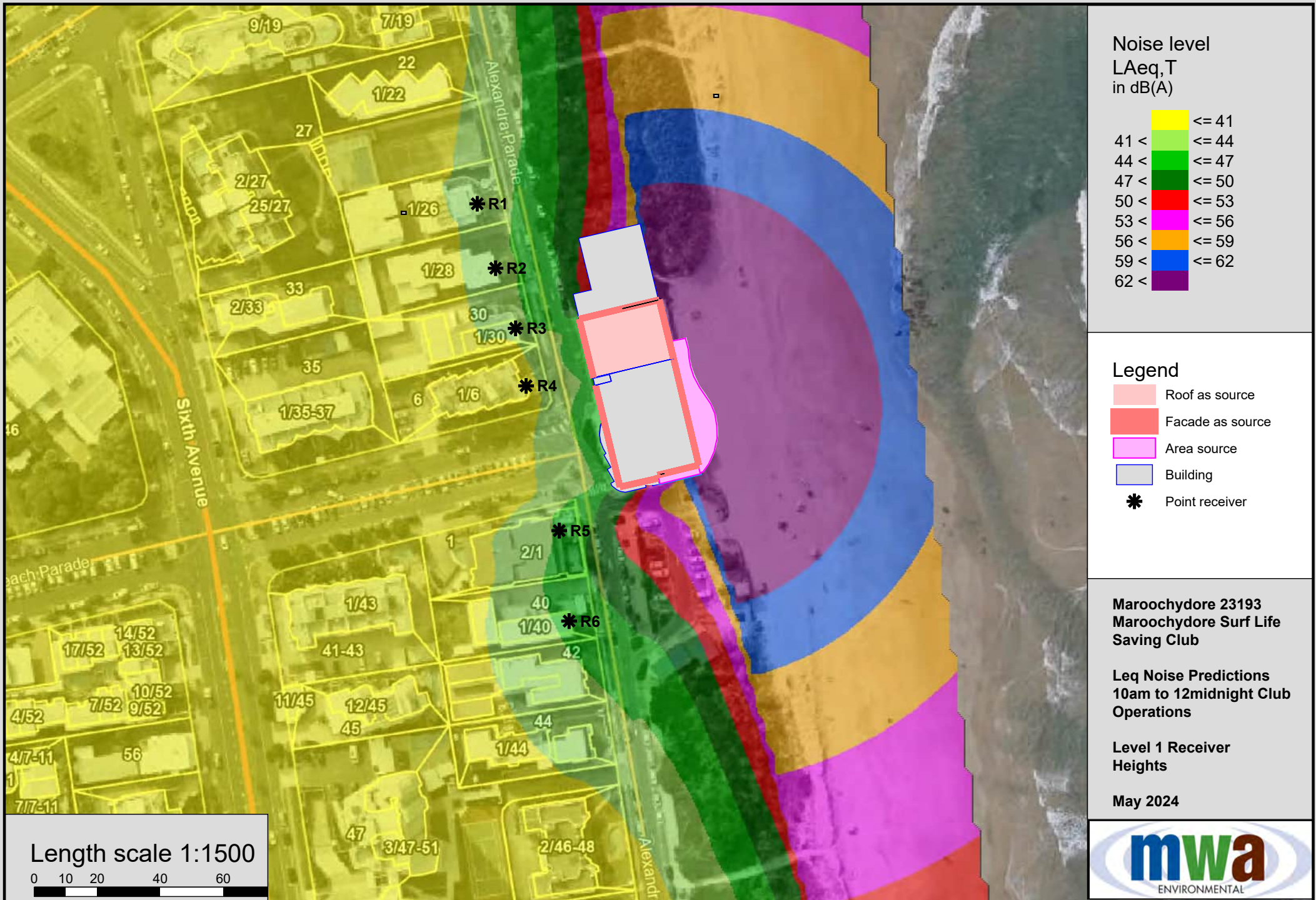
**Ground Level Receiver
Heights**

May 2024



Length scale 1:1500





Noise level
 LAeq,T
 in dB(A)

<= 41	<= 41
41 <	<= 44
44 <	<= 47
47 <	<= 50
50 <	<= 53
53 <	<= 56
56 <	<= 59
59 <	<= 62
62 <	

Legend

- Roof as source
- Facade as source
- Area source
- Building
- * Point receiver

**Maroochydore 23193
 Maroochydore Surf Life
 Saving Club**

**Leq Noise Predictions
 10am to 12midnight Club
 Operations**

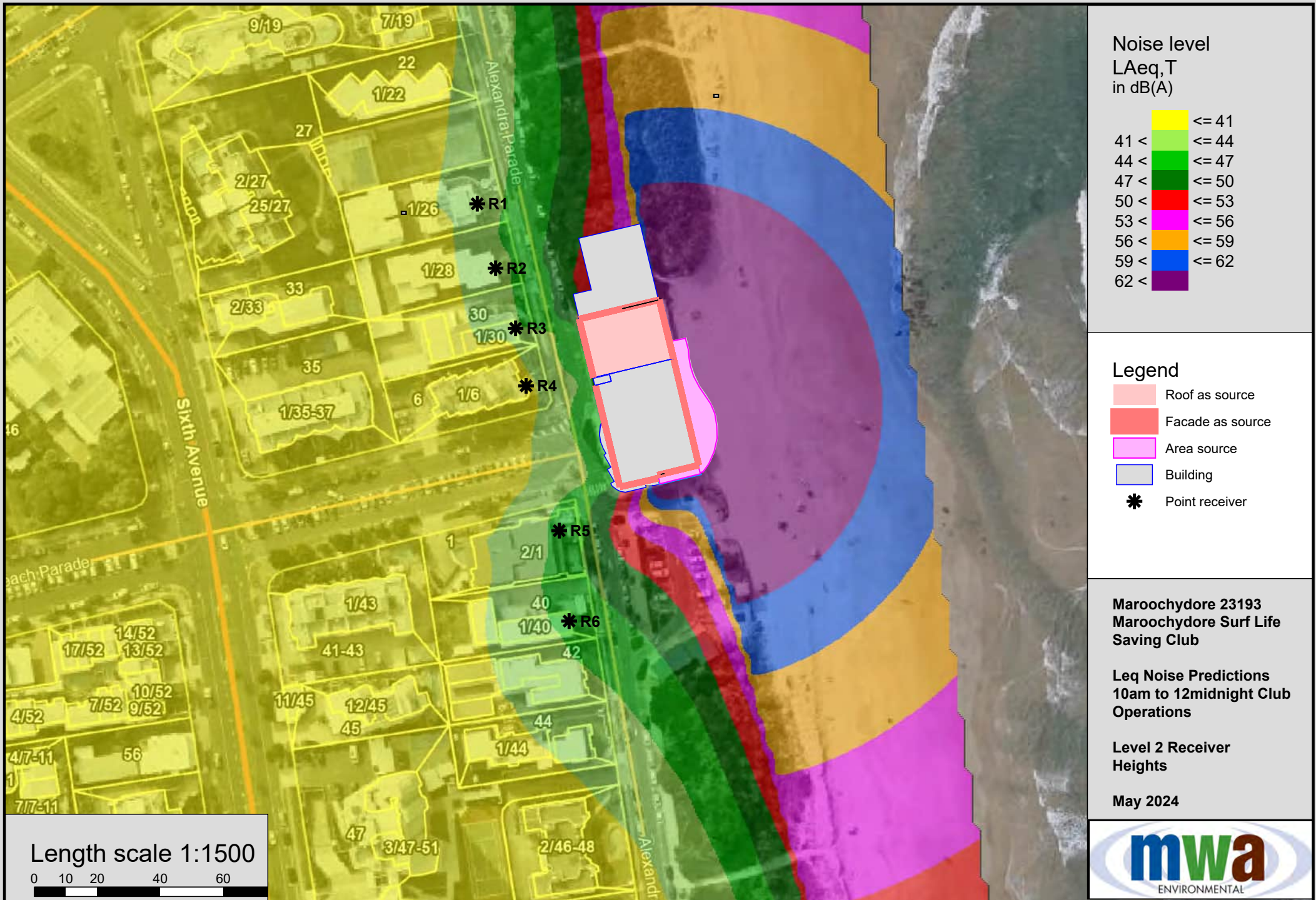
**Level 1 Receiver
 Heights**

May 2024



Length scale 1:1500





Noise level
 LAeq,T
 in dB(A)

Yellow	<= 41
Light Green	41 < <= 44
Green	44 < <= 47
Dark Green	47 < <= 50
Red	50 < <= 53
Magenta	53 < <= 56
Orange	56 < <= 59
Blue	59 < <= 62
Purple	> 62

Legend

- Roof as source
- Facade as source
- Area source
- Building
- * Point receiver

**Maroochydore 23193
 Maroochydore Surf Life
 Saving Club**

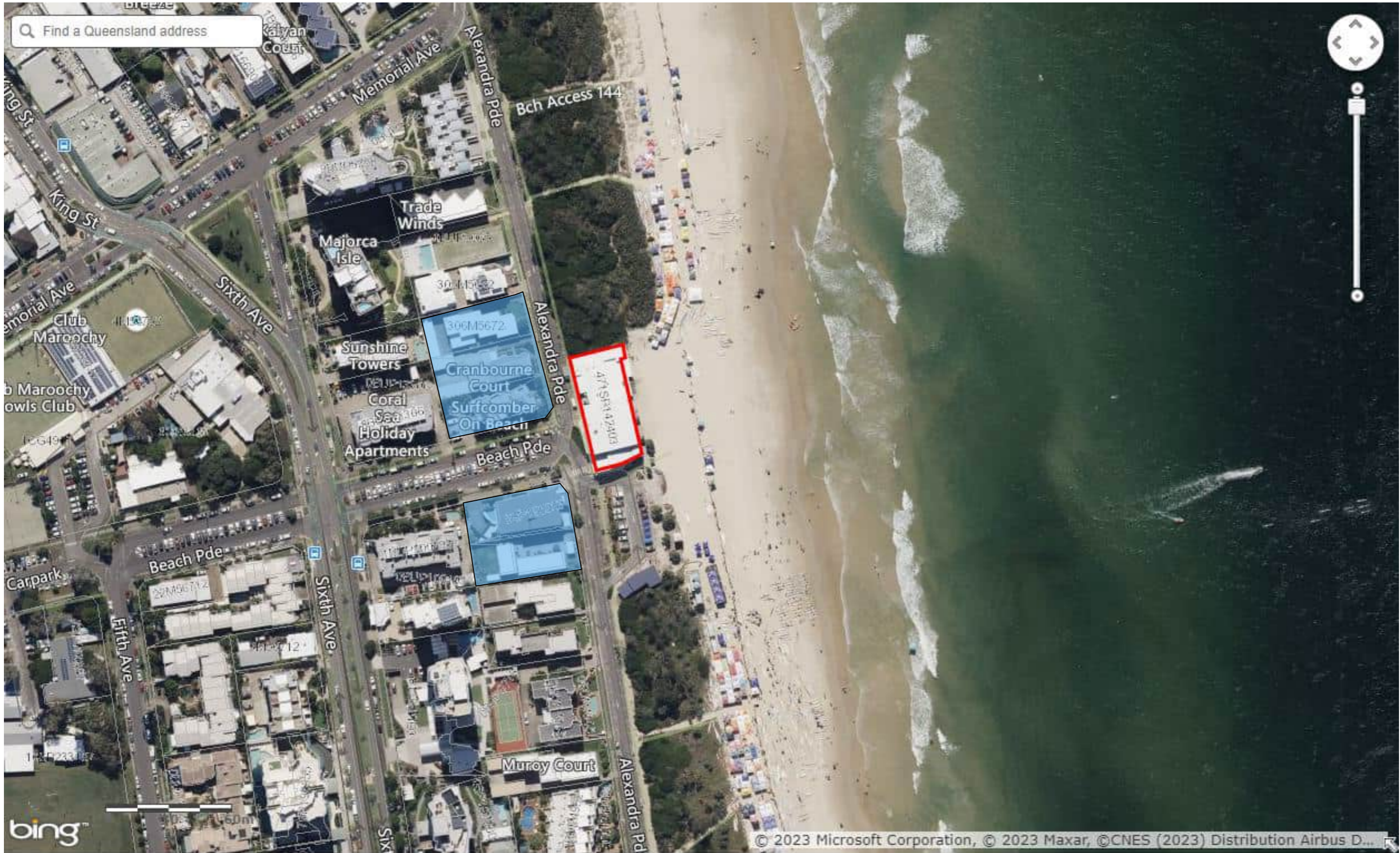
**Leq Noise Predictions
 10am to 12midnight Club
 Operations**

**Level 2 Receiver
 Heights**

May 2024



Appendix 9
Surrounding Properties Consultation Map



Properties to be consulted

Appendix 10
Council Preliminary Engagement Comments

Officer: Susan Talbot
Direct telephone: 07 5420 8001
Direct email:
susan.talbot@sunshinecoast.qld.gov.au
Our reference: F2024/18617
Your reference: 230503

12 March 2024

Cameron Adams
Adams + Sparkes Town Planning
Level 3, 26 Duporth Avenue
Maroochydore QLD 4558
Sent via email: admin@astpd.com.au

Dear Mr. Adams,

Re: Proposal for a Ministerial Infrastructure Designation – Maroochydore Surf Life Saving Club (Lot 471 on SP142403 at 34-36 Alexandra Parade, Maroochydore)

Thank you for your correspondence dated 27 February 2024, in which you seek Council's early input and feedback on a proposed Ministerial Infrastructure Designation (MID) at Maroochydore Surf Life Saving Club (MSLSC) located at 34-36 Alexandra Parade, Maroochydore.

Council acknowledges the importance of Surf Life Saving Clubs on the Sunshine Coast and the community services they provide. The MSLSC has long been a part of the local community and its continued operation to protect and monitor Maroochydore Beach and the Maroochy River inlet is recognised and supported by Council.

Council officers have previously met with the applicant and their consultant (December 2023) to discuss the proposed development. Detailed feedback was provided to the Club on 12 January 2024 (refer to **Appendix 1 – Pre-lodgement Meeting Notes MID – PLM 23 0191 – Maroochydore Surf Life Saving Club**). The content of this advice builds on those comments, noting that limited change appears to have been made in response to the issues Council has previously raised.

Proposed Development

Council officers understand that the Maroochydore Surf Life Saving Club seeks approval to demolish and reconstruct its current facility. In particular, the proposal seeks approval for:

Page 1 of 4

- surf life saving club facilities, patrol rooms, storage rooms, club rooms, gym, café, restaurant, function/community spaces, meeting rooms, dorms and offices;
- a total gross floor area (GFA) of 6,417m², which represents an increase of approximately 3,613m²;
- a proposed building height of 15m across the entire building;
- an increase in the total number of storeys from three (3) to four (4), inclusive of a basement below ground level; and
- enlargement of the existing lease area, including northward into an existing coastal dune, eastward onto the beach, southward toward the existing car parking area and westward towards Alexandra Parade.

The proposal also indicates the removal of an existing (natural) coastal dune and reinstatement of an artificial dune above a proposed new building basement. No proposed coastal defensive works or offset for impact on the coastal environment appear to be proposed as part of the development. The expansion of the lease to the west also appears to remove existing on-street car parking.

Key Issues

There remain a number of key issues that Council officers would encourage the Maroochydore Surf Life Saving Club and the Department of Housing, Local Government, Planning and Public Works (as the assessment manager) to further consider. The below points seek to reinforce the key issues, with the content building on the previously issued pre-lodgement advice. It is recommended that more detailed consideration be given to both sets of issues as part of any MID application material lodged to the State Government.

Land use:

The proposed building will expand beyond the Sport and Recreation Zone into the Open Space Zone to accommodate a basement, deck and other components of the use. In accordance with the Open Space Zone code of the *Sunshine Coast Planning Scheme 2014* (Planning Scheme), a Club is an inconsistent use in this zone. It is recommended that further consideration be given to this apparent land use conflict, in combination with the height, bulk and scale issues identified later in this correspondence.

Coastal hazards and climate resilience:

The proposed development does not appear to adequately consider or respond to coastal hazards and climate resilience matters. In particular:

- The proposed intensification of built form in the coastal dune and the ability to achieve integration with coastal management structures and coastal adaptation plans requires careful consideration and further analysis by the applicant.
- There is concern that the proposed extension of the lease area and construction of a basement under a replaced dune could prejudice Council's coastal protection/adaptation works for the area.
- Compliance with Council's adopted policy on coastal hazards, including the Coastal Hazard Adaptation Strategy (CHAS) and Shoreline Erosion Management Plan (SEMP) has not been demonstrated and requires further consideration.

- Impacts of the proposed removal of the existing natural coastal dune and vegetation on coastal and environmental processes to accommodate a new basement must be appropriately analysed.
- Proposed basement works are likely to be subject to ground water intrusion and pump outs may be required. Consideration of the increased loads during storm events are required, particularly given discharge would occur in an existing drainage deficient area.
- Compliance with provisions relating natural hazards/resilience in the *South-East Queensland Regional Plan 2023* should be addressed.

Council officers remain concerned that the proposed development has not been appropriately designed or located to respond to the predicted impacts of coastal hazards and climate change. Council officers have also not sited any technical analysis of coastal impacts prepared by a suitably qualified professional. Council's Coastal Hazard Adaptation Strategy shows the impacts in this area worsening over time and it would be prudent for the Maroochydore Surf Life Saving Club to both be appraised of the predicted impacts and identify potential mitigation measures to protect what would be a significant asset. Further detail is outlined on pages 19, 20 and 25-29 of Council's pre-lodgement advice.

Building height, bulk and scale:

The proposed development is significantly larger than the existing facility. While it is acknowledged that facilities will be consolidated from other locations and core functions are necessary to provide surf lifesaving services to both the Maroochydore Beach and adjoining river mouth, a building of this size on the foreshore requires further consideration and justification, particularly given not all proposed aspects of the development are coastal dependent development. In particular:

- The proposed building exceeds the maximum allowable height for the site (8.5 metres) under the *Sunshine Coast Planning Scheme 2014*. While the current building also exceeds this height, the un-articulated design and length of continuous height (as opposed to the articulated roof form and height of the current building) results in a significantly bulkier, larger, and in many places higher, building. Further justification and analysis of height impacts are required as a building of this scale is not anticipated by the current planning scheme and may not be consistent with the reasonable expectations of the local community.
- The proposed building is substantially larger than the existing building and increases the bulk and scale as viewed from a variety of public locations. There remains fundamental questions around (a) whether a building of this size, bulk and scale is appropriate on the foreshore and (b) potential visual amenity impacts from key public viewing locations. Analysis by a suitably qualified professional is required to demonstrate that the building is appropriate in its context and will not unreasonably dominate its landscape setting.
- Increased overshadowing on the beach created by an enlarged building also requires further analysis by a suitably qualified professional. This issue is of concern to the community and was reinforced through feedback received during preliminary consultation for the New Planning Scheme Project.

The relevant planning scheme provisions that the proposal does not appear to comply with are identified in further detail on page 24 of Council's pre-lodgement advice. Design matters are also identified on pages 14-18.

Car parking

There is an existing shortfall of parking for the MSLSC and the proposed expansion will further increase car parking demand as well as resulting in a loss of existing on-street parking. Detailed proposal plans and further technical reporting are required to confirm car parking demand and determine the actual impact on existing car parking, and how this will be suitably managed.

Summary

The Maroochydore Surf Life Saving Club is an important and valued part of the Sunshine Coast community. While Council supports the continued function of core lifesaving functions, there are a range of issues that remain unresolved and require further and more detailed consideration as part of the development application process. In particular, the impacts associated with coastal hazards and climate change require careful consideration to ensure any new facility is well equipped to respond to a changing coastal environment impacted by an increased frequency and intensity of events. The bulk and scale of the proposed building is also a significant concern and requires further careful consideration.

Thank you once again for the opportunity to provide preliminary comments on this proposed MID. I trust that the matters raised above will be able to be taken into consideration in subsequent planning and design work for the site.

Should you wish to discuss these matters further, please contact Susan Talbot on the contact details provided above.

Kind regards,



Josh Walker
Co-ordinator Regional Planning & Advocacy
Strategic Planning Branch

Pre-lodgement Notes for MID

Pre-lodgement details			
Reference no.	PLM23/0191		
Contributors to notes	Name	Title	Organisation
	John Borthwick	Principal Development Planner	SCC
	Daniel Rundle	Team Leader, Planning South	SCC
	Rob MacDonald	Principal Development Engineer	SCC
	Simon Aalbers	Team Leader, Specialist Services	SCC
	Newaz Amed	Senior Development Engineer (Hydraulics)	SCC
	Scott Harper	Senior Landscape Officer	SCC
	Lisa Moore	Senior Architect	SCC
	Rupert Hindley	Environment Health Officer	SCC
	Dr Monica Campbell	Principal Biodiversity Officer	SCC
	Lee Prior	Manager Leasing and Land Management	SCC
	Dale Watson	Environment and Sustainability Policy Branch and Environment Operations Branch Senior Environmental Project Officer	SCC
Josh Walker	Co-ordinator – Regional Planning and Advocacy	SCC	

Proposed development	
Street address	Maroochydore SLSC, 34-36 Alexandra Pde MAROOCHYDORE QLD 4558
Real property description	Lot 471 SP 142403
Proposal details	Expansion of the existing Maroochy Surf Club

Supporting information		
Plan/document no.	Title, prepared by	Date
2062 - GOV000 Rev.B	Cover Page, prepared by brd Group	8/11/2023
2062 – GOV101 Rev.B	Locality/Zoning Plan – Surrounding, prepared by brd Group	8/11/2023
2062 – GOV103 Rev.B	Existing Site Plan, prepared by brd Group	8/11/2023
2062 – GOV104 Rev.B	Proposed Site Plan/Site Analysis, prepared by brd Group	8/11/2023
2062 – GOV105 Rev.B	Existing Ground Floor Plan, prepared by brd Group	8/11/2023
2062 – GOV106 Rev.B	Proposed – Basement Plan, prepared by brd Group	8/11/2023

2062 – GOV107 Rev.B	<i>Proposed Ground Floor Plan</i> , prepared by brd Group	8/11/2023
2062 – GOV108 Rev.B	<i>Existing First Floor Plan</i> , prepared by brd Group	8/11/2023
2062 – GOV109 Rev.B	<i>Proposed First Floor Plan</i> , prepared by brd Group	8/11/2023
2062 – GOV110 Rev.B	<i>Existing Second Floor</i> , prepared by brd Group	8/11/2023
2062 – GOV111 Rev.B	<i>Proposed Second Floor Plan</i> , prepared by brd Group	8/11/2023
2062 – GOV201 Rev.B	<i>Elevations – West & North</i> , prepared by brd Group	8/11/2023
2062 – GOV202 Rev.B	<i>Elevations – East and South</i> , prepared by brd Group	8/11/2023
2062 – GOV203 Rev.B	<i>Perspective Views</i> , prepared by brd Group	8/11/2023
2062 – GOV204 Rev.B	<i>Perspective Views</i> , prepared by brd Group	8/11/2023

Note: The plans do not provide details of the basement parking areas design and layout, access/egress critical for any assessment and advice. A request was made to the applicant for these, however, these plans were not available at this stage. It is strongly recommended that a formal prelodgement be held once more information is available.

Planning scheme information

Planning scheme	<i>Sunshine Coast Planning Scheme 2014 (23 October 2023)</i>
Development type	Material Change of Use or potentially an “Other Change”
Level of assessment	Impact Assessable (Refer to Section Level of Assessment)
Local plan area	Maroochydore/Kuluin Local Plan Area
Zones	<ul style="list-style-type: none"> • Sport and Recreation Zone (existing lease area). • Environmental Management and Conservation Zone (north of the existing lease where possible expansion will occur). • Open Space Zone.
Overlays	<ul style="list-style-type: none"> • Acid sulphate soils overlay – Area 2: land above 5m AHD and below 20m AHD, Area 1: land at or below 5m AHD • Airport Environs Overlay – Runway Separation Distances, Obstacle Limitation Surface (OLS) • Biodiversity, Waterways and Wetlands Overlay – Native Vegetation Area • Coastal Protection Overlay – Coastal Protection Area • Height of Buildings and Structures Overlay – 8.5 metres • Local Government Infrastructure Plan – Priority Infrastructure Area

Extent of pre-lodgement assessment

The meeting has addressed the key issues/matters that have been identified by the applicant on the development assessment enquiry form. This document is a record of pre-lodgement advice and will not be made available for public viewing. Pre-lodgement advice is provided to explore development options and requirements, identify issues and provide guidance to prospective applicants about council’s policies for development.

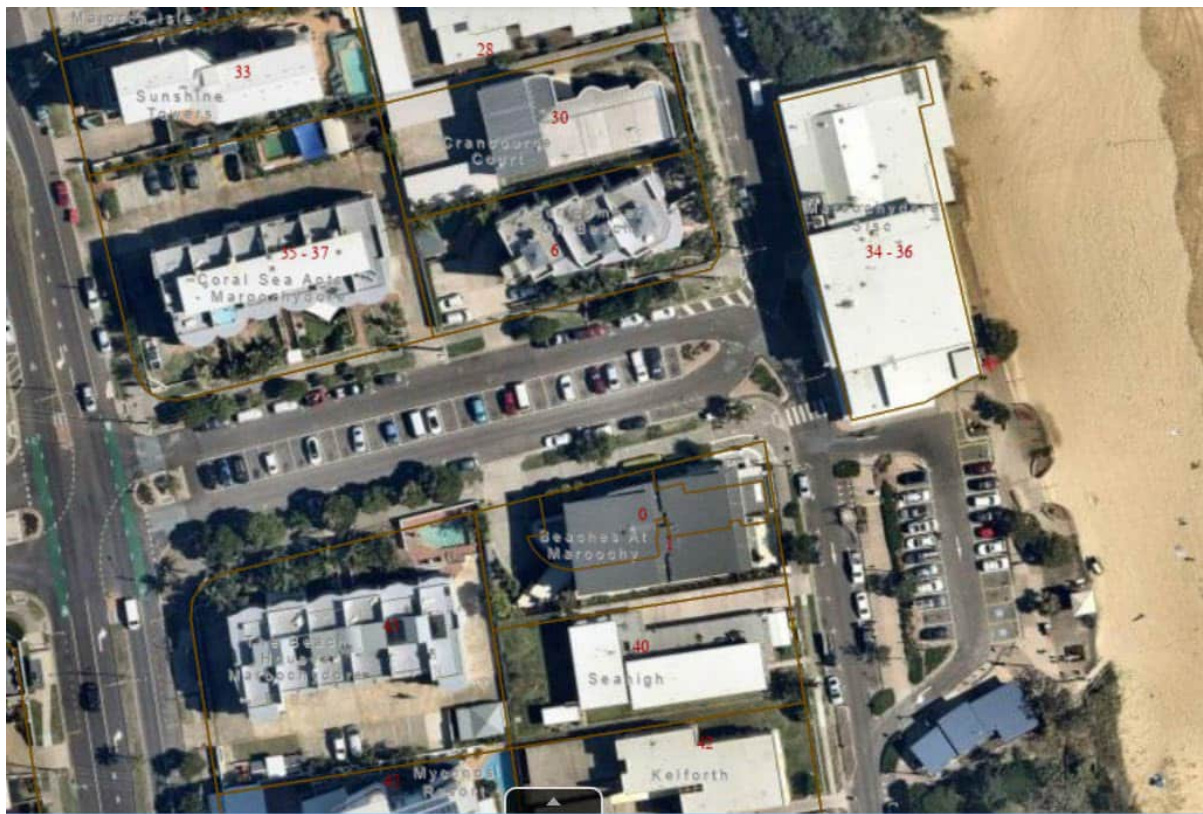
The recorded items and outcomes in no way imply or commit to an approval of the proposal on the part of council or council officers, nor guarantee that all potential issues associated with a development proposal have been raised/identified. When a formal development application is lodged, the proposal will be assessed on its planning merits in accordance with council’s policy framework existing at the time of the assessment. Any application must give due regard to the full provisions of council’s planning scheme as they apply to the application.

General Information

LOT CHARACTERISTICS

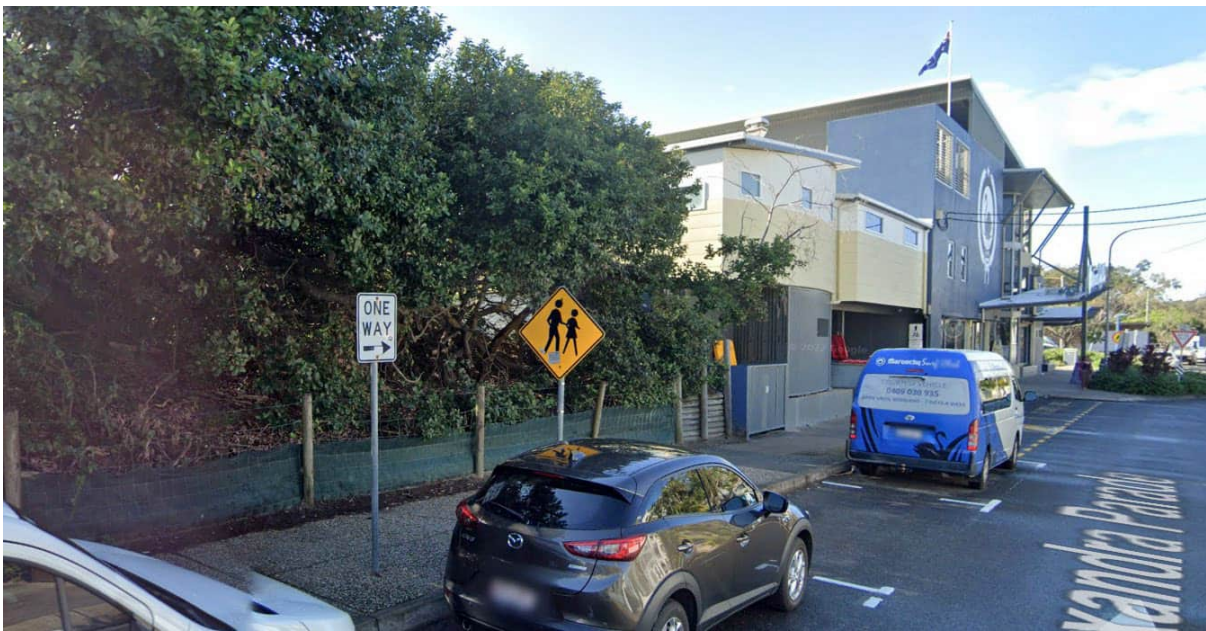
- 34-36 Alexandra Pde MAROOCHYDORE QLD 4558
- Lot 471 SP142403
- Land Area (Lease) - 1,291m²
- Land Owner - Maroochydore Surf Life Saving Club
- The Maroochydore Surf Life Saving Club do not have a lease agreement with Council. The Lease is held between the State of Queensland (Department of Resources) and the Surf Live Saving Club directly.





Source - Nearmap





Source Google Street View

HISTORY

- MCU99/8052 approval as described below:

DEVELOPMENT PERMIT FOR MATERIAL CHANGE OF USE OF PREMISES (REDEVELOPMENT OF SURF LIFESAVING CLUB, CARPARKING RELAXATION AND SITE LANDSCAPING RELAXATION), PRELIMINARY APPROVAL FOR BUILDING WORKS AND PRELIMINARY APPROVAL FOR OPERATIONAL WORKS (LANDSCAPING) - APPLICATION NO [REDACTED] PROPERTY NO. 16353 - LOT 471 CG 2957 - 34-36 ALEXANDRA PARADE, MAROOCHYDORE FOR MAROOCHYDORE SURF LIFESAVING CLUB INC

- MCU99/8052.05 Change to Approval
- OPW02/0836
- MCU99/8052.04 Change to Approval
- GA10/0026 Generally in Accordance
- PLM10/0009 Detailed Prelodgement Meetings / Advice
- CCC02/0008 Change/Cancel Conditions of Development Approval
- WA18/0079 Written Advice
- OPW12/0133.01 Change to Approval

PROPOSAL

The proposal involves redevelopment of the existing Maroochy Surf Club, including extending the existing lease area to the north to encompass part of the existing dune system and associated vegetation. The proposal also involves extending the lease area to the east to facilitate a new deck and access infrastructure from the beach.

OVERALL AREA SCHEDULE

	EXISTING LIFESAVING	EXISTING SUPPORTERS	PROPOSED LIFESAVING	PROPOSED SUPPORTERS
BASEMENT	n/a	n/a	1694m ²	n/a
GROUND	1094m ²	31m ²	1703m ²	31m ²
FIRST	n/a	1155m ²	133m ²	1328m ²
SECOND	22m ²	502m ²	1026m ²	502m ²
TOTAL	1116m²	1688m²	4556m²	1861m²
OVERALL TOTALS	2804m²		6417m²	

It is proposed to increase the existing surf club by 3,613m².

PLANNING SCHEME REQUIREMENTS

- **Planning Scheme – Sunshine Coast Planning Scheme 2014 – 23 October 2023.**
- **Zoning – Sport and Recreation Zone.** Surrounding area where possible expansion will occur is zoned **Open Space Zone** and **Environmental Management and Conservation Zone.**



- Zones
- Low Density Residential Zone
 - Medium Density Residential Zone
 - High Density Residential Zone
 - Tourist Accommodation Zone
 - Principal Centre Zone
 - Major Centre Zone
 - District Centre Zone
 - Local Centre Zone
 - Sport and Recreation Zone
 - Open Space Zone
 - Environmental Management and Conservation Zone

- Overlays:
 - Acid sulphate soils overlay – Area 2: land above 5m AHD and below 20m AHD, Area 1 : land at or below 5m AHD
 - Airport Environs Overlay – Runway Separation Distances, Obstacle Limitation Surface (OLS)
 - Biodiversity, Waterways and Wetlands Overlay - Native Vegetation Area
 - Coastal Protection Overlay – Coastal Protection Area
 - Height of Buildings and Structures Overlay – 8.5 metres
 - Local Government Infrastructure Plan – Priority Infrastructure Area

• Definitions:

<p>Club</p>	<p>Premises used by persons associated for social, literary, political, sporting, athletic or other similar purposes for social interaction or entertainment.</p> <p>The use may include the ancillary preparation and service of food and drink.</p>	<p>Club house, guide and scout clubs, surf lifesaving club, RSL club, bowls club</p>	<p>Hotel, nightclub entertainment facility, place of worship, theatre</p>
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- Level of Assessment

Sport and Recreation Zone

A club is code assessable and a consistent use.

Club	Accepted development if:- (a) located on <i>Council</i> owned or controlled land; and (b) undertaken by or on behalf of the <i>Council</i> .	• No requirements applicable
	Accepted development if:- (a) in an existing building; and (b) not exceeding a <i>gross floor area</i> of 300m ² .	• Transport and parking code
	Code assessment if not otherwise specified.	• Sport and recreation zone code • Applicable local plan code • Sport and recreation uses code • <i>Prescribed other development codes</i>

Open Space Zone

A Club is impact assessable and an inconsistent use.


Environmental Management and Conservation Zone

A Club is impact assessable and an inconsistent use.

STATE MAPPING

Mapping Layers for Matters of Interest 471SP142403


SEQ REGIONAL PLAN TRIGGERS

 SEQ Regional Plan land use categories

Show DA Layers

COASTAL PROTECTION


 Coastal management district


 Coastal area – erosion prone area

WATER RESOURCES

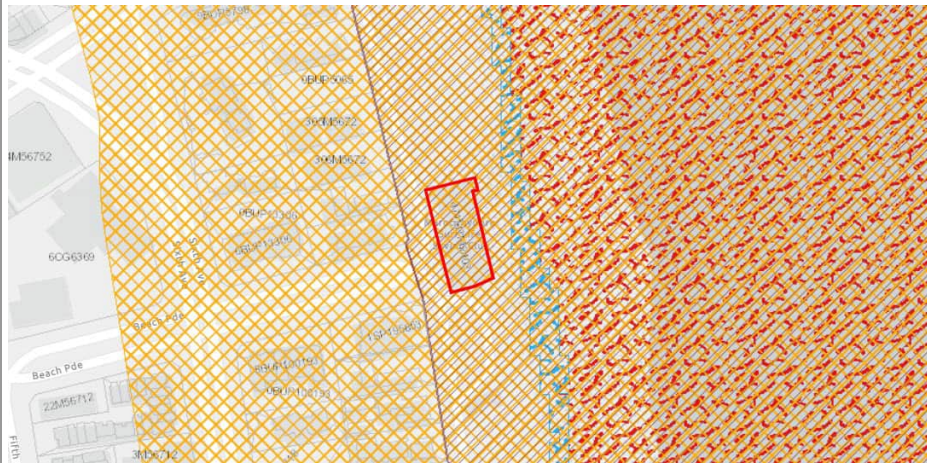
 Water resource planning area boundaries

NATIVE VEGETATION CLEARING

 Regulated vegetation management map (Category A and B extract)

 **PLEASE NOTE: This symbol indicates the layer contains sub-categories. Symbols for layer categories can be viewed in the legend to the left of the window.**

Coastal protection – Coastal management district and Coastal area - erosion prone area



- All
- Coastal management district
- Coastal building line
- Coastal area – erosion prone area
- Coastal area – medium storm tide inundation area
- Coastal area – high storm tide inundation area

Native vegetation clearing



- Regulated vegetation management map (Category A and B extract)
 - Category A on the regulated vegetation management map
 - Category B on the regulated vegetation management map
- Regulated vegetation management map (Other vegetation categories)
 - Category C on the regulated vegetation management map
 - Category R on the regulated vegetation management map
 - Category X on the regulated vegetation management map
- Vegetation management regional ecosystem map
 - Category A or B area containing endangered regional ecosystems
 - Category A or B area containing of concern regional ecosystems
 - Category A or B area that is a least concern regional ecosystem

Planning

- As mentioned in the initial preliminary meeting, Council understands the Surf Club is investigating with the State about applying the Ministerial Infrastructure Designation (MID) process for this proposal. If a MID process is not successful with the State, the proposed expansion would require a new Material Change of Use application or an “other” change to the existing approval. Changes are proposed to the lease area, scale and intensity of the use, entire functioning of the development, basement car park, and over height development. This application would be Impact Assessable and an inconsistent use. Impact assessment is triggered by the Table of assessment for the Open Space and Environmental management and conservation zones, and for the component of the development over the height limit. Public notification would be required.
- The proposal would seem to conflict with the with the Strategic Framework, *Environmental Management and conservation zone code*, *Open space zone code*, *Biodiversity, waterways and wetlands overlay code*, *Coastal protection overlay code* and *Height of buildings and structures overlay code*. Significant justification would be required to demonstrate how the conflict with the Planning Scheme can be overcome.
- The proposed expansion would require a new lease area to be approved. If this lease area is for more than 10 years a Reconfiguration of a lot (subdivision by lease) may be required.
- Expansion of the surf club should avoid any encroachment into the dunes to north of the existing site and avoid development into/over the public foreshore (beach) which is a tidal zone and within the Coastal management district and the erosion prone area. This conflicts with the State Planning Policy and council’s *Coastal protection overlay code* (see comments from other specialists).
- Expansion of the surf club should avoid any encroachment into the vegetated areas on the dunes, (see comments from other specialists).
- If any area were to be considered for further expansion of the surf club, the existing car park to the south of the site should be investigated. This area is already disturbed and contains no coastal dunes or vegetation. However, development in this area would still conflict with the State Planning Policy and council’s *Coastal protection overlay code*. Expansion to the west away from the coastal erosion prone area should also be investigated.
- The proposal would result in an over height development at approximately 15m. The height permitted for the site is 8.5m. Any application would need to demonstrate compliance with the *Height of buildings and structures overlay code* Overall Outcome (2) (a), (b), (c), and (e).

(2) The purpose of the Height of buildings and structures overlay code will be achieved through the following overall outcomes:-

- (a) development provides for the height of buildings and structures to comply with specified height limits except where explicitly provided for in this code;
- (b) development contributes to the retention of the preferred built form character for the Sunshine Coast, and the local plan area in which it occurs;
- (c) the height of buildings and structures is consistent with the reasonable expectations of the local community;

- (e) development does not result in a significant loss of amenity for surrounding development, having regard to:-
 - (i) the extent and duration of any overshadowing;
 - (ii) privacy and overlooking impacts;
 - (iii) impacts upon views;
 - (iv) building character and appearance; and
 - (v) building massing and scale relative to its surroundings.

Specific attention would need to be applied to point (e) to any loss of amenity the proposed development may have on units to the west of the site. In addition, a shadow diagram would need to be provided demonstrating the proposed expansions would not overshadow the beach and foreshore areas and residents to the west.

- There is an existing shortfall of parking for the club and the proposed expansion would seem to result in a loss of on street parking. Without plans showing additional parking arrangements comments cannot be made on parking numbers, access and egress.
- It is noted that at least three roller doors are proposed across the Coastal Footpath. There is no setback to these entrances/service points/egress point to the pathway, which may result in a dangerous situation for cyclists and pedestrians. Any driveways and servicing should be on site and setback from the coastal footpath.
- A 2.7m wide awing would be required across the entire frontage of the expansion area to provide shelter for pedestrians on the footpath. The footpath would need to be widened and street trees provided.
- The deck area proposed on the seaward side of the club over the public foreshore (beach) should not be for the exclusive use of the club and should be within the public domain. This would be an opportunity to continue the Coastal Footpath (boardwalk) along the foreshore rather than at the rear of the site where potential conflict points have been identified with access and egress to the basement car park and minimum widths required for pedestrian cycle pathway (Coastal Footpath).



- The following Overall Outcomes of the *Sport and recreation zone code* must be considered in any application.
 - (i) development provides a high level of amenity and mitigates the potential for land use conflicts with existing and planned development in the locality;*
 - (j) the scale, intensity and built form of development is compatible with the existing and intended scale and character of the streetscape and surrounding area;*

(k) sport and recreation activities and other activities established in the zone make a positive contribution to the image of the Sunshine Coast by incorporating a high quality of built form and landscape design;

(m) development protects and enhances the open space character and amenity of sport and recreation areas;

(n) development avoids as far as practicable, or where avoidance is not practicable, minimises and otherwise mitigates, adverse impacts on ecologically important areas, including creeks, gullies, waterways, wetlands, coastal areas, habitats and vegetation through location, design, operation and management;

(o) development is designed and sited to sensitively respond to the physical characteristics and constraints of land, including flooding, steep land, landslide hazard and bushfire hazard, where applicable;

Engineering

- There are no plans showing the basement layouts. There is a large basement shown and three entry doors, but it is not clear if this is for public parking, service vehicles etc.
- The current servicing is on-street at the pinch point where the coastal footpath is narrow. Since this alignment is the Coastal Pathway, council would require a functional footpath across the frontage, so any loading that can be done internally should be pursued.
- An important item for council will be the Coastal Pathway. Provision should be made to achieve a minimum 3m shared path between the building and Alexandra Parade. This should be clear of all obstructions such as car door, signs, poles, street furniture etc.
- The site is located within the Coastal Protection overlay. Any development should address this overlay (and relevant state requirements as well).
- This is an area of high parking demand and this is a high traffic generating use. The development should provide car parking or, at the very least, not result in any loss of public parking including street parking.

Hydraulics

- The site is located within Coastal Management District and Coastal Erosion Prone Area. The extensions area (deck area) is located within medium storm tide area.
- As per SPP, Natural hazards, risk and resilience Assessment Benchmark 1 (Part D, also refer to State Interest Policy 8) development is not to occur in an erosion prone area within a coast management district unless development cannot feasibly locate elsewhere and is: coastal dependent development or temporary, readily relocatable or able to be abandoned development or essential community infrastructure or minor redevelopment. The proposal does not achieve the assessment benchmark and therefore is not supported by the SPP.
- The development is proposed within coastal landforms (dunes) and significant intensification of existing uses would alter the character of the beachfront and would require construction of coastal protection measures i.e. seawall. The proposal does not meet any POs/AOs of *Council's Coastal protection overlay code* (e.g. PO1/AO1, PO2/AO2 it is intensification rather re-development, PO3/AO3, PO6/AO6, PO12/AO12), therefore is not supported by *Council's Coastal protection overlay code*.

Environmental management

Acoustic Amenity

- An acoustic assessment will be required to address Council's *Nuisance code* with respect to any proposed onsite activities (i.e. amplified music) on nearby residential premises/sensitive land uses. This assessment should also include that noise generated any fixed plant and equipment* that causes noise (e.g., from basement car-park exhausts, air conditioning units, refrigeration units, pumps and generators, kitchen exhaust units) must be enclosed, shielded and/or positioned to ensure that the following sound pressure levels for a noise sensitive land use is achieved:

Location where criteria applies at a noise sensitive land use	Adjusted equivalent continuous sound pressure level ($L_{Aeq,adj,T}$) to be achieved during the day, evening and night time periods			Maximum sound pressure level (L_{Amax}) to be achieved during the night time period
	Day 7am-6pm $L_{Aeq,adj,11hr}$	Evening 6pm-10pm $L_{Aeq,adj,4hr}$	Night 10pm-7am $L_{Aeq,adj,9hr}$	Night 10pm-7am
Sleeping Areas	35 dB(A)	35 dB(A)	30 dB(A)	45 dB(A)
Other Habitable Rooms	35 dB(A)	35 dB(A)	35 dB(A)	N/A
Within the Designated Private open Space	50 dB(A)	50 dB(A)	N/A	N/A

*Note: Measurements must be in accordance with AS 1055.1 - Acoustics – Description and measurement of environmental noise – General procedures. Measurements must be adjusted for tonality and impulsiveness where required, where attenuation is applied for inside to outside calculations, a maximum of 5 dB(A) only is to be applied (i.e. assumed windows fully open) *(Refer to Advisory Note)*

Waste Management

- The proposed development will need to address Council's Waste Management Code, specifically in terms of sufficient waste storage capacity, location and the arrangements for the safe and efficient servicing and movement of waste and recycle bins.

Commercial Kitchen Exhaust

- Kitchen exhaust points for the development must be located and operated in accordance with AS 1668.2 - *The use of ventilation and airconditioning in buildings* (specifically Section 3.10 – *Air Discharges*).

Lighting Amenity

- Any lighting assessment undertaken should include an assessment against Council's Nuisance Code with respect to nearby residential premises to ensure that any lighting associated with the use is designed, sited, installed and tested to comply with Table 2.1 & 2.2 of AS 4282 - *Control of the obtrusive effects of outdoor lighting* using a control level of 1.

Acid Sulfate Soils

- An acid sulfate soils investigation must be undertaken in accordance with council's *Planning scheme policy for the acid sulfate soils overlay code*. Where the investigation identifies acid sulfate soils that

require management, all works must be carried out in accordance with an acid sulfate soil and groundwater management plan (or part thereof) prepared by a qualified person* and endorsed through an operational works approval.

- The proposed basement must be designed and constructed as a water excluding structure in accordance with *AS 3735 – Concrete Structures for Retaining Liquids*". It must be able to withstand hydrostatic pressure, be completely sealed (including control joints) to prevent groundwater infiltration, and contain no permanent or post-construction sub-surface drainage.
- It is recommended that sheet piling methods of construction are not utilised due to the likely high hydrostatic pressures expected at the site.

Food Act 2006

- Any commercial kitchen will need to comply with the requirements of the *Food Act 2006* and the associated Australia New Zealand Food Standards Code. Please contact Council Healthy Places Team for licensing and fit out requirements.

Urban Design

The surf lifesaving club is an important community asset, which should express an exemplar design that expresses Sunshine Coast Design Principles. The development should avoid detrimental impacts to the significant natural surroundings. The development should also appropriately address Alexandra Pde. The proposal does yet not achieve these benchmarks. Urban Design issues include:

- The proposed design lacks openness and transparency, particularly the West façade.
- The ground level does not address Alexandra Pde and the public realm appropriately.
- The built form has an underdeveloped screen façade design.
- The development siting has detrimental effect on surrounding natural environment.

Design intent: The existing surf lifesaving club is visually prominent and an important locality for the local community and visitors. A new surf lifesaving development must appropriately respond to the important location and the iconic role of the surf lifesaving club in Maroochydore. The building must be exemplary design or architectural quality, providing a functional and memorable design that enhances the local area. The built form must positively integrate with the natural landscape surroundings, and all frontages should address its outlook. This is particularly important for the Beachfront outlook and the Alexandra Parade outlook. The building should also respond to climatic impacts with meaningful environmentally sustainable design elements such as appropriate orientation, shade devices, and natural ventilation opportunities.

Sunshine Coast Design Principles: The development should be responsive to the Sunshine Coast's subtropical character, and be light, open, and transparent, effective orientation to capture sunlight, capturing views through, allowing for natural ventilation, and other ways of designing specific to the Sunshine Coast character and climate. This is not yet achieved.

An appropriate expression of Sunshine Coast subtropical design is described in the *Sustainable design code* as "siting, orientation and design of buildings to appropriately respond to the region's subtropical climate and create an open and permeable built environment that connects indoor and outdoor spaces in an integrated design." Lifestyle values, place based design and community connection are also important factors that should be reflected in the design. Further information can be found here: [Sunshine Coast Design](#)

The design does address the waterfront to the East, and this façade offers transparency. However, an enclosing and solid style of building is provided, particularly when viewed from the North and the West. Views though are

not provided. The Western side of the building presents as a dominating wall of development in the foreshore landscape, as seen from Alexandra Parade, which is a main street frontage. In addition, the public realm is not appropriately activated.

The **Maroochydore/Kuluin Local Plan Area** requires that development recognises and reinforces the natural attribute of the site and surrounding. Buildings and landscapes, emphasise the outdoor lifestyle of 'living on or near the coast'.

Building design

- Incorporate a mix of lightweight and textured external building materials, including timber finishes or masonry construction with variation provided in texture and detailing. There is evidence of variation of materiality in the combination of aluminium screening, timber like window frames and timber decks, however more emphasis on openness, glazing and transparency (in addition to east façade which is predominately glazed) is necessary, and the featured aluminium screen facade requires further design development and resolution. (LPC PO2)
- The solid built form is predominantly square and lacks articulation and transparency. A lighter weight building response, with views and glimpses from Alexandra Pde through to the foreshore and ocean should be offered, rather than an enclosed built form.
- Additional screening to provide shade and weather protection may also positively add to texture and variation requirements, as well as responding to local climatic conditions.
- A colour scheme that is nonreflective, understated and blends with the natural environment should be demonstrated, as well as provision of a low-level lighting design solution to avoid biodiversity impacts.
- Landscaping integrated into the built form design is encouraged to soften the development and integrate it with the important open landscape surroundings. Some landscaping is proposed at the entrance but is minimal and is covered by awnings.
- The east elevation addresses the beach frontage with openable glazing and balcony areas, this approach is an appropriate response, but the open quality should extend to other sides of the building and allow views through.
- Detailed plan layout of all levels is not provided so it is unclear how the facilities function, or how windows and openings connect indoor and outdoor areas, and how window placement is designed for and integrated with the building programme.
- All required services must be located on plan, integrated into design, and directed away from impacting public frontages.

Facades

- The West façade and the NW and SW corners of the building are predominantly solid rendered walls with small window openings only, which are generally screened. The aluminium screen over the solid façade encloses the building further. The solidness of these facades is not desirable, particularly the façade that addresses Alexandra Pde. This façade should make an important and meaningful connection and contribution to the streetscape, designed to address the street frontage of Alexandra Pde, as an important frontage for its full length, and should not present an enclosed carpark or "back of house" response.
- The front /primary façade facing Alexandra Pde is approx. 65m in length, which is excessive, and more than 50% of this length is solid continuous stone, except for driveway roller doors and service enclosures. The western end of the building is more open, but significant areas of this part of the façade also presents as solid rendered wall. Views to the waterfront from Alexandra Pde and beyond. The dominant stone wall also provides little protection to heat generated along the footpath (pedestrian and cycle link) in front of the wall.
- The upper level is also predominantly enclosed, with any openings covered by aluminium screening. The emphasis of this upper level should be to provide open and transparent balconies and uses that overlook and interact with the street and surrounding areas.
- The north façade is also dominated by solid rendered walls. Consideration of northern orientation in terms of passive solar design should be considered further. This façade should offer more glazed areas and balconies, to utilise direct sunlight and to provide outlook over the natural vegetation to the north.

- Shade devices are not shown on north or east facades. Awnings or operable screens should be provided that allow direct sunlight to be utilised and naturally controlled.
- The feature aluminium screen does not appear to provide any shade or weather protection to the building. The entire east facade, along with a large portion of the north and south facades show this aluminium screen as a feature attached to the roof top edge only. It does not provide shade or protection. For the west façade, and NW and SW corners, some shade may be offered by the aluminium screen, however the design of the screen does not seem to address window locations. Openings appear random and prevent views through the building. Further resolution of the feature aluminium screen façade is necessary, noting that this is presented as the main visible design feature of the development.

Height and Roof form

- The built form, including feature aluminium screen is over 15m measured from the Alexandra Parade frontage. The maximum height pertaining to the site is 8.5m above natural ground level, or otherwise the flood immunity level. This is not achieved.
- The proposed roof form is flat. The feature aluminium screen is 2-dimensional and does not constitute an interesting roof form. LPC (PO2d) requires articulated, pitched, skillion or curved roof forms.

Built Form Impacts

- A 3D model in any of the following formats - IFC, Revit, Archicad, Sketchup should be provided to assist in determining visual impacts of built form. This includes siting, appearance, impacts on natural and streetscape surroundings, building height, mass, and bulk, and any impacts on views and vistas.
- LPC PO5 requires that scale and siting of community activity developments must be appropriate, having regard to its location and setting, streetscape, natural surroundings, and the nature and scale of surrounding development.
- The proposal seeks to increase the lease boundary, generally extended to the north and east. These impacts on the Native Vegetation areas, Coastal Impact areas, and green space should be prevented. The site boundary, including basement, should not be extended to the north or the east.
- The Open Space Zone should not be impacted in any way by the development. Any additional site allowance should be directed towards the south, encompassing the existing carpark which is not Natural Vegetation, foreshore, or green space. Existing carpark driveway access could also be utilised.

Streetscapes, Natural Landscapes and Views

- Critically important features of the site include the interface with both the natural landscape (greenspace and foreshore) and the prominent urban streetscape of Alexandra Parade. The building design and siting must respond positively to these features. The site overlooks Maroochydore Beach. Significant views in relation to the site location are highlighted on Figure 7.2.19A (Maroochydore/Kuluin Local Plan Elements). The site is dominated by foreshore greenspace to north and east, with a Coastal Path on the west, and Greenspace Link to the east, also shown on Fig. 7.2.19A.
- LPC PO3 requires that the development retains, protects, emphasises, and enhances these key landscape elements including significant views and vistas and existing character vegetation contributing to the setting, character and sense of place of the Maroochydore/Kuluin local plan area, including important views which must not be intruded upon, and the retention and enhancement of existing mature trees and vegetation contributing to the setting and character of the local plan area.
- The development must continue, and contribute to, the network of open space and pedestrian/cycle linkages along the frontage to Alexandra Parade and protect and enhance the major open space and greenspace links offered by the foreshore park and reserve system. This includes minimises direct vehicle access and gives priority to pedestrians and cyclists. The Coastal Path and the greenspace link must be retained and enhanced (LPC AO7). However, the Coastal Path is impacted by driveways and poor streetscape resolution, and consideration the greenspace link is not evident on plans.
- LPC (PO4 and 5) The development must allow for and contribute to the establishment of a “landscaped boulevard” along Alexandra Parade, an attractive and coherent streetscape that enhance the sense of arrival to, and coastal urban character of, Maroochydore/Kuluin. The development must ensure continuity of a streetscape and landscape design.

- LPC (AO5) advises that frontage to Alexandra Parade should provide no additional vehicle access from this street, with existing vehicle access points utilised wherever possible. Two vehicle access points are shown on plans. The impact of the crossovers interrupts the pedestrian/cycle linkage and is detrimental to the visual quality of Alexandra Parade frontage, façade design and appearance, and prevents public realm connectivity and activation.
- Alexandra Parade frontage should be predominantly glass at ground level, addressing and overlooking the street frontage. Car parking should be sleeved behind this.
- The basement, with proposed sand dune type landscape over the top, is not an appropriate design response. This is detrimental to the integrity of the existing natural environment and does not respond to the existing natural conditions of the site sensitively.

Feature aluminium screen and other surf motifs

The prominence and importance of the site for community and visitors requires a memorable and meaningful design response. Themes of the locality, natural environment, beach, and surf culture, as evident in the proposed design, offer a positive conceptual beginning – but it is a starting point only. Further ways of contributing to cultural and historic interpretation and storytelling in the form of art installations in and around the building, are encouraged.

The feature aluminium screen to the façade has an undulating pattern and cut out circles that may be reminiscent of water. There is also evidence of surfboard motif window mullions and columns located along the west façade. These features, as currently proposed, are underdeveloped. There is no explanation of process or ideas provided in relation to these features. Art expertise is required to ensure rigorous design development and execution of the work and achieve a sensitive and appropriately executed design outcome.

The importance of high quality artistic features is further emphasised due to the feature aluminium screen dominating the building facades and being the main design feature of the proposed building. A qualified Art Consultant should be engaged to see this proposal through and to achieve an appropriate and meaningful artistic response. The integration of artwork as part of the building design has great potential. This should be seen as an opportunity, and this component of the project should be given the time, expertise and resources required to produce an exemplary outcome that is a memorable and meaningful cultural response.

The quality of construction of these artistic elements must also be considered, with expert craftspeople involved. In the case of artist and crafts person involvement, emphasis on local expertise is advised. Council can assist and provide advice in relation to the development of artworks and screen design. To begin with, the following should be addressed:

- Involve a qualified person considered to be an arts consultant/artist experienced in the field of public art. Where cultural or heritage images or interpretation is used or adapted in a design process, a qualified Heritage Conservation Consultant should also be involved.
- Document the conceptual framework and artistic vision (e.g. themes / image / identity aims), identify community engagement strategies undertaken in the development of the image, framework and vision, and must address the following requirements.
- Identify building structures and areas of the site suitable for artwork; opportunities for art (e.g. entry statements, signature works, integrated art options, or community art projects).
- Identify integrated and sophisticated design methods, varied and interesting materials construction methodologies and methods for longevity, low-maintenance and graffiti-proofing.
- Provide evidence that written permission for the proposed use and location of the artwork has been provided by artists involved in the artwork.
- Where cultural, artistic or heritage images are used or adapted in a design process, cultural content must retain its integrity in the reproduction and not an appropriation of an image or object. Any reproduction or interpretation of cultural assets must have written approval from the commissioning body, artists and/or cultural groups.

Business Uses and Centre Design Code

The requirements of this *Business uses and centre design code* should be applied to the development. Importantly, this includes the provision of “high quality” design which reflects good centre design principles and appropriately responds to local character, environment, and amenity considerations.

Similar to the Local Plan Code requirements, the development should incorporate building and landscape design that responds to the region’s sub-tropical climate as well as the character of the local area; establishment safe, comfortable and vital pedestrian environments; integrated into its surrounds and reflects high quality town centre, streetscape and landscape design principles; and avoid adverse impacts on surroundings.

For the proposed development, all elevations address the public realm. The *Business uses and centre design code* further highlights the importance of streetscape, open space and public realm design including (PO5 and 6):

- The building is designed to create vibrant and active streets and public spaces.
- The built form should enhance the character and amenity of streets and neighbouring premises.
- The development should be closely related to streets, public spaces and pedestrian routes.
- Building facades should clearly define, frame or enclose the street and other useable public and semi-public open space.
- The most important facade should directly face the principal street frontage (Alexandra Pde) and provide an attractive and direct street front address.
- The ground level of any building fronting a main street or another public or semi-public space, incorporates activities that are likely to foster casual, social and business interaction for extended periods, such as shops, restaurants and the like.
- 65% of facades facing street frontages are clear glazing.
- Car parking areas, service areas and driveways are located so as not to dominate the streetscape.

Footpaths, walkways and other spaces intended primarily for pedestrians to be comfortable to use and adequately sheltered from excessive sunlight and inclement weather. (PO4) A building fronting a main street, should provide adequate and appropriate shelter in the form of a minimum 2.7m wide awning along the full length of the active street frontage (Alexandre Pde).

A clearly defined entrance should be provided, which faces the principal street, or the corner. In this case the SW corner is proposed, which is supported. The public realm interaction and activation at ground level to this corner and to the south is also supported.

The development should also provide access to attractive views (not just for the building occupants), and prevailing cooling breezes and takes advantage of local climatic conditions. Windows should be protected from excessive direct sunlight during warmer months. Building Features and Articulation should provide visual interest through form and facade design, with outdoor or semi-enclosed public spaces that complement adjoining indoor spaces. Articulated and textured facades should create a high level of openness and visual interest, and provide shading to walls and window.

The development must respond to the character and amenity of neighbouring premises. The building massing and composition should avoid excessively large building floor plates and building facades. No horizontal facade should be more than 45 metres in length, (PO7) and should also incorporate vertical and horizontal articulation such that no blank wall is longer than 15 metres. The building should provide an articulated and visually attractive skyline silhouette (PO9)

Advice Note:

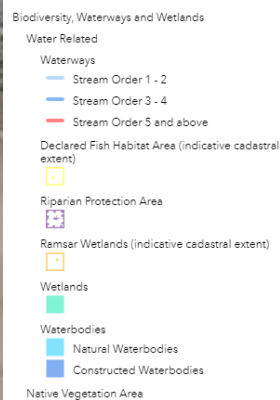
It is strongly recommended that consideration of passive climatic sub-tropical design elements such as screening, window hoods, awnings, etc., along with fire safety and egress requirements, hydrant boosters, electrical transformers, and mechanical plant occurs as early as possible in the design process in conjunction with an energy efficiency expert, fire engineer, electrical engineer and building certifier.

Early consideration of these elements will greatly assist in meeting the requirements of both the National Construction Code and the electricity distributor. As these elements can ultimately affect the performance, character and external appearance of new buildings, and the relationship of buildings to their site, neighbours and the street, it is critical that they be considered upfront. Failure to do so may result in time delays and increased costs in the post-development approval phase.

Ecology

Biodiversity, Waterways and Wetlands

The existing surf club site is not identified as supporting any features on the Biodiversity, waterways and wetlands overlay code mapping. However, the dune system to the north of the site is identified on the *Biodiversity, Waterways and wetlands overlay code* mapping as supporting native vegetation areas (see below excerpt).



It should be noted that the *Biodiversity, Waterways and wetlands overlay code* does not always accurately capture the on-ground extent of vegetation. In this case, not all of the native vegetation associated with the dune system has been captured by the mapping, however, this appears to be a spatial error. The entire dune system should be treated as supporting matters of local environmental significance (MLES) – native vegetation, given the Biodiversity, Waterways and Wetlands mapping has the following notation.

Note – Areas not identified by the Biodiversity, Waterways and Wetlands Overlay Maps may also contain Ecologically Important Areas, rare or threatened flora and fauna species or their supporting habitat. Development occurring in such areas will also be assessable against the Biodiversity, Waterways and Wetlands Overlay Code.

In addition, the adjacent beach and dune systems provide nesting habitat for sea turtles, primarily Loggerhead and Green Turtles, both of which are listed as threatened at the State and Commonwealth level. The adjacent beach and dune system is therefore an ecologically important area under the Schedule 1 of the Planning Scheme.

Based on the submitted plans the intent is to construct part of the new facilities beneath the dune system to the north of the existing surf club. Information regarding how construction underneath the dune system will be undertaken and the anticipated impacts to environment has not been provided. Dune systems are highly sensitive and dynamic environments, and it is difficult to see how the proposal could proceed without having a detrimental impact on the dune system and the associated MLES – native vegetation and turtle nesting habitat. The proposed expansion of the facility into the northern dune system is therefore not supported by the *Biodiversity, waterways and wetlands overlay code* given it is inconsistent with the following performance outcomes (PO):

- PO1, which requires development to protect the physical and ecological integrity and biodiversity of ecologically important areas; and
- PO2, which requires development on or adjacent to land containing an ecologically important area to be designed and constructed to prevent direct and indirect impacts on the ecologically important area.

The proposal does present an opportunity to improve on the light pollution impacts on turtle nesting habitat and hatchlings associated with the existing facility. It is strongly recommended that the development adopts turtle sensitive lighting and design measures to be consistent with:

- PO4 of the *Biodiversity, waterways and wetlands overlay code* which requires development on or adjacent to land containing an ecologically important area to protect fauna that are sensitive to disturbance from noise, light, vibration and dust; and
- The Desired Outcome (DO) 2 of Council's Marine Turtle Conservation Plan which aims to achieve minimisation of direct light sources and ambient light visible from sensitive nesting beaches and adjacent marine areas.

Bushfire

The 'State Planning Policy (SPP) Assessment Benchmark Mapping – Natural Hazards Risk and Resilience, Bushfire Prone Area (BPA)' is currently set as the default mapping system to determine whether an application must demonstrate compliance with the *Sunshine Coast Planning Scheme 2014, Bushfire hazard overlay code* and/or the SPP assessment benchmarks relevant to an application. Council is currently using the SPP bushfire hazard mapping as the default because:

- it is updated more regularly and is prepared consistently with the SPP methodologies and any future iterations thereof; and
- the SPP applies to the extent of any inconsistency with a local planning instrument (*Planning Act 2016, section 8(4)(a)*).

The SPP BPA mapping below identifies the site:



The site is not located in a mapped BPA, further consideration of bushfire risk and mitigation is not required.

Landscape

Documentation:

- A Landscape Concept plan will be needed and detailed landscapes for any future operational works application.

Deep Planting:

- Performance Outcome PO10 of the *Business uses and centre design code* would be addressed in terms of demonstrating a 10% deep planting. Deep planting areas are required to be free from services, obstruction, infrastructure and open to the sky to be calculable. It will also need to demonstrate that trees can be provided to achieve shade, amenity and microclimatic control.

Podium Landscapes:

- Podium planters must be demonstrated to be of sufficient depth and width to support planting capable of screening and providing amenity.

Services:

- A combined services plan will be required that demonstrates that the landscape areas are not adversely affected by services. Where services are proposed then these should be aligned so as ensure deep planting opportunities are maximised. E.g. avoid running services through the centre of deep planting areas, align to edges, or run under hardstand.
- Provide written confirmation from Energex as to whether the site triggers a requirement for a pad mount transformer. The location of such infrastructure must be shown on site and must not be located within any required landscape area.
- Provide confirmation of the location and dimensions of any proposed fire booster assembly.

Stormwater integration:

- The application would need to demonstrate how the stormwater requirements and landscape requirements are compatible.

Species:

- Planting will need to be selected that consider the future maintenance obligations. A species should be selected with an appropriateness to the locality.

Public Works

- Street trees will be required as part of the coastal pathway requirements so as to sufficiently shade the pathway.
- Any new footpaths would need to be offset a minimum 1.2m from the back of kerb to facilitate street trees. Street trees are to be located with regard to safe vehicle sightlines and so as to not obstruct access to the fire boosters.
- Footpaths will need to be finished so as to match in with Council's design palette for the local area.

Strategic planning

Strategic Planning has reviewed the proposed development and provide below a series of comments for further consideration.

Strategic Planning acknowledges that Surf Lifesaving Clubs provide a range of important community services across the region. In recognising the significance of the Surf Lifesaving Clubs to our community, officers are happy to further collaborate with Maroochydore Surf Club to ensure the best outcome possible for all parties.

In terms of the proposal for the redevelopment of the Maroochydore Surf Club, it is understood from the meeting held recently that the proposal seeks to:

1. Consolidate a range of facilities under the Club's operation into a single (redeveloped) site.
2. Develop a new building with a GFA of approximately 6,417m² (2.3 times larger than the existing facility).
3. Require an enlargement of the existing lease area, including northward into an existing coastal dune, eastward onto the beach, southward toward the existing car parking area and westward toward Alexandra Parade. The plans also show some components of the redeveloped building **outside** of the

proposed lease area including a public deck, planters, stairs, ramp and building fenestration (screen, and 'shaped concrete awning').

4. Remove an existing coastal dune and rebuild on top of a proposed basement of the new building
5. Increase the total number of storeys from three (3) to four (4), inclusive of a basement below ground level.
6. An overall increase in the building height, bulk and scale as viewed from the eastern and western facades.

While Strategic Planning supports the continued function of core lifesaving functions and agrees that the Maroochydore Surf Club is an important part of the community, consideration of coastal hazards/climate resilience and building height, bulk and scale requires further attention in the preparation of application material.

Land use conflict

Strategic Planning notes that significant increase in building size means that the proposed development will expand into the Open Space Zone. In accordance with the Open Space Zone code, a Club is an inconsistent use and generally not supported. This presents a conflict with the planning scheme and justification will be required to demonstrate how the conflict can be overcome.

Coastal hazards and climate resilience

Coastal hazards and climate resilience are a significant and important consideration of the proposed development. Officers understand from the recent meeting that the applicant has not given consideration to potential future impacts of coastal hazards and climate change in the design, operation or technical reporting of the proposed development. It is important that the applicant consider these risks and a suitable response be developed not only to demonstrate compliance with relevant State and Local requirements, but also for the Club to understand and plan for future risk before investing significant time and resources in redevelopment.

While this matter is best responded to by the ESP Branch (see comments elsewhere in these notes) specific comments from Strategic Planning are as follow:

1. The proposed intensification of built form in the coastal dune and the ability to achieve integration with coastal management structures and coastal adaptation plans requires careful consideration and analysis by the applicant's consultancy team. In particular, the environmental impact of removing and rebuilding the coastal dune and the intensification of built form in an area subject to increasing forecasted coastal impact requires detailed analysis. The longevity and adaptability of the building itself should also be given due consideration so that the club is fully aware of, and can respond to, climate risks. In addition to detailed reporting, further consultation with relevant Council staff and State agencies on this matter is recommended.
2. Council's adopted policy on coastal hazards, including the Coastal Hazard Adaptation Strategy (CHAS) and Shoreline Erosion Management Plan (SEMP) must be addressed in the application material by a suitably qualified professional.
3. Removing existing coastal dunes and established vegetation has the potential to impact on coastal and environmental processes and must be appropriately analysed in detailed environmental and coastal assessments prepared by suitably qualified professionals.
4. Council's current work on coastal hazards will provide refinements in policy and expectations for development within the coastal erosion area. While the policy is yet to be consulted, it will be important for the proposed development to ensure that it is designed to withstand the forces of wave action associated with coastal erosion. *Note: This will require further engineering and is likely to have significant cost implications, but not doing so will pose significant safety and building integrity implications if not considered.*
5. The SEQ Regional Plan 2023 contains a range of provisions relating to natural hazards/resilience that should be assessed as part of the application material. Relevant provisions are outlined below.

“Sustain Outcome 8 – Resilience

Strategy 8.2 Integrate risk-based planning investigations and benchmarks (as per the Resilience Policy Maturity Framework) into strategic planning, zoning and development decisions so that:

(a) Strategic infill sites are only considered where they can achieve a tolerable (or preferably acceptable) level of natural hazard risk and where any mitigation accounts for climate change.” (pp.121)

“Developing climate and natural hazard risk responsive coastal and hinterland communities that reflect local mitigation and adaptation values of protecting natural areas and consolidating growth in safer locations will advance the intent to:

- Realise risk-responsive future growth by continuing local efforts to avoid development in areas of intolerable risk, including those areas projected to be at risk from climate change.*
- Prepare for future settlement adaptation by integrating outcomes from local natural hazard risk management and adaptation strategies such as local governments’ Coastal Hazard Adaptation Strategies.” (pp.184)*

The application material must provide an assessment of these matters.

6. In terms of planning scheme provisions, we trust that Development Services Branch will identify specific requirements. We would, however, like to highlight key provisions that are considered relevant to the assessment of the application –
- Strategic Framework including 3.10.1(a), (b), (c) and (e), 3.10.4 and 3.10.7.1
 - *Coastal protection overlay code*
 - *Sport and recreation zone code* Overall outcome (2)(n) and (o)*
 - *Open space zone code* overall outcome (2)(k), (l)*
 - *Maroochydore/Kuluin local plan code* – PO3/AO3.2

**Note that coastal hazard is not specifically mentioned, but the wording says ‘including’ which does not mean to the exclusion of all other natural hazard overlays.*

Building height, bulk and scale

As identified earlier in this advice, the proposal seeks to more than double its current GFA. The club’s building would be the largest of its kind on the coast by some margin. While it is acknowledged that facilities will be consolidated from other locations and core functions are necessary to provide surf lifesaving services to both the Maroochydore beach and adjoining river mouth, a building of this size adjacent to the beach requires further consideration and justification, particularly given not all proposed aspects of the development are coastal dependent development. The proposal, while consistent with the highest point of the current building, is significantly higher than the 8.5m high limit for the zone, which presents a conflict with the planning scheme. The applicant also appears to use the maximum height of the existing building (at a single point in the façade) to justify an unarticulated building and unvaried height across its entire length and profile, as shown below. This significantly increases the bulk and scale of the facility.



Specific comments are outlined below.

1. The proposed building exceeds the maximum allowable height for the site (8.5 metres). While the current building also exceeds this height, the unarticulated design and length of continuous height (as opposed to the articulated roof form and height of the current building) provides a significantly bulkier, larger, and in many places higher, building. Further justification and analysis of height impacts are required as a building of this scale is not anticipated by the current planning framework.
2. The proposed building is substantially larger than the existing building and increases the bulk and scale as viewed from a variety of public locations. There remains fundamental questions around (a) whether a building of this size, bulk and scale is appropriate on the foreshore and (b) potential visual amenity impacts from key public viewing locations. Analysis by a suitably qualified professional is required.
3. Increased overshadowing on the beach created by an enlarged building requires further analysis by a suitably qualified professional. This issue is of concern to the community and was reinforced through feedback received during preliminary consultation on the New Planning Scheme. The scale of the building is such that it is unlikely to align with community expectations.
4. Relevant planning scheme provisions related to these issues include:
 - Strategic Framework – 3.8.1(d), 3.8.2.1(a) (e) (g) and (i), 3.8.3.1(c)
 - *Sport and recreation zone code* Overall outcome (2)(j)
 - *Open space zone code* Overall outcome (2)(a), (b), (g), (j)
 - *Sport and recreation zone code* PO1(b)
 - *Height of buildings and structures overlay code* Overall outcome (2)(a), (c), (e), PO1 and PO4
 - *Maroochydoore/Kuluin local plan code* PO2 and PO3

Ministerial Infrastructure Designation (MID) coordination

The Regional Planning and Advocacy Team will co-ordinate Council's formal response and call on inputs from Development Services Branch and a number of other specialist areas of Council once formal comments are sought by the Department.

Should there be queries around Council's inputs into this process, please contact Josh Walker, Co-ordinator Regional Planning and Advocacy via email: Josh.Walker@sunshinecoast.qld.gov.au

Land Management

1. The Maroochydoore Surf Life Saving Club do not have a lease agreement with Council. The Lease is held between the State of Queensland (Department of Resources) and the Surf Live Saving Club directly.

2. The current facility is located within a designated lot created by the State of Queensland to allow the lease to the Maroochydore Surf Life Saving Club.
3. The current proposal would seek an expansion of the lease lot into the Maroochydore/Cotton Tree foreshore reserve.
4. Expansion of the lease lot to incorporate a wider development of the Surf Club would be subject to the consideration of:-
 - a. Planning and precinct planning considerations.
 - b. Approval and meeting the requirements of a broader range of stakeholders.
 - c. Ensuring the impact to the community amenity of the foreshore is not adversely impacted.
5. The land surrounding the lease lot is owned by the State of Queensland and managed by Council as foreshore reserve.
6. It would be Land Management's advice that if the expansion of the lease lot is broadly agreed, that Council would consent to a larger lease lot being created by the State of Queensland to allow it to directly lease to the Maroochydore Surf Life Saving Club. This alleviates the need for a dual leasing arrangement to exist between the State, Council and the Surf Club and would make sense given the existing lease arrangement in place.

Environment and Sustainability Policy Branch and Environment Operations Branch

Queensland Government Environmental Values

The extension of the lease area and construction of the basement area will involve the destruction of dune ecosystem habitat within the Council managed Cotton Tree-Alex Foreshore Bushland Conservation Reserve. This loss of vegetation and habitat will impact the following Queensland Government environmental values that currently exist on the site of the proposed development:

- Loss of remnant Regional Ecosystem 12.2.14 (strand and fore dune complex comprising *Spinifex sericeus* grassland *Casuarina equisetifolia* subsp. *incana* low woodland/open forest)
- Loss of Queensland Government Matter of State Environmental Significance - wildlife habitat (endangered or vulnerable, and special least concern animal)
- Loss of Queensland Government mapped essential habitat
- Potential impacts to adjacent Queensland Government Matter of State Environmental Significance - Significant sea turtle nesting area (including lighting impacts)

Environment and Liveability Strategy 2023

The extension of the lease area and construction of the basement area will result in the destruction of dune ecosystem conflicts with the following positions outlined in the Sunshine Coast Council Environment and Liveability Strategy - Part A: Strategic Directions - 2023 edition (ELS): -

- *Biodiversity policy positions:*
 - *2.1 Natural ecosystems and the native plants and animals they support are preserved:*
 - *a. Habitat areas are ecologically functional and well connected.*
 - The development will further fragment the north to south ecological connection between the dune ecosystems of Maroochydore Beach
 - *b. Ecological functionality of habitat areas is maintained under changing environmental conditions.*

- The development will reduce dune ecosystem's ability to act as a natural coastal erosion defence
- *e. Core and connecting habitat areas are protected.*
 - The development will result in the loss of habitat mapped as Connecting Habitat by the ELS Part C: Network Plan.
- *f. Habitat extent and condition (composition, structure and function) is maintained.*
 - The proposed development will result in reduced extent of remnant vegetation habitat
- *g. Remnant vegetation is protected.*
 - The proposed development will result in direct loss of remnant vegetation habitat
- *2.3 Biodiversity is valued, respected and used sustainably to support our lifestyle, livelihoods and sense of place:*
 - *a. Biodiversity values and ecosystem services are appreciated by the community to ensure ongoing support for preservation.*
 - The loss of vegetation resulting from the development may undermine community appreciation for ecosystem services provided by dune ecosystems and the need to preserve these important ecosystems.
- *Coastal policy positions:*
 - *4.1 The natural values and function of coastal environments are preserved:*
 - *a. Natural coastal processes are preserved.*
 - The proposed development will reduce dune ecosystem's ability to act as a natural coastal erosion defence
 - *b. Coastal landforms, habitats and vegetation communities are protected and enhanced.*
 - The proposed development will result in loss of dune landform, habitat, and vegetation.
 - *4.2 A healthy coast and near-shore marine environment is preserved to sustain our valued coastal lifestyle and economy:*
 - *a. Coastal recreational, social and economic activities have minimal impact on coastal values and natural processes.*
 - The proposed development will result in loss of coastal environmental values and loss of dune ecosystem's ability to act as a natural coastal erosion defence.
 - *d. Coastal vegetation is not damaged or removed except where required for approved coastal dependent development and the construction and maintenance of community recreational and access infrastructure.*
 - Discussion is required to understand if the lifesaving club activities to be serviced by the proposed new basement area are deemed coastal dependent development.

The ELS includes coastal policy positions relating to 'coastal dependent development', which is defined as development that requires land adjoining the foreshore and access to tidal water to function. It is not considered that the proposed viewing deck and members deck would meet the definition of coastal

dependent, and as a result these components of the development conflict with the following ELS policy positions:

- **4.3 Coastal hazard risks are known and avoided or otherwise adequately addressed, forming part of long-term adaptation planning:**
 - **a. New permanent development is located outside of the Coastal Erosion Prone Area unless it is deemed coastal dependent development / community infrastructure.**
 - The development of the new viewing deck and members deck is within the Coastal Erosion Prone Area
 - **b. Coastal dependent development / community infrastructure is resilient to coastal hazards.**
 - As the members deck and public deck sections of the development extend beyond the existing sea wall, it is not apparent if they would be resilient to coastal hazards.

Furthermore, it is considered that the proposed development should respond to aspects of sustainable design, energy and resources and its approach to adaptation and resilience, with guidance available in the ELS.

Coastal Hazard Adaptation Strategy 2021

The *Sunshine Coast Coastal Hazard Adaptation Strategy 2021* (CHAS) is a long-term strategy seeking to proactively manage risks from coastal erosion and storm tide inundation, now and in the future under rising sea levels. [Part A - Coastal Hazard Adaptation](#) of the CHAS states that Maroochydore Beach (Maroochy River mouth to the start of Alexandra Headland Beach) is likely to be increasingly prone to open coast erosion in the future.

Assets that may be at risk include public foreshore infrastructure, the surf club, the main road, some private assets and the natural sandy beach and dune system.

[Part B - coastal hazard maps and supporting information](#) of the CHAS and the [online coastal hazard maps](#) show that the development site is within the Open Coast Erosion (1%AEP) Present Day zone. Table 22: Maroochydore Beach adaptation pathway within Part A of the CHAS presents a collective package and sequencing of adaptation actions for managing coastal hazards.

The following present day to 2041 actions for Maroochydore Beach should be addressed by the development:

- **Enhance adaptive capacity:**
 - **Encourage dune growth, revegetation, controlled access, monitoring.**
 - The proposed development would result in the loss of dune ecosystem
 - **Promote awareness of coastal hazards and natural processes, including the role of the dunes.**
 - The proposed development would result in the loss of dune ecosystem undermining awareness of the role dunes play in coastal hazard defence
- **Planning:**
 - **Review approval conditions for seawall alignment associated with last line of defence option, with the alignment being as landward as possible.**
 - The proposed development has not coordinated with planning being undertaken for a last line of defence seawall along Maroochydore Beach
- **Coastal management and engineering:**
 - **Primary action: Undertake dune protection and enhancement.**
 - The proposed development would result in the loss of dune ecosystem

- *Prior to construction commencing or final approvals review last line of defence component of hybrid (nourishment-seawall) option – review alignment of seawall between the Alex skate park and Maroochy SLSC, and triggers to enable proactive management.*
 - The proposed development has not coordinated with planning being undertaken for a last line of defence seawall along Maroochydore Beach

Sunshine Coast Planning Scheme 2014 – Coastal protection overlay code

It is considered that the proposed development is in conflict with the *Coastal protection overlay code* within the *Sunshine Coast Planning Scheme 2014*, see Strategic Planning Branch comments.

Sunshine Coast Council Special Area Adaptation Precinct Planning Project – Surf Club Case Study 2023

In 2023 Council undertook an engagement and coordination role with key stakeholders to progress further investigations and planning to better understand options to address coastal erosion risks being faced by a local surf life saving club. The surf club expressed a desire to explore adaptation responses at their site, with regard to intent to redevelop the ageing clubhouse building and existing safety concerns over beach access conflicts. The project:

- involved workshops and surveys focussing on values and options with directly impacted stakeholders
- established a clear understanding of issues between directly impacted stakeholders
- addressed safety concerns surrounding the lack of visibility of the beach from the surf lifesaving tower and conflicts between vehicular beach access and the coastal pathway
- investigated alternative suitable sites for relocation of highly valued community assets, and the impacts of relocation on placemaking, social/political and economic perspectives
- undertook a detailed appraisal of options over time using multi-criteria analysis and cost benefit analysis techniques Identified detailed actions to support further adaptation planning within the precinct
- recognised that this is the first part of a longer process with no formal decision being made as a result of this project, and that broader community engagement and further detailed assessments will be required.

A framework was developed to inform a coordinated approach to long-term infrastructure siting, design, and service delivery which could be used as a template for further work at the Maroochydore Surf Club.

Operational Comments

- The proposed designs provided for the Maroochydore Surf Club Redevelopment Proposal will inhibit inspections and maintenance of any seawall below the viewing and members deck areas and beach profile.
- No information is provided regarding which entity would be responsible (Council or Maroochydore Surf Club) for the protection of the proposed piers, viewing deck, and members deck structures when they are eroded by coastal hazards. Given the viewing and members deck extensions are within the new proposed lease area, any seawall would be the responsibility of the leaseholder to maintain. Current thinking is that seawalls should not be privately owned and maintained.
- Maroochydore beach has been analysed as a recessive beach, this means the erosion issues will increase over time. Nourishment programs will only be effective for a medium-term planning horizon after which there is no guarantees regarding beach widths or volumes.

- There is a seawall in front of the current Maroochydore Surf Club. This seawall was not able to be assessed, however, all indications are it was built around 1965 so is well above its design life and likely not built to current engineering standards.
- Historical photos show major storm erosion along the alignment of the existing seawall. Building seaward of the existing seawall alignment will result in accelerated beach erosion for all users.
- The height of the existing dune to the north for the Surf Club will require extensive battering or large sheet piles to stabilise should the extension of the lease area and construction of the basement area on the northern side of the proposed extension be approved.

If a development application is required, below are details on the mandatory technical reports and information to accompany resulting applications

1. Acid Sulfate Soils/Groundwater
2. Acoustic Report
3. Ecological Assessment Report
4. Engineering Report
5. Stormwater Management Plan
6. Traffic Impact Assessment
7. Town Planning Report

Broad methodology and content of these reports can be found within the associated planning scheme policy.

Any changes to the proposal may require variation to the above requirements.

A statement addressing the development's compliance with the matters raised in the pre-lodgement notes must also be supplied.

Council has published a well made checklist which is available on our website

<https://www.sunshinecoast.qld.gov.au/Development/Development-Applications/Development-Application-Forms> . We recommend you lodge a completed version of this checklist with your application, accompanied by the code checklists which are also available on the <https://www.sunshinecoast.qld.gov.au/Development/Development-Applications/Development-Application-Forms>. A well-made application that is consistent with the planning scheme will be prioritised with faster assessment timeframes.

Appendix 11
Preliminary Engagement Responses (Other)

From: O'Brien, Ted (MP) <Ted.O'Brien.MP@aph.gov.au>
Sent: Thursday, 29 February 2024 12:24 PM
To: Admin @ ASTPD
Cc: Cameron Adams
Subject: RE: Rebuild of Maroochydore Surf Life Saving Club - Preliminary Consultation (ASTP ref 230503)

Hi Erin

Many thanks for your email and brief for Mr O'Brien.

Mr O'Brien is very supportive of surf life saving club's expansions/redevelopments and has supported them via grants and grant submissions.

Ted will continue to work with Maroochydore SLSC on any Federal grant opportunity that arises.

Kind regards
Hayley

Hayley Holloway

OFFICE OF TED O'BRIEN MP

FEDERAL MEMBER FOR FAIRFAX

SHADOW MINISTER FOR CLIMATE CHANGE AND ENERGY

Maroochydore | Electorate Office

P: 07 5479 2800 | E: ted.obrien.mp@aph.gov.au | W: tedobrien.com.au | F: [@tedobrienmp](https://www.instagram.com/tedobrienmp)

From: Lachlan Reid <l_mreid@bigpond.com>
Sent: Wednesday, 20 March 2024 2:24 PM
To: Admin @ ASTPD
Cc: rjhs@bigpond.net.au; maroochydore@parliament.qld.gov.au;
jason@jasonopray.com.au
Subject: Maroochydore Surf Club Redevelopment

The response date has been moved from the 12th March to the 26th March which will help but it should be longer as this significant project is very important to the local area .

Unfortunately the Surf Club went through their Town Planner Adams & Sparkes which sent the proposed plans to the Body Corporate Managers who have taken their time in sending out the details to the respective committees not owners.

I believe the Maroochy Surf Club should have sent them direct to all unit and business owners within say one kilometre from the club which would be more effective. The approval of the project through the State Government will take some time (years) .The demolition of the existing building and the construction of the new club will take at least 2 years., this will have an enormous effect on the local community . This important fact was not pointed out by the Maroochy Surf Club to the local community.

Alexandra Parade is a small one way street and Beach Parade has little car parking even now.

The Surf Club is trying to obtain 990 sq m of extra land to the north of the club for underground parking and storage but want it for nil consideration when the land is worth millions and is a National Park.
I understand the construction costs are around \$30 to \$40 million which proves it's a business operation and not a community driven project .

The location is a residential and holiday unit area and not conducive to a huge commercial building operation.

We need help to get this Project reduced to a more realistic size and far more involvement with the local community and units owners to ensure this project suits the local community expectations.

I would appreciate your acknowledgement of this email.

Lachlan Reid (0412 055997)
Unit 7
6 Beach Parade
Maroochydore Q 4558

Sent from [Mail](#) for Windows

From: Con Comino <c.comino@gmail.com>
Sent: Tuesday, 12 March 2024 9:53 AM
To: Admin @ ASTPD
Subject: Preliminary Stakeholder Engagement - Proposed Ministerial Infrastructure Designation 34-36 Alexandra Parade, Maroochydore

I write in response to your letter dated 27th February 2024 for initial stakeholder input.

Please keep me updated about all future consultation periods and documentation.

The plans you have provided me do not show enough detail about the existing car park as this now appears to be a dune with some vegetation on it.

It appears that the public car park with public accessibility to the beach has now been completely removed and this is something that needs more detail to be produced.

This has been a public car park and accessible beach entry for many decades and this lookout may in fact have heritage significance for this reason. Are there any Heritage Impact plans or reports. And if so why not. The area has heritage importance to the Sunshine Coast.

Are there any details about disabled access to the beach?

I await your response.

Thanks

Con Comino (Beaches at Maroochy Pty Ltd - 0412729689)

Appendix 12
Endorsement Correspondence

From: Alan Houston <Alan.Houston@dsdilgp.qld.gov.au>
Sent: Tuesday, 6 August 2024 9:43 AM
To: Cameron Adams
Subject: MPL-0523-0430 - Maroochydore SLSC - Endorsement
Attachments: ENTITY CONSULTATION - Published notice TEMPLATE - MGR 2020 - update 20 March 2024.docx; ENTITY CONSULTATION TEMPLATE - Sign on the land - MGR 2020 - updated 20 March 2024.doc; ENTITY CONSULTATION TEMPLATE - letter to stakeholders - MGR 2020 - updated 20 March 2024.docx

Hi Cameron

Thank you for your request dated 10 April 2024 seeking endorsement for the above mentioned project to proceed through the MID pathway.

I am pleased to advise that the Maroochydore Surf Life Saving Club has been endorsed for the Ministerial Infrastructure Designation (MID) assessment process, subject to owners consent being obtained and relevant level of reporting to demonstrate the environmental and coastal processes can be suitably mitigated.

Once owners consent is obtained, you may lodge the MID proposal via the [online portal](#).

The MID Proposal must include/address:

- The required material for making a MID specified in Schedule 3 of the [Minister's Guidelines and Rules](#)
- the matters raised in pre-lodgement minutes.

The consultation templates are attached.

Regards



Queensland
Government

Alan Houston

Senior Planner
Development Assessment Division
Department of Housing,
Local Government, Planning, and Public Works

Microsoft teams – meet now

P 3452 7627
Level 13, 1 William Street, Brisbane QLD 4001
PO Box 15009, City East QLD 4002



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Author: Blake Petchell
File / Ref number: 2024/003223
Directorate / Unit: Land and Surveying Services
Phone: 5451 2408



Department of Resources

4 November 2024

Maroochydore Surf Lifesaving Club Inc
C/- Cameron Adams
Adams Sparkes Pty Ltd
PO Box 1000
Buddina QLD 4575
<mailto:admin@astpd.com.au>

Dear Cameron

Owners consent for endorsement to proceed through the Ministerial Infrastructure Designation (MID) assessment process.

Term lease for community purposes, described as Lot 471 on SP142403, TL 0/215727, and surrounding area of dedicated road.

Reference is made to the request for owners consent required to accompany the making of an application for a Ministerial Infrastructure Designation (MID) for the proposed redevelopment of the Maroochydore Surf Life Saving Club (the Club).

I confirm that on 14 August 2024 a Permanent Road Closure application was lodged, and properly made with the Department of Resources (Resources) which supports the requirement for the additional area of dedicated road to facilitate the proposed redevelopment of the Club.

In accordance with section 36 (3) of the Planning Act 2016, and the Ministers Rules and Guidelines, Schedule 3 – Required Material - For making a MID under Chapter 7, Part 1, Item 14 Resources provides consent for the lodgment of the MID.

It should be noted that Resources will not commence assessment, or make a decision on the Permanent Road Closure application until the assessment of the MID application has been completed.

This letter of consent to the making of an application for a MID, does not provide the proponent permission or rights to access, occupy, use or undertake works on or in the subject State lands until such time the proponent obtains the appropriate authority or tenure under the Land Act 1994. The proponent will require the relevant authority or tenure under the Land Act 1994 prior to the commencement of any works or use of the State lands.

Your client is also required to always comply with the purpose, terms and conditions of the term lease. Your client is will also need to comply with all other legislative and regulatory requirements which may also include approvals that are not part of the assessment of the MID application under the *Planning Act 2016* e.g. a marine park permit if in a marine park.

Further, please note that the above consent will expire on 21 April 2025. Should the MID application not be lodged with the Department of Housing, Local Government, Planning and Public Works prior to this date, your client will be required again to lodge another request and any attachments with Resources with a further request for owner's consent - any further request will need to be reconsidered by Resources.

It is also advised that any land use activities must comply with the *Aboriginal Cultural Heritage Act 2003* or the *Torres Strait Islander Heritage Act 2003*.

If you wish to discuss this matter please contact Blake Petchell on 5451 2408.

All future correspondence relative to this matter is to be referred to the contact Officer at the address below or by email to LSSEQ@resources.qld.gov.au. Any hard copy correspondence received will be electronically scanned and filed. For this reason, it is recommended that any attached plans, sketches or maps be no larger than A3-sized.

Please quote reference number 2024/003223 in any future correspondence.

Yours sincerely

A handwritten signature in black ink, appearing to read 'BPetchell', with a long horizontal flourish extending to the right.

Blake Petchell
Manager
Land and Surveying Services

A duly authorised delegate of the Minister
under the current Land Act (Ministerial) Delegation

Appendix 13
Cultural Heritage Register Search

Cultural Heritage Database and Register Search Report

Search report reference number: 160071

The Aboriginal and Torres Strait Islander Cultural Heritage Database (cultural heritage database) and Aboriginal and Torres Strait Islander Cultural Heritage Register (cultural heritage register) have been searched in accordance with the location description provided, and the results are set out in this report.

The cultural heritage database is intended to be a research and planning tool to help Aboriginal and Torres Strait Islander parties, researchers, and other persons in their consideration of the cultural heritage values of particular areas.

The cultural heritage register is intended to be a depository for information for consideration for land use and land use planning, and a research and planning tool to help people in their consideration of the Aboriginal cultural heritage values of particular objects and areas.

Aboriginal or Torres Strait Islander cultural heritage which may exist within the search area is protected under the [Aboriginal Cultural Heritage Act 2003](#) and the [Torres Strait Islander Cultural Heritage Act 2003](#) (the Cultural Heritage Acts), even if the Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (the Department) has no records relating to it.

The placing of information on the database is not intended to be conclusive about whether the information is up-to-date, comprehensive or otherwise accurate.

Under the Cultural Heritage Acts, a person carrying out an activity must take all reasonable and practicable measures to ensure the activity does not harm Aboriginal or Torres Strait Islander cultural heritage. This applies whether or not such places are recorded in an official register and whether or not they are located on private land.

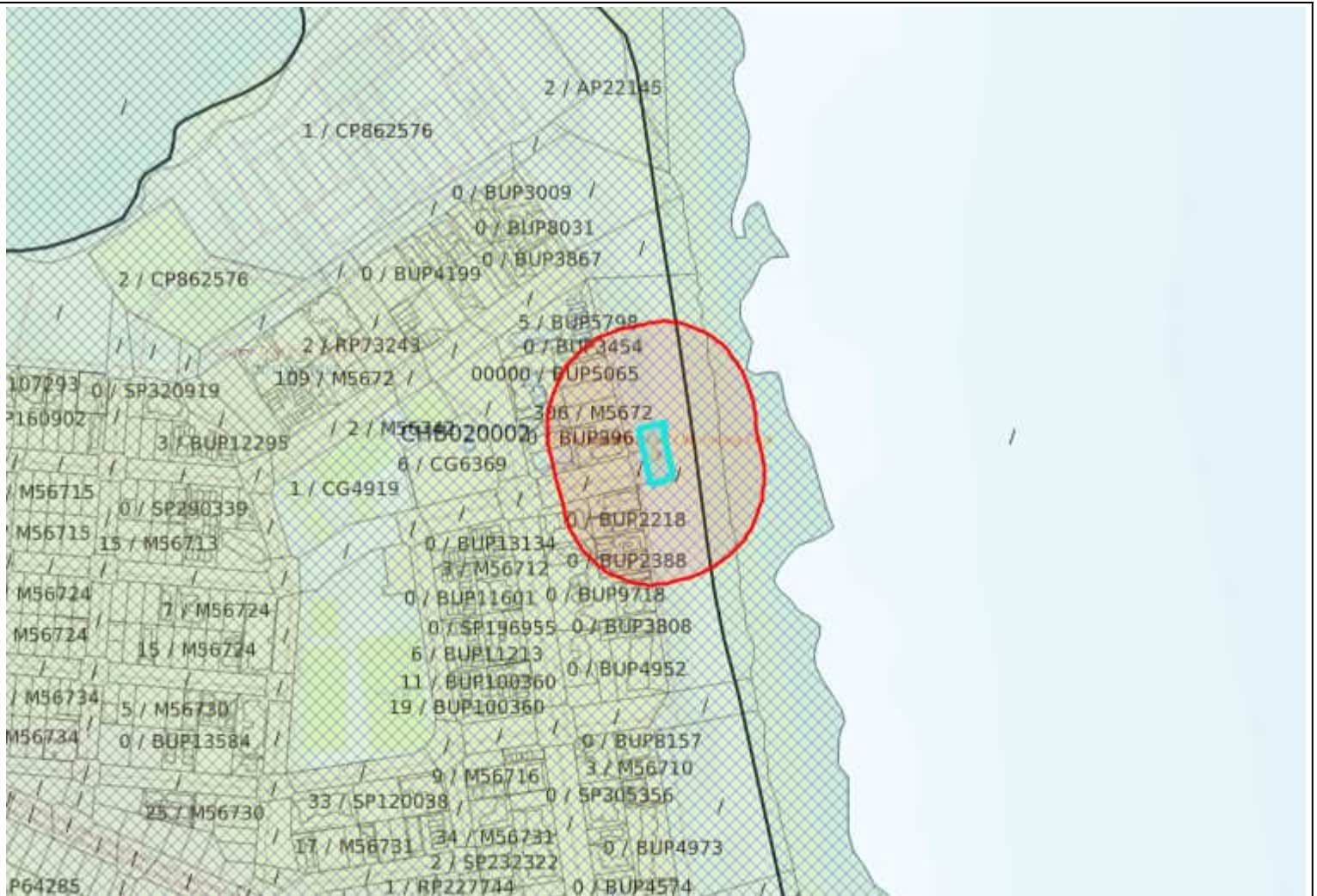
Please refer to the Department website <https://www.qld.gov.au/firstnations/environment-land-use-native-title/cultural-heritage/cultural-heritage-duty-of-care> to obtain a copy of the gazetted Cultural Heritage Duty of Care Guidelines, which set out reasonable and practicable measure for meeting the cultural heritage duty of care.

In order to meet your duty of care, any land-use activity within the vicinity of recorded cultural heritage should not proceed without the agreement of the Aboriginal or Torres Strait Islander Party for the area, or by developing a Cultural Heritage Management Plan under Part 7 of the Cultural Heritage Acts.

The extent to which the person has complied with Cultural Heritage Duty of Care Guidelines and the extent the person consulted Aboriginal or Torres Strait Islander Parties about carrying out the activity – and the results of the consultation – are factors a court may consider when determining if a land user has complied with the cultural heritage duty of care.

Should you have any further queries, please do not hesitate to contact the department via email: cultural.heritage@dssdsatsip.qld.gov.au or telephone: 1300 378 401.

Cultural Heritage Database and Register Search Report



LEGEND

- CH Parties
- CH Bodies
- CHMPs
- Study Areas
- DLAs

Reference Number: 160071
 Search Type: Lot/Plan
 Lot: 471
 Plan: SP142403
 Shire: Sunshine Coast Regional
 Buffer Distance: 100m

Cultural Heritage Sites

- Pre-2015 Point Site
- Post-2015 Point Site
- Mitigated Point Site
- Pre-2015 Area Site
- Post-2015 Area Site
- Mitigated Area Site

Map Projection: Geographic Latitude & Longitude (GDA2020).

The Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships (DSDSATSIP) is the custodian of spatial data provided by various third parties for inclusion in the Aboriginal and Torres Strait Islander cultural heritage online portal. This includes spatial data provided by the National Native Title Tribunal and Aboriginal and Torres Strait Islander parties.

Features shown on this map have been obtained from available sources. It is possible that errors and omissions may exist. The DSDSATSIP disclaims any liability for any errors or omissions that appear in this document.

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Map produced by the Cultural Heritage Unit, DSDSATSIP, Brisbane, Queensland, Australia on 17 May 2024.

1:7,175

Metres 100 200 300

LOCALITY

Cultural Heritage Database and Register Search Report

There are no Aboriginal or Torres Strait Islander cultural heritage site points recorded in your specific search area.

There are no Aboriginal or Torres Strait Islander cultural heritage site polygons recorded in your specific search area.

Cultural Heritage Party/ies for the area:

Reference No.	Federal Court No.	Name	Contact Details
QC2018/007	QUD20/2019	Kabi Kabi First Nation Traditional Owners Native Title Claim Group	Kabi Kabi First Nation Traditional Owners P & E Law PO Box 841 MAROOCHYDORE QLD 4558 Phone (07) 5479 0155 Email: reception@paelaw.com Contact: Matt Patterson

Cultural Heritage Body/ies for the area:

Departmental Reference No.	Name	Contact Details	Registration Date
CHB020002	Kabi Kabi People Aboriginal Corporation	Kabi Kabi Peoples Aboriginal Corporation PO Box 713 CALOUNDRA QLD 4551 Mobile: 0435 599 859 Email: b.warner@outlook.com	27/07/2021

There are no Cultural Heritage Management Plans recorded in your specific search area.

There are no Designated Landscape Areas (DLA) recorded in your specific search area.

There are no Registered Cultural Heritage Study Areas recorded in your specific search area.

There are no National Heritage Areas (Indigenous values) recorded in your specific search area.

Cultural Heritage Database and Register Search Report

Glossary

Cultural Heritage Body: An entity registered under Part 4 of the Cultural Heritage Acts as an Aboriginal or Torres Strait Islander cultural heritage body for an area. The purpose of a cultural heritage body is to:

- identify the Aboriginal or Torres Strait Islander parties for an area
- serve as the first point of contact for cultural heritage matters.

Cultural Heritage Management Plan (CHMP): An agreement between a land user (sponsor) and Traditional Owners (endorsed party) developed under Part 7 of the Cultural Heritage Acts. The CHMP explains how land use activities can be managed to avoid or minimise harm to Aboriginal or Torres Strait Islander cultural heritage.

Cultural Heritage Party: Refers to a native title party for an area. A native title party is defined as:

- Registered native title holders (where native title has been recognised by the Federal Court of Australia).
- Registered native title claimants (whose native title claims are currently before the Federal Court of Australia).
- Previously registered native title claimants (the 'last claim standing') are native title claims that are no longer active and have been removed from the Register of Native Title Claims administered by the National Native Title Tribunal. Previously registered native title claimants will continue to be the native title party for that area providing:
 - o there is no other registered native title claimant for the area; and
 - o there is not, and never has been, a registered native title holder for the area.

The native title party maintains this status within the external boundaries of the claim even if native title has been extinguished.

Cultural heritage site points (pre 2015): Aboriginal and Torres Strait Islander cultural heritage sites and places recorded in the database as point data **before** 1 July 2015.

Cultural heritage site points (post 2015): Aboriginal and Torres Strait Islander cultural heritage sites and places recorded in the database as point data **after** 1 July 2015.

Cultural heritage site points (post 2015 mitigated): Aboriginal and Torres Strait Islander cultural heritage sites and places recorded in the database as point data after 1 July 2015 where the recorder has advised the department that the site has been mitigated.

Cultural heritage site polygons: Aboriginal and Torres Strait Islander cultural heritage sites and places recorded in the database as a polygon.

Designated Landscape Areas (DLA): Under the repealed *Cultural Record (Landscapes Queensland and Queensland Estate) Act 1987*, an area was declared a 'designated landscape area' (DLA) if it was deemed necessary or desirable for it to be preserved or to regulate access.

Indigenous Protected Areas (IPA): Areas of land and sea managed by Indigenous groups as protected areas for biodiversity conservation through voluntary agreements with the Australian Government. For further information about IPAs visit <https://www.environment.gov.au/land/indigenous-protected-areas>

National Heritage areas: Places listed on the National Heritage List for their outstanding heritage significance to Australia and are protected under the *Environment Protection and Biodiversity Conservation Act 1999*. For further information about the National Heritage List visit <https://www.environment.gov.au/heritage/about/national>

National Heritage Areas (Indigenous values): Places listed on the National Heritage list (Indigenous values) are recognised for their outstanding Indigenous cultural heritage significance to Australia and are protected under the *Environment Protection and Biodiversity Conservation Act 1999*. These areas are now included in the cultural heritage

Cultural Heritage Database and Register Search Report

register.

Registered Cultural Heritage Study Areas: Comprehensive studies of Aboriginal and or Torres Strait Islander cultural heritage in an area conducted under Part 6 of the Cultural Heritage Acts for the purpose of recording the findings of the study on the register.

Traditional Use of Marine Resources Agreement (TUMRA): Areas subject to agreement between Great Barrier Reef Traditional Owners and the Australian and Queensland governments on the management of traditional use activities on their sea country. For further information about TUMRAs visit <https://www.gbrmpa.gov.au/our-partners/traditional-owners/traditional-use-of-marine-resources-agreements>

World Heritage Areas: Places inscribed on the World Heritage List pursuant to the World Heritage Convention adopted by the United Nations Education, Scientific and Cultural Organisation (UNESCO) and are protected under the [Environment Protection and Biodiversity Conservation Act 1999](#). For further information about World Heritage places in Queensland visit <https://parks.des.qld.gov.au/management/managed-areas/world-heritage-areas>

Disclaimer: *The Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships is the custodian of spatial data and information provided by various third parties for inclusion in the Aboriginal and Torres Strait Islander cultural heritage online portal. This includes spatial data provided by the National Native Title Tribunal and Aboriginal and Torres Strait Islander parties. Department of Seniors, Disability Services and Aboriginal and Torres Strait Islander Partnerships is not responsible for the accuracy of information provided by third parties or any errors in this search report arising from such information.*

Appendix 14
Contaminated Land and Environmental Management Register Search



Department of Environment, Science and Innovation (DESI)
ABN 46 640 294 485
GPO Box 2454, Brisbane QLD 4001, AUSTRALIA
www.des.qld.gov.au

SEARCH RESPONSE
ENVIRONMENTAL MANAGEMENT REGISTER (EMR)
CONTAMINATED LAND REGISTER (CLR)

Dye & Durham
410 Ann st
Brisbane QLD 4000

Transaction ID: 50936131 EMR Site Id: 23 May 2024
Cheque Number:
Client Reference:

This response relates to a search request received for the site:
Lot: 471 Plan: SP142403
34 ALEXANDRA PDE
MAROOCHYDORE

EMR RESULT

The above site is NOT included on the Environmental Management Register.

CLR RESULT

The above site is NOT included on the Contaminated Land Register.

ADDITIONAL ADVICE

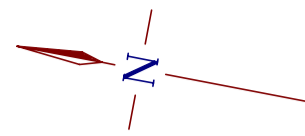
All search responses include particulars of land listed in the EMR/CLR when the search was generated.
The EMR/CLR does NOT include:-

1. land which is contaminated land (or a complete list of contamination) if DESI has not been notified
2. land on which a notifiable activity is being or has been undertaken (or a complete list of activities) if DESI has not been notified

If you have any queries in relation to this search please email emr.clr.registry@des.qld.gov.au

Administering Authority

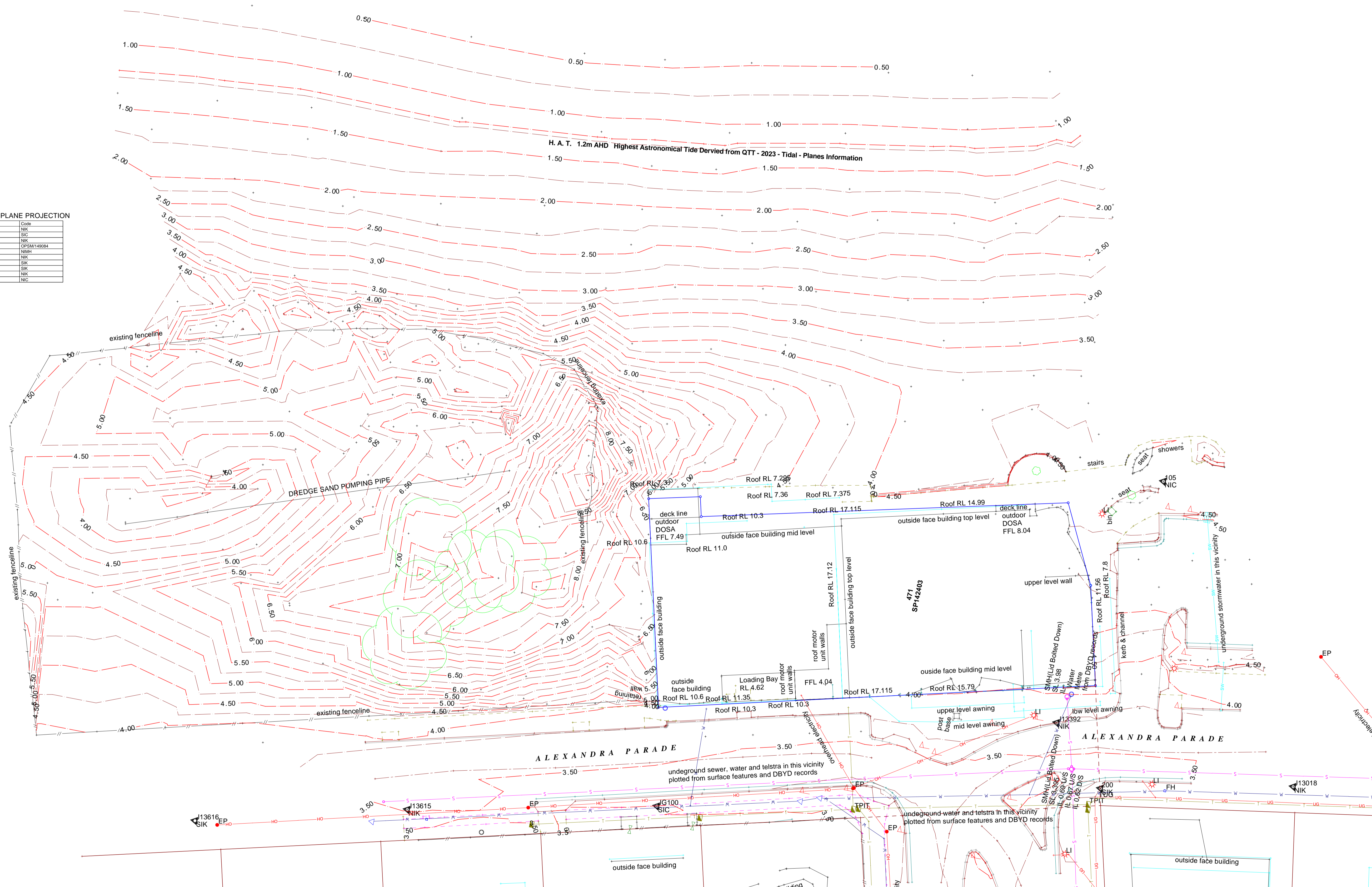
Appendix 15
Contour and Detail Survey prepared by Murray & Associates



A1 1:250

SURVEY CONTROL MGA2020 ZONE 56 PLANE PROJECTION

Point	Easting	Northing	Elevation	Code
J13018	510298.168	7051616.563	3.567	NK
J20100	510270.772	7051694.638	3.515	SK
J13352	510296.485	7051647.235	3.828	NK
J13556	510226.802	7051632.260	2.910	QPSM149084
J13557	510291.622	7051630.874	3.167	NK
J13615	510264.473	7051725.356	3.508	NK
J13616	510258.096	7051751.300	3.422	SK
J200	510285.409	7051640.306	3.391	SK
J13644	510291.421	7051595.344	3.885	NK
J13645	510295.343	7051596.279	3.932	NK



MURRAY & ASSOCIATES
SURVEYORS & TOWN PLANNERS
ACN 075 543 154

Murray Building, 15-17 Currie St. Nambour Ph. (07)5441 2188 P.O. Box 246
Branch Offices at Maroochydore Caboolture Chinchilla Roma Gympie & Emerald

AV	Air Valve	PH	Fire Hydrant	T	Tree	—	Telecommunications Line
BM	Bench Mark	GRATE	Stormwater Grate	TE	Telstra Pit	—	Sewer Line
CP	Control Point	GATE	Gate	TP	Telstra Pillar	—	Water Line
ELP	Elect. Light Pole	S	Sign	WM	Water Meter	—	Fenceline
EMH	Electricity Manhole	GAS	Gas Infrastructure	WV	Water Valve	—	Electricity
PP	Power Pole	SM	Sewer Manhole	SV	Scower Valve	—	Gas Line
EP	Electricity Pole	SMH	Stormwater Manhole	SW	Stormwater	—	Edge of Bitumen
ERT	Electricity Pit			SW	Stormwater	—	Tree line
				SW	Stormwater	—	Underground Electricity
				SW	Stormwater	—	Overhead Powerline

REVISIONS

NO.	DESCRIPTION	DATE	INIT.

PROJECT

Contour & Detail Survey of Lot 471 on SP142403
34-36 Alexandra Parade, Maroochydore
L.G.A. Sunshine Coast Regional

CLIENT MSLSC

Notes: Contour Interval is 0.25 metres. Underground searches have been located from visible surface features only. A 'Dig Before You Dig' search should be performed before the commencement of any excavation work. The property boundaries shown have not fully been investigated for the purpose of this survey. For an accurate determination of the boundaries, an identification survey will be required.

Datum: MGA2020 Zone 56
Plane Projection

F.W.	JG	Date	19/12/2023
F.Bk		File	101130 MSLSC MGA2020 PLANE.mxp
Level Bk		Job & Plan No.	101130
Acc. Bk			
Scale	A1 1:250		

Licd. Surveyor **Andrew Campbell**